

Health Officer's annual report / the Municipality of George Town, Penang, Straits Settlements.

Contributors

George Town (Pinang). Municipal Health Office.

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THE
Municipality of George Town,
PENANG.

STRAITS SETTLEMENTS.

HEALTH OFFICER'S
ANNUAL REPORT

For the Year 1926.

Glass, S.S., Acting Municipal
Health Officer

Price 50 cents per copy,
OBTAINABLE FROM THE MUNICIPAL SECRETARY.

DR. J. STUART ROSE
MUNICIPAL HEALTH
OFFICER

TEL. NO. 388.

Municipal Health Office,
PENANG.

DR. G. S. GLASS
DEP. MUNICIPAL HEALTH
OFFICER

TEL. NO. 388.

With the compliments of the
Ag. Municipal Health Officer, Penang.



STATISTICAL SUMMARY.

Situation	... Lat. 5° 24' N., Long. 100° 1' E.
Average Elevation above L.W.M.O.S.T.	... Town area 12 feet 6 inches. Country area 25 feet 0 inch.
O. S. Tides rise and fall	... 9 feet 0 inch.
Rainfall 1926 (average of three readings within Municipal Limits)	... 119.56 inches.
Mean Temperature 1926	... 82.2° F.
Maximum Temperature 1926	... 98.00° F. on 3rd April.
Minimum do.	... 69.00° F. on 29th December.
Total area of Penang Island	... 108 sq. miles.
Area within Municipal Limits	... 9.4 sq. miles or 5,803 acres.
Estimated population (mid. year)	... 136,000.
Density of Population	... 23.4 per acre.
Crude Death Rate	... 32.32 per mille.
Infant Mortality	... 159.
Birth Rate	... 32.60 per mille.
Sterling equivalent of \$1.00	... 2s. 4d. (approximately).

STAFF OF THE HEALTH DEPARTMENT ON 31st DECEMBER, 1926.

J. STUART ROSE	...	M.B., D.P.H.,		
		Health Officer,		
		Registrar of Births and Deaths,		
		Deputy Superintendent of Vaccination,		
		Registrar of Midwives,		
		Medical Superintendent of Infectious Diseases Hospital,		
		Medical Superintendent of Chinese Small-pox Hospital.		
G. S. GLASS	...	B.A., M.B., D.P.H., D.T.M. and H.,		
		Deputy Health Officer,		
		Deputy Registrar of Births and Deaths,		
		Deputy Superintendent of Vaccination.		
KHOO TIANG PHEAN	...	M.B., B.S., (Hong Kong).		
		Deputy Registrar of Deaths.		
W. A. WARD	...	Chief Sanitary Inspector, joined the service	1st Jan.,	1893.
A. A. JEREMIAH	...	Sanitary Inspector, joined the service	1st January,	1904.
J. S. REUTENS	...	do.	do.	1st January, 1905.
H. L. McCULLOCH	...	do.	do.	1st January, 1912.
R. J. RANGEL	...	Sanitary Sub-Inspector, do.		1st October, 1913.
B. B. Peters	...	do.	do.	1st May, 1918.
M. D'SOUZA	...	do.	do.	1st April, 1919.
J. LOH	...	do.	do.	17th May, 1921.
OW LEONG CHYE	...	do.	do.	1st July, 1921.
E. V. LESSLER	...	do.	do.	1st July, 1921.
V. E. ROZELLS	...	do.	do.	1st September, 1921.
LIM THEAN SOO	...	do.	do.	1st September, 1921.
F. A. SCULLY	...	do.	do.	1st May, 1922.
YEAP HIN TAT	...	do.	do.	14th August, 1922.
LIM KHAY SENG	...	do.	do.	1st March, 1923.
LO SIEW TEAN	...	do.	do.	1st July, 1923.

TEOH CHENG HOE	...	Sanitary Sub-Inspector, joined the service	1st December, 1923.
M. S. d'ORVILLE	...	do. do.	18th February, 1924.
LIM FOOK THOONG	...	do. do.	1st August, 1925.
OH CHENG GUAN	...	Temporary Sanitary Sub-Inspector, joined the service	18th May, 1926.
LIEW AH FOO	...	do. do.	20th May, 1926.
Miss J. A. G. RONALD,	...	C.M.B., District Nurse, joined the service	9th January, 1923.
Miss C. M. GOLD,	...	do. do.	9th April, 1923.

Eight Qualified Chinese Midwives as part time District Nurses.



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MUNICIPAL HEALTH OFFICE,

Penang, 24th March, 1927.

To

THE MUNICIPAL COMMISSIONERS,

GENTLEMEN,

I have the honour to submit the following report on the health of the Municipality during 1926.

Population.

1. The estimated population was 136,000 divided among the various nationalities as follows:—

Table I.

Nationality.	Males.	Females.	Total.
European ...	703	405	1,108
Eurasian ...	711	833	1,544
Chinese ...	55,730	37,517	93,247
Malay ...	8,907	9,060	17,967
Indian ...	16,197	4,620	20,817
Others ...	778	539	1,317
Total ..	83,026	52,974	136,000

Births.

2. There were 4,434 births registered of whom 2,282 were males and 2,152 females, the birth rate being 32.60 per thousand. The figures for 1925 were, births 4,318 and birth rate 32.38.

Reckoned on the estimated female population alone the birth rate was 83.70 per thousand compared to 83.12 per thousand in 1925.

The number of births and the birth rates for the various nationalities were as follows:—

TABLE II.

Nationality	NUMBER OF BIRTHS.			BIRTH RATE PER THOUSAND	
	Males	Females	Total	Total population	Female population
European ...	30	21	51	46.03	125.93
Eurasian ...	30	25	55	35.62	66.03
Chinese ...	1,657	1,536	3,193	24.24	85.11
Malay ...	301	284	585	32.56	64.57
Indian ...	244	270	514	24.69	111.26
Others ...	20	16	36	27.33	66.79

During the previous ten years the births registered were:—

Table III.

Year.	European.	Eurasian.	Chinese.	Malay.	Indian.	Others.	Total.
1916	34	47	1,785	362	390	90	2,708
1917	39	44	2,010	463	472	71	3,099
1918	57	53	2,008	403	381	28	2,940
1919	41	51	2,134	481	467	29	3,203
1920	46	43	2,250	468	464	50	3,321
1921	48	71	2,623	557	437	32	3,768
1922	54	53	2,655	534	404	38	3,738
1923	59	53	2,818	573	499	26	4,028
1924	53	54	2,903	660	544	43	4,257
1925	46	52	3,135	562	497	26	4,318
Average for ten years.	48	52	2,432	506	456	44	3,538
1926	51	55	3,193	585	514	36	4,434

A comparison of the births and deaths in the different nationalities may be of interest:—

Table IV.

Nationality.	Births.	Birth rate per thousand.	Deaths.	Death rate per thousand.
European ...	51	46.03	9	8.12
Eurasian ...	55	55.62	34	22.02
Chinese ...	3,193	34.24	2,436	26.12
Malays ...	585	32.56	497	27.66
Indian ...	514	24.69	568	27.29
Others ...	36	27.33	26	19.74

Deaths.

3. The gross total of deaths within Municipal Limits during the year was 4,396, and the crude death rate 32.32; of this number 826 were not normally resident in Penang and had been less than three months within Municipal Limits. Omitting these we have 3,570 deaths and a corrected death rate of 26.25 per thousand.

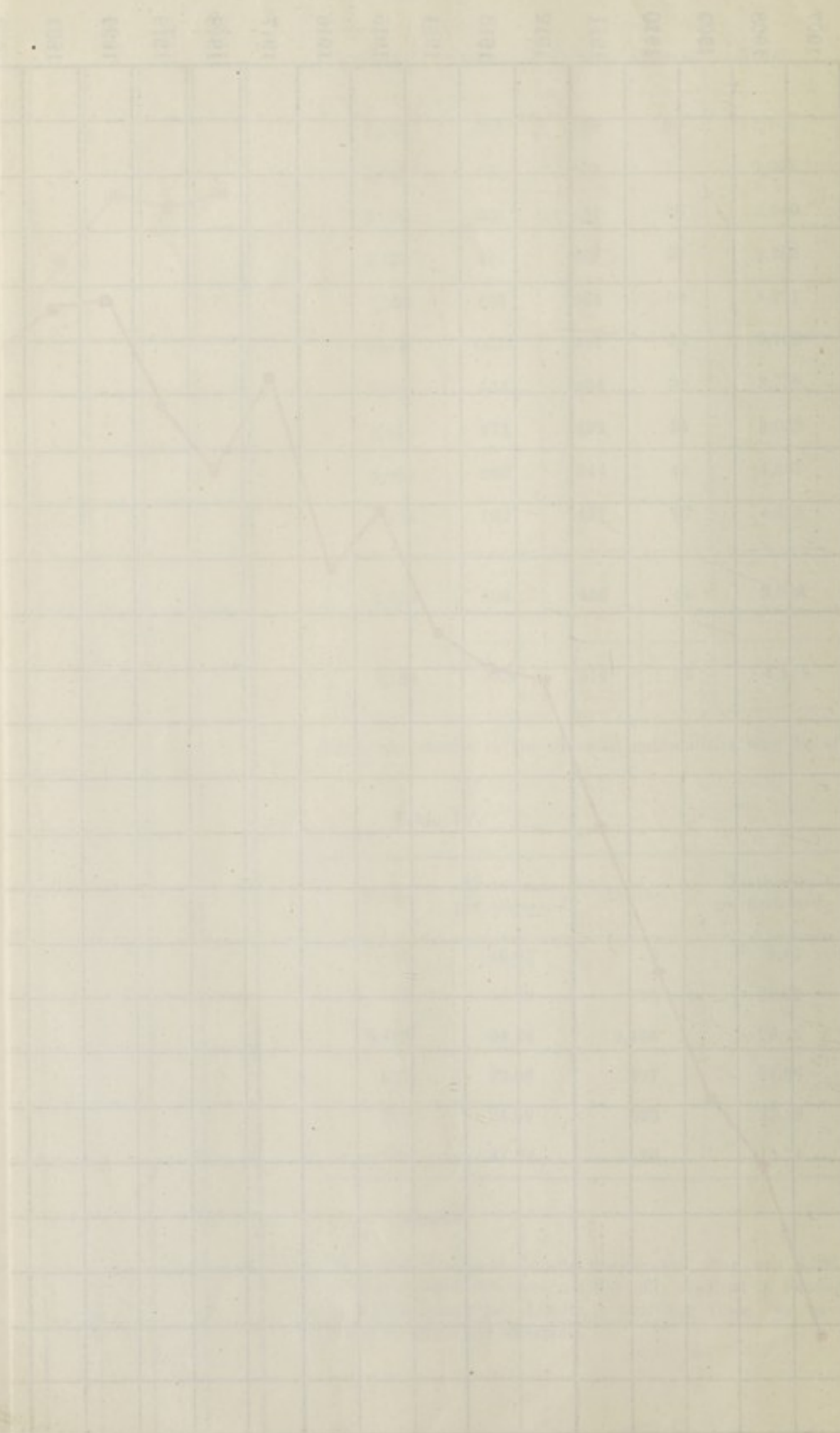
PENANG MUNICIPALITY.

