## Contributors

Kedah. Medical Department.

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## THE ANNUAL REPORT

OF THE

## MEDICAL AND HEALTH DEPARTMENTS, KEDAH,

FOR THE YEAR

1342 A.H.

(14TH AUGUST, 1923-1st AUGUST, 1924)

BY

Dr. D. BRIDGES,

STATE SURGEON TO THE KEDAH GOVERNMENT.

Blor Star : PRINTED AT THE KEDAH GOVERNMENT PRESS.

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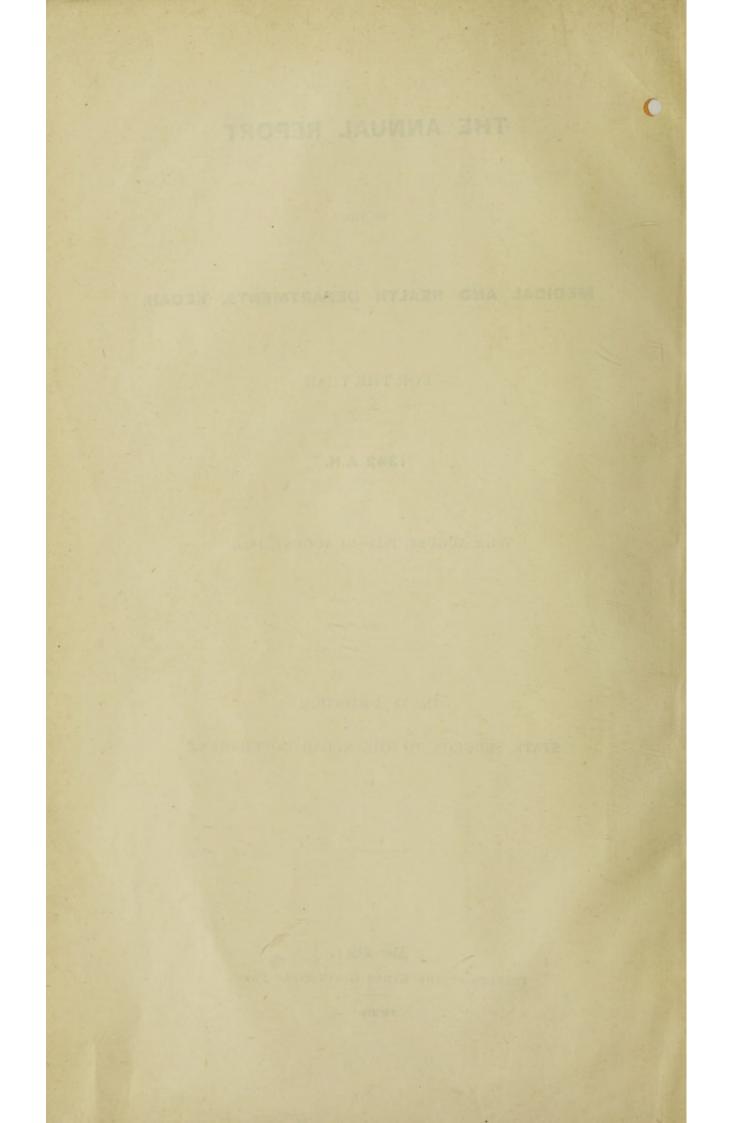
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Reed. Jan. 1926.



# Annual Report of the Medical and Health Departments, Kedah, for the Year 1342, A.H.

#### I-VITAL STATISTICS.

The population of Kedah for 1342, A.H. is estimated at 350,000 as against 341,596 for 1341, A.H.

The following is a comparative table for the last 10 years :

Year.		Estimated population.	Births.	Birth rate per mille.	Deaths.	Death rate per mille.	Remarks.
1333		258,000	6,584	25.23	6,039	19.50	
1334		273,000	6,937	25.41	5,463	20.00	1383 7287
1335		285,000	8,030	28.17	6,646	23.32	
1336		290,000	7,902	27.25	6,299	21.72	
1337		300,000	9,102	30.34	11,548	38.49	Influenza
1338	-	325,000	9,593	29.51	8,557	26.14	And and a state of the second
1339	-	338,544	10,153	29.99	8,718	25.75	Census Year
1340	-	340,000	10,305	30.30	8,656	25.40	The A Life
1341	-	341,596	9,454	27.73	7,834	23.41	And Street
1342		350,000	11,095	31.70	7.877	22.41	

The excess of births over deaths was 3,218. The figures for the year shew the highest birth rate recorded in Kedah, and the lowest death rate for the last six years.

#### INFANTILE MORTALITY.

There were 1,401 deaths among infants up to one year old, against 1,530 during 1341, A.H., the rate being 126'27 per thousand births, against 161'73 in 1341.

Infantile death rate for last 5 years was :

Year.		Deaths.	Rate per Mille.	Age.
1338		1,312	136.76	Deaths under 1 year
1339	-	1,980	194.98	1 year and under
1340	-	1,704	165.35	
1341	-	1,530	161.73	"
1342		1,401	126.27	

The lowest infantile death rate for the last 5 years compares very favourably indeed with infantile death rate of Straits Settlements which in 1922 was 195.22.

The infantile death rate per thousand births, among the principal nationalities was :

Malays.	Chinese.	South Indians.
120.20	139.33	184.42

BIRTHS ACCORDING	TO S	SEX AND	NATIONALITY.
------------------	------	---------	--------------

	Nationality.	H.A.	342	Males.	Females.	Total.
Europeans				_	_	_
Eurasians	-		-	4	3	7
Chinese				760	661	1,421
Malays				4,524	4,178	8,702
South Indians	-			384	348	732
North Indians				5	6	11
Others			•	110	112	222
		Total		5,787	5,308	11,095

DEATHS /	ACCORDING TO	NATIONALITIES	AND DISEASES.
----------	--------------	---------------	---------------

Diseases.	Euro- peans.	Chinese.	Malays.	South Indians.	North Indians.	Others.	Total.
Fever	1	614	2,545	203	11	85	3,459
Bowel Diseases	-	153	408	280	3	6	850
Lung Diseases		182	421	154	7	16	780
Old Age	-	69	624	47	- 110	17	757
Infantile Diseases -	-	87	442	45	201	7	581
Ankylostomiasis	-	52	390	88	1000	5	535
Nervous Dis. and Convl		32	219	39		3	293
Death after abortion and							
child birth	-	24	182	3		5	214
Venereal Diseases -	-	20	12	5		1	38
Cardiac Diseases -		6		7			13
Zymotic Diseases -	-		5	-	-	3	8
Leprosy	-	2			2		4
Beri-Beri	-	-	1	-	-	-	1
Other Causes	1	85	195	49		14	344
Total -	2	1,326	5,444	922	21	162	7,877

The causes of death as given in this return is not to be taken as even approximately correct, as in the majority of cases except Hospital cases, the diagnosis is vague, and death is attributed to one or other of the few well-known diseases.

Nationality			Males.	Females.	Total.
Europeans			, 2		1
Eurasians		-			
Chinese		-	1,053	273	1,326
Malays .		-	2,918	2,526	5,444
South Indians		-	529	393	922
North Indians			21		21
Others	-	-	83	79	162
	Total	-	4,606	3,271	7,877

DEATHS ACCORDING TO SEX AND NATIONALITIES.

E

Age	. e Jany	1	Europeans.	Chinese.	Malays.	S. Indians.	N. Indians.	Others.	Total.
1 year and	under	-	States.	198	1,046	135	10-21-1	22	1,401
5 years	,,	-	-	79	774	89	1	. 8	951
15 "	,,	-	-	68	492	53	-	12	625
	,,	-	-	98	464	95	4.	18	679
35 "	,,	-		192	553	246	6	24	1,021
45 "	,,		2	262	529	168	7	19	987
25 " 35 " 45 " 55 " 65 "	"	1-		206	423	72	3	16	720
65 "	,,	-	-	165	394	33	-	25	617
75 "	,,	-	Conserved in the local division of the local	45	327	21	100-1-1	10	403
100 "	,,	-		13	412	10	-	7	442
Over 100 yea	irs	•		-	30	-	-	1	31
	Total	-	2	1,326	5,444	922	21	162	7,877

DEATHS ACCORDING TO AGES AND NATIONALITIES.

29.85 per cent of the total deaths was of children under 5 years of age.

## II. ADMINISTRATURE.

#### STAFF.

State Surgeon.	Laboratory Assistants - 5
Medical Officers 2 (for Central and	Midwives 2
South Kedah.)	Attendants, Male 67
Assistant Surgeon 1 (Ag. for Medical	" Female 12
Officer, Alor Star.)	Other Hospital Servants - 36
European Nursing Sisters - 2	Vaccinators 10
Dressers, Special Grade - 3	Clerks, First Grade (E.) - 1
" First Grade - 4	" Third Grade (E.) - 8
" Second Grade - 16	Orderlies 7
" Third Grade - 19	Assistant Surgeon, Quarantine
" Probationers - 5	Station, Padang Besar - 1

(Kedah pays 4/15th share of this man's salary, the balance being paid proportionately by Straits, F.M.S. and Perlis Governments.)

#### III. PUBLIC HEALTH.

The health work has been greatly handicapped during the year, by not having an Health Officer or a fully qualified Inspector. Had there been any serious outbreak of disease, it would have been quite impossible to cope with it; as it was, during the short time the small outbreak of small-pox lasted, the work was very strenuous, as everything had to be attended to personally by the State Surgeon.

