Annual Report and
Statistics of the
Madras Government
General Hospitals,

1910 1922

(2) Average daily sick ...	Non-Europeans	360·93	
	Europeans	24·69	
	Total ...	385·62	

(*b*) *In-patients*—

(1) Remaining for the year 1922.	Non-Europeans	342	
	Europeans	99	
			441
(2) Admissions	Non-Europeans	7,154	
	Europeans	1,701	
			8,855
	Total ...		9,296

(3) Results—	Non-Europeans.	Europeans.	Total.
Cured	3,763	1,108	4,871
Relieved	1,715	322	2,037
Otherwise discharged	1,154	193	1,347
Died	522	87	609

A comparison of the above figures with those of the previous year 1921 shows a slight increase in the number of out-patients treated among non-Europeans and a decrease in the Europeans, while the daily sick among both non-Europeans and the Europeans decreased.

Statement of in-patient Europeans and non-Europeans treated during the past ten years with an average for ten years past for 1922:—

Years.	In-patients.				Out-patients.			
	Total treated.		Average daily sick.		Total treated.		Average daily sick.	
	Non-Europeans.	Europeans.	Non-Europeans.	Europeans.	Non-Europeans.	Europeans.	Non-Europeans.	Europeans.
1912 ...	6,270	2,022	327·58	108·54	45,232	5,740	34·175	35·04
1913 ...	5,579	2,057	332·63	123·03	47,006	6,229	349·11	35·24
1914 ...	6,179	2,127	318·99	120·18	55,807	7,047	421·25	38·66
1915 ...	5,740	1,823	291·99	109·33	56,958	5,900	409·77	27·41
1916 ...	6,176	1,743	284·76	94·47	53,177	5,160	427·30	27·57
1917 ...	5,673	1,688	278·70	93·90	55,183	4,690	459·57	25·79
1918 ...	6,491	1,831	311·12	93·25	57,032	4,689	383·60	25·32
1919 ...	6,551	1,861	326·63	95·08	55,460	4,639	363·48	23·53
1920 ...	6,718	1,892	328·09	100·12	57,096	4,830	356·53	25·93
1921 ...	6,472	1,886	349·68	109·60	55,505	5,143	365·07	23·71
1922 ...	7,496	1,800	393·11	103·36	56,746	4,782	360·93	24·69
Average for ten years	6,185.	1,883.	315·02.	104·75.	53,836.	5,407.	387·74.	28·82.

In-patients.—There is a decrease in the total treated among the Europeans while a perceptible increase has been noticed among the non-Europeans, and this is the largest figure ever recorded in the report.

Average daily sick.—From a reading of the figures from 1918, it is observed that non-European average daily sick steadily though slightly increased and it is the largest figure when compared with the past 10 years, but among Europeans a slight decrease is observed in the daily sick and remained below the average for 10 years.

Out-patients.—The total number of non-European admissions increased during 1922 when compared with the previous year and is over the average for the past 10 years, while the European admissions fluctuate between 5,900 to 4,800 for the past 8 years. The daily average among non-Europeans decreased this year, while a slight increase was noticed last year. The daily average remained less than the average for the past 10 years and although the European average being higher than the last year remains less than the average for 10 years.

The following statements show the number of European and non-European admissions during each month of the past ten years :—

Non-Europeans.

Number of years.	Remaining for the year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1913 ...	305	468	421	414	435	473	399	421	437	394	422	492	498	5,579
1914 ...	293	479	431	504	512	530	487	554	471	479	503	456	480	6,179
1915 ...	266	441	388	439	430	465	536	493	451	480	479	435	437	5,740
1916 ...	249	437	461	471	506	561	469	547	565	493	447	518	452	6,176
1917 ...	229	485	424	539	448	407	427	490	415	458	469	429	453	5,673
1918 ...	267	456	460	487	521	522	516	579	482	491	684	497	529	6,491
1919 ...	311	507	423	464	489	485	467	613	600	550	559	551	532	6,551
1920 ...	276	564	507	537	530	569	605	534	536	541	508	510	501	6,718
1921 ...	291	450	505	551	517	561	509	525	550	508	482	497	526	6,472
1922 ...	342	530	507	628	507	644	640	645	602	642	629	632	548	7,496

Europeans.

Number of years.	Remaining for the year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1913 ...	81	194	134	150	171	168	172	146	160	162	186	172	160	2,057
1914 ...	108	195	153	175	181	178	135	172	191	175	176	137	151	2,127
1915 ...	85	174	135	140	154	136	162	164	169	141	125	137	101	1,823
1916 ...	65	135	125	144	119	158	113	171	169	149	130	145	120	1,743
1917 ...	79	165	135	150	123	145	120	150	148	136	117	123	97	1,688
1918 ..	71	128	120	126	155	148	118	155	117	172	250	139	132	1,831
1919 ...	83	162	121	115	125	120	127	148	176	183	196	156	149	1,861
1920 ...	92	147	126	151	128	160	175	123	148	168	175	159	140	1,892
1921 ...	88	160	192	136	149	162	133	119	156	158	162	141	130	1,886
1922 ...	99	160	138	154	126	139	148	131	137	144	138	164	122	1,800

3. Mortality.—The following table shows the number of deaths during 1921 and 1922 for each disease together with the percentage :—

Diseases.	Non-Europeans. 1921. Deaths.	Non-Europeans. 1921. Percentage of deaths to total treated.	Non-Europeans. 1922. Deaths.	Non-Europeans. 1922. Percentage of deaths to total treated.	Europeans. 1921. Deaths.	Europeans. 1921. Percentage of deaths to total treated.	Europeans. 1922. Deaths.	Europeans. 1922. Percentage of deaths to total treated.
1. Cholera Asiatic	2	22·22	...	...	1	1·00	..	..
2. Dysentery	11	6·11	28	13·53	2	3·77	1	1·47
3. Enteric fever	14	17·72	17	19·32	7	10·93	5	12·20
4. Gono coccal infection...	2	2·10	1	1·41	...	...	...	...
5. Syphilis (primary and secondary)	12	3·06	8	0·88	...	...	...	...
6. Kala-Azar	7	11·86	2	9·09	1	7·14	...	...
7. Leprosy	...	...	...	...	...	...	...	...
8. Malaria	34	7·72	24	4·08	5	4·58	11	9·91
9. Plague	...	...	...	...	...	...	...	...
10. Influenza	...	...	2	0·91	...	...	...	...
11. Relapsing fever	...	...	...	...	...	...	1	50·00
12. Pneumococcal infection of the lung	32	12·69	67	24·28	7	16·28	16	31·37
13. Pyrexia of uncertain origin	2	3·92	2	3·45	2	4·34	1	1·92
14. Rheumatic fever	...	...	...	...	2	6·06	...	...
15. Smallpox	...	...	...	...	...	...	...	...
16. Tuberculosis of the lungs	20	11·83	43	23·40	10	22·72	5	15 62
17. Other tubercular diseases	14	31·11	4	2·25	3	21·42	...	...
18. All other infective diseases	26	7·43	44	10·84	6	2·87	7	3·54
19. Anæmia	4	6·78	14	9·52	...	...	1	5·26
20. Diabetes	6	16·21	1	8·86	...	...	...	...
21. Scurvy	...	...	...	...	...	...	...	...
22. Rickets	...	...	...	...	1	50·00	...	...
23. Other diseases due to disorders of nutrition and metabolism.	...	...	...	...	2	4·88	...	...
24. Disease of the ductless or endocrine system.	...	...	..	...	..	...	...	...
25. 26. New growth { Non-malignant ...	...	...	...	...	2	11·77	...	...
26. New growth { Malignant ...	12	9·22	16	14·29	4	30·79	...	...
27. All other general diseases	15	23·81	3	3·3	...	...	5	14·29
28. Diseases of the nervous system. { Diseases of the nerves spinal cord, brain and meninges.	7	10·60	6	3·30	3	4·53	1	1·43
28. Diseases of the nervous system. { Disease of which the pathological basis is not accurately known from mental diseases.	...	...	...	...	...	...	...	...
29. Diseases of the eye	...	...	...	...	...	...	...	...
30. Do. ear	...	...	...	...	...	...	8	53·33
31. Do. nose	...	...	...	...	...	...	...	...
32. Do. circulatory system ...	32	26·66	35	22·56	5	11·11	...	...
33. All diseases of the respiratory system except pneumonia and tubercle of the lungs.	...	...	13	5·86	...	...	...	...
34. Diseases of the stomach	...	..	...	...	...	...	...	...
35. Do. intestines	11	19·29	8	10·26	...	...	1	3·85
36. Abscess of the liver	6	15·38	4	6·78	...	...	2	15·39
37. All other diseases of liver	19	24·05	16	17·20	4	30·76	...	6·25
38. All other diseases of the digestive system.	54	4·66	48	4·62	13	4·76	7	2·58
39. Acute or suppurative inflammation of the lymphatic glands ...	4	2·89	3	2·38	3	5·88	...	...
40. Acute and chronic nephritis... ...	...	...	1	5	...	6·06	1	33·33
41. All other diseases of the urinary organs.	28	6·98	13	4·80	4		6	9·52
42. Other diseases of the generative system.	6	10·34	9	2·88	...	2·08	...	...
43. Diseases of the organs of locomotion.	4	3·33	6	6·45	...	...	...	...
44. Diseases of the areolar tissue ...	25	4·34	25	4·21	3	3·48	...	...
45. Inflammation, ulcerative	2	2·13	9	4·66	2	4·65	2	4·17
46. Other diseases of the skin	4	5·71	7	5·43	2	1·16	...	...
47. All other local diseases	6	6·12	...	...	5	15·15	...	...
48. Injuries (general and local)	47	7·18	42	6·70	4	15·38	3	5
49. Poisoning ... { By opium	...	...	...	..	...	...	...	...
49. Poisoning ... { By other poisons ..	...	...	1	12·50	...	...	...	...
50. Labour ... { Normal	...	...	...	...	...	...	...	...
50. Labour ... { Abnormal	...	...	...	...	...	...	...	...
Total ...	480	7·41	522	7·00	105	5·57	87	4·83

Of 7,496 non-European in-patients treated, 522 died and of 1,800 Europeans, 87 died. The percentage of death on both sides slightly decreased as compared with the previous year. Taking the total treated for the hospital, the death-rate was 65·51 per mille as compared with 69·87 during the year 1921.

Deaths from Septic Causes.—

	No.
Cellulitis	4
Gangrene	3
Tetanus	6
Peritonitis	8
Extravasation of urine	3
Septicæmia	3
Multiple injuries shock	2
Total ...	29

Twenty-nine deaths from sepsis were recorded as compared with forty-five in 1921. Of these five acquired in hospital and twenty-four before admission.

The following table shows the total number of deaths which occurred in hospital, the deaths from septic causes and the number of cases admitted and discharged in a moribund condition together with the percentage of deaths, etc., for 1922, as compared with the previous two years :—

Year.	Total number of deaths.	Ratio per cent of deaths to total treated.	Cases admitted moribund.	Cases removed moribund.	Deaths from septic causes.		Ratio per cent of deaths to total treated exclusive of cases admitted moribund.
					Acquired in hospital.	Acquired before admission.	
1920	532	6·18	139	9	4	67	4·56
1921	585	6·99	145	7	3	42	5·88
1922	609	6·55	143	10	5	24	5·12

4. Classes of Diseases.—The following statement shows the total treated (among in and out-door patients) of the most important diseases which came up for treatment during 1922, as compared with 1921 :—

Classes of diseases.	1921.			1922.		
	Total treated.		Total.	Total treated.		Total.
	In-door.	Out-door.		In-door.	Out-door.	
Other general diseases	111	827	938	126	1,563	1,689
Malarial fevers	549	4,920	5,469	593	5,257	5,850
Diseases of the digestive system	1,345	8,241	9,586	1,311	8,938	10,249
Do. respiratory system except pneumonia and tubercle of lungs.	181	4,531	4,712	304	3,365	3,669
Do. skin	96	3,967	4,063	161	3,976	4,137
Do. ear	30	1,063	1,093	32	2,051	2,083
Do. generative system	84	498	582	390	1,199	1,589
Do. nervous system	131	749	880	248	833	1,081
Do. urinary system	467	707	1,174	484	1,988	2,402
Do. connective tissue	662	4,127	4,789	696	2,802	3,498
Injuries (general and local)	737	5,702	6,439	687	6,226	6,913
Ulcers	127	3,689	3,816	241	2,843	3,084
Diseases of stomach	46	164	210	30	977	1,007
Rheumatic fever and rheumatism	75	201	276	127	969	1,096
Dysentery	233	885	1,118	275	1,145	1,420
Tuberculous effections	272	809	1,081	405	850	1,255
Syphilis	451	1,657	2,108	400	1,784	2,184
Gonorrhœa	118	419	537	82	802	884

Diseases which contributed to an increase during the year are enumerated below in order of their increased numbers :—

	No.
1. Diseases of the urinary system	12,28
2. Do. generative system	1,007
3. Do. ear	990
4. Rheumatic fever and rheumatism	820
5. Diseases of stomach	797
6. All other general diseases	3,751
7. Diseases of digestive system	663
8. Injuries (general and local)	474
9. Malarial fevers	381
10. Gonorrhœa	347
11. Dysentery	302
12. Diseases of nervous system	201
13. Tuberculous effections	174
14. Syphilis	76
15. Diseases of the skin	74

The following diseases show a decrease in 1922 and they are enumerated in order of their fall in numbers :—

	No.
1. Diseases of connective tissue	1,291
2. Diseases of respiratory system	1,043
3. Inflamed ulcers	732

Malaria—

Years.	Number of cases.	Years.	Number of cases.
1901	11,317	1912	3,513
1902	8,213	1913	8,457
1903	6,654	1914	9,118
1904	4,211	1915	8,821
1905	3,482	1916	7,495
1906	3,031	1917	6,687
1907	1,260	1918	5,563
1908	1,843	1919	5,320
1909	1,903	1920	5,403
1910	1,822	1921	5,469
1911	1,871	1922	5,850

The above figures show that malaria which prevailed in an epidemic form in 1912 continued to increase until 1915, when it showed signs of abatement, gradually decreasing until 1919. From 1920 the disease is on the increase.

Septic Cases.—

	Number admitted.
Admitted with sepsis	221

5. Operation.—The following is the comparative statement of work done by the three Surgeons during the years 1920, 1921 and 1922 :—

Surgeons	1920.	1921.	1922.
First Surgeon	873	781	803
Second Surgeon	708	605	600
Third Surgeon	784	693	724
Total ...	2,365	2,079	2,127

6. Sexes and classes of patients treated.—Vide statement F attached to the report. The following statement shows, in a convenient form, the various classes and sexes of patients treated, both in and out, during the year as compared with the two preceding years :—

Years.	Europeans and Anglo-Indians.				Hindus.				Muhammadans.				Others.				Total treated.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		Adults.		Children.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
In-patients.																	
1922	1,024	549	131	96	4,225	1,060	280	150	387	81	26	10	758	375	91	53	9,296
1921	1,140	526	132	88	3,795	916	166	95	353	69	17	7	636	318	63	37	8,358
1920	1,185	539	85	83	3,694	914	148	82	437	45	6	2	932	372	40	46	8,610
Out-patients.																	
1922	2,524	1,228	597	433	30,647	5,633	3,019	2,443	3,150	276	206	162	6,869	2,337	1,331	1,173	61,528
1921	2,752	1,347	592	452	30,506	6,102	3,035	2,363	3,025	213	120	73	6,581	1,889	896	702	60,648
1920	2,574	1,191	569	466	30,278	6,267	3,293	2,660	3,014	205	142	95	6,815	1,968	1,358	996	61,926
Total.																	
1922	3,548	1,777	728	529	34,872	6,693	3,299	2,593	3,537	357	232	172	7,127	2,712	1,422	1,226	70,824
1921	3,892	1,873	724	540	34,301	7,018	3,201	2,458	3,378	282	137	80	7,217	2,207	950	739	69,006
1920	3,759	1,730	654	549	33,972	7,181	3,446	2,742	3,451	250	148	97	7,747	2,340	1,398	1,042	70,536

In-patients.—As already stated the decrease among Europeans is distributed among adult male and female children. Although there is an increase in the number of females and female children yet the total number is less than the previous year.

There was a general increase of patients treated among non-Europeans when compared with the previous year.

Out-patients.—In the out-patient department greater number was treated during the year under reference.

7. Epidemics.—Ten cases of cholera and nine cases of smallpox were treated of which seven cases of cholera and eight cases of smallpox were treated among non-Europeans and the remaining among Europeans.

The number of enteric cases treated decreased as compared with the previous year. The figures for 1922 were 116.

—	1920.		1921.		1922.	
	Europeans.	Non-Europeans.	Europeans.	Non-Europeans.	Europeans.	Non-Europeans.
Admissions	51	63	58	70	38	78
	114		128		116	

The death-rate was 12·20 and 19·32 in 1922 as against 10·93 and 17·72 respectively among Europeans and non-Europeans in 1921.

8. Training of Medical Students.—Three hundred and three students of different ranks were given clinical instructions in 1922 against 295 in 1921.

9. Training School for Nurses.—During the year under report 96 applications were received from women desirous of joining the hospital as Government probationers.

Probationers.—The following are the figures for the year :—

Existing staff on 1st January 1922	21
Newly entertained	44
Total ...	65
Qualified and promoted to the staff	19
Left the service	11
Remaining on the 31st December 1922...	35
Total ...	65

NOTE.—Eleven probationers left the service on the following grounds :—

Owing to ill-health	1
Family circumstances	1
Found unsuitable	9
Total ...	11

During the year 23 applications were received from women desirous of joining the hospital as Indian Nurse Probationers—

Existing staff on 1st January 1922	5
Newly entertained	6
Total ...	11
Qualified and promoted to the staff	5
Dismissed from the service	1
Found unsuitable	1
Remaining on 31st December 1922	4
Total ...	11

Female Ward Attendants—Probationers.—

Existing staff on 1st January 1922	7
Newly entertained	1
Total ...	8
Qualified and promoted to the staff	3
Remaining on 31st December 1922	5
Total ...	8

Female Ward Attendants.—The sanctioned establishment is distributed as follows :—

First Grade	4
Second „	6
Third „	8
Fourth „	4
Total ...	22

Existing staff on 1st January 1922	19
Trained in this hospital	3
Total ...	22
Died	1
Remaining on 31st December 1922	21
Total ...	22

10. Working of the Special Department.—Full particulars are given in the professional reports.

11. Finance.—Statement H gives the details of expenditure and income of the hospital during the year 1922.

Income.—The main sources of revenue to this hospital are as follows :—

(1) *Hospital stoppages recovered from paying patients.*—The recoveries made from such of the in-patients as are liable for payment under G.O. No. 399, Public, dated 17th September 1917, provisionally are noted below :—

The amounts collected during the past three years are—

Year.	Amount. Rs.
1920	26,788
1921	27,641
1922	30,101

(2) *Hire for motor ambulance Car recovered from patients admitted to hospital and those of private practitioners.*—The amounts collected during the past three years are as under :—

Year.	Amount. Rs.
1920	1,442
1921	1,277
1922	454

The car was out of order and under repair for some months. This accounts for the decrease in the collection of fees.

(3) *The sale-proceeds of garden produce including usufructs of coconut trees in the hospital compound.*—The amounts collected during the past three years are—

Year.	Amount. Rs.
1920	326
1921	470
1922	350

(4) *Fines on contractors.*—The amounts collected during the past three years are—

Year.	Amount. Rs. A. P.
1920	133 2 6
1921	57 9 3
1922	68 9 11

(5) *The sale-proceeds of unserviceable articles, empty packings and tins.*—The amounts collected during the past three years are—

Year.	Amount. Rs. A. P.
1920	1,300 0 0
1921	873 7 6
1922	556 0 0

Expenditure—*Salaries.*—The increase is due to the revision of the salaries of the Commissioned Medical officers and officers of the Medical Provincial service, nurses and others attached to this institution during the year 1922.

12. Cost per head.—Information is given in Appendix C attached to this report.

13. General Hospital Poor Fund.—The receipts and expenditure of the Poor Fund for the year are as follows :—

Receipts.	Amount. Rs. A. P.	Expenditure.	Amount. Rs. A. P.
Opening balance	41 1 6		
Lieut.-Col. T. H. Symons, O.B.E., I.M.S.	36 0 0	Expenditure during the year	397 9 9
Master Charte Reits	10 0 0		
Mr. K. M. I. Kemp, Esq.	20 0 0		
Fletcher, Esq., Bombay	10 0 0		
Drawn from the Bank	350 0 0	Opening balance	69 7 9
Total ...	467 1 6	Total ...	467 1 6

14. Supplies—Medicines and Surgical Equipments.—Medicines and instruments were obtained from the Medical Store Depot, special and unauthorized medicines and instruments on Home indents, and emergent requisitions by local purchases.

Diet and non-diet articles.—These articles are supplied by the contractors annually at the rates proposed by the Superintendent, General Hospital, and approved by the Surgeon-General on the submission of tenders by the contractors. Other articles for use are purchased departmentally or obtained from other departments of Government if obtainable.

Bedding and clothing.—These are standardized to suit the hospital requirements and are obtained from the Jail department.

Hospital necessaries.—Articles are obtained both from Home and local purchases.

The table below shows the expenditure of a few of the more important surgical dressings, etc., during the year 1922 as compared with the previous three years :—

Articles.	1919.		1920.		1921.		1922.	
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.
Absorbent cotton.	1,806½ lb.	2,409 12 0	1,847½ lb.	2,771 4 0	1,574⅛ lb.	2,361 15 0	1,895½ lb.	2,671 4 0
Combed cotton ...	3,501½ „	3,501 8 0	3,831½ „	3,818 0 0	4,106½ „	4,106 8 0	4,434 „	4,434 0 0
Dungry cloth ...	18,325 pcs.	19,470 5 0	18,355 pcs.	22,465 15 0	17,055 pcs.	18,653 14 6	20,076 pcs.	21,330 12 0
Muslin	840 yds.	315 0 0	1,380½ yds.	553 10 3	1,350 yds.	306 4 0	2,100½ yds.	623 9 4
Long cloth ...	2,573½ „	1,286 12 0	3,010 „	1,489 5 0	3,043$\frac{3}{16}$ „	1,505 12 10	3,755½ „	1,819 1 2
Glycerine	324½ lb.	1,297 0 0	438½ lb.	1,754 0 0	511½ lb.	255 12 0	428 lb.	214 0 0
Alcohol	2,278 „	512 0 0	2,688½ „	726 15 6	2,117½ „	2,646 6 6	2,537 „	3,171 4 0
Carbolic acid ...	564 „	2,256 0 0	668 „	2,672 0 0	734 „	275 4 9	539 „	202 2 0
Flannel	500½ yds.	250 4 0	576 yds.	288 0 0	547½ yds.	273 10 0	732 yds.	366 0 0
White gauze ...	11,772½ „	1,009 8 0	16,400 „	1,476 0 0	13,689 „	1,232 0 2	24,282 „	2,671 4 0
Total ...		32,358 1 0		46,689 5 9		31,817 7 0		37,503 4 6

The increase in total cost has been observed when compared to the previous year.

15. Electric Installation of Punkahs, Lights, Fans, etc.—The plant is in charge of Electric Foreman who is provided with free quarters in the General Hospital and under the supervision of the Electrical Engineer to Government, Madras.

The following statement shows the expenditure incurred on electrical works at the General Hospital, Madras, during the calendar year 1922 :—

A. ORIGINAL WORKS.

I. Works completed during the year 1922.

Name of work.	Expenditure during the calendar year 1922. Rs. A. P.
1. Providing for shifting the punkah rope in the General Hospital, Estimate Rs. 450	292 15 10
2. Providing electric indicator at the Out-Patient department, General Hospital, Estimate Rs. 165	131 11 10
3. Providing a ceiling fan in the House Surgeon's quarters over the Out-Patient department Dispensary, Estimate Rs. 230	203 2 0
4. Preliminary estimate for metering all the motors in General Hospital, Estimate Rs. 195	136 7 0

II. Works under construction.

Name of work.	Expenditure during the calender year 1921. Rs. A. P.
1. Providing fans and lights in the X—Ray Institute. Temporary Operation Theatre, General Hospital, Estimate Rs. 2,650	2,000 6 10
2. Providing electric fans in the additional wards in the General Hospital, Estimate Rs. 2,740	2,262 8 6
3. Providing a table fan in the Isolation shed, General Hospital, Estimate Rs. 120	85 0 0
4. Providing additional points in the Out-Patient Dispensary, General Hospital, Estimate Rs. 60	50 4 0
5. Providing an electric pump at the General Hospital, Estimate Rs. 2,150	1,900 5 4
6. Providing additional lights in the Out-Patient department, General Hospital, Estimate Rs. 125	61 3 8
7. Providing punkahs in the General Hospital, Estimate Rs. 190	58 7 0
Total Original Works ...	7,177 8 0

B. REPAIRS.

1. Providing Electric Repairs to General Hospital, Estimate Rs. 4,536	4,536 11 11
2. Provincial Electric Repairs to No. 1 Resident Medical Officer's quarters, General Hospital, Estimate Rs. 56.	34 0 0
3. Renewal of fans in the II Resident Medical Officer's quarters, General Hospital, Estimate Rs. 200	190 8 0
4. Annual punkah repairs to General Hospital, Estimate Rs. 3,445	3,448 9 4
Total Repairs ...	8,206 13 3

16. Establishment.—The following changes occurred during the year 1922 both in the medical and the subordinate staff :—

Rank.	Name.	Nature of duties.	Period during which the officers were present for duty. From	To	Remarks.
Medical Officers.					
Lieut.-Col., I.M.S.	T. H. Symons, O.B.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Superintendent ...	1 Jan. 1922	5 May 1922	Permanent.
Major, I.M.S. ...	E. W. C. Bradfield, O.B.E., M.S., M.B. (Lon.), F.R.C.S. (Edin.).	Do. ...	6 May 1922	5 June 1922	Acting.
Lieut.-Col., I.M.S.	W. R. J. Scroggie, C.I.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Do. ...	6 June 1922	31 Oct. 1922	Do.
Do.	T. H. Symons, O.B.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Do. ...	1 Nov. 1922	31 Dec. 1922	Permanent.
Do.	F. F. Elwes, C.I.E., M.D. (Lon.), M.R.C.S. (Eng.), L.R.C.P. (Lon.)	First Physician...	1 Jan. 1922	Do.	Do.
Major, I.M.S. ..	G. E. Malcomson, M.D. (Lon.), D.P.H. (Lon.).	Second Physician.	1 Jan 1922	14 May 1922	Sub. pro tem.
Lieut.-Col., I.M.S.	F. F. Elwes, C.I.E., M.D. (Lon.), M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Do.	15 May 1922	22 June 1922	Acting.
Major, I.M.S. ...	J. M. Skinner, M.B., B.C. H.D.T.M.	Do.	23 June 1922	31 Dec. 1922	Do.
Civil Assistant Surgeon.	T. S. Tirumurti, B.A., M.B., C.M.	Third Physician...	1 Jan. 1922	30 Nov. 1922	Do.
Major, I.M.S. ...	W. L. Forsyth, M.B., C.H.B. (Glasgow) & (Lon.)	Do. ...	1 Dec. 1922	31 Dec. 1922	Do.

Rank.	Name.	Nature of duties.	Period during which the officers were present for duty.		Remarks.
			From	To	
Medical Officers—*cont.*					
Civil Assistant Surgeon.	M. R. Guruswami Mudaliyar, B.A., M.D., C.M.	Fourth Physician.	1 Jan. 1922	1 May 1922	Acting.
Do.	T. S. Tirumurti, B.A., M.B., C.M.	Do.	2 May 1922	31 May 1922	Do.
Do.	M. R. Guruswami Mudaliyar, B.A., M.D., C.M.	Do.	1 June 1922	31 Dec. 1922	Do.
Lieut.-Col., I.M.S.	T. H. Symons, O.B.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	First Surgeon ...	1 Jan. 1922	30 Apr. 1922	Permanent.
Major, I.M.S. ...	E. W. C. Bradfield, O.B.E., M.S., M.B. (Lon.), F.R.C.S. (Edin.).	Do. ...	1 May 1922	31 Oct. 1922	Acting.
Lieut.-Col., I.M.S.	T. H. Symons, O.B.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Do. ..	1 Nov. 1922	31 Dec. 1922	Permanent.
Do.	W. R. J. Scroggie, C.I.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Second Surgeon...	1 Jan. 1922	5 May 1922	Sub, *pro tem.*
Major, I.M.D. ...	E. W. C. Bradfield, O.B.E., M.S., M.B. (Lon.), F.R.C.S. (Edin.).	Do. ...	6 May 1922	5 June 1922	Acting.
Lieut.-Col., I.M.S.	W. R. J. Scroggie, C.I.E., M.R.C.S. (Eng.), L.R.C.P (Lon.).	Do. ...	6 June 1922	14 Nov. 1922	Sub. *pro tem.*
Major, I.M.S. ...	E. W. C. Bradfield, O.B.E. M.S. M.B (Lon.), F.R.C.S (Edin.).	Do. ...	15 Nov. 1922	31 Dec. 1922	Acting.
Do.	Do.	Third Surgeon ...	1 Jan. 1922	5 Aug. 1923	Permanent.
Civil Assistant Surgeon.	S. Ranga Acharya, M.B., C.M.	Do. ...	1 May 1922	5 Aug. 1922	Acting.
Lieut.-Col., I.M.S.	L. Hirsch, C.I.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.), F.R.C.S. (Lon.).	Do. ...	6 Aug. 1922	31 Oct. 1922	Do.
Major, I.M.S. ...	E. W. C. Bradfield, O.B.E., M.S., M.B. (Lon.), F.R.C.S. (Edin.).	Do. ...	1 Nov. 1922	14 Nov. 1922	Permanent.
Do.	K. G. Pandalai, M. B., F.R. C.S.	Do. ...	15 Nov. 1922	31 Dec. 1922	Acting.
Do. ...	A. P. G. Lorimer, M.B., B.C.H.	Resident Medical Officer.	1 Jan. 1922	5 May 1922	Permanent.
Do.	K. G. Pandalai, M.B., F.R. C.S.	Do.	6 May 1922	5 June 1922	Acting.
Do.	A. P. G. Lorimer, M.B., B.C.H.	Do.	6 June 1922	31 Dec. 1922	Permanent.
Subordinate Medical Staff.					
Temporary Civil Assistant Surgeon.	G. Sivaram, M.B., B.S.	Senior Assistant Surgeon.	1 Jan. 1922	20 Apr. 1922	Acting.
Capt., I.M.D. ...	E. R. Mahoney ...	Do.	20 Apr 1922	14 Nov. 1922	Do.
Civil Assistant Surgeon.	F. De'Netto, M.B., B.S. ..	Do.	15 Nov. 1922	20 Nov. 1922	Do.
Civil Assistant Surgeon.	D. Kanagasabhesan. L.M.S.	Do.	21 Nov. 1922	15 Dec 1922	Do.
First Class Military Assistant Surgeon.	L. P. Gernon, I.M.D ...	Do.	16 Dec. 1922	31 Dec. 1922	Do.
Temporary Civil Assistant Surgeon.	V. K. Narayana Menon, M.B., B.S.	Assistant to First Physician.	1 Jan. 1922	Do.	Do.
Do.	K. Ranganathan, L.M.S.	Assistant to Second Physician.	Do.	Do.	Do.
Civil Assistant Surgeon.	F. De'Netto, M.B., B.S.	Assistant to Third Physician.	Do.	Do.	Do.
Temporary Civil Assistant Surgeon.	K. Venkatachalam Pillai, L.M.S.	Assistant to Fourth Physician.	Do.	4 July 1922	Do.
Do.	G. Sivaram, M.B., B.S.	Do.	5 July 1922	31 Dec. 1922	Do.
Do.	A. Narayana Menon, M.B., B.S.	Assistant to First Surgeon.	1 Jan. 1922	23 Oct. 1922	Do.

Rank.	Name.	Nature of duties.	Period during which the officers were present for duty.		Remarks.
			From	To	
Subordinate Medical Staff—*cont.*					
Civil Assistant Surgeon.	N. B. Morris, F.R., F.P.S.	Assistant to First Surgeon.	24 Oct. 1922	31 Dec. 1922	Acting.
Do.	N. S. Ramaswami, Ayyar, M.B., B.S.	Assistant to Second Surgeon.	1 Jan. 1922	4 Oct. 1922	Do.
Do.	D. Kanagasabhesan, L.M.S.	Do.	5 Oct. 1922	20 Nov. 1922	Do.
Do.	N. S. Ramaswami Ayyar, M.B., B.S.	Do.	21 Nov. 1922	31 Dec. 1922	Do.
Temporary Civil Assistant Surgeon.	C. Krishnaswami Pillai.	Assistant to Third Surgeon.	1 Jan. 1922	Do.	Do.
Civil Assistant Surgeon.	V. R. Natesan, L.M.S. ...	Assistant to Third Surgeon (Special Department).	1 Jan. 1922	Do.	Do.
Temporary Civil Assistant Surgeon.	N. Krishna Thambi, M.B., B.S.	Anæsthetist ...	Do.	1 July 1922	Do.
Civil Assistant Surgeon.	B. Dyananda Rao, L.M.S.	Do. ...	2 July 1922	24 July 1922	Do.
Do.	C. V. Krishnaswami, M.B., B.S.	Do. ...	25 July 1922	18 Dec. 1922	Do.
Temporary Civil Assistant Surgeon.	C. S. S. Sarma, L.M.S ..	First Assistant to Resident Medical Officer.	1 Jan. 1922	20 Apr. 1922	Do.
Do.	G. Sivaram, M.B., B.S.	Do.	21 Apr. 1922	15 June 1922	Do.
Third Class Military Assistant Surgeon.	A. St. C. Bartley, I.M.D.	Do.	16 June 1922	18 Oct. 1922	Do.
Civil Assistant Surgeon.	W. C. Thomas, L.M.S. ...	Do.	19 Oct. 1922	23 Oct. 1922	Do.
Temporary Civil Assistant Surgeon.	C. Oommen, M.B., B.S. ...	Do.	24 Oct. 1922	31 Dec. 1922	Do.
Do.	C. K. Anantanarayana Ayyar, L.M.S.	Second Assistant to Resident Medical Officer.	1 Jan. 1922	Do.	Do.
X-Ray.					
Captain ...	T. W. Barnard ...	Radiologist ..	1 Jan. 1922	31 Dec. 1922	Permanent.
Civil Assistant Surgeon.	Rao Sahib M. Govindarajulu Nayudu.	First Assistant to Radiologist.	Do.	8 May 1922	Do.
Do.	C. Totadri, L.M.S. ...	Do.	8 May 1922	19 Oct. 1922	Acting.
Do.	Do. ...	Reserve duty ...	1 Jan. 1922	7 May 1922	Do.
Temporary Civil Assistant Surgeon.	R. Viswanathan, L.M.S.	Second Assistant to Radiologist.	Do.	4 July 1922	Do.
Civil Assistant Surgeon.	M. J. Santanakrishna Pillai.	Do.	5 July 1922	18 Oct. 1922	Do.
Do.	Do.	First Assistant to Radiologist.	19 Oct. 1922	31 Dec. 1922	Do.
Third Class Military Assistant Surgeon.	A. St. C. Bartley, I.M.D.	Second Assistant to Radiologist.	Do.	Do.	Do.
House Surgeons and Physicians.					
House Surgeon ...	G. Raghavayya, L.M.S.	House Surgeon to First Surgeon.	13 Dec. 1922	31 Dec. 1922	
Do. ...	K. Srinivasa Acharya, L.M.S.	Do.	13 Sep. 1922	Do.	
Do. ...	P. Arunachallam, M.B., B.S.	Do.	23 May 1922	10 July 1922	
Do. ...	K. S. Amurtha Rao, L.M.S.	Do.	12 July 1922	7 Aug. 1922	
Do. ...	A. M. Doraiswami, L.M.S.	Do.	24 May 1922	20 Aug. 1922	
Do. ...	P. M. Papoo, L.M.S. ...	Do.	26 May 1922	23 Oct. 1922	
Do. ...	Raghava Panikkar, L.M.S.	Do.	1 Jan. 1922	25 May 1922	

Rank.	Name.	Nature of duties.	Period during which the officers were present for duty.		Remarks.
			From	To	

House Surgeons and Physicians—*cont.*

House Surgeon ...	S. Dorairaj, B.A., L.M.S.	House Surgeon to Second Surgeon.	1 May 1922	31 Dec. 1922
Do. ...	Sankara Subban, L.M.S.	Do.	1 Jan. 1922	22 Mar. 1922
Do. ...	R. Shanmugam, L.M.S.	Do.	15 June 1922	1 Aug. 1922
Do. ...	E. S. Gopalan, M.B., B.S.	House Surgeon to Third Surgeon.	9 May 1922	19 July 1922
Do. ...	O. C. Karunakaran, M.B., B.S.	Do.	16 Jan. 1922	20 May 1922
Do. ...	C. S. Titus, L.M.S. ...	Do.	24 May 1922	23 Oct. 1922
Do. ...	A. S. Mannudi Nayar.	Do.	1 Jan. 1922	15 Jan. 1922
House Physician.	K. Vasudeva Rao, M.B., B.S.	House Physician to First Physician.	22 May 1922	31 Dec. 1922
Do. ...	M. A. Basir, L.M.S. ...	Do.	4 May 1922	31 Dec. 1922
Do. ...	Isaac Joseph	Do.	15 May 1922	14 July 1922
Do. ...	M. B. Misto	Do.	19 Aug. 1922	27 Oct. 1922
Do. ...	Anantam Pillai, L.M.S.	Do.	27 Oct. 1922	31 Dec. 1922
Do. ...	A. S. Mannudi Nayar.	Do.	16 Feb. 1922	23 Feb. 1922
Do. ...	M. K. Swaminathan ...	House Physician to Second Physician.	23 May 1922	1 Sep. 1922
Do. ...	K. C. Paul	Do.	3 May 1922	31 Dec. 1922
Do. ...	V. Hanumanta Rao ...	Do.	1 Jan. 1922	31 Mar. 1922
Do. ...	J. Srinivasan ...	Do.	6 Nov. 1922	31 Dec. 1922
Do. ...	M. Venkataramanamurti, L.M.S.	House Physician to Fourth Physician.	24 May 1922	31 Aug. 1922
Do. ...	A. K. Subramanyam ...	Do.	5 June 1922	26 Aug. 1922
Do. ...	S. Sanjiva Rao, L.M.S. ..	Do.	1 Jan. 1922	31 Mar. 1922
Do. ...	C. Venkatasubba Rao.	Do.	16 Nov. 1922	31 Dec. 1922
Sub-Assistant Surgeon.	V. Narayanaswami Pillai, No. 1040.	In-charge of In-Dispensary.	1 Jan. 1922	Do.
Do.	U. S. Muthuswami Nadar, No. 697.	In-charge of Out-Dispensary.	Do.	Do.

