Report on vital statistics and sanitary work for the year 1897.

Borough of Paddington.

REPORT

ON

VITAL STATISTICS

AND

SANITARY WORK

FOR THE YEAR

1897,

BY

REGINALD DUDFIELD, M.A., M.B., D.P.H.,

Medical Officer of Health.

Contents.

TO THE CHAIRMAN & MEMBERS OF THE SANITARY COMMITTEE OF THE VESTRY OF PADDINGTON.

GENTLEMEN,

I have the honour to present to you my Fourth Annual Report dealing with the Vital Statistics of the Parish for the year 1897.

The year's record would have been without special feature but for the reductions observed in the death-rates from all causes, measles, and enteric fever. In 1889 only did the death-rate (14·21 per 1,000) fall below the rate for last year (14·33). The local records extend back to 1866, and the mean death-rates from all causes have been as follows:—

In periods of five years:

1866-1870...19·86	1876-1880...17·00	1886-1890...16·20
1871-1875...19·18	1881-1885...16·24	1891-1895...17·28

In periods of ten years:

1866-1875...19·52	1876-1885...16·67	1886-1895...16·74

In 1896 the death-rate was 15·3, and in 1897 14·3. The maximum rate (20·5) was recorded in 1867 and 1870.

A comparison of the death-rates from selected causes in 1889 and 1897 will be of interest:—

Death-Rates per 1,000 of the Population.

	1889	1897
Measles	0·09	0·01
Scarlet Fever	0·06	0·15
Whooping Cough	0·22	0·31
Diphtheria	0·33	0·51
Fever	0·13	0·05
Diarrhœa	0·53	0·84
Zymotic Rate... ...	1·39	1·90
Puerperal Fever	0·03	0·01
Other Septic Diseases ...	0·14	0·07
Cancer	0·82	0·90
Phthisis	1·27	1·04
Other Tubercular Diseases ...	0·46	0·56
Bronchitis	1·55	1·59
Pneumonia	1·16	0·76

Nothing has been done yet to give effect to the Reports of the Royal Commission on Vaccination, or of the Commons' Committee on Food Products Adulteration. Amendments are very generally desired, and very needful. The varying influences brought into play make the task of the Government in drafting fresh legislation an unenviable one—that is so far as the political aspect of the case is concerned.

With regard to the needs of a Disinfecting Station worked by the Vestry, and of better office accommodation, I have nothing to add to my remarks of last year.

In conclusion, I desire to tender my thanks to the Committee, and especially to the Chairman of the Committee, for the kindly support and co-operation I have received from them, and to express my satisfaction with the manner in which the Officials of the Department have discharged their duties.

I have the honour to be,

GENTLEMEN,

Your most obedient servant,

REGINALD DUDFIELD,
M.A., M.B., D.P.H.,
Medical Officer of Health.

VESTRY HALL,
HARROW ROAD, W.

June, 1898.

POPULATION.

Six years having elapsed since the taking of the complete census in 1891, the estimates of the population have become somewhat untrustworthy. The enumeration of 1896 was from its incomplete character liable to serious error, chiefly in the direction of excess, and is therefore of little value as a check to the estimates. It has, however, been thought desirable to assume that the changes in the populations of the two sub-districts, as determined by the enumeration, have remained constant. On this basis the population of the Parish at the middle of the year, has been estimated at 126,253 inhabitants, of whom 92,788 were residents in North Paddington (St. Mary's Sub-District), and 33,465 in South Paddington (St. John's Sub-District).* The numbers of individuals estimated living in each sex-age-group have been tabulated in Table 1.

The natural increment of the population of the Parish during 1897, amounted to 1,210 individuals, as compared with 1,126 in 1896 and 880 in 1895. During the decennium, 1887-96, the natural increment averaged 855 individuals a year.

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* The boundary line between the two sub-districts begins, at the eastern end of the Parish, in the middle of Praed Street, at its junction with Edgware Road, is continued down the centre of the Canal Basin to Bishop's Road Bridge, and passes thence down the middle of Bishop's Road and Westbourne Grove to the western limit of the Parish.

The population of the Metropolis at the middle of the year was estimated at **4,463,169** persons, 2,109,739 males and 2,353,430 females. The estimates of the numbers living in each sex-age-group are given in the last column of Table 1.

TABLE 1.

Sex-Age-Constitution of Populations estimated to middle of 1897.

	Age Groups.	Paddington.	St. Mary.	St. John.	London.
PERSONS.	All ages	126,253	92,788	33,465	4,463,169
	0- 1	2,660	2,268	392	115,304
	1- 5	9,321	7,739	1,582	416,607
	5-15	20,950	16,928	4,022	922,380
	15-25	27,006	18,716	8,290	895,792
	25-65	60,380	42,849	17,531	1,936,173
	65 and over	5,936	4,288	1,648	176,913
	0- 5	11,981	10,007	1,974	531,911
	5-65	108,336	78,493	29,843	3,754,345
	5 and over	114,272	82,781	31,491	3,931,258
MALES.	All ages	52,215	40,293	11,922	2,109,739
	0- 1	1,304	1,114	190	57,174
	1- 5	4,601	3,827	774	207,387
	5-15	10,107	8,240	1,867	457,813
	15-25	10,378	7,704	2,674	414,986
	25-65	23,802	17,972	5,830	902,547
	65 and over	2,023	1,436	587	69,832
	0- 5	5,905	4,941	964	264,561
	5-65	44,287	33,916	10,371	1,775,346
	5 and over	46,310	35,352	10,958	1,845,178
FEMALES.	All ages	74,038	52,495	21,543	2,353,430
	0- 1	1,356	1,154	202	58,130
	1- 5	4,720	3,912	808	209,220
	5-15	10,843	8,688	2,155	464,567
	15-25	16,628	11,012	5,616	480,806
	25-65	36,578	24,877	11,701	1,033,626
	65 and over	3,913	2,852	1,061	107,081
	0- 5	6,076	5,066	1,010	267,350
	5-65	64,049	44,577	19,472	1,978,999
	5 and over	67,962	47,429	20,533	2,086,080

At the date of the census the inhabitants of the Parish averaged 95·1 to the acre, 105·8 in the northern half, and 75·8 in the southern. On the estimate for 1897, these averages are 101·9, 116·7, and 75·3 respectively. In 1891 each house had an average of 8·1 occupants in the whole Parish, 8·9 in the northern half, and 6·6 in the southern. The averages for last year cannot be given, owing to the changes in the manner of making up the rate books, and the want of exact information as to the numbers of houses pulled down and constructed. The increased number of flats lately erected cannot have failed to attract a considerable number of inhabitants to the Parish, as well as to alter the density of the population.

In the decennium 1841-50, each inhabitant of the Parish had an average area of 0·035 of an acre, which space had shrunk to 0·009 of an acre in 1897. Such a diminution of "elbow room" offers greatly increased facilities for the spread of infectious disease, and demands an unremitting attention to sanitary details in order to minimise those conditions inimical to health which are naturally associated with a dense aggregation of individuals.

BIRTHS.

During the fifty-two weeks constituting the statistical year, 3,010 births were registered in the Parish, 2,586 in North Paddington, and 424 in South. The birth-rate for the Parish was 23·84, that for North

Paddington 27·86, and that for South, 12·66 per 1,000 inhabitants of each district. In Table 2, the numbers of births of each sex in each district are given, with the corresponding rates for 1897 and the preceding

TABLE 2.

Births registered.

Births registered 1897.	Paddington.			St. Mary.			St. John.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
1st Quarter	367	375	742	327	325	652	40	50	90
2nd „	370	362	732	319	309	628	51	53	104
3rd „	406	395	801	341	331	672	65	64	129
4th „	369	366	735	309	325	634	60	41	191
Year	1,512	1,498	3,010	1,296	1,290	2,586	216	208	424
Birth Rates* 1897	11·97	1·861	23·84	13·96	13·90	27·86	6·45	6·21	12·66
Mean Rates, 1892-96.	12·45	11·79	24·27	14·35	13·86	28·22	7·38	6·20	13·58
1896 ..	13·12	11·11	24·24	15·01	13·20	28·21	7·98	5·41	13·39
1895 ..	12·34	11·92	24·26	14·01	13·87	27·88	7·64	6·43	14·07
1894 ..	11·95	11·36	23·32	13·94	13·29	27·23	6·54	6·08	12·67
1893 ..	12·47	12·49	24·96	14·41	14·85	29·26	7·29	6·16	13·45
1892 ..	12·48	12·11	24·60	14·42	14·09	28·52	7·45	6·96	14·41

* Rates per 1,000 of total population of each year.

five years. The births of males in the Parish were equivalent to a rate of 11·97, 0·48 below the quinquennial mean; those of females to one of 11·86, or 0·07 above the mean, whilst the total birth-rate (23·84) was 0·43 below the same mean. Last year's birth-rate was the second lowest recorded during the six years 1892-97. The mean rate for the decennium

1887-96 was 24·5 per 1,000, 0·8 higher than the rate for last year. (See Table 3.) With regard to the sub-districts, the rate for St. John (12·66) shows the greater diminution, being 1·92 below the mean rate for the five years 1892-96 (13·58), and 1·3 below that for the previous decennium (14·0). The birth-rate for England and Wales was 29·7, 0·9 below the decennial mean rate, and that for London 30·0, or 1·2 below the mean. (See Table 3.) Last year's rate for Paddington was 5·9 below that for England and Wales, and 6·2 below that for the Metropolis.

TABLE 3.

Births and Birth-rates, 1887-97.

	Paddington.		St. Mary.		St. John.		Birth-rates.	
	Regd.	Rates.	Regd.	Rates.	Regd.	Rates.	England and Wales.	London.
1897.. ..	3,010	23·84	2,586	27·86	424	12·66	29·7	30·0
1887	2,916	25·5	2,368	30·5	548	14·9	31·9	32·9
1888	2,843	24·6	2,331	29·5	512	13·9	31·2	32·1
1889	2,863	24·5	2,346	29·2	517	14·1	31·1	31·9
1890	2,901	24·4	2,389	29·1	512	14·0	30·2	30·7
1891	2,952	25·1	2,420	28·8	532	15·8	31·4	31·9
1892	2,934	24·6	2,456	28·5	478	14·4	30·5	30·9
1893	3,011	25·2	2,567	29·8	444	13·4	30·8	30·9
1894	2,834	23·3	2,423	27·2	411	12·6	29·6	30·1
1895	2,979	24·3	2,526	27·9	453	14·0	30·3	30·5
1896	3,068	24·2	2,419	28·2	455	13·4	29·7	30·2
Averages 1887-96.	2,930	24·5	2,424	28·8	486	14·0	30·6	31·2

Of the 3,010 children whose births were registered in the Parish, 107 were illegitimate, equal to a rate of

0·84 per 1,000 of the population. (See Table 4.) The mean illegitimate rate for the decennium was 1·19, 0·35 above the rate for last year. The illegitimate births were in the proportion of 3·68 to every 100 legitimate, as compared with a decennial average of 5·13.

TABLE 4.

Illegitimate Births and Birth-rates.

Year.	Estimated Population.	Births Registered.			Birth-rates per 1,000 of Population.			Illegitimate Births per 100 Legitimate.
		Legitimate.	Illegitimate.	Total.	Legitimate.	Illegitimate.	Total.	
1887 ...	114,462	2,735	181	2,916	23·9	1·58	25·5	6·20
1888 ...	115,749	2,694	149	2,843	23·3	1·28	24·6	5·24
1889 ...	117,060	2,729	134	2,863	23·4	1·14	24·5	4·68
1890 ...	118,736	2,741	160	2,901	23·1	1·34	24·4	5·51
1891 ...	117,838	2,807	145	2,952	23·9	1·23	25·1	4·91
1892 ...	119,260	2,792	142	2,934	23·4	1·18	24·6	4·77
1893 ...	120,480	2,885	126	3,011	24·1	1·04	25·2	4·18
1894 ...	121,500	2,686	148	2,834	22·1	1·21	23·3	5·22
1895 ...	122,750	2,854	125	2,979	23·3	1·01	24·3	4·19
1896 ...	124,850	2,949	119	3,068	23·3	0·94	24·2	4·03
Mean for 10 years 1887-96	119,656	2,787	143	2,930	23·29	1·19	24·48	5·13
1897 ...	126,253	2,903	107	3,010	22·99	0·84	23·84	3·68

VACCINATION.

There was a slight increase in the percentage of infants "not accounted for" during 1896 (the last year for which returns have been completed),

such infants forming 9·0 per cent. of those born, as against 8·8 and 8·2 in 1895 and 1894. It will be remembered that there was a slight prevalence of smallpox in the Parish in 1893 and 1894, which doubtless had some effect on the amount of vaccination in the subsequent years.

TABLE 5.

Vaccination Returns 1881-1896.