With regard to town work, things are very behind hand. In Alor Star, sanitation is conspicuous by its absence; things are generally nearly as bad as possible. Various Committees have sat during the year to consider a replanning of the whole town, which is absolutely necessary; but up-to-date nothing has been done, as there are no laws to enable any action to be taken; and, as the people will not live away from the river, which is the high road of trade here, it remains for the Government to decide on some plan, by which the town can be rebuilt in sections. More attention must be paid to sanitation of towns and villages in the future, as it is largely, on these crowded spots the health of the country depends.

Regarding Estate work, very little was done during the year as there was no one to do the work. But the health returns compare very favourably with last year's figures and with returns of other states.

## IV. HOSPITALS AND DISPENSARIES.

The Kedah Medical Institutions in 1342 consisted of :--

General Hospital, Alor Star.	The Gaol Sick Ward, Sungei Patani.
District Hospital, Sungei Patani.	The Gaol Sick Ward, Kulim.
District Hospital, Kulim.	Dispensary, Town, Alor Star.
District Hospital, Kuala Ketil.	Dispensary, Kuala Nerang.
District Hospital, Serdang.	Dispensary, Changloon.
District Hospital,Bandar Bahru.	Dispensary, Yen.
District Hospital, Baling.	Dispensary, Sik.
District Hospital, Langkawi.	Dispensary, Kuala Muda.
The Gaol Sick Ward, Alor Star.	Dispensary, Mahang.

Quarantine Station, Padang Besar, Perlis, which is worked from Kedah.

The total number of patients treated in the Hospitals during the past 5 years was:

Year.			No. Treated. Deaths.		Percentage of Deaths	
	1338	fice	12,168	983	8.07	
	1339		13,369	1,144	8:56	
	1340		13,018	898	6.89	
	1341		13,020	945	7.25	
	1342		13,657	1.021	7.48	

The year under review shews the largest number treated during last 5 years.

The number of patients treated in each Hospital during 1342 was :

	Hospital.		10 1000	No. Treated.	Deaths.	Percentage of Deaths.
Alor Star				3,149	196	6.22
Sungei Patani				4,417	324	7.34
Kulim				2,220	251	11.30
Kuala Ketil				1,864	136	7.29
Serdang				887	62	6.99
Bandar Bahru				443	24	5.41
Baling				283	20	7.07
Langkawi				148	6	4.02
Pri	ison Sick Wa	ard.		dans of part		date in the
Alor Star			1-12	145	2	1.37
Sungei Patani	/			85		
Kulim				16		
	TOTAL			13,657	1,021	7.48

Excluding 255 deaths which occurred within 48 hours of admission, the death rate for the year was 5.61%, a very satisfactory result. The Nationalities of Indoor patients for 1342 were :---

Europeans	 	 11
Eurasians	 	 1
Chinese	 	 3,622
Malays	 	 903
Indians	 	 8,898
Javanese	 	 39
Siamese	 	 22
Others	 	 161
	TOTAL	 1,3657

The average number of indoor patients in the various Hospitals during 1342 was as follows :---

Alor Star	 	1	174.57
Sungei Patani	 		227.22
Kulim	 		134.23
Kuala Ketil	 		105.90
Serdang	 		44.93
Bandar Bahru	 		19.96
Baling	 		12.68
Langkawi	 · · · · · · · · · · · · · · · · · · ·		12.00

#### Prison Sick Ward

	TOTAL	 742.06
Kulim	 	 1.36
Sungei Patani	 	 2.81
Alor Star	 and a sector and a	 6.40

The average daily number for 1341 A. H. was 710.24.

Estate Coolies who received Indoor treatment in the various Hospitals, were as follows :----

	Tan	nils.	Mala	iys.	Chin	ese.	Oth	ers.	To	tal.	Percent
Hospital.	Ad.	D.	Ad.	D.	Ad.	D.	Ad.	D.	Ad.	D.	age of Deaths.
Alor Star	98	9	3	2	4	2	1		106	11	10.37
Langkawi			3	-	7		-		10	-	-
Sungei Patani	2018	118	8		58	12	13	-	2097	130	6.19
Kuala Ketil	1301	91	1		23	1	4	-	1329	92	6.92
Baling	8	-						-	8	-	-
Kulim	1147	110	8	1	116	13	19	3	1290	127	9.84
Serdang	475	30	1		6	2	-	-	482	32	6.63
Bandar Bahru	220	12	-	•	7	1	-	-	227	13	5.72
TOTAL	5267	370	24	1	221	31	37	3	5549	405	7.20

Of the total number 297 remained from previous year.

#### V. THE PREVAILING DISEASES.

The more important diseases treated in Kedah Hospitals during the last three years were :---

		1340.			1341.			134	2.
Diseases.	Cases.	Deaths.	Deaths %	Cases.	Deaths.	Deaths %	Cases.	Deaths.	Deaths %
Malaria	5,131	249	4.85	4,332	195	4.50	4,511	228	5.05
Dysentery-Amob: )	675	157	23.26	264	64	24.24	407	67	16.46 19.15
" Bacill:	-	-	-	511	94	18.39	663	138	20.81 1913
Venereal Diseases	1037	14	1.35	1,077	21	2.42	1,052	18	1.71
Ulcers	1438	2	'13	1,222	-	-	1,052	9	.85
Ankylostomiasis -	717	91	12.69	834	93	11.15	806	77	9.55
Respiratory Dis:	549	90	16.39	802	153	19.07	799	151	18.89
Wounds	590	11	1.86	688	8	1.16	684	14	2.04
Pul: Tuberculosis	204	96	47.05	210	81	38.57	234	108	46.15
Other Diseases •	2,677	188	7.02	3,080	236	7.66	3,449	211	6.11
Total -	13,018	898	6.12	13,020	945	7.25	13,657	1,021	7.48

The cases in 1342 include the following numbers which remained from the previous year, under the above headings, in their respective order 178, 17, 39, 58, 133, 47, 46, 27, 26, 203.

There has been a large increase in the number admitted for Pulmonary Tuberculosis and Dysentery; in the latter case nearly 50 per cent. over the previous two years.

These cases bardly ever come for treatment in the early stage of the disease, but nearly always when they are past hope.

#### MALARIA.

The total number of blood films examined for Malaria in the various Hospitals was as follows :

Hos	pitals.	1.94.94	M. T.	B. T.	Quartan.	Negative.	Total.
Kulim -			263	113	43	736	1,155
Alor Star -		100-	192	364	39	1,287	1,882
Serdang -		-	80	179	6	469	734
Langkawi	Line Mil	111-	5	11		141	157
Kuala Ketil	-	-	137	508	-	1,172	1,817
Sungei Patani		-	584	448	2	1,528	2,562
Bandar Bahru	101	-	32	28	2	154	216
							- New Martin
		1	1,293	1,651	92	5,487	8,523

In Alor Star the usual type of Malaria is the Benign Tertian, and the carrier appears to be A. Sinensis; hardly any A. Maculatus being discovered here.

The admissions for Malaria and the death rate for Malaria cases treated remains much the same as in previous year; it is not high, and if deaths within 48 hours of admission are excluded, the result can be taken as very satisfactory.

Out of the total admissions 2,004, or 44 per cent. came from Estates.

#### VENEREAL DISEASES TREATED IN HOSPITALS.

Gonorrhoea	-			244
Gon. Sequelæ	-	-		92
Prim. Syphilis	-			112
Secondary Syphilis			-	298
Tertiary Syphilis		-		79
Syph. Sequelæ	1 1/ 114	2013-273	1	17
Chancre Soft			-	114
Bubo -		2		96
			Total -	1,052

The number treated is about the same as last year.

The deaths among these numbered 18 or 1.17 per cent.

#### PURU.

7,620 injections of Neo-Salvarsan were given for this disease during the year, against 1,183 in 1341.

There is a marked decrease in the amount of puru in the State. But although regular visits were made by the Medical Officers to most of the Mukims for the purpose of giving injections, and the Penghulus were previously warned of the visit, all the cases were not brought forward for treatment; and unless this is done we can never hope to eradicate this disease.

#### ANKYLOSTOMIASIS.

806 cases were treated in Hospitals with 77 deaths (9.55 per cent. death rate) against 834 cases with 93 deaths (11.15 per cent death rate) during 1341 A.H.

The death rate is slightly less than last year.

Most cases of less than 25 per cent. haemoglobin die.

#### PULMONARY TUBERCULOSIS.

234 cases were treated, with 108 deaths, giving a death rate of 46.15 per cent. There were 210 cases and 81 deaths during 1341 A.H., the death rate being 38.57 per cent.

The number of cases treated has been steadily increasing during the last few years. 12 Government employees were found to be suffering with Phthisis.

No Phthisis was observed in a Malay living in an attap house in a Kampong.

#### PNEUMONIA.

314 cases were treated, with 123 deaths, against 275 cases and 118 deaths in 1341 A.H; the death rates being 39'17 and 42'9 respectively.

There was a small outbreak of cases which reminded one of Influenza, but shewed none of the ordinary symptoms.

#### DYSENTERY, AMOEBIC.

407 cases with 67 deaths.

#### BACILLARY.

663 cases with 138 deaths.

There was a marked increase of cases, being 300 more than the previous year, but the death rate was much less, being 19'11 instead of 23 per cent.

No infectious source could be traced.

## PREGNANCY AND ITS DISEASES.

125 cases connected with Pregnancy and its complication were treated in the Hospitals, with 9 deaths. In the whole State there were 214 deaths, recorded under this heading, against 242 deaths in the previous year, shewing a death rate of 1.92 per cent to total births.

#### LUNATICS.

There were 83 Kedah lunatics under treatment in Tanjong Rambutan Hospital in the beginning of the year. 61 were sent in during 1342, 18 were discharged as cured, 8 died, 6 absconded, and the number remaining at the end of the year was 112.