Medical Officers and Subordinates on Reserve duty.

Lieut.-Col., I.M.S.	F. C. Rogers, M.R.C.S. (Eng.), L.R.C.P. (Lon.).	Reserve duty ...	18 Jan. 1922	18 Apr. 1922
Do.	R. B. Foster, B.A., M.D., B.C.H.B.A.C. (Dublin.), D.P.H. (Cantab). L.M.	Do. ...	24 May 1922	8 June 1922
Major, I.M.S. ...	K. G. Pandalai, M.B., F.R.C.S.	Do. ...	6 June 1922	17 June 1922
Lieut.-Col., I.M.S.	L. Hirsch, C.I.E., M.R.C.S. (Eng.), L.R.C.P. (Lon.), F.R.C.S. (Lon.).	Do. ...	1 Nov. 1922	26 Nov. 1922
Civil Assistant Surgeon.	Sujir Narasinga Naik ...	Do. ...	1 Jan. 1922	17 Jan. 1922
Do.	D. Narayana Rao, M.B., B.S.	Do. ...	18 Jan. 1922	19 Feb. 1922
Do.	G. L. Kantha Rao, B.A., L.M.S.	Do. ...	1 Jan. 1922	20 Jan. 1922
Do.	T. S. Somasundara Ayyar, L.M.S.	Do. ...	Do.	22 Jan. 1922
Do.	E. Venkata Rao, L.M.S.	Do. ...	Do	31 Jan. 1922
Temporary Civil Assistant Surgeon.	C. N. Venkoba Rao, L.M.S.	Do. ...	4 Feb. 1922	1 Mar. 1922
Civil Assistant Surgeon.	P. S. Sivaramakrishna Ayyar, L.M.S.	Do. ...	11 Feb. 1922	17 Feb. 1922
Do.	H. Krishnan, M.B., B.S.	Do. ...	7 Mar. 1922	7 July 1922

Rank.	Name.	Nature of duties.	Period during which the officers were present for duty.		Remarks.
			From	To	

Medical Officers and Subordinates on Reserve duty—*cont.*

Civil Assistant Surgeon.	R. Kanagasabhapati Pillai.	Reserve duty ...	1 Apr. 1922	30 Apr. 1922	
Do.	E. Gopalakrishna Prabhu, L.M.S.	Do. ...	Do	Do.	
Do.	C. S. Sarma, L.M. S. ...	Do. ...	20 Apr. 1922	Do.	
Do.	K. Krishna Shenai, M.B., B.S.	Do. ...	16 May 1922	22 May 1922	
Temporary Civil Assistant Surgeon.	K. Visvanathan, L.M.S.	Do. ...	Do.	5 July 1922	
Do.	N. Swaminathan, L.M.S.	Do. ...	2 June 1922	2 July 1922	
Do.	A. V. Kamath, M.B., B.S.	Do.	1 June 1922	1 July 1922	
Do.	R. Subrahmanya Ayyar, L.M.S.	Do. ...	3 June 1922	21 June 1922	
Do.	S. G. Masilamani, L.M.S.	Do. ...	9 June 1922	2 July 1922	
Do.	A. Yesudian	Do. ...	12 June 1922	Do.	
Do.	K. C. Kuthi Ethan Raja, L.M.S.	Do. ...	13 June 1922	Do.	
Do.	J. M. Colaco, M.B., B.S....	Do. ...	15 June 1922	15 July 1922	
Do.	T. C. Joseph, L.M.S. ...	Do. ...	14 June 1922	13 July 1922	
Do.	G. Sivaram, M.B., B.S. ...	Do. ...	15 June 1922	4 July 1922	
Do.	K. R. Subrahmanyam, L.M.S.	Do. ...	17 June 1922	29 June 1922	
Do.	M. V. Subrahmanyam, L.M.S.	Do. ...	18 June 1922	2 July 1922	
Civil Assistant Surgeon.	D. Kanakasabhesan, L.M.S.	Do. ...	16 June 1922	29 June 1922	
Do.	B. Dayananda Rao, L.M.S.	Do. ...	25 June 1922	25 July 1922	
Temporary Civil Assistant Surgeon.	T. P. Vasudevan, M.B., B.S.	Do. ...	28 July 1922	28 Aug. 1922	
Do.	C. V. Krishnaswami, M.B., B.S.	Do. ...	24 July 1922	13 Dec. 1922	
Do.	P. V. Cherian	Do. ...	15 Aug. 1922	12 Sep. 1922	
Do.	K. Krishna Shenai ...	Do. ...	19 Aug. 1922	19 Sep. 1922	
Do.	A. M. Moideer Sahib Bahadur, M.B., B.S.	Do. ...	5 Dec. 1922	Posted for a few days.	
Do.	K. Venugopal, L.M.S. ...	Do. ...	13 Dec. 1922		
Sub-Assistant Surgeon.	B. Appal Narayana, No. 990.	Do. ...	1 Jan. 1922	31 Jan. 1922	
Do.	T. P. Kanakasabhapati Pillai, No. 794.	Do. ...	Do.	10 Feb. 1922	
Do.	B. K. Narayana Rao, No. 857.	Do. ...	Do.	31 Dec. 1922	He was on leave from 1st Jan. to 28th Sep. 1922 from which date he was on duty.
Do.	P. Chakrapani Nayudu, No. 821.	Do. ...	21 June 1922	Do.	
Do.	S. Venkatesan, No. 687.	Do. ...	24 June 1922	Do.	
Do.	D. Narayanaswami Ayyangar, No. 721.	Do. ...	10 Oct. 1922	Do.	
Do.	Md. Alli Sahib, No. 1250.	Special duty ...	24 Aug. 1922	Do.	

Nursing Establishment.—Under the Fundamental rules Miss B. Royal Dawson, Assistant Matron Superintendent, was granted four months' leave on full average salary and 7 months' leave on half average salary in continuation from the 6th November 1922 as per memorandum from the Personal Assistant to the Surgeon-General with the Government of Madras, Reference No. R.C. No. 2673-General of 1922, dated 17th and 18th September 1922.

Ward Sister Miss B. Lane, an English Lady with English training, who joined the service pending her out-passage to India, was appointed to act for the Assistant Matron Superintendent Miss B. Royal Dawson during her absence on leave as per memorandum Reference No. 3093 G-1, dated 12th October 1922, from the Personal Assistant to the Surgeon-General with the Government of Madras.

Indian Nursing Staff.—

Nurses trained in this hospital	
Remaining on 31st December 1922	5
Total ...	10

The following statement shows the strength of the Nursing Staff during the year:—

English and Indian Trained Sisters.—The sanctioned strength is 9.

Existing staff on the 1st January 1922	3
Newly entertained	4
Total ...	7
Left service	3
Remaining on 31st December 1922	4
Total ...	7

Two English and one locally trained Sisters left the service to better their prospects.

Nursing Staff.—

Existing staff on 1st January 1922	55
Nurses trained in hospital	22
Otherwise attached	2
Total ...	79
Left the service	15
On deputation to Narasapatam	2
Long leave	1
Remaining on 31st December 1922	61
Total ...	79

Fifteen Nurses left the service on the following grounds :—

To take midwifery training	2
Transferred as Sister	1
To better prospects	5
After completing three years' training	4
To be married	1
Owing to ill-health	1
Found unsuitable	1
Total ...	15

Linen Department.—

The work done in this department is shown in the following table :—

Year	Amount spent under bedding and clothing.	Cost of materials used in the laundry.	Cost of washing 100 pieces in the laundry.	Number of pieces washed in the laundry.	Amount paid by nurses, etc., to replace linen lost.	Amount paid to extra tailors.
		Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
1920 ...	...	3,742 4 11	1 2 8	319,878	559 13 6	...
1921 ...	...	3,516 12 7	1 1 6	326,553	636 4 4	74 13 7
1922 ...	...	3,726 5 8	1 1 11	333,364	484 2 3	42 12 0

The stock of linen was examined quarterly and the work of the Linen department was satisfactory throughout the year.

Year.	Number of pieces condemned.	Cost of articles condemned.	Number of pieces wasted.	Remarks.
		Rs.		
1919-20	6,297	8,009	318,696	These figures are for the official years.
1920-21	5,966	10,705	322,346	
1921-22	6,488	12,353	330,196	

Male Ward Attendants.—Present strength 24.

Steam Laundry.—The plant was in charge of a mechanic as usual. The repairs needed to the machines were carried out by the fitters deputed by the Public Works Workshop. All the necessaries for the plants were obtained annually on indent from the General Superintendent, Public Works Stores.

The air heater was again tried by the Public Works Department for the third time during the year but proved a failure.

The licence for the Boiler (Registry No. 1228) was renewed for one year from 8th January 1923.

Steam Disinfector (Lyons).—The Disinfection work is carried out thrice a week on Mondays, Wednesdays and Saturdays. Urgent work is carried out on all days. A Sub-Assistant Surgeon is delegated to supervise the disinfection of articles while the installation is in charge of a licensed driver. The licence for the disinfector (Registry No. 1067) was renewed for one year from 9th July 1922.

Motor Ambulance Car.—It is available for public use at any part of the day or the night. The chauffeur resides on the premises. He made 590 trips covering a distance of 3,609 miles 3 furlongs during 1922 against 728 trips extending ever 4,978 miles during the previous year.

346 gallons of commercial spirit (Powerin) were consumed and the distance travelled worked out to an average of 10·43 miles a gallon in 1922 as compared with 12·8 miles during 1921.

During the year a new Ford Motor Ambulance Car was purchased locally from Messrs. Oakes & Co., at a cost of Rs. 5,000. The old one was sold in auction by the Public Works Department.

The car is now being engaged more on Government purposes for treatment and transmission of patients from one hospital to another. It is utilized by the public when not engaged on public duty. This attributes to the decrease in collection.

Electrical Department.—The Electrical Foreman is in charge of the installation with a gang of 11 workmen under him. The plant is periodically inspected by the Electrical Engineer and Assistant Engineer, who carry out the repairs necessary for maintenance.

Sanitary Department.—The Hospital Sergeant with the Jamadar of servants makes daily morning rounds and sees to the sanitation of the hospital and its compound as well as to the daily cleaning of all the drains and flush outs.

The Resident Medical Officer supervises the work done by the Sanitary Department and gives such orders and suggestions as he may think necessary to be carried out by the Sergeant or other departments concerned. The Superintendent makes weekly inspection of the whole hospital building with the Public Works and other departments to note and carry out alterations or suggestions that he may like to give to the various departments.

Office Establishment.—The Resident Medical Officer is generally in charge of the internal administration of the hospital. He is assisted by the Head Steward or the Manager in the performance of the administration works directly under him and it is composed of 22 members.

Telephone.—Telephone plant connecting with 10 intercommunications to various departments and residences within the hospital is available both day and night in charge of telephone clerks. The Medical Officers of this hospital are now connected with telephonic communications to their private residences at the cost of Government.

Diet Accounts.—These are under the daily check of the Assistant Accountant of this hospital and under the concurrent monthly audit of the Accountant-General, Madras.

Articles.	1919.		1920.		1921.		1922.	
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.
Coffee powder, lb.	4,346-4	2,919 3 3	5,028-5	3,699 0 8½	4,274-4½	2,938 6 9	4,776-5	3,582 3 9
Sugar, brown ,,	8,044-9	837 15 8	3,239-2	885 14 9½	2,675-6½	974 6 4	3,182-5	710 1 1
,, white ,,	5,904-15½	764 18 5	11,491-13½	3,950 5 8½	12,153-15½	4,304 8 4	12,945-0½	2,860 9 10
Tea ... ,,	191-4½	178 8 8	317-11½	357 6 7½	335-10½	335 12 0	354-8½	332 5 6
Soda Splits ...	15,269	318 1 8	12,958	323 15 8	5,683	147 9 0	19,243	400 1 10½
Lemonade Splits.	6,861	285 14 0	8,106	370 11 4	4,692	205 12 0	7,541	549 15 10
Longcloth ...	2,573½	1,286 12 0	3,010	1 489 5 0	3043½	1,505 12 10	3,985	1,967 8 0
Milk ... Pints.	244,433-3	48,233 9 0	273,092-12	77,982 14 1	249,019-12½	54,473 1 1	284,065	42,905 10 0
Apples ... No.	777	1,795 4 0	1,652	316 1 0	489	75 7 3	1,868	234 12 6
Oranges ... ,,	6,918	295 15 0	16,201	830 13 1	21,899	912 2 4	21,286	997 12 6
Eggs ... ,,	60,149	2,084 10 10	75,386	3,693 1 2	68,453	3,565 4 2	60,981	2,858 7 9
Ice ... lb.	129,463	3,803 6 10	1,16,044	3,313 14 0	139,084	8,692 12 0	157,591	9,849 7 0
Wines and Spirits.	...	2,081 1 3	...	2,071 4 8	...	3,056 7 3	...	3,309 1 0

Average daily cost of In-patients.—The following table shows the average daily cost of dieting European and Indian patients per diem in the general wards of the hospital, together with the average daily attendance of patients dieted during each month of the year from 1920 :—

Months.	Indians.						Europeans.					
	1920.		1921.		1922.		1920.		1921.		1922.	
	Average daily attendance of patients dieted.	Average cost per head per diem.	Average daily attendance of patients dieted.	Average cost per head per diem.	Average daily attendance of patients dieted.	Average cost per head per diem.	Average daily attendance of patients dieted.	Average cost per head per diem.	Average daily attendance of patients dieted.	Average cost per head per diem.	Average daily attendance of patients dieted.	Average cost per head per diem.
		Rs. A. P.		A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.
January.	269·55	0 9 5¾	288·43	11 6	348·87	0 9 3½	87·61	1 1 1¼	96·90	1 3 6	96·96	1 0 6
February.	310·52	0 9 6½	308·96	10 2¼	353·48	0 9 5¾	92·90	1 1 1¾	104·53	1 1 3¾	97·07	0 15 11¼
March. ...	315·45	0 9 7¼	325·77	10 5	382·71	0 9 9¾	87·16	1 1 2¼	101·61	1 1 11¼	94·71	1 0 5
April ..	302·70	0 10 11¼	315·37	12 3½	368·40	0 10 3¾	78·96	1 3 10¾	95·96	1 1 10	97·30	1 1 6½
May ...	317·10	0 11 5¼	324·9	10 2¾	375·00	0 10 5	77·45	1 3 8¾	97·7	1 1 5¾	97·50	1 3 0
June ...	323·70	0 11 4¾	332·9	9 4	391·90	0 8 9¾	87·30	1 4 7	99·9	1 0 10¼	90·10	1 0 ¼
July ...	315·29	0 11 5¾	336·4	9 3¾	412·20	0 8 9¾	86·00	1 5 10¾	88·09	1 1 2¼	86·90	0 15 1¾
August ...	311·51	0 11 3¼	348·45	9 2¾	403·54	0 8 6¼	95·32	1 6 ¾	98·26	1 0 10¾	89·58	0 14 1¾
September.	337·80	0 11 4¼	344·96	9 8½	408·26	0 8 6¾	88·76	1 5 11½	103·03	1 3 ¼	92·43	0 15 1
October ...	341·13	0 11 9¾	362·85	9 11¼	399·22	0 8 7¼	96·90	1 5 7¼	112·77	1 3 10¾	92·87	0 15 11¼
November.	315·43	0 11 10¾	359·56	10 1¼	363·40	0 8 7¼	97·63	1 5 9	101·73	1 3 11¾	86·90	0 15 3¼
December.	303·28	0 12 5	354·06	9 6½	363·68	0 8 2½	88·09	1 6 9¼	90·29	1 1 3¼	82·03	0 14 3¾
Total average.	316·12	0 11 ½	333·51	10 1¼	380·88	0 9 1½	88·67	1 4 3¾	99·18	1 2 1½	92·03	0 15 11¼

Water-supply.—The following statement shows the expenditure of water with cost during the past four years :—

Year.	Expenditure.	Cost.		
	GALLONS.	RS.	A.	P.
1919	8,398,870	2,249	2	5
1920	9,007,448	10,731	8	0
1921	11,820,081	14,498	5	0
1922	13,223,631	16,517	4	0

The expenditure of water is high owing to additional flush system latrines of Clive, Hope, Pottinger and Victoria Ward opened during the year, as well as to the large consumption of water used by the Public Works Department for construction purposes.

Sale of unserviceable articles.—Public auctions were held during the year and articles condemned sold. The following are the realizations during the past three years :—

Years.	Amount realised.		
	RS.	A.	P.
1920	614	3	0
1921	873	7	6
1922	556	0	0

Income.—(3) Sale-proceeds of the garden produce including usufruct of cocoanut trees in the hospital compound. The amount collected during the past three years are :—

Years.	Amount realized		
	RS.	A.	P.
1920	326	0	0
1921	470	0	0
1922	350	0	0

(5) The sale-proceeds of unserviceable articles, empty packing and tins, etc. The amounts collected during the past three years are :—

Years.	Amount realized.		
	RS.	A.	P.
1920	1,300	0	0
1921	873	7	6
1922	556	0	0

Protection of buildings.—The building is provided with four Minimax Extinguishers fixed to the walls of the hospital on the south side, where the medical stores and the in-dispensary are located. Eighty-four fire buckets are available for emergent use in charge of Hospital Sergeant. The Nurses Quarters are protected with fixing up of two Minimax Extinguishers and the hand pump with buckets which hitherto in use was removed.

Hot water furnaces.—There are three hot water furnaces connecting the wards and the Nurses Quarters for supply of hot water during day and night.

17. Inspection.—The minister of the Medical Port Folio as well as Her Excellency Lady Willingdon, and the Honourable the Surgeon-General Sir G. Godfray Giffard, C.S.I., K.H.S., inspected the hospital during the year.

18. The annual verification of stock and of furniture was conducted as usual by a committee of Medical Officers on the 31st January 1923.

The Medical Stores are in charge of the Fourth Physician and were inspected by him daily as regards medicines and appliances while the instruments are in charge of First Surgeon who checks them on receipt from Home.

The Resident Medical Officer makes constant visits to the Provision Stores and the books are checked by the Head Steward. The annual stock-taking of the Provision Stores was carried out by the Head Steward on the 1st January 1923 and approved by the Resident Medical Officer. The value of the same being on that day Rs. 4,796–14–2¼.

The stock of stationery and linen was examined quarterly by the Resident Medical Officer and the Matron Superintendent respectively.

19. Verification of Service Registers.—The service books of both the superior and inferior permanent establishments were verified up to 31st December 1922.

20. Sanctioned Establishment.—

21. Statement of Wound and Post-Mortem Certificate, etc.—

Number of wound certificates issued during the year 1923.	Number of post-mortem certificates issued during the year 1922.	Number of post-mortem examination.		Number of days during the year spent in courts of justice by Medical officers and subordinates.	
		For medico-legal purposes.	For scientific purposes.		Days.
86	28	23	135	Dr. T. S. Tirumurti Ayyar	1
				Civil Asst. Surgeon N. S. Ramaswami Ayyar ...	4
				Do. do. Dr. DeNetto ...	3
				Do. do. C. Natesa Ayyar...	6
				Temporary Civil Asst. Surgeon A. Narayana Menon	6
				Do. do. J. Mathews ...	2
				Do. do. Sivaramakrishna Ayyar, L.M.S. ...	15
				Do. do. C. S. Sarma ...	4
				Do. do. V. S. Hanumanta Rao	2
				Do. do. Venkatarama Ayyar.	2
				Do. do. Anantanarayana Ayyar	16
				Do. do. Ramakrishnan ...	2
				Do. do. C. Ranganadham...	2
				Do. do. K. R. Subba Ayyar.	1
				Do. do C. Vasudevan ...	7
				Do. do. C. Krishnaswami...	2
				Do. do. C. Oomen	2
				House Surgeon ... ... T. G. Raghava Panikkar ...	3
				Do. ... ... A. Sankara Subban.	4
				Do. ... ... S. Mannudi Nayar	6
				Do. ... ... T. K. Kuri Vella...	3
				Do. ... ... A. Basir	5
				Do. ... ... T. C. Titus ...	3
				Do. ... ... Duraiswami ...	5
				Do. ... ... Appavu	3
				Do. ... ... Dorai Raj	2
				Do. ... ... Karunakaran ...	1
				House Physician ... ... Venkataramamurti	4
				Sub-Asst. Surgeon ... ... Muttuswami Nadar	7
				Do. ... ... P. Chakrapani Nayudu... ...	1
				Total ...	126

22. General Remarks.—The following statement shows receipts and expenditure during the past four years ending with 1922 :—

Receipts.	1919.	1920.	1921.	1922.
	Rs. 5,45,509	Rs. 7,32,313	Rs. 6,82,924	Rs. 6,85,431
	Rs.	Rs.	Rs.	Rs.
Expenditure—				
Salaries (Medical Officers)	90,103	94,509	1,01,077	1,10,110
Salaries (nurses)	65,822	74,947	74,581	93,319
Salaries (inferior servants)	50,785	63,475	71,752	69,712
Medicines (Europe)	62,958	56,640	75,622	68,059
Medicines (Bazaar)	3,596	3,372	6,712	4,388
Diet	1,01,952	1,45,790	1,19,960	1,30,170
Miscellaneous charges	1,10,665	1,67,737	1,07,767	1,51,977
Buildings and repairs	59,630	1,25,843	96,535	57,696
Average daily sick in 1918 (404·37)	421·71	428·21	459·28	496·47
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Cost per head of the total average strength ...	674 8 8	904 7 4	771 2 10	739 6 7

GOVT. GENERAL HOSPITAL, MADRAS,
28th March 1923.

T. H. SYMONS, O.B.E., Lieut.-Col., I.M.S.,
Superintendent.

APPENDIX A.

APPENDIX A.

Comparative statement of the medical work done in the General Hospital, Madras, for the three years ending 1922.

Years.	In-patients.																				Out-patients.						
	Total treated.		Average daily sick.		Deaths.			Operations.	Average stay in hospital.		Average cost of diet.								Total treated.			Average daily sick.			Operations.
											General wards.				Officers' quarters.											
	Europeans and Eurasians.	Non-Europeans.	Europeans and Eurasians.	Non-Europeans.	Europeans and Eurasians.	Non-Europeans.	Total.		Europeans and Eurasians.	Non-Europeans.	Europeans and Eurasians.		Non-Europeans.		Europeans and Eurasians.		Non-Europeans.		Europeans and Eurasians.	Non-Europeans.	Total.	Male side.	Female side.	Total.	
											RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.															
1920	1,892	6,718	100·12	328·09	89	443	532	4,463	19·37	17·87	1	4	3½	0	11	½	3	4	11⅓	2	3	8⅔	4,830	57,096	61,926	259·60	122·66	382·26	8,469
1921	1,886	6,472	109·60	349·68	103	480	583	4,800	21·15	19·68	1	2	½	0	9	11½	2	15	11½	1	3	4½	5,143	55,505	60,648	271·88	116·9	388·78	6,780
1922	1,800	7,496	103·36	393·11	87	522	609	6,203	20·98	19·15	1	0	⅙	0	9	½	3	3	2½	1	7	7	4,782	56,746	61,528	263·41	122·21	385·72	7,509

APPENDIX B.

Statement showing the medical work done by each Medical Officer during 1922.

In-patients.

officers.	Class of patients.	Admissions.								Average daily sick.	Death-rate per 1,000.	Operations.								Average stay of patients in hospital.	Average cost of diet.		Post-mortem examinations.
		Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.			Remained.	Performed during the year.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.		Special wards.	General wards.	
																					RS. A. P.	RS. A. P.	
First Physician ...	Non-Europeans	30	930	960	503	187	144	85	41	47·68	88·54	...	1,274	1,274	...	1,274	...	...	...	18·16	1 8 5	0 13 2½	25
	Europeans	39	667	706	465	101	75	36	29	39·52	50·99	...	1,261	1,261	...	1,261	...	...	...	20·41	2 15 0½	1 2 2	...
	Total ...	69	1,597	1,666	968	288	219	121	70	87·2	72·63	...	2,535	2,535	...	2,535	...	...	...	38·57	...	...	25
Second Physician ...	Non-Europeans	41	953	994	486	267	97	106	38	45·39	106·64	...	545	545	...	545	...	...	...	16·66	1 5 1½	0 9 11½	27
	Europeans	18	210	228	125	55	19	15	14	14·11	65·79	...	58	58	...	...	...	...	...	22·88	2 4 8	0 13 6½	1
	Total ...	59	1,163	1,222	611	322	116	121	52	59·50	99·01	...	603	603	...	603	...	...	...	39·24	...	...	28
Third Physician ...	Non-Europeans	22	468	490	231	133	63	53	10	25·77	108·16	...	188	188	4	175	9	...	...	19·18	...	0 9 8½	28
	Europeans	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	22	469	491	231	133	64	53	10	25·77	108·16	...	188	188	4	175	9	...	...	...	...	...	28
Fourth Physician ...	Non-Europeans	45	1,137	1,202	542	410	129	74	47	51·15	61·56	...	476	476	...	476	...	...	...	15·54	1 5 9½	0 10 7	35
	Europeans	14	215	229	136	50	17	16	10	12·61	69·87	...	274	274	...	274	...	...	...	20·18	2 11 6½	0 14 5½	1
	Total ...	59	1,352	1,431	678	460	146	90	57	63·76	67·62	...	750	750	...	750	...	...	...	35·72	...	...	36
First Surgeon ...	Non-Europeans	59	1044	1,103	668	144	170	65	56	68·19	58·93	41	669	710	609	19	23	39	20	22·58	1 4 0½	0 8 3½	8
	Europeans	9	207	216	137	44	18	7	10	13·53	32·41	2	91	93	71	5	11	2	4	22·93	3 7 1	0 15 3½	...
	Total ...	68	1,251	1,319	805	188	188	72	66	81·72	54·59	43	760	803	680	14	34	41	24	45·50	...	...	8
Second Surgeon ...	Non-Europeans	75	1,419	1,494	684	351	326	71	62	83·57	47·52	27	481	508	354	86	13	21	34	20·45	1 5 9½	0 7 9⅔	13
	Europeans...	12	225	237	136	49	39	7	6	12·87	20·54	5	87	92	67	18	...	5	2	19·87	3 1 5	0 13 2½	...
	Total ...	87	1,644	1,731	820	400	365	78	68	96·44	45·05	32	568	600	421	104	13	26	36	40·32	...	...	13
Third Surgeon ...	Non-Europeans	70	1183	1,253	649	223	225	68	88	71·36	54·27	32	619	651	482	80	24	38	27	20·79	1 9 9	0 7 7¾	11
	Europeans	7	176	183	109	33	24	6	11	10·72	32·78	2	71	73	56	9	1	3	4	21·17	3 4 1¾	0 13 11¾	1
	Total ...	77	1,359	1,436	758	256	249	74	99	82·08	52·26	34	690	724	538	89	25	41	31	41·96	...	...	12
Total ...	Non-Europeans	342	7,154	7,496	3,763	1,715	1,154	522	342	393·11	69·84	100	4,252	4,352	1,449	2,055	69	98	81	19·15	1 7 7	0 9 0⅔	147
	Europeans	99	1,701	1,800	1,108	382	193	87	80	103·36	48·33	9	1,852	1,861	194	1,625	12	10	10	20·95	3 3 2½	1 0 0½	3
	Grand Total ...	441	8,855	9,296	4,871	2,047	1,347	609	422	496·47	65·51	109	6,094	6,203	1,643	4,280	81	108	91	20·47	...	...	150

Out-patients.

Medical officers.	Class of patients.	Total treated.					Average daily sick.					Operations.	Post-mortem examinations.
		Men.	Women.	Male children.	Female children.	Total.	Men.	Women.	Male children.	Female children.	Total.	Total.	
Resident Medical Officer and Assistant Surgeons.	Non-Europeans ...	40,171	8,352	4,554	3,769	56,746	250·7	53·15	32·27	24·81	360·93	5,897	5
	Europeans	2,524	1,228	597	433	4,782	12·71	6·54	3·14	2·30	24·69	1,612	3
	Total ...	42,695	9,480	5,151	4,202	61,528	263·41	59·69	35·41	27·11	385·62	7,509	8

APPENDIX C.

Statement showing "Cost per head per annum" of the Daily Average Strength of the General Hospital, Madras, for the year 1922, *as compared with those of* 1919, 1920 *and* 1921.

Name of hospital or dispensary.	Number of medical institutions.	Daily average number of in-patients treated.	Daily average number of out-patients treated.	Total of the daily average strength.	Total cost. Cost.	Total cost. Cost per head of the total average strength.	Establishment. Cost.	Establishment. Cost per head of the total average strength.	Diet. Cost.	Diet. Cost per head of the total average strength.	Medicines, both European and country. Cost.	Medicines, both European and country. Cost per head of the total average strength.	Miscellaneous charges. Cost.	Miscellaneous charges. Cost per head of the total average strength.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
(Government General Hospital, Madras. Founded in 1768.) 1919.	1	421·71	387·01	806·72	5,13,560 0 0	635 0 4	2,06,710 0 0	255 9 7	1,01,952 0 0	121 1 1	66,552 0 0	82 4 8	78,716 0 0	97 5 4
1920.	1	428·21	381·46	809·67	7,02,288 0 0	867 6 0	2,32,031 0 0	287 10 6	1,45,790 0 0	340 6 8	60,012 0 0	74 2 0	1,37,712 0 0	170 1 3
1921.	1	459·28	386·78	846·06	6,54,006 0 0	771 2 9	2,47,410 0 0	291 11 9	1,19,980 0 0	141 7 3	82,334 0 0	97 1 4	1,07,767 0 0	127 1 2
1922.	1	496·47	385·62	882·09	6,52,227 0 0	739 6 7	2,78,141 0 0	309 11 4	1,30,170 0 0	147 9 1	72,447 0 0	82 2 1	1,18,773 0 0	134 10 5

Column 6 is the same as column 23 in Statement H, *minus* column 11 of the same.
Column 8 is the same as column 4 of Statement H.
Column 10 is the total of columns 16 and 17 of Statement H.
Column 12 is the same as column 18 of Statement H.
Column 14 is the same as column 19 of Statement H, *minus* column 11 of the same.
Cost of petty repairs to buildings is included in column 20 of Statement H.

APPENDIX D.

INDIANS.

Statement showing the in-patients treated with results in the year 1922.

No.	Diseases.	Remained.	Admitted.	Total.	Results. Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.	Total.
1	Cholera, Asiatic...	...	7	7	..	3	4	...	...	7
2	Dysentery	4	203	207	141	16	8	28	14	207
3	Enteric fever	10	78	88	63	...	...	17	8	88
4	Gonococcal infection	5	66	71	23	25	22	1	...	71
5	Syphilis (primary and secondary)	20	338	358	87	174	78	3	16	358
6	Kala Azar	6	16	22	...	8	6	2	6	22
7	Leprosy	...	4	4	...	...	4	..	...	4
8	Malaria	8	474	482	328	98	10	24	22	482
9	Plague	...	..	..	...	...	...	...	...	...
10	Influenza	...	221	221	216	3	...	2	...	221
11	Relapsing fever...	...	4	4	3	1	...	...	...	4
12	Pneumococcal infection of the lung... ...	20	256	276	164	17	20	67	8	276
13	Pyrexia of uncertain origin	5	53	58	37	6	13	2	...	58
14	Rheumatic fever	6	82	88	29	44	15	...	...	88
15	Smallpox	2	8	10	...	...	10	...	...	10
16	Tuberculosis of the lung	12	171	183	1	70	60	43	9	183
17	Other tubercular diseases	10	168	178	68	48	46	4	12	178
18	All other infective diseases	14	392	406	181	88	63	44	25	406
19	Anæmia	3	144	147	63	58	12	14	..	147
20	Diabetes...	2	33	35	5	16	8	1	5	35
21	Scurvy	...	...	...	...	...	...	...	...	...
22	Rickets	...	2	2	...	1	...	1	...	2
23	Other diseases due to disorders of nutrition and metabolism.	1	40	41	14	12	8	2	5	41
24	Diseases of the ductless or endocrine glands.	2	3	5	3	...	2	...	...	5
25	New growths — Non-malignant	7	10	17	10	5	...	2	..	17
26	New growths — Malignant	8	104	112	33	8	54	16	1	112
27	All other general diseases	15	76	91	41	26	13	3	8	91
28	Diseases of the nervous system — Diseases of the nerves, spinal cord, brain and menings. Diseases of which the pathological basis is not accurately known. Mental diseases.	...	178	178	43	69	45	6	15	178
29	Diseases of the eye	...	10	10	3	5	2	...	...	10
30	Do. ear	...	17	17	3	8	5	...	1	17
31	Do. nose	...	33	33	22	11	..	...	..	33
32	Do. circulatory system	14	141	155	22	72	17	35	9	155
33	All diseases of the respiratory system except pneumonia and tubercle of the lungs.	4	218	222	107	72	25	13	5	222
34	Diseases of the stomach	2	17	19	2	9	8	...	...	19
35	Do. intestines	4	74	78	39	12	16	8	3	78
36	Abscess of the liver	4	55	59	36	8	9	4	2	59
37	All other diseases of the liver	6	87	93	7	43	24	16	3	93
38	Do. digestive system .	45	995	1040	557	251	146	48	38	1,040
39	Acute or suppurative inflammation of the lymphatic glands.	8	118	126	82	25	16	3	...	126
40	Acute and chronic nephritis	...	20	20	3	7	7	1	2	20
41	All other diseases of the urinary organs ...	11	260	271	97	111	47	13	3	271
42	Other diseases of the generative system ...	16	297	313	230	31	32	9	11	313
43	Diseases of the organs of locomotion ...	4	89	93	29	31	16	6	11	93
44	Do. Arcolar tissue ...	25	569	594	404	76	69	25	20	594
45	Inflammation ulcerative	4	189	193	100	51	26	9	7	193
46	Other diseases of the skin	2	127	129	54	28	32	7	8	129
47	All other local diseases	15	83	103	24	9	57	...	13	103
48	Injuries (general and local)	20	607	627	384	59	92	42	50	627
49	Poisoning — By opium	...	2	2	...	...	2	...	...	2
	Poisoning — By other poisons	...	8	8	5	...	...	1	2	8
50	Labour — Normal	...	...	...	...	...	...	...	...	...
	Labour — Abnormal	...	...	...	...	...	...	...	...	...
	Total ...	342	7,154	7,496	3,763	1,718	1,154	522	342	7,496

APPENDIX E.

EUROPEANS AND ANGLO-INDIANS.

Statement showing the in-patients treated with results in the year 1922.