BIRTH RATE



PENANG MUNICIPALITY

BIRTH RATE



The following table shows the distribution of the deaths in age groups and nationalities.

Table V.

Nationalities.	Sex.	A G E S .										Unknown.	Total.	Grand Total.
		Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years.	55 to 65 years.	65 to 75 years.	over 75 years.			
European	M.	...	...	...	2	1	1	...	...	...	...	1	5	9
	F.	1	...	...	..	1	1	1	...	...	...	..	4	
Eurasian	M.	2	...	...	2	2	1	2	3	2	1	...	15	34
	F.	...	..	1	1	3	3	1	7	1	2	...	19	
Chinese	M.	303	146	54	92	194	262	255	184	85	18	6	1,599	2,436
	F.	215	115	51	54	103	79	55	75	62	28	...	837	
Malay	M.	58	33	18	13	22	25	24	23	18	10	...	244	497
	F.	45	39	12	12	32	32	12	13	34	22	...	253	
Indian	M.	44	26	12	31	94	72	52	42	21	4	3	401	568
	F.	35	17	10	30	25	15	10	12	7	6	...	167	
Other Nationalities	M.	2	...	2	1	..	2	1	...	2	1	...	11	26
	F.	...	2	2	1	1	1	2	3	1	2	..	15	
Total	M.	409	205	86	141	313	363	334	252	128	34	10	2,275	3,570
	F.	296	173	76	98	165	121	81	110	105	60	...	1,295	
		705	378	162	239	478	494	415	362	233	94	10	3,570	

Compared with 1925 the Chinese deaths have increased by 271, the Malay deaths by 29, and the Indian deaths by 30.

The total deaths of each nationality in the last ten years is shown here.

Table VI.

Year.	European.	Eurasian.	Chinese.	Malay.	Indian.	Others.
1917	11	36	2,484	540	688	59
1918	9	26	2,930	479	927	56
1919	13	34	2,539	518	872	38
1920	11	44	2,398	382	676	42
1921	10	26	2,213	394	629	41
1922	12	34	2,130	464	544	46
1923	9	31	2,066	467	573	35
1924	6	30	2,048	519	512	17
1925	5	28	2,165	468	538	36
1926	9	34	2,436	497	568	26

Appended is Table VII showing the infant mortality in the various nationalities and a comparison with 1925.

Table VII.

Nationality.	Births.	Deaths under one year.	Infant deaths per thousand births.	
			1926	1925
European	51	1	20	22
Eurasian	55	2	36	38
Chinese	3,193	518	162	139
Malay	585	103	176	167
Indian	514	79	154	195
Others	36	2	56	192
Total	4 434	705	159	147

The chief causes of infant deaths and the mortality compared with that in previous years from the same causes are given in Table VIII.

Table VIII.

Infant deaths per thousand births.										
	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
Tetanus	46	30	39	34	22	2	8	4	0.5	0.23
Intestinal diseases	68	61	71	54	38	36	37	23	19	21
Respiratory diseases	53	54	46	41	31	24	27	25	27	19
Prematurity & Debility	57	46	48	47	32	15	26	27	23	29
Convulsions	13	12	9	9	24	59	23	43	47	60

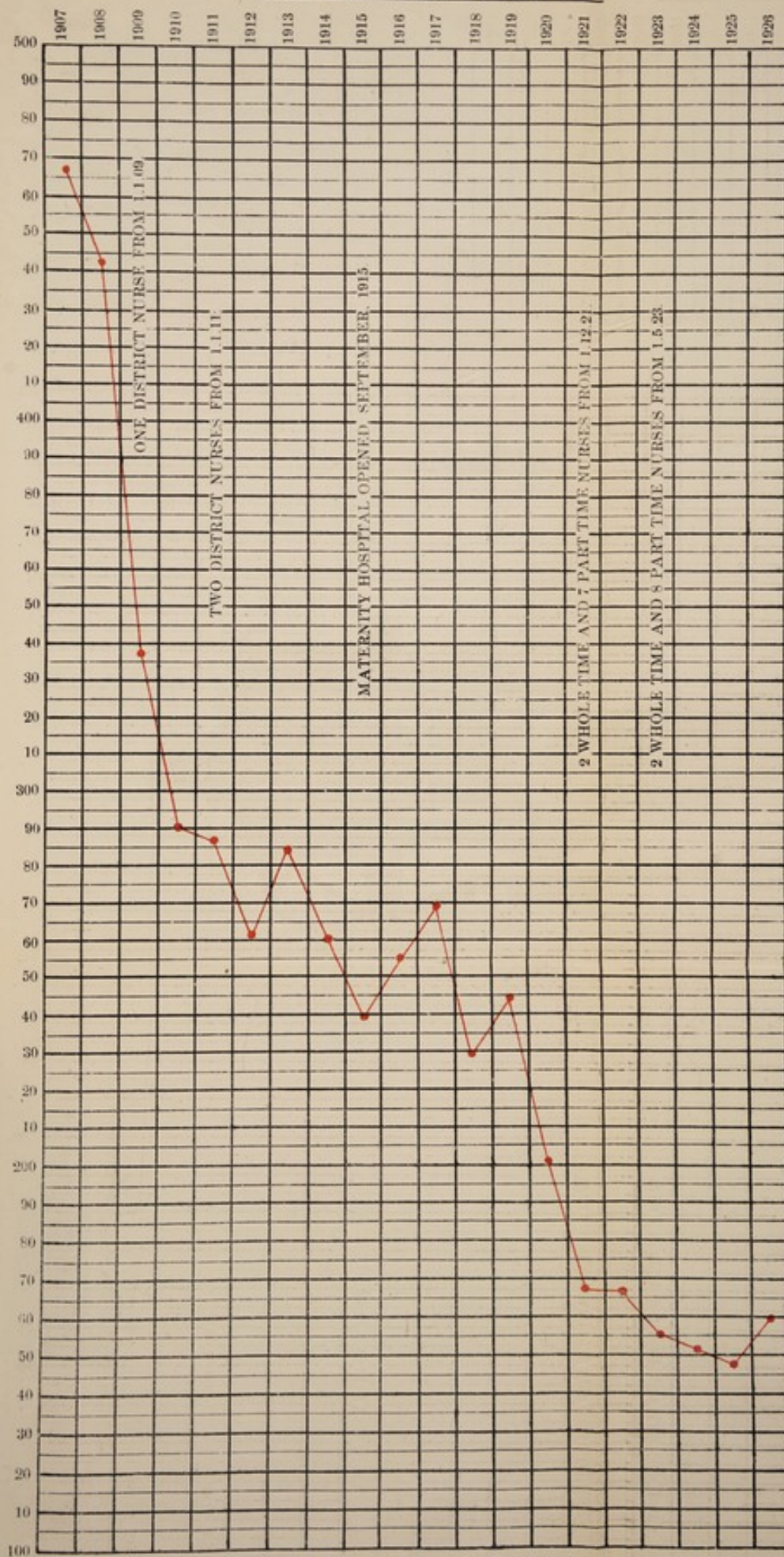
These causes accounted for 568 of the 705 infant deaths which occurred.

1 infant was certified as having died from tetanus and 265 were returned as having died from convulsions: the corresponding figures for 1925 are 2 and 204.

Table VIII is unreliable, the only figures that may be used with any exactitude for comparison are those given in Table VII.

PENANG MUNICIPALITY.

INFANT MORTALITY.