#### VI. GENERAL HOSPITAL, ALOR STAR.

This institution was under the charge of Dr. C.J.S. Nicholas, Assistant Surgeon who has acted as Medical Officer, Alor Star.

The number of indoor patients, according to nationalities, was as under :---

Nation	ality.	14	No. Treated.	Deaths.	Percentage of Deaths
Europeans			7		
Malays			452	19	4.20
Indians		-	1,309	53	4.04
Chinese		-	1,284	121	9.42
Javanese			11		13 TH 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Others		•	86	3	3.48
	Total	-	3,149	196	6.22

The percentage of deaths excluding those occuring within 48 hours was 4.60. The figures for the previous year were :---

Number treated 3,609, deaths 216, percentage of deaths 5'98, excluding deaths within 48 hours, 4'5 per cent.

106 estate coolies received indoor-treatment, of whom 11 died or 10.37 per cent: 4 from malaria, 2 from pneumonia and the rest from micellaneous causes. In 1341, the number treated was 118, with 5 deaths.

The daily average of inpatients was 174'57.

The principal diseases treated were :---

Malaria, ulcers, venereal diseases, wounds, ankylostomiasis, respiratory diseases, pulmonary tuberculosis and dysentery.

3.6					100
M	- A. I	F: /	ΔF	23	A.,
7.4	2.8.1	1.0.5	2.4	<b>.</b>	1.8.8

Percentage of Deat	Deaths.	Total Treated.		ear.	Y
6.89	69	1,002			1338
6.75	73	1,084		-	1339
6.20	77	1,241	-		1340
5.52	52	941	-		1341
7.65	57	745	-		1342

The decrease in amount of malaria treated is probably due to the fact that the value of quinine is being realised by the people and readily taken.

Blood was examined for malaria in 1882 instances with the following results:-

Malignant malaria					192
Benign tertian		-	- 11.4.1	-	364
Quartan	-			-	39
~			Negative		1,287
			Sec. a large	-	
the second second			Total	-	1,882
3				-	

#### ULCERS.

406 cases were treated, with two deaths : one due to cardiac syncope and the other to Toxamia.

#### VENEREAL DISEASES.

Ye	sar.		No. Treated.	Deaths.
1340		28	402	8
1341		22	402 448 396	8
1342		22	396	5

The figures for the last three years was as under :---

0

There is a small decrease in the number of admissions and deaths.

#### WOUNDS.

261 cases were treated, of whom 6 died. Many of these were Police cases.

#### ANKYLOSTOMIASIS.

	Year.		Total Treated.	Deaths.	Percentage of Deaths	
1.	338			188	19	10.10
	339	-	-	181	20	11.05
	340	-		224	27	12.05
1.	341	-	-	292	19	6.20
1	342	- 1011	(Carb	252	13	5.15

. There is a slight improvement on last year's figures. Treatment on estates is becoming more general. Early recognition and careful treatment of these cases is very important.

#### RESPIRATORY DISEASES.

including Pneumonia, Bronchitis, Pleurisy and Asthma. The figures for the last three years were :---

Year.		No. Treated.	Deaths.	Percentage of Deaths	
1340 -		121	21	17:35	
1341	-	196	32	17.34	
1342 -	-	159	33	20.75	

The death rate is high, as many of the cases come into hospital too late; and it is a recognised fact that the death rate for Pneumonia in this country is high.

#### PULMONARY TUBERCULOSIS.

Year.			Total Treated.	Deaths.	Percentage of Deaths.
1338			78	38	48.98
1339	-		75	37	49.33
1340		-	76	36	47.36
1341	-		84	36	42.85
1342		1.	71	32	45.07
		1 100			

The death rate is high, and about the same for the last five years. Practically no case ever comes into hospital until he is hopeless.

18	0	÷.
	×.	κ.

#### DYSENTERY.

Year.		Year. Total Treated. Deaths.			
1338	-		117	20	17.09
1339	-		122	28	22.95
1340	-		91	12	13.18
1341	Amoe. Bacıll.	-	44 41	12 6	27·27 14·63 21·12
1342	Amoe. Bacill.	-	24 31	3 9	$12.50 \\ 29.03$ 21.81

The death rate is about the same as last year. The cases came from scattered areas; and no focus of infection was traced.

#### INFECTIOUS DISEASES.

2 cases of Influenza, 2 of chicken pox and 1 of measles were treated in the hospital and cured.

No case of Beri-Beri was recorded.

#### SURGICAL OPERATIONS.

There were 27 major operations performed including Hernia 4, Intestinal Obstruction 1, Laporatomy for penetrating wounds of abdomen 3, Hoemorrhoids 3, Amputations 3, Radical Cure, Hydrocele 2, Orchidectomy 1, Trephining 3, Harelips 2, Dilatation of Stricture 5.

Neo-Salvarsan injections to indoor patients numberd 524.

#### LABORATORY WORK

4,233 Specimens were examined.

	Spe	cimens.			Total examined.	Negative
Blood		12			1,882	1,273
Faeces		-			1,917	649
Sputum	-	-	-	12	175	24
Scraping and	Dischar	ge -	-	-	22	10
Urine		-	-		117	56
Post Mortem	Specime	en -			14	3
Pus		•		•	106	6
				1	4,233	2,021

Post Mortem Examination :---

Police Cases	-		- 10		57
Hospital Cases	-	•	-	-	22

Total - 79

#### OUT-DOOR DEPARTMENT.

7,098 cases were treated ; out of these 1,058 were repetitions.

ionalities :			
Malays	 		3,128
Tamils	 		1.704
Chinese	 		1,253
Europeans	 		403
Sikhs	 		255
Eurasians	 		124
Singhalese	 		82
Others	 		149
	To	TAL	7,098

The Malays are taking out-door treatment freely.

The common complaints were Malaria, Ulcers, Bronchitis, Constipation, Ascaris, Scabies, and Wounds.

2,844 injections were given for Puru.

Nati

0

Buildings : The new mortuary was completed.

Revenue : Collected during the year was \$2,682.30.

#### VII. SUNGEI PATANI HOSPITAL.

Dr. R. B. Hawes was in charge of this hospital, and the hospitals at Kuala Ketil and Baling.

The number of indoor cases treated during the year was 4417. There were 324 deaths, being a percentage of 7'34. Excluding deaths within 48 hours of admission, the death rate was 5'21 per cent.

2,097 or nearly half the total cases, were estate coolies.

The daily average of inpatients was 227.22.

The figures for 1341 were : total cases 3,956, deaths 272, percentage of deaths 7.17, percentage excluding deaths within 48 hours 4.7; estate patients 1,728, and daily average 164.29.

The increase on last year's figures is due to increased number of estate coolies treated.

Natio	nality.		No. Treated.	Deaths.	Percentage of Deaths.
Europeans			4	1	25.00
Indians			3,165	193	6.09
Chinese		-	1,034	117	11.31
Malays		-	161	8	4.96
Others	-	-	53	5	9.43
	Total		4,417	324	7.34

IN-DOOR PATIENTS ACCORDING TO NATIONALITIES.

Estate Coolies : The total coolies treated numbered 2,097, of whom 130 died or 6'19 per cent : 36 from Malaria, 22 Dysentery, 18 Pneumonia, 17 Ankylostomiasis and the rest from miscellaneous causes.

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The prevailing diseases were as follows :---

		1340.			1341.			1342	2.
Diseases.	Cases.	Deaths.	Deaths %	Cases.	Deaths.	Deaths %	Caseis.	Deaths.	Deaths %
Malaria Venereal Diseases Dysentery Amo "Bacill. Ulcers Respiratory Dis Ankylostomiasis - Wound Pul. Tuberculosis	1,663 283 	57 1 -35 -28 13 4 20	3·42 ·35 19·92 	1,458 335 	$ \begin{array}{c} 60 \\ 3 \\ -44 \\ -32 \\ 14 \\ -7 \\ 17 \end{array} $	4·12 ·89 21·25 	1,627 483 168 125 285 261 182 164 97	68 8 20 22 1 51 30 3 41	4.17 1.65 11.90 17.60 .35 19.54 16.48 1.82 42.26
Other Diseases - Total -	912 3,837	67 225	5.86	1,054 3,956	102	9.67	1,025	80	7.80

#### MAJOR OPERATIONS.

There were 59 operations performed, including: appendicitis and appendicular ulcer 5, Laparotomy 8, Cataract 2, Sarcoma 2, Hernia 2, Pleurisy 3, Empyema 2, Liver abscess 1.

Neo Salvarsan injections to indoor patients numbered 702.

#### LABORATORY WORK.

Blood was examined in 2,562 cases, with the following results :--

and the pair states and the	Total	 2,562
Negative	 	 1,528
Quartan Malaria	 	 2
Benign Tertian Malaria	 	 448
Malignant Malaria	 	 584

Other Specimens examined :--

			Negative.
Stools		 2,995	880
Urine		 1,420	957
Sputum		 429	300
Pus		 238	38
Scrapings		 114	44
Postmortem		 3	2
	Total	 5.199	2,221

### POSTMORTEM EXAMINATIONS.

Police Cases	 	VI		49
Hospital Cases	 			73
			-	1000
		Total		122

#### INFECTIOUS DISEASES.

12 cases of measles with 2 deaths, 5 cases of chickenpox, and 5 cases of enteric fever with 3 deaths, were treated in the hospital.

#### OUTDOOR DEPARTMENT.

#### 5,082 cases were treated, including 609 repetitions.

The nationalities who received treatment were :---Malays 1,981, Chinese 1,062, Tamils 1,524, Europeans 247, Eurasians 96, Sikhs 31, Others 141. Malays are taking medicines freely.

The principal complaints were :--Malaria, Skin diseases, Venereal diseases, Constipation, Bronchitis, Wounds and Ascaris.