No.	Disease	Remained.	Admitted.	Total.	Results. Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.	Total
1	Cholera, Asiatic	...	1	1	1	...	...	...	...	1
2	Dysentery	...	68	68	52	7	7	1	1	68
3	Enteric fever	3	38	41	30	1	...	5	5	41
4	Gonococcal infection	2	9	11	4	5	2	...	...	11
5	Syphilis (primary and secondary)	6	36	42	13	18	11	...	...	42
6	Kala Azar	1	13	14	6	2	1	...	5	14
7	Leprosy	...	...	...	...	...	...	...	...	...
8	Malaria	5	106	111	74	19	3	11	4	111
9	Plague	...	...	...	...	...	...	...	...	...
10	Influenza	...	25	25	23	1	1	...	...	25
11	Relapsing fever	...	2	2	1	...	...	1	...	2
12	Pneumococcal infection of the lung	6	45	51	30	3	...	16	2	51
13	Pyrexia of uncertain origin	5	47	52	46	3	...	1	2	52
14	Rheumatic fever	3	36	39	14	18	7	...	...	39
15	Smallpox	2	1	3	...	...	3	...	...	3
16	Tuberculosis of the lung	2	30	32	1	13	11	5	2	32
17	Other tubercular diseases	5	7	12	2	5	2	...	3	12
18	All other infective diseases	8	190	198	168	4	11	7	8	198
19	Anæmia	...	19	19	8	8	2	1	...	19
20	Diabetes	...	25	25	13	8	4	...	...	25
21	Scurvy	...	1	1	...	1	...	...	...	1
22	Rickets	...	1	1	...	...	1	...	...	1
23	Other diseases due to disorders of nutrition and metabolism.	...	6	6	3	2	1	...	...	6
24	Diseases of the ductless or endocrine glands.	...	1	1	...	1	...	...	...	1
25	New growths — Non-malignant	...	2	2	2	...	...	...	...	2
26	New growths — Malignant	...	17	17	7	4	4	...	2	17
27	All other general diseases	2	33	35	16	10	2	5	2	35
28	Diseases of the nervous system. (Diseases of the nerves, spinal cord, brain and menings. Diseases of which the pathological basis is not accurately known. Mental diseases.)	3	67	70	23	32	12	1	2	70
29	Disease of the eye	...	3	3	1	1	1	...	...	3
30	Do. ear	...	15	15	6	1	...	8	...	15
31	Do. nose	...	1	1	...	1	...	...	...	1
32	Do. circulatory system	2	25	27	7	12	3	2	3	27
33	All diseases of the respiratory system except pneumonia and tuberculosis of the lungs.	5	77	82	40	29	5	...	8	82
34	Diseases of the stomach	...	11	11	6	5	...	...	...	11
35	Do. intestines	4	22	26	16	2	3	1	4	26
36	Abscess of the liver	1	12	13	7	...	4	2	...	13
37	All other diseases of the liver	...	16	16	5	10	...	1	...	16
38	Do. digestive system	6	265	271	175	44	36	7	9	271
39	Acute or suppurative inflammation of the lymphatic glands.	3	36	39	31	3	4	...	1	39
40	Acute and chronic nephritis	...	3	3	...	1	1	1	...	3
41	All other diseases of the urinary organs	...	63	63	24	21	9	6	3	63
42	Other diseases of the generative system	8	69	77	68	6	...	...	3	77
43	Diseases of the organs of locomotion	2	6	8	5	..	1	..	2	8
44	Do. Arcolar tissue	1	101	102	88	8	6	...	...	102
45	Inflammation ulcerative	5	43	48	26	13	7	2	...	48
46	Other diseases of the skin	4	28	32	22	5	5	...	...	32
47	All other local diseases	4	19	23	3	...	17	...	3	23
48	Injuries (general and local)	1	59	60	40	5	6	3	6	60
49	Poisoning — By opium	...	...	...	...	...	...	...	...	...
	Poisoning — By other poisons	...	1	1	1	...	...	...	...	1
50	Labour — Normal	...	...	...	...	...	...	...	...	...
	Labour — Abnormal	...	...	...	...	...	...	...	...	...
	Total	99	1,701	1,800	1,108	1,332	198	87	80	1,800

APPENDIX F.

Table showing the number of admissions, etc., from 1862.

Years.	In-patients. Total treated. Europeans. Medical	Europeans. Surgical	Indians. Medical	Indians. Surgical	Average daily sick. Europeans. Medical	Europeans. Surgical	Indians. Medical	Indians. Surgical	Deaths. Europeans. Medical	Europeans. Surgical	Indians. Medical	Indians. Surgical	Total. Total treated. Europeans	Indians	Average daily sick. Europeans	Indians
1862	1,118	432	2,123	1,104	39·67	17·52	88·30	45·91	60	14	441	56	5,506	12,186	84·75	221·01
1863	1,229	560	3,306	1,804	45·86	26·37	94·94	75·67	80	19	876	113	7,166	17,511	104·38	265·54
1864	1,326		2,536		75·68		139·92		76		200		6,470	18,530	109·84	258·19
1865	1,460		2,345		70·23		136·06		46		164		6,306	31,786	105·82	281·99
1866	1,278		2,566		56·21		134·81		57		172		6,671	20,769	95·18	277·65
1867	1,402		2,240		60·57		119·73		58		131		6,765	21,144	101·90	278·15
1868	1,469		2,221		61·59		128·39		57		171	18	6,974	20,919	96·79	262·49
1869	782		2,088		62·82		133·63		40		75		5,983	24,223	98·44	287·20
1870	663	525	2,173	3,451	65·83	07·43	122·86	149·38	39	15	70	32	6,164	24,679	100·40	289·60
1871	738	402	2,313	3,946	78·07	71·14	138·22	172·16	49	3	63	30	6,093	27,442	104·37	307·89
1872	991	409	2,238	3,416	72·83	59·89	123·71	136·58	46	9	56	31	7,485	29,037	105·65	307·68
1873	880	460	2,327	3,077	59·89	66·13	136·58	158·58	60	10	74	46	8,133	26,579	99·49	306·46
1874	352	123	1,482	3,161	66·13	67·43	158·58	149·38	64	2	23	18	8,366	30,567	110·52	339·57
1st quarter of 1874	922	551	3,451		67·43	71·14	149·38		39	25	65	54	9,520	33,868	116·39	370·52
1874–75	921	458	3,946		71·14	172·16			67	11	127	41	10,361	36,351	126·47	412·64
1875–76																
1876–77	1,385		3,416		68·24	174·61			75	14	441	56	9,020	35,386	116·08	424·89
1877	1,272		3,077		81·41	181·98			74	19	876	113	9,232	40,084	133·47	461·59
1878	1,329		3,161		90·48	178·13			62				9,500	44,611	130·46	474·55
1879																
1880																
1881																
1882																
1883																
1884																
1885																
1886																
1887																
1888																
1889																
1890																
1891																
1892																
1893																

APPENDIX F—*cont.*

Table showing the number of admissions, etc., from 1862—cont.

Years.	In-patients.												Out-patients.				Total.			
	Total treated.				Average daily sick.				Deaths.				Total treated.		Average daily sick.		Total treated.		Average daily sick.	
	Europeans.		Indians.		Europeans.		Indians.		Europeans.		Indians.		Total.									
	Medical.	Surgical.	Medical.	Surgical.	Medical.	Surgical.	Medical.	Surgical.	Medical.	Surgical.	Medical.	Surgical.	Medical.	Surgical.	Europeans.	Indians.	Europeans.	Indians.	Europeans.	Indians.	Europeans.	Indians.
1894	1,548		3,947		84·21		197·11		57	309		366	8,465	42,350	49·54	293·27	10,013	46,297	133·75	490·38
1895	1,620		4,233		109·18		260·81		77	300		377	10,656	42,309	61·83	294·23	12,276	46,542	171·01	555·04
1896	2,150		5,232		111·00		267·91		98	344		442	14,333	47,442	74·48	328·52	16,483	52,674	185·48	596·13
1897	2,059		5,823		111·59		266·78		120	413		533	14,268	51,353	79·93	346·48	16,327	57,176	191·52	633·26
1898	1,632		5,119		102·33		282·83		106	449		555	12,993	45,328	79·54	318·28	14,675	50,447	181·87	601·11
1899	1,527		4,677		196·58		266·08		109	412		521	11,751	42,390	75·87	313·95	13,278	47,067	172·45	580·03
1900	2,028		5,585		110·24		294·50		138	467		605	11,178	51,829	69·06	370·02	13,206	57,414	179·30	664·52
1901	1,886		5,032		100·74		278·93		131	523		654	10,465	56,532	67·18	385·13	12,351	61,564	167·92	664·06
1902	2,015		5,302		109·08		279·51		122	548		665	10,375	50,395	70·92	394·65	12,390	55,697	180·00	674·16
1903	1,943		5,284		119·49		283·01		138	506		644	10,623	50,219	72·36	381·51	11,566	55,453	191·85	664·52
1904	1,938		5,036		117·24		272·46		121	450		571	10,186	46,518	68·94	343·88	12,124	51,554	186·18	616·34
1905	1,979		5,287		108·93		281·30		145	477		622	8,720	45,036	57·14	353·64	10,699	50,323	166·07	634·94
1906	1,933		4,668		115·26		283·75		133	425		558	8,007	46,539	49·65	345·46	9,940	51,207	164·91	629·21
1907	1,747		4,592		103·17		284·03		125	393		518	7,038	46,262	46·53	359·36	8,785	50,854	149·70	643·39
1908	1,979		5,533		111·85		308·63		141	448		589	6,538	45,705	45·83	382·91	8,517	51,238	157·78	691·54
1909	1,946		5,629		115·08		305·61		132	514		646	6,097	45,998	47·06	411·16	8,043	51,627	162·09	716·77
1910	2,088		5,818		113·12		309·95		106	508		614	6,120	45,876	46·72	407·33	8,158	51,694	159·84	717·28
1911	2,066		5,705		121·41		312·65		186	393		529	6,107	41,453	40·77	393·87	8,173	47,158	162·18	706·52
1912	2,022		6,270		108·54		327·59		98	454		552	5,740	45,232	35·04	341·75	7,762	51,502	143·58	669·34
1913	2,057		5,579		123·03		332·63		96	416		512	6,229	47,006	35·24	349·11	8,284	52,585	159·27	681·74
1914	2,127		6,179		120·18		318·99		78	406		484	7,047	55,807	38·66	421·25	9,174	61,986	158·84	740·24
1915	1,823		5,740		109·33		291·99		87	353		440	5,900	56,958	27·41	409·77	7,688	62,432	136·74	701·76
1916	1,748		6,176		94·47		284·76		76	301		377	5,160	53,177	27·57	427·30	6,908	59,353	122·04	712·06
1917	1,688		5,673		93·90		278·70		62	304		366	4,690	55,183	25·79	459·57	6,378	60,856	119·69	738·27
1918	1,881		6,491		93·25		311·12		82	540		622	4,689	57,032	25·42	383·60	6,520	63,523	118·67	694·72
1919	1,861		6,551		95·09		326·63		100	453		553	4,639	55,460	23·53	363·48	6,500	62,011	118·61	690·11
1920	1,893		6,718		100·12		328·09		89	443		532	4,836	57,096	25·93	356·53	6,722	63,814	126·05	684·62
1921	1,886		6,472		109·60		349·68		105	480		585	5,143	55,505	23·71	365·07	7,029	61,977	133·31	714·75
1922	1,800		7,496		108·36		393·11		87	522		609	4,782	56,746	24·69	360·93	6,582	64,242	128·05	754·04

Nominal Register of Medical Officers of the Government

(G.O. No. 371, Educational, dated 2nd July 1901; G.O. No. 826, Public, dated 13th August 1901; G.O

Superintendent.				First Physician.				Second Physician.				Third Physician.				Fourth Physician			
Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office	
		From	To			From	To			From	To			From	To			From	
W. R. Browne, M.D., Lieut.-Col., I.M.S.	Permanent.	2 Aug. 1901	18 May 1903	R. Robertson, M.B., Major, I.M.S.	Permanent.	2 Aug. 1901	29 June 1913	F. J. Crawford, M.D., Major, I.M.S.	Permanent.	2 Aug. 1901	10 April 1905	R. K. Mitter, Captain, I.M.S.	Permanent.	2 Aug. 1901	2 Mar. 1902	G. G. Giffard, Major, I.M.S.	Permanent.	2 Aug	
F. J. Crawford, M.D., Major, I.M.S.	Acting.	19 May 1902	29 June 1902	F. J. Crawford, M.D., Major, I.M.S.	Acting.	9 Jan. 1903	27 Feb. 1903	F. D. S. Fayrer, Captain, I.M.S.	Acting.	2 Aug. 1901	25 Feb. 1902	W. H. Murray, M.B., Plague Doctor.	Acting.	2 Aug. 1901	18 Nov. 1901	P. C. Gabbett, Captain, I.M.S.	Acting.	2 Aug	
J. Maitland, M.D., Lieut.-Col., I.M.S.	Do.	7 Nov. 1902	18 May 1903	A. Miller, Captain, I.M.S.	Do.	28 Feb. 1903	9 April 1903	C. Donovan, M.D., Captain, I.M.S. (Promoted to the rank of Major on 28th July 1903.)	Do.	9 Jan. 1903	10 Mar. 1905	H. St. J. Fraser, Captain, I.M.S.	Do.	19 Nov. 1901	2 Mar. 1902	F. D. S. Fayrer, Captain, I.M.S.	Do.	27 Feb	
J. Maitland, M.D., Lieut.-Col., I.M.S.	Permanent.	19 May 1903	31 Mar. 1906	W. A. Lee, Lieut.-Col., I.M.S.	Do.	8 May 1904	31 Oct. 1905					Do.	Permanent.	3 Mar. 1902	13 Mar. 1903	T. H. Symons, Captain, I.M.S.	Do.	22 Fe	
R. Robertson, Major, I.M.S.	Acting.	20 May 1903	30 June 1903	C. Donovan, M.D., Major, I.M.S.	Do.	22 May 1910 A.N.	16 Nov. 1910	C. Donovan, M.D., Major, I.M.S.	Permanent.	11 April 1905	16 June 1914	F. D. S. Fayrer, Captain, I.M.S.	Acting.	27 Mar. 1902	4 April 1902	D. H. Tucker, Captain, I.M.S.	Do.	14 A	
W. A. Lee, Lieut.-Col., I.M.S.	Do.	18 May 1904	17 June 1904	H. Kirkpatrick, Major, I.M.S.	Do.	24 Mar. 1911 A.N.	7 July 1911	T. H. Foulkes, Major, I.M.S.	Acting.	8 Dec. 1905	7 July 1907	H. Kirkpatrick, Captain, I.M.S.	Do.	5 April 1902	8 Dec. 1902	T. H. Symons, Captain, I.M.S.	Permanent.	19 M	
W. B. Browning, C.I.E., Lieut.-Col., I.M.S.	Do.	1 Mar. 1905	31 Mar. 1906	W. J. Niblock, Major, I.M.S.	Do.	25 June 1912	(One day only.)	E. W. Browne, Captain, I.M.S.	Do.	22 May 1910 A.N.	16 Nov. 1910	W. H. Tucker, Captain, I.M.S.	Do.	9 Dec. 1902	3 July 1903	F. F. Elwes, Captain, I.M.S.	Acting.	4 Jul	
W. B. Browning, C.I.E., Lieut.-Col., I.M.S.	Permanent.	1 April 1906	16 May 1910	W. Molesworth, Lieut.-Col., I.M.S.	Do.	26 June 1912	15 Dec. 1912 F.N.	A. C. Ingram, Captain, I.M.S.	Do.	15 Dec. 1910 A.N.	27 Aug. 1911	H. Kirkpatrick, Captain, I.M.S. (Promoted to the rank of Major).	Permanent.	14 Mar. 1903	7 April 1914	F. F. Elwes, Captain, I.M.S.	Do.	16 Ma	
F. J. Crawford, M.D., Major, I.M.S.	Acting.	11 May 1906	22 Dec. 1906	F. F. Elwes, Major, I.M.S.	Do.	15 Dec. 1912	5 June 1913	T. S. Ross, Major, I.M.S.	Do.	28 Aug. 1911	30 Nov. 1911	F. F. Elwes, Captain, I.M.S.	Acting.	4 July 1903	12 July 1903	T. W. Harley, Lieut., I.M.S.	Do.	20 May	
F. J. Crawford, M.D., Lieut.-Col., I.M.S.	Do.	7 May 1908 A.N.	5 Nov. 1909 (Died.)	H. Kirkpatrick, Major, I.M.S.	Do.	6 June 1913	3 July 1913	W. C. Gray, Captain, I.M.S.	Do.	1 Dec. 1911	28 Jan. 1912	T. H. Symons, Captain, I.M.S.	Do.	13 July 1903	30 Aug. 1903	W. C. Long, Captain, I.M.S.	Do.	13 July	
R. Robertson, Lieut.-Col., I.M.S.	Do.	28 Sep. 1909	22 Nov. 1909	F. F. Elwes, Major, I.M.S.	Made permanent on 30 June 1913.			F. F. Elwes, Major, I.M.S.	Do.	29 Jan. 1912	14 Dec. 1912	W. H. Tucker, Captain, I.M.S.	Do.	31 Aug. 1903	30 Oct. 1903	F. F. Elwes, Captain, I.M.S.	Do.	12 Ma	
C. M. Thompson, M.B., Lieut.-Col., I.M.S.	Do.	23 Nov. 1909	16 May 1910					C. G. Webster, Major, I.M.S.	Do.	15 Dec. 1912 F.N.	28 July 1913	D. C. Kemp, Captain, I.M.S.	Do.	21 Feb. 1904	1 Mar. 1904	W. C. Long, Captain, I.M.S.	Do.	12 June	
C. M. Thompson, M.B., Lieut.-Col., I.M.S.	Permanent.	17 May 1910	31 Mar. 1911 (Retired.)	F.F. Elwes, Major, I.M.S.	Permanent.	30 June 1913	...	J. W. Illius, Major, I.M.S.	Do.	29 July 1913	29 June 1914	F. F. Elwes, Captain, I.M.S.	Do.	2 Mar. 1904	19 Oct. 1904	W. R. J. Scroggie, Captain, I.M.S.	Do.	20 May	
W. J. Niblock, Major, I.M.S.	Acting.	1 April 1911	4 April 1911	J. M. Skinner, Captain, I.M.S.	Acting.	13 June 1914	16 June 1914	E. C. C. Maunsell, Major, I.M.S.	Do.	30 June 1914	12 Aug. 1914	D. G. Rai, Lieut., I.M.S.	Do.	20 Oct. 1904	25 Oct. 1904	D. G. Rai, Captain, I.M.S.	Do.	26 May	
E. Hasel Wright, Lieut.-Col., I.M.S.	Sub. *pro tem.*	5 April 1911	7 July 1911	W. Molesworth, C.I.E., Lieut.-Col., I.M.S.	Do.	17 June 1914	14 Sep. 1914	J. W. Illius, Major, I.M.S.	Do.	13 Aug. 1914	7 Sep. 1914	D. G. Rai, Lieut., I.M.S.	Do.	15 May 1905	12 Nov. 1905				
R. Robertson, Lieut.-Col., I.M.S.	Acting.	8 July 1911	31 Mar. 1912	W. Molesworth, C.I.E., M.B., Lieut.-Col., I.M.S.	Do.	24 May 1915	14 June 1915	A. C. Ingram, M.D., Captain, I.M.S.	Do.	8 Sep. 1914	14 Sep. 1914	J. W. Illius, Captain, I.M.S.	Do.	16 Feb. 1906	29 Mar. 1906	E. W. Browne, Captain, I.M.S.	Do.	2 Dec.	
R. Robertson, Lieut.-Col., I.M.S.	Permanent.	1 April 1912	30 June 1913	W. Molesworth, C.I.E., M.B., Lieut.-Col., I.M.S.	Do.	18 Sep. 1915	27 Sep. 1915	W. Molesworth, C.I.E., M.B., Lieut.-Col., I.M.S.	Made permanent on 17 June 1914.			J. W. Illius, Captain, I.M.S.	Do.	11 May 1906	22 July 1906	E. W. Browne, Captain, I.M.S.	Permanent.	7 May	
W. J. Niblock, Major, I.M.S.	Acting.	25 June 1912	(One day only.)	J. J. Robb, M.B., B.Ch., B.A.O., D.P.H., Major, I.M.S.	Do.	1 June 1917	30 June 1917					W. H. Tucker, Captain, I.M.S.	Do.	23 July 1906	22 Dec. 1906				
W. Molesworth, M.B., Lieut.-Col. I.M.S.	Do.	26 June 1912	15 Dec. 1912 F.N.	E. M. Illington, M.B., L.R.C.P., D.T.M., Lieut.-Col., I.M.S.	Do.	5 May 1918	12 June 1918	Do.	Permanent,	17 June 1914	...	T. H. Symons, Captain, I.M.S.	Do.	20 May 1907	19 June 1907	J. M. Skinner, Captain, I.M.S.	Acting.	22 May	
C. G. Webster, Major, I.M.S.	Do.	15 Dec. 1912 A.N.	28 July 1913					F. F. Elwes, C.I.E., M.D., Major, I.M.S.	Acting.	15 June 1915	4 July 1915	D. S. A. O'Keeffe, Captain, I.M.S.	Do.	24 Mar. 1908	2 April 1908	M.4 Wards distributed among M-1, M-2 and M-3.	...	18 July	
H. Kirkpatrick, Major, I.M.S.	Do.	29 July 1913	7 April 1914	C. Donovan, B.A., M.D., Lieut.-Col., I.M.S.	Do.	19 July 1918	23 July 1918	Do.	Do.	13 May 1916	1 June 1916	J. W. Illius, Captain, I.M.S.	Do.	3 April 1908	15 Oct. 1908				
W. J. Niblock, M.B., Major, I.M.S.	Do.	8 April 1914	16 June 1914	J. Kirkwood, M.B., F.R.C.S.E., Major, I.M.S.	Do.	18 Sep. 1918	27 Sep. 1918	Dr. F. R. S. Milton, F.R.C.S., M.R.C.P.	Do.	2 June 1916	1 July 1916	A. C. Ingram, Captain, I.M.S.	Do.	16 Oct. 1908	21 May 1909	A. C. Ingram, Captain, I.M.S.	Acting.	28 Aug.	
W. Molesworth, C.I.E., M.B., Lieut.-Col., I.M.S.	Permanent.	17 June 1914	...		Do.	Dec. 1918	11 Dec. 1918	F. F. Elwes, C.I.E., M.D., Major, I.M.S.	Do.	2 July 1916	8 Jan. 1917	C. Donovan, M.D., Major, I.M.S.	Do.	22 May 1909	23 May 1909				
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	15 June 1915	4 July 1915		Do.	3 May 1919	25 June 1919	T. S. Ross, L.R.C.P., L.R.C.S., Major, I.M.S.	Do.	9 Jan. 1917	30 April 1917	E. W. Browne, Captain, I.M.S.	Do.	24 May 1909	3 July 1909	J. L. Macrae, Major, I.M.S.	Do.	3 June	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Do.	3 May 1916	31 May 1916					F. F. Elwes, C.I.E., M.D., Major, I.M.S.	Do.	1 May 1917	31 May 1917	A. C. Ingram, Captain, I.M.S.	Do.	4 July 1909	15 May 1910	A. C. Ingram, Captain, I.M.S.	Do.	3 July	
C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Rtd.).	Do.	1 June 1916	17 Sep. 1916	A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Do.	22 Sep. 1919	30 Sep. 1919	C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Rtd.).	Do.	1 June 1917	3 June 1917	E. Roberts, Captain, I.M.S.	Do.	16 May 1910	15 June 1910	A. J. H. Russell, Captain, I.M.S.	Do.	30 June	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Do.	18 Sep. 1916	17 Oct. 1916	F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Permanent.	1 Oct. 1919	18 Mar. 1920					A. C. Ingram, Captain, I.M.S.	Do.	16 June 1910	15 Dec. 1910	J. M. Skinner, Captain, I.M.S.	Do.	3 July	
C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Rtd.).	Do.	18 Oct. 1916	8 Sep. 1917	A. G. Ingram, M.D., Major, I.M.S.	Acting.	19 Mar. 1920	9 May 1920	† T. S. Ross, L.R.C.P., L.R.C.S., Major, I.M.S.	Do.	One day on	4 June 1917	T. W. Harley, Captain, I.M.S.	Do.	20 June 1911	6 Nov. 1911	A. C. Ingram, Captain, I.M.S.	Do.	15 Sep.	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Do.	9 Sep. 1917	8 Oct. 1917	A. J. H. Russell, M.D., Major, I.M.S.	Do.	10 May 1920	9 June 1920	C. H. L. Palk, M.B., F.R.C.S. (Ed.),	Do.	5 June 1917	21 June 1917	J. L. Macrae, Major, I.M.S.	Do.	3 June 1912	2 July 1912	T. S. Ross, Major, I.M.S.	Sub. *pro tem.*	6 Nov.	
*C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Rtd.).	Do.	9 Oct. 1917	19 Jan. 1917	A. C. Ingram, M.D., I.M.S.	Do.	10 June 1920	26 May 1921	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Do.	22 June 1917	...	R. E. Wright, Captain, I.M.S.	Do.	8 April 1914	30 June 1914	C. A. P. Hingston, M.R.C.S., L.R.C.P., Major, I.M.S.	Acting.	11 Nov.	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Do.	20 Jan. 1917	5 Feb. 1918	G. E. Malcomson, Major, I.M.S.	Do.	17 May 1921	20 June 1921	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Do.	23 Dec. 1918	27 Dec. 1918	A. J. H. Russell, M.A., M.D., B.C.H., Captain, I.M.S.	Do.	1 July 1914	9 Oct. 1914	Rao Sahib M. C. Koman, L.M. & S.	Do.	1 Feb.	
E. M. Illington, M.B., M.R.C.S., L.R.C.P., D.T.M., Lieut.-Col., I.M.S.	Sub. *pro tem.*	6 Feb. 1918	17 June 1918	F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Permanent.	21 June 1921	16 Dec. 1921	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	28 Dec. 1918	12 Dec. 1919	W. Molesworth, C.I.E., M.B., Lieut.-Col., I.M.S.	Do.	10 Oct. 1914	17 Jan. 1915	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Do.	7 June	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	18 June 1918	28 July 1918	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Acting.	7 Dec. 1921	26 Dec. 1921	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Acting.	13 Dec. 1919	20 Dec. 1919	O. H. L. Palk, Major, I.M.S. (Rtd.).	Do.	18 Jan. 1915	23 April 1915	Rao Sahib M. C. Koman, L.M. & S.	Do.	16 June	
E. M. Illington, M.B., M.R.C.S., L.R.C.P., D.T.M., Lieut.-Col., I.M.S.	Sub. *pro tem.*	28 July 1918	6 Oct. 1918	F. F. Elwes, C.I.E., M.D., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Do.	4 Jan. 1922	31 Dec. 1922	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	21 Dec. 1919	30 April 1920	A. C. Ingram, M.D., Major, I.M.S.	Permanent.	8 Sep. 1914	...	Rao Sahib M. C. Koman, L.M. & S.	Do.	10 July	
W. J. Niblock, Lieut.-Col., I.M.S.	Acting.	7 Oct. 1918	16 Oct. 1918					M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Acting.	1 May 1920	30 June 1920	T. S. Ross, L.R.C.P., L.R.C.S., Major, I.M.S.	Sub. *pro tem.*	6 Nov. 1915	30 April 1917	M. R. Guruswami Mudaliyar, B.A., M.B., C.M.	Do.	29 July	
E. M. Illington, M.B., M.R.C.S., L.R.C.P., D.T.M., Lieut.-Col., I.M.S.	Sub. *pro tem.*	17 Oct. 1918	22 Dec. 1918					M. R. Guruswami Mudaliyar, B.A., M.D., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	1 July 1920	5 Sep. 1920	Rao Sahib M. C. Koman, L.M.S., Civil Asst. Surgeon.	Acting.	1 May 1917	3 June 1917	J. Kirkwood, M.B., F.R.C.S.E., Major, I.M.S.	Do.	29 July	
W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	23 Dec. 1918	2 Jan. 1919					G. E. Malcomson, M.D., Major, I.M.S.	Do.	7 Sep. 1920	5 May 1921	A. C. Ingram, B.A., M.D., Major, I.M.S.	Permanent.	4 Jan. 1918	12 June 1919	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	30 Sep.	
E. M. Illington, M.B., M.R.C.S., L.R.C.P., D.T.M., Lieut.-Col., I.M.S.	Sub. *pro tem.*	3 Jan. 1919	9 Mar. 1919					A. C. Ingram, M.D., I.M.S.	Acting.	6 May 1921	9 May 1921	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Acting.	13 June 1919	22 June 1919	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Acting.	1 May	
‡ T. H. Symons, M.B.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Permanent.	10 Mar. 1919	5 April 1919 F.N.					G. E. Malcomson, Major, I.M.S.	Sub. *pro tem.*	10 May 1921	21 July 1921	A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Sub. *pro tem.*	12 July 1919	26 Dec. 1919	Dr. T. S. Tirumurti, B.A., M.B.C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	31 May	
‡ E. M. Illington, M.B.C.S., L.R.C.P., F.R.C.S., Lieut.-Col., I.M.S.	Acting.	5 April 1919	26 June 1919					M. R. Guruswami Mudaliyar, B.A., M.D., C.M., Civil Asst. Surgeon.	Acting.	22 July 1921	25 July 1921	F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Acting.	27 Dec. 1919	2 Jan. 1920	M. R. Guruswami Mudaliyar, B.A., M.B., C.M., Civil Asst. Surgeon.	Acting.	30 Sep.	
F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Do.	27 June 1919	6 July 1919					G. E. Malcomson, Major, I.M.S.	Sub. *pro tem.*	26 July 1921	26 Dec. 1921	A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Sub. *pro tem.*	3 Jan. 1920	8 June 1920	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	9 Oct.	
E. M. Illington, M.B.C.S., L.R.C.P., F.R.C.S., Lieut.-Col., I.M.S.	Do.	7 July 1919	31 Aug. 1919					F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Acting.	27 Dec. 1921	31 Dec. 1921	A. F. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Sub. *pro tem.*	8 Jan. 1920	9 June 1920	M. L. Kamath, B.A., M.D., C.M., Civil Asst. Surgeon.	Sub. *pro tem.*	29 Dec.	
F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Do.	1 Sep. 1919	21 Sep. 1919					G. E. Malcomson, Major, I.M.S.	Sub. *pro tem.*	1 Jan. 1922	14 May 1922	A. C. Ingram, M.D., Major, I.M.S.	Acting.	10 June 1920	1 July 1920	M. R. Guruswami Mudaliyar, B.A., M.D., C.M., Civil Asst. Surgeon.	Do.	7 Sep.	
A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Do.	22 Sep. 1919	30 Sep. 1919					F. F. Elwes, C.I.E., M.D., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Acting.	15 May 1922	23 June 1922	A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Permanent.	2 July 1920	30 Apr. 1921	F. F. R. Carreck, Major, I.M.D.	Acting.	4 May	
F. F. Elwes, M.D., C.I.E., Lieut.-Col., I.M.S.	Do.	30 Sep. 1919	18 Mar. 1920					J. M. Skinner, M.B., B.Ch., D.T.M., Major, I.M.S.	Do.	23 June 1922	31 Dec. 1922	A. C. Ingram, M.D., Major, I.M.S.	Acting.	1 May 1921	4 May 1921	M. R. Guruswami, B.A., M.D., C.M., Civil Asst. Surgn.	Sub. *pro tem.*	1 June	
A. C. Ingram, M.D., Major, I.M.S.	Do.	19 Mar. 1920	9 May 1920									T. S. Tirumurti, B.A., M.B., C.M., Civil Asst. Surgeon.	Do.	5 May 1921	7 May 1921	M. R. Guruswami Mudaliyar, B.A., M.D., C.M., Civil Asst. Surgeon.	Acting.	1 Jan.	
A. J. H. Russell, M.A., M.D., B.C.H., Major, I.M.S.	Do.	10 May 1920	8 June 1920									G. E. Malcomson, Major, I.M.S.	Do.	8 May 1921	12 May 1921	T. S. Tirumurti, B.A., M.B.C.M., Civil Asst. Surgeon.	Do.	2 May	
A. C. Ingram, M.D., Major, I.M.S.	Do.	10 June 1920	8 July 1920									T. S. Tirumurti ...	Do.	13 May 1921	13 May 1921				
T. H. Symons, O.B.E., Lieut.-Col., I.M.S.	Permanent.	9 July 1920	3 May 1921									F. F. Carreck, Major, I.M.D.	Do.	14 May 1921	14 May 1921				
												T. S. Tirumurti ...	Do.	20 May 1921	20 May 1921	M. R. Guruswami Mudaliar, B.A., M.D., C.M., Civil Asst. Surgeon.	Do.	1 June	
W. R. J. Scroggie, C.I.E., Lieut.-Col., I.M.S.	Acting.	4 May 1921	7 Nov. 19 1									G. E. Malcomson, Major, I.M.S.	Do.	21 May 1921	31 May 1921				
T. H. Symons, O.B.E., Lieut.-Col., I.M.S.	Permanent.	8 Nov. 1921	23 Dec. 1921									F. F. Carreck, Major, I.M.D.	Do.	1 June 1921	23 June 1921				
W. R. J. Scroggie, C.I.E., Lieut.-Col., I.M.S.	Acting.	2 Dec. 1921	31 Dec. 1921									M. R. Guruswami Mudaliyar, M.D., C.M.	Do.	24 June 1921	31 Aug. 1921				
T. H. Symons, O.B.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Permanent.	1 Jan. 1922	5 May 1922									Dr. T. S. Tirumurti, B.A., M.B. C.M	Do.	1 Sep. 1921	31 Dec. 1921				
B. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Acting.	6 May 1922	5 June 1922									T. S. Tirumurti, B.A., M.B.C.M., Civil Asst. Surgeon.	Do.	1 Jan. 1922	1 Dec. 1922				
W. R. J. Scroggie, C.I.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Do.	6 June 1922	31 Oct. 1922									W. L. Forsyth, M.B.C.H.B., Major, I.M.S.	Do.	1 Dec. 1922	31 Dec. 1922				
T. H. Symons, O.B.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Permanent.	1 Nov. 1922	31 Dec. 1922																

* Appointed to be Inspector-General of Prisons, Madras, Sub. *pro tem.*

† Reverted to Military duty.

neral Hospital, Madras, from 2nd August 1911.

No. 16, Public, dated 3rd January 1902; and G.O. No. 1177, Public, dated 20th November 1902.)