PENANG MUNICIPAL

INFANT MORTALITY

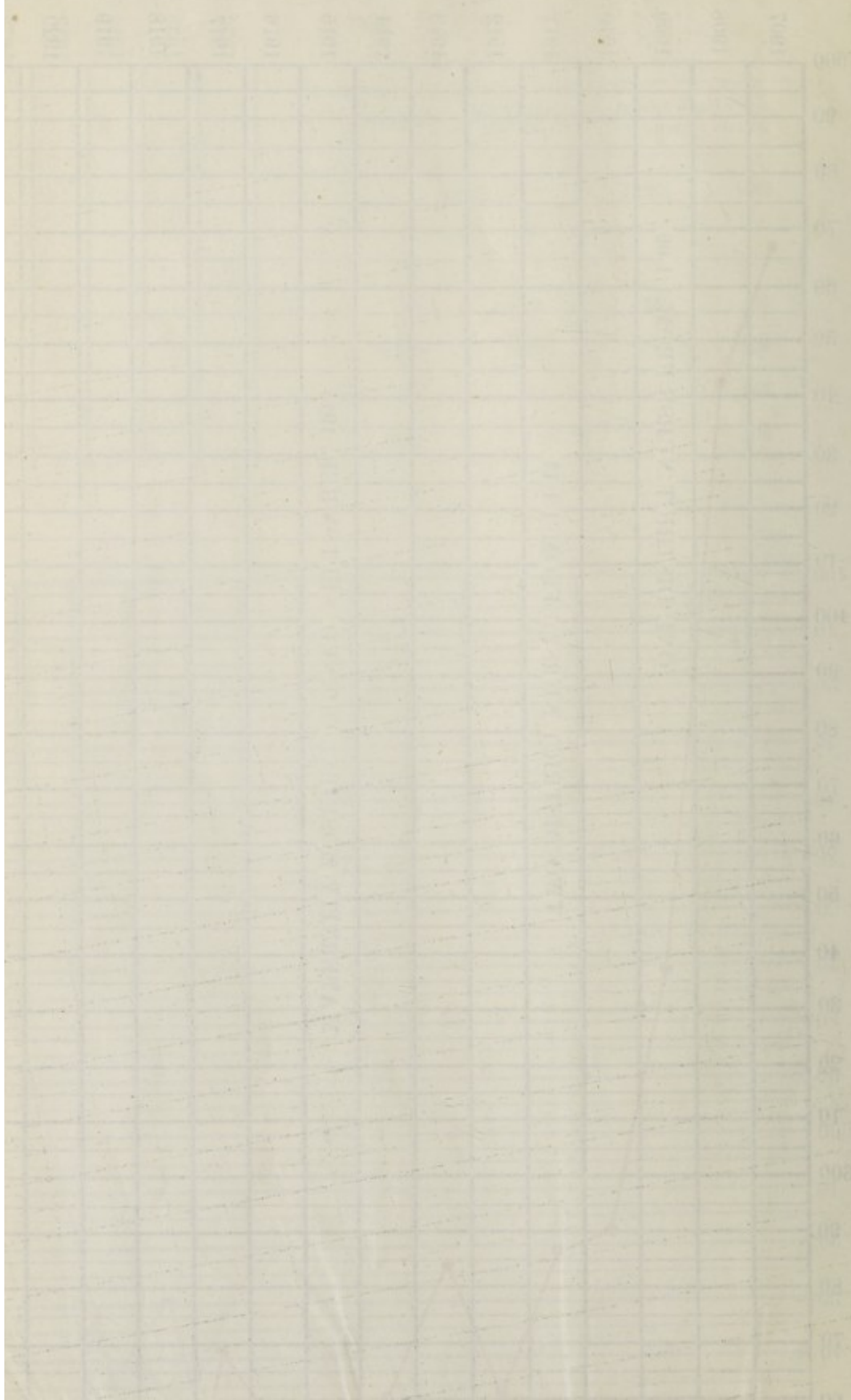


Table IX is given to show a comparison between births, infant mortality and general death rate for the preceding ten years and for 1926.

Table IX.

Year.	Estimated population.	BIRTHS.		DEATHS UNDER 1 YR.		DEATHS AT ALL AGES.	
		Total.	Rate per thousand population.	Total.	Rate per thousand births.	Total.	Rate per thousand population.
1916	105,183	2,708	25.75	692	255	3,162	30.00
1917	105,950	3,099	29.25	831	269	3,831	36.16
1918	106,723	2,940	27.55	673	229	4,430	41.50
1919	107,502	3,203	28.86	732	244	4,024	37.43
1920	108,386	3,321	30.67	681	205	3,554	32.82
1921	123,300	3,768	30.56	631	167	3,313	26.87
1922	125,834	3,738	29.71	622	166	3,230	25.67
1923	128,300	4,028	31.39	626	155	3,183	24.81
1924	130,810	4,267	32.54	641	151	3,162	24.17
1925	133,373	4,318	32.38	634	147	3,240	24.29
Average for the preceding ten years.	117,526	3,538	29.87	681	199	3,513	30.37
1926	136,000	4,434	32.60	705	159	3,570	26.25

Cause of Death.

4. Table X shows the age, sex and cause of death certified; 1,308 of the certificates were from Hospitals or Private Practitioners, 22 from the Coroner and 2,240 from the Deputy Registrar of Deaths.

In other words less than half of the cases were under medical attention before death. As the number of post-mortem examinations made was so small as to be negligible, the diagnoses here tabulated must be accepted with reserve.

Table X.

Deaths from	Sex.	A G E S.											Total.	Grand Total.
		Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years.	55 to 65 years.	65 to 75 years.	over 75 years.	Unknown.		
Enteric fever	M.	...	1	...	2	2	1	1	...	...	...	...	7	14
	F.	...	...	...	...	...	1	...	...	...	...	...	1	
Diarrhoea	M.	40	22	1	1	...	3	2	7	3	...	...	79	144
	F.	33	17	1	2	4	3	...	2	2	1	...	65	
Dysentery	M.	1	1	2	7	17	15	11	4	...	1	...	59	89
	F.	...	1	3	3	5	5	4	4	3	2	...	30	
Remittent fever	M.	...	...	...	1	1	2	...	...	...	...	...	4	5
	F.	...	...	1	...	...	...	...	...	...	...	...	1	
Intermittent fever	M.	...	...	...	...	...	...	...	...	...	1	...	1	1
	F.	...	...	...	...	...	...	...	...	...	...	...	...	
Unspecified fever	M.	64	68	32	38	72	85	72	54	19	6	...	510	808
	F.	38	68	34	17	38	32	23	30	12	7	...	299	
Syphilis	M.	6	1	...	1	6	4	3	2	1	...	...	24	26
	F.	1	...	...	...	...	1	...	...	...	...	...	2	
Puerperal fever	M.	...	...	...	...	...	...	...	...	...	...	...	...	9
	F.	...	...	...	5	3	1	...	...	...	...	...	9	
Other Septic diseases	M.	5	3	2	5	7	9	7	5	1	1	...	45	71
	F.	3	3	2	4	3	3	5	2	1	...	...	26	
Phthisis	M.	1	...	3	31	75	107	88	32	10	1	1	349	460
	F.	...	3	3	22	36	28	9	7	1	2	...	111	
Other Tubercular diseases	M.	...	2	1	1	2	...	4	3	...	...	...	13	13
	F.	...	...	3	1	1	...	...	...	...	...	...	5	
Leprosy	M.	...	...	...	...	...	...	...	...	...	...	...	...	5
	F.	...	...	...	3	...	1	...	1	...	...	...	5	
Tetanus	M.	...	...	...	2	...	...	1	...	...	...	...	3	4
	F.	1	...	...	...	...	...	...	...	...	...	...	1	
Diphtheria	M.	...	1	2	...	...	...	...	...	...	...	...	3	5
	F.	...	1	1	...	...	...	...	...	...	...	...	2	
Influenza	M.	1	5	...	1	...	1	2	...	1	...	...	11	18
	F.	1	...	1	1	1	1	1	1	...	...	...	7	
Measles	M.	...	...	1	...	...	...	...	...	...	...	...	1	2
	F.	1	...	...	...	...	...	...	...	...	...	...	1	
Totals to carry forward	M.	118	104	44	90	182	227	191	107	35	10	1	1,109	1,674
	F.	78	93	49	58	91	76	42	47	19	12	...	565	

Deaths from	Sex.	A G E S.										Unknown.	Total.	Grand Total.
		Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years.	55 to 65 years.	65 to 75 years.	over 75 years.			
Brought forward...	{ M. 118 104 44 90 182 227 191 107 35 10 1	118	104	44	90	182	227	191	107	35	10	1	1,109	1,674
	{ F. 78 93 49 58 91 76 42 47 19 12	78	93	49	58	91	76	42	47	19	12		565	
Malaria	{ M. 3 2 9 14 24 20 13 11 3 ..	3	2	9	14	24	20	13	11	3	..	..	100	134
	{ F. 3 7 1 7 8 4 2 .. 1 1	3	7	1	7	8	4	2	..	1	1	..	34	
Malarial Cachexia	{ M. 1	..	..	..	..	..	1	..	..	..	..	..	1	1
	{ F.	..	..	..	..	..	..	..	..	..	..	..	..	
Forms	{ M. .. 5 4 .. 2 1 2 1	..	5	4	..	2	1	2	1	..	..	..	15	24
	{ F. .. 4 1 2 .. 1 1 ..	..	4	1	2	..	1	..	..	1	..	..	9	
Rheumatism	{ M. 1	..	..	..	..	..	..	1	..	..	..	..	1	3
	{ F. 1 .. 1	..	..	..	..	..	..	1	..	1	..	..	2	
Cancer	{ M. 1 1 2 4 2 3	..	..	..	1	1	2	4	2	3	..	..	13	28
	{ F. 2 4 2 5 2	..	..	..	..	2	4	2	5	2	..	..	15	
Naemia	{ M. 1	..	..	..	..	..	1	..	..	..	..	..	1	9
	{ F. .. 2 .. 3 2 .. 1	..	2	..	3	2	..	1	..	..	..	..	8	
Beri-beri	{ M. 3 .. 1 1 1	..	..	..	3	..	1	1	1	..	..	..	6	9
	{ F. 1 1 .. 1	..	..	1	1	..	1	..	..	..	..	..	3	
Immature birth	{ M. 34	34	..	..	..	..	..	..	..	..	..	..	34	72
	{ F. 38	38	..	..	..	..	..	..	..	..	..	..	38	
Old age	{ M. 1 24 50 17 ..	..	..	..	..	..	..	1	24	50	17	..	92	211
	{ F. 20 53 46	..	..	..	..	..	..	..	20	53	46	..	119	
Convulsions	{ M. 156 25 2	156	25	2	..	..	..	..	..	..	..	..	186	318
	{ F. 109 23	109	23	..	..	..	..	..	..	..	..	..	132	
Other diseases of Nervous system	{ M. 2 4 2 3 6 .. 2 1 1 ..	2	4	2	3	6	..	2	1	1	..	..	21	36
	{ F. 3 1 1 3 2 1 1 3	3	1	1	3	2	1	1	3	..	..	..	15	
Organs of special sense	{ M. .. 2	..	2	..	..	..	..	..	..	..	..	..	2	2
	{ F.	..	..	..	..	..	..	..	..	..	..	..	..	
Circulatory System	{ M. 2 2 3 2 17 22 28 23 13 2 1	2	2	3	2	17	22	28	23	13	2	1	115	174
	{ F. 2 .. 2 1 20 8 7 8 11	2	..	2	1	20	8	7	8	11	..	..	59	
Totals to carry forward	{ M. 315 147 64 113 232 275 243 170 105 30 2	315	147	64	113	232	275	243	170	105	30	2	1,696	2,695
	{ F. 233 130 55 75 125 95 56 84 88 58 ..	233	130	55	75	125	95	56	84	88	58	..	999	