Year.	Births.	Successfully vaccinated.	Insusceptible of vaccination.	Had Small-pox.	Died unvaccinated.	Vaccination postponed.	Remaining (not traced, &c.,* &c.)*	Children not accounted for (including postponed cases) % of births.
1881	2,845	2,415	8	...	203	7	212	7·7
1882	2,897	2,411	8	...	212	17	249	9·2
1883	2,873	2,381	7	...	231	16	238	8·8
1884	2,955	2,460	13	...	239	43	200	8·2
1885	3,019	2,489	12	...	252	38	228	8·8
1886	2,923	2,409	7	...	213	26	268	10·1
1887	2,915	2,440	11	...	220	40	204	8·4
1888	2,855	2,293	22	...	216	38	286	11·3
1889	2,870	2,275	7	...	223	68	297	12·7
1890	2,845	2,255	7	...	254	29	300	11·6
1891	2,968	2,172	16	...	254	32	494	17·7
1892	2,957	2,374	7	...	202	16	358	12·6
1893	3,015	2,421	27	...	265	10	292	10·0
1894	2,853	2,369	24	...	203	21	236	8·2
1895	2,986	2,378	24	...	302	21	261	8·8
1896	3,042	2,443	28	...	286	11	274	9·0
January to June, 1897	1,464	1,184	4	...	113	27	136	9·2

* Gone away, false addresses, "unaccounted for."

Table 6 illustrates the extent of neglect of vaccination in the country generally, in the Metropolis, and, for part of the time, in the Parish. It may be remarked that Scotland has hitherto been noted for the exceedingly small proportion of children under the "not accounted for" heading,

the percentage of such to the births being generally from 1-2.

TABLE 6.

Percentages of Children born escaping Vaccination.

		England & Wales.	Metropolis.	Paddington.
In the year	1872 ...	4·5	8·8	?
Averages for the Quinquennia	1873—77	4·1	8·1	?
	1878—82	4·4	6·8	?
	1883—87*	5·7	7·4	7·7
	1888—92†	11·2	14·1	11·9
In the year	1891 ...	12·9	16·4	17·7
„ „	1892† ...	14·3	18·4	12·6
„ „	1893 ...	15·7	18·2	10·0
„ „	1894 ...	19·0	20·6	8·2
„ „	1895 ...	Not yet published		8·8
„ „	1896‡ ...	Not yet published		9·0

* Royal Commission on Vaccination, appointed 1887.
† Fifth Report of Commission, issued in 1892.
‡ Final Report of Commission, issued in 1896.

To those at all familiar with the history of smallpox prior to vaccination, the increasing neglect of this valuable protection is a matter of profound regret. It is fairly generally admitted that, when the susceptible individuals constitute a certain proportion of the community (the proportion varying for each disease), the chances of an epidemic following the introduction of infection are enormous. Consider the case of Gloucester. The neglect of certain individuals to warn the authorities of the existence of smallpox among the members of their family gave the opportunity requisite for the disease to spread through a community containing a very large proportion of unprotected children. If vaccination fall

into general disuse, it is exceedingly improbable that the efforts of the sanitary authorities in the direction of isolation and quarantine will suffice to stay the disease. While such measures, together with general sanitation, do favour a milder form of the epidemic, vaccination alone will bring about its cessation, except the disease be allowed to run riot, attack all susceptible individuals, and thus exhaust itself.

NOTIFICATION OF INFECTIOUS DISEASES.

During the year 1,003 cases of infectious disease were reported, 223 fewer than the total for the previous year. The sickness-rate, calculated on the notifications, was equal to 7·94 per 1,000, or 0·2 per 1,000 above the average for the preceding seven years. In 1896 the sickness rate was 9·68 per 1,000.

In the Metropolis 45,465 cases were notified, 2,367 more than the annual average for the seven preceding years, and 4,301 less than the total for 1896. The sickness-rate for 1897 was 10·18 per 1,000, that for 1896 11·10, and the septennial mean, 9·9.

In comparison with the annual averages for the seven years 1890-96, the notifications of smallpox and of the fevers, enteric and continued, show reductions, all the other diseases, increases. (See Table 7.) In the Metropolis, scarlet fever, diphtheria, and cholera show increases as compared with the corresponding annual averages, all the remaining diseases

TABLE 7.

Comparison of Returns for Paddington and London.

(Corrected for duplicates.)

	Notifications Received.				Sickness Rates. †			
	Paddington.		London.		Paddington.		London.	
	1897.	Difference from Average.*	1897.	Difference from Average.*	1897.	1896.	1897.	1896.
Smallpox ...	1	-16	105	-725	0·00	0·03	0·02	0·05
Cholera ...	1	... §	38	+3	0·00	...	0·00	0·00
Diphtheria ...	312	+70	12,811	+3,181	2·47	1·84	2·87	2·98
Membr. Croup	10	+4	388	-144	0·07	0·06	0·08	0·09
Erysipelas ...	136	+4	5,800	-512	1·07	0·92	1·29	1·43
Fevers. Scarlet ...	491	+21	22,876	+789	3·88	6·24	5·12	5·72
Typhus ...	...	... §	4	-17	...	...	0·00	0·00
Enteric ...	45	-18	3,113	-94	0·35	0·48	0·69	0·71
Relapsing	...	... §	1	-8	...	...	0·00	0·00
Continued	..	-3	65	-94	...	0·00	0·01	0·02
Puerperal	7	-1	264	-12	0·05	0·08	0·05	0·06
Totals...	1,003	+62	45,465	+2,367	7·94	9·68	10·18	11·10

* Averages for years 1890–1896 inclusive, adjusted to nearest whole numbers.
† Per 1,000 of populations. ... indicates no case. 0·00, a rate under 0·01.
§ Only one case of each of these diseases during the seven years.

diminutions. It is noteworthy that with the increase in the number of notifications of diphtheria, there has been a diminution in the notifications of membranous croup. How far such diminution is due to cases formerly described as membranous croup being now reported as diphtheria, it is impossible to say. It may, however, be

remarked that the past year has seen a greatly increased proportion of cases of diphtheria removed to hospital for isolation. As the Asylums Board will not admit cases diagnosed as membranous croup, unless they be qualified as "of a diphtheritic nature," it is possible that it has become more general to describe such cases as diphtheria, for the sake of securing admission to hospital. It is almost generally accepted that the two terms describe but different manifestations of the same morbid process.

In Table 8 the sickness-rates from each disease have been set out for each sub-district, and each sex, in the three age-groups, "0-5 years," "5 years and over," and "all ages." A glance over the Table will convey more than can be communicated in a short paragraph. It will suffice here to note that for the first time in the four years 1894-97, the rates from scarlet and enteric fevers, at ages under 5 years, were higher among females than males in the Parish as a whole, the greater part of such excess being due to the heavier incidence on females in North Paddington. At ages over 5 years there was not last year that marked difference between the rates for the two sexes recorded in 1896. In North Paddington at ages under 5, the incidence of diphtheria was greater on males, that from scarlet fever on females. In South Paddington, there was a greater prevalence of all diseases among males than among females.

TABLE 8.

Comparison of Notification Rates, 1894-97.
Per 1,000 estimated living in each Sex-Age-Group.

District.	Age-group.	Year.	MALES. Smallpox.	Diphtheria and Mem. Croup.	Erysipelas.	Fevers. Scarlet.	Fevers. Enteric & Continued.	All Diseases.	FEMALES. Smallpox.	Diphtheria and Mem. Croup.	Erysipelas.	Fevers. Scarlet.	Fevers. Enteric & Continued.	Fevers. Puerperal.	All Diseases.
PADDINGTON.	0—5	1897	—	11·3	1·8	11·7	0·2	25·7	—	11·4	0·9	13·0	0·5	—	25·7
		1896	—	11·1	0·8	16·9	0·1	29·1	—	7·9	0·6	16·6	—	—	25·1
		1895	—	7·4	0·6	11·3	0·1	19·6	—	5·7	0·1	9·8	—	—	15·7
		1894	0·5	12·6	1·2	8·6	0·8	23·9	0·3	12·8	0·5	6·5	0·1	—	20·3
	5 & over.	1897	—	1·7	1·1	3·1	0·5	8·6	*	1·5	1·0	2·9	0·3	0·1	5·8
		1896	*	1·1	0·5	6·3	0·9	9·0	*	1·0	1·2	4·3	0·2	0·1	7·0
		1895	0·1	1·4	0·7	2·9	0 7	5·9	*	1·4	0 9	2·4	0 5	0·1	5·6
		1894	0·1	1·9	1·0	1·8	0·8	5·6	0·2	2·2	1·0	1·8	0·4	*	5·8
	All ages.	1897	—	2·8	1·1	4·1	0·4	8·6	*	2·3	1·0	3·7	0·3	0·1	7·5
		1896	*	2·2	0·5	7·5	0·8	11·2	*	1·6	1·1	5 3	0·2	0·1	8·5
		1895	0·1	2·1	0·7	3·8	0·6	7·5	*	1·8	0·9	3·0	0·4	0·1	6·4
		1894	0·2	3·1	1·0	2·6	0·8	7·9	0·2	3·0	0·9	2·1	0·4	*	7·0
ST. MARY.	0—5	1897	—	13·2	1·2	11·9	0·2	26.5	—	12·0	1·0	13·8	0·6	—	27·4
		1896	—	11·1	1·0	17·8	—	30·0	—	8·3	0·7	17·4	—	—	26·5
		1895	—	7·6	0·8	12·2	0·2	20·9	—	6 4	0·2	10 3	—	—	16·9
		1894	0·6	14·3	1·4	8·6	0·6	25·7	0·2	14·4	0.6	7·2	0·2	—	22·6
	5 & over.	1897	—	1·8	1·2	3·5	0·5	7·0	*	1·8	1·2	3·8	0·3	0·1	7·1
		1896	*	1·0	0·5	6·8	0·7	9·3	*	1·2	1·4	4·1	0·3	0·2	8·5
		1895	0·1	1·7	0·8	3·1	0·7	6·6	*	1·7	1·2	2·7	0·5	0·1	6·5
		1894	0·2	2·2	1·0	1·9	0·9	6·2	0·2	2·7	1·0	2·1	0·3	*	6·7
	All ages.	1897	—	3·2	1·2	4·5	0·4	9·7	*	2·8	1·1	4·7	0·3	0·1	9·1
		1896	*	2·2	0·5	8·2	0·6	11·8	*	1·9	1·3	6·3	0·3	0·2	10·2
		1895	0·1	2·4	0·8	4·2	0·6	8·4	*	2·1	1·1	3·4	0·5	0·1	7·5
		1894	0·2	3·7	1·0	2·7	0·8	8.6	0·2	3·9	1·0	2·6	0·3	*	8·2
ST. JOHN.	0—5	1897	—	10·4	1·0	10·4	—	21·8	—	7·9	—	8·9	—	—	16·8
		1896	—	11·2	—	12·2	1·0	24·5	—	5·8	—	12·6	—	—	18·5
		1895	—	6·4	—	6·4	—	12 8	—	2·0	—	7·2	—	—	9·2
		1894	—	4·2	—	8·5	2·1	14·9	1·0	5·0	—	3·0	—	—	9·1
	5 & over.	1897	—	1·3	0·8	1·9	0·5	4·6	—	0·7	0·8	1·0	0·3	—	2·8
		1896	—	1·5	0·5	4·6	1·2	8·0	—	0·6	0·6	2·3	0·1	—	3·7
		1895	—	0·3	0 2	2·0	0·8	3·6	*	0·8	0·4	1·8	0·4	—	3·6
		1894	*	1·2	0·9	1·7	0·7	4·8	0·1	1·0	0 9	1·2	0·5	*	3·9
	All ages.	1897	—	2·0	0·8	2·6	0·4	6·0	—	1·1	0·7	1·3	0·3	—	3·4
		1896	—	2·3	0·4	5·2	1·2	9 5	—	0·8	0·6	2·8	0·1	—	4·4
		1895	—	0·8	0·2	2·4	0 7	4·3	*	0·8	0·4	2·0	0·3	—	3·8
		1894	*	1·4	0·8	2·3	0·8	5·6	0·1	1·2	0·8	1·1	0·5	*	3·9

— No cases notified. * Rates under 0·1 per thousand.

Smallpox.

	Paddington.	London.
Cases reported in 1897	1	105
Average annual number, 1896-97 ...	17	830
Case-rate*, 1897	0·00	0·03

This disease was, in fact, absent from the Parish throughout the year, the single case reported in the Northern Sub-District in the third quarter of the year being erroneously so diagnosed. The patient, an adult female, was removed to hospital only to be sent home again next day.

In the Metropolis 105 cases were notified, the smallest total for any year since 1890, when 60 cases were recorded. No information is available as to the number of cases erroneously diagnosed. The Reports of the Ambulance Committee of the Metropolitan Asylums Board indicate that a very considerable proportion of the cases sent to the Smallpox Wharves are erroneously diagnosed.

Cholera.

	Paddington.	London.
Cases reported in 1897	1	38
Average annual number, 1890-96 ...	0	35
Case-rate, 1897	0·00	0·00

The single case reported as "cholera" was not one of true cholera, but of severe diarrhœa with vomiting, apparently due to poisoning by drain emanations. The patient was a domestic groom resident in South Paddington. There were other illnesses of an indefinite character among the members of his family. An

* In all cases the rates are calculated per 1,000 of the estimated population, unless otherwise stated.

account of the series will be found in the Report for the Second Quarter of the Year.