Tenure of office		First Surgeon.				Second Surgeon.				Third Surgeon.				Resident Medical Officer.			
		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office	
	To			From	To			From	To			From	To			From	To
1901	18 May 1903	J. Maitland, M.D., Lieut.-Col., I.M.S.	Permanent.	2 Aug. 1901	18 May 1903	H. Allison, M.D., Lieut.-Col., I.M.S.	Permanent.	2 Aug. 1901	30 Oct. 1903	W. J. Niblock, Captain, M.B., I.M.S.	Permanent.	2 Aug. 1901	5 Nov. 1909	H. St. J. Fraser, Captain, I.M.S.	Permanent.	3 Aug. 1901	2 Mar. 1902
1901	26 Feb. 1902	T. H. Symons, Captain, I.M.S.	Acting.	2 June 1902	30 June 1902	H. Kirkpatrick, Captain, I.M.S.	Acting.	2 Aug. 1901	4 April 1902	T. H. Symons, Captain, I.M.S	Acting.	2 May 1902	2 Nov. 1902	C. B. Harrison, Captain, I.M.S.	Do.	3 Mar. 1902	10 Feb. 1903
1902	7 Jan. 1903	W. B. Browning, Lieut.-Col., I.M.S.	Do.	7 Nov. 1902	8 Jan. 1903	C. Donovan, Captain, I.M.S.	Do.	5 April 1902	10 Aug. 1902	R. Bryson, Captain, I.M.S.	Do.	9 April 1903	23 Dec. 1903	T. H. Symons, Captain, I.M.S.	Acting.	19 Nov. 1901	1 May 1902
1903	13 April 1903	E. Robertson, Major, I.M.S.	Do.	9 Jan. 1903	8 April 1903	H. Kirkpatrick, Captain, I.M.S.	Do.	19 Nov. 1902	30 Oct. 1903	F. F. Elwes, Captain, I.M.S.	Do.	1 Dec. 1905	13 June 1906	B. Bryson, Captain, I.M.S.	Do.	2 May 1902	28 Sep. 1902
1903	3 July 1903	W. J. Niblock, M.B., Captain, I.M.S.	Do.	9 April 1903	23 Dec. 1903	D. Simpson, Major, I.M.S.	Permanent.	31 Oct. 1903	11 April 1905	W. C. Long, Captain, I.M.S.	Do.	14 June 1906	13 July 1906	A. Miller, Captain, I.M.S.	Do.	29 Sep. 1902	2 Nov. 1902
1903	5 Nov. 1909	G. G. Giffard, Major, I.M.S.	Permanent.	19 May 1903	18 May 1906	W. J. Niblock, M.B., Captain, I.M.S.	Acting.	3 May 1904	4 July 1904	F. F. Elwes, Captain, I.M.S.	Do.	14 July 1906	5 Mar. 1907	T. H. Symons, Captain, I.M.S.	Do.	3 Nov. 1902	9 Mar. 1903
1903	12 July 1903	W. B. Browning, Lieut.-Col., I.M.S.	Acting.	12 June 1905	3 July 1905	F. J. Crawford, Major, I.M.S.	Permanent.	12 April 1905	5 Nov. 1905	J. W. Illius, Captain, I.M.S.	Do.	6 Mar. 1907	29 April 1907	F. F. Elwes, Captain, I.M.S.	Do.	10 Mar. 1903	1 Mar. 1904
1904	19 May 1904	P. C. Gabbett, Major, I.M.S.	Permanent.	19 May 1906	25 Aug. 1912	W. A. Lee, Lieut.-Col., I.M.S.	Acting.	15 April 1905	14 May 1905	E. W. Browne, Captain, I.M.S.	Do.	30 April 1907	1 Dec. 1907	D. C. Kemp, Captain, I.M.S.	Do.	2 Mar. 1904	24 Jan. 1905
														D. G. Rai, Captain, I.M.S.	Do.	25 Jan. 1905	11 June 1905
1904	10 June 1904	T. H. Symons, Major, I.M.S.	Acting.	22 Jan. 1909	15 July 1909	H. Kirkpatrick, Captain, I.M.S.	Do.	16 Feb. 1906	29 Mar. 1906	R. D. Willcocks, Captain, I.M.S.	Do.	29 April 1908	30 April 1909	John Forrest, Captain, I.M.S.	Do.	12 June 1905	22 July 1906
1905	11 May 1906	W. J. Niblock, Major, I.M.S.	Do.	26 Aug. 1910 A.N	30 April 1911	H. Kirkpatrick, Captain, I.M.S.	Do.	11 May 1906	22 Dec. 1906	D. S. A. O'Keeffe, Captain, I.M.S.	Do.	1 May 1909	15 July 1909	J. W. Illius, Captain, I.M.S.	Do.	23 July 1906	11 Nov. 1906
1906	11 June 1906	A. Chalmers, Captain, I.M.S.	Do.	1 May 1911	31 May 1911	T. B. Symons, Captain, I.M.S.	Do.	3 May 1907	28 Feb. 1908	T. H. Symons, Major, I.M.S.	Do.	16 July 1909	15 Aug. 1909	W. C. Long, Captain, I.M.S.	Do.	12 Nov. 1906	13 Feb. 1907
1906	11 Nov. 1906	W. J. Niblock, M.B., Major, I.M.S.	Do.	1 June 1911	8 Sep. 1912 A.N.	T. H. Symons, Major, I.M.S.	Do.	7 May 1908 A.N.	21 Jan. 1909	D. S. A. O'Keeffe, Captain, I.M.S.	Do.	16 Aug. 1909	18 Jan. 1910	W. R. Scroggie, Captain, I.M.S.	Do.	14 Feb. 1907	30 Oct. 1907
1907	15 May 1907	T. H. Symons, Major, I.M.S.	Do.	9 Sep. 1913 F.N.	18 May 1913	L. Hirsch, Captain, I.M.S.	Do.	22 Jan. 1909	2 May 1909	T. H. Symons, Major, I.M.S.	Permanent.	6 Nov. 1909	25 Aug. 1912	D. G. Rai, Captain, I.M.S.	Permanent.	11 Feb. 1908	30 June 1908
	1 Dec. 1907	W. J. Niblock, M.B., Major, I.M.S.	Permanent.	26 Aug. 1912	...	E. W. Browne, Captain, I.M.S.	Do.	3 May 1909	23 May 1909	T. W. Harley, Captain, I.M.S.	Acting.	19 Jan. 1910	10 Mar. 1910	M. J. Quirke, Captain, I.M.S.	Do.	18 July 1910	13 Oct. 1910
	28 Feb. 1908	E. W. C. Bradfield, Captain, I.M.S.	Acting.	19 May 1913	29 June 1913	T. W. Harley, Captain, I.M.S.	Do.	24 May 1909	16 Jan. 1910	W. J. Niblock, M.B., Major, I.M.S.	Do.	11 Mar. 1910	13 Mar. 1910	J. M. Skinner, Captain, I.M.S.	Do.	14 Oct. 1910	Only one day.
	...	T. H. Symons, Major, I.M.S.	Do.	30 June 1913	9 Dec. 1913	W. J. Niblock, M.B., Major, I.M.S.	Permanent.	6 Nov. 1909	25 Aug. 1912	L. Hirsch, Captain, I.M.S.	Do.	14 Mar. 1910	16 Apr. 1910	A. C. Ingram, Captain, I.M.S.	Do.	15 Oct. 1910	4 Dec. 1910
		A. Chalmers, M.B., Major, I.M.S.	Do.	1 June 1916	30 June 1916					D. H. Graves, Major, I.M.S.	Do.	11 April 1910	30 June 1910	J. M. Skinner, Captain, I.M.S.	Do.	5 Dec. 1910	16 Jan. 1911
	16 Nov. 1910	C. A. F. Hingston, M.R.C.S., L.R.C.P., Major, I.M.S.	Do.	14 May 1917	7 June 1917	T. H. Symons, C.I.E., Major, I.M.S.	Do.	26 Aug. 1912 A.N.	...	M. J. Quirke, Captain, I.M.S.	Do.	21 June 1910	17 July 1910	M. J. Quirke, Captain, I.M.S.	Do.	17 Jan. 1911	17 July 1911
	27 Aug. 1911	C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Ret.).	Do.	8 June 1917	9 June 1917	A. Chalmers, Captain, I.M.S.	Acting.	26 Aug. 1910	15 Mar. 1912 A.N.	W. J. Niblock, M.B., Major, I.M.S.	Do.	18 July 1910	19 Aug. 1910 A.N.	S. Bose, Captain, I.M.S.	Do.	18 July 1911	4 Sep. 1911
1912	2 June 1913 A.N.	E. M. Illington, M.R.C.S., L.R.C.P., D.P.M., Lieut.-Col., I.M.S.	Do.	10 June 1917	13 June 1917	W. C. Gray, Captain, I.M.S.	Do.	16 Mar. 1912	27 Mar. 1912	A. Chalmers, Captain, I.M.S.	Do.	20 Aug. 1910	25 Aug. 1910	R. D. Willcocks, Captain, I.M.S.	Permanent.	15 Mar. 1912	16 Nov. 1914
1912	2 July 1913 A.N.	A. Chalmers, M.B., F.R.C.S.I., Major, I.M.S.	Do.	16 May 1918	6 June 1918	T. H. Symons, Major, I.M.S.	Do.	28 Mar. 1912	9 Sep. 1913 A.N.	L. Hirsch, Captain, I.M.S.	Do.	26 Aug. 1910	25 June 1912 A.N	A. P. G. Lorimer, Captain, I.M.S.	Acting.	5 Sep. 1911	30 Sep. 1912
1913	29 June 1913 F.N.	E. M. Illington, M.R.C.S., L.R.C.P., Major, I.M.S.	Do.	18 Sep. 1918	27 Sep. 1918	E. W. C. Bradfield, Captain, I.M.S.	Do.	10 Sep. 1913 F.N.	9 Dec. 1913	J. L. Macrae, Lieut.-Col., I.M.S.	Do.	26 June 1912	31 Oct. 1912 A.N.	A. J. H. Russell, Captain, I.M.S.	Do.	1 Oct. 1912 F.N.	31 Oct. 1912 A.N.
1913	2 July 1913	E. M. Illington, Lieut.-Col., I.M.S.	Do.	28 Sep. 1918	27 Sep. 1918	W. Molesworth, O.I.E., M.B., Lieut.-Col., I.M.S.	Do.	13 Nov. 1914	15 Nov. 1914					A. P. G. Lorimer, Captain, I.M.S.	Do.	1 Nov. 1912 F.N.	11 Aug. 1913
1913	14 Sep. 1914									T. W. Harley, Captain, I.M.S.	Permanent.	26 Aug. 1912	26 April 1916	A. J. H. Russell, M.A., M.D., Captain, I.M.S.	Do.	12 Aug. 1913	11 Sep. 1913
1914	4 Nov. 1915	E. M. Illington, M.R.C.S., L.R.C.P., D.P.M., Lieut.-Col., I.M.S.	Do.	26 May 1919	25 June 1919	A. Chalmers, Major, I.M.S.	Do.	16 Nov. 1914	25 April 1915	A. J. H. Russell, Captain, I.M.S.	Acting.	1 Nov. 1912 F.N.	18 Dec. 1913	A. P. G. Lorimer, Captain, M.B.	Do.	12 Sep. 1913	14 July 1914
1915	10 Nov. 1916	W. J. Fernandes, F.R.C.S.I., Civil Asst. Surgeon.	Do.	29 Sep. 1919	29 Sep. 1919	E. W. C. Bradfield, Captain, I.M.S.	Do.	26 April 1915	30 June 1915	E. W. C. Bradfield, Captain, I.M.S.	Do.	19 Dec. 1913	19 Mar. 1914	J. M. Skinner, Captain, I.M.S.	Do.	15 July 1914	17 July 1914
1916	31 Jan. 1917	Do.	Do.	24 Dec. 1919	2 Jan. 1920	W. J. Niblock, Lieut.-Col., I.M.S.	Do.	1 July 1915	16 Jan. 1917	C. A. F. Hingston, Captain, I.M.S.	Do.	20 Mar. 1914	8 April 1914	A. S. Leslie, Captain, I.M.S.	Do.	18 July 1914	12 Aug. 1914
1917	6 June 1919	W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Permanent.	3 Jan. 1920	13 May 1920	A. Chalmers, Major, I.M.S.	Do.	17 Jan. 1917	7 June 1917	W. C. Gray, Captain, I.M.S.	Do.	9 April 1914	25 May 1914	J. M. Skinner, M.B., Captain, I.M.S.	Do.	13 Aug. 1914	17 Aug. 1914
1918	15 June 1918	E. W. C. Bradfield, O.B.E., Major, I.M.S.	Acting.	14 May 1920	9 July 1920	C. A. F. Hingston, M.R.C.S., L.R.C.P., Major, I.M.S.	Do.	8 June 1917	9 June 1917	E. W. C. Bradfield, Captain, I.M.S.	Do.	26 May 1914	12 Nov. 1914	J. M. Skinner, M.B., Captain, I.M.S.	Do.	13 Aug. 1914	17 Aug. 1914
		T. H. Symons, O.B.E., Lieut.-Col., I.M.S.	Do.	10 July 1920	2 Dec. 1920	C. H. L. Palk, M.B., F.R.C.S. (Ed.), Major, I.M.S. (Ret.).	Do.			J. M. Skinner, Captain, I.M.S.	Do.	13 Nov. 1914	15 Nov. 1914	A. P. G. Lorimer, Captain, I.M.S.	Do.	18 Aug. 1914	20 Oct. 1914
1918	10 July 1918									W. C. Gray, Captain, I.M.S.	Do.	16 Nov. 1914	22 Nov. 1914	F. C. Rogers, Major, I.M.S.	Permanent.	17 Nov. 1914	9 April 1916
1918	28 July 1918	S. W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Permanent.	3 Dec. 1920	14 May 1921	E. M. Illington, M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Do.	10 June 1917	28 June 1917	A. Chalmers, Major, I.M.S.	Do.	23 Nov. 1914	20 Dec. 1914	J. M. Skinner, M.B., Captain, I.M.S.	Acting.	21 Oct. 1914	31 Dec. 1914
1918	29 Sep. 1918	J. Kirkwood, Major, I.M.S.	Acting.	15 May 1921	31 May 1921	† J. J. Robb, M.B., M.Ch., Major, I.M.S.	Do.	29 June 1917	24 Jan. 1918	P. C. Gabbett, Lieut.-Col., I.M.S. (Ret.).	Do.	21 Dec. 1914	7 Mar. 1915	A. J. H. Russell, Captain, I.M.S.	Do.	1 Jan. 1915	28 April 1915
1918	27 Dec. 1918	S. Raja Acharya, M.B., C.M., Civil Asst. Surgeon.	Do.	1 June 1921	10 June 1921	W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Do.	25 Jan. 1918	...	A. Chalmers, M.B., Major, I.M.S.	Do.	8 Mar. 1914	31 May 1915	J. M. Skinner, M.B., Captain, I.M.S.	Do.	29 April 1915	28 May 1915
1918	1 Jan. 1919									Civil Asst. Surgeon T. M. K. Nedungadi, L.M.S.	Do.	1 June 1915	4 July 1915	A. J. H. Russell, Captain, I.M.S.	Do.	29 May 1915	18 Mar. 1917
1919	30 April 1919	J. Kirkwood, Major, I.M.S.	Do.	11 June 1921	14 June 1921	E. C. C. Maunsell, M.B., Major, I.M.S.	Permanent.	27 April 1916	...	J.M. Skinner, M.B., Captain, I.M.S.	Do.	5 July 1915	31 Oct. 1915	A. P. G. Lorimer, M.B., Captain, I.M.S.	Permanent.	10 April 1916	...
1919	30 May 1919	E. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Do.	15 June 1921	7 Nov. 1921	W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	11 April 1917	10 May 1917	A. Chalmers, M.B., Major, I.M.S.	Do.	1 Nov. 1915	26 Nov. 1915	T. S. Ross, L.R.C.S., L.M.C.P., Major, I.M.S.	Acting.	1 May 1916	31 May 1916
		T. H. Symons, O.B.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Do.	8 Nov. 1921	3 Dec. 1921	W. J. Fernandes, L.M.S., Civil Asst. Surgeon.	Sub. pro tem.	7 Aug. 1917	17 Nov. 1919	Civil Asst. Surgeon T. M. K. Nedungadi, L.M.S.	Do.	27 Nov. 1915	6 Aug. 1917	T. M. K. Nedungadi, L.M.S., Civil Asst. Surgeon.	Do.	19 Mar. 1917	20 Mar. 1917
1920	3 May 1921					W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	17 Nov. 1919	25 Nov. 1919	W. J. Niblock, M.B., F.R.C.S., F.M.U., Lieut.-Col., I.M.S.	Acting.	17 Nov. 1919	25 Nov. 1919	J. Kirkwood, M.B., F.R.C.S.I., Major, I.M.S.	Do.	21 Mar. 1917	1 July 1917
1921	31 May 1921					E. M. Illington, M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Sub. pro tem.	29 July 1918	6 Oct. 1918	W. J. Fernandes, L.M.S., Civil Asst. Surgeon.	Sub. pro tem.	26 Nov. 1919	13 Dec. 1920	‡ J. Kirkwood, M.B., F.R.C.S.I., Major, I.M.S.	Do.	2 July 1917	31 Oct. 1917
1921	31 Dec. 1921					W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	7 Oct. 1918	16 Oct. 1918	T. Kirkwood, I.M.S., Major.	Do.	14 Dec. 1920	14 May 1921	A. J. H. Russell, M.A., M.D., Captain, I.M.S.	Do.	2 July 1917	31 Oct. 1917
1922	1 May 1922					E. M. Illington, M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Sub. pro tem.	17 Oct. 1918	22 Dec. 1918	S. Raja Acharya, M.B., C.M., Civil Asst. Surgeon.	Acting.	15 May 1921	18 Aug. 1921	W. J. Fernandes, L.M.S., Civil Asst. Surgeon.	Acting.	27 June 1919	6 July 1919
1922	1 June 1922					W. J. Niblock, M.B., Lieut.-Col., I.M.S.	Acting.	23 Dec. 1918	2 Jan. 1919	E. A. Roberts, D.S.O. (Brevt.) Lieut.-Col., I.M.S.	Do.	19 Aug. 1921	5 Sep. 1921	‡ J. Kirkwood, M.B., F.R.C.S.E., Major, I.M.S.	Sub. pro tem.	7 July 1919	7 Aug. 1919
1922	31 Dec. 1922					E. M. Illington, M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Sub. pro tem.	3 Jan. 1919	9 Mar. 1919	E. W. C. Bradfield, O.B.E., Major.	Permanent.	6 Sep. 1921	19 Sep. 1921	V. P. Kamath, L.M.S., Civil Asst. Surgeon.	Do.	8 Aug. 1919	7 May 1920
						T. H. Symons, M.R.C.S., F.R.C.S., Lieut.-Col., I.M.S.	Permanent.	10 Mar. 1919	5 Apr. 1919	A. P. G. Lorimer, Major, I.M.S.	Acting.	20 Sep. 1921	7 Nov. 1921	W. J. Fernandes, L.M.S., Civil Asst. Surgeon.	Acting.	8 May 1920	7 June 1920
						E. M. Illington, M.R.C.S., L.R.C.P., F.R.C.S., Lieut.-Col., I.M.S.	Acting.	5 Apr. 1919	26 June 1919	E.W.C. Bradfield, O.B.E., Major, I.M.S.	Permanent.	8 Nov. 1921	31 Dec. 1921	V. P. Kamath, L.M.S., Civil Asst. Surgeon.	Sub. pro tem.	8 June 1920	31 Aug. 1920
						W. J. Niblock, M.B., F.R.C.S., F.M.U., Lieut.-Col., I.M.S.	Do.	27 June 1919	6 July 1919	E. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Permanent.	1 Jan. 1922	30 Apr. 1922	F. F. M. Carreck, Major, I.M.D.	Do.	1 Sep 1920	4 Jan. 1921
						E. M. Illington, M.R.C.S., L.R.C.P., F.R.C.S., Lieut.-Col., I.M.S.	Do.	7 July 1919	31 Aug. 1919	S. Ranga Acharya, M.R.C.M., Civil, Asst. Surgeon.	Acting.	1 May 1922	5 Aug. 1922	W. C. Grey, Major, I.M.S.	Acting.	5 Jan. 1921	31 Jan. 1921
						S. Ranga Acharya, M.B., C.M., Civil Asst. Surgeon.	Do.	1 Sep. 1919	15 Sep. 1920	L. Hirsch, C.I.E., M.R.C.S., L.R.C.P., F.R.C.S., Lieut.-Col., I.M.S.	Do.	6 Aug. 1922	31 Oct. 1922	F. F. R. Carreck, Major, I.M.D.	Do.	1 Feb. 1921	25 July 1921
						J. M. Skinner, Major, I.M.S.	Do.	16 Sep. 1920	11 Nov. 1920	E. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Permanent.	1 Nov. 1922	14 Nov. 1922	S. M. Hepworth, Captain, I.M.S.	Do.	26 July 1921	Sep. 1921
						S Ranga Acharya, M.B., C.M., Civil Asst. Surgeon.	Do.	12 Nov. 1920	2 Dec. 1920					W. J. Fernandez, L.M.S., Civil Asst. Surgeon.	Do.	3 Sep. 1921	7 Nov. 1921
						T. H. Symons, O.B.E., Lieut.-Col., I.M.S.	Permanent.	3 Dec. 1920	3 May 1921					A. P. G. Lorimer, Major, I.M.S.	Permanent.	8 Nov. 1921	31 Dec. 1921
						W. R. J. Scroggie, C.I.E., Lieut.-Col., I.M.S.	Acting.	4 May 1921	31 Dec. 1921					A. P. G. Lorimer, M.B., B.Ch., Major, I.M.S.	Do.	1 Jan. 1922	5 May 1922
						W. R. J. Scroggie, O.I.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Sub. pro tem.	1 Jan. 1922	5 May 1922					K. G. Pandalai, M.B., F.R.C.S., Major, I.M.S.	Acting.	6 May 1922	5 June 1922
						E. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Acting.	6 May 1922	5 June 1922					A. P. G. Lorimer, M.B.,B.C.H.,Major I.M.S.	Permanent.	6 June 1922	31 Dec. 1922
						W. R. J. Scroggie, C.I.E., M.R.C.S., L.R.C.P., Lieut.-Col., I.M.S.	Sub. pro tem.	6 June 1922	14 Nov. 1922								
						E. W. C. Bradfield, O.B.E., M.S.M.B., F.R.C.S., Major, I.M.S.	Acting.	15 Nov. 1922	31 Dec. 1922								

‡ Granted combined leave and furlough for a year.

§ On combined leave preparatory to retirement.

Nominal Register of Medical Officers of the General Hospital, Madras, from the year

Old Organization.

Garrison Surgeon.				Surgeon.				
Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		
		From	To			From	To	
T. Sevestre	Permanent.	1 Jan. 1830	1 Jan. 1833	W. Mortimer	Permanent.	Unknown.	1 July 1841	W. Sl
H. A. Atkinson	Acting ...	1 July 1830	1 April 1831	G. Harding	Do.	1 July 1841	1 April 1851	A. Bl
				W. Evans, M.D.	Do.	1 April 1851	24 Feb. 1852	J. B.
				W. Gilchrist, M.D.	Do.	24 Feb. 1852	24 May 1852	
				T. A. Arthur, M.D.	Do.	20 Aug. 1852	12 Jan. 1854	
				W. Evans, M.D.	Do.	13 Jan. 1854	14 April 1859	
				T. L. Paul, M.D.	Do.	14 April 1859	2 May 1869	

New Organization.

Senior Medical Officer.				Senior Surgeon.				Second Surgeon.				Resident Medical Officer.				
Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.
		From	To			From	To			From	To			From	To	
W. N. Chipperfield.	Permanent.	24 Aug. 1865	21 Aug. 1872	B. W. Cockerill	Acting.	3 May 1869	5 May 1874	J. Maitland, M.D.	Permanent.	23 Feb. 1882	27 Jan. 1891	E. F. Drake-Brockman.	Acting.	6 July 1870	25 Oct. 1870	W. B. Browning ...
G. Smith, M.D. ...	Acting.	22 June 1868	20 Aug. 1872		Permanent.	6 May 1874	24 Feb. 1885	C. M. Thompson, M.B.	Acting.	10 April 1885	9 July 1885		Permanent.	26 Oct. 1870	28 Feb. 1875	H. A. F. Nailer, M.B.
	Permanent.	21 Aug. 1872	24 Oct. 1874	C. Sibthorpe ...	Acting.	1 July 1875	31 Aug. 1875	W. R. Browne, M.D.	Do.	18 Oct. 1886	26 Mar. 1887	P. N. Mookerjee ...	Acting.	7 July 1872	28 Aug. 1872	D. F. Dymott, M.B.
M. C. Furnell, M.D., C.I.E.	Acting.	2 Sep. 1874	30 Sep. 1874		Do.	6 May 1876	24 May 1876	M. H. Smith ...	Do.	27 Mar. 1887	11 Aug. 1887	W. E. Wright ...	Do.	2 July 1873	27 Dec. 1873	J. Smyth, M.D. ...
	Do.	24 Oct. 1874	28 Feb. 1875		Do.	3 Aug. 1876	30 Sep. 1876	A. P. Adams ...	Do.	12 Aug. 1887	8 Sep. 1887		Do.	6 Aug. 1874	21 Sep. 1874	D. Simpson, M.B.
	Permanent.	1 Mar. 1875	5 April 1880		Do.	7 April 1877	10 April 1877	F. Clarence Smith.	Do.	9 Sep. 1887	10 Dec. 1888	D. R. Thompson, M.D.	Do.	13 Nov. 1874	28 Feb. 1875	G. G. Giffard ...
B. W. Cockerill ...	Acting.	14 April 1876	24 May 1876	J. L. Ratton, M.D.	Do.	11 April 1877	18 June 1878	W. R. Browne, M.D.	Do.	22 Mar. 1889	17 April 1889		Permanent.	1 Mar. 1875	10 May 1875	Dr. A. C. Rendle, M.B.
J. E. Dickenson ...	Do.	25 May 1876	17 April 1877	C. Sibthorpe ...	Do.	6 July 1880	5 Aug 1880	W. B. Browning.	Do.	18 April 1889	30 Aug. 1890	C. Sibthorpe ...	Do.	11 May 1875	15 Aug. 1883	G. G. Giffard ...
Henry King, M.B.	Permanent.	6 April 1880	4 April 1882	W. R. Browne, M.D.	Do.	1 July 1881	30 Sep. 1881	F. J. Crawford, M.D.	Do.	1 Sep. 1890	27 Jan. 1891	W. Butler ...	Acting.	1 July 1875	30 Aug. 1875	C. Donovan, M.D.
James Keess, M.D.	Acting.	5 April 1882	15 Aug. 1883		Do.	9 April 1884	5 Oct. 1884		Permanent.	28 Jan. 1891	14 Sep. 1900	J. A. Laing, M.D.	Do.	3 July 1876	30 Sep. 1876	R. Robertson ...
	Permanent.	16 Aug. 1883	4 Jan. 1887	J. L. Ratton, M.D.	Permanent.	25 Feb. 1885	25 Jan. 1888	F. C. Reeves ...	Acting.	27 June 1891	28 July 1891	A. M. Branfoot, M.B.	Do.	28 April 1877	11 July 1878	A. N. Fleming, M.B.
A. Porter, M.D. ...	Do.	5 Jan. 1887	25 July 1890	C. Sibthorpe ...	Acting.	19 July 1886	31 Aug. 1886	D. Simpson, M.B. ...	Do.	29 July 1891	24 Sep. 1891	J. J. Moran, M.D.	Do.	2 Dec. 1878	14 Dec. 1878	C. Donovan, M.D.
C. Sibthorpe ...	Acting.	12 Aug. 1887	30 Sep. 1887	J. Maitland, M.D.	Do.	1 Sep. 1886	30 Sep. 1886	D. Simpson, M.B. ...	Do.	2 May 1892	2 July 1892	G. L. Walker, M.D.	Do.	15 Dec. 1878	27 July 1879	R. Robertson ...
H. Allison, M.D. ...	Do.	9 Sep. 1888	30 Sep. 1888	W. R. Browne, M.D.	Do.	1 Oct. 1886	16 Nov. 1886	R. Robertson ...	Do.	3 July 1892	22 Jan. 1893	A. J. Sturmer ...	Do.	4 Sep. 1879	5 Dec. 1879	R. Robertson ...
J. H. Ritchie, M.D.	Do.	3 April 1889	9 Dec. 1889	C. Sibthorpe ...	Do.	17 Nov. 1886	25 Jan. 1888	D. Simpson, M.B. ...	Do.	23 Jan. 1893	31 Mar. 1893	W. R. Browne, M.D.	Do.	18 Nov. 1880	5 April 1882	
C. Sibthorpe ...	Do.	10 Dec. 1889	15 April 1890		Permanent.	26 Jan. 1888	8 Dec. 1890	D. Simpson, M.B. ...	Do.	1 April 1893	4 Oct. 1893	W. E. Johnson, M.D.	Do	6 April 1882	31 Mar. 1883	
J. H. Ritchie, M.D.	Permanent.	26 July 1890	18 Nov. 1891	H. Allison, M.D. ...	Acting.	29 July 1888	30 Sep. 1888	C. L. Williams ...	Do.	25 Mar. 1895	6 Nov. 1895	J. Smyth, M.D. ...	Do.	1 April 1883	13 April 1883	
W. Price, M.D. ...	Acting.	29 Sep. 1891	18 Nov. 1891	W. R. Browne, M.D.	Do.	1 Oct. 1888	30 June 1889	R. Robertson ...	Do.	7 Nov. 1895	27 Oct. 1896	G. T. Thomas ...	Do.	14 April 1883	7 Nov. 1883	
	Permanent.	19 Nov. 1891	6 April 1896	H. Allison, M.D. ...	Do.	1 July 1889	31 Aug. 1889	P. C. Gabbett ...	Do.	30 April 1898	12 Mar. 1899	W. R. Browne, M.D.	Permanent.	8 Nov. 1883	28 Oct. 1884	
W. R. Browne, M.D.	Acting.	1 April 1893	30 June 1893	W. R. Browne, M.D.	Do.	1 Sep. 1889	31 Jan. 1890	W. J. Niblock, M.B.	Do.	13 Mar. 1899	17 Mar. 1900	J. Smyth, M.D. ...	Acting.	9 April 1884	5 Oct. 1884	
	Do.	6 Oct. 1893	5 July 1894	W. Price, M.D. ...	Do.	1 Feb. 1890	16 April 1890	W. J. Niblock, M.B.	Do.	30 Mar. 1900	14 Sep. 1900	G. T. Thomas ...	Permanent.	29 Oct. 1884	27 Mar. 1885	
J. Maitland, M.D.	Do.	15 Aug. 1895	14 Sep. 1895		Do.	15 May 1890	28 Sep. 1890	W. J. Niblock, M.B.	Permanent.	15 Sep. 1900	1 Aug. 1901	D. F. Dymott, M.B.	Do.	28 Mar. 1885	30 June 1888	
W. R. Browne, M.D.	Permanent.	7 April 1896	1 Aug. 1901	W. R. Browne, M.D.	Do.	29 Sep. 1890	8 Dec. 1890					H. A. F. Nailer, M.B.	Acting.	27 Oct. 1885	7 May 1886	
H. Allison, M.D. ...	Acting.	2 July 1897	2 Aug. 1897		Permanent.	9 Dec. 1890	6 April 1896						Sub. *pro tem.*	23 June 1886	23 Dec. 1887	
J. Maitland, M.D.	Do.	26 May 1898	26 June 1898	J. Maitland, M.D.	Acting.	7 April 1893	5 July 1894						Do.	24 Dec. 1887	30 June 1888	
G. L. Walker, M.D.	Do.	5 April 1900	7 Jan. 1901	J. Smyth, M.D. ...	Do.	15 Aug. 1895	14 Sep. 1895					J. Smyth, M.D.	Permanent.	1 July 1888	5 June 1895	
				J. Maitland, M.D.	Do.	15 Sep. 1895	6 April 1896					F. C. Reeves ...	Acting.	7 April 1889	24 Sep. 1889	
					Permanent.	7 April 1896	1 Aug. 1901					G. C. Hall ...	Do.	10 April 1891	2 Sep. 1891	
				J. Smyth, M.D. ...	Acting.	4 April 1896	3 July 1896					A. E. Grant, M.B. ...	Do.	31 July 1892	11 Aug. 1892	
				H. Allison, M.D. ..	Do.	30 Mar. 1899	3 July 1899					E. H. Wright ...	Do.	12 Aug. 1892	21 Sep. 1892	
				F. J. Crawford, M.D.	Do.	30 Jan. 1900	16 Feb. 1900					D. Simpson, M.B. ...	Do.	7 May 1893	1 June 1893	
					Do.	31 Mar. 1900	11 May 1900					C. F. Fearnside ...	Do.	2 June 1893	2 Sep. 1893	
				H. Allison, M.D. ...	Do.	1 May 1900	25 June 1900					C. L. Williams ...	Do.	3 Sep. 1893	5 Mar. 1895	
				F. J. Crawford, M.D.	Do.	26 June 1900	14 Sep. 1900					G. G. Giffard ...	Permanent.	5 June 1895	6 Nov. 1899	
				G. G. Giffard ...	Do.	15 Sep. 1900	24 Dec. 1900					R. Robertson ...	Acting.	6 July 1896	11 Aug. 1896	
												E. H. Wright ...	Do.	12 Aug. 1896	4 Oct. 1896	
												Dr. A. C. Rendle, M.B.	Do.	17 April 1898	1 Dec. 1898	
												H. Fraser ...	Do.	2 Dec. 1898	6 Nov. 1899	
													Permanent.	7 Nov. 1899	1 Aug. 1901	
												A. N. Fleming, M.B.	Acting.	6 April 1900	...	
												T. E. Watson, M.B.	Do.	7 April 1900	3 July 1900	
												R. H. Elliot, M.B.	Do.	1 Jan. 1901	5 Feb. 1901	
												C. B. Harrison, M.B.	Do.	6 Feb. 1901	3 April 1901	
												Dr. W. J. Murray, M.B., C.M.	Do.	4 April 1901	1 Aug. 1901	

* Styled as Resident Physician from 1st January 1901.

Permanent Assistant Surgeon.			
Name.	Acting or permanent.	Tenure of office	
		From	To
...w	Permanent.	1 April 1851	1 Jan. 1852
...klock	Do.	1 Jan. 1852	24 Aug. 1865
...homas	Acting ...	20 June 1867	13 July 1867
	Permanent.	14 July 1867	25 Oct. 1870

First Physician.			Assistant Physician.				Additional Medical Officer.			
Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office		Name.	Acting or permanent.	Tenure of office	
	From	To			From	To			From	To
Permanent.	4 May 1895	31 Dec. 1900	A. M. Branfoot, M.B.	Permanent.	12 July 1878	30 June 1881	G. C. Hall ...	Permanent.	19 July 1893	11 Mar. 1895
Acting.	9 June 1896	29 Aug. 1896	T. K. Rodgers ...	Acting.	7 April 1878	27 June 1879	D. Simpson, M.B....	Acting.	29 Oct. 1893	18 Mar. 1894
Do.	29 Aug. 1896	10 Nov. 1896	H. Armstrong ...	Do.	27 June 1879	16 July 1879	C. L. Williams ...	Do.	19 Mar. 1894	11 April 1895
Do.	10 Nov. 1896	3 April 1897	C. J. McNally, M.D.	Do.	17 July 1879	30 June 1881	G. G. Giffard ...	Do.	12 April 1894	4 June 1895
Do.	3 April 1897	16 April 1898		Permanent.	1 July 1881	4 July 1884	R. Robertson ...	Permanent.	12 Mar. 1895	...
Do.	16 April 1898	5 June 1898	W. G. King ...	Acting.	14 April 1882	12 Nov. 1883	W. Molesworth ...	Acting.	5 June 1895	16 Mar. 1896
Do.	5 June 1898	5 July 1898		Do.	1 April 1884	4 July 1884	P. C. Gabbett ...	Do.	17 Mar. 1896	3 Oct. 1896
Do.	6 July 1898	13 Mar. 1899	D. F. Dymott, M.B.	Permanent.	5 July 1884	27 Mar. 1885	J. L. Macrae ...	Do.	4 Oct. 1896	27 Oct. 1896
Do.	14 Mar. 1899	16 April 1899					G. G. Giffard ...	Do.	16 Sep. 1897	13 Oct. 1897
Do.	17 April 1899	14 June 1900	H. Allison, M.D.	Do.	28 Mar. 1885	25 Jan. 1888	F. C. Pereira ...	Do.	13 Oct. 1897	31 Jan. 1898
Do.	15 June 1900	9 Aug. 1900	F. C. Reeves ...	Acting.	29 Oct. 1885	10 Dec. 1885	Dr. H. H. G. Knapp.	Do.	1 Feb. 1898	20 Feb. 1898
Do.	10 Aug. 1900	9 Sep. 1900	J. Smyth, M.D. ...	Do.	11 Dec. 1885	23 Mar. 1886	Dr. V. O. Taylor ...	Do.	21 Feb. 1898	30 Nov. 1898
Do.	10 Sep. 1900	31 Dec. 1900	T. H. Pope, M.D.	Do.	13 Aug. 1886	31 Aug. 1887	Dr. A. C. Rendle, M.B.	Do.	1 Dec. 1898	2 May 1899
Permanent.	1 Jan. 1901	1 Aug. 1901		Permanent.	26 Jan. 1888	5 Dec. 1892	Dr. W. H. Murray, M.B.	Do.	3 May 1899	13 Dec. 1899
			J. Smyth, M.D. ...	Acting.	2 Sep. 1887	23 Dec. 1887	C. B. Harrison, M.B.	Do.	14 Dec. 1899	8 Mar. 1900
			H. K. Fuller, M.B.	Do.	24 Dec. 1887	25 Aug. 1888	K. Mitter	Permanent.	...	...
			F. Clarence Smith.	Do.	28 Aug. 1888	10 Sep. 1888	A. E. Grant, M.B.	Acting.	9 Mar. 1900	17 Mar. 1900
			D. B. Browning.	Do.	11 Sep. 1888	26 Dec. 1888	W. J. Niblock, M.B.	Do.	18 Mar. 1900	30 Mar. 1900
			J. Smyth, M.D. ...	Do.	14 June 1890	31 Aug. 1900	A. N. Fleming ...	Do.	31 Mar. 1900	20 May 1900
			A. E. Grant, M.B.	Do.	1 Sep. 1890	7 Mar. 1892	C. B. Harrison, M.B.	Do.	21 May 1900	16 Aug. 1900
				Sub. pro tem.	8 Mar. 1892	5 Dec. 1892	H. St. J. Fraser ...	Do.	17 Aug. 1900	23 Aug. 1900
				Permanent.	6 Dec. 1892	13 Sep. 1900	* E. H. Elliot, M.B.	Do.	24 Aug. 1900	6 Feb. 1901
			T. C. Moore ...	Acting.	1 April 1893	30 June 1893	C. B. Harrison, M.B.	Do.	6 Feb. 1901	3 April 1901
			G. G. Giffard ...	Do.	12 June 1894	3 July 1894	Dr. W. H. Murray, M.B., C.M.	Do.	4 April 1901	1 Aug. 1901
			R. Robertson ...	Do.	4 July 1894	14 Nov. 1895				
			Dr. V. O. Taylor.	Do.	23 June 1898	5 July 1898				
			Dr. A. Woodward.	Do.	7 April 1899	6 July 1899				
			F. D. S. Fayrer ...	Do.	13 June 1899	12 July 1900				
			C. Donovan, M.D.	Sub. pro tem.	14 Sep. 1900	1 Aug. 1901				
			G. G. Giffard ...	Acting.	21 Jan. 1901	2 April 1901				
			H. St. J. Fraser.	Do.	3 April 1901	11 May 1901				
			P. C. Gabbett ...	Do.	12 May 1901	11 Aug. 1901				

STATEMENT A

Showing the number of dispensaries during the year 1922.

[*Population of the City*, 522,951.]

Class of dispensary.	Number open on 31st December 1921.	Number opened during the year.	Number closed during the year.	Number opened on the last day of the year.	Remarks.
1	2	3	4	5	6
I.—State-Public ...	1	...	...	...	...

STATEMENT B

Showing the number of in-door and out-door patients treated in the State-Public, Government General Hospital, Madras, during the year 1922.