Deaths from	Sex.	A G E S .										Unknown.	Total.	Grand Total.
		Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years.	55 to 65 years.	65 to 75 years.	over 75 years.			
Brought forward...	{ M. 315 147 64 113 232 275 243 170 105 30 2	1,696	2,695											
	{ F. 233 130 55 75 125 95 56 84 88 58	999												
Bronchitis	{ M. 9 5 2 ... 1 3 13 24 8 1 ...	66	91											
	{ F. 3 1 ... 1 6 7 7 ...	25												
Pneumonia	{ M. 29 33 14 17 48 47 34 25 6 ...	255	349											
	{ F. 18 25 13 7 10 8 6 4 3 ...	94												
Other diseases of Respiratory system	{ M. 8 4 4 3 6 6 5 1 2 ...	39	82											
	{ F. 16 13 2 ... 2 1 5 3 1 ...	43												
Enteritis	{ M. 9 10 ... 2 2 5 2 1 ...	31	42											
	{ F. 2 3 3 1 2 ...	11												
Diseases of Liver...	{ M. 6 5 10 4 1 ...	27	30											
	{ F. 1 1 ... 1 ...	3												
Other diseases of Digestive system	{ M. 7 1 5 4 6 6 ...	29	39											
	{ F. 2 1 1 3 ... 3 ...	10												
Lymphatic system	{ M. 1 ...	1	2											
	{ F. 1 ...	1												
Glandlike organs of uncertain use	{ M.	...	3											
	{ F. 1 1 ...	3												
Urinary system	{ M. ... 1 2 2 8 11 19 18 5 2 ...	68	106											
	{ F. 1 2 8 12 3 7 4 1 ...	38												
Generative Organs	{ M. 1 ...	1	6											
	{ F. 2 1 1 1 ...	5												
Child birth and Abortion	F. 11 12 7 ...	30	30											
Bones and Joints...	{ M. 1	1	3											
	{ F. 1	2												
Accident and Negligence	{ M. ... 1 ... 3 1 4 ...	11	15											
	{ F. ... 1 2 ... 1 ...	4												
Homicide, Suicide and Execution	{ M. 3 2 ...	8	8											
	{ F.	...												
Debility	{ M. 31 3 1 ...	37	62											
	{ F. 24 1 ...	25												
Unknown	{ M. ... 1 1 ...	2	2											
	{ F.	...												
Diabetes	{ M. 1 1 1 ...	3	5											
	{ E. 1 1 ...	2												
Totals	{ M. 409 205 86 141 313 363 334 252 128 34 10	2,275	3,570											
	{ F. 296 173 76 98 165 131 81 110 105 60 ...	1,295												

A comparison between the numbers of deaths attributed to some of the principal causes in 1926 and in the preceding ten years is shown here.

Table XI.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	Average for pre- ceding ten years.	1926
Phthisis ...	527	590	722	693	677	580	455	454	511	499	571	460
Pneumonia ...	203	220	559	243	235	220	266	222	188	276	263	349
Bronchitis ...	98	148	198	152	146	126	88	112	58	113	124	91
Malaria ...	473	455	478	606	505	420	134	101	52	97	332	134
Unspecified fever...	184	239	323	68	20	116	504	524	589	659	323	809
Enteritis ...	213	266	257	318	265	186	73	97	9	35	172	42
Dysentery ...	134	147	130	188	138	115	108	75	81	58	117	89
Diarrhoea ...	20	29	30	49	23	115	147	166	157	125	86	144
Beri-beri ...	182	323	262	238	143	102	71	30	15	6	137	9
Debility ...	104	147	95	153	143	103	44	77	82	61	101	62
Tetanus ...	118	133	199	133	120	91	14	39	20	4	87	4
Old Age ...	143	198	141	174	142	173	203	274	302	287	203	211
Small-pox ...	41	7	16	142	18	2	...	..	...	...	..	...

The distribution of the chief causes of death among the various nationalities is shown in Table XII.

Table XII.

Certified cause of death.	European	Eurasian	Chinese.	Malay.	Indian.	Others.	Total.
Diarrhoea	...	1	129	3	11	...	144
Dysentery	...	1	47	10	28	3	89
Unspecified fever	...	1	465	184	153	6	809
Syphilis	...	...	25	...	1	...	26
Other Septic diseases	...	1	45	11	12	...	71
Phthisis	...	7	353	33	61	4	460
Malaria	...	3	86	10	32	1	134
Convulsions	...	1	224	68	25	...	318
Diseases of the Circulatory System	...	5	123	19	25	2	174
Bronchitis	...	1	76	2	12	...	91
Pneumonia	...	1	259	19	70	...	349
Other Respiratory diseases	...	1	59	6	16	...	82
Enteritis	...	...	26	4	11	1	42
Diseases of the Urinary System	...	1	79	9	16	1	106
Debility	...	...	36	10	16	...	62

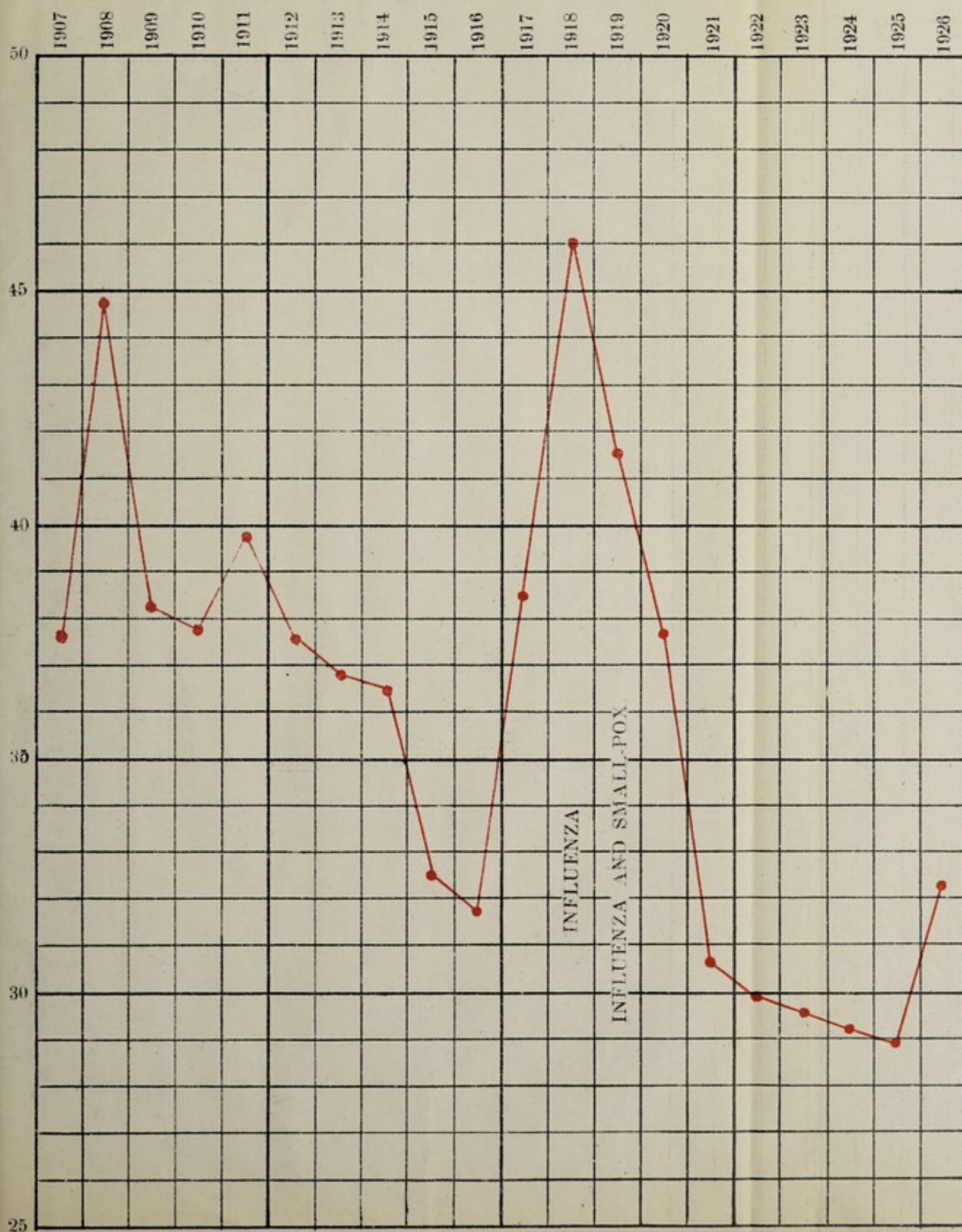
Table XIII.

Cause of death.	NUMBER CERTIFIED BY			
	Hospitals.	Private Practitioners.	Deputy Registrar of Deaths.	Coroner.
Enteric fever	3	5	...	...
Diarrhoea	1	26	117	...
Dysentery	53	28	8	...
Unspecified fever	...	40	769	...
Phthisis	137	73	250	...
Tetanus	3	1	...	...
Influenza	...	18	...	...
Malaria	81	53	...	...
Beri-beri	3	6	...	...
Old age	7	13	191	...
Convulsions	2	29	287	...
Diseases of the Circulatory System	39	76	56	3
Bronchitis	2	21	68	...
Pneumonia	69	34	245	1
Enteritis	10	23	9	...

The total returns made by the Hospitals were 621, by Private Practitioners 687, by the Deputy Registrar of Deaths 2,240 and by the Coroner 22; that is the Deputy Registrar of Deaths certified more than three-fifths of the total deaths.

PENANG MUNICIPALITY.