3,507 injections were given for Puru.

#### BUILDINGS.

Latrines were connected with wards by covered ways. The female ward was extended by two bays, and a verandah was erected all round the female lock-up wards. The outpatient department and Dispensary were altered. A part of the Medical Officer's Office was partitioned off as a Nurse's room.

#### REVENUE.

The Revenue collected during the year was \$12,821.08.

#### VIII. KULIM HOSPITAL.

Dr. J. T. Clarke was in charge of this hospital and the hospitals at Serdang and Bandar Bahru.

The number of indoor cases treated during the year was 2,220; the number of deaths was 251, being a percentage of 11.3 to total treated. The death rate excluding those which occurred within 48 hours of admission was 5.41 per cent. The daily average of inpatients was 134.23. Of the total treated 1,290 patients or more than half the number, were from estates.

The figures for the previous year were; total cases 1,658, deaths 189, percentage of deaths 11'3, percentage excluding deaths within 48 hours 9'5, estate patients 708, and daily average 121'12.

	1	Nationalities.		No. Treated.	Deaths.	Percentage of deaths.
Indians			 	1,587	162	10.20
Chinese			 	559	79	14.13
Malays			 	65	10	16.30
Javanese			 	5		
Others			 	4		
		TOTAL	 	2,220	251	11.30

The following were the nationalities treated :--

#### ESTATE COOLIES.

The total number of coolies treated was 1,290, of whom 127 died, or a death rate of 9.84 %: 33 from Malaria, 54 from Dysentery, 5 from Ankylostomiasis, and the rest from miscellaneous causes.

The prevailing diseases were as follows:

		1340.			1341.			1	342.
Disesaes.	Cases.	Deaths.	Deaths.	Cases.	Deaths.	Deaths.	Cases.	Deaths.	Deaths.
Malaria	598	43	7.19	656	40	6.09	757	62	8.19
Dysentery : Amoe :							131	31	23.66 20.53
Dysentery: Bacill:	157	55	35.03	172	42	24.41	278	53	19.06 20.55
Ulcers	133	1	.75	109			131	5	3.84
Venereal Diseases	138	7	5.07	134	7	5.22	121	5	4.13
Respiratory Diseases.	72	14	19.44	97	30	30.92	90	27	30.00
Wounds	87	1	1.15	114	2	1.75	89	1	1.01
Ankylostomiasis	99	23	23.23	79	28	35.44	59	11	18.64
Pul: Tuberculosis	34	20	58.82	32	12	37.50	40	24	60.00
Other Diseases	294	28	9.52	265	28	10.56	524	32	6.11
TOTAL	,1612	192	11.91	1,658	189	11.39	2,220	251	11.30

#### MAJOR OPERATIONS.

16 operations were performed including: Amputations 3, Empyema 2, Laperotomy 1, Removal tumour 3, Herniotomy 3, Removal eyeball 1, Urinary Calculi 2, Rad: cure, Hydrocele 1.

Neo-Salvarsan injections to indoor patients numbered 545.

#### LABORATORY WORK.

Blood was examined in 1155 cases with the following results:

 	736
 	1.0
 	43
 	113
 	263

Other specimens examined :

	Specime	ns.		No. examined.	Negative
Stools	 		 	567	131
Urine	 		 	354	274
Pus	 		 	10	-2
Sputum	 		 	94	9
Scrapings	 		 	.13	1
		TOTAL	 	1,038	417

#### INFECTIOUS DISEASES.

No infectious disease, except one case each of Measles, Chickenpox and Influenza was treated in the hospital.

#### OUT DOOR CASES.

Total patients numbered 2,124, including 1290 repetitions.

The nationalities who received treatment were: Europeans 68, Eurasians 17, Chinese 625, Tamils 856, Malays 485, Sikhs 59, Bengalees 11, Others 3.

The common complaints were: Malaria, Bronchitis, Constipation, Venereal diseases, Skin diseases, Wounds and Ascaris.

728 injections were given for Puru.

#### REVENUE.

Amounted to \$7291.87.

0

#### IX. KUALA KETIL.

First Grade Dresser, S. J. George, was in charge : Dr. R. B. Hawes, as Medical Officer, Central Kedah, paid routine visits.

The number of indoor cases treated during the year was 1,864, the number of deaths was 136, or a percentage of 7.29. The death rate, excluding those which occurred within 48 hours of admission was 5.41.

The daily average of inpatients was 105'9. Of the total treated 1,329 or 71 per cent. were estate coolies.

The figures for the previous year were :- Total cases 1,657, deaths 117, percentage of deaths 7'06, percentage excluding deaths within 48 hours 4'83, daily average 109'23, and estate patients 838.

Natio	malities.	Total Treated.	Deaths.	Percentage of Deaths.
Indians	···· ···	1,633	118	7.22
Chinese		197	15	7.61
Malays		21	1	4.76
Javanese		12	2	16.66
Siamese	e consettai	in a the 1	r estro 0 - stars	Onmana chin
	Total	1,864	136	7.29

The nationalities of inpatients were :--

#### ESTATE COOLIES.

1,329 coolies received indoor treatment, of whom 92 died, or a percentage of 6'92: 19 from Pneumonia, 18 Dysentery, 10 Malaria, 8 Ankylostemiasis, 6 other bowel diseases and the rest from miscellaneous causes.

The prevailing diseases were as follows :---

Diseases.	Total Treated.	Deaths.	Percentage of Deaths.	
Malaria	. 812	21	2.58	
Ankylostomiasis	156	12	7.69	
Respiratory Diseases		26	18.57	
Ulcers	112	-		
Enteritis	. 88	10	11:36	
Dysentery, Amo	20	8	26.33 35.06	
Dysentery, Bacill	47	19.	40.42 33 00	
Ascaris	61	1	1.63	
Venereal Diseases	57	-		
Wounds	. 44	_	_	
Pul. Tuberculosis	. 16	12	75.00	
Other Diseases	. 300	27	9.00	
deathe of parceolige	104	126	7:20	
Total	1,864	136	7.29	

#### LABORATORY WORK.

Blood was examined in 1,817 cases, with the following results :---

	Total	 1.817
Negative	 	 1,172
Benign Tertian Malaria	 	 122
Malignant Malaria	 	 523

Other Specimens examined :---

		N	lo. examined.	Negative:
Stools			1,473	263
Sputum			113	and the last
Urine			141	A Stand and
Discharge			46	
Scrapings			6	
to the second	Tot	al	1,779	263

#### POSTMORTEMS.

Police Cases	 		7
Hospital Cases	 		11
	Tot	al	18

#### INFECTIOUS DISEASES.

One case chickenpox, 6 cases measles, and 7 cases influenza, were treated with no deaths.

#### OUTDOOR CASES.

579 cases were treated, including 50 repetitions.

The nationalities who received treatment were :- Europeans 26, Tamils 278, Chinese 66, Malays 146, Sikhs 42, Others 21.

The common complaints were :---Malaria, Bronchitis, Constipation and Skin diseases.

#### BUILDINGS.

A verandah was added to the Female Ward.

#### REVENUE.

\$7,901.42.

#### X. SERDANG HOSPITAL.

First Grade Dresser V. Krishna Pillai was in charge, with Dr. J. T. Clarke, acting Medical Officer, South Kedah, supervising.

The number of indoor cases treated during the year was 887; the number of deaths was 62, or a percentage of 6'99. The death rate excluding those which occurred within 48 hours of admission was 5'86.

The daily average of inpatients was 44.93.

Of the total treated 482 or 54 per cent were estate coolies.

The figures for the previous year were : total cases 748, deaths 61, percentage of deaths 7.82, percentage excluding deaths within 48 hours 6.29, daily average 49.55 and estate patients 361.

Nationalities.	Total Treated.	Deaths.	Percentage of Daths
Indians	 651	43	6.60
Chinese	 224	18	8.03
Malays	 10		
Others	 2	1	50.00

The following we the metionalities to

0

#### ESTATE COOLIES.

62

6.99

887

482 coolies received indoor treatment, of whom 32 died, or a percentage of 6.63; 12 from Dysentery, 9 Malaria, 3 Pneumonia, 2 Ankylostomiasis and the rest from miscellaneous causes.

The prevailing diseases were :--

Total ...

Diseases.	 Total Treated.	Deaths.	Percentage of Deaths.
Malaria	281	14	4.98
Dysentery Amo.	 47	5 -	10:63)
Bacill.	 83	26	10.63 31.32 23.84
Ankylostomiasis	 70	20	2.85
Ulcers	 69	ĩ	1.44
Respiratory Diseases	 64	3	4.68
Venereal Diseases	 39		
Wounds	 24	bomed III antes	Successi Grade 10
Pul. Tuberculosis	 5		
Other Diseases	 205	11	5.20
Total	 887	62	6.99

## LABORATORY WORK.

Blood was examined in 734 cases, with the following results :--

Malignant Malaria	 	 80
Benign Tertian Malaria	 	 179
Quartan Malaria	 	 6
Negative	 	 469
	Total	 734

Other Specimens examined :---

		No. examined.	Negative.
Stools		753	49
Urine		397	369
Sputum		20	4
Discharges		14	1
Scrapings		1	
	Total	1,185	423

#### POSTMORTEMS.

Police Cases Hospital Cases

C

#### INFECTIOUS DISEASES.

One case of Enteric Fever was treated and cured.

#### OUTDOOR CASES.

Total cases numbered 688, including 210 repetitions.

The nationalities treated were :- Chinese 250, Tamils 266, Malays 84, Europeans 4, Others 84.

The common complaints were :---Malaria, Bronchitis, Constipation, Wounds, Skin diseases and Venereal diseases.