Diphtheria and Membranous Croup.*

	Paddington.	London.
Cases reported in 1897	322	13,199
Average annual number, 1890-96 ...	248	10,162
Case-rate, 1897	2·54	2·95

With the exception of 1894, when 382 cases were reported, last year's total is the highest recorded since the introduction of notification. The following are the figures for each year :—

	1890.	1891.	1892.	1893.	1894.	1895.	1896.
North Paddington ...	199	160	134	237	340	209	195
South „ ...	25	24	39	57	42	28	47
Paddington ...	224	184	173	294	382	237	242

Last year 275 cases were reported from North Paddington (64 in excess of the seven years' average), and 47 from South Paddington (10 in excess of the average). In the first quarter of the year 66 cases were recorded in the whole Parish, 82 in the second, 89 in the third, and 85 in the last. Whilst the cases were fairly equally distributed over the four quarters in North Paddington (the totals for each quarter were 62, 71, 66, and 76), there was a special incidence on the second and third quarters in the South (the figures were 4, 11, 23, and 9). The cases in the two minor outbreaks indicated in the figures were reported from streets to the west of Queen's Road, the greater proportion from Salem Gardens. A consider-

* Throughout the Report, unless otherwise stated, "diphtheria" includes "membranous croup."

able number of the patients were scholars at St. Matthew's Schools. The chief streets affected were Moscow Road (3 cases in 3 houses), Salem Gardens (10 cases in 6 houses), and York Mews (4 cases in 3 houses).

In North Paddington there were some excess of the disease in the following streets :—

Bravington Rd.	21	cases in	13	houses	Kilburn Pk. Rd.	8	cases in 3 houses
Harrow Road	15	„	10	„	Barnsdale Road	7	„ 4 „
Ashmore Road	13	„	8	„	Waverley Road	7	„ 5 „
Shirland Road	9	„	5	„	Kensal Road	7	„ 6 „
Clarendon Street	9	„	6	„	Circncester Street	7	„ 7 „

In 54 houses in various parts of the Parish, 127 cases were recorded, the number of cases in any house varying from 2 to 6. These secondary cases were increased in frequency through failure to recognise the primary, and occasionally, it is feared, through neglect to secure medical advice for the patients. In 18 instances (40 attacks) two or more cases were reported simultaneously, the recorded dates of attack not being identical. In each of 14 of the 18 instances, two cases were so reported, and in each of the remaining four, three. Particulars of the 54 groups here dealt with will be found in Appendix B (see page 114).

In at least five instances, the notification was received on the day on which the patient died, and in one other case the notification was not received until the day after the death of the patient.

In one group of four cases reported from one

house, the infection appears to have been conveyed from the first patient (treated at home in Paddington) to relations in the country. Certain of the relatives were removed to the local isolation hospital. One of the patients, discharged from that hospital, came to Paddington, and there infected other members of the family. (See Group 26, Appendix B, p. 114).

Two groups, one of five and the other of six cases, were intimately associated. The source of infection of the first patient (Group 37, p. 114), an inmate of Victoria Orphanage, could not be traced. He appears to have infected three other children, at varying intervals, and after his apparent recovery, was sent to Hampstead to recover his health. From the Branch Home in Hampstead, six children, including the patient already mentioned, were some two months later removed to this Parish, all ill with diphtheria. The first patient succumbed to this his second attack. The children were brought into the Parish as soon as they were taken unwell, and no diagnosis was made until they were in Paddington. (See Groups 37 and 31, Appendix B, page 114.)

Although the bulk of the cases of diphtheria were reported from houses occupied by more than one family, in five instances only did the infection spread to other families.

Of the 322 cases reported, 206 were removed to hospital, equal to 60·8 per cent. In 1896, 50·0 per cent. of the cases were removed, in 1895, 53·0, and in

1894, 56·2. Last year 61·1 per cent. of the children under five went to hospital, and 66·2 per cent. of persons aged five years and upwards.

Scarlet Fever.

	Paddington.	London.
Cases reported, 1897	491	22,876
Average annual number, 1890-96...	470	22,087
Case-rate, 1897	3·88	5·12

The cases of scarlet fever (491) reported last year were 299 fewer than the number reported in 1896 (790). In 1893, 776 cases were reported, and in 1892 539. In each of the remaining years since 1890 the cases have varied in number, from 212 in 1890 (notification probably incomplete) to 416 in 1895. The diminution in the local case rate from this disease from 6·24 in 1896 to 3·88 in 1897, is in satisfactory contrast with the slight reduction in the Metropolis generally, viz., from 5·72 in 1896 to 5·12 in 1897.

In North Paddington 431 cases were reported, or 48 more than the annual average for the seven years 1890-96, and in South Paddington 60, or 27 fewer than the average. In the former district the following streets had excessive numbers of cases :—

Bravington Rd.	24 cases	in 18 houses	Portnall Road	11 cases	in 10 houses
Shirland Road	21 „	14 „	Canterbury Terrace	10 „	4 „
Woodchester St.	19 „	12 „	Brindley St.	10 „	6 „
Ashmore Road	19 „	13 „	Clarendon St.	10 „	7 „
Fernhead Road	12 „	11 „	Saltram Cres.	10 „	7 „
Harrow Road	12 „	11 „			

In South Paddington the largest number in any one street was 7 in Craven Terrace.

The largest number of cases reported during the year from any one house was 5. There were two such groups (Nos. 11 and 50, Appendix B, p. 113). In the first group (No. 11), three of the patients were found to be peeling when the first notification was received, and the fifth case in the house followed the return of a patient from hospital. In the second group (No. 50), the cases followed each other at such close intervals as to make it evident that the infection was passed directly from patient to patient. In each group the patients were removed to hospital as soon as the disease was reported. It would be beyond the scope of this Report to deal with all the instances of multiple infection in the houses, and it must suffice to direct attention to the paragraphs on the causes of such secondary cases, and to the analysis of the reputed cause of each group, contained in Appendix B. (See page 108, *et seq.*)

In 22 instances, two or more cases were reported simultaneously, in sixteen, two cases, and six, three. In thirteen out of the twenty-two instances, the disease in the first patient appears to have been unrecognised—probably through want of medical attendance in many cases—until the secondary cases occurred In eight instances the disease spread to a second family living in the same house.

Of the 491 cases, 380 were removed to hospital, equal to 77·3 per cent., as compared with 76·8 per

cent. in 1896, 65·3 in 1895, and 82·3 in 1894. The proportion of cases removed depends, to some extent, on the "pressure" experienced by the hospital authorities. There was little or no such "pressure" in 1894. Of the patients aged under five years, 80·4 were removed last year, of those over five years, 76 0.

Enteric and Continued Fevers.*

	Paddington.	London.
Cases reported, 1897	45	3,178
Average annual number, 1890-96...	66	3,366
Case-rate, 1897	0·35	0·70

Having regard to the general prevalence of this disease throughout the country, and to the local epidemics reported from certain towns during the autumn, a record for the year showing a diminution of approximately one-third of the average annual number, may be deemed very satisfactory. The local case rate for the year (0·35) was just one-half that for the Metropolis (0·70), and 0·13 below the local rate for 1896 (0·48). In 1896 the rate for the Metropolis was 0·73—showing a reduction last year of 0·03 only, just one-fourth of the reduction in the local rate.

In North Paddington 34 cases were recorded in the year, 14 below the annual average for 1890-96. In 1892, 32 cases were recorded, but with this exception, the total for each of the seven years was higher than that for last year. The highest total (57) was recorded in 1891.

* Throughout the Report, unless otherwise stated, Enteric (or Typhoid) Fever is considered to include Continued Fever.

In South Paddington 11 cases were recorded in 1897, 7 below the annual average, and the smallest total recorded since the date of notification. The highest number for any year has been 23, recorded in 1890, and the lowest (prior to 1897) 13, recorded in 1893.

In North Paddington four cases in four houses were reported from Shirland Road, and two in two houses (one a nursing home) from Clifton Gardens. The remaining 28 cases were reported from as many streets and houses. In South Paddington three cases were reported among the Nursing Staff of St. Mary's Hospital, and two (taken ill on the same day) in a house in Edgware Road. The other six cases occurred singly in streets and houses. In no house or family was there a secondary attack—the three cases in St. Mary's Hospital having independent origins.

The origin of infection in sporadic cases of enteric fever is a matter of speculation rather than of knowledge. Of the 45 cases recorded during the year, three appeared to have been due to the patients nursing other cases, and two to eating oysters (origin unknown). In two cases there were histories of consumption of ice cream and mussels, but the information was too unreliable to be accepted without reservation.

Of the 45 cases, 23 were removed to hospital, equal to 51·1 per cent., as compared with 51·6 per cent. in 1896, 37·1 in 1895, and 43·8 in 1894. Of

the patients under 5 years of age, 25 per cent. were removed to hospital, and of those aged over five years, 53·6.

Puerperal Fever.

	Paddington.	London.
Cases reported, 1897	7	264
Average annual number, 1890-96 ...	8	276
Case-rate, 1897	0·05	0·05

The whole of the cases of this disease were reported in North Paddington, in which district 60 cases have been reported in the eight years 1890-97, as compared with four cases in South Paddington. In the former district 17,394 births were registered in the eight years, and in the latter 3,285, so that the cases of puerperal fever (as notified) have been just about three times as frequent in the former as in the latter district. In at least three of the seven cases reported last year, the patient had no medical attendance at the time of labour.

Inasmuch as the amount of infectious disease in a district depends, to some extent, on the prevalence of such disease in the adjacent districts, Table 9 has been prepared to compare the local prevalence of disease with those of the districts co-terminous with the Parish. The Table contains the number of cases of each disease reported in each quarter and in the whole year, with the rates per 1,000. The figures have been taken from official sources, viz., the Weekly Returns of the Local Government and the Metropolitan Asylums Boards.

The subjoined tabulated scheme indicates the varying degrees of prevalence of the more important diseases—the bottom of the list being the most satisfactory position for a district to occupy.

Diphtheria and Membranous Croup.	
Chelsea	3·23*
Willesden	3·06
Paddington	**2·54**
Kensington...	1·92
St. Marylebone	1·56
St. George, Hanover Square	1·49

Scarlet Fever.	
Willesden	5·44
Chelsea	5·05
Kensington...	4·36
Paddington	**3·89**
St. Marylebone	2·81
St. George, Hanover Square	2·20

Enteric and Continued Fevers.	
Kensington...	0·70
St. Marylebone	0·62
Willesden	0·58
Chelsea	0·53
St. George, Hanover Square	0·51
Paddington	**0·35**

Puerperal Fever.	
Kensington...	0·09
Willesden	0·09
Paddington	**0·05**
Chelsea	0·05
St. Marylebone	0·03
St. George, Hanover Square	0·01

* Rates per 1,000 of population.

Attention has already been called to the spread of infection through neglect of the first case in any family, and some note should now be made of other factors favouring the spread of infection. As one result of the inquiries made after every notification, it appeared that 50 cases of infectious illness reported during the twelvemonth, were due to infection brought into the Parish, either through the patient coming here whilst incubating the disease, or through his infecting other persons after his arrival in the district. The cases included 23 of scarlet fever, 12

of diphtheria,* and 15 of enteric fever. No cases were reported from outside districts of infection taken from this Parish, but it is probable that such cases occurred.

In speaking of the prevalence of diphtheria, allusion was made to a series of cases in the area west of Queen's Road, many of the sufferers being scholars of St. Matthew's Church School. (See page 21, *supra*). This was the only instance during the twelvemonth of any special spread of disease among the children of any one school, and even in this case there were so many other factors to be considered that it is not certain that the school should be indicted. It might almost be said that there was no evidence of any school being a special means of spreading infection, and no action was required beyond the customary notices required by the Public Health (London) Act, 1891. Inquiries were made as to milk supplies, laundries, etc., but no conveyance of infection was indicated thereby.

It is the practice of the Department to secure the removal of the largest possible proportion of cases to hospital, both with a view to prevent the spread of infection, and for the better nursing of the sick. The success achieved has been indicated in speaking of each disease. There was during certain months of the year a considerable strain on the accommodation

* If the secondary cases in Groups 26 and 31 (*vide* page 114) be included, 21 cases of diphtheria have been due to importations, and the total of such imported cases becomes 59.

available. There resulted a longer or shorter delay in removing some of the patients, 139 patients not being removed within twenty-four hours of the application for removal. The cases thus delayed comprised 113 of scarlet fever, and 26 of diphtheria. The appended statement shows the extent of the delay :—

Days of delay.	Scarlet Fever.	Diphtheria.
One ...	53 ...	13
Two ...	24 ...	7
Three ...	14 ...	3
More than three	22 ...	3
	113	26

If hospital isolation is to be real and efficient, the patients requiring such isolation should be removed within the shortest possible time after diagnosis. The above record is to that extent unsatisfactory, but it should in fairness be remarked that the delay indicated appears to have caused practically no harm. In the case of scarlet fever, the delay extended in one case to 23 days, and in another to 24, but the system of daily application by the Department, with statement of the circumstances making each removal urgent or otherwise, has worked well, and no case that could be described as in real need of immediate hospital isolation was kept at home more than twenty-four hours after application.

In the Reports for 1895* and 1896† attention has

* p. 41.
† pp. 59 and 144.

TABLE 9.

Notifications of Infectious Disease in Districts co-terminous with Paddington.