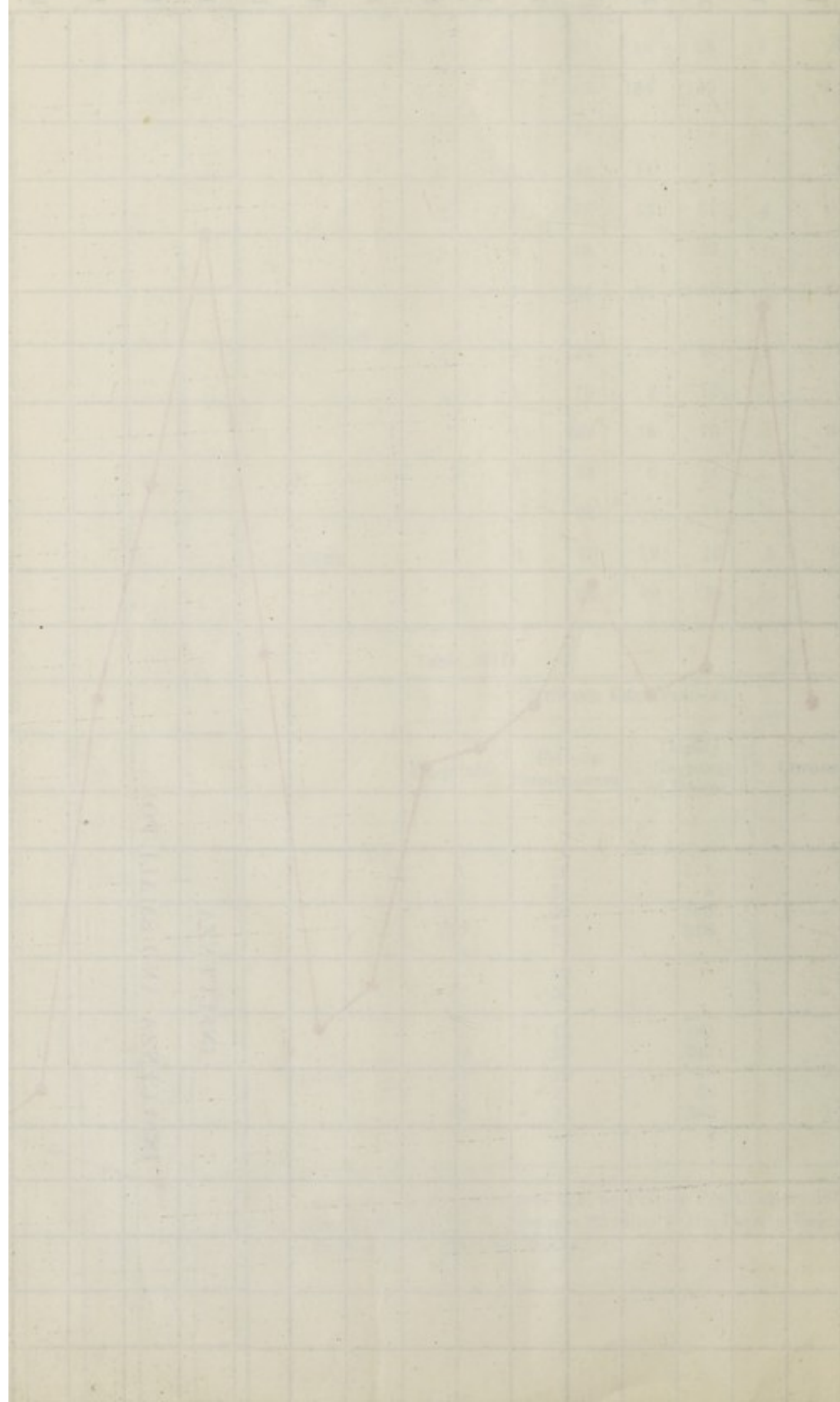
CRUDE DEATH RATE.



PENANG MUNICIPALITY

CRUDE DEATH RATE

1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100



Seasonal Mortality.

5. The deaths and death rate for each month are here recorded.

Table XIV.

Month.	Deaths.	Death rate per thousand.	Month.	Deaths.	Death rate per thousand.
January	311	26.93	July	331	28.66
February	254	29.15	August	288	24.94
March	320	27.71	September	253	22.64
April	367	32.84	October	250	21.65
May	342	29.61	November	263	23.54
June	305	27.29	December	286	24.77

Infectious Diseases.

6. Table XV shows the incidence among the various nationalities of the principal infectious diseases which occurred during the year.

Table XV.

Nationality.		Chicken-ox	Enteric fever	Tuberculosis	Influenza	Puerperal fever	Diphtheria	Measles	Mumps	Total
European	... { M	...	...	2	...	...	...	.	...	2
	... { F	...	1	...	...	...	...	...	...	1
Eurasian	... { M	2	...	4	1	...	...	...	...	7
	... { F	1	...	3	...	...	...	...	...	4
Chinese	... { M	6	9	278	8	...	3	2	...	306
	... { F	1	...	88	7	6	3	1	...	106
Malay	... { M	5	2	22	1	...	...	...	...	30
	... { F	2	...	13	...	2	...	...	...	17
Indian	... { M	64	...	54	1	...	...	3	3	125
	... { F	11	...	10	...	1	...	...	...	22
Others	... { M	...	...	2	...	...	...	...	...	2
	... { F	...	...	2	...	...	...	...	...	2
Total	... { M	77	11	362	11	...	3	5	3	472
	... { F	15	1	116	7	9	3	1	...	152
Grand Total		92	12	478	18	9	6	6	3	624

Vaccination.

7. The system of infant vaccination remained the same as in 1925: most of the work was done by two senior Sub-Inspectors and the results were satisfactory.

4,434 births were reported during the year.

Our staff did 2,496 primary vaccinations, other public vaccinators and private practitioners 1,085, total primary vaccinations 3,581; there were 250 re-vaccinations performed.

705 infants died under age of one year of whom 617 were unvaccinated.

Small-Pox.

8. Two imported cases were seen.

One was a female Chinese, aged 29 years, vaccinated two days previously, who on arrival here by ship from China was found to be suffering from haemorrhagic small-pox. She died the next day.

The other was a male Malay, aged 35 years, who on arrival in Penang had fever.

Five days later, when his fever had abated and a profuse discrete rash had developed, he was found and removed to our Quarantine Camp, where he recovered uneventfully. He had been vaccinated in infancy.

The usual precautions were taken and no contact or other cases resulted.

Enteric Fever.

9. 12 cases were reported, 1 European, 9 Chinese, and 2 Malay.

4 were treated in Hospital, 3 died and 1 recovered.

8 remained at home, 5 died and 3 recovered.

Cerebro-Spinal Meningitis.

10. No cases occurred within Municipal limits.

Chicken-Pox.

11. 92 cases were reported, 76 of which were admitted to the Quarantine Camp. There were no deaths.

Of the total, 3 were Eurasians, 7 Chinese, 7 Malays, and 75 Indians.

As usual the Indians showed a distinct susceptibility to this disease, the number affected being quite out of proportion to the size of the community.

Plague.

12. No case was reported.

Puerperal Fever.

13. 9 cases were reported compared to 11 in 1925.

Chinese had 6 cases, Malays 2 cases and Indians 1 case: all died.

Influenza.

14. Under Ordinance No. 157 (Quarantine and Prevention of Disease), this is classified as a dangerous infectious disease.

18 persons were reported as having died of this disease: 1 Eurasian, 15 Chinese, 1 Malay and 1 Indian.

Cases were reported every month except May, August, October, and November.

Five cases were reported in March and four in September.

All the cases were notified by General Practitioners.

Diphtheria.

15. 6 cases were notified: all were Chinese: their ages were 2, 3, 5, (2 cases), 8 and 20 years. 2 were admitted to General Hospital: 1 died. 4 were treated at home: one recovered.

Whooping Cough.

16. This is not notifiable as an infectious disease.

No case was reported.

Measles.

17. This infectious disease is not notifiable under Ordinance No. 157 (Quarantine and Prevention of Disease). Each year some cases come under our attention, but the disease has never assumed epidemic proportions.

6 cases were brought to our notice.

3 were Chinese and 3 Indians.

2 cases were treated in Hospital and 2 in the Quarantine Camp: all recovered.

2 cases were treated at home: both died.

Tuberculosis.

18. 125 living cases were notified and 478 deaths from tuberculosis of all forms. It is difficult to estimate the incidence of phthisis and its mortality, since the majority of persons who die in the town have not been under medical treatment, and the Deputy Registrar of Deaths often cannot get sufficient reliable information to enable him to form a definite diagnosis.

We think it better that he should then use some vague term, such as "Unspecified Fever," rather than attempt an unattainable precision.

This means that we accept some uncertainty about our actual phthisis death rate.

It must be noted that more than half of the deaths from phthisis were certified by the Deputy Registrar of Deaths, these being the cases where he had reasonable grounds for such a diagnosis.

Even the apparent under-estimate of 460 deaths gives far too high a phthisis death rate, about 3.4 per thousand; on the other hand it is encouraging that this is lower than the rate in any of the preceding ten years.

It would be perhaps unwise to expect any great or sudden fall in the phthisis death rate until the overcrowding problem is less serious.

As before, all living quarters where a death from phthisis is reported were disinfected, and our staff gave advice to the occupants of houses where cases of phthisis were known or suspected to exist.

In December 1925, the Committee on Tuberculosis, then recently appointed by the Municipal Commissioners, sent to the private practitioners a circular from which the following is an extract, "I am directed by the Committee to request you to be good enough to supply the following information.

1. Number of patients suffering from Tuberculosis at present on your books.
2. Sex.
3. Age.
4. Locality.
5. Occupation.
6. Imported or otherwise.
7. Whether in your opinion, tuberculosis in Penang is on the increase or not."

To some of these questions the answers were interesting, Question 2, Sex—slightly more female than male cases were reported. Our death returns show that in the two years 1925 and 1926, three times more males than females were certified as having died of tuberculosis.

Question 3. Age—All cases reported were adults, of ages varying from 18 years to 67.

Question 7. Increase or not. This is obviously difficult to answer. Some of our senior practitioners, however, were of the opinion that tuberculosis is on the increase, though one doctor qualifies this by stating that more cases seek private treatment now than formerly.

During the year the Committee prepared a pamphlet on the prevention of tuberculosis and had it printed in English, Chinese, Tamil, Jawi Malay and Romanized Malay. The English version is inserted here.

Instructions for preventing the spread of Tuberculosis.