#### BUILDINGS.

One room was added to Attendants' Barracks, to be used as a store.

#### REVENUE.

\$2,556.55.

#### XI. LANGKAWI HOSPITAL.

Second Grade Dresser, Mohamed Sahat bin Haji Jassin, was in charge.

The total number of inpatients treated during the year was 148; the number of deaths was 6, or a percentage of 4.05. Excluding one death which cccurred within 48 hours, the death rate was 3.37.

The daily average of inpatients was 12.

The figures for the previous year were: total cases 238, deaths 9, percentage of deaths 3'78, daily average 15'25.

Nationalities. Total Treated. Deaths. Percentage of Deaths. 60 2 Chinese 3.33 Malavs 2 3.03 66 Indians 18 1 5.55 Siamese 1 3 33.33 1 Javanese Total 148 6 4.05

#### The following were the nationalities treated :--

#### ESTATE COOLIES.

10 coolies were treated, with no deaths, against 13 cases and no deaths during 1341.

The	prevailing	diseases were as	follows :
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Diseases.		Total Treated.	Deaths.	Percentage of Deaths
Malaria		23	1	4.34
Venereal Diseases		18		
Wounds		16		
Ulcers		15		
Ankylostomiasis		9	3	33.33
Respiratory Diseas	es	6		
Pul. Tuberculosis	·	5	2	40.00
Other Diseases		56		
Total		148	. 6	4.02

#### LABORATORY WORK.

Blood was examined in 157 cases, with the following results :---

Malignant Malaria	 	 5
Benign Tertian Malaria	 	 11
Negative	 	 141
	Total	 157

Other Specimens examined :---

		No. examined,	Negative.
Stools		 132	20
Urine		 101	90
Sputum		 48	
Pus		 10	
Scrapings		 3	
	Total	 294	110

#### OUTDOOR CASES.

3,669 cases were treated, including 1,564 repetitions.

The nationalities who received treatment were :---Malays 2,633, Chinese 718, Tamils 279, Europeans 21, Siamese 6, Bengalis 12.

The common complaints were :---Malaria and Skin diseases.

541 injections of Neo-Salvarsan for Puru were given by the State Surgeon during his visits.

#### \$110.55.

## REVENUE.

## XII. BALING HOSPITAL.

Second Grade Dresser, J. A. 1saac, was in charge, with routine visits from Dr. R. B. Hawes, Medical Officer, Central Kedah.

The total amount of inpatients treated during the year was 283; the number of deaths was 20, being a percentage of 7.07; excluding deaths within 48 hours admission, the percentage was 4.81.

The daily average of inpatiens was 12.68.

The figures for the previous year were : total cases 349, deaths 23, percentage of deaths 6.59, percentage excluding deaths within 48 hours 5.44, daily average 17.70.

Natio	malities.	Total Treated.	Deaths.	Percentage of Deaths
Indians		 145	10	6.89
Chinese		 103	8	7.76
Malays		 12	2	16.66
avanese		 5		
Others		 18		ter and the second second
	Total	 283	20	7.07

The following were the nationalities treated :---

#### ESTATE COOLIES.

8 cases from estates were treated, with no deaths, against one case and no death during 1341.

The prevailing diseases were as follows :---

Diseases.		Total Treated.	Deaths.	Percentage of Deaths
Malaria		123	5	4.06
Wound	·	27		
Dysentery		- 22	3	13.63
Ulcers		22		
Respiratory Diseases		21	7	33.33
Venereal Diseases		18		
Pul. Tuberculosis		3	1	33.33
Other Diseases		47	4	8.51
Total		283	20	7.07

POSTMORTEMS.

Hospital cases 2.

OUTDOOR CASES.

958 cases were treated, with 80 repetitions.

#### REVENUE.

\$154.05.

## XIII. BANDAR BAHRU HOSPITAL.

Second Grade Dresser M. D. Rajamoney was in charge, with Dr. J. T. Clarke, Acting Medical Officer, South Kedah, supervising.

The total number of inpatients treated during the year was 443; deaths numbered 24, being a percentage of 5'41. Excluding deaths which occurred within 48 hours of admission the death rate was 3'38 per cent.

The daily average of inpatients was 19'96.

The figures for the previous year were: total cases 517, deaths 46, percentage of deaths 8.89, percentage excluding deaths within 48 hours 5.99, daily average 27.14.

## The nationalities treated were :---

0

Natio	nalities.	Total Treated.	Deaths.	Percentage of Deaths.
Indians Chinese Malays Javanese	··· ··· ···	360 66 14 3	18 4 1 1	5.00 6.06 7.14 33.33
	Total	443	24	5.21

## ESTATE COOLIES.

227 estate coolies or 51 per cent. of the total inpatients were treated, with 13 deaths, or a percentage of 5'72: 2 from Malaria, 2 Pneumonia, 2 Bowel diseases, 1 Ankylostomiasis, 1 Dysentery and the rest from miscellaneous causes.

In 1341, the number of coolies treated was 292 with 13 deaths.

The prevailing diseases were as follows :---

Diseases.	20	Total Treated.	Deaths.	Percentage of Deaths
Malaria		109	2	1.83
Ankylostomiasis		60	25	8.33
Ascaris		45	2	4.44
Wound		42		
Respiratory Disease	100 C 100	40	6	15.00
Dysentery, Amo.		2		
" Bacill.		19	5	26.31
Venereal Diseases		19		
Ulcer		9		
Pul. Tuberculosis		1		
Other Diseases		• 97	4	4.12
Total		443	24	5.51

#### LABORATORY WORK.

Blood was examined in 216 cases, with the following results :--

Negative	 	 154
Quartan Malaria	 	 2
Benign Tertian Malaria	 bered	 28
Malignant Malaria	 	 32

Other Specimens examined :--

		No.	examined	1.	Negative.	
Stools			291		42	
Urine			78		68	
Sputum			16		1	
Discharge			7			
Scrapings			2		1	
	T	otal	394		112	

POSTMORTEM.

Police Cases 3.

INFECTIOUS DISEASES.

One case of chickenpox was treated.

#### OUTDOOR CASES.

Total cases numbered 1,027, including 306 repetitions.

The nationalities treated were: Tamils 427, Chinese 371, Malays 209, Others 20.

The common complaints were : Malaria, Venereal Diseases, Constipation, Ulcers, Wounds, Ascaris.

#### REVENUE.

\$1,583.49.

#### XIV. PRISON SICK WARDS.

The number of prisoners who received indoor treatment in the three Prison Sick Wards was as follows :---

Here I	No. Treated.	Deaths.	Percentage of Deaths.
Alor Star Sungei Patani Kulim	 145 85 16	2  	1·37  
Total	 246	• 2	.81

The deaths were due to the following causes : Dysentery 1, Ankylostomiasis 1.

The daily average of inpatients was :---

Alor Star	 	 6.40
Sungei Patani	 ····	 2.81
Kulim	 	 1.36
	Total	 10.57

Outdoor cases numbered 16,376, including 9,446 repetitions.

Alor Star	 		15,501
Sungei Patani	 		684
Kulim	 		191
	Tot	al ,	16,376

## XV .- OUT-DOOR DISPENSARIES.

Besides the out-door dispensaries in each hospital and prison ward, there are seven Government Dispensaries.

Place.	Officer in Charge.	Cases Attended	
Alor Star, Town -	Second Grade Dresser Mohamed Zain		
and a second second	bin H. Hussain	9,108	
Kuala Nerang -	Vaccinator Abdul Hamid up to 30-5-43 -	519	
Changloon -	Second Grade Dresser, Osman bin		
	Yahaya	5,076	
Yen	Third Grade Dresser, Luan	1,717	
Sik	Second Grade Dressers, G. Gabriel up to	.,	
research of the state of	30-7-42, V. Kanagasabai since then -	689	
Kuala Muda -	Vaccinator Che Din bin Md. Sahood -	1,181	
Mahang	Vaccinator Dhaim bin Kassim		
hanang	vaccinator Diani on Rassin · · ·	408	
	Total	18,698	

Repetitions numbered 8,353.

The nationalities treated were :---

Malays	-	-		-	8,847
Chinese	-		-		6,367
Indians		-	-		2,341
Siamese	-	-			216
Others	- 01			- 11	927
			г	otal	18,698

It is satisfactory to see that Malays are coming in freely for medicines.

The Dispensary at Kuala Nerang was destroyed, as the vaccinator in charge developed leprosy.

There has been no dispensary at this place since 1-6-42.

Arrangements are being made to re-open the dispensary.

#### XVI.-VACCINATION.

The number of vaccinations done during the year was as follows :---

District.					No. Vaccinated.
Kota Star	-				5,286
Kubang Pasu				-	3,459
Padang Trap					250
Yen	-				2,157
Langkawi	-				316
Sik					81
Kuala Muda		1011	Designation of	and of	4,298
Baling				and the second	1,296
Kulim	-	1. 19121	illi gita a		1,605
Bandar Bahru					1,838

Total ... 20,586

.

Transport of Vaccinators	ni zningepre		\$ 826.26
Vaccine Lymph	-		1,124.45
Salaries of 6 Vaccinators			2,095.87
Half salary of 3 Vaccinators, charge of Dispensaries	who were	in -	540.00
	Total	-	\$4,586.58

The cost per head of vaccination was 221 cents.

The number vaccinated during the previous year was 9,355, and approximate cost per head  $53\frac{1}{4}$  cents.

The figures for the present year have been swelled by a large number of re-vaccinations done in the areas affected by small-pox, and more strict supervision of the Vaccinators.