District	Pop., 1897.	1897.	Smallpox.	Cholera	Diphtheria.	Membr. Croup.	Erysipelas.	Fever. Scarlet.	Fever. Typhus	Fever. Enteric.	Fever. Relapsing	Fever. Continued.	Fever. Puerperal.	Total.
PADDINGTON.*	126,161*	1st Qr.	...	...	61	5	37	97	...	8	...	...	2	210
		2nd ,,	...	1	80	2	33	94	...	9	...	...	1	220
		3rd ,,	1	..	89	...	38	133	.	11	...	...	2	274
		4th ,,	...	...	82	3	28	167	...	17	...	...	2	292
		Year	1	1	312	10	136	421	...	45	...	...	7	1,003
		Rate †	0·00	0·00	2·47	0·07	1·07	3·89	...	0·35	...	...	0·05	7·95
KENSINGTON.	171,427	1st Qr.	...	...	73	4	59	117	...	21	...	3	3	280
		2nd ,,	...	...	63	2	54	146	...	18	...	1	5	289
		3rd ,,	1	...	81	2	62	248	...	31	...	...	2	427
		4th ,,	...	...	105	2	62	238	...	47	...	1	6	461
		Year	1	...	322	10	237	749	...	117	...	5	16	1457
		Rate †	0·00	...	1·87	0·05	1·38	4·36	...	0·68	...	0·02	0·09	8·49
CHELSEA.‡	96,692	1st Qr.	...	...	77	1	24	98	...	17	...	...	1	218
		2nd ,,	...	...	81	2	21	135	...	5	...	...	...	244
		3rd ,,	...	...	66	...	22	145	...	16	..	...	1	250
		4th ,,	...	...	83	3	31	111	...	14	...	...	3	245
		Year	...	...	307	6	98	489	...	52	...	...	5	957
		Rate †	...	...	3·17	0·06	1·01	5·05	...	0·53	...	...	0·05	9·89
ST. GEORGE, Hanover Square.	80,330	1st Qr.	...	...	15	...	16	41	...	7	...	...	1	80
		2nd ,,	...	...	24	...	12	41	...	9	...	2	...	88
		3rd ,,	1	...	29	...	8	45	...	10	...	...	...	93
		4th ,,	...	...	52	...	15	50	...	14	...	...	...	131
		Year	1	...	120	...	51	177	...	40	..	2	1	392
		Rate †	0·01	...	1·49	...	0·63	2·20	...	0·49	...	0·02	0·01	4·87
ST. MARYLE-BONE.	140,808	1st Qr.	1	...	41	1	63	60	...	17	...	...	...	183
		2nd ,,	2	...	34	...	54	93	...	11	...	1	1	196
		3rd ,,	1	2	68	...	70	113	...	22	...	...	2	278
		4th ,,	...	...	75	2	67	131	...	38	...	...	2	315
		Year	4	2	218	3	254	397	...	88	...	1	5	972
		Rate †	0·02	0·01	1·54	0·02	1·80	2·81	...	0·62	...	0·00	0·03	6·90
WILLESDEN.	92,605	1st Qr.	1	...	63	1	25	117	...	14	...	1	3	225
		2nd ,,	...	1	40	3	19	89	...	10	...	...	1	163
		3rd ,,	...	1	56	1	27	121	...	17	...	...	...	223
		4th ,,	...	...	120	...	35	177	...	12	...	...	5	349
		Year	1	2	279	5	106	504	...	53	...	1	9	960
		Rate †	0·01	0·02	3·01	0·05	1·14	5.44	...	0·57	...	0·01	0·09	10·36

* The estimate given here is taken from the same source as the estimates for the other districts and differs somewhat from the estimate arrived at by the Department's calculations

† Rates per 1,000 of the estimated population.

‡ Chelsea detached, otherwise Kensal New Town, is the only part co-terminous with Paddington.

been directed to the occurrence of fresh cases of infectious disease following the return of patients from hospital. During the past year 41 such "return" cases have been noted, 33 of scarlet fever and 8 of diphtheria. Particulars of 14 of the cases of scarlet fever, giving rise to 19 other cases, will be found in the Appendix C, page 116. These cases were specially inquired into, as there appeared to be a probability in each case that the returning patient was the cause of the subsequent cases. The cases not dealt with did not present such indication of cause and effect. With regard to diphtheria, the occurrence of return cases can only be noted. It is impracticable to make satisfactory inquiries concerning such cases until bacteriological examination be available.

DEATHS.

During the year 1,941 deaths were registered in the Parish, 991 of males and 950 of females, equal to an uncorrected death-rate of 15·37 per thousand, as compared with rates of 16·57, 18·32, and 15·78, in the years 1896, 1895, and 1894 respectively. The deaths were due to the following among other causes:—diseases of the zymotic class 261, including measles 2, scarlet fever 3, diphtheria 36, whooping cough 44, enteric fever 8, simple continued fever 1, diarrhœa 109, puerperal fever 4, and other septic diseases 15. The deaths due to the principal zymotic diseases numbered 203, and were equal to a zymotic rate of

1·60 per 1,000. The deaths from cancer numbered 124, those from phthisis 133, and those from other forms of tuberculosis 93. Bronchitis and pneumonia were certified as causing 318 deaths, viz., 212 from the former, and 106 from the latter disease. The foregoing figures include the deaths of 294 non-parishioners, and do not take into account the 163 deaths of parishioners registered in other parts of the Metropolis. By the exclusion of the former and the inclusion of the latter, a nett total of 1,810 deaths of parishioners is obtained, equal to a death rate of 14·33 per 1,000. This constitutes the commonly called "corrected" total of deaths and death-rate, but, as will be shortly explained, the latter requires further a correction before it can be used for comparison with the rates of other districts.

If Table 10 be referred to, it will be seen that the death-rate for last year (14·33) was the lowest for the six years, 1892-97, and 2·27 below the mean rate for the five years 1892-96. Table 11 shows that last year's rate was 2·19 below the decennial mean rate, and that the rate for 1889 (14·21) was the only one below that for last year. An examination of the recorded rates since 1866 shows that the years 1889 and 1897 have been the only occasions when corrected death-rates under 15·0 per 1,000 have been recorded.

The 1,810 deaths of parishioners comprised 906 of males and 904 of females, equal to rates of 17·35 and 12·20 per 1,000 of each sex. (See Table 10.) These

TABLE 10.

Deaths of Parishioners.

Deaths recorded 1897.	Paddington.			St. Mary.			St. John.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
1st Quarter	245	218	463	189	172	361	56	46	102
2nd ,, ...	209	194	403	164	151	315	45	43	88
3rd ,, ...	241	248	489	204	204	408	37	44	81
4th ,, ...	211	244	455	163	208	371	48	36	84
Year	906	904	1810	720	735	1455	186	169	355
Death Rates * 1897	17·35	12·20	14·33	17·86	14·00	15·68	15·60	7·84	10·60
Mean Rates 1892—1896.	19·11	14·84	16·60	19·73	16·64	17·98	17·06	10·58	12·87
Death Rates * 1896	18·58	13·06	15·34	19·82	15·00	17·09	14·46	8·41	10·57
1895	19·58	15·34	17·09	20·26	17·05	18·44	17·27	11·10	13·30
1894	17·22	13·55	15·06	17·73	15·18	16·29	15·52	9·63	11·73
1893	19·87	16·44	17·86	19·87	18·58	19·14	19·87	11·42	14·43
1892	20·32	15·82	17·68	20·99	17·40	18·96	18·20	12·33	14·35

* Rates per 1,000 individuals in each case.

rates were 1·76 and 2·64 per 1,000 lower than the corresponding means for the preceding five years. Of the residents of North Paddington, 1,455 deaths were recorded, equal to a rate of 15·68 per 1,000 of the inhabitants of the district, and of the residents of South Paddington, 355 deaths, equal to a rate of 10·60. The latter rate would be considered a very good record in a health resort. The differences between the rates for last year and those for the quinquennium 1892-96 will be found in Table 10. The rate for North Paddington (15·68) was 2·32 per 1,000 below the decennial mean rate (18·00), that for

TABLE 11.

Deaths and Death-rates, 1887-1897.

Years.	Paddington.		St. Mary.		St. John.		Death-rates.	
	Regd.	Rates.	Regd.	Rates.	Regd.	Rates.	England and Wales.	London.*
1897	1,810	14·33	1,455	15·68	355	10·60	17·4	18·2
1887	1,785	15·59	1,346	17·35	439	11·90	19·1	20·3
1888	1,916	16·55	1,472	18·64	444	12·06	18·1	19·3
1889	1,664	14·21	1,266	15·76	398	10·83	18·2	18·4
1890	2,104	17·71	1,602	19·51	502	13·69	19·5	21·4
1891	2,110	17·90	1,590	18·89	520	15·43	20·2	21·5
1892	2,142	17·96	1,632	18·95	510	15·38	19·0	20·7
1893	2,153	17·86	1,680	19·14	473	14·43	19·2	21·3
1894	1,831	15·06	1,449	16·29	382	11·73	16·6	17·8
1895	2,099	17·09	1,671	18·44	428	13·30	18·7	19·9
1896	1,942	15·34	1,583	17·09	359	10·57	17·1	18·6
Averages 1887-96.	1,974	16·52	1,529	18·00	445	12·93	18 5	19·9

South Paddington (10·60), 2·33 below its mean (12·93). The figures contained in Table 11 show differences of 3·1 and 3·9 (in favour of the Parish) between last year's rates for Paddington and England and Wales, and London respectively. The mean rate for the Parish (16·5) was 2·0 per 1,000 below the mean for England and Wales (18·5), and 3·4 below that for London (19·9).

All the rates mentioned in the foregoing paragraphs take no account of the differences in the constitutions of the various populations as regards sex and age. Factors to adjust such differences have been calculated and applied to the rates of the dis-

tricts given in Table 12. The rates there given are

TABLE 12.

Comparison of "Corrected" Death-rates, 1897.

	Standard Death-rate.	Sex-age Factor.	Rates for 1897.		Middle of 1897.		Infantile Mortality* per 1,000 births.
			Record.	Corrected.	Population.	Acres per Person	
England and Wales ...	19·15	—	17·4	17·4	31055355	?	156
London	17·96	1·06626	17·7	18·87	4463169	0·015	158
WEST—							
Paddington	17·72	1·08070	14·4	15·56	126,161	0·009	149
Kensington	17·38	1·10184	15·7	17·29	171,427	0·012	166
Hammersmith ...	18·05	1·06094	16·7	17·71	105,959	0·021	171
Fulham	18·27	1·04817	17·0	17·81	120,040	0·014	162
Chelsea	17·95	1·06685	17·8	18·98	96,692	0·008	161
St. George, Hanover Sq.	17·34	1·10438	13·2	14·57	80,330	0·013	133
NORTH—							
Marylebone	17·82	1·07464	18·3	19·66	140,808	0·010	136
Hampstead	16·63	1·15153	11·8	13·58	77,275	0·029	127
St. Pancras	17·89	1·07043	18·7	20·01	242,255	0·011	168
Islington	17·90	1·06983	15·8	16·90	341,134	0·009	136
Hackney	18·23	1·05047	16·5	17·33	216,698	0·018	147
EAST—							
Shoreditch	18·45	1·03794	21·6	22·41	121,883	0·005	183
Bethnal Green ...	18·39	1·04133	21·4	22·28	129,098	0·005	171
Whitechapel	17·74	1·07948	20·4	22·02	79,724	0·004	148
St. George in the East	18·43	1·03907	26·4	27·43	47,917	0·005	197
Mile End, Old Town...	18·58	1·03068	18·7	19·27	111,883	0·006	149
Poplar...	18·49	1·03569	19·8	20·50	169,811	0·013	170
SOUTH—							
Newington	18·32	1·04531	21·2	22·16	122,191	0·005	177
Lambeth	18·24	1·04989	17·5	18·37	300,048	0.013	151
Battersea	17·80	1·07584	16·2	17·42	168,877	0·012	162
Wandsworth	17·93	1·06804	13·4	14·31	195,612	0·047	135
Camberwell	18·10	1·05801	16·6	17·56	257,575	0·017	159

* From the Registrar-General's Annual Summary for 1897. The mortality among infants obtained from the local register is somewhat less than that given by the Registrar-General.

fully corrected and strictly comparable, save that no account is taken of the varying influences of overcrowding, poverty, &c., which cannot be reduced to mathematical formulæ. Of the Metropolitan Districts mentioned in the Table, Hampstead had the lowest death-rate (13·58) last year, Wandsworth the next lowest (14·31), and St. George, Hanover Square, the next (14·57). These were the only districts with rates below the fully corrected rate for the Parish (15·56). It will be seen that last year's rate for England and Wales was 1·8 below the "standard rate," whilst that for London was approximately 0·9 *above* the standard. The rates prevailing in the districts included in the Western Area of the Metropolis were all below the standard rates, to the following extents :—Paddington 1·16, Kensington 0·09, Hammersmith 0·34, Fulham 0·46, Chelsea 0·97, and St. George, Hanover Square, 2·77.

AGE-GROUP DEATH-RATES.