1. Tuberculosis of the lung (Phthisis—Consumption) causes more deaths in Penang Municipality than any other disease.
2. The disease is infectious.
3. It is spread to healthy people by germs from the sputum or spit of persons suffering from the disease.
4. Persons become infected by breathing the dried spit of those already infected.
5. Therefore, the spit and coughed-up material of infected persons should be collected and destroyed.
6. Drying of the spit does not kill the germs.
7. Spitting on the floors of theatres, cinemas, offices, workshops, rooms, tram cars, buses, motor cars, or on streets or frequented places should be avoided.
8. Cloth handkerchiefs may be used to receive the spit: they should be boiled in water before they are allowed to become dry.
9. Paper handkerchiefs should be burnt immediately after use.

10. When the patient is **INDOORS** a vessel containing water or a disinfectant may be used to receive the sputum: the contents of such vessel should, at short intervals be emptied into the latrine pail.
11. Separate eating and drinking utensils should be kept for the sole use of the patient.
12. The bed clothing of the patient and his pillow covers and mosquito nets should be boiled and washed at least once a month.
13. The floor, the walls, the furniture, etc., of the room occupied by the patient should be wiped over every day with a cloth steeped in disinfectant.
14. The patient should have a separate room to which there is free access of air and sunlight.
15. A constant supply of fresh air and the free admission of sunlight promote the recovery of the patient and help to prevent others from becoming infected.
16. Tuberculous mothers should not suckle their babies and they should not touch with their mouths their babies' food or the teat of the feeding bottle, etc.
17. A patient should always hold a handkerchief to his mouth when coughing: the breath **COUGHED** out is full of small drops of sputum and is infectious.
18. Persons attending phthisical people run great risk of infection and ought to take extra precautions.
19. The Municipal Health Officer (Penang) will gladly and gratuitously give advice and disinfect rooms, bedding, clothing, etc., and provide a sufficient supply of disinfectant for daily use.

The Committee also discussed the establishment of a Tuberculosis Sanitorium, but decided to leave the matter in abeyance for the present.

INFECTIOUS DISEASES HOSPITAL, PERAK ROAD.

19. The alterations at the Hospital were nearing completion at the end of the year, but there has been some delay in the rolling and surfacing of the roads.

There were 238 admissions, including 110 healthy contacts.

Tables XVI and XVII show their distribution according to disease and nationality.

Table XVI.

Disease	Remaining on 31.12.25	Admitted	Total	Discharged	Absconded	Died.	Remaining on 31.12.26
Small-pox	...	2	2	1	...	1	...
Chicken-pox	3	76	79	77	...	...	2
Measles	...	44	44	42	...	...	2
Mumps	...	3	3	2	1	...	...
Phthisis	...	1	1	...	...	1	...
Pneumonia	...	2	2	...	...	2	...
Total	3	128	131	122	1	4	4

Table XVII.

Nationality	Remaining on 31.12.25	Admitted	Total	Discharged	Absconded	Died	Remaining on 31.12.26
Eurasian	...	3	3	3	...	...	...
Chinese	...	8	8	7	...	1	...
Malay	...	13	13	13	...	...	...
Indian	3	214	217	205	1	3	8
Total	3	238	241	228	1	4	8

The eight remaining in Hospital are Indians, 2 suffering from Chicken-pox, 2 from Measles and 4 healthy contacts.

Anti-mosquito Work.

20. About 125 Indian coolies—including 21 "chokras" (boys), were employed during the year.

The men worked mostly at clearing stagnant ditches, filling in pools, and cutting undergrowth.

The boys did useful work collecting coconut shells, tins, and other receptacles likely to be mosquito breeding-places.

Six men were employed in oiling stagnant water in ditches and swamps.

The amount of oil used was, crude oil 9,425 gallons, solar oil 6,370 gallons and shell mineral turpentine 32 gallons, the total cost of the oil being \$4,182.60.

The Anophelines found within Municipal Limits were *A. maculatus*, *A. barbirostris*, *A. malayensis* and *A. kochi*.

These were found in the following places:—

A. maculatus, four times near Western Road or Scotland Road. We did not find more than a few, say 3 to 12, larvae of *A. maculatus* on any one day, and as we kept suspected places under close observation before and after finding the larvae, it is possible that these were merely stray ones which would have been killed at the next oiling if we had not saved them from that fate.

We believe this to be the only malaria-carrying species found in the town.

A. barbirostris, once Dato Kramat Road.

A. malayensis, Kelawei Road 7 times, Perak Road 4 times, Dato Kramat Road and Burmah Road each 2 times, River Road, Bagan Jermal Road, Macalister Road, Singora Lane, Western Road and Northam Road once each.

A. vagus, Kelawei Road twice, Pangkor Road, Peel Avenue, Scotland Road, Batu Gantong Road and Western Road once each.

A. kochi, Kelawei Road, Scotland Road and Batu Gantong Road once each.

We examined streams and seepage water near sites for quarters occupied or to be erected in connection with the new water scheme at Batu Ferringhi, and found *A. maculatus* in many places.

The best available sites for coolie lines were eventually chosen in consultation with the Water Engineer, with special regard to the possibility of doing efficient anti-malaria work.

Theatres.

21. All theatres and cinemas were inspected once a week.

The provision of actors' quarters and extra sanitary conveniences have greatly improved these houses.

Water Supply.

22. The consumption was 45 gallons per head per day of population within Municipal Limits including supply for trade and shipping.

Owing to a long period of drought in the earlier part of the year, there was a temporary shortage of water about the fourth month, owing to which the supply was shut down for certain hours of the day for about five weeks.

To secure a more continuous and plentiful supply, new catchment areas are now being included in the Penang Water Scheme.

As the work on the New Extension was all in the Rural area of the island, we had no sanitary control outside the land actually bought by the Municipality, this land being in most places a strip 22 yards wide.

In March 1926, our sickness rate having increased, Government and Municipal Officers agreed that it would probably be more satisfactory if the Municipal Health Officer were responsible for general sanitation of the area, and especially for anti-malaria work within half a mile of all occupied quarters.

We accordingly assumed control from 1st April, 1926, and have since then kept two inspectors employed on the scheme. They and the men of the Water Department working with them have done excellent work.

As the new extension was keeping men at work up to twelve miles from the town, we have always sent all cases which were not obviously trivial to the Government Hospital for treatment. Our object was to prevent avoidable deaths, even at the expense of incurring a high Hospital admission rate.

Table XVIII from figures supplied by the Municipal Water Engineer, is inserted to show the sickness rate on the New Extension.

Medical Attendance.

23. Medical advice or treatment was given to Municipal employees 4,628 times.

The total for 1925 was 3,508 and for 1924 was 2,481.

The number seen per month varied from 249 in January to 534 in June.

The number seen in the different departments were:—

Engineer, 2,309, Health 812, Electrical 103, Fire Brigade 124, Jinricksha 36, Water 1,092, Secretariat 127, and Veterinary 25.

Table XVIII.

PENANG WATER SCHEME (NEW EXTENSION).

LIST OF CASES TREATED IN HOSPITAL.

	1925	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	N ov.	Dec.
Total Employed	...	59	73	79	104	123	112	149	145	140	155	190	195
Malaria	...	...	1	...	2	2	...	1	1	2	2	2	8
Ankylostomiasis	...	...	...	...	...	1	1	...	...	...	3	...	2
Other Causes	...	1	1	3	7	5	3	7	3	3	5	8	7
1926													
Total Employed	...	201	239	311	345	363	381	566	745	838	860	896	991
Malaria	...	13	14	67	61	37	34	9	7	3	2	2	2
Ankylostomiasis	...	3	8	13	8	2	3	2	7	8	7	4	2
Other Causes	...	5	4	14	8	23	25	7	10	4	2	13	5

Note:—The malaria death rate for the Island of Penang continued to increase even while our sickness rate was decreasing, and reached an unusually high figure in June, 1926.

District Nursing.

24. The work was again supervised by Miss J. Ronald and Miss C. M. Gold.

Eight locally qualified midwives were employed as part time nurses.

The main part of the town is divided into eight districts: to each district a midwife is allocated: each district nurse superintends the work in four districts.

The total number of visits and revisits made by the District Nurses and the eight midwives was about 39,800.

At the end of the year (under the Midwives Ordinance 1923), 41 midwives were registered as Class "A", 86 as Class "B", and 15 as Class "C".

Class "C" are the local "bidans"—unqualified midwives—who were registered after the Central Midwives Board had certified that they possessed a competent practical knowledge of conducting midwifery cases.

156 babies died less than seven days old and 54 between the age of seven and fourteen days.

The Maternity Hospital, opened in September, 1915, has been extended: it continues to be an institution of educational value and is appreciated by the many paying and non-paying patients who attend.

It seems a pity that some better class families give their babies tinned milk, perhaps as a proof of their ability to afford it.

However clean and wholesome the tinned products are, the mothers' milk is still the best.

SALE OF FOOD AND DRUGS ACT.

Milk.

25. Following the custom of previous years only such samples were bought for analysis as showed by lactometer that they were below the normal specific gravity.

Some 4,713 lactometer tests were made by the Laboratory Assistant and nearly 500 by the Sanitary Inspectors; fourteen seemed to be below the standard and samples of these were bought and analysed.

Eight were found to be adulterated, containing respectively 48, 33, 30, 24, 22, 20, 12 and 10 parts per cent. of added water.

Eight vendors were prosecuted: six were convicted and fines ranging from \$30 to \$100 were imposed: the cases against other two vendors will be heard in 1927.

One vendor was convicted for an offence committed during 1925: he was fined \$50 and costs.

Eighteen vendors were convicted for having bottles or plantain leaves inside their milk cans and in contact with their milk.

Two men were convicted for selling milk without a licence and two for failing to carry their vendor badges or licences.

198 milk vendors were registered after medical examination. In the year 1925, 1924 and 1923 the numbers registered were 204, 217 and 225.

During the year a new departure was made by the Singapore Cold Storage Company, who set up a plant for the production of reconstituted milk. The milk is imported in powder form and the product as sold to the public seems wholesome and clean.

General Progress in Public Health.

26. The 1926 death rate was unusually high, both in Penang and, I am told, over most of the Malay Peninsula.

In the first part of the year we had a peculiarly long dry hot season, with a high death rate from all causes.

Hospital Medical Officers, private practitioners and the Deputy Registrar were alike unable to assign any disease or group of diseases as the outstanding cause of unusual mortality.