#### XVII. INFECTIOUS DISEASES.

#### SMALL-POX.

Small outbreaks of small-pox occurred in different places of the State, as follows :---

			Cases.	Deaths
North Ke	DAH.			
Kuala Salak		•	10	1
Kampong Java		-	6	1
Kangkong	-	-	1	
Changloon			1	
Prison, Alor Star		-	1	
CENTRAL KE	DAH.			
Kampong Raga, Yen	-	-	2	
Sungei Glam			3	1
Kampong Bujang	-	-	1	
South Ked	AH.			
Tek Pang Estate		•	-1	
	Total	-	26	3

The disease started in the house of a Haji, who had recently returned from Penang to Kuala Salak; and the cases at Kampong Java, Kangkong, Yen, Sungei Glam, and Kampong Bujang were directly traced from the original source at Kuala Salak.

The outbreak, though it occurred in four or five separate Mukims, was quickly controlled by strict isolation and disinfection, and vaccination of all persons, except those recently done, within a radius of about two miles of the cases.

### OTHER ZYMOTIC DISEASES.

			MEA	SLES.	CHICKEN-POX.		
and a start of the local day	m bas - Main		Cases.	Deaths.	Cases.	Deaths	
North Kedah	init's populat	-	2		15		
Central Kedah	-	-	18	2	8		
South Kedah	1	-	3		10		
	Total	-	23	2 .	33	A. 4	

There were treated in the Hospitals, 6 cases of *Enteric Fever* with 3 deaths, and 46 cases of *Influenza* with 4 deaths.

The cases of Enteric came from scattered areas, and no cause of infection could be traced.

Influenza occurred mostly in the Central Kedah Districts.

#### LEPROSY.

Only 4 cases were admitted to the Leper Asylums, for want of accommodation, so that the number remaining in the various hospitals, awaiting transfer, was 30, against 17 at the end of the previous year.

#### RETURN OF LEPER PATIENTS.

	 14	Remained 1-1-42.	Admitted 1342.	Total.	Discharged.	Transferred.	Died.	Remaining.
Pulau Jerajak	-	27	3	30			10	20
Pangkor Laut	-	5	1	6		***	1	5
Kedah Hospitals	-	17	44	61	23	4	- 4	30

All the cases received regular treatment with E.C.C.O. and Tartar Emetic; three cases were apparently cured, no Lepra-Bacilli being found on repeated examinations.

#### XVIII. QUARANTINE STATION, PADANG BESAR.

Assistant Surgeon, A. Anugraham, who was in charge since 24-3-40 (25-11-21) left on transfer to F.M.S., and was succeeded by Assistant Surgeon R. Appa Rajoo on 19-2-42 (1-10-23); the latter continued until 28-12-42 (31-7-24).

The original arrangement, under which the Straits and F.M.S. Governments undertook to send, by turns, an Assistant Surgeon to Padang Besar for periods of six months, was found impossible to carry out.

It was therefore decided at the end of the year, to appoint a temporary man, from outside the service; and Assistant Surgeon S. M. Kumarasamy was appointed to the post on 29-12-42 (1-8-24).

#### EXAMINATION OF PASSENGERS.

27,268 passengers by train, coming from Siam and Kelantan, were examined. No notifiable infectious disease was detected among the passengers. One case of Pneumonia and one case of acute Bacillary Dysentery were found and treated. One case of Chicken-pox contact from Nibong Tebal, P.W., was isolated and kept under observation.

#### DISPENSARY WORK.

1,178 outdoor cases were treated at the F.M.S.R. Dispensary, the number of new and chronic cases of Malaria being 14 and 293 respectively. All the necessary drugs were supplied by the Railway Department; and medicines were given free of charge to coolies and staff of the F.M.S.R., and S.S.R., and to the inhabitants of the Padang Besar village and neighbouring Kampongs.

#### ANTI-MALARIAL WORK.

Sub-soil drainage work was done at the beginning of the year to a length of about 1,800 feet by the Railway Dept. Filling up of hollows and ditches, and drainage of swamps, which formed Anophelene breeding places, were steadily progressing. In addition, oiling was done regularly within the Railway areas.

#### SANITARY WORK.

Four Sanitary committee meetings were held during the year. Various improvements such as, new house-drains, sanitary dust-bins, proper latrine accommodation, etc. were recommended for the Railway premises, and carried out satisfactorily. Only one sanitary meeting was held for the village; and works such as, filling up small swamps, cutting new earthdrains, and clearing of vegetation close to the Pekan, were carried out.

#### GENERAL CONDITIONS.

During the year under review, there was a marked improvement in the health of the Railway staff and coolies, which must be largely attributed to the progress made in the Anti-malarial work.

The Railway authorities have considered the necessity of enlarging the Dispensary, and have given contract for the work.

Reve	mue.	2		1341.	1342.	Increase.
Hospital Fees Sale of Medicines	:	:	•	\$28,514.62 1,133.15	\$32,625.06 1,507.32	\$4,110.44 374.17
Miscellaneous Injections -	:	:		158.10	358.13 701.50	200.03 701.50
		Total		\$29,805.87	\$35,192.01	\$5,386.14

#### XIX .- REVENUE AND EXPENDITURE.

There is a general increase in Revenue on the previous year, and it is hoped to improve on this next year.

Exp	enditure.			1341.	1342.	Increase.
Salaries etc Other Charges			• •	\$123,867.62 141,317.00	\$129,711.35 150,759.81	\$5,843.73 9,442.81
	100	Total	•	\$265,184.62	\$280,471.16	\$15,286.54

The increase in Expenditure is in proportion to regular increase of wages on promotion, and increase in number of patients.

#### XX.-REMARKS.

#### STAFF.

Appointments : Two European Nursing Sisters were seconded from Straits Settlements for service in Kedah.

Wan Ismail bin Mohamed Ariff and Ooi Lay Ching were appointed Probationer Dressers.

Syed Abdullah bin Osman and Loh Ah Kim were appointed Laboratory Assistants.

Lee Poh Soo was appointed Storekeeper (E. II).

Inche Buang binti Isa was appointed Midwife.

**Promotions**: Osman bin Lah, Attendant, was promoted to Laboratory Assistant. Ahmad bin Abdullah, Attendant, was promoted to Vaccinator.

Retirement : First Grade Dresser C. S. Joseph retired on Medical Certificate.

Resignations : Probationer Dresser, Tan Ah Loi, and Midwife, M. Gnana-theepam, resigned.

Reduction : Dranee bin Mat, Laboratory Assistant, was reduced to Vaccinator.

Deaths : Vaccinators Ali bin Taib and Abdul Hamid bin Mohamed Akib died.

The staff worked well during the year.

Ten Dressers were examined for promotion, of whom three passed the grade II examination, and one passed the grade III examination. Great difficulty is experienced in getting Malays, especially Kedah Malays, to join the Medical Department, the reason being they perfer office work where the work is less strenuous, holidays more, and the pay is slightly better as the allowance is more.

#### SCHEMES.

New Schemes of salaries for Dressers, Attendants and Midwives of attendant class were passed during the year.

#### GENERAL.

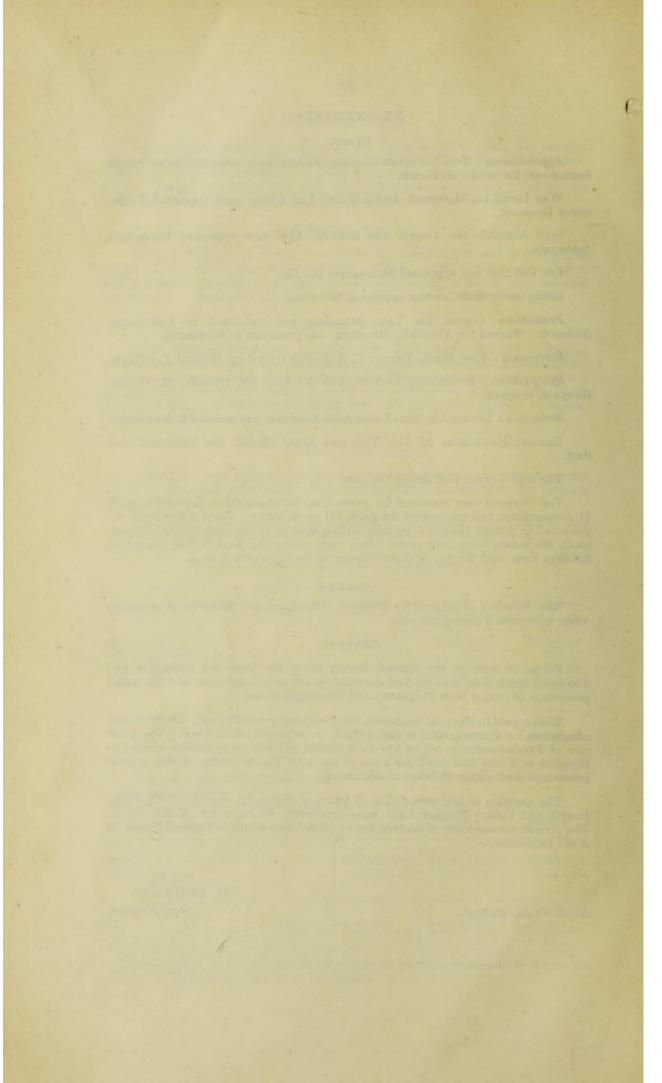
Points of note in the Annual Report are :-- the increased birth rate and decreased death rate, also marked decrease in infantile death rate and the small percentage of deaths from Pregnancy and its complications.

With regard to Hospital treatment, the results are generally good. The increased admissions for Estate coolies is due, I think, to increased labour force. The death rate of Estate coolies is not as low as it should be; but many coolies are sent to Hospital in a very bad condition : out of the total Estate deaths of 405, a good percentage died within 48 hours of admission.