Tables 13 and 13A contain the death-rates prevailing in the six age-groups used in these reports for each sex and each sub-district, as well as the whole Parish, the rates being calculated on the total deaths recorded in each age-group. Tables 14 and 14A give the numbers of deaths recorded at ages under one year, and in each year of life under five. With regard to infants under one year of age, the mortality rates in the latter tables are more trustworthy than those in the former.

TABLE 13.

Death-rates per 1,000 estimated living in each group.

MALES.

	Age Groups.	1892.	1893.	1894.	1895.	1896.	Mean Rates 1892-96.	1897.
Paddington.	0-1 ...	198·03	190·47	173·32	211·18	215·57	197·71	180·21
	1-5 ...	33·11	28·80	28·26	21·42	31·92	28·70	21·29
	5-15 ...	4·31	3·95	3·60	2·64	3·26	3·55	4·05
	15-25 ...	3·67	3·63	4·70	3·86	2·88	3·75	3·08
	25-65 ...	15·00	16·08	13·75	16·32	13·50	14·93	14·15
	65 & over ...	105·01	97·30	64·66	95·62	78·39	88·20	80·57
	All ages ...	20·32	19·87	17·22	19·58	18·58	19·11	17·35
	0-5 ..	69·49	64·48	60·27	63·31	72·43	65·99	56·39
	5-65 ...	9·91	10·39	9·31	10·28	8·67	9·71	9·25
	5 & over ...	14·08	14·20	11·74	14·00	11·72	13·15	12·37
St. Mary.	0-1 ...	196·32	205·12	182·58	211·59	216·03	202·33	186·71
	1-5 ...	33·78	28·75	29·98	24·08	33·51	30·02	21·69
	5-15 ...	4·44	3·59	3·03	2·73	3·52	3·46	4·00
	15-25 ...	4·05	3·56	4·73	3·72	3·25	3·86	2·98
	25-65 ..	15·46	14·65	13·34	16·47	14·27	14·84	14·57
	65 & over ...	105·85	98·74	63·95	98·50	83·08	90·02	77·29
	All ages ...	20·99	19·87	17·73	20·26	19·82	19·73	17·86
	0-5 ...	70·43	68·52	64·39	66·34	74·64	68·86	58·89
	5-65 ...	10·19	9·45	8·98	10·23	9·44	9·66	9·37
	5 & over ...	14·08	13·07	11·21	13·82	12·16	12·87	12·13
St. John.	0-1 ...	207·44	107·52	119·56	208·79	212·88	171·24	142·10
	1-5 ...	30·02	29·02	19·92	8·06	24·18	22·24	19·37
	5-15 ...	3·78	5·47	5·50	2·22	2·11	3·81	4·28
	15-25 ...	2·64	3·81	4·61	4·27	1·84	3·43	3·36
	25-65 ...	13·67	20·31	14·63	15·87	10·90	15·07	12·86
	65 & over ...	103·09	93·91	66·54	88·49	67·11	83·83	88·58
	All ages ...	18·20	19·87	15·52	17·27	14·46	17·06	15·60
	0-5 ..	6·49	44·49	39·38	47·51	61·33	39·84	43·56
	5-65 ...	9·05	13·39	10·40	10·43	7·12	10·08	8·87
	5 & over ...	14·09	17·70	13·41	14·61	10·34	14·03	13·14

TABLE 13A.

Death-rates per 1,000 estimated living in each group.

FEMALES.

	Age Groups.	1892.	1893.	1894.	1895.	1896.	Mean Rates 1892-96.	1897.
Paddington.	0-1 ...	138·36	166·79	128·93	168·05	144·41	149·31	157·08
	1-5 ...	23·92	25·83	29·32	23·49	29·63	26·44	15·46
	5-15 ...	3·72	4·06	4·68	3·31	4·05	3·96	3·41
	15-25 ...	2·34	3·01	2·49	2·47	2·21	2·50	1·62
	25-65 ...	11·16	11·78	9·48	9·99	8·80	10·24	7·73
	65 & over ...	98·70	88·62	64·25	90·43	58·63	80·12	69·25
	All ages ...	15·82	16·45	13·55	15·34	13·06	14·84	12·20
	0-5 ...	49·44	57·27	51·54	55·77	55·33	53·87	47·07
	5-65 ...	7·61	8·20	6·85	8·51	6·28	7·49	6·97
	5 & over ...	12·85	12·82	10·16	13·23	9·29	11·67	9·09
St. Mary.	0-1 ...	135·26	173·99	136·40	173·91	151·84	154·28	168·97
	1-5 ...	25·06	27·58	30·40	25·92	31·25	28·04	17·12
	5-15 ...	3·44	4·26	5·04	3·53	3·57	3·97	3·10
	15-25 ...	2·93	3·74	2·65	2·97	2·63	2·98	2·08
	25-65 ...	13·16	13·14	10·56	11·03	10·67	11·71	8·64
	65 & over ...	94·44	91·98	64·74	89·43	57·61	79·64	72·93
	All ages ...	17·40	18·60	15·18	17·05	15·00	16·64	14·00
	0-5 ...	50·19	60·96	54·56	59·62	58·74	56·81	51·71
	5-65 ...	8·75	9·08	7·53	7·58	7·30	8·05	5·94
	5 & over ...	8·22	14·07	10·97	12·50	10·33	11·22	9·97
St. John.	0-1 ...	155·00	126·90	86·73	134·02	102·56	121·04	89·10
	1-5 ...	18·72	17·67	24·16	11·58	21·95	18·81	7·42
	5-15 ...	4·68	3·31	3·33	2·41	5·94	3·93	4·64
	15-25 ...	1·25	1·63	2·19	1·48	1·04	1·52	0·71
	25-65 ...	7·16	8·98	7·20	7·73	4·88	7·19	5·81
	65 & over ...	109·41	79·88	63·08	93·13	61·31	81·36	59·37
	All ages ...	12·33	11·42	9·64	11·10	8·41	10·58	7·84
	0-5 ...	45·95	39·43	36·65	36·04	38·05	39·22	23·76
	5-65 ..	5·18	6·24	5·33	5·34	3·99	5·21	4·21
	5 & over ...	10·57	10·04	8·31	9·87	6·95	9·15	7·06

TABLE 14.

MALES. Deaths at ages under 5 years.

		St. Mary.						St. John.						Paddington.					
		1892.	1893.	1894.	1895.	1896.	1897.	1892.	1893.	1894.	1895	1896.	1897.	1892.	1893.	1894.	1895.	1896.	1897.
Births Registered ..		1242	1264	1240	1269	1390	1296	247	239	213	246	271	216	1489	1503	1453	1515	1661	1512
Deaths at Ages	Under 1 day ...	12	20	16	21	22	19	6	2	2	4	3	3	18	22	18	25	25	22
	1–7 days ...	19	19	17	22	12	22	5	4	1	4	4	3	24	23	18	26	16	25
	1–4 weeks	22	27	26	30	39	18	4	1	2	3	10	1	26	28	28	33	49	19
	1–12 months ...	150	150	136	157	167	149	24	13	17	27	24	20	174	163	153	184	191	169
	Total under 1 yr.	203	216	195	230	240	208	39	20	22	38	41	27	242	236	217	268	281	235
	1–2 years	75	46	55	56	65	38	14	8	6	3	8	5	89	54	61	59	73	43
	2–3 „	17	27	26	13	29	18	2	5	5	2	2	4	19	32	31	15	31	22
	3–4 „	15	20	14	15	16	18	5	5	2	1	5	3	20	25	16	16	21	21
	4–5 „	13	11	15	6	18	9	2	4	2	...	4	3	15	15	17	6	22	12
	Total 1–5 years	120	104	110	90	128	83	23	22	15	6	19	15	143	126	125	96	147	98
	Grand Total under 5 yrs. ...	323	320	305	320	368	291	62	42	37	44	60	42	385	362	342	364	428	333
*Infantile Mortality ...		163	170	157	181	172	160	158	83	103	154	151	125	162	157	149	176	169	155

* Deaths at ages under 1 year per 1,000 births registered.

TABLE 14A.

Deaths at ages under 5 years. FEMALES.

		St. Mary.						St. John.						Paddington.					
		1892.	1893.	1894.	1895.	1896.	1897.	1892.	1893.	1894.	1895.	1896.	1897.	1892.	1893.	1894.	1895.	1896.	1897.
Births Registered ...		1214	1303	1183	1257	1223	1290	231	202	198	207	184	208	1445	1505	1381	1464	1407	1498
Deaths at Ages	Under 1 day ...	10	12	11	19	9	19	4	2	2	3	5	2	14	14	13	22	14	21
	1–7 days	14	14	16	17	13	12	4	3	1	2	1	2	18	17	17	19	14	14
	1–4 weeks	18	26	11	29	30	25	1	4	2	2	2	3	19	30	13	31	32	28
	1–12 months ...	103	138	113	131	123	139	22	16	12	19	13	11	125	154	125	150	136	150
	Total under 1 yr.	145	190	151	196	175	195	31	25	17	26	21	18	176	215	168	222	196	213
	1–2 years	49	45	43	49	59	31	7	3	10	9	6	2	56	48	53	58	65	33
	2–3 ,, ...	23	23	27	26	27	14	3	5	5	...	5	1	26	28	32	26	32	15
	3–4 ,, ...	12	23	28	9	20	13	4	2	...	...	5	1	16	25	28	9	25	14
	4–5 ,, ...	7	11	16	15	16	9	1	4	4	...	2	2	8	15	20	15	18	11
	Total 1–5 years	91	102	114	99	122	67	15	14	19	9	18	6	106	116	133	108	140	73
	Grand Total under 5 yrs. ...	236	292	265	295	297	262	46	39	36	35	39	24	282	331	301	330	336	286
*Infantile Mortality ...		119	145	127	155	143	151	134	123	85	125	114	86	121	142	121	151	139	142

* Deaths at ages under 1 year per 1,000 births registered.

TABLE 15.

Death-rates from Groups of Diseases per 1,000 individuals.

	1892.	1893.	1894.	1895.	1896.	Mean. 1892 to 1896.	1897.
I.—Specific Febrile, or Zymotic Diseases ...	3·01	3·37	2·79	2·91	3·01	3·01	2·29
1. Miasmatic Diseases ...	2·24	2·41	2·21	1·89	2·24	2·19	1·29
2. Diarrhœal ,, ...	0·62	0·53	0·37	0·74	0·52	0·56	0·87
3. Malarial ,, ...	—	0·01	—	*	*	0·02	—
4. Zoogenous ,, ...	—	*	*	*	—		—
5. Venereal ,, ...	0·08	0·12	0·10	0·10	0·08	0·09	0·03
6. Septic ,, ...	0·06	0·27	0·09	0·15	0·14	0·14	0·08
II.—Parasitic Diseases...	0·01	—	0·04	0·04	—	0·01	*
III.—Dietic Diseases ...	0·05	0·09	0·11	0·10	0·13	0·09	0·12
IV.—Constitutional Diseases	3·27	3·25	3·10	2·99	2·86	3·09	2·81
V.—Developmental Diseases	1·18	1·05	1·09	1·35	1·31	1·19	1·14
VI.—Local Diseases ...	8·92	8·88	6·82	8·35	7·02	7·99	7·06
1. Nervous System ...	1·41	1·71	1·31	1·64	1·54	1·52	1·37
2. Organs of Special Sense	0·02	0·04	0·03	*	—	0·01	0·03
3. Circulatory System ...	1·43	0·13	1·18	1·38	1·11	1·04	1·32
4. Respiratory System ...	4·10	4·10	2·60	3·65	2·47	3·38	2·51
5. Digestive System ...	1·16	1·05	0·97	1·09	1·16	1·08	1·11
6. Lymphatic System ...	*	*	*	0·01	0·02	*	*
7. Gland-like Organs of Uncertain Use ...	0·02	0·01	0·02	0·02	0·01	0·01	—
8. Urinary System ...	0·46	0·40	0·45	0·42	0·49	0·44	0·51
9. Reproductive System...	0·16	0·09	0·15	0·17	0·13	0·14	0·12
(*a*) Organs of Generation	0·09	0·03	0·05	0·10	0·03	0·06	0·03
(*b*) Parturition ...	0·07	0·05	0·09	0·06	0·10	0·07	0·08
10. Bones and Joints ...	0·07	0·06	0·04	0·04	0·03	0·04	0·03
11. Integumentary System	0·04	0·02	0·02	0·02	0·02	0·02	0·02
VII.—Violence	0·56	0·57	0·64	0·62	0·46	0·57	0·45
1. Accident or Negligence	0·39	0·45	0·52	0·47	0·38	0·42	0·37
2. Homicide	0·04	0·01	—	0·03	—	0·01	0·02
3. Suicide	0·12	0·09	0·12	0·12	0·07	0·10	0·05
4. Execution	—	—	—	—	—	—	—
VIII.—Ill-Defined & not Specified Causes...	0·65	0·63	0·45	0·48	0·52	0·54	0·42
Total Death-rates ...	17·68	17·87	15·06	17·09	15·34	17·40	14·33

* Indicates a rate of less than 0·01 per 1,000. — Indicates no deaths recorded.

TABLE 16.