The rise in infant mortality from 147 to 159 is disappointing at first sight, but cannot be regarded as alarming in a year when the total death rate rose from 24.29 to 26.25 per thousand.

A table composed of the simplest available figures has been prepared to present a quick view of the main facts in our vital statistics of the last twenty years.

Table XIX.

Year.	Total number of		Birth Rate.	Crude Death Rate.	Infant Mortality.
	Births.	Deaths (crude)			
1907	1190	3776	11.84	37.59	437
1908	1519	4552	14.97	44.86	442
1909	1656	3923	16.15	38.25	337 (a)
1910	1905	3912	18.39	37.76	290
1911	2133	4045	21.02	39.88	287 (b)
1912	2421	3829	23.69	37.47	261
1913	2464	3794	23.95	36.86	284
1914	2545	3774	24.55	36.40	260
1915	2808	3390	26.89	32.46	239 (c)
1916	2708	3341	25.74	31.76	255
1917	3099	4071	29.25	38.42	269
1918	2940	4309	27.55	45.99	229
1919	3203	4466	28.86	41.54	244
1920	3321	4090	30.67	37.75	205
1921	3768	3775	30.56	30.61	167 (d)
1922	3738	3768	29.71	29.94	166
1923	4028	3801	31.39	29.62	155 (e)
1924	4257	3811	32.54	29.13	151
1925	4318	3858	32.38	28.93	147
1926	4434	4393	32.60	32.32	159

Note:—(a) 1st January 1909—one District Nurse.

(b) 1st January 1911—two District Nurses.

(c) September 1915—Maternity Hospital opened.

(d) 1st December 1921—two whole time and seven part time District Nurses.

(e) 1st May 1923—two whole time and eight part time District Nurses.

Financial.

27. The total expenditure of the Health Department for 1926 was \$139,176.10.

This includes everything, the Quarantine Camp, the District Nurses' Scheme, Vaccination, Anti-Mosquito Work, all pay and allowances and the Commissioners' donations to the Provident Fund of our staff.

The total receipts amounted to \$17,796.68, leaving \$121,370.42 as the cost of the department to the ratepayers.

This represents a rate of 2.071 per cent., or a little less than five pence in the pound sterling.

The population being 136,000, the total cost of the department for the year per head of population is about 89 cents or about two shillings sterling.

Staff.

29. Dr. J. S. Rose went home on leave on 11th March and resumed duties on 28th December; during his absence Dr. G. S. Glass acted as Health Officer.

Miss J. A. G. Ronald after three years service was granted six months home leave. She left on 5th January and returned on 9th July.

Miss C. M. Gold went home on eight months leave, commencing from 3rd July.

The following Sanitary Sub-Inspectors were appointed.

Oh Cheng Guan — 18th May.

Liew Ah Foo — 20th May.

The work of this Department has greatly increased recently, but the staff worked exceptionally well and proved satisfactory in every way.

I have the honour to be,

Gentlemen,

Your obedient servant,

G. S. GLASS, B.A., M.B., D.P.H., D.T.M. & H.,
Ag. Municipal Health Officer.

Penang, 28th February, 1927.

To

THE MUNICIPAL HEALTH OFFICER,
Penang.

SIR,

I have the honour to submit the report of the work done by the staff during the year ending 31st December, 1926.

General Sanitation.

The staff made 22,612 inspections and 27,428 reinspections.

They found 1,164 defective and 2,002 filthy houses.

4,831 notices were issued and 4,828 (including 11 unserved and brought forward from 1925) were served: 4,758 (including 388 outstanding on 31.12.25) have been complied with.

(Vide detailed list below)

NOTICES.	Outstanding on 31.12.25.	Unserved on 31.12.25.	New Notices issued 1926.	New Notices served 1926	Unserved on 31.12.26.	Complied with.	Work started.	Cancelled.	Brought forward to 1927.
Nuisance	240	3	449	448	4	435	50	15	238
Lime washing	8	...	233	233	...	229	2	1	11
Latrines	39	...	73	73	...	73	1	3	36
Drains	14	2	133	135	...	111	3	2	36
Filthy Premises	16	...	630	630	...	644	...	1	1
Common Lodging Houses	6	...	911	911	..	899	..	13	5
Trades	...	...	539	539	...	536	...	1	2
Bakeries	..	...	796	796	...	796	...	...	...
By-laws	1	...	44	38	6	23	..	...	16
Partitions	34	...	170	170	..	185	...	3	16
Mosquito Orders	6	2	261	259	4	240	5	1	24
Rats	1	...	12	12	...	11	...	..	2
Disinfection of infected houses	...	4	528	532	...	529	...	3	..
Wells	23	...	26	26	..	31	...	10	8
Closing Order	...	...	26	26	...	16	...	...	10
Total	388	11	4,831	4,828	14	4,758	61	53	405

53 notices were cancelled for various reasons.

435 Nuisance notices were complied with during the year dealing with 806 houses, of which 357 were structurally altered to provide light and ventilation, and land was set apart for back lanes or passages.

449 houses were repaired, i.e., floors, drains, roof and latrines put in order.

3 marshy lands were filled in, and 152 other nuisances dealt with. In 61 cases work has been started.

9 permits were granted to erect latrines or to construct drains.

Wells.

26 notices under Section 247 were served, and 23 brought forward from 1925. 31 were complied with; 36 wells were closed.

Cemeteries.

The Sub-Inspector in charge visited the cemeteries 169 times.

Exhumations.

49 applications for exhumation of bodies were received, but only 41 bodies were exhumed under special licence.

Passengers.

1978 passengers arrived from infected ports and passed through this office as against 412 last year.

Plans.

471 plans were sent in and examined in this office as against 273 last year.

Prosecutions.

562	summonses were issued during the year	...	522	Convictions
			18	Withdrawn
66	were brought forward from 1925 (vide list A)	...	1	Dismissed
			87	Carried forward
Total	628		Total	628

104 Abatement of Nuisance, 7 Closing, 19 Prohibition, and 15 Mandatory Orders were obtained.

The fines imposed by the Magistrates amounted to \$7,676.10 against \$1,813 last year.

Disinfections.

557 houses were disinfected during the year for the following causes:—

Phthisis	...	...	316
Small-pox	...	...	1
Measles	...	...	2
Dysentery	...	...	42
Diarrhoea	...	...	127
Enteritis and Enteric	...	...	37
Chicken-pox	...	...	30
Diphtheria	...	...	1
Influenza	...	...	1
Total	...	...	557

The houses disinfected being distributed as follows:—

Phthisis:—Rope Walk (14), Hutton Lane (12), Chulia Street (11), Beach Street, Ayer Etam Road and Noordin Street (10 each), Kimberley Street, Bridge Street, Campbell Street and Burmah Road (8 each), Acheen Street (7), Magazine Road, Penang Road, West Jelutong, Green Lane, Dato Kramat Road and Carnarvon Street (6 each), Kampong Malabar, Presgrave Street, Love Lane, Prangin Road, Argyll Road, Queen Street and Perak Road (5 each), Pahang Road, East Jelutong, Bishop Street, China Street, Malay Street, and Pitt Street (4 each), Cecil Street, Macalister Road, Soo Hong Lane, Gladstone Road, Brick Kiln Road, Lorong Slamet, Scotland Road and Patani Road (3 each), Macalister Lane, Siam Road, Ah Quee Street, Maxwell Road, Tye Sin Street, Dato Koyah Road, Muntri Street, Jelutong Road, Armenian Street, Madras Lane, Market Lane, Kedah Road, Cintra Street, Sg. Pinang Road, Prangin Lane, Irving Road, Anson Road, Perak Lane, Victoria Street, Tamil Street, Bertam Lane, Malacca Street and Cantonment Road (2 each), Kelawei Road, Seang Tek Road, Cheapside, Keng Kwee Street, Chowrasta Road, Clarke Street, Transfer Road, Aboo Sittie Lane, Cannon Square, Armenian Street Ghaut, Jones Road, Bagan Jermal Lane, Carnarvon Lane, Prangin Road Ghaut, Malay Street Ghaut, North Beach, Chulia Street, Stewart Lane, Noordin St. Ghaut, Perlis Road, Kampong Java Lama, McCallum Street, Tek Soon Street, King Street, Penang Street, Toh Aka Lane, Cannon Street, York Road, Western Road, Buckingham Street, McNair Street, Mount Erskine Road, Kuala Kangsar Road, Muda Lane, Ceylon Lane, Trang Road, Light Street, Caunter Hall, Amoy Lane, Kampong Deli, Katz Street, Weld Quay and Klang Street (1 each).

Diarrhoea:—Bridge Street (9), Campbell Street (6), Kuala Kangsar Road, Armenian Street, West Jelutong and Noordin Street (5 each), Tek Soon Street (4), Dato Kramat Road, Hutton Lane, Green Lane, Acheen Street and East Jelutong (3 each), Sandilands Street, Kimberley Street, Perak Lane, Carnarvon Street, Barrack Road, Burmah Road, Chulia Street, Seck Chuan Lane, Rope Walk, Seang Tek Road, Queen Street, Brick Kiln Road, Magazine Road, Madras Lane, Beach Street, Jelutong Road, Muntri Street, Macalister Lane, Singora Lane, Kedah Road and Batu Lanchang Road (2 each), Sri Bahari Road, Stewart Lane, Kinta Lane, Burmah Road, Acheen Street, Armenian Street, Macalister Road, New Lane, Weld Quay, Muda Lane, Toh Aka Lane, Keng Kwee Street, Kampong Java Bahru, Irving Road, Presgrave Street, Prangin Road, Lorong Slamet, China Street, Pahang Road, McNair Street, Kek Chuan Road, Prangin Lane, Dato Koyah Road, Penang Road, Perak Road, Kampong Malabar, Drury Lane, Jahudi Road, Carnarvon Lane and Penang Street (1 each).

Dysentery:—Aier Etam Road (4), Transfer Road (3), Cantonment Road, Dato Kramat Road, Perak Lane, Kedah Road, Macalister Road, Penang Street and Noordin Street Ghaut (2 each), Kimberley Street, Scotland Road, West Jelutong, East Jelutong, Malacca Street, Brick Kiln Road, Perak Road, Pahang Road, Singora Lane, Kimberley Street, Cintra Street, Seang Tek Road, Caunter Hall, Lorong Slamet, Sg. Pinang Road, Pitt Street, Church Street, Halfway Road, Magazine Road, Chulia Street and Siam Road (1 each).