District.	Name of dispensary.	Of what class.	In-door patients.																Out-door patients.										Total number of patients treated both in-door and out-door.
			Total treated during the year.					Number cured.	Number relieved.	Discharged otherwise.	Died.	Ratio of deaths per cent to total treated.	Number of beds available.		Daily average number.				Number treated.					Average daily attendance.					
					Children.												Children.				Total treated.						Children.			
			Men.	Women.	Male.	Female.	Total.						Men.	Women.	Men.	Women.	Male.	Female.	Total.	Attended personally.	Represented by friends.	Men.	Women.	Male.	Female.	Total.	Men.	Women.	Male.	Female.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Madras.	Government General Hospital, Madras.	Non-Europeans.	5,497	1,405	371	223	7,496	3,763	1,715	1,154	522	6·96	218	90	270·50	81·99	27·07	13·55	393·11	56,746	...	40,171	8,252	4,554	3,769	56	250·70	53·15	32·27	24·81	360·93	64,242
		Europeans ...	1,038	538	136	88	1,800	1,108	332	193	87	4·28	70	57	57·11	30·83	10·69	5·23	103·36	4,782	...	2,524	1,228	597	433	4,783	12·71	6·54	3·14	2·30	24·69	6,582
		Total ...	6,535	1,943	507	311	8,286	4,871	2,047	1,347	609	6·15	288	147	327·61	112·32	37·76	18·78	496·47	61,528	...	42,695	9,480	5,151	4,202	61,528	263·41	59·69	35·41	27·11	385·62	70,824

INSTRUCTIONS.

(1) Statement B is intended to comprise only those institutions from which full information can be expected. These are State-Public, Local Fund and Private-aided Institutions.
(2) The classification in column 3 should accordingly be into I, III, IV of the classes shown in Statement A.
(3) In column 2 individual dispensaries should be shown, the dispensaries being arranged by districts. The arrangement of districts should be geographical, not alphabetical. In each district should be shown first: A.—General dispensaries, that is to say, dispensaries open to both sexes, and then B.—Female dispensaries. The whole statement will conclude with a provincial total for A.—General dispensaries, a provincial total for B.—Female dispensaries, and a combined provincial total.
(4) In filling up columns 6, 7, 18, 19, 25, 26, 30 and 31 all persons under 10 years of age should be treated as children.
(5) The columns for "total treated" (Nos. 4 to 8 and 23 to 27) should include both those remaining from the previous year and those admitted during the year under report. The words "total treated" refer to the number of different individual cases. If, for example, the same person attends for 10 days, he should not be counted 10 times; if he reappears as a fresh case he should be counted again.

STATEMENT C (I)

Showing the diseases, etc., of the in-door patients treated in the State-public in the Government General Hospital, Madras, during the year 1922.

District.	Class of dispensary.		Infective diseases.																										Other general diseases					
			Cholera Asiatic.		Dysentery.		Enteric fever.		Gonococcal infection.		Syphilis (Primary and Secondary).		Kala-azar.		Leprosy.		Malaria.		Plague.		Influenza.		Relapsing fever.		Pneumococcal infection of the lung.		Pyrexia of uncertain origin.		Rheumatic fever.		Smallpox.		Tubercle of the lungs.		Other tubercular diseases.		All other infective diseases.		Anæmia.		Diabetes.		Scurvy.	
			Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.
1	2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23	
Madras.	I Class, State-Public, Government General Hospital, Madras—	Non-Europeans ..	7	..	207	28	88	17	71	1	358	3	22	2	4	..	482	24	...	..	221	2	4	...	276	67	58	2	88	..	10	...	183	43	178	4	406	44	147	14	35	1	...	...
		Europeans ...	1	..	68	1	41	5	11	..	42	...	14	...	...	..	111	11	..	..	25	.	2	1	51	16	52	1	39	...	3		32	5	12	..	198	7	19	1	25	..	1	.
		Total ...	8	..	275	29	129	22	82	1	400	3	36	2	4	..	593	35	...	..	246	2	6	1	327	83	110	3	127	...	13	...	215	48	190	4	604	51	166	15	60	1	1	..

District.	Class of dispensary.		Other general diseases—*cont.*										Systemic diseases.																					
			Rickets.		Other diseases due to disorders of nutrition and metabolism.		Diseases of the ductless or endocrine glands.		New growths. Non-malignant.		New growths. Malignant.		All other general diseases.		Diseases of the nervous system. Diseases of the nerves, spinal cord, brain and meninges.		Diseases of the nervous system. Diseases of which the pathological basis is not accurately known.		Diseases of the nervous system. Mental diseases.		Diseases of the eye.		Disease of the ear.		Diseases of the nose.		Diseases of the circulatory system.		All diseases of the respiratory system except pneumonia and tubercle of the lungs.		Diseases of the stomach.		Diseases of the intestines.		Abscess of the liver.		All other diseases of the liver.	
			Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.
24			25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41					
Madras.	I Class, State-Public, Government General Hospital, Madras—	Non-Europeans ..	2	1	41	2	5	...	17	2	112	16	91	3	167	6	11	...	...	...	10	..	17	1	33	...	155	35	222	13	19	...	78	8	59	4	93	16				
		Europeans ...	1		6	...	1	...	2	.	17	...	35	5	66	1	4	...	...	...	3	...	15	8	1	...	27	2	82	...	11	...	26	1	13	2	16	1				
		Total ...	3	1	47	2	6	...	19	2	129	16	126	8	233	7	15	...	...	..	13	...	32	9	34	..	182	37	304	13	30	...	104	9	72	6	109	17				

STATEMENT C (I)—*cont.*

Showing the diseases, etc., of the in-door patients treated in the State-Public in the Government General Hospital, Madras, during the year 1922—cont.

District.	Class of dispensary.		Systemic diseases—*cont.*																		General and Local.						Labour.				Total number in-door patients.		Operations.	
			All other diseases of the digestive system.		Acute or suppurative inflammation of the lymphatic glands.		Acute and chronic nephritis.		All other diseases of the urinary organs.		Diseases of the generative system.		Diseases of the organs of locomotion.		Diseases of the areolar tissue.		Inflammation ulcerative.		Other diseases of the skin.		All other local diseases.		Injuries (general and local).		Poisoning. By opium.		Poisoning. By other poisons.		Normal.		Abnormal.					
			Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.
42			43		44		45		46		47		48		49		50		51		52		53		54		55		56		57		58	
Madras.	I Class, State-Public, Government General Hospital, Madras—	Non-Europeans ...	1,040	48	126	3	20	1	271	18	313	9	93	6	594	25	193	9	129	7	108	...	627	42	2	...	8	1	...	...	...	...	7,496	522	4,352	98
		Europeans ...	271	7	39	...	3	1	63	6	77	...	8	...	102	...	48	2	32	...	23	...	60	3	...	...	1	...	...	...	...	...	1,800	87	1,851	10
		Total ...	1,311	55	165	3	23	2	334	19	390	9	101	6	696	25	241	11	161	7	126	...	687	45	2	...	9	1	...	...	..	...	9,296	609	6,203	108

INSTRUCTIONS.

(1) Statement C (I) is complementary to statement B and is intended to relate only to those institutions from which complete information can be expected. These are State-Public, Local Fund, and Private-aided Institutions (classes I, III, IV of the classes in Statement A).

(2) Details need not be given for each institution. It will suffice if totals are given for each class.

(3) For guidance in filling up the columns the following remarks are added :—
In all cases the instructions contained in "The Nomenclature of Diseases," fourth edition, 1906, should be followed.

Column 9 to include all diseases due to malaria.
,, 15 to include all diseases due to the poison of syphilis, e.g., syphilitic iritis
,, 6 to include all diseases resulting from gonorrhœal infection, e.g., gonorrhœal rheumatism.
,, 19 to include only cases of anæmia of which the cause cannot be ascertained.
Columns 51 and 52 should also include labour cases among out-patients.

STATEMENT C (II)

Showing the diseases of the out-door patients treated in the Government General Hospital, Madras, during the year **1922.**

District.	Class of dispensary.		Infective diseases.																					
			Cholera, Asiatic.	Dysentery.	Enteric fever.	Gonococcal infection.	Syphilis (Primary and Secondary).	Kala-azar.	Leprosy.	Malaria.	Plague.	Influenza.	Relapsing fever.	Pneumococcal infection of the lung.	Pyrexia of uncertain origin.	Rheumatic fever.	Smallpox.	Tubercle of the lungs.	Other tubercular diseases.	All other infective diseases.	Anæmia.	Diabetes.	Scurvy.	Rickets.	Other diseases due to disorders of nutrition and metabolism.
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Madras.	I Class, State-Public, Government General Hospital, Madras—	1921 Non-Europeans	...	204	69	82	88	42	11	377	...	121	...	108	266	127	10	32	44	134	27	22	1	6	...
		1921 Europeans	...	941	366	720	1,696	135	58	4,880	...	552	...	924	2,133	842	6	266	506	2,555	181	171	7	19	...
		Total ...	...	1,145	435	802	1,784	177	69	5,257	...	673	...	1,032	2,399	969	16	298	552	2,689	208	193	8	25	...

District.	Class of dispensary.		Other general diseases.				Systemic diseases.													
			Diseases of the ductless or endocrine glands.	New growth. Non-malignant.	New growth. Malignant.	All other general diseases.	Diseases of the nervous system. Diseases of the nerves, spinal cord, brain and meninges.	Diseases of the nervous system. Diseases which the pathological basis is not known.	Diseases of the nervous system. Mental diseases.	Diseases of the eye.	Diseases of the ear.	Diseases of the nose.	Diseases of the circulatory system.	All diseases of the respiratory system except pneumonia and tubercle of the lungs.	Diseases of the stomach.	Diseases of the intestines.	Abscess of the liver.
			26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Madras.	I Class, State-Public, Government General Hospital, Madras—	1921 Non-Europeans	11	61	1	107	170	...	...	...	111	16	86	218	176	52	8
		1921 Europeans	50	254	26	1,456	663	...	...	41	1,940	60	766	3,147	801	410	88
		Total ...	61	315	27	1,563	833	...	...	41	2,051	76	852	3,365	977	462	91

STATEMENT C (II)—*cont.*

Showing the diseases of the out-door patients treated in the Government General Hospital, Madras, during the year **1922—cont.**

District.	Class of dispensary.		Systemic diseases—*cont.*											General and local.			Labour.			
			All other diseases of the liver.	All other diseases of the digestive system.	Acute or suppurative inflammation of the lymphatic glands.	Acute and chronic nephritis.	All other diseases of the urinary organs.	Other diseases of the generative system.	Diseases of the organs of locomotion.	Diseases of the areolar tissue.	Inflammation ulcerative.	Other diseases of the skin.	All other local diseases.	Injuries (general and local).	Poisoning. By opium.	Poisoning. By other poisons.	Normal.	Abnormal.	Total number of out-door patients.	Operations.
			41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
Madras.	I Class, State-Public, Government General Hospital, Madras—	1921 Non-Europeans	24	655	29	30	81	64	29	139	117	189	102	524	...	16	...	...	4,782	1,6 2
		1921 Europeans	301	8,283	338	110	1,747	1,135	1,262	2,863	2,726	3,787	1,977	5,702	...	53	...	...	56,746	5,897
		Total ...	325	8,938	367	140	1,828	1,199	1,291	2,802	2,843	3,976	2,079	6,226	.	69	...	...	61,528	7,509

INSTRUCTIONS.

(1) Statement C (II) is complementary to statement B and is intended to relate only to those institutions from which complete information can be expected. These are State-Public, Local Fund and Private-aided institutions (Classes I, III, IV of the classes in Statement (A).

(2) Details need not be given for each institution. It will suffice if totals are given for each class.

(3) For guidance in filling up the columns the following remarks are added :—
In all cases the instructions contained in "The Nomenclature of Diseases," fourth edition, 1903, should be followed.

Column 9 to include all diseases due to malaria. Non-malarial fevers should be returned in column 24—"All other general diseases"
„ 15 to include all diseases due to the poison of syphilis. e.g., syphilitic iritis.
„ 16 to include all diseases resulting from gonorrhœal infection, e.g., gonorrhœal rheumatism.
„ 19 to include only cases of anæmia of which the cause cannot be ascertained.
Late cases should be included under columns 52 *and* 53 *of statement C (I).*

STATEMENT F.

Number of in-door and out-door patients, according to class and sex, treated in the State-Public, Government General Hospital, Madras, in the year 1922.

District.	Name and class of dispensary.	Europeans and Eurasians.				Hindus.				Muhammadans.				Others.				Total treated.
		Adults.		Children.		Adults.		Children.		Adults.		Children.		Adults.		Children.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Madras.	Government General Hospital, Madras, Class I, State-Public, 1922. In-door ...	1,024	549	131	96	4,225	1,060	280	150	387	81	26	10	758	375	91	53	9,296
	Out-door ...	2,524	1,228	597	433	30,647	5,633	3,019	2,443	3,150	276	206	162	6,369	2,337	1,331	1,173	61,528
	Total ...	3,548	1,777	728	529	34,872	6,693	3,299	2,593	3,537	357	232	172	7,127	2,712	1,422	1,226	70,824

INSTRUCTIONS.

(1) Statement F is intended to comprise only those institutions from which full information can be expected. These are State-Public, Local Fund and Private-aided dispensaries (Classes I, III and IV of the classes shown in Statement A).
(2) In filling up columns 5, 6, 9, 10, 11, 13, 14, 17, 18 all under ten years of age should be reckoned as children.
(3) The number of individual patients and not the number of visits should be shown throughout.
(4) The specimen form is primarily adapted for use in provinces of India proper. For the Burma Provincial report the arrangement of the columns may be altered as the local Government sees fit.

STATEMENT F (SUPPLEMENT).

Number of in-door and out-door patients, according to class and sex, treated in the State-Public, Government General Hospital, Madras, in the year 1922.

District.	Name and class of dispensary.	Europeans and Eurasians.				Hindus.				Muhammadans.				Others.				Total treated.
		Adults.		Children.		Adults.		Children.		Adults.		Children.		Adults.		Children.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Madras.	Government General Hospital, Madras, Class I, State-Public, 1922. In-door ...	1,024	549	131	96	4,225	1,060	280	150	387	81	26	10	758	375	91	53	9,296
	Out-door labour cases.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other out-door cases represented by friends.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Out-door ...	2,524	1,228	597	433	30,647	5,633	3,019	2,443	3,150	276	206	162	6,369	2,337	1,331	1,173	61,528
	Total ...	3,548	1,777	728	529	34,872	6,693	3,299	2,593	3,537	357	232	172	7,127	2,712	1,422	1,226	70,824

INSTRUCTIONS.

(1) Statement F is intended to comprise only those institutions from which full information can be expected. These are State-Public, Local Fund and Private-aided dispensaries (Classes I, III and IV of the classes shown in Statement A).
(2) In filling up columns 5, 6, 9, 10, 11, 13, 14, 17, 18 all under ten years of age should be reckoned as children.
(3) The number of individual patients and not the number of visits should be shown throughout.
(4) The specimen form is primarily adapted for use in provinces of India proper. For the Burma Provincial report the arrangement of the columns may be altered as the local Government sees fit.

STATEMENT G

Showing the Results of the Surgical Operations performed in the General Hospital, Madras, for the year 1922.

(*Note.*—The asterisk indicates operations not specifically mentioned in the nomenclature.)

Class of operations.	Nature of operations.	Number of patients remaining from last year.	Number of operations performed during the year.			Number of patients operated on in columns 4 to 6.	Results of operations on patients.				Number of patients remaining at the end of the year.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Operations on tumours ...	Removal by excision or other methods	1	69	...	69	69	58	3	2	5	2
	Destruction by electrolysis and cautery ...	...	1	...	1	1	1	...	...	...	...
	* Exploratory Puncture or Incision	1	3	...	3	3	1	...	3	...	...
	Total ...	2	73	...	73	73	60	3	5	5	2
Operations on cysts	Removal by enucleation or excision	...	33	...	33	33	32	...	...	..	1
	Treatment by— (a) Incision and plugging with or without erasion.	...	1	...	1	1	1	...	...	...	...
	Total ...	...	34	...	34	34	33	...	...	..	1
Operations for abscess ...	For Acute abscess—incision	4	628	4	632	628	621	3	1	3	4
	For Chronic abscess— (a) Incision and drainage	2	28	...	28	28	28	1	1	...	...
	(b) Incision with erasion and subsequent closure.	1	...	...	...	...	1	...	...	...	...
	(c) Incision with erasion and subsequent drainage.	1	4	...	4	4	2	2	1	...	...
	(d) Aspiration, with or without injection ...	2	7	1	8	7	4	1	1	1	2
	(e) Excision	...	...	...	...	...	...	...	...	...	...
	Total ...	10	667	5	672	667	656	7	4	4	6
Removal of foreign bodies ...	In the natural passages (excluding the external ear and urethra).	...	81	...	81	81	81	...	...	...	...
	Impacted or embedded substances (except in the eyeball).	...	21	...	21	21	21	...	...	...	...
	Total ...	...	102	...	102	102	102	..	...	...	...
Operations on arteries... ...	Ligature and excision	...	2	...	3	3	2	...	1	...	...
Operations on veins	Phlebotomy	...	18	...	18	18	...	18	...	...	...
	Infusion of saline or other fluid	...	3,406	...	3,406	3,406	...	3,406	...	...	...
	For varices excision, partial or complete ...	...	2	...	2	2	2	...	...	...	...
	Ligature of veins	...	...	...	...	...	...	...	...	...	...
	Total ...	...	3,426	...	3,426	3,426	2	3,424	...	...	...
Operations on lymphatics ...	Removal of lymphatic glands— (a) By excision	1	49	3	52	49	40	6	...	...	4
	(b) By curetting	...	88	...	88	88	83	5	...	...	...
	Removal of varicose lymphatic vessels ...	...	...	...	...	...	...	...	...	...	...
	* Incision of inflamed lymphatic glands ...	...	2	...	2	2	...	2	...	...	...
	Total ...	1	139	3	142	139	123	13	..	..	4
Operations on nerves	* Freeing of a nerve from cicatrix	...	2	...	2	2	2	...	...	...	...
	* Injection into a nerve trunk or nerve ganglion.	1	2	...	2	2	3	...	...	...	...
	Total ...	1	4	...	4	4	5	...	...	...	...
Operations on the skin and subcutaneous tissues.	Plastic operations for cicatrices and congenital malformations.	1	8	8	16	8	5	1	1	...	2
	Skin grafting (Thiersch's method)	3	15	6	21	15	15	3	...	...	...
	Curetting— For chronic ulcer	2	9	...	9	9	9	2	...	...	...
	For sinuses	2	52	6	58	52	35	15	2	2	...
	For sloughing tissues	...	...	...	...	...	...	...	...	..	...
	Linear scarification— For inflamed tissues	...	32	...	32	32	27	1	1	2	1
	For sloughing tissues	...	13	...	13	13	9	1	...	1	...
	For hæmatoma	..	3	2	5	3	3	...	2	...	...
	For boils and carbuncles	...	40	...	40	40	37	...	...	2	...
	For whitlows	...	15	...	15	15	15	...	1	..	...
	Cauterization thermo or electric	...	...	...	...	...	...	...	...	...	...
	*Excision of keloids and Cicatrix	..	7	...	7	7	5	2	...	...	...
	* Excision of elephantoid tissues and Kondoleons operation.	...	10	1	11	10	7	1	...	..	1
	*Excision of mycetoma	...	...	...	...	...	...	...	1	...	...
	*Excision of carbuncles	1	7	...	7	7	5	...	...	...	
	*Avulsion of nails	...	3	...	3	3	3	...	...	..	...
	*Repair of wounds	2	31	...	31	31	33	...	...	...	...
	Total ...	11	245	23	268	245	208	26	8	7	7
Operations on bones	Incision of periosteum	...	6	...	6	6	2	...	1	...	3
	Osteotomy— Linear	...	3	...	3	3	2	...	1	...	...
	Cuneiform	1	1	...	1	1	2	...	...	...	...
	Correction of deformity by fracture	...	17	...	17	17	17	...	...	...	..
	Wiring or otherwise uniting recent fractures or ununited fractures.	...	15	...	15	15	8	6	...	...	...
	Grafting of bones	...	4	...	4	4	2	2	...	..	1

STATEMENT G—*cont.*

Showing the Results of the Surgical Operations performed in the General Hospital, Madras, for the year 1922—cont.

ss of operations.	Nature of operations.	Number of patients remaining from last year.	Number of operations performed during the year.			Number of patients operated on in columns 4 to 6.	Results of operations on patients.				Number of patients remaining at the end of the year.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
s on bones—*cont.*	Removal of sequestra	4	38	4	42	38	24	16	1	1	...
	Excision, partial or complete	4	10	...	10	10	8	5	...	...	1
	Evacuation of an abscess	...	3	1	4	3	2	1	...	...	..
	Erasion of diseased bones	...	6	1	7	6	2	1	...	1	2
	Total	9	103	6	109	103	69	31	3	2	7
ns on joints	Reduction of dislocation—										
	Shoulder	...	3	...	3	3	3	...	...	...	...
	Elbow	...	7	1	8	7	4	3	...	...	..
	Hip	...	...	...	...	...	...	...	...	...	...
	Foot and toe	...	2	...	2	2	1	1	...	...	...
	Passive movements	2	10	1	11	10	8	4	...	...	...
	Tapping or aspiration with or without injection or irrigation.	2	10	1	11	10	5	6	...	1	...
	Incision with or without drainage	2	5	...	5	5	5	2	...	...	...
	Arthrotomy	...	2	...	2	2	...	...	2	...	...
	Excision, partial or complete	1	11	1	12	11	7	...	1	1	3
	Operation for congenital dislocation	1	1	...	1	1	2	...	...	...	1
	Total	3	51	4	55	51	35	16	3	2	3
ns on muscles and is fascia.	Tenotomy	...	3	...	3	3	3	...	...	...	...
	Union of a divided tendon	...	...	...	...	...	...	...	...	...	...
	* Intramuscular injections	...	...	1,759	1,759	...	...	...	...	...	...
	Total	...	3	1,759	1,762	3	3	...	...	...	...
	For injury—										
	Shoulder	...	...	...	...	...	...	...	...	...	...
	Arm	...	...	...	...	...	...	...	...	...	...
	Forearm, upper third	...	...	...	...	...	...	...	...	...	...
	Forearm, lower third	...	...	...	...	...	...	...	...	...	...
	Wrist	...	...	...	...	...	...	...	...	...	...
	Hand and fingers	2	11	1	12	11	13	...	...	...	...
	Thigh, middle third	...	...	...	...	...	...	...	...	...	...
	Thigh, lower third	...	...	...	...	...	...	...	...	...	...
	Knee	...	...	...	...	...	...	...	...	...	...

Amputations	Leg, upper third	...	...	...	...	...	...	...	...	...	...
	Leg, middle third	...	1	...	1	1	1	...	...	...	...
	Leg, lower third	...	...	...	...	...	...	...	...	...	...
	Foot and toes	...	...	...	...	...	...	...	...	...	...
	For disease or deformity—										
	Shoulder—										
	Middle third of arm	...	1	...	1	1	1	...	...	...	...
	Forearm, upper third	...	1	...	1	1	...	...	...	...	1
	Forearm, middle third	...	1	...	1	1	1	...	...	...	...
	Hand and fingers	1	6	...	6	6	6	...	1	...	...
	It is articulation thigh	...	1	...	1	1	...	...	...	...	1
	Thigh, middle third	1	4	1	5	4	4	...	...	...	1
	Thigh, lower third	...	7	...	7	7	7	...	...	...	...
	Knee	...	2	...	2	2	1	...	...	1	...
	Leg, upper third	2	7	...	7	7	7	...	...	2	...
	Leg, middle third	1	...	...	...	...	1	...	...	...	...
	Leg, lower third	...	4	...	4	4	3	..	...	1	...
	Ankle	1	...	...	...	...	1	...	...	...	...
	Foot and toes	1	7	...	7	7	5	2	1	...	...
	Total	9	53	2	55	53	51	2	2	4	3
Operations on the skull	Trephining or removing portions of skull	1	5	...	5	5	1	1	1	3	...
	Elevation of depressed bone	1	...	...	...	...	1	...	...	...	...
	Total	2	5	...	5	5	2	1	1	3	...
Operations on the spine and spinal cord and meninges.	Lumbar puncture of sub-arachnoid space	...	11	...	11	11	...	11	...	...	...
	Laminectomy	1	...	...	...	...	1	...	...	...	...
	Total	1	11	...	11	11	1	11	...	...	...
Operations on the face	For harelip	...	8	1	9	8	7	...	...	...	1
	For salway fisila	...	1	...	1	1	1	...	...	...	...
	Removal of lip-partial	1	2	...	2	2	3	...	...	...	...
	Total	1	11	1	12	11	11	...	...	...	1
Operations on the mouth	Division of frenum of tongue	...	...	...	...	...	...	...	...	...	...
	Removal of tongue, partial or complete	...	2	...	2	2	1	...	1	...	...
	Excision of uvula	...	14	...	14	14	14	..	...	...	...
	Removal of tonsils	1	96	...	96	96	97	...	...	...	...
	Incision of tonsils	...	9	...	9	9	9	...	...	...	...
	For cleft palate	...	5	...	5	5	4	...	...	...	1
	For Ranula	...	...	...	...	...	...	...	..	...	...
	Total	1	126	...	126	126	125	...	1	...	1
Dental operations	Extraction of teeth	...	3,564	..	3,564	3,564	3,564	...	...	...	...
	Filling	...	135	...	135	135	135	..	...	...	...
	Other Dental operations—										
	Scaling	...	601	...	601	601	601	...	...	...	...
	Incision of gums, etc.	...	76	...	76	76	76	...	...	...	...
	Removal of sequestra	...	6	...	6	6	6	..	...	...	...
	Uniting fractured jaw	...	2	...	2	2	2	...	...	...	...

STATEMENT G—*cont.*

Showing the Results of the Surgical Operations performed in the General Hospital, Madras, for the year 1922—cont.

Class of operations.	Nature of operations.	Number of patients remaining from last year.	Number of operations performed during the year.			Number of patients in operated on columns 4 to 6.	Results of operations on patients.				Number of patients remaining at the end of the year.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Dental operations—*cont.*	Other Dental operations—*cont.*										
	Antrum plug	...	1	...	1	1	1	...	...	...	...
	Denture	...	1	..	1	1	1	...	...	...	...
	Treatment of gums, etc.	...	502	...	502	502	502	...	...	...	...
	Total	...	4,888	...	4,888	4,888	4,988	...	...	...	...
Operations on the nose and accessory sinuses.	For deviation of nasal septum	...	...	...	...	...	...	...	...	...	...
	For removal of nasal polypus	...	1	.	1	1	1	...	...	...	...
	Application of electric cautery for Hypertrophic mucous membrane over inferior turbinated bones.	...	39	...	39	39	39	...	.	...	..
	Operations on the nasal sinuses	...	6	...	6	6	5	1	...	...	...
	Removal of turbinated bones, partial or complete.	...	8+5	...	8+5	8+5	8+5	...	...	...	...
	Total	...	59	...	59	59	58	1	...	...	...
Operations on the naso-pharynx.	Removal of adenoid growths	...	5	...	5	5	5	...	...	...	...
	Removal of nasal or naso-pharyngeal growths	...	29+2	...	29+2	29+2	29+2	...	...	...	...
	Total	...	36	...	36	36	36	...	...	...	...
Operations on the ear and accessory cavities.	Abscess, external ear	...	26+1	1	26+2	26+1	26+1	...	...	...	...
	Removal of polypus or granulation	...	29	...	29	29	29	...	...	...	...
	Removal of foreign bodies	...	...	...	...	...	...	.	...	...	...
	For acute suppurative otitis media—Opening of mastoid antrum	1	7	...	7	7	7	...	...	...	1
	For chronic suppurative otitis media—Radical operation	...	11	...	11	11	8	2	...	1	...
	Total	1	74	1	75	74	71	2	...	1	1
Operations on the larynx and trachea.	Tracheotomy and incubation	1	3	...	3	3	2	1	1	...	...
Operations on the thyroid body.	Operation on one lobe	..	1	...	1	1	1	...	...	...	...
Enucleation eyeball	Enucleation	...	1	..	1	1	...	...	...	1	...

Operations on the breast	For cyst or benign tumour	...	4	...	4	4	4	...	...	...	...
	Excision of breast	..	5	...	5	5	4	1	...	...	...
	Excision of breast with axillary glands and adjacent structures.	...	6	...	6	6	2	1	..	3	...
	Total	...	15	...	15	15	10	2	...	3	...
Operations on the thorax	Paracentesis Thoracis	...	43	1	44	43	...	43	...	...	...
	Incision and drainage of Pluera and resection Part of rib.	1	13	1	14	13	5	5	1	3	...
	Thoracoplasty	...	...	...	...	...	...	...	...	..	...
	Trans-thoracic incision for drainage of hepatic abscess.	...	11	...	11	11	8	...	...	3	...
	Aspiration of Alpatic abscess	...	3	...	3	3	3	...	...	...	...
	Total	1	70	2	72	70	16	48	1	6	...
Operations on the abdomen	Paracentesis abdominis	...	321	...	321	321	...	321	...	...	...
	Abdominal section—										
	(a) Exploratory	...	6	...	6	6	1	2	1	2	...
	(b) *For curative*, peritonitis both acute and Tubercular	5	25	1	26	25	6	12	1	9	2
	Operations on the stomach—										
	(1) Gastrorrhaphy	...	..	...	...	...	...	...	...	...	...
	(2) Gastrostostomy	...	...	...	...	...	...	...	...	...	...
	(3) Gastroenterostomy	1	123	...	124	123	99	1	...	9	15
	(4) Partial gastrectomy	...	6	...	6	6	3	...	...	3	...
	Operations on the intestines—										
	Sture of intestines	...	1	...	1	1	...	1	...	...	...
	Excision of portions of the intestine—										
	Enterectomy	1	8	1	8	8	4	1	...	4	...
	Colotomy Inguinal	2	4	...	4	4	3	2	...	1	...
	For intestinal obstruction	...	7	...	8	7	3	...	...	4	...
	*Operations For Mobile Colour	...	8	...	8	8	8	...	...	...	...
	Operations for disease of the appendix—										
	Excision of the appendix										
	(a) In the acute stage	...	1	...	1	1	...	...	...	...	...
	(b) During a quiescent period	3	110	...	110	110	107	...	...	4	...
	Opening and drainage of abscess	2	5	...	5	5	5	..	...	2	...
	Operations for external hernia—										
	(a) Strangulation—(i) By taxis	...	...	...	...	...	...	...	...	...	...
	(ii) Herniotomy and radical cure.	1	21	...	21	21	16	...	...	6	...
	(b) Radical cure for external hernia	2	88	...	88	88	86	...	...	...	4
	Operations on the liver—										
	*Exploratory puncture	...	69	...	69	69	...	65	3	1	...
	For Cirrhosis-omentopexy	1	5	...	5	5	..	4	1	1	...
	For abscess	1	16	...	16	16	11	1	2	2	1
	Operations on the gall-bladder and bile ducts—										
	Cholecystostomy	...	4	...	4	4	1	1	...	1	1
	Cholecystectomy	...	3	...	3	3	2	...	...	...	1
	Operations on the spleen—										
	(1) Splenic puncture	...	9	...	9	9	...	9	...	...	...
	(2) Splenectomy	...	4	...	4	4	2	...	...	2	...

STATEMENT G—*cont.*

Showing the Results of the Surgical Operations performed in the General Hospital, Madras, for the year 1922—cont.

Class of operations.	Nature of operations.	Number of patients remaining from last year.	Number of operations performed during the year			Number of patients on in operated 4 to 6.	Results of operations on patients				Number of patients remaining at the end of the year.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Operations on the abdomen—cont.	Operations on the kidney—										
	(1) Decapsulation	1	3	...	3	3	...	3	...	...	1
	(2) Nephrotomy	...	2	...	2	2	...	1	...	1	...
	(3) Nephrectomy	...	1	...	1	1	1	...	...	..	...
	(4) Nephropexy	...	...	...	...	...	...	...	...	...	...
	(5) Neprolithotomy	...	3	...	3	3	3	...	...	...	...
	Total ...	20	853	3	856	853	361	42	8	52	28
Operations on the rectum and anus.	For congenital malformations—										
	Imperforate anus	...	1	...	1	1	1	...	...	...	...
	For anal fistula	2	59	...	59	59	59	...	...	...	2
	For anal fissure or ulcer...	...	6	...	6	6	6	...	...	...	...
	For haemorrhoids	2	122	...	122	122	121	...	...	...	3
	For prolapse—										
	By manipulation	...	2	...	2	2	2	...	...	...	...
	By operation	1	...	...	...	...	1	...	...	...	...
	Polypus	...	...	...	...	...	...	...	...	...	...
	Dilatation of sphincter—										
	For stricture	1	3	...	3	3	2	1	...	...	...
	* Sigmoidos copy...	2	8	...	8	8	5	4	1	1	...
	Total ...	8	201	...	201	201	197	5	1	1	5
Operations on the bladder ...	Sounding	...	2	...	2	2	...	1	...	1	...
	Cystos copy	...	7	...	7	7	2	3	...	2	...
	Supra-pubic puncture	...	1	...	1	1	...	...	...	1	...
	Cystotomy supra-pubic	...	4	...	4	4	1	1	...	2	...
	Lithotomy supra-pubic	...	5	...	5	5	5	..	...	...	...
	„ Median Perincal	...	1	...	1	1	...	1	...	...	...
	Total ...	...	20	...	20	20	8	6	...	6	...
Operations on the prostate ...	Removal of the prostate (complete) arostatectomy.	1	4	...	4	4	4	...	...	1	...
Operations on the urethra ...	Urethroscopy	...	...	...	...	...	...	...	...	...	...
	Dilatation of stricture	3	97	27	124	97	10	86	1	..	3
	Urethrotomy—										2
	External	2	20	1	21	20	10	6	...	4	
	Perineal section	...	2	...	2	2	1	...	...	1	...
	Operation for extravasation of urine	1	3	...	3	3	...	2	...	2	...
	Operation of urethral fistula	2	6	...	6	6	3	4	1	...	...
	Total ...	8	128	28	156	128	24	98	2	7	5
Operations on the male generative organs.	Circumcision	...	124	...	124	124	124	...	...	...	...
	Amputation of penis, complete	4	19	...	19	19	21	...	...	2	...
	For paraphymosis reduction	...	50	...	50	50	50	...	...	...	...
	For varicocele	1	13	...	13	13	12	1	...	...	1
	For hydrocele—										
	Tapping	...	27	...	27	27	3	24	...	...	...
	Incision and eversion of sac	4	178	...	178	178	178	...	...	...	4
	Excision of part of parietal sac	...	4	...	4	4	4	...	...	...	...
	Incision and drainage	1	10	...	10	10	9	1	...	...	1
	For hæmatocele—										
	Incision and eversion of sac	..	3	...	3	3	2	...	..	...	1
	Incision and drainage	1	...	...	...	...	1	...	...	...	...
	Excision of part of the parietal sac	...	9	...	9	9	8	...	...	...	1
	Removal of testis	...	9	...	9	9	9	...	...	...	...
	* Removal of elephantoid scrotum and penis ...	2	14	...	14	14	15	...	...	...	1
	Fixation of undescending testicle in crostem ...	...	3	...	3	3	3	...	...	...	...
	Total ...	13	463	...	463	463	439	26	...	2	9
Operations on the female generative organs.	*Operations involving abdominal section.*										
	Removal of—										
	Ovary enlarged by new growth...	...	...	...	...	...	...	...	...	...	...
	Ovary under other conditions	...	1	...	1	1	...	...	...	1	...
	Operation in connexions.										
	With uterine appendages	...	1	...	1	1	1	...	..	...	...
	Hysterectomy supravaginal	...	1	...	1	1	1	...	.	...	...
	Operations by the vagina or vulva.										
	Amputation of chitoris for hypertrophy ...	...	...	...	...	...	...	...	..	...	...
	Repair of ruptured perineum	...	...	...	...	...	...	...	...	...	...
	Removal of new growth vulva—	...	...	...	...	...	...	...	...	...	...
	Total ...	...	3	...	3	3	2	...	...	1	...
	Grand Total ...	109	11,875	1,837	13,712	11,875	7,605	4,147	41	108	83

STATEMENT G (I) (REVISED).

Showing the Results of the Surgical Operations in the General Hospital, Madras, for the year 1922.