		Birth-rate *	Death-rates* from										Infantile Mortality (0-1 year) per 1,000 births registered.
			All Causes.	Principal Zymotic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever. †	Diarrhœa.	Phthisis.	
England & Wales	1897	29·7	17·4	2·15	0·00	0·40	0·14	0·24	0·35	0·16	0·86	?	156
	1887-96	30·7	18·6	2·11	0·01	0·44	0·20	0·22	0·41	0·16	0·60	1·50	148
33 Great Towns	1897	30·7	19·1	2·87	0·00	0·55	0·18	0·31	0·41	0·18	1·24	?	177
	1887-96	?	20·6	2·38	0·02	0·62	0·27	0·29	0·14	0·20	0·84	?	167
67 Large Towns	1897	30·1	17·2	2·41	0·00	0·43	0·15	0·24	0·38	0·16	1·05	?	169
Rest of England & Wales	1897	?	16·4	1·62	0·00	0·29	0·12	0·19	0·31	0·14	0·57	?	138
Registration London	1897	30·0	17·7	2·58	0·00	0·43	0·17	0·50	0·41	0·13	0·92	1·76	158
	1887-96	31·3	19·9	2·76	0·00	0·64	0·25	0·45	0·59	0·15	0·67	1·88	155
PADDINGTON	1897 ‡	23·8	14·4	1·94	...	0·02	0·17	0·51	0·35	0·08	0·81	1·13	149
	1887-96 §	24·5	16·5	2·06	0·00	0·40	0·13	0·43	0·39	0·11	0·54	1·35	145

* All rates per 1,000 of population. † Includes Typhus, Enteric (or Typhoid), and Simple Continued Fevers. 0·00 indicates a rate of under 0·01 per 1,000. ... indicates no deaths recorded. ‡ From Registrar-General's Annual Summary. § From local registers.

Of the rates prevailing among males, the chief reduction occurred among those aged from 1–5 years and 65 and upwards. At the former ages the rate in the whole Parish was 21·29, as compared with a quinquennial mean of 28·70, last year's rate being the lowest recorded in the six years dealt with. The reduction in the rate at this age was not so marked (2·87) in St. John's Sub-district as in St. Mary's (8·33). At ages of 65 years and upwards the rate for 1897 (80·57) was 7·63 below the mean (88·20), in the Parish, the rate in North Paddington being 12·73 below the mean, that in South Paddington 4·65 *above*.

Among females similar reductions may be observed at the ages mentioned, that recorded in South Paddington at age 1–5 years (11·39 per 1,000) being the largest reduction of the whole series.

The mortality among infants was 168·4 per 1,000 estimated living, 180·2 among males, and 157·0 among females. The rate prevailing among males was slightly below the mean for the five preceding years, that among females above. The mortality measured by the births registered was 148, 155 among males and 149 among females. The decennial mean rate (Table II., Appendix A) was 145, 3 below the rate for last year. The causes of this increase will be dealt with later on.

It will be seen from Table 12 that the infantile mortality rate for the Parish (149) was lower than that for any district included in the Western Area of the

Metropolis, with the exception of St. George, Hanover Square (133). In Wandsworth the rate was 135, and in Hampstead 127 per 1,000 births registered.

The official returns show that the local rate was 9 per 1,000 below that for the Metropolis (Table 16) and 7 below that prevailing in England and Wales. In the "Rest of England and Wales," chiefly made up of rural and small urban districts, only was the rate (138) lower than that of the Parish.

CAUSES OF DEATH.

The numbers of deaths from the various diseases at various ages are given in Table III., Appendix A, on which table the rates given in Table 15 have been calculated. Table 17 shows the variations in the numbers of deaths from certain selected causes, from the quinquennial and decennial averages (corrected for changes in population), and Table 18 gives the rates obtained from the figures in Table 17. These tables tell their own tale so clearly that it will suffice to briefly direct attention to a few points only.

Measles.

No. of Cases } Fatality* }	Not known.			
No. of Deaths	1897	2	1896	103
Mortality†	,,	0·01	,,	0·81

* By "fatality" is meant the number of deaths per cent. of the cases reported.

† By "mortality" is meant the number of deaths per 1,000 of the population of *all* ages, unless otherwise specified.

TABLE 17.

Average annual number of Deaths compared with record for 1897.

(Averages corrected for changes in population, and adjusted to nearest whole numbers.)

		St. Mary's.				St. John's.				Paddington.			
			Averages.				Averages.				Averages.		
		1897.	1887 to 1891.	1892 to 1896.	1887 to 1896.	1897.	1887 to 1891.	1892 to 1896.	1887 to 1896.	1897.	1887 to 1891.	1892 to 1896.	1887 to 1896.
Principal Zymotic Diseases.	Smallpox	—	0	1	1	—	—	0	0	—	0	1	1
	Measles	2	40	56	49	—	4	6	4	2	44	62	53
	Scarlet Fever	16	15	17	16	4	1	4	3	20	16	21	19
	Whooping Cough	36	51	38	44	4	8	3	6	40	59	41	50
	Diphtheria*	65	50	65	58	8	12	12	12	73	62	77	70
	Fever†	5	9	13	11	2	6	4	5	7	15	17	16
	Diarrhœa‡	96	61	63	62	11	7	8	7	107	68	71	69
	Totals	220	226	253	241	29	38	37	37	249	264	290	278
	Puerperal Fever	2	5	4	5	—	1	1	1	2	6	5	6
	Diseases of Parturition	7	8	6	7	3	1	2	1	10	9	8	8
	Other Septic Diseases	7	12	10	11	2	3	3	3	9	15	13	14
	Epidemic Influenza	19	19	52	36	11	6	19	12	30	25	71	48
	Alcoholism	9	6	7	7	2	2	3	2	11	8	10	9
	Cirrhosis of Liver	15	10	12	11	5	7	6	6	20	17	18	17
	Malignant Disease	84	75	83	79	30	29	33	30	114	104	116	109
	Phthisis	104	156	135	146	28	28	28	28	132	184	163	174
	Other Tubercular Diseases§	62	61	65	64	9	13	11	12	71	74	76	76
	Apoplexy	64	75	70	73	22	24	23	23	86	99	93	96
	Bronchitis	173	189	204	198	28	50	53	50	201	239	257	248
	Pneumonia	78	145	112	128	18	41	32	36	96	186	144	164
	Suicides	6	11	10	11	1	4	4	4	7	15	14	15

0 indicates an average less than 1. — no deaths.

* Includes Diphtheria, Quinsy, Croup, Sore Throat, and Laryngitis.
† ,, Typhus, Enteric (Typhoid), and Simple Continued Fevers.
‡ ,, Diarrhœa and Dysentery.
§ ,, Tabes Mesenterica, Tubercular Meningitis, Hydrocephalus, Scrofula, and other forms of Tuberculosis, except Phthisis.

The two deaths recorded in the Parish were 51 below the decennial average; 42 below that for 1886-91, and 60 below that for 1892-96. In North Paddington (where both deaths occurred) the corresponding averages were 49, 40, and 56, and the

TABLE 18.

Calculated from Figures of Table 17.

		Death Rates per 1,000 of Populations.					
		St. Mary.		St. John.		Paddington.	
		1897.	Mean 1887-96.	1897.	Mean 1887-96.	1897.	Mean 1887-96.
Principal Zymotic Diseases.	Smallpox	...	0·00	...	0·00	...	0·00
	Measles	0·02	0·52	...	0·13	0·01	0·40
	Scarlet Fever	0·17	0·16	0·11	0·07	0·15	0·14
	Whooping Cough ...	0·38	0·47	0·11	0·17	0·31	0·39
	Diphtheria*	0·70	0·62	0·23	0·34	0·57	0·54
	Fever*	0·05	0·11	0·06	0·14	0·05	0·12
	Diarrhœa*	1·03	0·66	0·32	0·21	0 84	0·53
	Totals	2·37	2·59	0·86	1·09	1·97	2·15
	Puerperal Fever ...	0·02	0·04	...	0·03	0·01	0·04
	Diseases of Parturition	0·07	0·07	0·08	0·03	0·08	0·06
	Other Septic Diseases ...	0·07	0·11	0·06	0·09	0·07	0·11
	Epidemic Influenza ...	0·20	0·39	0·32	0·36	0·23	0·38
	Alcoholism	0·09	0·07	0·05	0·05	0·08	0·06
	Cirrhosis of Liver ...	0·16	0·12	0·14	0·18	0·15	0·14
	Malignant Disease ...	0·90	0·85	0·89	0 89	0·90	0·86
	Phthisis	1·12	1·57	0·83	0·82	1·04	1·35
	Other Tubercular Diseases*	0·66	0·68	0·26	0·36	0·56	0·59
	Apoplexy	0·68	0·78	0·65	0·67	0·68	0·75
	Bronchitis	1·86	2·13	0·82	1·50	1·59	1·94
	Pneumonia	0·84	1·38	0·53	1·06	0·76	1·28
	Suicides	0·06	0·11	0·02	0·10	0·05	0·11

* See foot-notes to Table 17.
0·00 indicates a rate under 0·01.

mortality last year was 0·02, as compared with a mean rate of 0·52.

The deaths were recorded in the second half of the fourth quarter of the year. Of the prevalence of non-fatal cases in the Parish nothing is known. The local rate last year was the lowest of the rates given in Table 16.

Prior to 1897, the smallest number of cases of this disease recorded in any year was 7 in 1891, when there were six deaths in North and one in South Paddington. In no other year has the total fallen below 11. The largest number in any year was 103 in 1896.

Whooping Cough.

No. of Cases } Fatality }	Not known.			
No. of Deaths	1897	40	1896	47
Mortality	„	0·31	„	0·37

The deaths recorded were ten below the average for 1887-96, 19 below that for 1887-91, and 1 below that for 1892-96. In North Paddington the deaths were 8, 15, and 2 below the corresponding averages, and in South 2 and 4 below, and 1 *above*. The mortality in North Paddington was 0·08 below the mean, and 0·06 below in South.

Fever.*

No. of Cases	1897	45	1896	62
No. of Deaths	„	7	„	16
Fatality	„	15·5	„	25·7
Mortality	„	0·05	„	0·12

The deaths in the Parish were nine below the average for 1887-96, in North Paddington 6, and in South Paddington 3. The mortality in the Parish was 0·07 below the mean, in North Paddington 0·06, and in South, 0·08. So small a number of deaths has not been recorded since 1892. The local rate was the lowest of all the rates mentioned in Table 16.

* See footnote to Table 17.

Diarrhœa.

No of Cases Fatality	Not known.			
No. of Deaths	1897	107	1896	66
Mortality	„	0·84	„	0·52

The deaths were 38 in excess of the average for the ten years, 39 above the average for 1887-91, and 36 above that for 1892-96. In North Paddington the deaths were 34, 35, and 33 above the corresponding averages, and in South Paddington 4, 4, and 3.

The mortality last year was 0·29 in excess of the mean, 0·37 in North Paddington, and 0·11 in South. This subject will be reverted to in speaking of the causes of death among infants.

Scarlet Fever.

No. of Cases	1897	491	1896	790
No. of Deaths	„	20	„	22
Fatality	„	4·0	„	2·7
Mortality	„	0·15	„	0·17

The fatality of this disease varies greatly in different epidemics, and is dependent chiefly on the virulence or mildness of the morbific element, on the season of the year in which the disease occurs, and on the hygienic surroundings of the patients. As a rule it has been observed that with an excessive number of attacks there is a diminished fatality.

The 20 deaths were one in excess of the ten years' average, four in excess of the average for 1887-91, and one *below* that for 1892-96. In North Paddington 16 deaths were recorded, a total equal to the decennial average, one above that for 1887-91, and one

below that for 1892-96. The four deaths in South Paddington were one in excess of the decennial average, three above that for 1887-91, and equal to that for 1892-96. The mortality last year was in excess of the mean in each case, being most so in South Paddington—0·11 as compared with 0·07.

DIPHTHERIA.

No. of Cases	1897	322	1896	242
No. of Deaths	„	65	„	67
Fatality	„	20·1	„	27·6
Mortality	„	0·51	„	0·52

In comparison with 1896, there was a slight diminution in the mortality from this disease, and a satisfactory reduction in its fatality. In four out of the ten years, 1887-96, higher totals of deaths have been recorded, viz., in 1888 (75), 1893 (69), 1894 (92), and 1896 (67).

Owing to the changes in the methods of classification of causes of deaths, and to the improved means of diagnosis, it has been thought desirable to include under the term "Diphtheria" in Tables 17 and 18, the deaths classified under the headings "Diphtheria," "Quinsy," "Croup," "Sore-throat," and "Laryngitis." The total deaths from these causes in 1897 numbered 73, three in excess of the ten years' annual average, 11 in excess of that for 1887-91, and four *below* that for 1892-96. The mortality based on the total of 73 was 0·57, 0·03 above the mean.

In North Paddington 65 deaths were recorded, 15 in excess of the annual average for 1887-91, equal to

that for 1892-96, and seven in excess of that for the ten years. The mortality 0·70, was 0·08 above the mean. In South Paddington eight deaths were recorded, four less than each of the three annual averages. The mortality, 0·23, was 0·11 *below* the mean.