Chicken-pox:—Macalister Road (3), Argyll Road, Bengal Lane, Rope Walk, Kinta Lane and Gladstone Road Cooly Lines (2 each), Aboo Sittie Lane, Dundas Court, Sri Bahari Road, New Lane, Dato Kramat Road, Kampong Java Cooly Lines, Sg. Pinang Road, River Road, Queen Street, Patani Road Cooly Lines, Victoria Street, Malay Street, Penang Road, Kampong Malabar, Transfer Road, Perak Road, and Fort Cornwallis (1 each).

Enteritis:—Burmah Road (3), Lorong Slamet, Cantonment Road, Perak Road and Aboo Sittie Lane (2 each), Chulia Lane, Perlis Road, Seang Tek Road, Ayer Etam Road, Siam Road, Prangin Road Ghaut, Sg. Pinang Road, East Jelutong, Tye Sin Street, Beach Street, Prangin Road, Hutton Lane, New Lane, Macalister Road, Singora Lane, Bridge Street, Brick Kiln Road, Logan Road, Northam Road, Trang Road, Penang Road and Kinta Lane (1 each).

Enteric Fever:—Penang Street, Chulia Street, Bridge Street, and Maxwell Road (1 each).

Diphtheria:—Malay Street (1).

Small-pox:—Acheen Street (1).

Influenza:—Soo Hong Lane (1).

Measles:—Macalister Lane (2).

Trades.

The fees collected during the year for trade licences amounted to \$7,856.70 against \$7,916.30, a decrease of \$59.60 (vide attached list B).

Common Lodging Houses.

918 Common Lodging Houses were licensed during the year against 876 in 1925, the fees collected amounted to \$1,306.00 as against \$1,530.20, an increase of 42 houses and decreased fees of \$224.20.

The staff made 2 night raids on 120 common lodging houses in October and November, and 69 of them were found to be over-crowded—summonses were issued against the keepers and fines amounting to \$2,235 were imposed by the Magistrate against 65 of them, 4 cases were carried forward to 1927.

Lodging Houses under the Minor Offences Ordinance.

16 Lodging Houses were licensed under the Minor Offences Ordinance against 26 in 1925.

Milk.

198 milk sellers were registered in 1926 against 204 in 1925 a decrease of 6.

14 samples were sent for analysis of which 7 were found to be adulterated.

33 summonses were issued (7 for selling milk adulterated with added water and 26 for offences against the by-laws). Of the former one was fined \$100, one \$75, one \$60, three \$50 (each), and one \$30.

45 cases were brought forward from 1925.

Total 78

29 convictions were obtained

1 withdrawn

48 carried forward to 1927.

Total 78

Fines amounting to \$613 were imposed against \$393 in 1925—an increase of \$220.

The Sanitary Inspectors spent an afternoon each month in testing milk by lactometer from the various milk-sellers whom they met in different parts of the town.

485 samples were tested during the year by them and 4,713 by the Laboratory Assistant.

Vaccination.

Our vaccinators made 2,551 primary and 250 secondary vaccinations; 1,220 tubes of lymph were used at a cost of \$366.

Private practitioners and public vaccinators made 1,085 primary vaccinations.

Anti-Mosquito Works.

The Anti-Mosquito gangs did good work, cutting down vegetation, digging, levelling and clearing ditches, collecting old tins, coconut shells and burying them at Dato Kramat, Waterfall, Ayer Rajah, Perak, Burmah, Gottlieb, Brown, Scott, Scotland, Macalister, Brick Kiln, Anson, Patani, Seang Tek, Siam, Trang, Barrack, Cantonment, Kelawei, Krian, Larut, Jahudi, Pahang, Sungei Pinang, York, Jelutong, East Jelutong, Batu Lanchang, Bell, Hogan, Adam, and Barnett Roads, Ayer Etam behind Ayer Etam Road

private market, Kinta, Singora, Green and Bagan Jermal Lanes, Lorong Slamet, Westlands and Babington Avenue; they also cleared the river banks from the Chetty's Temple to Perak Road Bridge; before and after the Thaipusam they cleared up the ground in the vicinity of the Temple.

The Chokra Gang under Sub-Inspector John Loh went through the Town Area destroying and clearing up the breeding places of mosquitoes generally.

All ditches, pools and swamps within the Town Area and the Race Course were regularly sprayed with solar oil and crude oil once a week; 6,370 gallons of solar oil and 9,425 gallons of crude oil were used: the cost was \$1,900.60 and \$2,232.40 respectively.

The gangs also cleared up private lands at the cost of the owners.

Staff.

S.S.I. Oh Cheng Guan joined the service on 18th May.

S.S.I. Liew Ah Foo joined the service on 20th May.

The staff worked satisfactorily throughout the year.

I have the honour to be,

Sir,

Your obedient servant,

W. A. WARD,
Chief Sanitary Inspector.

A

Prosecutions.	Brought forward from 1925.	Issued in 1926.	Cases in Court.	Convictions.	Withdrawn.	Dismissed.	A. N. O.	C. O.	P. O.	M. O.	Total orders obtained.	Fines.		Costs.	
												\$	cts.	\$	cts.
Nuisance Notice ...	11	163	163	158	5	...	104	...	19	3	126	609	00	*80	00
Nuisance Orders ..	4	41	32	32	...	...	...	7	...	...	7	2693	10	*17	00
Drains and Latrines ...	4	17	19	18	1	...	...	...	...	8	8	81	00	9	00
Trades ...	...	28	28	26	2	...	...	...	...	...	...	160	00	13	00
Common Lodging Houses ...	...	80	78	71	7	...	...	...	...	...	...	324	00	*36	50
Breach of C.L.H. by-laws ..	...	71	67	66	1	...	...	...	...	3	3	2259	00	33	00
Filthy premises ...	...	15	15	15	...	...	...	...	...	...	...	149	00	7	50
Secs.160/161 ...	1	11	10	10	...	...	...	...	...	1	1	33	00	5	00
Bakery by-laws ..	...	21	21	20	1	...	...	...	...	...	...	259	00	10	00
Milk ...	45	33	30	29	1	...	...	...	...	...	...	613	00	49	50
Failing to report birth ...	...	21	21	20	...	1	...	...	...	...	...	5	00	10	00
Failing to report death ...	...	2	2	2	...	...	...	...	...	...	...	4	00	1	00
Breach of pig by-laws ...	1	45	44	44	...	...	...	...	...	...	...	382	00	22	00
Breach of Cattle shed by-laws...	...	2	2	2	...	...	...	...	...	...	...	50	00	1	00
Lime Washing ..	...	4	4	4	...	...	...	...	...	...	...	25	00	2	00
Infectious Disease ...	...	1	1	1	...	...	...	...	...	...	...	5	00	...	50
Mosquitoes ...	...	7	4	4	...	...	...	...	...	...	...	25	00	2	00
Total ...	66	562	541	522	18	1	104	7	19	15	145	7676	10	299	00

*Including Warrant fee \$1.00.

Trade Licenses 1926.	No. 1925.	Fees.		No. 1926	Fees.		No. In- crease.	Fees.		No. Decre- ase.	Fees.	
		\$	cts.		\$	cts.		\$	cts.		\$	cts.
Coal Depot ...	4	48	00	4	48	00	..	..	..	...	...	...
Charcoal Depot ..	29	174	00	28	168	00	...	...	...	1	6	00
Candle Factory ...	14	112	00	14	112	00	...	...	...	...	...	...
Cattleshed & Cattle ...	110	561	00	130	610	00	20	49	00	...	...	..
Wood Depot ...	68	408	00	80	408	00	12	72	00	...	...	...
Dyeing House ...	4	40	00	5	50	00	1	10	00	...	...	...
Fish Storing and curing	46	552	00	44	528	00	...	...	...	2	24	00
Braziers, Foundries and Smithies ...	56	112	00	56	112	00	..	..	..	..	...	...
Pig Stys ...	54	108	00	63	126	00	9	9	18	...	...	..
Pig Stys (Free) ...	471	...	..	584	...	...	69	...	...	...	...	...
Pepper Washing Factory	1	10	00	1	10	00	...	...	...	...	...	...
Pottery Making ...	1	2	00	1	2	00	...	...	...	...	...	...
Rags, Bones and Feathers	4	48	00	4	48	00	...	...	...	...	...	...
Soap Factory ...	13	104	00	12	96	00	...	..	...	1	8	00
Stables and Horses ...	2	11	00	2	11	00	...	..	...	...	...	...
Sheep and Goats ...	5	21	00	5	20	70	...	...	...	..	..	30
Tanneries ..	17	408	00	17	408	00	...	...	...	...	...	...
Blachan Factory ...	2	24	00	2	24	00	...	...	...	...	...	...
Bakeshops ..	38	190	00	35	175	00	...	...	...	3	15	00
Cookshops ...	192	960	00	180	900	00	..	...	...	12	60	00
Eatingshops ...	654	3,270	00	630	3,150	00	..	...	...	24	120	00
Storing and Curing Hides	5	60	00	8	96	00	3	36	00	...	...	..
Sago Factory ...	1	10	00	1	10	00	...	...	...	..	..	...
Atap, Kajang and Straw	49	147	00	52	156	00	3	9	00	...	...	...
Sugar Boiling ...	11	66	00	12	72	00	1	6	00	...	...	...
Market Gardens ..	34	...	..	30	...	...	...	..	...	4	...	...
Drying Cloths ...	1	5	00	3	15	00	2	10	00	...	...	...
Milk Sellers ...	204	204	00	198	198	00	...	...	...	6	6	00
Lodging Houses (Minor Offences Ord.) ...	26	26	00	16	16	00	...	...	...	10	10	00
Fresh Fish and Meat ...	47	235	00	43	215	00	...	...	...	4	20	00
Total ..	2,163	7,916	00	2,260	7,856	70	120	210	00	67	269	30
Common Lodging Houses	876	1,530	20	918	1,306	00	42	...	...	...	224	20