Class of operations.	Nature of operations.	Remaining from 1920.	Number of operations during the year.			Number of patients operated on in columns 3 to 4.	Results.				Remaining.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Operations on tumours ...	Removal by excision or other methods	1	69	...	69	69	58	3	2	5	2
Operations on cysts ...	Removal by excision or enucleation	...	33	...	33	33	32	...	...	...	1
Operations on arteries and veins.	Excision of varices	...	2	...	2	2	2	...	...	...	...
Operations on nerves ...	Freeing of a nerve from cicatrix	...	2	...	2	2	2	...	...	...	...
Operations on the skin and subcutaneous tissues.	Excision of elephantoid tissues—(leg and foot) ...	...	10	1	11	10	7	1	1	...	1
Operations on bones ...	Osteotomy linear or cuneiform	1	4	...	4	4	4	...	1	...	..
	Correction of deformity by fracture	...	17	...	17	17	17	...	...	...	...
	Removal of sequestra	4	38	4	42	38	24	16	1	1	...
	Excision, partial or complete	4	10	...	10	10	8	5	...	...	1
	Grafting of Bones	...	4	...	4	4	2	2	...	...	...
	Total ...	9	73	4	77	73	55	23	2	1	1
Operations on joints ...	Arthrectomy	...	2	...	2	2	...	...	2	...	...
	Excision, partial or complete	1	11	1	12	11	7	...	1	1	3
	Total ...	1	13	1	14	13	7	...	3	1	3
Amputations	For injury—										
	Shoulder	...	...	...	...	...	...	...	...	...	...
	Arm, lower third	...	...	...	...	...	...	...	...	...	...
	Forearm, upper third	...	...	...	...	...	...	...	...	...	...
	„ lower third	...	...	...	...	...	...	...	...	...	...
	Wrist	...	...	...	...	...	...	...	...	...	...
	Thigh, lower third	...	...	...	...	...	...	...	...	...	...
	Knee	...	...	...	...	...	...	...	...	...	...
	Leg, upper third	...	...	...	...	...	...	...	...	...	...
	„ middle third	1	...	1	1	1	...	...	...	...	...
	„ lower third	...	...	...	...	...	...	...	...	...	...
	For disease or deformity—Shoulder	...	...	...	...	...	...	...	...	...	...
	Arm	...	1	...	1	1	1	...	...	...	...
	Forearm, upper third	...	1	...	1	1	...	...	...	...	1
	„ middle third	...	1	...	1	1	1	...	...	...	...
	Disarticulation thigh	...	1	...	1	1	...	...	...	...	1
	Thigh, middle third	1	4	1	5	4	4	...	...	...	1
	„ lower third	...	7	...	7	7	7	...	...	...	...
	Knee	...	2	...	2	2	1	...	...	1	...
	Leg, upper third	2	7	...	7	7	7	...	...	2	...
	„ lower third	...	4	...	4	4	3	...	...	1	...
	„ middle third	1	...	...	...	...	1	...	...	...	...
	Total ...	4	29	1	30	29	26	...	...	4	3
Operations on the skull ...	Trephing or removing portions of the skull	1	5	...	5	5	1	1	1	3	...
	Elevation of depressed bone	1	...	...	...	...	1	...	...	...	...
	Total ...	2	5	...	5	5	2	1	1	3	...
Operations on the face ...	For harelip	...	8	1	9	8	7	...	...	...	...
Operations on the mouth.	Removal of tongue	...	2	...	2	2	1	...	1	...	...
	For cleft palate	...	5	...	5	5	4	...	...	...	1
	Total ...	...	7	...	7	7	5	...	1	...	1
Operations on the ear and accessory cavities.	Opening of mastoid antrum	1	7	...	7	7	7	...	...	...	1
	Radical operation for chronic otitis media	...	11	...	11	11	8	2	...	1	...
	Total ...	1	18	...	18	18	15	2	...	2	1
Operations on the thyroid body.	Removal of malignant growths	...	1	...	1	1	1	...	...	...	...
Operations on the breast	For cyst or benign tumour	...	4	...	4	4	4	...	...	...	...
	Excision of breast	...	5	...	5	5	4	1	...	...	...
	Excision of breast with axillary glands and adjacent structures.	...	6	...	6	6	2	1	...	3	...
	Total ...	...	15	...	15	15	10	2	...	3	...
Operations on the thorax ...	Trans thoracic incision for drainage of hepatic abscess.	...	11	...	11	11	8	...	...	3	...

STATEMENT G (I)—*cont.*

Showing the Results of the Surgical Operations in the General Hospital, Madras, for the year 1922—cont.

Class of operations.	Name of operations.	Remaining from 1919.	Number of operations during the year.			Number of patients on in operated columns 4 to 6.	Results.				Remaining.
			Primary.	Secondary.	Total.		Cured.	Relieved.	Discharged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Operations on the abdomen.	Abdominal section—										
	(a) Exploratory curative	...	6	...	6	6	1	2	1	3	...
	(b) *Curative* perdinitotis both acute and tubercular.	5	25	1	26	25	26	12	1	9	2
	Operations on the stomach—										
	Gastroenterostomy (a) Posterior	1	122	1	124	123	99	1	...	9	15
	„ (b) Gastrotrophy	...	6	...	6	6	3	...	...	3	...
	Operations on the intestines—										
	Suture of intestines	...	1	...	1	1	...	1	...	...	...
	Excision of portions of intestines—										
	(a) Enterectomy	1	8	...	8	8	4	1	...	4	...
	Colotomy inguinal	2	4	...	4	4	2	2	...	2	...
	Operations for intestinal obstruction	...	7	1	8	7	3	...	...	4	...
	Operation for mobile calcum	...	1	...	8	8	8	...	...	...	...
	Operations for disease of the vermiform Appendix—										
	Excision of the Appendix (a) In the acute stage ...	...	1	...	1	1	...	...	...	...	1
	„ (b) During a quiescent period.	3	110	..	110	110	107	...	...	4	3
	Opening and drainage of abscess	2	5	...	5	5*	5	...	...	2	...
	Operations for external Hernia—										
	(a) For Strangulation—Herniotomy and Radical cure.	1	21	...	21	21	16	...	...	6	...
	(b) Radical cure for external Hernia	2	88	...	88	88	86	...	...	...	4
	Operations on the Liver—										
	(a) For cirrhosis-omentopexy	1	5	...	5	5	...	4	1	1	...
	(b) For abscess	1	16	...	16	16	11	1	2	2	1
	Operations on the gall bladder and ducts—										
	(a) Chole cystostomy	...	4	...	4	4	1	1	...	1	1
	Chole cystectomy...	...	3	...	3	3	2	...	...	...	1
	Operations on the Spleen :—Splenectomy	...	4	...	4	4	2	...	...	2	...
	Operations on the Kidney—(Decapsulation)... ...	1	3	...	3	3	...	3	...	...	1
	Nephrotomy	...	2	...	2	2	...	1	...	1	...
	Nephrectomy...	...	14	...	1	1	1	...	...	...	...
	Nephrolithotomy	...	3	...	3	3	3	..	...	...	...
	Total ...	20	454	3	457	454	360	29	5	52	28
Operations on the rectum and anus.	For congenital malformations—Imperforate anus ...	...	1	...	1	1	1	...	...	...	...
Operations on the bladder	Lithotomy (suprapubic)	...	5	...	5	5	5	...	...	...	...
	Median perineal	...	1	...	1	1	...	1	...	...	...
	Total	...	6	...	6	6	5	1	...	...	...
Operations on the prostate.	Removal of the prostate	1	4	...	4	4	4	...	...	1	...
Operations on the urethra ...	Urethrotomy external	2	20	1	21	20	10	6	...	4	2
Operations on the male generative organs.	Amputation of penis—complete	4	19	...	19	19	21	...	...	2	...
	For Hydrocele—										
	(a) Incision and eversion of sac	4	178	...	178	178	178	...	...	...	4
	(b) Excision of part of the parietal sac	...	4	...	4	4	4	...	...	...	...
	For Hæmatocele—										
	(a) Incision and eversion of sac	...	3	...	3	3	2	...	...	...	1
	(b) Excision of part of the parietal sac	...	9	...	9	9	8	...	...	...	1
	Removal of testis	...	9	...	9	9	9	...	...	...	..
	Removal of elephantoid scrotum and penis ..	2	14	...	14	14	15	...	...	...	1
	Fixation of undescended testes	...	3	...	3	3	3	...	...	...	...
	Total ...	10	239	...	239	239	240	...	...	2	7
Operations on the female generative organs.	Operations involving abdominal section—										
	(a) Removal of ovary enlarged by new growth ...	...	1	...	1	1	...	...	...	1	...
	(b) Drainage of cyst in connexion with uterine appendages.	...	1	...	1	1	1	...	...	...	...
	Hysterectomy supra-vaginal	...	1	...	1	1	1	...	...	...	...
	Total ...	...	3	...	3	3	2	...	..	1	...
	Grand total ...	51	1,023	12	1,035	1,023	859	68	15	81	51

* The asterisk mark indicates operations not specifically mentioned with nomenclature.

GOVERNMENT GENERAL HOSPITAL, MADRAS,
9th March 1922.

T. H. SYMONS, O.B.E., LIEUT.-COL., I.M.S.,
Superintendent.

STATEMENT III-B.

Selected List of Operations performed by each Medical Officer, Government General Hospital, Madras, for the year 1922.

Number.	Names of Surgeons.	Period of duty.	Excision of tumours.	Excision bones or joints.	Operations on bones.	Grafting of bone.	Operation on skull.	Laminectomy.	Amputations. Above the metacarpus.	Amputations. Above the metatarsus.	Operations on arteries and veins.	Operations on nerves.	Operations for empyema.	Operations for excision of the breast.	Abdominal section (for any purpose other than obstetrical).	Abscess of the liver (all operations).	Operations on gall-bladder.	Operations on intestines including hernia.	Operations on stomach.	Operations on spleen.	Operations on kidney.	Operations on bladder.	Operations for removal of prostate.	Operations for removal of vesical calculi.	Operations on elephantoid scrotum.	Operations on testicle and supernatic cord.	Amputation of penis.	Operations on female generative organs.	Operations on mastoid.	Plastic operations.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Lieut.-Col. T. H. Symons, I.M.S.	From 1st Jan. to 1st May (S-1) and 1st Nov. to 31st Dec. 1922 (S-1).	15	3	7	...	1	..	1	12	1	...	2	2	13	4	2	40	21	...	2	1	1	...	2	3	2	...	4	2	141
2	Major E. W. C. Bradfield, I.M.S.	From 1st May to 31st Oct. (S-1), 6th May to 5th June (S-2), 14th Nov. to 31st Dec. (S-2), 1st Jan. to 30th Apr. (S-3), and 1st Nov. to 14th Nov. 1922 (S-3).	25	6	18	2	3	1	1	9	2	...	4	6	25	15	3	90	87	2	5	2	1	3	4	4	4	1	4	7	384
3	Lieut.-Col. W. R. J. Scroggie, C.I.E., I.M.S.	From 1st Jan. to 5th May (S-2) and 6th June to 14th Nov. 1922 (S-2).	15	2	25	2	1	...	...	7	...	...	8	...	...	6	1	49	14	2	2	1	2	2	2	2	10	...	9	3	165
4	Lieut.-Col. L. Hirsh, I.M.S.	From 5th Aug. to 31st Oct. 1922 (S-3).	2	...	3	...	...	..	...	6	...	...	...	2	2	1	...	10	...	...	...	...	...	...	...	1	1	...	...	...	28
5	Dr. S. Ranga Acharya, M.B., C.M.	From 1st May to 5th Aug. 1922 (S-3).	8	...	6	...	...		1	..	2	...	...	5	9	2	...	40	5	...	...	1	...	...	6	2	2	2	1	...	92
6	Major K. G. Pandalai, I.M.S.	From 6th May to 5th June (R.M.O.) and 14th Nov. to 31st Dec. 1922 (S-3).	4	1	...	...	...		1	2	...	...	1	...	2	2	1	10	3	...	...	...	...	...	...	...	...	...	...	1	28
7	Major A. P. G. Lorimer, I.M.S.	From 1st Jan. to 5th May (R.M.O.) and 6th June to 31st Dec. 1922 (R.M.O.).	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	20
		Total ...	69	12	59	4	5	1	4	36	5	...	15	15	55	30	7	255	130	4	9	5	4	5	14	12	19	3	18	13	808

SUPPLEMENTARY STATEMENT.

Showing venereal diseases of in-door and out-door patients, by sexes, treated in the dispensaries in the Province of during the year 192 .

District.	Class of dispensary.	GONOCOCCAL INFECTION. State-Public. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.	State-Special and Railway. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.	Private non-aided. In-door and out-door. Total treated. Males.	Females.	Deaths. Males.	Females.	SYPHILIS (PRIMARY AND SECONDARY). State Public. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.
1	2	3		4		5		6		7		8		9		10		11		12		13	
Madras.	Government General Hospital, Madras— I Class, State-Public. Non-Europeans...	49	22	1	...	450	270	...	...	...	...	...	...	...	...	...	...	102	52	1	1	440	280
	Europeans ...	7	4	...	...	73	9	...	...	...	...	...	...	...	...	...	...	12	5	...	...	51	7
	Total ...	56	26	1	...	523	279	...	...	...	...	...	...	...	...	...	...	114	57	1	1	491	287

District.	Class of dispensary.	SYPHILIS (PRIMARY AND SECONDARY)—*cont.* State-Special and Railway. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.	Private non-aided. In-door and out-door. Total treated. Males.	Females.	Deaths. Males.	Females.	* OTHER DISEASES OF VENEREAL ORIGIN. State-Public. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.	State-Special and Railway. In-door. Total treated. Males.	Females.	Deaths. Males.	Females.	Out-door. Total treated. Males.	Females.	Private non-aided. In-door and out-door. Total treated. Males.	Females.	Deaths. Males.	Females.
		14		15		16		17		18		19		20		21		22		23		24		25		26	
Madras.	Government General Hospital, Madras— I Class, State-Public. Non-Europeans...	...	...	...	...	...	...	...	...	...	...	124	80	1	...	600	376	...	...	...	...	...	...	...	...	...	...	...	...
	Europeans ...	...	...	...	...	...	...	...	...	...	...	21	4	...	...	25	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	...	...	...	...	...	...	...	...	...	...	145	84	1	...	625	381	...	...	...	...	...	...	...	...	...	...	...	...

* Among these are included gonorrhœal ophthalmia, gonorrhœa, rheumatism and salpingitis, pelvic abscess, gonorrhœal cystitis and tertiary syphilitic lesions of the brain, spinal cord, skin liver, bone and testis, etc., and infection granuloma, soft store, balanitis vaginitis, lewcorrhœn.

NOTE.—The different Cases included in

STATEMENT H

Showing the Income and Expenditure of the Government General Hospital, Madras, in the year 1922.

District.	Name of dispensary.	Cash balance.	Income. Government contribution. As salary.	Government contribution. Other-wise.	Local Fund contribu-tions.	Municipal Fund contri-butions.	Interest on invest-ments.	Subscriptions. Euro-pean.	Subscriptions. Indian.	Miscellane-ous receipts (to include sale of se-curities).	Total receipts (exclusive of opening balance).	Expenditure. Salaries. Medical officers.	Salaries. Nurses.	Salaries. Inferior servants.	Medicines. Euro-pean.	Medicines. Bazaar.	Diet.	Miscellane-ous charges.	Buildings or repairs.	Investments.	Total expen-diture.	Closing balance.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Madras.	Government General Hospital.	Nil.	2,73,141	3,79,086	...	...	...	...	...	33,204	6,85,431	1,10,110	93,319	69,712	68,059	4,388	1,80,170	1,51,977	57,666	...	6,85,431	...

(1) Statement is intended to comprise only those institutions from which complete information can be expected. These are State-Public, Local Fund and Private-aided dispensaries (Classes I, III and IV of the classes shown in Statement A).

(2) Figures for individual dispensaries should be given: and dispensaries should be arranged in column 2 as in statement B, except that district totals (for general, female or combined institutions) need not be given.

(3) Annas and pies should be omitted throughout.

(4) Income in column 13 should be shown (1) the pay of Surgeons, Assistant Surgeons, Apothecaries, Hospital Assistants and Native Doctors attached to the dispensary, including special dispensary allowance (if any), and (2) the special allowance given to Surgeons, Assistant Surgeons, Apothecaries, Hospital Assistants and Native Doctors for holding charge of the dispensary in addition to their ordinary civil work. The pay of Civil Surgeons or other Medical officers holding charge of the dispensary in addition to other duties should not be shown at all in this statement

(5) In column 15 should be shown the salaries of (1) compounders, dressers, etc., (2) menial servants, e.g., cooks, sweepers, chaukidars, etc.

FIRST PHYSICIAN'S WARDS.

I was in charge of these wards throughout the year.

The following table shows the number of cases treated and deaths this year as compared with the two preceding years :—

Class of patients.	1920.		1921.		1922.	
	Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.
Europeans	708	43	705	51	706	36
Non-Europeans	556	53	538	54	960	85
Total ...	1,264	96	1,243	105	1,666	121

The great increase in the number of admissions on the Non-European side is largely due to the opening of a new ward containing 16 beds on 28th February 1922.

Class of patients.	Admissions. Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.	Average daily sick.
Europeans	39	667	706	465	101	75	36	29	39·52
Non-Europeans	30	930	960	503	187	144	85	41	47·68
Total ...	69	1,597	1,666	968	288	219	121	70	87·20

Minor operations performed during 1922.

Operations.	Europeans.	Non-Europeans.	Total.
Intramuscular injections	689	708	1,397
Intravenous	527	291	818
Paracentesis abdominis	2	212	214
Paracentesis thoracis	1	12	13
Paracentesis lumbar cord	2	7	9
Liver puncture	32	29	61
Spleen puncture...	1	2	3
Vene section	1	4	5
Abscess opened	6	9	15

Intramuscular injections were those of quinine, emetine, sodium morrhuate and vaccines. Intravenous injections were mostly of antimony salts for Kala Azar and filariasis, of Salvarsan derivatives, of Hexamine and Chloramine T.

Percentage of mortality.

Class of patients.	Total treated.	Deaths.	Percentage.	Moribund cases.	Percentage of deaths excluding moribund cases.
Europeans	706	36	5·09	8	4·67
Non-Europeans	960	85	8·85	15	7·29

Principal diseases treated and deaths.

Diseases.	Europeans.			Non-Europeans.			Total.	
	Total treated.	Deaths.	Remarks.	Total treated.	Deaths.	Remarks.	Cases treated.	Deaths.
Malaria. Benign tertian ...	38	...	...	71	1	Complicated with pneumonia.	109	1
Malaria. Malignant tertian ...	43	...	...	77	2	Both complicated with acute amœbic dysentery and peritonitis in 1 case.	120	2
Malaria. Quartan	1	...	...	7	...	...	8	...
Malaria. Chronic	2	...	...	21	1	Sudden death. P.M. Big fatty heart.	23	1
Enteric	22	1	...	6	...	...	28	1
Influenza	17	...	...	10	...	...	27	...
Pneumonia	25	...	...	88	25	7 cases were moribund, 7 were of double pneumonia, 1 complicated with malaria, 1 with advanced ankylostomiasis, 1 with purulent pericarditis.	113	25
and fly fever	6	...	...	13	...	...	19	...
	42	...	...	21	...	...	63	...
Dengue	55	1	Terminal pneumonia.	39	2	1 moribund, 1 clinically like enteric, but P.M. no lesions in the intestines.	94	3
P.U.O.								
Relapsing fever	...	...	...	2	1	20 hours after injection of N.A.B., P.M status lymphaticus.	2	1
Cerebro-spinal meningitis	1	1	...	4	4	2 moribund, 1 with pneumonia and hyperpyrexia.	...	....
Kala Azar	28	2	1 complicated with T.P., 1 with advanced anæmia and heart failure.	23	3	1 very advanced case, 1 moribund complicated with pneumonia, 1 died of internal hæmorrhage result of splenic punctura.	51	5
Tuberculosis of lung	25	6	1 complicated with Kala Azar.	42	7	...	67	13
Bronchitis	19	...	...	16	...	...	35	...
Asthma (bronchial)	25	...	...	21	...	...	46	...
Rheumatism	16	...	...	6	...	...	22	...
Pleurisy. Dry	4	...	...	2	...	...	6	...
Pleurisy. With effusion	3	...	...	5	...	...	8	...
Diseases of heart	19	6	2 moribund.	35	9	...	54	15
Diseases of blood. Pernicious anæmia ...	...	...	...	2	1	...	2	1
Diseases of blood. Myeloid leuksemia ...	...	...	...	1	1	...	1	1
Hepatitis	6	1	Terminal pneumonia.	9	...	...	15	1
Cirrhosis of liver	1	...	...	37	4	...	38	4
Catarrhal jaundice	1	...	..	8	...	...	9	...
Diseases of stomach	18	1	...	18	...	...	31	1
Enteritis	20	4	...	21	3	...	41	7
Appendicitis	2	...	...	2	...	...	4	...
Colitis	12	...	...	9	1	...	21	1

Principal diseases treated and deaths—cont.

Diseases.	Europeans.			Non-Europeans.			Total.	
	Total treated.	Deaths.	Remarks.	Total treated.	Deaths.	Remarks.	Cases treated.	Deaths.
Dysentery. Amœbic	23	1	Old age.	37	3	1 very acute, developed peritonitis, 2 complicated with malaria M.T.	60	4
Dysentery. Bacillary	5	...	...	4	1	Complicated with ankylostomiasis.	9	1
Nephritis. Chr. interstitial ...	1	...	...	7	1	P.M. marked atheroma of cerebral vessels and aorta; hæmorrhage into Rt. optic thalamus.	8	1
Nephritis. Chr. parenchymatous ...	5	2	Uræmia.	21	4	2 heart failure, 1 uræmia.	26	6
Nephritis. Acute do. ...	...	...	...	3		1 heart failure, 1 uræmia.	3	2
Pyelitis	1	...	...	4	...	...	5	...
Diseases of nervous system ...	9	...	...	22	...	..	31	..
Tubercular Meningitis	2	...	...	1	...	...	3	...
Hemiplegia	5	1	...	5	1	Terminal pneumonia.	10	2
Parasitic diseases of skin and hair follicles.	12	...	...	7	...	...	19	...
Ankylostomiasis	6	...	...	77	4	1 complicated with paresis of intestines, 1 with acute T.P., 1 with pneumonia, 1 with bacillary dysentery.	83	4
Other intestinal worms	15	...	...	15	...	...	30	...
Bilharziasis (Vesical)	...	...	...	1	...	...	1	...
Filariasis	8	...	...	1	...	...	9	...
Deficiency diseases	2	...	...	15	2	1 complicated with measles.	17	2
Diabetes mellitus	3	...	...	12	...	...	15	...

SPECIAL ANKYLOSTOMIASIS REPORT.

A.—*Europeans and Anglo-Indians.*

Place of residence.	Number treated.
Madras. Triplicane	1
Madras. Kilpauk	1
Madras. Parktown	1
Madras.	1
Madras. Perambur	1
Trivandrum	1
Total ...	6

Occupation.	Number treated.
Students	4
Nil.	1
Nurse	1
Total ...	6

Result.

Cured	4
Relieved	2
Discharged otherwise	
Died	
Total ...	6

B.—*Non-Europeans.*

Place of residence.		Number treated.
Malabar		5
Travancore		1
Madras.	Mint Street	2
	Georgetown	5
	Chintadripet	2
	Mount Road	1
	Sowcarpet	1
	Tondiarpet	1
	Washermanpet	1
	...	1
	Periamet	3
	Mylapore	1
	Purasawakkam ...	1
	Choolai	1
	Vepery	1
	Egmore	1
Dindigul		1
Nagari		1

Occupation.	Number treated.
Coolie	8
Student	1
Beggar	5
Cook	3
Clerk	1
Ryot	5
Fisherman	1
Landlord	1
Merchant	1

Place of residence.		Number treated.
Sholapur		1
Avadi		1
Tinnanur		1
Periyapalaiyam		1
Nayndupet		1
Guntûr		2
Mayavaram		1
Tindivanam		1
Pallavaram		1
Poonamallee		2
Chingleput		2
Conjeeveram		1
Tinnevelly		1
Place unknown		31
	Total ...	77

Occupation.	Number treated.
Teacher	1
Astrologer	1
Butcher	1
Hotel-keeper	1
Weaver	1
No definite occupation	46
Total ...	77

Result.

Cured	53
Relieved	15
Discharged otherwise	5
Died	4
	77

INTERESTING CASES AND OBSERVATIONS.

Kala-Azar.—Fifty-one cases of Kala-Azar were treated during this year, of which 28 were Europeans or Anglo-Indians and 23 were Indians. Of these there were 5 deaths in all as noted above. Fourteen patients did not remain to take the full course of injections—either refusing to be injected or absconding in the middle of the treatment. Of the remaining cases one was recurrence after incomplete treatment with 1 per cent solution elsewhere, and he did not respond to injections of 2 per cent solution of either the sodium or the potassium antimony tartarate. This patient developed scattered patches all over his body resembling patches of subcutaneous haemorrhage after a series of injections of 2 per cent solution of antimony tartrate, which, at the time, were supposed to be caused by the antimony salt, although he showed no other symptoms of antimony poisoning. Later on, on the suggestion of Col. Liston, I.M.S., of Bombay, the patient's blood was sent for Wassermann reaction, which was returned as strongly positive. Two injections of N.A.B. cleared up the patches quite well. The patient was however discharged as incurable, and it is reported that he died in England a few months later, where he went for further treatment.

The remaining 31 cases, with one exception were all cured as indicated by the disappearance of the spleen, normal temperature increase in weight, and marked improvement in the general health together with a return of the formed elements of the blood to a normal condition. The exception was as follows:—

Girl aged 12 years, resident in Georgetown, was admitted on 28th September 1921 for irregular fever of 4 months' duration. On admission the temperature was 101·4° F, and was intermittent in type. The spleen was just palpable ½ inch below costal margin. Repeated examinations of blood showed no parasites, but slight Leucopaenia. R.B.C. 4,312,480 per c. mm. W.B.C. 8,500 per c. mm. Haemoglobin 65 per cent. On 2nd October 1921 liver puncture was performed and free Kala-Azar bodies were demonstrated in the liver juice. Intravenous injections of 2 per cent solution of Sodium antimony tartarate were begun on 8th October 1921. At this period her temperature was typical of Kala-Azar showing double and triple rises in 24 hours. She was given 13 injections of the Sodium salt amounting to a

total of 9·9 grains of sodium antimony tartarate. The temperature did not however remain normal, and the spleen had increased to 2¾ inches below costal margin after the thirteenth injection. She was then tried on the potassium salt (as mentioned in my last year's report) and had 7 injections amounting to a total of about 7 grains of potassium antimony tartrate, but still her condition did not improve, the fever remained and the spleen continued to increase in size. A second liver puncture on 17th January 1922 showed that Kala-Azar bodies were still present in large numbers. Wassermann reaction was negative. Repeated blood examinations did not show any malarial parasite. Only whip-worm ova were present in the stools. From 2nd May to 30th June 1922 she had seven injections of Stibenyl intravenously, and after the last injection she developed symptoms of anaphylaxis which however did not prove fatal. After this the temperature range was lower than before (98·4°—101°). But the spleen remained large although the general condition improved to some extent. She was discharged as incurable on 14th September 1922 with a spleen 5 inches below costal margin. The interesting feature about this case is that the disease gradually progressed even in spite of vigorous treatment from the beginning, thus pointing to the possibility in rare cases of some special phenomenon, constitutional or otherwise, rendering the parasites highly resistent to antimony salts.

The youngest case of Kala-Azar was 1 year and 1 month old.

The following types of reactions after intravenous injections of antimony tartrate were observed in the order of frequency as below:—

(*a*) Cough—in almost all cases ... ... } Relieved by sucking
(*b*) Vomiting—in many cases ... ... } pieces of ice.
(*c*) Rise of temperature—in many cases ... ...
(*d*) Pain in the gums only—in two cases ... ...
(*e*) Pain in the joints only—in two cases ... ... } Relieved by Salicyl-
(*f*) Pain over the body as in Dengue—one case ... ... } ates.
(*g*) A peculiar smell which was most distasteful to the patient —one case.
(*h*) Abdominal pain—1 case.
(*i*) Rigor after the injection—exceedingly rare.

It may be mentioned that in all cases except three the diagnosis of Kala-Azar was made after liver puncture. In two cases however the spleen had to be punctured since smears from the liver juice were negative: and in only one case did culture (from liver juice) prove positive when liver puncture failed to demonstrate the parasite.

One case in which the spleen was punctured died.

On *Post-mortem* examination the puncture on the spleen was found to be quite clean and small, but nevertheless fatal haemorrhage had resulted, thus showing that puncture of the spleen should not be undertaken lightly. To my mind liver puncture is quite safe and in 99 per cent of cases quite successful in demonstrating the parasite. In the few cases where liver puncture is negative, spleen puncture may be resorted to with proper precautions.

Treatment of Malaria with Malarine.—Fifty cases of Malaria were treated with Malarine, of which 22 were Benign tertian, 26 Malignant tertian, and 2 Quartan. B.T. parasites and M. T. rings disappeared from the peripheral blood and the temperature remained normal in 48 hours after commencing administration and with an average dose of 30 grains of malarine. The crescent forms of M.T. did not disappear from the peripheral blood even at the end of 7 days and with a total dose of 105 grains of malarine. Quarten parasites took 4 days and 55 grains of malarine (average) to disappear from the peripheral blood. The method of administering the drug was as powder mixed with sugar, the average dose for an adult being 15 grains per diem. It was found to be equally effective as quinine and better tolerated by the patients. Chemical analysis showed that the active principle in malarine consists mainly of the amorphous alkaloids of Cinchona bark.

Guipsine in Hyperplesis.—Two cases of persistent hyper-tension were treated with guipsine which contains the useful principles of mistletoe. It appears to lower the blood pressure slightly, but its action is not very marked.

Chloramine T in Tuberculosis of Lungs.—Six cases of T.P. were treated with 2 per cent solution of Chloramine T alone: 3 patients were given no medicine internally except cod liver oil, rest and hospital diet; the remaining 58 cases were treated with intramuscular injections of sodium morrhuate in addition to rest and diet. Those that were treated with Chloramine T alone did not fare any better than those with no medicine internally. In practically all cases the patients improved remarkably in the beginning, particularly those who had sodium morrhuate injections, although later on, in the majority of cases, they declined rapidly. Weekly examinations of the Sputum as compared with the first smear did not show any marked difference in the number or staining of the bacilli.

Carbon Tetrachloride in Ankylostomiasis.—Fifty-four cases of Ankylostomiasis were treated with carbon tetrachloride. I have found it to be more effective than any other drug in expelling the worms. In none of the cases has it produced any toxic symptoms. No precautions have to be taken and no ceremonies to be gone through as in the case

of Thymol. The average dose for an adult is 2 c.c.—3 c.c., and in the majority of cases the patient had to be dosed at least three times before completely getting rid of all the worms. (The method of adiminstration is to give 2 or 3 c.c. of carbon tetrachloride on sugar on an empty stomach in the morning, to be followed by a purgative 2 hours later.)

My assistant Dr. V. K. Narayana Menon has devised a rapid and excellent method of examining faeces for ankylostome ova in clinical practice. A small piece of the faeces (size of the tip of the little finger) is mixed with lacto phenol and after spreading it on a slide examined under the low power. The ova stand out prominently and can be recognized at once when present.

A few brief notes of some interesting cases are recorded below :—

I. P.U.O.—Miss Z., aged 19 years, admitted on 11th August 1922 for fever. On admission the general condition was good and nothing could be found to account for the fever, the only abnormal condition found being a furred tongue and constipation. The fever was of an irregular intermittent type, frequently rising to 103° or 104° without rigour, and returning to normal in a few hours. Blood culture and repeated blood examinations both day and night showed no abnormality whatever. Catheterised specimen of urine showed no bacilluria. The fever continued for several weeks, and the only additional symptom which developed was occasional pain over the lower part of the abdomen on the right side. Nothing abnormal with the generative organs could be detected on examination. Sodium morrhuate injections were given without any effect on the fever. An exploratory laparotomy was eventually decided upon, and performed by Major Bradfield who however found nothing abnormal but removed the appendix as the pain complained of was in this region. From the day following the operation the patient's temperature was normal, and she is at the time of writing perfectly well, and has had no recurrence of fever.

The Pathologist's report on the appendix was that it was normal.

II. Meningitis without definite Signs.—A child aged 7 years was admitted on 25th September 1922, for fever of 2 days' duration. On admission the temperature was 104·6°. Eyes somewhat conjested. No retraction of head, no Kernig's sign. Examination of blood showed marked polymorphonuclear leucocytosis. Blood culture negative. Widal positive 1 in 25. Nothing abnormal in Cardiac respiratory or genito urinary systems. The temperature finally reached normal on 29th January 1922 and the patient appeared to be doing well until 1st October 1922 when respirations became hurried, pulse rapid and general condition unsatisfactory though the temperature remained normal. The child died the same day at 5-45 p.m. On *Post-mortem* examination the meninges of the brain were found markedly inflamed with purulent exudation present. There were also numerous petechial haemorrhages beneath the Serous membranes.

The Pathologist pronounced the cause of death to be meningitis and septicaemia. It is remarkable that no clinical signs of meningitis were present.

III. Lesions in the Optic Thalmus.—1. Miss S., aged 43 years, admitted on 16th February 1922 complained that 2 days previous she felt giddy and fell down. She did not lose consciousness, but found that she could not rise as she was unable to move the limbs on the right side of the body. On admission there was complete paralysis of the whole of the right side of the body including the face, and also complete hemianaesthesia on the same side. Reflexes also lost on the right side. No hemianopia, blood pressure systolic 248, diastolic 110. On 21st February 1922 patient was able to move her toes and slightly abduct the right thigh, paralysis of facial muscles was also less marked. From this time onwards both the paralysis and anæsthesia rapidly recovered, and patient was discharged on 27th April 1922 apparently quite recovered.

2. S., male, aged 55 years, admitted in an unconscious condition on 20th November 1922 with a history of having been picked up in an unconscious condition from the street. No paralysis could be detected. Blood pressure systolic 260, diastolic 190. The patient was given purgatives and aconite and on 21st November 1922 venesection was performed. The blood pressure fell to 230 m.m. systolic., 130 siastolic, but the patient remained in an unconscious condition and died on 29th November 1922. The *Post-mortem* examination revealed exceedingly extensive atheroma of cerebral vessels and of aorta and a haemorrhage the size of an arecannt in the right optic Thalmus. Both kidneys were small and granular, and the left ventricle of the heart much hypertophied.

Pilariasis and Tartar Emetic.—1. Miss W. , aged 22 years, from Kumbakōnam, was admitted on 7th August 1922 for fever attended with rigor. Lymphangitis over the left pectoral region and outer aspect of the left shoulder was present. Blood smear showed slight leucocytosis, but no parasite. Night blood showed numerous micro-filaria bancrofti. The patient was started on intravenous injections of 2 per cent solution of Tartar Emetic of which she had 19 injections amounting to a total of 34·8 grains of Tartar Emetic. Her blood, however, showed many microfilariæ, although they were apparently less numerous than in the beginning. The lymphangitis on the shoulder travelled down to the inner side of the left upper

arm where it formed an abscess which had to be opened. No parent filaria could be discovered inside the abscess.

Her blood was again examined three months after the course of injections, and the microfilariae were found to be as numerous as before.

2. I , aged 64 years, resident in Vepery, was admitted on 28th September 1922, complaining of passing milky urine for one month. He also had irregular rises of temperature. Blood smear showed slight leucocytosis under the microscope. Night blood showed numerous microfilaria bancrofti. The patient was given 13 injections of 2 per cent solution of Tartar Emetic amounting to a total of 16·5 grains of Tartar Emetic. The urine became apparently normal; but microfilariae were still present in large numbers in the blood.

3. Miss R. , aged 16 years, resident in Georgetown, was admitted on 4th November 1922, for continuous fever for 6 days. On admission the temperature was 100·4. Blood smear showed no parasite and no leucocytosis. On examining the blood smear again on 8th November 1922 a microfilaria was accidentally discovered in the smear. Preparations of her blood was at once made (at 9-30 a.m. on 8th November 1922) which showed numerous microfilariæ, but differing very much from m. bancrofti in size, mode of death, and in the apparent absence of a sheath. Specimens of night blood were next examined, but they failed to show any filariæ. They were present only during daytime. Up to 23rd November 1922 she was given 9 injections of 2 per cent solution of sodium antimony tartrate amounting to a total of 7·35 grains of sodium antimony tartrate, but the microfilariæ still persisted in her day blood. From 11th December 1922 her temperature remained normal. On 22nd December 1922 night blood showed the microfilariæ, and since then they have been absent from the blood during daytime and appear only during night. This microfilariæ has not yet been identified. Major Cunningham, I.M.S., thinks that it may possibly belong to a new species altogether, but his investigations are not complete. The patient is still in hospital, her temperature is normal but the filariæ persist and are now only present in the perepheral blood at night.

I wish again to express my appreciation of the assistance given me by my Assistant Dr. V. K. Narayana Menon who has shown the greatest interest and zeal in his work inspite of much arduous routine work.

Govt. General Hospital, Madras,
20th March 1923.

F. F. ELWES, M.D., C.I.E., Lieut.-Col., I.M.S.,
First Physician.

SECOND PHYSICIAN'S WARDS.

The wards were in charge of Major G. E. Malcomson, M.D., I.M.S., from 1st January to 14th May 1922; Lieut.-Col. Elwes, C.I.E., I.M.S., from 15th May to 23rd June 1922 and in my charge from 23rd June to 31st December 1922.

Class of patients.	Admissions.								Average daily sick.	Death-rate per 1,000.	Operations.							
	Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.			Remained.	Performed during the year.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans ...	18	210	228	125	55	19	15	14	14·11	65·8	...	58	58	..	58	...	...	...
Non-Europeans ...	41	953	994	486	267	97	106	38	45·29	106·6	...	545	545	...	545	...	...	...
Total ...	...	...	...	...	...	...	...	...	...	...	..	...		...	...	...	...	...

Minor operations:—

Paracentesis thoracis	17
Do. abdominis	53
Do. lumbar puncture	3
Intravenous saline	40
Other intravenous injections	482
Venesection	8

	Total No. performed during the year.
Europeans	58
Non-Europeans	545
Total ...	...

Percentage of mortuary.

Class of patients.	Total treated.	Deaths.	Percentage of deaths.	Moribund cases.	Percentage of deaths excluding moribund cases.
Europeans	228	15	6·58	...	6·58
Non-Europeans	994	106	10·66	3	10·37

Principal diseases treated and their deaths.