The question of accommodation of lepers is becoming urgent. Both Pulau Jerejak and Pulau Pangkor Laut have apparently no room for Kedah lepers. The present arrangement of keeping lepers in isolation wards in General Hospitals is not satisfactory.

D. BRIDGES, State Surgeon.

ALOR STAR, KEDAH.



## APPENDIX.

0

Diseases.	1	Remained.	Admitted.	Total.	Died.	Remainin
Lungarious Discusses	27				nipogansi	Pl-ours!
INFECTIOUS DISEASES.	LL;					kodogra
falaria T. N. D	-	38	1,204	1.242	34	52
Quartan		7	79	86	4	5
Ê T		75	1,406	1,481	56	84
" M. T.	1	30	1,153	1,183	106	81
" Cachexia -		3	417	420	11	39
" Chronic -			55	55	3	
" Cerebral		25	19	44	14	
and the second descent and the second s	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6	6	.3	P. L.
Enteric Fever	100		7	7	1	
lumps		12	232	244		16
Gonorrhoea	-	1	- 38	39	1	2
Gonor. Arthritis		3	12	15		1
" Ophthalmia -			13	13		Contractor -
" Orchitis -	1		25	25		2
" Rheumatism -	1			112		3
syphilis Primary -	1	5	107		1 9	2
" Secondary -	E	23	275	298	5	17
" Tertiary -		13	66	79	5	8
" Iritis	-		1	1		
" Gumma Brain -	-	- 1		1		1000
" Gumma -	-		3	3		
" Myelitis -	•		. 2	2	1	
" Lepto-Meningitis	-		1	1	anole to	
" Cerebral -	-		1	1	1	
" Congenital -	-		2	2		
" " Paresis	-		1	1	111 A	· · · · ·
" Arthritis -	-		1	1		10000
" Spondylitis -	-		3	3		
" Periostitis -	-					
" Pharyngitis -	-		1	1		
Chicken-Pox	-		12	12		
Measles	-		20	20	2	3
nfluenza	-	2	44	46	4	
Dysentery Bacillary -	-	39	624	663	138	40
" Amoebic -		-17	390	407	67	34
Pulmonary Tuberculosis	-	26	208	234	108	18
Fibroid Phthisis -			2	2	1	
Fubercular Disease of Bone			1	1		
., Spondylitis -		1		1		
" Laryngitis -			1	1	1	
Gland Neck .		1	5	6		1
Paritonitie .		1	23	3	2	
Miliary .				3	3	
Disease of Hin	-		2	2		6.110 APA
Spine			1	1		1
Fremur			1	1		
Framboesia Tropica -		6	49	55		7
					and the second second	
Leprosy		17	44	61	4	· 30

## ANNUAL RETURN OF INDOOR PATIENTS TREATED IN HOSPITALS IN KEDAH DURING THE YEAR 1342 A.H.

.

Diseases.		Remained.	Admitted.	Total.	Died.	Remaining
INFECTIOUS DISEASES-cta	d.		Lan Later	o seure		de-1
Septicaemia	11.21	Chatter 9	10	10	9	
Erysipelas - •			9	9		
Rheumatism	-	1	30	31	1	1
Fetanus	-		1	1		
Pneumonia	-	12	256	268	116	14
Pleuro-Pneumonia -	-	1	9	10	2	
Broncho-Pneumonia -	-	3	33	36	5	3
Small-Pox	-		1	1		
Paratyphoid - •	-		1	1		
Foxaemia	-		1	1	1	
Pyaemia			1	1		1
INTOXICATION.						
INTOXICATION.						
Alcoholism	-		15	15		
Dpium Intoxication -	-		. 16	16	3	aquittle
GENERAL DISEASES.						Ganorita
Anaemia			1	1		
Pernicious Anaemia -			ĩ	1	1	
Diabetes			1	1		
Debility Senile			12	12	3	4
Beri-Beri	-		5	5		2
Old Age - ·	-		2	2	1	
Starvation			2	2	1	1
Gleet	-		1	ī		
						1
LOCAL DISEASES.						1.1
(Diseases of Nervous System	).					1
Polio-Myelitis		1	1	2		2
Cerebro-Spinal Meningitis			2	2		
Meningitis			2	2	2	
Cerebral Haemorrhage -	-		2 5	5	5	
Neuritis		2	35	37		5
Paraplegia	-		4	4	3	
Spastic Paraplegia -	-		2	2		1
Hemiplegia		10	23	33	1	8
Neuralgia			10	10		
Epilepsy		2	10	12	2	The state of the s
ocomotor Ataxy -	-		5	5		
Hiccough	-		1	1		C STORAGE
Paresis	-		1	1		
Convulsion	-		i	î	1	ALCONCERN.
Sciatica	-		9	9		1
Tabes Dorsalis		1	1	2		2
nsanity	-		î	ī		
Mania	-	1	44	45		1
Melancholia	-	î	3	4		i
Dementia	-		1	1		
Softening of Brain -	-		î	1	1	
Peripheral Neuritis -			i	1		
Erythromyalgia Tropica			1	î		Second Second
Acute Temporary Insanity	123		1	î		
Imbecility			î	a 1	1800	00000000
indecinity		***		1/2 1		

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Disease	. Lost I	Remained.	Admitted.	Total.	Died.	Remainin
Discuse	ð-	- Itemanieu.	Trummeter.	Total.	Dict.	Tremannin
LOCAL DISEAS	SES—ctd.		1.4.10			-
Paralysis -			1	1		· ···
aralysis Agitans			- 1	- 1	0 1	
lyelitis -	-		1	1		1
lental Deficiency	-		1	1		
elirium Tremens	-		1	1		
erebral Softening			1	1		
ephalgia - horea -			1	1		
poplexy -			î	î		
		1				interior 1
DISEASES OF 1	THE EAR.					
torrhoea -	F		8	8		2
titis -	S	•	18	18		
lastoid Abscess	5	- 1	1	2		
bscess Ear -			2	2		
oreign Body Ear	-	•				
lcer Ear -			1	1		
DISEASES OF T	HE NOSE.					
cute Rhinitis -			1	1		
lcer Nose -	-		1	1		
						Lereby Cen
DISEASES OF T	HE EYE.					distants!
urulent Ophthalm	ia -		5	5	1	
lindness -	-	- 1	4	.5		2
ataract -	-	- 6	5	11	1	6
onjunctivitis -		- 2	28	- 30		1
orneal Ulcer -		- 5	30	35 4		3
vctalopia -	-		-2	2		
tye ritis			14	14		2
acrymal Abscess			1	1		
laucoma -			1	1		1
lepharitis -			1	1		
taphyloma -	10 - 1 - 1		2	2	1	
phthalmitis -			5	5		
anophthalmitis			4	43		
lypopyon - orneal Opacity			3	3 2		
DISEASES OF T	HE HEART				pinndo,	
		State State			2 17 April	
neurysm of Abdor	ninal Aorta	•	1 3	1 3	1	
ericarditis -			1	3		
hlebitis - Iaemorrhoids -	in the second second	: 2	18	19		2
alvular Disease of	Heart	. 2	7	9	4	
Disordered Action			2	2		
ordiac Debility	distant in the		1	1	1	
uricular Fibrolatio	on -		1	1		
hrombosis -			1	1	1	
rterio Sclerosis	No.		1	1	1	
Aortic Angina	-		1	1		

I	Diseases.			Remained.	Admitted.	Total.	Died.	Remaining
DISEASES OF	THE	HEART	-ctd.				a and i	1
Endocarditis					1	1	1	
alposition of	Heart		1		1	1		
Double Mitral	Disea	en .			1	1		
Atheroma	Disca		2		î	1		
Adherent Peri	carditi	s -	-		1	1	1	
DISEASES C	F RE	SPIRAT	ORY					1.5-1072
	STEM							Troters
Bronchitis				19	308	327	=	10
	-	-	-				5	10
Asthma		-	•	3	55 73	58 79	1	3
Pleurisy				6			22	4
aryngitis			-		4	4		
Empyema				2	3	5		
Nasal Catarrh			-		8	8	***	( Deserved
oetid Bronch	ittis		-		1	1	1	1. 1. 1. 1. 1
Iaemoptysis		-	-		1	1	1	
Emphysema	-	-	-		1	1		No.
Coryza			-		1	1		1
DISEASES			Æ					1
S	YSTEM	•						H. sharad
ndigestion					12	12		
Dypepsia	-		1		10	10		
Enteritis				3	118	121	11	7
lernia Inguin	al		-	1	19	20		1
Iernia Strang			1		2	2		
anal Abscess		-			2	2		
aecal Fistula	-				1	1		
Colic		11	-		27	27		
hrush	-				1	1		
Colitis	-				1	i		
Gastritis	-			2	30	32	2	
Peritonitis			-		5	5	5	
tomatitis			-		11	11	3	
onsilitis			-	1	6	7		
haryngitis	-		-		1	i		
ristula Ano	-		-		7	7		
holecystitis		-	-		4	4	1	
lveolar Absco	:55			1	5	6	Î	
Gastro Enterit	is		-		4	4		
ntestinal Obs	tructio	n -	-	1	1	2		
Prolapse Anus		-	-		5	5		
ppendicular .		s -	-		3	3		
ppendicitis	-	-	-	1	4	5	1	· ····
aries Tooth	-	-			6	6	1	1
onstipation	-	-	-		20	20		a habite
aundice Cata		-	1		4	4	2	
Elongated Uv		-	-		1	1		The second
astric Ulcer	-	-	-	1	4	5	1	1
Duodenal Ulco	er	-	-		1	1	i	
	-	-	-		4	4	2	
scites					the second se			
scites Diarrhoea	-	1.		1	12	13		
	- Absces	6 .	:	$\frac{1}{2}$	12 10	13 12		