The rate for diphtheria alone in 1897 (0·51), was 0·01 above the rate for the Metropolis, 0·27 above that for England and Wales, 0·20 above that for the 33 "Great Towns," 0·27 above that for the 67 "Large Towns," and 0·32 above that for the "Rest of England and Wales." (Table 16.)

The mortalities from this disease at ages under five years have been calculated for each sex in the Parish and its two sub-districts, for the years 1892-97 (Table 19). It will be noticed that no death has occurred in South Paddington from diphtheria at ages under one year during the period under review. In this age-group the great increase took place in the mortality among females in North Paddington. In the age-group 1-5 years there was an increase in the mortality among males, and a considerable diminution in that among females. In the last group the mortality increased in both sexes.

A fatality of 17·9 per cent. prevailed last year among the patients removed to hospital, as compared with 27·6 in 1896. Among the patients kept at home the fatality was 24·1, as compared with 27·2 in 1896.

TABLE 19.

Death-rates from Diphtheria.

Rates per 1,000 individuals in each Sex-age-group.

Age.		Paddington.		St. Mary.		St. John.	
		M.	F.	M.	F.	M.	F.
0-1 years.	1897	0·76	2·95	0·89	3·46	—	—
	Mean-rate, 1892-6	2·06	0·75	2·41	0·89	—	—
	1896	2·30	2·21	2·70	2·60	—	—
	1895	1·57	—	1·83	—	—	—
	1894	2·39	—	2·80	—	—	—
	1893	3·22	1·55	3·79	1·84	—	—
	1892	0·81	—	0·96	—	—	—
1-5 years.	1897	4·78	2·33	4·70	2·81	5·16	—
	Mean rate, 1892-6	4·40	4·11	4·43	4·55	4·18	1·99
	1896	5·64	4·44	5·75	4·86	5·09	2·43
	1895	3·57	3·04	3·74	3·66	2·68	—
	1894	4·97	7·05	5·72	8·26	1·32	1·27
	1893	4·34	4·23	3·59	4·32	7·91	3·78
	1892	3·47	1·80	3·37	1·65	3·91	2·49
5-15 years.	1897	1·18	1·19	1·33	1·15	0·53	1·39
	Mean rate, 1892-6	0·59	1·04	0·60	1·03	0·54	1·03
	1896	0·29	0·64	0·24	0·57	0·52	0·91
	1895	0·60	0·94	0·74	0·94	—	0·96
	1894	0·72	2·30	0·63	2·30	1·10	1·90
	1893	0·83	1·16	0·89	1·21	0·54	0·94
	1892	0·52	0·19	0·52	0·12	0·54	0·46

Deaths at ages above 15 years, not included in above:—

1892.....	2	1895.....	1
1893.....	5	1896.....	4
1894.....	3	1897.....	2

The foregoing diseases are known as the "Principal Zymotic Diseases," and the total deaths ascribed to them numbered 241, equal to a death-rate of 1·90 per 1,000. In 1896, 332 deaths were recorded from these causes, equal to a rate of 2·54. Last year's rate for Paddington compares favourably with the rates prevailing in the districts mentioned in Table 16.

The diseases in this group can be divided into two groups :—

(*a*) Those which are notified, and to the direct controlling of which much time and energy are devoted; and

(*b*) Those which are subjected to no *direct* controlling influence.

The former class includes smallpox, diphtheria, scarlet fever, and "fever," to which diseases 92 deaths were attributed during the year, equal to a death-rate of 0·728 per 1,000. The remaining diseases, constituting the second class, caused 149 deaths, equal to a rate of 1·180. In 1896 the rates from the diseases in each class were 0·837 and 1·706. In 1867, thirty years ago, the rates were 0·989 and 2·093, but the year was marked by the commencement of an epidemic of measles, and by the absence of any considerable amounts of diphtheria and diarrhœa.

PUERPERAL FEVER.

No. of Cases	1897	7	1896	11
No. of Deaths	,,	2	,,	4
Fatality	,,	28·5	,,	36·3
Mortality*	,,	0·02	,,	0·05

* Per 1,000 females living at all ages.

The deaths from this cause were well below the annual averages. The fatality was high, but there is more than a suspicion that the number of cases reported understates the prevalence of the disease. The last "Nomenclature of Diseases" issued by the Royal College of Physicians, directs that the term "Puerperal Fever" should no longer be used. The Legislature thus directs the notification of a disease under a name which the highest medical authority declares to be out of use and so affords an excuse for the non-performance of an exceedingly unpleasant duty.

Grouping puerperal fever with diseases of parturition, a total of twelve deaths is obtained, equal to a fatality of 0·4 per cent. of the births registered in the year. In North Paddington there were nine deaths (0·34 per cent. of the births), and in South three (0·70 per cent.)

The deaths during the year from all the other diseases mentioned in Tables 17 and 18 were below their respective annual averages, with the exception of those from Malignant Disease. The 114 deaths from this cause were 5 in excess of the ten years' annual average, and 10 in excess of that for 1887-91, but 2 *below* that for 1892-96. The mortality last year was 0·90, as compared with a mean rate of 0·86. The increase occurred entirely in North Paddington, where 84 deaths were recorded, 5 in excess of the annual average for 1887-96, 9 in excess of that for

1887-91, and 1 in excess of that for 1892-96. The mortality (0·90) was 0·05 above the mean.

DEATHS OF INFANTS UNDER ONE YEAR OF AGE.

In Table 20, the deaths of these children have been classified under the principal causes, and set out in comparison with the averages for the preceding decennium and the two quinquennia therein included. The total of such deaths during the year was 448—24 in excess of the annual average for the preceding decennium, and 43 in excess of the annual average for the five years 1887–91. If the decennial averages be multiplied by the factor 1·027 to correct for the difference between the annual average number of births during 1887–96 (2,930) and the number recorded last year (3,010), the "corrected" annual averages given in the last column but one of Table 20 will be obtained. On this basis, last year's deaths (448) were twelve in excess of the annual average, whilst the infantile mortality, calculated per 1,000 births registered, was 4 above the decennial mean (144).

Infantile Diarrhœa.—A good deal was written on this subject in the Annual Report for 1895 (pages 92 *et seq.*), and it will suffice here to deal only with the special phenomena of the year to supplement what was written in the Report mentioned.

TABLE 20.

Deaths of Infants under One Year.

(Averages adjusted to nearest whole numbers.)

	Uncorrected Averages.			Corrected Averages, 1887-96.*	1897.
	1887-91.	1892-96.	1887-96.		
Measles	8	13	11	11	1
Scarlet Fever	0	1	1	1	...
Whooping Cough	20	16	18	18	20
Diphtheria	3	4	3	3	5
Diarrhœa	49	56	52	54	83
Principal Zymotics ...	80	90	85	87	109
Syphilis	13	8	10	10	2
All other Zymotics ...	2	4	4	4	5
Total Zymotics ...	95	102	99	101	116
Want of Breast Milk ...	3	3	3	3	5
Tubercular Diseases ...	30	27	29	30	28
Premature Birth	50	59	54	56	57
Malformations	10	19	14	14	23
Convulsions	38	28	33	34	24
Bronchitis and Pneumonia	65	74	69	72	83
Dentition	9	7	8	8	6
Enteritis	4	19	12	12	27
Suffocation (overlaid) ...	11	12	11	11	7
Other Forms of Violence ...	5	3	4	4	5
Atrophy and Debility ...	56	55	56	58	45
All other Causes	29	34	32	33	22
Grand Total	405	442	424	436	448
Infantile Mortality per 1,000 births ...	139	149	144	144	148

* Obtained by factor $\frac{3010}{2930} = 1{\cdot}027$

The deaths registered as due to "diarrhœa" do not account for all the deaths caused by those morbid conditions which give rise to the high mortality of infants during the summer months. "Diarrhœa" is, after all, only a symptom of disease, and not a disease *per se*, and many practitioners prefer to attribute* the deaths to whatever conditions they may deem to have caused the diarrhœa. Hence, in dealing with the question, it is necessary to take note of deaths classified as "enteritis," "atrophy and debility," &c.—terms of but vague signification, and denoting pathological processes with which diarrhœa and wasting are most commonly associated.

From these three causes there were 155 deaths in the course of the year—viz., 83 from diarrhœa, 27 from enteritis, and 45 from atrophy and debility—a total of 35 in excess of the annual average for the ten years 1887–96. The records for each of the ten years are here set out :—

	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
Diarrhœa	51	25	54	50	64	62	54	38	72	54	83
Enteritis	7	0	5	4	5	13	11	5	43	25	27
Atrophy and Debility ...	39	53	47	69	73	73	62	38	48	55	45
Totals ...	97	78	106	123	142	148	127	81	163	134	155

* There is also a certain amount of "fashion" influencing the certification of deaths which has undoubtedly caused the transference of a considerable number of deaths from "atrophy and debility," and "diarrhœa" to "enteritis." This probably will account in part for the diminution in the number of deaths under "convulsions."

The mortality from diarrhœal affections is well known to be highest in the third quarter of the year, and, of the 155 deaths recorded last year, 111 were recorded in that quarter. Further, the prevalence of the disease varies somewhat with the temperatures recorded. The variations in the mean temperature of the air in each week of the three months, July, August, and September, with the corresponding variations in the temperature of the ground at a depth of three (3) feet, are set out in Table 21, together with

TABLE 21.

1897. Week ending	Greenwich Observations.			Deaths registered in the Parish (not corrected).		
	Mean Temp. of Air.	Diff. from Average for 50 years.	Mean Temp. of Earth at 3 ft.	Diarrhœa All Ages.	Enteritis. Under 1 yr.	Atrophy Under 1 yr.
July 3	64·4	+3·0	61·87	0	0	0
„ 10	61·5	-0·5	61·89	1	0	0
„ 17	65·5	+2·6	63·12	4	1	0
„ 24	66·9	+4·0	64·75	6	0	0
„ 31	64·6	+2·3	64·65	11	3	1
Aug. 7	68·1	+5·8	65·45	21	2	1
„ 14	63·6	+1·1	65·63	18	3	2
„ 21	62·0	+0·4	64·29	17	4	1
„ 28	59·6	-1·2	62·74	2	0	3
Sept. 4	56·8	-3·0	61·54	5	2	0
„ 11	54·2	-4·5	59·39	4	1	1
„ 18	54·6	-3·0	58·55	1	1	1
„ 25	55·4	-0·1	57·55	4	3	1
Oct. 2	56·5	+2·0	58·01	2	1	0

the deaths registered in the Parish in each week from the three causes dealt with in these paragraphs. The

numbers given under these last headings are not corrected for non-parishioners. The table shows that the mortality follows the rise and fall of the temperatures, but that temperature alone is not the efficient cause of the mortality is shown by Table 22, which compares the chief meteorological elements for the last four years (third quarters), and the deaths from diarrhœa only at four age-groups under one year of life.

TABLE 22.

		Third Quarters of			
		1894.	1895.	1896.	1897.
Greenwich Observations.	Mean Temperature (F°)	55·5	62·3	63·0	59·5
	„ Daily Range „	16·5	20·5	17·9	18·7
	„ Humidity of Air (Saturation=100)	81	73	74	73
	Total Rainfall, inches	7·56	6·50	8·60	6·34
	Bright Sunshine, percentage of "possible" recorded ...	23·5	30·6	25·4	43·9*
	Mean Velocity of Wind in miles per hour	10·3	11·0	10·6	11·0
Deaths of Parishioners.	Deaths from Diarrhœa, 0—3 months ...	7	12	9	21
	„ „ 3—6 „ ...	9	19	20	31
	„ „ 6—9 „ ...	12	14	10	18
	„ „ 9— „ ...	6	6	6	8
	Total under 1 year	34	51	45	78

* A new globe fixed to recorder in January. Results in former years found to be too low.

Of the infants dying of diarrhœal affections, 77 were males and 78 females; whilst, of the

whole, no fewer than 139 (out of 155) were residents in North Paddington, and only 16 of South. This will be better appreciated in the form of rates per 1,000 children born in each district, the rate for North Paddington being 53·7, that for South 37·7.

TABLE 23.

Deaths recorded at ages under One Year from Diarrhœal Affections. 1892-97, third quarter of each year.

		Under 7 dys.	Weeks.			Months.										Totals under 1 year.
			1-	2-	3-	1-	2-	3-	4-	5-	6-	7-	8-	9-	10-	11-	
1892.	Diarrhœa ...	...	1	...	2	4	6	11	9	2	4	3	2	...	4	2	50
	Enteritis ...	1	...	...	...	1	4	...	1	...	1	...	1	...	...	...	9
	Atrophy ...	2	1	...	1	3	3	2	2	2	2	...	1	2	...	...	21
1893.	Diarrhœa ...	...	...	...	2	6	8	6	4	4	2	3	2	2	1	4	44
	Enteritis* ..																
	Atrophy ...	...	2	2	3	...	6	1	3	2	1	1	1	...	1	...	23
1894.	Diarrhœa ...	...	1	...	...	3	3	3	3	3	5	6	1	4	1	1	34
	Enteritis* ..																
	Atrophy ...	...	...	...	2	3	2	3	1	1	...	1	1	1	...	...	16
1895.	Diarrhœa ...	...	1	...	...	8	3	4	8	7	5	5	4	1	3	2	51
	Enteritis ...	...	3	2	...	5	4	2	2	1	1	3	1	1	...	...	25
	Atrophy ...	...	1	...	1	6	1	..	2	1	...	...	...	...	...	...	12
1896.	Diarrhœa ...	...	1	2	...	5	1	12	4	4	2	5	3	1	2	3	45
	Enteritis ...	1	1	...	...	2	2	4	...	4	...	3	1	...	...	1	19
	Atrophy ...	2	2	3	2	3	3	1	3	2	1	...	...	...	...	...	22
1897.	Diarrhœa ...	...	...	4	1	6	10	6	16	9	2	8	8	3	3	2	78
	Enteritis ...	...	...	1	...	1	3	7	3	3	3	1	...	...	...	...	22
	Atrophy ...	1	...	1	1	2	2	1	...	2	1	...	...	...	...	...	11

* Not taken out.