Diseases.	Total treated.			Deaths.		
	Europeans.	Non-Europeans.	Total.	Europeans.	Non-Europeans.	Total.
Malaria — Benign tertian	24	86	110	...	...	...
Malaria — Malignant tertian ...	4	49	53	...	2	2
Malaria — Quartan	...	3	3	...	...	...
Malaria — Chronic	1	19	20	...	...	.
Kala-Azar	5	24	29	...	6	6
Enteric fever	10	32	42	1	2	3
Dengue	5	31	36	...	..	...
Influenza	6	32	38	...	...	...
Sand fly fever	...	5	5	...	...	...
Pyrexia of uncertain origin	12	22	34	...	1	1
Lobar Pneumonia	6	60	66	3	17	20
Broncho-pneumonia	5	32	37	1	4	5
Pleurisy	2	14	16	...	2	2
Bronchitis	18	25	43	...	1	1
Empyema	1	5	6	...	...	...
Tubercle of lungs	1	33	34	...	7	7
Diseases of the heart	9	46	55	...	9	9

Diseases.	Total treated.			Deaths.		
	Europeans.	Non-Europeans.	Total.	Europeans.	Non-Europeans.	Total.
Nephritis	3	40	43	...	8	8
Cirrhosis of liver	...	29	29	...	9	9
Nervous diseases	6	40	46	1	1	2
Diseases of stomach	4	24	28	...	1	1
Diseases of Intestines	8	50	58	1	5	6
Dysentery	13	45	58	2	2	4
Cholera	...	...	...	...	...	...
Small-pox	9	9	18	...	...	...
Measles	6	6	12	...	...	...
Chicken-pox	...	...	...	...	...	...
Diphtheria	1	2	3	...	1	1
Mumps	1	...	1	...	...	..
Whooping cough	...	1	1	..	...	...
Gonorrhœa	...	1	1	...	..	..
Syphilis	...	8	8	...	...	...
Asthma	5	14	19	...	...	...
Diabetes	1	3	4	...	...	...
Hepatitis	3	7	10	...	...	...
Beri-Beri	...	6	6	...	...	...
Deficiency disease	2	6	8	...	1	1
Anæmia	...	10	10	...	2	2
Aneurysm	1	1	2	...	...	...
Admoids and Tonsillitis	6	1	7	...	...	...
Splenic anæmia	...	1	1	..	1	1
Leucæmia	...	1	1	...	...	...
Rheumatism	2	11	13	...	...	..
Rheumatoid Arthritis	...	1	1	..	...	...
Hydrophobia	...	1	1	...	1	1
Epilepsy	1	3	4	...	...	...
Biliary colic	...	3	3	...	..	...
Catarrhal jaundice	3	6	9	...	...	...
Rat bite fever	...	1	1	...	...	...
Chyluria	...	2	2	...	...	...
Filariasis	...	5	5	...	...	...
Ascariasis	...	2	2	...	...	...
Ankylostomiasis	3	45	48	...	3	3
Poisoning corrosive	...	1	1	...	...	...
Do. glass	...	1	1	...	...	...
Do. lead	...	1	1	...	...	...
Otitis media	..	1	1	...	...	...
Skin diseases	1	6	7	...	...	...
Anthrax	1	...	1	...	...	...
Tape worm	3	...	3	...	...	...
Alcoholism	2	...	2	...	...	...
Cancrum oris	1	...	1	...	...	...

Purpura Haemorrhagica.—European, male, 21 years.

After a few days fever, during which no parasites were found in the blood, the patient complained of pain in the stomach and a purpuric rash appeared and he was sent into hospital.

On Admission.—Very pale. Nutrition good. Face, trunk, arms and legs sprinkled with purpurics pots: at points where he had had hypodermic injections large ecchymoses occurred. The gums and mucous membrane of the mouth were bleeding. Urine black, contained large quantity of blood. There was no haemoptyses, epistaxis, haemetemesis or meloena.

Temperature: Evening rises 101—99.

Abdomen normal. Respiratory movements: Very tender in both hypochondriac regions, less so in lower abdomen.

No rigidity. Constipation was troublesome throughout.

Respiratory, Circulatory and Nervous system.—No signs except the hæmorrhages above mentioned.

Treatment.—Calcium chloride was administered 20 grains three times a day. Adrenatin (1—1000) 10 m. was given hypodermically. The urine fairly quickly cleared up and no fresh petichiae appeared. In a week the urine was free from blood and albumen. Bowels regulated with salines.

On 17th July 1922 he developed right hemiplegia and became aphasic. Temperature continued to be irregular generally about 99, sometimes normal. Wassermann Reaction: Positive strong. Neosalvarsan which had been given before admission was repeated. Temperature remained generally normal.

GOVT. GENERAL HOSPITAL, MADRAS,
1923.

J. M. SKINNER, Major, I.M.S.,
Second Physician.

THIRD PHYSICIAN'S WARDS.

Dr. T. S. Tirumurti, B.A., M.B., C.M., was in charge of these wards from 1st January to 31st May, Dr. M. R. Guruswami Mudaliyar, B.A., M.D., from 1st to 30th June 1922, Dr. T. S. Tirumurti, B.A., M.B., C.M., from 1st July to 30th November 1922 and in my charge from 1st to 31st December 1922.

The number of admissions and deaths is as follows :—

1920.		1921.		1922.	
Total treated.	Deaths.	Total treated.	Deaths.	Total treated.	Deaths.
663	72	678	87	468	53

The number of admissions this year has considerably decreased. This is due to the fact that in August the number of beds was reduced from 38 to 8, as I was placed in charge of the new clinical laboratory.

Admissions.							
Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
22	468	490	281	133	68	53	10

Percentage of mortality.

Total treated.	Deaths.	Percentage.	Moribund cases.	Percentage of deaths excluding moribund cases.
490	53	10·82	20	4·69

The number of deaths is rather large. The cause for this is not far to seek. The majority of patients belong to a very ignorant and illiterate class of people and they seek admission only at a very late stage of the disease. This is borne out by the large number of moribund cases admitted.

Principal diseases treated and deaths.

Diseases.	Total treated.	Deaths.	Remarks.
Tuberculosis of lungs	21	4	
Pneumonia	20	11	6 admitted moribund.
Broncho-Pneumonia	2	2	
Bronchitis	32	1	1 died of heart failure.
Asthma	18	...	
Pleurisy Dry	6	...	
„ with effusion	2	...	
Influenza	25	3	2 admitted moribund.
Malaria — Malignant tertian	6	1	1 cerebral.
Malaria — Benign tertian	26	...	
Malaria — Quartan	3	...	
Malaria — Chronic	16	...	
Kala-Azar	16	4	
Enteric fever	10	...	
Pyrexia of uncertain origin	11	...	
Rickets	1	...	
Diabetes	5	2	1 admitted moribund.
Pernicious Anæmia	1	...	1 complicated with Nephritis.
Tabes mesenterica	1	...	
Tubercular Peritonitis	1	...	
Lymphadenoma	1	...	
Goitre	1	...	
Spleno medullary leucæmia	1	...	
Filariasis	9	...	
Diseases of the skin	6	...	
„ „ nervous system	14	...	
„ „ heart	30	6	1 admitted moribund.
„ „ digestive system	31	4	
Dysentery, Amœbic	28	4	2 admitted moribund.
„ Bacillary	2	...	
Diarrhœa	12	...	
Ankylostomiasis	21	2	
Other intestinal worms	7	...	
Rheumatism	13	...	
Nephritis	23	3	1 admitted moribund.
Cirrhosis liver	7	...	
Hysteria	7	...	
Cystitis	1	...	

MINOR OPERATIONS.

Operations.	Number.	Remarks.
Paracentesis abdominis	19	Relieved.
„ thoracis	2	„
„ lumbar cord	2	„
Intravenous infusions	5	„
„ injections	138	„
Intramuscular injections	7	„
Venesection	2	„
Spleen puncture	6	Diagnosis purposes.
Liver „	3	„
Abscesses opened	4	Cured.

"HOOK WORM" REPORT.

Place.	No.	Place.	No.
Calicut	1	Kumbakonam	1
Conjeeveram	2	South Arcot	1
Chetput	1	Tellicherry	1
Chintadripet	2	Tiruttani	1
Choolai (Madras)	1	Unknown	4
Georgetown	4	Total	21
Negapatam	1		
Pallavaram	1		

Occupation.

Coolies	9
Beggars	4
Merchants	2
Sweepers	3
House-keepers	3
Total	21

GOVT. GENERAL HOSPITAL, MADRAS,
23rd January 1922.

W. LEONARD FORSYTH, Major, I.M.S.,
Third Physician.

FOURTH PHYSICIAN'S WARDS.

These wards were under my charge from the 1st January to the 31st December 1922 except for the period between 1st to 31st May 1922, when Dr. T. S. Tirumurti Ayyar, B.A., M.B., C.M., was in charge.

There were a few alterations in the number of beds under my charge. The Napier ward was closed down and in lieu of the 16 beds in that ward, I took over 5 from Pottinger (M_1 ward) and 6 from Harris (M_2) ward. From the month of August 1922, I took over Alexandra ward (for Indian women patients) from M_3, containing 16 beds.

Tabular statement of admissions and discharges.

—	Admissions and discharges.					Discharged otherwise.	Died.	Remaining.	Average daily sick.	Death rate per 1,000.
	Remaining.	Admitted.	Total.	Cured.	Relieved.					
Europeans	14	215	229	136	50	17	16	10	12·61	69·87
Non-Europeans	45	1,157	1,202	542	410	129	74	47	57·15	61·56
Total ...	59	1,372	1,431	678	460	146	90	57	68·76	67·62

Tabular statement of operations.

—	Performed.	Cured.	Relieved.	Discharged otherwise.	Died.
Paracentesis thoracis	...	...	7	...	...
Paracentesis abdominis	...	...	35	...	...
Intravenous injections	...	...	705	...	...
Venesection	...	...	3	...	...
Lumbar punctures	...	...	5	...	...

Principal diseases and their mortality.

Diseases.	Total treated.			Deaths.		
	Non-Europeans.	Europeans.	Total.	Non-Europeans.	Europeans.	Total.
Pneumonia	61	6	67	8	2	10
Broncho-pneumonia	15	2	17		...	...
Pleurisy	15	1	16	...	...	...
Asthma	40	5	45	...	...	..
Tubercle of lung	50	6	56	11	3	14
Empyæma	2	...	2	...	...	...
Sarcoma pleura	..	1	1	...	...	...
V.D.H.	42	2	44	7	...	7
Pericarditis with effusion	1	...	1	1	...	1
Malignant Endocarditis	2	...	2	1	...	1
Aneurysm	1	...	1	1	...	1
Dextrocardia (congenital)	1	...	1	1	...	1
Anæmia	7	...	7	1	...	1
Pernicious Anæmia	1	...	1	1	...	1
Enteric	10	10	20	1	...	1
Acute Rheumatic fever	5	1	6	...	...	..
Influenza. Respiratory	30	5	35	1	1	2
Influenza. Febrile	122	25	147	...	...	...
Influenza. Cardiac	1	...	1	...	...	...
Influenza. Gastric	1	...	1	...	...	...
Malaria. Benign tertian	150	27	177	1	...	1
Malaria. Malignant tertian ...	73	9	82	1	...	1
Malaria. Quartan	2	...	2	...	...	...
Kala-Azar	20	3	23	1	1	2
Dengue	15	3	18	...	...	...
Sand-fly fever	1	...	1	...	...	...
Amœbic dysentery	68	12	80	1	...	1
Bacillary dysentery	13	3	16	1	...	1

Principal diseases and their mortality—cont.

Diseases.	Total treated.			Deaths.		
	Non-Europeans.	Europeans.	Total.	Non-Europeans.	Europeans.	Total.
Sprue	1	...	1	...	...	...
Beri Beri	2	...	2	...	...	...
Filariasis	8	2	10	...	...	...
Leprosy	6	...	6	...	...	...
Measles	2	...	2	...	...	...
Smallpox	9	...	9	...	...	...
P.U.O.	7	...	7	...	...	...
Dietetic deficiency	8	1	9	...	...	...
Myxœdema	2	...	2	...	...	...
Diabetes	6	1	7	...	...	...
Gastritis	37	2	39	...	...	...
Cirrhosis liver	33	2	35	3	1	4
Jaundice Catarrhal	2	...	2	..	...	...
Jaundice Malignant	1	...	1	1	...	1
Tubercular Peritonitis	7	..	7	2	...	2
Tabies Mesenferica	5	1	6	1	..	1
Enteritis	12	...	12	4	...	4
Nephritis. Acute	7	1	8	...	...	...
Nephritis. Chr. parenchymatous.	11	4	15	2	1	3
Nephritis. Chr. interstitial ...	23	2	25	2	...	2
Nervous diseases	17	5	22	...	...	...
Hemiplegia	10	2	12	...	...	...
Epilepsy	4	..	4	...	...	...
Hydrophobia	1	...	1	1	...	1
Ankylostomiasis	50	...	50	1	...	1

Percentage of mortality.

	Total treated.	Deaths.	Percentage of deaths.	Moribund cases.	Percentage of deaths excluding moribund cases.
Non-Europeans	1,202	74	6·15	12	5·1
Europeans	229	16	6·99	3	5·6

REPORT ON "HOOK WORM."

The largest number of worms voided with one 60 grain-dose of Thymol was 802.

Localities.

Vyasarpadi	3	Trichinopoly	1
Choolai	3	Dharmapuri	1
Georgetown	3	Kumbakonam	3
Triplicane	2	Salem	5
Washermanpet	1	Vellore	3
Pudupet	1	Malabar	5
Egmore	2	Chingleput	2
Mount Road	2	Kallidaikurichi	1
Perambur	2	Guntūr	2
St. Thomas' Mount...	1	Tiruttani	2
Tondiarpet	1	Nellore	2
Villivakam	1		
Villupuram	1	Total ...	50

Results.

Cured	30	Discharged otherwise	7
Relieved	12	Death	1
		Total ...	50

Occupation.

Coolies	15	Students	2
Ryots	20	Railway guard	1
Weavers	3	Cook	1
Beggars	5	Landlord	1
Destitute	2		
		Total ...	50

INTERESTING CASES.

1. **Tubercular meningitis in an adult.**—Patient aged 29 admitted with a history of acute continuous headache for 12 days and vomiting for 6 days. His left lung was found to be affected with tuberculosis and he had an old, quiescent Pott's disease of spine. He was very restless, had the meningeal cry, Kernig's sign, Brudzenski's sign, loss of knee jerk and was somewhat comatose. Spleen was tender. Lumbar puncture yielded a turbid fluid which on staining showed tubercle bacilli, and some gram-positive capsulated diplococci. Patient was taken away by relatives as he was steadily growing worse. (The turbidity of cerebro-spinal fluid is said to be rare in cases of Tubercular meningitis.)

2. **Dextro-Cardia.**—(*a*) *Congenital*—Patient aged 20, admitted for pain in the right side of chest on exertion, of 20 days' duration. On examination, he was found to have his heart on the right side. Skiagram showed that the other viscera were in normal position, the heart alone being transposed.

(*b*) *Due to Pneumothorax.*—Two cases of actute pneumothorax, secondary to tuberculosis of lung were admitted. In both of them the condition was on the left side and the heart was pushed over to the right, so much so, the apex beat was close to the right nipple. In both paracentesis thorasis was done to let out the excess of altered air after waiting for the lung condition to settle down.

(*c*) *Due to Sarcoma of left chest.*—This patient, aged about 16, was admitted with dyspnœa and slight temperature. On examination showed a dextrocardia and absolute dulness on left side of chest with a small nodular mass close to a fresh scar about the middle of left sixth rib which was stated to be due to an operation for a blood cyst, secondary to a fall which the patient had three months back. The cyst is said to have been removed entire. On paracentesis there was found to be a sanguineous effusion into the left plural sac. The tender age of the patient, the trauma, the tumour, the blood effusion and the extreme displacement of heart to right made the diagnosis of sarcoma of left chest with involvement of mediastinal glands most probable. Patient was put on massive doeses of X-Ray but with no improvement. The tumour grew bigger and bigger and in about a month a very large sarcomatous mass had appeared on the chest wall. Patient was quite happy and felt no pain though he was all the while running a temperature. His parents took him away as no hopes of recovery were held out to them.

3. **Hodgkin's Disease.**—Adult aged about 35 was admitted with enlarged cervical glands with just commencing signs in the axillary glands. He had a temperature which had somewhat of the relapsing character described by Ebstein. His blood examination was not suggestive of anything in particular. He had a few patches of thickened, wrinkled skin about 3 inches below nape of neck having an elephantoid appearance—a condition which may be called lympho-dermia and these patches were very itchy. He was treated with injections of sodium cacodylate, X-Ray exposures to the affected areas and Fowler's solution by mouth. The temperature became normal; the glands began to get smaller, and the pruritus had almost disappeared. He was discharged apparently cured.

4. **Toxic paraplegia** (? post Enteric myelitis).—A girl aged about 12 admitted in an unconscious state with high temperature, and paralysis of left arm and left leg followed shortly after with œdema of both lungs. Lumbar puncture let out a good quantity of clear cerebro-spinal fluid and patient was treated symptomatically. Eleven days after admission patient was conscious and had normal temperature, but she was suffering from paralysis of both the lower extremities with anaesthesia below the loins and bladder symptoms. Blood showed positive widal 1 in 200. Was treated thereafter with T.A.B. vaccine and gradually improved; till ultimately after 5 months' treatment the patient left hospital *walking*.

5. **Lathyrism.**—Two cases of this peculiar form of spinal disease came into the wards. I had seen this form of spastic paralysis in jail population, where it was ascribed by the patients to "Kesari Dhall." These two cases are not traceable to Kesari Dhall, so could not have been caused by the amines of germinating dhall, but possibly they are attributable to allied chemical toxins from some other dhall that these have been using.

6. **Pseudo-Cervical Rib with arterio-Sclorosis.**—A middle-aged man admitted with distinct pulsation and tortuous carotid and subclavian on the right side of neck gave a history of having spat out blood some months back. Was suspected to be aneurysm of arch of aorta, but there was no bruit, no dulness, and no tracheal tugging. Skiagram showed no evidence of aneurysm; but showed a pseudo-cervical rib on the right side.

7. **Addison's Disease.**—A young woman admitted in a very low condition with a history of diarrhoea of two months' duration, said to have started after a normal puerperium. Very emaciated and asthenic. Pulse very soft and small. Pigmentation marked on the fingers, and about the palate. Was treated with Adrenaline Chloride injections, no other drug being given. After 4th injection, 1 c.c. being given per day, the patient's diarrhoea stopped. After the 8th injection, the patient was apparently alright, having a fairly good pulse, no diarrhœa, no vomitting or nausea, though somewhat weak. Though no more Adrenaline was given, her improvement was steady thereafter. This class of cases requires further

investigation as to their nature, as it is inconceivable that a few injections of adrenaline chloride will cure what has been described as Addison's Disease. It is just possible that there is in these cases an intestinal toxemia which produces hypo-adrenæmia and the resultant symptoms.

8. **Pulmonary Tuberculosis.**—This year Sodium morrhuate intravenously was tried in a number of cases and the results were fairly encouraging. After the preliminary subcuteneous injection of 7 m., the doses for intravenous injection adopted were 4 m. to 20 m., starting with 4 and increasing 1 m. every time. The intervals between injections 4 days. One boy increased in weight from 73 to 110 pounds and has been free from cough, fever and all active signs for the last 1½ months.

Three of these cases were found to be clinically T. P. but no bacilli could be demonstrated by Ziel-Nailson method. In these Much's modification of Gram method demonstrated the bacilli showing that Tubercle bacilli are sometimes *non-acid* fast, a fact which has to be borne in mind. Inoculation into Guinea-pig from one of these cases gave positive result.

8. **Dengue.**—A good number of cases were treated but no new feature of the disease was observed—except neuritis in two cases.

New Drugs:—

Malarine.—A specimen was sent for testing and was found in my ward to be a little better than quinine sulphate (that I was using before), and a little less satisfactory than quinine-hydrochloride. 50 cases were treated of B.T., M.T., and Quartan and the parasites were found to disappear in from 48 to 72 hours. The dose adopted was 5 grs. t.d.

Carbon Tetrachloride.—This drug in doses of 2 cc. and 3 cc. did not give me as good results as Thymol in 60 grs. dose.

Chloramine.—T. has been this year used mainly as an intestinal antiseptic in my ward.

Iron Cacodylate.—I have found this drug a very powerful hæmatinic and restorative in chronic cases of anæmia.

GOVT. GENERAL HOSPITAL, MADRAS,
19th January 1923.

M. R. GURUSWAMI, B.A., M.D., C.M.,
Fourth Physician.

FIRST SURGEON'S WARDS.

During the year these wards were in charge of the following officers :—

1. Lieut.-Col. T. H. Symons, O.B.E., I.M.S.
2. Major E. W. C. Bradfield, I.M.S.

The following table shows the number of patients treated :—

Class.	Remaining.	Admission.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans	9	207	216	137	44	18	7	10
Non-Europeans	59	1,044	1,103	668	144	170	65	56
Total ...	68	1,251	1,319	805	188	188	72	66

Mortality.—5·49 per cent. This includes 39 cases admitted moribund.

The following table shows the operative work done during the year 1922 :—

Class.	Remaining on 1 Jan. 1922.	Operated during the year.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining on 1 Jan. 1922.
Europeans	2	91	93	71	5	11	2	4
Non-Europeans	41	669	710	609	19	23	39	20
Total ...	43	760	803	680	24	34	41	24

Mortality.—5·36 per cent. This includes 16 cases admitted moribund.

The following table shows the most important operations done during the year :—

Diseases.	Total number of operations during the year.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Removal of tumours (including 19 malignant)	55	40	5	5	3	2
Plastic operations (including harelip and cleft palate)	21	18	5	2	...	1
Operations on bones—						
Osteotomy for genu vulgum	1	1	...	...	...	...
Sequestrotomy	13	7	5	1	...	...
Major amputations	10	7	2	1	...	...
Excision of breast	3	3	...	...	...	...
Excision of elbow joint	1	1	...	...	...	...
Disarticulation hip joint	2	1	..	...	1	...
Excision of lower jaw (partial)	3	...	2	1	...	...
Excision of rectum	1	...	...	...	1	...
Laparotomy (exploratory)...	20	7	4	3	3	3
Gastro-enterostomy	75	57	5	3	7	3
Gastrectomy	4	2	...	...	...	2
Splenectomy	1	...	..	...	1	...
Resection of gut	4	2	...	...	...	1
Liver abscess	7	5	1	...	1	...
Hydatid	1	...	...	...	1	...
Colopexy	8	5	2	1	...	...
Omentopexy	6	4	1	1	2	...
Intestinal obstruction	9	4	..	...	2	3
Chronic Intrusia cystem	1	...	...	...	1	...
Appendicectomy	41	35	4	3	...	...
Hernia (Strangulated)	12	7	...	...	3	2
Reducible inguinal	53	53	...	...	...	...
Cholocystectomy	5	4	...	...	1	...
Kidney (decapaulation)	2	1	...	...	...	1
Nephrectomy	1	...	...	...	1	...
Nephrotomy	2	1	1	...	...	...
Prostatectomy	2	2	...	...	...	...
Amputation of penis	3	3	...	...	...	...
Do. tongue	1	1	...	...	...	...
Elephantiasis scrotum with skin grafting	12	8	2	...	1	1
Removal of elephantoid tissue	4	2	1	...	...	1
Ligature of external carotid for cancer maxilla	1	...	1	...	...	...
Suture of nerve	1	1	...	...	...	...

T. H. SYMONS, Lieut.-Col., O.B.E., I.M.S.,
First Surgeon.

SECOND SURGEON'S WARDS.

The following table shows the number of patients treated :—

Class of patients.	Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans	16	167	183	108	17	38	7	12
Non-Europeans	52	1,023	1,075	633	48	264	69	62
Total ...	68	1,190	1,258	741	65	302	76	74

Mortality.—6 per cent. This includes 28 cases admitted moribund.

OPERATIVE WORK.

The following table shows the operative work done during the year :—

Class of patients.	Remained.	Performed during the year.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans	5	87	92	67	18	...	5	2
Non-Europeans	27	481	508	354	86	13	21	34
Total ...	32	568	600	421	104	13	26	36

Mortality.—4 per cent.

The following table shows the more important operations done during the year :—

Diseases.	Total number operated.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Tumours and cysts	16	14	1	...	1	...
Plastic operations	3	..	1	...	...	2
Excision of joints	2	1	...	...	...	1
Major amputations	2	2	...	...	...	...
Hare lip...	3	2	...	...	...	1
Cleft palate	1	...	...	...	...	1
Inguinal hernia	38	37	...	...	...	1
Strangulated hernia	13	10	...	...	3	...
Splenectomy	2	2	...	...	...	...
Intestinal obstruction...	2	1	...	...	1	...
Enterectomy and anastomosis	2	1	...	...	1	..
Appendicitis	7	5	...	...	1	1
Liver abscess	10	5	2	1	2	...
Gastro-enterostomy	22	14	...	...	1	7
Laparotomy	7	...	...	3	4	...
Gall bladder	1	1	...	...	...	...
Kidney	2	1	1	...	...	...
Mastoid disease	11	8	1	...	1	1
Excision of lower jaw	2	...	...	...	1	1
Wiring, etc., for fractures	12	6	5	...	...	1
Hydrocele and hæmatocele	50	48	...	1	...	1
Elephantiasis scrotum and penis	4	3	...	...	...	1
Cancer penis	11	10	...	...	1	...
Removal of prostate	2	2	...	...	...	...
Empyema thoracis	6	2	2	1	1	...

TETANUS.

1888 *and* 1922.

On 6th April 1888, Brigade Surgeon Sibthorpe read a paper before the South Indian Branch of the British Medical Association of which the following is an extract :—

1. During the years 1878 to 1886 there were 108 amputations of the long bones performed at the General Hospital of which 6 or 5·5 per cent developed tetanus. The total mortality from these operations from all causes was 19·4 per cent.

2. From 1868 to 1886 there were 116 patients with compound fracture admitted to the hospital of whom 13 or 11·4 per cent developed tetanus. The mortality from all causes of these was 25 per cent.

3. Tetanus occurred in all parts of the Presidency in fairly equal frequency, except that it was very rare in the Hill stations. Time of year had no influence.

4. The mortality rates in eight Hospitals of the Presidency for the ten years 1878 to 1887 were—

		Mortality. Per cent.
Traumatic cases admitted	383	63·4
Idiopathic cases ,, ...	196	35·7
Total cases (includes unspecified cases) admitted	587	53·5

5. At the General Hospital during the ten years 191 patients were admitted for tetanus with 126 deaths (ratio 65·9 per cent) and Sibthorpe notes that 35 or 27·7 per cent of the deaths occurred within 24 hours of admission, showing that cases admitted moribund are included in his figures.

6. The disease is said by Sibthorpe to be less fatal in Madras than in some other places and the following rates are quoted :—

Ratio percentage of deaths to cases in Madras—

General Hospital	67
Guy's Hospital	84·2
Glasgow Hospital	87·2
Calcutta Medical College Hospital	77·4

7. As regards the causation of the disease Sibthorpe mentions that "the principal observers accept the bacillus of Rosenbach," but the "position of tetanin, tetanotoxin and other organic compounds isolated from a culture of Rosenbach's bacillus and their influence in causing the disease, requires confirmation."

8. Treatment in the years under review by Sibthorpe consisted mainly of the administration of chloral and potasium bromide and he advocated prevention by antiseptic treatment of wounds.

B.—Tetanus case at the General Hospital for ten years ending 1922.

1. Total number of cases recorded 67. Of these the notes on 3 cases are too vague, they are only shown as "discharged otherwise" or "at parent's request" after 3, 12, 2 days and therefore are not included in the following statistics.

2. Total cases recorded 64. Mortality 41 = 67 per cent of whom 28 or 56·2 per cent were admitted moribund or died within 24 hours of admission.

3. Only 1 patient with compound fracture developed tetanus during hospital treatment as compared with 11·4 per cent in Sibthorpe's time. No other patients developed tetanus during Hospital treatment or following operations.

	Per cent.
Mortality rate 1878 to 1887	68·4
Do. 1912 to 1922	67·1

4. Seven cases are shown as treated without anti-tetanic serum with 1 death, the average duration of symptoms being 27 days in the cases who recovered and 4 days in the patients who died.

5. Anti-tetanic serum has not been given under any regular system, but excluding the 23 patients who were admitted in a moribund state the figures are as follows :—

Twenty-eight cases had apparently only 1 injection of anti-tetanic serum on admission, of whom 16 (55·5 per cent) died, after an average stay in hospital of 4—5 days and 12 recovered after an average stay of 18·7 days, 1 case had two injections and died in 2 days. Five cases had regular injections continued through the illness until symptoms abated, the dose being 4,500 followed by 3,000 units daily in one case and 1,500 units daily in the other cases. All these patients recovered.

Conclusions.

1. **Prophylaxis.**—The efficacy of modern wound treatment which has included the administration of anti-tetanic serum to accident cases passing through the casualty department of the hospital, is well shown in the two statements. During the past ten years only one patient (compound fracture) developed tetanus, as compared with 5·5 per cent following amputations and 11·4 per cent of compound fractures in Sibthorpe's time.

2. **Treatment.**—The results of treatment do not show any improvement and are practically the same for the two periods. The slightly higher mortality rate (67·1 per cent of recent years against 68·4 per cent) is probably explained by the fact that all except one

were admitted with the disease, while Sibthorpe's figures include patients contracting the disease in hospital and who, therefore, received immediate and intelligent treatment from the beginning of the disease. Tetanus and septic complications of all kinds formed the main surgical material of the hospital, while at the present day they are transferred to the "sheds" in order that they may be isolated. The sheds are very unsuitable for the treatment of any patient who is seriously ill. It is a simple matter to lay down rules for the treatment of tetanus based on modern research, which reduced the mortality from tetanus to 19 per cent during the latter part of the war, but anti-tetanic serum is very expensive and was only obtained during the past year for poorer patients by the generosity of an English gentleman.

3. The statistics of the General Hospital, and especially the case sheets of patients treated in the sheds have, of late years, been poorly kept and it has been impossible to show the influence of incubation period or type or symptoms on prognosis.

Chronic Dyspepsia.—With the approval of the Superintendent and the Senior Physician all patients attending the Out-patient department during the past year for chronic dyspepsia were seen by me or by Mr. Mathew, the Surgical Registrar of the Hospital, and when advisable were admitted direct to the Surgical Wards of the Hospital. Excluding a number of chronic dysenteries patients suffering from the effects of intestinal parasites and others who refused hospital treatment, the surgical work which has been done in my wards is shown in the table. The results are neither especially good nor bad, but are very similar to those which have been reported from other clinics. Admissions under other Surgeons of the hospital are not shown in the following table :—

	Cases.	Deaths.	Operation Mortality. Per cent.
Gastroenterostomy—			
For Pyloric ulcer	16	...	...
For Duodenal ulcer	61	6	9
For Gastric ulcer	1	...	...
For Perigastritis	2	1	50
Total ...	80	7	8·5
Gastrectomies—			
Partial, ulcer	2	1	50
Do. for Carcinoma	1	1	100
Do. for Sarcoma	1	1	100
Excision of ulcer (Balfour's)	2	1	50
Chronic appendicitis—			
Appendicectomy	8	...	...
Do. with division of bands ...	5	...	...
For mobile colon—			
Colopexy with appendicectomy	8	...	...
For gall stones—			
Cholecystotomy	1	1	100
Cholecystectomy	2	...	...
Hydatid disease of liver—			
Excision of Hydatid	1	1	100
Stricture of ileocaecal valve—			
Colectomy	1	...	...
Total all cases ...	112	13	1·16

The list only includes appendix and other patients whose symptoms have been mainly gastric, and where the operation has of necessity included exploration of the stomach and duodenum for a possible lesion.

The fact that more than 80 cases of chronic ulcer of the stomach and duodenum have been treated surgically during the last ten months is evidence that these are very common diseases in Madras and suggests that a review of the special features which they present is worth while.

Very few of the duodenal ulcer patients gave a history of typical attacks of hunger pain and the difficulty of diagnosis is shown by the number of operations included for other conditions The majority of these patients had a scarred, cicatrised ulcer causing actual stenosis of the duodenum, and the history usually elicited showed that they had had attacks of pain, extending over many years, but that for the last three or six months it had been worse, constant and quite prevented them from following their occupation. Out of 51 cases in no less than 31 was active peristalsis visible on inspection of the abdomen, showing either

that actual stenosis was present, or that there was marked spasm due to the presence of an advanced ulcer. Forty-two said that they relieved their pain by inducing vomiting, but vomiting relieves pain in many dyspeptic conditions. The duration of symptoms in all cases is shown in the following table, and though it has been of great value in diagnosis I would never wait for such long periods before advocating surgical measures, which in the early stages of the disease give an operative mortality of less than 2 per cent, but entail a greater risk when the patient is weak and debilitated from the chronic starvation of stenosis.

Duration of Symptoms.

—	Number.	Average duration.	Maximum.	Minimum.
		Yrs.	Yrs.	Yrs.
Pyloric	16	4·2	10	½
Duodenal	53	4·1	20	½
Gastric	5	2·8	5	1
Cancer	1	...	1·5	...
Mobile colon	7	4·4	10	½
Appendix	13	2·3	12	½

The important characteristic of gastric ulcers is the absence of symptoms during long intervals. Though we have been able to elicit epigastric tenderness in practically all our cases, its position seems to bear no definite relation to the site of the ulcer and I think the finding of tenderness either superficial or deep gives very little real diagnostic help. With the onset of complications, a chronic perforation or the formation of a stricture symptoms become constant and the disease more obvious. Visible peristalsis was present in 13 out of 15 pyloric ulcers and 3 out of 4 ulcers of the stomach.

The Radiology Department of the Hospital has given us very valuable help in diagnosis, though Radiographs have not been taken as a routine and a negative finding does not exclude the presence of ulcer. These results have not been summarised, but X-Rays after a Bismuth meal have shown either (1) delay in the passage of the opaque meal, (2) actual demonstration of the ulcer cavity or (3) a notch due to spasm of the stomach wall, which may occur with ulcer or in other inflammatory conditions of the right abdomen.

The site of the ulcer in the cases under review was as follows:—

Duodenum first part 54, second part (really at junction of first and second parts) 7, Pylorus 15, lesser curvature of stomach 8, posterior surface of stomach 1. In two patients two separate chronic ulcers were found, an ulcer on the first part of the duodenum being combined with an excavated ulcer of the lesser curvature in one and an ulcer near the pylorus in the other. That is, of 82 ulcers, 69 were situated at or in the region of the pylorus. A remarkable specimen was obtained from a patient too ill for operation and who died shortly after admission from acute dilatation of the stomach, in which there is a large ulcer on the lessor curvature, multiple ulceration of the first part of the duodenum, and a dense stricture due to ulcer which hardly admitted a probe just below the opening of the common bile duct. All except one of our ulcer patients were males.

Chronic diseases of the appendix—May produce spmptoms practically indistinguishable from gastric disease, the so-called appendix dyspepsia. All except three of our patients have been Indian and the pathological condition found was described as chronic catarrhal, ulcerated, fibrous and obliterated while one appendix contained a thread worm. Removal of the appendix has entirely relieved the gastric symptoms of all, except two, very much improved, who are still under observation and who are extremely neurasthenic, the result of symptoms of dyspepsia extending over many years.

One case is remarkable. This was referred to me by Col. Elwes, and in whom we expected a tuberculous peritonitis but the removal of her appendix had an immediate effect on the temparature and the patient's general condition, which rapidly improved and lost its toxic character. Only the appendix was removed and on microscopic examination this was found to be normal!

The exact meaning of these diseased appendices, which rarely go on to acute appendicitis is a little puzzling, for similar conditions can often be seen in the *post-mortem* room, where apparently there have been no symptoms. That they do cause symptoms is shown by the effect of their removal, and it is possible that they constitute a latent source of infection in the same way as the focal abscesses we so often find in connection with the teeth. The influence of the thread worm among a population, 60—70 per cent of whom are infected is also a subject for consideration.

Associated with diseased appendices in 5 cases were definite bands which were divided another abdominal condition which may cause obscure gastric symptoms and the description of which we owe primarily to Lane's work on intestinal s

Mobile Colon.—Waugh discussing the effects of mobile colon points out that abdominal diseases are largely grouped in the right upper abdomen and considers that their incidence is largely caused by an overloaded ascending colon.

The normal ascending colon has no mesentery and when full its weight is in consequence diffused over a wide area. In a certain number of people its primitive mesentery persists, and in consequence the colon, the only part of the alimentary canal which has to force semi-solid fluid upwards, against gravity is working at a disadvantage and there is great mechanical inefficiency. The weight of an overloaded colon is then distributed along a narrow line of the posterior attachment of the mesentery and in consequence strain is thrown upon the right kidney, duodenum and by radiation upon the pyloric end of the stomach. The colon may even prolapse into the pelvis causing sudden and unexplained attacks of pain. The pain produced though constant in type and location is erratic and irregular in its time of appearance, and may be gastric duodenal, renal, or right iliac in its character. The appendix is often involved, it seems to me by the constant back pressure of a chronic constipation. We know that some patients with chronic appendicitis, especially where the symptoms are mainly dyspeptic, are not cured by removal. Fixing the ascending colon to the posterior wall seems to give excellent results in these cases. The procedure at operation is to prepare a bed by clearing the psoas and guadratus muscles and a flap of peritoneum is closed over the colon to fix and bury it. Our results in 8 patients on whom this operation was performed were excellent.