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Diseases.	Remained.	Admitted.	Total.	Died.	Remainin
DISEASES OF DIGESTIVE			THE PERSON C	16 2.4	Isaa
SYSTEM—ctd.				HATEP	
Gum Boil -		6	6		
Haemolytic Jaundice -	- 1		1	1000000	10000
Haemorrhagic Jaundice -		1	1	1	1.1.1.1.1.1.1
Dilatation of Stomach -		1	1 1		
Sprue -		2	2		
Pharyngeal Abscess -		1	1		1
Cholangitis -		1	1		P
DISEASES OF LYMPHATIC				1 centre	Segorn &
SYSTEM.		3.3	ANCEN 2	IT TO B	ANNER C
	T.		N. S. A.	0 .12.T1	G I
plenitis -		3	3	1	
Liver Abscess -		6	- 6	2	
Iepatitis -	- 2	22	24	2	2
Cirrhosis of Liver -	- 1	19	20	. 8	1
ymphangitis		2	2		
New Growth Malignant Hepatic	a	1	1		
Adenitis		1	1		
ymphatic Leukaemia -		1	1	1	
Bubo	- 13	83	96		5
Suppuration of Glands -		1	1 7	1	
nflammation of Glands		7	7		
DISEASES OF URINARY		-			in sel
SYSTEM.			En dans	Konsult incos	alizant tex
	1 10 mm	1		And State	and se
Vephritis	- 1	20	-21	5	1
Bright's Disease -	- 1	14	15	2	1 2
Pyelitis		1	1		
Vesical Calculus -		1	1		
Cystitis		7	7	1	
Retention of Urine -	- 1	2	3		
Orchitis	- 1	10	11		
Epididymitis		1	1		
Jrinary Fristula -		3	- 3		1
Jlcer Scrotum		5	5		
Phagadaema Penis -		1 9	1 9		
Paraphimosis	·	105	114		8
Chancre Soft	- 9	28	33		100200
Phimosis		13	14		1
Hydrocele		2	2		
Albuminuria	: "ï	1	2		
Condyloma Stricture Urethra -		21	21		1
		1	1		
Jlcer Vagina		1	î		1.00
Dalpingitis Leucorrhoea		1	î		
Granuloma Pudendum		3	3		1
Dermatitis Scrotum		1	1		
Warts Penis		i	î		anbiene.
Cysto Abdominal Fristula		i	î		
Chronic Interstitial Nephritis		1	1	- 1	- and the state
Renal Colic		3	3	1	
Uraemia		3	- 3	- 3	and the state
Urinary Calculus -		3	- 3	. 1	- municipality
ormary Calculus					

Diseases			Remained.	Admitted.	Total.	Died.	Remaining
DISEASES OF	URINARY					No.	
SYSTEM-						1 10 24	Dessa
SISTEM-	·ciu.					-14.0 3 2 20	
Haematocele -				1	1		
Enlarged Prostate		1		1	1		Const. March
Haematuria -				2	2	a la contra de la	Gotter
Cellulitis Scrotum				2	2	2	(This eres)
Abscess Perineum		2		1	1		The second data and the
Prostatitis -		1		1	1		- and
Abscess Scrotum		5		î	1		
Hydronephrosis				1	1	1	in an arrest
riyuronephrosis				-			
DISEASES OF TH	E FEMA	LE				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EVER CERS
GENITAL OF						HICKE	1210
ountrie of	- Shirth						1
Menorrhagia -			1	2	3		Contraction De
Amenorrhoea -	10.			2	2		and a
Abortion -				10	10		1
Puerperal Sepsis				1	1	100.000	Strong Strong
Parturition -			1	49	50		and the second
Eclampsia -				7	7	1	1
Premature Labour				2	2	1	a rates and
Puerperal Fever				1	ĩ		read and
Retained Placenta	-	2		4	4	2	1
Prolapse Uterus		-		1	1		1
Pregnancy -				26	31	2	Providence
Miscarriage -				1	1		
Post Partum Haemo	orrhage	-		î	î	1	retore
Post Partum Debilit				î	î	1.	
Dysmenorrhoea				7	7		
Subinvolution of Ut	erus	-		1	1		
Extra Uterine Pregi				î	î		
Phlegmasia Alba Do		-		î	î		
			1000	100			
DISEASES OF LO	COMOTIO	N.					Recently
							anider (
Synovitis -	-	-	2	34	36	3	7
Arthritis -	-		2	34	36		1
Periostitis		•		3	3		1
Necrosis of Bone		-	1	12	13	The second	2
Ankylosis -				1	1		1
umbago -		-	2	8	10		Cleves C
Iyalgia -		-		8	8		1
Osteoma -		-		1	1	1	
Iyositis -	-	-		1	1		minere la
ecrosis Jaw		-	1	3	4		2
Erythromyalgia		•		9	9	and the second	3
DISEASES OF CO TISSUE		Е					
				a second	Contrast of		
	1.00	-	13	186	199	3	9
Abscess -			3	11	14	1	5
Phagadaena -		-	3		and the second se		
Phagadaena - Gangrena -	:	-	1	2	3		
Phagadaena - Gangrena - Cellulitis -	:	100		2 114		 8	7
Phagadaena - Gangrena - Cellulitis - Ginus -		-	1		123	8	··· 7
Phagadaena - Gangrena - Cellulitis -			1 9	114			

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Diseases.	Remained.	Admitted.	Total.	Died.	Remainin
DISEASES OF SKIN.			an an	in the second	6
Leukoderma	- 1		1		
Boils		4	4		1
Jlcer	- 133	919	1,052	9	94
arbuncle	•	12	12	1	1
Pemphigus		2	2		1
a base a state of the state of	- 2	46	48		1
urunculosis	)	1	1		
Herpes Zoster	. 1	10	11		1
soriasis		3	3	111	
Irticaria		1	1		
npetigo Contagiosa -		4	4		1
chthyosis	- 1		1		1
Folliculitis		3	3		
cabies	- 2	85	87	***	3
lingworm	- 1	. 9	10		1
inea Imbricata -		1	1		
inea Sycosis		1	1		
uinea Worm		5	5		1
Dermatitis		7	7		1
ingioneurotic Oedema		1	1		
Phlegmon		1	1		
inea Cruris		1	1		
Celoid		1	1		1
INJURIES GENERAL.					-
Compression Brain -		4	4	3	
oncussion Brain -		4	4	!	
Cut Throat		2	2		1
Gun Shot Wound -		13	13	1	1
Vounds	- 22	647	669	13	19
Concussion Spine -		1	1	1	
Sunstroke		1	1	1	
shock due to drowning -		1	1		
Asphyxia		1	1	1	
INJURIES LOCAL.					17 hereit
brasion	- 1	42	43	1	
aceration Ear Lobe -		3	3		
Burns		17	17	4	
cald	-	11	11	1	
Contusion	- 1	161	162		
Dislocation		8	8		. 2
prain	- 1	14	15		3
Bruises		55	55		
Fracture Simple	- 4	58	62		4
" Compound -		12	12		2
" Comp. Comminuted Rib		1	1	1	
" Depressed Skull		2	2	1	
" Potts	-   1		1		
Rupture Urethra -	- 1		1		
Fracture Base of Skull -	- 1	3	4	1	
Foreign Body Nose -		1	1		
Centipede Bite		2	2		
Snake Bite		11	11		****
Leech Bite		1	1		

Diseases.		Remained.	Admitted.	Total.	Died.	Remaining
INJURY LOCAL-etd.				-	2001 20	1
Dog Bite	-		10	10		
Rat Bite	-		1	1		1
Fracture Spine	-		2	2	1	1
Multiple Injury	-		3	3	1	
Injury Spine	-		2	2	1	
Wasp Bite	-		1	1		
Crocodile Bite	-		1	1	***	
Haematoma	-		1	1		
Laceration Tongue -	-		1	1	1	
Alleged Rape			1	1		
Foreign Body in Brain - Strain	-		1	1	1	
Foreign Body in the Ear	-		1	1		
Tumours.						
			10 10			Name of Street
Tumour Abdomen -	-		1	1	1	
Sarcoma	-	1	7	8	3	
Fibroma	-	1	2	3		1
Lympho Sarcoma - Cancer Liver	-		1	- 1	1	
Cancer Liver Cancer Stomach -	-		2	2	1	
Epithelioma	-		$\frac{1}{2}$	1 2	1	
Lipoma			2	2		
Papilloma Abdomen -			1	1		
Carcinoma Uterus -			i	. 1	i	
Thyroid Tumour			i	1		1
Tumour	-		2	2		
ILL DEFINED CAUSES.						11 E 142
Malingering Observation		15	1 511	526		41
		15		010		disa ten ar
PARASITES.						and the second
Ankylostomiasis -	-	47	759	806	77	53
Round Worm	-	11	250	261	3	15
MALFORMATION.						marial
Harelip	-		2	2		
MALNUTRITION.						A DEALER ST
Malnutrition	-		5	5	- 4	
DISEASES OF EARLY INFANC	Y.					
Marasmus	-	1	3	• 4	4	
Infantile Diarrhoea -	-			4		
Infantile Convulsion -	-		4 2 1	2	2	
Infantile Scurvy -	-		1	1	1	
D						1 manuters
POISONS.			1.23	1. 1. 1. 1. 1. 1.		
Fapioca Root Poisoning	-		1	1		
Ptomaine Poisoning - Poisoning -	•		5	5	- 2	
Poisoning -	-		2	2	· · · ·	
TOTAL .		774	12,883	13,657	1,021	and the second second