Operation Mortality.—The operative mortality 8·5 per cent for gastroenterostomy, at first sounds very high when compared with the recent figures of other Surgeons. Their statistics are, however, based on the treatment of cases seen earlier and which have not reached the desperate condition of many of our patients to whom the surgical risk is a big one.

The cause of death in the cases under review was as follows:—

Gastroenterostomy, for ulcer	...	6. Pneumonia 4 on the 3rd, 5th, 6th and 8th day after operation. Heart failure 1, a man aged 70, who was doing very well but died suddenly on the 5th day of sudden heart failure while talking to his relatives. Tubercule of lung—1.
Gastrectomy	... ...	3. Shock 2, in both malignant cases. Peritonitis with pneumonia 1.
Excision of ulcer	... ...	1. Shock 1. A desperate case.
Perigastritis...	... ...	Abscess of liver 1. Died suddenly on the 25th day. Abscess of the liver was never suspected at the operation or after and a gastroenterostomy had entirely relieved his symptoms.
Cholecystotomy	.... ..	A single gall stone, which had caused severe gastric symptoms and who died some 20 days after operation from tubercle of lung.

That is, death was due to pneumonia in 4 cases, tuberculosis 2, peritonitis 1, shock 4, heart failure 2. These results are, I think, not discouraging but rather an argument for earlier surgical treatment. All the duodenal patients who died had very advanced stenosis, while the gastrectomy patients were all very ill and very bad surgical risks. It is difficult to refuse surgical treatment to this type of patients, for they are suffering from a mechanical obstruction which nothing but surgery can relieve.

The following table shows the chief post operative complication which occurred:—

—	Gastric cases.	Gall bladder.	Colopexy.	Appendicectomy.
Total cases. 104.	80	3	8	13
Acute Bronchitis	3	...	1	3
Pneumonia ... ...)	11–13·7 per cent.	...	...	...
Heart failure	1	...	...	...
Orchitis (Result of catheterisation) ...	1	...	...	1
Malaria	3	...	...	...
Gastro-jejunal ulcer	1	...	...	...
Acute dilatation of stomach	1	...	...	...
Post-anæsthetic paralysis	1	...	1	1

The frequency of pneumonia after operations on the upper abdomen, to which the antiquity of our operating theatre and the mechanical punkas, which cause a constant draught throughout the wards are predisposing causes, has caused us very considerable anxiety. With [illegible]-ealization of the necessity for keeping the patient warm and dry during the

operation, our results have improved, but lung complications in these patients of very poor surgical risk are a very real danger, while some are probably tuberculous in nature.

The anaesthetic is another dread and the use of choloroform adds to the risks of operation. The use of a chart on which the pulse, respiration and blood pressure is noted is of great help, and gives one timely warning, but until we get rid of the idea that any one can give an anaesthetic, and until the anaesthetist's appointment ceases to be a stepping stone to others, this will always be a source of anxiety to the Surgeon. In most operations novecoine has been injected locally with a minimum of general anaesthesia and I hope we soon will be able to substitute the safer gas and oxygen method for chloroform.

Jejunal ulcer occurred 6 months after one of our earlier gastro-enterostomy operations and in which the stoma was smaller than usual. Since enlarging the opening and removing the appendix at a subsequent operation, the patient appears to have done well. After treatment, however, with Indian Hospital patients is very difficult. Their desire to hurry home and indulge in their normal bulky diet is irresistible and I fear that peptic ulceration must be a more frequent complication in South India than in other more fortunate clinics.

It is impossible at this early date to give any final estimate of our treatment, but 50 patients were written to six months after their operation and 16 replies were received.

Appendicectomy	1	quite well, cured.
Gall stones	1	completely cured.
Colopexy	3	„
Gastroenterostomy with appendicectomy	10	8 completely cured, very happy and can do any work, 2 no pain or trouble but not yet strong enough to do heavy work, 1 died 3 months after operation, no cause given, left hospital very well and cured.

Many of these gastric patients have a very dilated stomach which had completely lost its tone, and take some time to recover. We are trying electrical massage on several now with promising results.

The conditions found associated with gastric and duodenal ulcer are interesting and suggestive as to causation. The appendix has been removed as a routine, except in desperate cases where very rapid operating is necessary. The pathological report of 68 cases of these appendices is as follows :—

Normal 23, Chronic inflammatory 21, Catarrhal inflammation 10, Obliterative appendicitis 7, ulcer 1. Thread worm with chronic inflammation 4, Round worm 1. That is, there is a pathological lesion in 66 per cent, while of 23 normal appendices 9 were noted at the operation to be retro-caecal and kinked.

The condition of the ascending colon, and the presence of bands has been noted at operation in 47 cases. A mobile colon, with mesentery was present in 30 cases, 63 per cent (21 duodenal, 9 pyloric) a Jackson's membrane in 7, an ileo-caecal kink in 4, and a band over the ascending colon in 8.

In 66 patients or 82 per cent the teeth were definitely noted as infected wth pyorrhœa or as dirty as to be a probable source of infection.

The results of treatment, especially where stenosis or chronic indurated ulcer is present lead us to advocate earlier surgical interference. In the early stages of gastric ulceration, medical treatment may undoubtedly effect a cure, but very few Indian patients will carry out the restricted diet and rest that is necessary, nor can many afford to. If medical treatment fails to bring relief within a reasonable time or if relapses, a feature of these ulcers occur, operation is indicated and in 85 per cent of duodenal and 75 per cent of gastric ulcers will cure. Our experience shows that the appendix is generally diseased, more frequently than is generally supposed in Indians and that treatment should include attention to this and all other foci of infection.

SPECIAL DEPARTMENT.

The reorganization of this department for the treatment of outpatients attending hospital for venereal disease has now been completed and although the equipment is scanty and accommodation inadequate much progress has been made. Routine dressings are still carried on in the Out-patient department but microscopic examination for diagnosis and specific treatment is carried on in the Special department after the rush of outpatient hours.

That a great deal of clinical material has been available for teaching is shown by the fact that during the past year 5,585 patients attended the department of whom 2,691 were new admissions, made up as follows :—

1. Syphilis 1,338.

Primary.	Secondary.	Tertiary.
205	689	442

Extragenital chancre	2	... ...	...
2. Infective granuloma	8	... ...	...
3. Soft sores (venereal sore)	152		
4. Scabies of genitals ...	28		
5. Stricture urethra ...	52		
6. Perineal abscess ...	12		
7. Stone in kidney ...	1		
8. Stone in bladder ...	2		
9. Phosphatic accumulation in prepuce ...	1		
10. Chyluria	2		
11. Psoariasis. Non-specific	15		
12. Yaws	3		
13. Rodent ulcer ...	1		
14. Gonorrhœa			
Acute (a) ...	302		
Gleet and Chronic Prostatitis ...	703		

MINOR OPERATIONS PERFORMED DURING THE YEAR.

Total 2,344

Made up of as follows :—

1. Circumcision	84
2. Reduction of Paraphymosis	32
3. Incision and erasion of Inguinal glands ...	16
4. Primary Dilatations ...	10
5. Secondary Dilatations ...	21
6. Intravenous injections of Neopreparations of Salvarsan ...	320
7. Intravenous injection of Pure Salvarsan ...	2
8. Intravenous injection of Stabilarsan ...	178
9. Intravenous injection of 2 per cent solution Tartar Emetic ...	230
10. Hypodermia injections (various)	782
11. Intramuscular injection of Mercurial cream ...	355
12. Aspiration of bubos and injection of Iodoform emulsion or Collosal argentum	12
13. Intravenous injection of cyarsal, a liquid preparation of mercury ...	250

Cyarsal. Potassium cyan mercury-salicylate a soluble organic preparation of mercury was injected intravenously twice a week in addition to salvarsan given once a week to 38 patients. In two cases slight gingivitis occurred at the seventh injection. There were no other ill effects.

Salvarsan. No ill effects were observed following the administration intravenously of 320 injections of Neopreparations of Salvarsan, 2 of Salvarsan and 178 tubes of Stabilarsan.

E. W. C. BRADFIELD, M.S., F.R.C.S., Lieut.-Col., I.M.S.,
Second Surgeon.

THIRD SURGEON'S WARDS.

These wards were in charge of the following officers during the year 1922 :—

Major E. W. C. Bradfield, O.B.E., I.M.S., from 1st January to 30th April 1922.
M.R.Ry. S. Ranga Acharya Avargal, M.B., C.M., from 1st May to 4th August 1922.
Lieut.-Col. Hirsch, C.I.E., I.M.S., from 5th August to 31st October 1922.
Major E. W. C. Bradfield, O.B.E., I.M.S., from 1st November to 14th November 1922.
Major K. G. Pandalai, F.R.C.S. (Eng.), I.M.S., from 15th November to 31st December 1922.

The following table shows the total number of patients treated during the year :—

Class of patients.	Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans	7	158	165	108	24	19	5	9
Non-Europeans	70	1,119	1,189	642	223	198	68	58
Total ...	77	1,277	1,354	750	247	217	73	67

Mortality including moribund cases 5·39 per cent.

The following table shows the operative work done during the year :—

Class of patients.	Remained.	Admitted	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Europeans	2	71	73	56	9	1	3	4
Non-Europeans	32	619	651	482	80	24	38	27
Total ...	34	690	724	538	89	25	41	31

Mortality 5·66 per cent.

The following table shows the more important operations performed during the year :—

—	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
Cholecystectomy	2	...	...	...	1
Gastro-jejunostomy	21	1	...	2	4
Appendicitis and appendicular abscess ...	7	...	...	2	1
Tuberculosis Coecum	1	1	...	...	...
Intestinal obstruction	1	...	...	2	...
Peritonitis Tubercular, etc.	3	...	...	2	1
Omento-pexy (cirrhosis liver)	...	...	...	1	...
Liver abscess	11	...	...	3	1
Splenectomy	...	...	...	1	...
Hydro-nephrosis	2	...	...	...	...
Renal Calculus	3	...	...	...	...
Vesical Calculus	1	...	...	1	...
Hysterectomy	1	...	...	...	...
Empyema Thoracis	1	3	...	...	...
Decompression operation	...	1	...	...	...
Hernia — Reducible Inguinal	49	...	...	...	3
Hernia — Irreducible Inguinal	1	...	...	...	1
Hernia — Strangulated Inguinal	9	...	...	4	...
Hernia — Ventral	1	...	...	...	...
Hydrocele and Hæmatocele	74	...	...	...	3
Cancer penis	5	...	...	...	...
Varicocele	3	...	...	...	1
Elephantiasis scrotum	12	...	...	...	2
Elephantiasis leg (Kondolean's operation) ...	6	..	..	...	..
Stricture urethra	13	24	1	...	...
Major amputations	4	...	...	...	...
Tumours and cysts	32	8	...	8	1
Operations on bones	22	12	1	...	1
Enlarged tonsils and adenoids	29	...	...	...	...
Cleft Palate	1	...	...	...	...

MALE AND FEMALE IN-PATIENT VENEREAL WARDS :—(Sii and Siii).

Class of patients.	Remained.	Admitted.	Total.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
(a) Europeans ...	2	76	78	29	41	6	1	2
(b) Indians	23	460	483	58	303	89	2	30
Total ...	25	536	561	87	344	95	3	32

Death 5 per cent.

GENERAL HOSPITAL,
2nd March 1923.

K. G. PANDALAI, Major,
Third

OUT-PATIENT DEPARTMENT.

The out-patient department was in charge of the Resident Medical Officer, Major A. P. G. Lorimer, I.M.S., throughout the year except for the period between 6th May to 5th June 1922 when Major K. G. Pandalai, I.M.S., was in charge.

The following Assistant and Sub-Assistant Surgeons were on the out-patient staff during the year :—

1. First Assistant to the Resident Medical Officer—
(*a*) Temporary Civil Assistant Surgeon C. S. S. Sarma, L.M.S., from 1st January to 20th April 1922.
(*b*) Temporary Civil Assistant Surgeon G. Sivaram, M.B., B.S., from 21st April to 14th June 1922.
(*c*) Third-class Military Assistant Surgeon A. St. G. Bartley, I.M.D., from 15th June to 18th October 1922.
(*d*) Civil Assistant Surgeon W. C. Thomas, M.B., B.S., from 19th to 23rd October 1922.
(*e*) Temporary Civil Assistant Surgeon C. Ommen, M.B., B.S., from 24th to 31st October 1922.

2. Second Assistant to the Resident Medical Officer—
Civil Assistant Surgeon C. K. Anantanarayana Ayyar, L.M.S., from 1st January to 31st December 1922.

Sub-Assistant Surgeons in charge of Out-Patient Dispensary—
(1) Mr. V. S. Muttuswami Nadar, No. 697, throughout the year.
Reserve Duty Sub-Assistant Surgeons.

	From	To
(1) B. Appalanarayana, No. 990	1 Jan. 1922	31 Jan. 1922
(2) T. P. Kanakasabhapati Pillai, No. 794. ...	Do.	10 Feb. 1922
(3) B. K. Narayana Rao, No. 857	Do.	...
(4) P. Chakrapani Nayudu, No. 821	21 June 1922	31 Dec. 1922
(5) S. Venkatesan, No. 687	24 June 1922	Do.
(6) D. Narayanaswami Ayyar, No. 721 ...	10 Oct. 1922	Do.

The following table shows the work done in the Out-Patient Department during the year :—

—	Total treated.					Average daily sick.				
	Men.	Women.	Male children.	Female children.	Total.	Men.	Women.	Male children.	Female children.	Total.
Non-Europeans	40,171	8,252	4,554	3,769	56,746	250·70	58·15	32·27	24·81	360·93
Europeans	2,524	1,228	597	433	4,782	12·71	6·54	3·14	2·90	21·09
Total ...	42,695	9,480	5,151	4,202	61,528	263·41	59·69	35·41	27·11	385·62

The total number of non-Europeans treated during the year increased over that of the last year by 1,241, while that of the European admission showed a decrease when compared with the previous year which was 5,143.

The daily average in the case of non-Europeans showed a slight decrease over that of the last year, viz., 365·07, while the European daily average showed a tendency to increase by 0·92.

These statistics are by no means accurate and in some points are misleading. When I took over in 1921, for instance, I found that medical cases were only being given one day's medicine although it is clearly laid down in the Hospital Rules that they are to receive two days' medicine in order to obviate their attending every day. By a daily issue it is obvious that double the number of medical cases are recorded as attending daily.

See also the last paragraph of this report under "Statistics."

The Out-patient Department has been carried on during the year on the lines of reconstruction described in last year's report; and in addition has been developed in certain new directions. The following are the chief new additions effected :—

(1) Construction of operating rooms for the male and female sides.
(2) Provision of Post-operation Dressing Cubicles on the male and female sides.

(3) Completion of the Venereal Department for males and females.
(4) The equipment of an anti-rabic Section in the Out-patient Department.
(5) Organization of a Casualty Section in the Out-patient Department for the treatment of cases arriving after out-patient hours, by day and by night.
(6) Provision of various minor equipments and appliances for the examination of cases in the cubicles already in existence.
(7) Provision of nursing staff for duty in the Out-patient Department and in the Casualty department by day and by night.

1. *Provision of operation rooms.*—The operating room on the male side has been constructed by enclosing the existing verandah next to the old venereal dressing rooms which latter has been converted into a sterilizing room. The verandah enclosed provides an operating room 25 feet by 10 feet and well lit by windows during day, and electric lights at night. A table with sliding panels and automatic drainage is used in this room and it is found very convenient in the handling of cases.

On the female side the same operation room is in use as formerly, but it has been refitted with new windows, and the whole room restocked. No sterilising room, however, is available for this operation theatre. Sterilisation is carried out therefore in the sterilising room of the male department which fortunately opens on to the verandah leading to the female theatre.

2. *Provision of Post-operation Dressing Cubicles.*—In order to prevent overcrowding in the operation rooms, no dressing subsequent to operation is carried out in the theatres. A patient who has been operated on proceeds the next day to the Post operation Cubicle in the main dressing room on the male or female side, where the case is attended to until stitches are removed or until the patient is fit to be treated in the ordinary dressing cubicles. The transfer of the patients from the operating room through the Post operating Cubicle to the common dressing cubicles is effected by stamping the ticket of the patient in a suitable way indicating the room to which he has to go. The Post operating Dressing Cubicle differs very little from the ordinary dressing cubicles except that more instruments and a greater variety of dressings and appliances are supplied in it.

3. *Venereal Departments.*—The male Venereal Department consisting of a lavage room for gonorrhœa, a dressing cubicle for genital and non-genital sores and for the inspection of new cases, and a small dispensary has been completed for some time and is in good working order. As far as possible, dressing and lavage is carried out by the patients themselves who are instructed in the proper procedure while students superintend the treatment and are in a position to see all the different types of the venereal affections and the treatment carried out, without in any way running the risk of infection by contact with the case. The Assistant Surgeon, Mr. Natesan, who is in charge of the Special Department as well as this part of the Out-patient Department has supervised the work here and arranges for the necessary liaison between the two departments. Thus a case being dressed for a venereal sore in the Out-patient Department is also treated with injections of Salversan in the Special Department on injection days. The department is well run and is in an orderly state. Plans have been submitted for the extension of the male Venereal Department towards the main gate in order to provide a room for the examination of new cases instead of the present arrangement by which new cases are examined in one of the cubicles of the lavage room. Application has been made to the Electrical Engineer and plans have been submitted for the provision and installation of electric lights and fans in the department. The matter is extremely urgent as the roof of the building is so low that in hot weather during the morning it is only with very great discomfort that the work can be carried out by the staff there.

In regard to the female side of the Venereal Department, three rooms and a small dispensary have been provided in a corresponding situation at the north end of the department near the cow gate. The building here is extremely suitable for the purpose, as it provides for separate rooms for inspection of new cases, treatment of cases by lavage, and dressing treatment, while the entrance and exit to this particular section is separate from the main entrance. Clinical instruments, tables, lavage apparatus and furniture have been provided, and, in addition, an arrangement by curtains has been made so that the patients can be examined without undue exposure. At present the female Venereal Department is not in use on account of want of staff. I trust that this matter will receive special attention and will shortly be in full working order. Three ayas and one nurse are necessary for the working of this department, and, in addition, the services of a pupil compounder will be necessary for the issuing of stock mixtures from the dispensary attached to the department.

Previously these three rooms were used as a skin department. But it was found after six months' trial that the number of skin patients attending did not justify the use of so much room to the exclusion of a female Venereal Department for which there is a very definite need. It is now arranged that skin cases—male and female—will attend the Venereal Department along with venereal patients.

4. *Anti-Rabic Section.*—Following the instructions of the Surgeon-General received a year ago, local treatment in the Out-patient Department for dog bites has been carried out

and some 600 cases were treated during the first 12 months. This is an entirely new piece of work that has been entrusted to the Out-patient department of this hospital. But I regret to say that no corresponding increase in the staff has been effected. In my opinion a whole time Assistant or Sub-Assistant Surgeon should be provided and also a whole time clerk. The work is of a very responsible nature and great care has to be exercised in seeing that the patients attend regularly. Not infrequently, when the patient finds that the treatment is painful and unpleasant, the case disappears after the third or fourth injection. To overcome this, special post cards have been printed and are issued to the addresses of the absentees requesting them to attend regularly forthwith in their own interest. A post-card is also sent out to the Police Department of the patients' district and they are informed that a case undergoing anti-rabic treatment has ceased to attend.

In this work it has been necessary to design a special anti-rabic injection ledger so that it may be seen at a glance whether a patient is attending regularly or not; and further to ensure that the double injections are carried out in a routine manner and in such a way as to avoid too great local reaction charts of the abdomen have been provided and attached to the Out-patient ticket. In these the sites of injection are numbered and are ticked off each day in each case by the operator. At present the work is carried out by whatever staff can be spared at the moment. Thus Assistant Surgeons, Sub-Assistant Surgeons, senior students and nurses have to be employed from time to time in order to undertake the work according as the staff is available. In order to bring this department into line with the rest of the other departments, a rubber stamp bearing the design of dog's head has been introduced and all patients attending for this treatment have the clinical tickets and counterfoils stamped with this design.

5. *Casualty Section.*—Since the Out-patient department was started many years ago, there has been no proper attempt made to provide an efficient Casualty department for the reception and treatment of cases, especially accidents, arriving after the out-patient hours, during the day and night. This has been one of the weakest points of the whole hospital administration and it is here that delay and want of suitable organization is most likely to reflect upon the good name of the institution. Accidents of all descriptions, from the most trivial to the most serious and fatal, are constantly arriving at the hospital by night and day. These accidents have become more and more common since the introduction of motor traffic and with the increase of factory life in this city, while the railway provides a very considerable number of the more serious cases. Representations were made in the years before the war when I was the Resident Medical Officer, and plans were drawn up, for a separate department in a separate building. The necessity for such a scheme was also recognized in the plans for the new hospital on the proposed Spur Tank site. In the present financial stringency no work of this kind can be carried out. A Casualty department had therefore to be constructed in the present Out-patient department; and this could only be effected by utilizing the operation and sterilizing room and the urgent case room of the male side of the Out-patient department, during non-out-patient hours, when the Casualty department comes into being. In addition a further enclosure of the verandah on the west side was undertaken by which a preparation room for accident cases was obtained. Thus during the hours in which the Casualty department is running there is available for the reception of casualties both surgical and medical the following accommodation:—

(1) A detention room containing four couches with the appropriate linen necessary.
(2) A preparation room.
(3) An operation room
(4) A sterilization room.

In undertaking these alterations, it was found that the inside stair-case up to the Duty Assistant Surgeon's quarters greatly interfered with the space available. A plan was therefore drawn up with estimates for the removal of the inside stair to the outside. This allows for six couches instead of four in the detention room and provides a clear and straight run-in from the entrance, for wheeled stretchers, etc., from the outside to the preparation room and thence to the operation room. In the ordinary working of this department medical cases are taken direct into the detention room and are placed on beds, while the accident cases are taken direct to the preparation room. In regard to the preparation room, the main idea was to have some place where preliminary rough cleaning and removal of soiled and dirty clothes might be carried out before the patient is taken to the operation room itself. With this in view full length cement baths were provided in the preparation room and a special design of stretchers prepared for use with them. These stretchers differ from the ordinary casualty stretchers in having iron rods instead of the canvas on which the patient lies and further can be unlocked and taken to pieces under the patient without lifting him thereby avoiding undue handling of the case. Thus a compound fracture placed upon one of these iron grid stretchers is run in over one of the cement baths, on rails, where all dirt, etc., resulting from the cleaning of the case falls into the bath below. After the case is cleaned the stretcher is run on rails on to the top of the operating table on which the case can be suitably treated. Thereafter the patient can be conveyed on the same stretcher to his bed where it is taken to pieces under him leaving him in his bed. This avoids lifting and

handling of the case from the time he is placed on the stretcher till the time he is placed on bed. All details in connexion with the running of this department such as overhead trolley dressing stands and various accessories and additional equipment have been embodied in a scheme for which estimates have been prepared and are now in the hands of the Public Works Department. On sanction from the Surgeon-General, with whom copies of the scheme have been sent, the matter will be put into execution. In addition to this, electric accident bells and lights, etc., were fitted to the Duty Assistant Surgeon's room and in the entrance passage opposite to Trevelyan ward where the night Casualty Nurse is to be found. These appliances are operated from the Porter's Lodge at the main gate, so that on arrival of a case at night the Duty Assistant Surgeon, and the Casualty Nurse on duty are automatically summoned. The accident bells are of a non-stop pattern and do not cease ringing until silenced by the person summoned.

I cannot conclude the report on this department without drawing attention to the urgent necessity which exists for an efficient Casualty department. In severe accidents so much depends on the promptness and efficiency of the treatment of the patient during the first hour after his arrival. Promptness and rapidity of work are an essential, and it should be possible in all cases for the Nurse, the Assistant Surgeon and the Casualty to arrive simultaneously at the department. While considering the subject of the Casualty department, it is necessary to make some reference to the emergency theatre in the In-patient department of the hospital. The present emergency theatre, where major operations are performed at night on cases coming from the Casualty department, is situated in a corner of Buckingham and Grant Duff Wards with walls separating it from them. The theatre is badly lit, barely equipped, and in a state of disrepair. The furniture of this important theatre is composed of fragments left over from the other main theatres and presents a very heterogenous collection. A scheme has been put forward for various alterations and from time to time some suggestions are carried out piecemeal. I am of opinion that a complete scheme should be formulated and carried through so as to equip this theatre for all the emergency cases it has to undertake. At present the only part of the equipment which is helpful in regard to the emergent nature of this theatre is the Cabinet in which various groups of instruments suitable for the main types of emergency operations are kept ready and sterilised day and night. This has proved of very great value. The principal operations provided for are—

Tracheotomy,
Acute Abdomen,
Amputations,
Trephining,
Strangulated hernia,
Extravasation of urine.

At the same time much more remains to be done. Thus instruments and drugs for the various forms of the local anæsthesia should be constantly kept ready, such as local freezing, nerve block, or the more elaborate anæsthesia by interspinal injections. I would also suggest that the apparatus and material for intervenous or subcutaneous saline infusion should be constantly kept ready. The light of the theatre is extremely faulty and hand lights are necessary for night work. Lastly in regard to the nursing personnel attached to this theatre, frequent changes should be avoided.

6. *Additions in minor equipment.*—In regard to the provision of various equipments to the Out-patient department for the examination of patients on the male and female sides, two cases of instruments for the rapid examination of nervous lesions have been provided, such as percussion hammers, needles with handles, camel's hair brushes and tuning forks, while in addition all examination cubicles are provided with blue skin pencils for making out clinical lines on the body. Diagramatic charts of the abdomen, the entire body, back and front and side, have also been provided for rapid shorthand indication of clinical conditions. These charts are attached to the case tickets of the patients.

7. *Appointment of nurses.*—This is one of the most important additions to the Out-patient department. Three nurses are employed during the out-patient hours and in the Casualty department till 6-30 p.m. After that time the department is kept ready and locked, the key being in the possession of the Night Nurse of the Casualty department who is posted as supernumerary in Trevelyan Ward and is summoned to the Casualty department by the ringing of the casualty bell. After some six months' experience of the department working with a staff of nurses, I am of opinion that the effect has been extremely good and the efficiency of the department has been improved very considerably. The increase of promptness with which cases are attended to, the accuracy with which cubicles and theatres are kept stocked, are entirely due to their good work. I have found their services invaluable and I trust that that it will be possible to increase the number of nurses in the Out-patient and the Casualty departments later on.

Statistics of the Out-patient department.—The statistics of the department are compiled from daily records made by the Out-patient clerk who is now a whole-time official. The work has been facilitated by the introduction of a standard "Daily out-put" form

bound into books which are supplied to the Medical Officers of each cubicle or department and which is completed by him every day. In spite of this, however, the work is difficult, the total figures running from 55 to 60 thousand in the year.

Certain conventions are ordered in connexion with the statistics of the department. Thus a patient who fails to attend for three consecutive days is supposed to be sent back to the booking office for a new ticket. This I found was being neglected and I had to introduce a rule that when the clinical ticket showed such a three days' lapse in attendance the Medical Officer of the department was to draw a blue chalk line diagonally across the ticket and send the case to the booking office. The peons were informed that any case with such a mark should be sent to the entrance for a new ticket. This system is I fear more honoured in the breach than in the execution of it. Further it is unavoidable when dealing with ignorant people to guard against their losing their counterfoils, and when such occurs, the patient naturally presents himself for a new ticket,—while it is not uncommon for a patient who is dissatisfied with his treatment to suppress his counterfoil and obtain a new ticket.

Another convention is prescribed as to the issue of two days' medicine to old medical cases, so that they attend every second day. There are, however, many ignorant patients who consume their medicines in one day and present themselves daily. (Prescription and stock mixtures are so designed that the taking of two days' supply will not produce dangerous effects). In regard to this matter I found when I took over the department in 1921 that the convention was not being followed and that patients were being given only one day's medicine and were attending daily. It can be seen from this that the statistics of the department are not as accurate as they should be.

In regard to diagnostic statistics much requires to be done.

I requested the Superintendent to issue Hospital Orders making diagnosis according to the nomenclature of diseases compulsory. This was actually passed, I understand, but so far it is not carried out as a routine. Until this is done no accurate statistics can be obtained

In conclusion, while it is possible to say that during the last year the Out-patient department has been to some extent organized into a practical unit of the hospital, in which it is now possible to undertake real medical work, at the same time the disabilities encountered are still very great. For want of space no further expansion of the department is possible. On completion of the Casualty department, no further room will exist for any new work. But perhaps the chief obstacle to the maintaining of any standard in the Out-patient department is the vexed question of staff. There is still no attempt made to provide a permanent staff, or any scale of staff, for the work to be undertaken. The Resident Medical Officer who is in charge of the Out-patient department is still unable to say from day to day what number of staff he will have at his disposal, while the policy of detailing members of the subordinate medical service to the Out-patient department as a punishment seems to be still in vogue. Till something definite is done in this direction to provide a permanent staff or a permanent nucleus of sufficient size, say 8 or 9 qualified men, it will be very difficult to maintain any standard of work at all. I would again suggest that the whole of this question be reconsidered.

A. P. G. LORIMER, Major, I.M.S.,
Resident Medical Officer.

ANNUAL REPORT OF THE GOVERNMENT X-RAY INSTITUTE FOR 1922.

The X-Ray department of the General Hospital moved into its new quarters on 17th March when Her Excellency Lady Willingdon, accompanied by His Excellency the Governor, and supported by the Raja of Panagal and the Surgeon-General, formally opened the X-Ray Institute in the presence of a representative gathering of the citizens of Madras.

As will be seen by the statistics given below, the different departments of the institute have been fully used and the inadequate staff have been hard put to it to get through all the demands made on their services

Nature of work performed.	1919.	1920.	1921.	1922.
I. (*a*) Radiographs	999	1,758	3,853	5,323
(*b*) Screen examinations	55	49	Nil.	Nil.
II. (*a*) Clinical photographs	16	28	10	51
(*b*) Radiographic and photographic prints	...	...	77	410
III. Radio-therapeutic exposures	602	660	1,342	1,386
IV. Electro-therapeutic sittings—				
(*a*) Galvanization	64	141	821	1,213
(*b*) Faradization	281	289	179	441
(*c*) Ionic medication	360	396	892	1,534
(*d*) Electrolysis	11	4	13	6
(*e*) Cauterization	71	60	33	Nil.
(*f*) Vibratory massage	72	80	28	48
(*g*) Muscle testing	...	...	67	52
(*h*) Diathermy, High Frequency and General Electrical Treatment.	...	...	...	1,248
Total	2,581	3,465	7,315	11,757

Radiographic Department.

Hospitals from which patients were sent for Radiographic Examination.

Hospitals.	Radiographs taken.
Government General Hospital	4,835
„ Rayapuram Hospital	221
„ Ophthalmic Hospital	79
„ Royapettah Hospital	36
„ Maternity Hospital	16
„ Penitentiary	1
„ Tuberculosis Hospital	89
British Station Hospital	42
Indian Station Hospital	18
Lunatic Asylum	14
Victoria Hospital	15
Rainy Hospital	16
Veterinary Hospital	1
Total	5,383

The General Hospital total includes those patients sent from the mufassal, nearly all of which were special cases requiring an X-Ray examination to elucidate obscure conditions.

It is pleasing to note that again in 1922, radiographs from the institute were accepted by the Royal Photographic Society of Great Britain for the Scientific section of their Annual Exhibition held in London during September and October. The exhibition is open to the world, and of about 800 exhibits shown only 30 were radiographs, three of which came from Madras X-Ray Institute.

Bismuth meals.—Seven hundred and eighty-four bismuth meals were given during 1922 against a total of one hundred and six in the previous year. Special investigations on duodenal ulceration were undertaken in collaboration with Colonel Symons and Major Bradfield, the results of which were shown in a paper read by Major Bradfield before the South Indian Branch of the British Medical Association. This paper, with radiographs, was subsequently published in the Indian Medical Journal.

Thoracic examination.—One hundred and fifty-six radiographic examinations of the thorax were carried out, the majority being for ? tubercular conditions. This shows a falling off as compared with the previous year, probably due to the fact that Dr. Chandrasekar was away in Europe for some months.

Examination of skull.—Sixty-eight radiographs of the head have been taken nearly all at the request of Major Wright in continuation of the special investigation on the relation of Pituitary Tumours to Optic Atrophy, which he has been carrying out since 1921. Details of this work have been published in ophthalmic journals and the annual reports of the Government Ophthalmic Hospital.

Dental radiography.—One hundred and seventy-four radiographs of jaws and teeth have been taken, an increase of seventy-three on the previous year.

Veterinary hospital case.—The case from this hospital was that of a horse who had an old injury to the shoulder. The X-Ray room was cleared and a bed of straw prepared on to which the Horse was thrown and given chloroform, to prevent movement. We were able to produce good radiographs of this difficult subject, the results showing the nature of the injury. This, is probably, the first time a horse has been radiographed in India.

Radio and Electro-therapeutic departments.—It will be seen that so far as figures are concerned there has been only a small increase in the number of X-Ray treatment exposures given in 1922. This does not give any idea of the increase in the time spent giving exposures, those for 1922 being of a much heavier dosage than those given previously, inasmuch as many cases of cancer and fibroids have been treated with encouraging results. The apparatus used for X-Ray treatment is an old set which has been in use for nine years. We have been fortunate in securing sanction for the purchase of one of the new very powerful X-Ray sets for treatment of cancer. This will probably be installed during 1923 in a special lead-lined pavilion to be erected in the court yard adjoining the X-Ray Institute and will be used for deep and massive dosage, the old set still being kept in use for skin treatment.

The statistics of the Electrical treatment speak for themselves and there is little that is outstanding except, perhaps the continued success of ionic medication, with sulphate of zinc, of chronic sinuses! Recently a new method of dealing with chronic Eczema has been tried with fair results, but a larger number of cases must be treated before the method is published.

Medical Diathermy has proved of great use and Surgical Diathermy has been made use of with results that cannot yet be decided.

The departmental staff.—The staff have carried out their arduous work in a very satisfactory manner and it would be invidious to mention any names. Another Assistant Surgeon is badly wanted and, indeed, will become absolutely essential when the new treatment apparatus is installed.

During the year the Senior Assistant Surgeon, Rao Sahib M. Govindarajulu Nayudu, retired after serving nearly 40 years in the medical service of Madras Presidency, a very fine record. His place was taken by Mr. Totadri from Vizagapatam who was on duty here after training. Mr. Totadri went on long leave the latter part of the year and was replaced by Mr. Santhanakrishna Pillai who is on duty now. The services of temporary Assistant Surgeon R. Viswanathan terminated in July. Military Assistant Surgeon C. Bartley was eventually posted here for training and is now on duty as Junior Assistant Surgeon.

It cannot be too frequently brought to notice that X-Ray work is exceedingly dangerous to the operators in spite of all the precautions taken, and every encouragement, financial and otherwise, should be given to the Assistant Surgeons engaged in this duty. Those doing nothing else beside X-Ray work, as at the Institute, should work short hours, have adequate leave and spend as much time as possible in the open air. By paying attention to these important items good health should be maintained.

X-Ray Institute,
Govt. General Hospital, Madras,

T. W. BARNARD, Captain,
Radiologist.

DENTAL DEPARTMENT.

The number of admissions during 1922 was	4,409
Those on the First Dental Surgeon's days being	2,088
And those on the Second Dental Surgeon's days	2,331

This constitutes a record for the department, the increase being accountable for by the regular attendance of the dental officers during the year.

The admissions included—

Europeans and Anglo-Indians	906
Muhammadans	194
Hindus	2,943
Other castes	366
Males	3,208
Females	903
Children	298

The treatment carried out by me, and by students under my supervision, was as follows:—

Deciduous teeth extracted in treatment of persistence, stomatitis and dental caries	148
Permanent teeth extracted in treatment of the following conditions:	
Dental caries	730
Pyorrhea alveolaris	787
Alveolar abscess, necrosis, ulceration, etc.	142
Impaction of lower third molars	23
Abrasion and attrition	19
Fracture	5
Irregularity	20
Supernumerary teeth	7
Total extractions ...	1,881

Ethyl chloride was administered for extractions 164 times, 114 of these being by Dr. M. N. Anklesaria, who underwent a post-collegiate course in dental surgery from July.

Chloroform was administered once.

Cocaine solution was injected 27 times.

Fillings	68
Scalings	256
Incisions, in cases of erupting teeth, abscess, etc.	27
Sequestra removed	2
Splints for fractured mandible	2
Regulating cases	1
Procelain crown fixed on incisor	1
Denture	1
Obturator for antral abscess	1
Total operations ...	2,250
Treatment of gums, alveolo-dental periosteum, etc.	264
Advice	25
Refusals of either examination or treatment by patients	53

Major A. W. Lynsdale, I.S.O., I.M.D., acted as Second Dental Surgeon during the year. I append his report on the cases treated by him.

I may remark that dressings in preparation for filling, treatment of pain after extraction, etc., have never appeared in my own reports as operations.

GOVT. GENERAL HOSPITAL, MADRAS,
23rd January 1923.

C. F. BADCOCK, L.D.S.R.C.S. (Eng.),
First Dental Surgeon.