The ages at which summer diarrhœa is most fatal are shown by the figures in Table 23, which

deals with the third quarter of each of the six years 1892–97. Taking the deaths from diarrhœa alone, it appears that, at ages under six months, the number dying in each year from 1892 onwards was 35, 30, 16, 31, 29, and 52; whilst the numbers at ages above six months were 15, 14, 18, 20, 16, and 26. This shows the heavier incidence on the younger children, and also the smaller range of mortality among children in the older group, among whom a fairly constant mortality from this cause appears to have prevailed.

As it has not been possible to get out information as to the social status of the parents of the deceased, that part of the subject must be left for future consideration. The streets in which the deaths from diarrhœa occurred were given in the Appendices to the Reports for the third quarters of the years (*q.v.*).

What, then, is the cause of this mortality? The answer may be given in one word—"Dirt." Dirt in the soil, in the streets, in the house, on the person, and last, and perhaps most important of all, in the food. It has been shown on many occasions that nearly all infants dying of diarrhœal affections are "hand" (i.e., "bottle") fed, and therein lies the *causa causans* of the mortality. Sour neglected bottles will suffice to kill children under conditions otherwise favourable to life, and when to such poisoning by the bottle there is added starvation by the use of condensed milks of the cheaper sort—

many deprived of as much as 95 per cent. of the natural fat (cream)—the marvel is rather that so many children survive their trials than that so many die. Sanitary supervision can do much towards mitigating this scourge, but more must be done by the individual parent. The most effective means of obviating the annual loss of life from diarrhœa are the instruction of girls in the need of real cleanliness in the home, and the abandonment of artificial feeding.

DEATHS OF ILLEGITIMATES.

The deaths of 47 illegitimate children were registered during the year, 36 under 1 year of age, 9 at ages between 1 and 5 years, and 2 at ages exceeding 5 years. Of the 47 deaths, 38 were registered in North Paddington, and 9 in South. The mortality among illegitimate children under 1 year was at the rate of 336 per 1,000 illegitimate births, as compared with a rate of 141 among legitimate children. The appended statement shows the numbers of deaths due to certain causes, and the occupations of the mothers of the children. The death of one infant was registered without certificate from medical practitioner or coroner's inquest.

TABLE 24.—Deaths of Illegitimate Children.

1897.	Paddington.					
	0-1		1-5		5 & over.	
	M.	F.	M.	F.	M.	F.
Quarter 1st	4	2	3	1	...	...
„ 2nd	2	2	1	1	1	...
„ 3rd	7	9	2	...	1	...
„ 4th	5	5	1	...	...	...
Year	18	18	7	2	2	...

Causes of Death.

	0—1.		1—5.		5 & over	
	M.	F.	M.	F.	M.	F.
Measles	1	0	0	0	0	0
Whooping cough	0	0	1	0	0	0
Diphtheria	0	0	0	0	1	0
Diarrhœa	4	6	0	0	0	0
Dietic Diseases	1	0	0	0	0	0
Tubercular Diseases	1	1	1	2	0	0
Developmental Diseases ...	2	3	0	0	0	0
Bronchitis and Pneumonia ...	3	3	3	0	0	0
Gastro-enteritis	3	2	0	0	0	0
Accident and Violence ...	1	1	0	0	0	0
Ill-defined Causes	1	1	0	0	0	0
All other Causes	1	1	2	0	1	0
Totals ...	18	18	7	2	2	0

Occupations of Mothers.

Domestic Employment				35
Servant	14	General Servant ...	7	
Cook	6	House-maid	7	
		Charwoman	1	
Laundry Workers				2
		Laundress	2	
Commercial Employées				6
Tailoress	1	Shopwoman		1
Dressmaker ...	3	Barmaid		1
No occupation, or occupation not stated				4

INQUEST CASES.

During the year, 133 deaths were registered on the Coroner's certificate after inquest. The deaths included 75 from "natural causes," 6 "by misadventure," 36 from accidents, 7 from suicide, and with respect to 6 the findings were "open." (See Table 25.)

TABLE 25.

Inquests on Parishioners, 1897.

Finding of Jury.	Paddington.	St. Mary.	St. John.
Natural Causes	75	58	17
By Misadventure	6	5	1
Accidental Death	36	26	10
Manslaughter	—	—	—
Wilful Murder	3	2	1
Suicide	7	6	1
Open	6	4	2
Totals...	133	101	32

The accidental deaths were attributed to the following causes :—

Vehicular Traffic	6	Falls, not exactly specified ...	6
Railway do.	3	Overlaid in bed	5
Fires, not conflagrations ...	5	Drowned in Canals	2
Accidents at Birth	2		

and one from each of the following miscellaneous causes : —

Mishandling a revolver.
Upsetting boiling water.
Kick from horse.
Injury to foot by boot.
Nutshell in windpipe.
Window cleaning.
Suffocation in a fit.

DEATHS IN INSTITUTIONS.

In the local institutions there were 519 deaths, including 269 of non-parishioners; and, in institutions beyond the limits of the Parish, 163 deaths of parishioners occurred. In all, 401 deaths of parishioners took place during the year in public institutions, equal to 22·1 per cent. of all deaths.

LOCAL INSTITUTIONS.

Paddington Workhouse & Infirmary ...	192,	including	16	non-parishioners.	
Lock Hospital	2,	„	2	„	
Children's Hospital, Paddington Green	63,	„	45	„	
St. Mary's Hospital	262,	„	206	„	

OUTLYING INSTITUTIONS.

Hospitals of the Metropolitan Asylums Board					54
Scarlet fever ...	17	Diphtheria	37		
General Hospitals					35
Cancer	10	Tubercular diseases ...	1		
Other diseases, 24.					
Special Hospitals					14
Cancer	3	Tubercular diseases ...	6		
Other diseases, 5.					
"Homes"					7
Cancer	4	Tubercular diseases ...	2		
Other diseases, 1.					

OUTLYING INSTITUTIONS.—*Continued.*

Lunatic Asylums				37
Tubercular diseases...	4	Cancer	2	
Other diseases, 31.				
Poor Law Institutions				4
Tubercular diseases...	1	Other diseases ...	3	
"Elsewhere"				12
Tubercular diseases...	1	Other diseases ...	11	

Of the 163 deceased persons, 27 were residents of South Paddington.

WATER SUPPLY.

The water supplied to the district by the West Middlesex and Grand Junction Waterworks Companies has maintained its excellence, that of the former Company being on the whole the better. Table 26 shows the amount of, and range of variation in, the purification effected by the settlement and filtration which the water undergoes before distribution, and Table 27 compares the mean results of last year with those of the three preceding years.

Valuable as are the results and information obtained by the chemical analysis of a water of known composition, especially when such analysis is made at frequent intervals, it is necessary to supplement it by biological examination and inspection of, and supervision over, the area whence the water is derived. The biological examination of water is as yet but imperfectly understood, and usually consists in an enumeration of the number of "colonies" which may be developed from a minute standard quantity of water. On special occasions a careful search will be made for such micro-organisms as are known to be

TABLE 26.

Comparison of Analyses of Thames Water and the Water Supplied to Paddington.

(From the Registrar-General's Annual Summary.)

1897.			Thames (unfiltered water.)	From Mains of West Middlesex Co.	From Mains of Grand Junction Co.
	Temperature (degrees Centigrade)	mean	10·4	9·8	11·6
		max.	20·0(8)*	18·1(8) †	20·8(8)
		min.	3·8(2)	5·5(2)	5·7(2)
Parts per 100,000 of water.	Total Solids	mean	29·81	27·50	29·02
		max.	34·00(1)	31·86(1)	33·14(1)
		min.	27·60(9)	23·74(7)	25·32(8)
	Organic Carbon	mean	0·274	0·159	0·162
		max.	0·602(2)	0·280(1)	0·302(2)
		min.	0·158(11)	0·093(6)	0·108(6)
	Organic Nitrogen	mean	0·043	0·019	0·020
		max.	0·076(2)	0·032(1)	0·031(1)(2)
		min.	0·027(4)	0·010(9)	0·011(6)
	Ammonia	mean	0·009	—	—
		max.	0·014(11)	—	—
		min.	0·004(8)(9)	—	—
	Nitrogen as Nitrites and Nitrates	mean	0·223	0·223	0·251
		max.	0·294(1)	0·291(2)	0·321(11)
		min.	0·142(8)	0·125(8)	0·136(8)
	Chlorine	mean	1·8	1·8	1·8
		max.	2·0(12)	1·8 ‡	1·9 §
		min.	1·7(2-5)	1·7 ‡	1·7(2)(4-6)
	Degrees of Hardness	mean	20·1	19·5	19·1
		max.	22·7(1)(4)	22·7(1)	23·3(1)
		min.	16·3(8)	16·6(8)	16·9(8)(9)

* The figures shown thus ( ) indicate months of observation. † No record for September. ‡ 1·8 during Jan., Mar., June, and Aug.-Dec. 1·7 during other months. § 1·9 during Jan. and Oct.-Dec.

the cause of disease, whose presence in a given sample might be expected by reason of the occurrence of epidemic disease. Very little is at present known of those microbes which may be called indigenous to water supplies, or of the significance of their presence. Some waters, such as those derived from deep wells, are entirely free from microbes.

For some time past, Sir Edward Frankland, the Water Examiner, has collated the gaugings of the volume of water flowing through the bed of the Thames, and the number of microbes present in each c.c. of water at the time of the gauging. His observations show that the microbes are most numerous in flood times. He has also enumerated the microbes present in the water at various stages of settlement and filtration, and when it is pumped into the mains. The purification (*quâ* micro-organic life) effected by the two Companies supplying the Parish last year was as follows :—

1897.		West Middlesex.	Grand Junction.
Amount of storage, days' supply		19·4	3·4
Average thickness of sand on filters, in feet		2·75	2·25
Average rate of filtration, gall. per sq. ft. per hour		1·33	1·8
Percentage of microbes removed.	Maximum ...	99·89	99·92
	Minimum ...	97·52	89·33
	Average ...	99·40	98·46

Having regard to the observation of the excess of microbes in the river water during flood time, it is satisfactory to note that the West Middlesex Company have already increased their storage capacity from 5·6

(in 1896) to 19·4 days, and that the two Companies have initiated magnificent schemes of storage which will, it is hoped, enable them to avoid taking water from the river during floods.

TABLE 27.

Comparison of mean results of analyses, 1894-9 7.

		Mean Temperature C°.	Parts per 100,000 pts. of Water. (Means of all Analyses.)						
			Total Solids.	Organic.		Ammonia.	Nitrogen as Nitrites and Nitrates.	Chlorine.	Hardness 1 degree = 1 pt. Ca CO_3.
				Carbon.	Nit'g'n.				
West Middlesex Water Co. ...	1897	9·8	27·50	0·159	0·019	0·000	0·223	1·8	19·5
	1896	11·1	28·54	0·161	0·024	0·000	0·205	1·9	19·8
	1895	9·8	28·57	0·159	0·021	0·000	0·233	1·8	19·3
	1894	10·9	28·12	0·207	0·024	0·000	0·216	1·9	18·4
Grand Junction Water Co. ...	1897	11·6	29·02	0·162	0·020	0·000	0·251	1·8	19·1
	1896	12·7	28·46	0·163	0·022	0·000	0·217	1·9	19·8
	1895	11·8	28·74	0·147	0·019	0·000	0·239	1·8	19·6
	1894	12·3	28·96	0·202	0·024	0·000	0·226	1·9	18·9

It is not pleasant to recall the fact that the bulk of the water supplied to the Metropolis has already passed, more than once, through the systems of various animals, not excluding man, but it cannot be denied that the existing supply has hitherto proved to be a safe one. There has been no epidemic of disease since 1866 traceable to the water-supply, and each year the condition of the river is being improved, and

the theory and practice of filtration becoming better understood.

A demand that the water-supply of the Metropolis shall be beyond all chances of pollution rests on something more than theory, but it is unfortunately only too often necessary to reduce the demand for the ideal to the limits of the practicable. The question is, therefore, whether the existing supply, heretofore found safe, and calculated to suffice for the needs of the population for many years, should be abandoned in favour of a new source from some distant part such as Wales. The latter water may well be purer at its source than the existing supply, but the chances of dangerous pollution in transit would be enormous. It seems more rational to extend the work of purifying the river by compelling all riparian residents to so deal with their waste products that no living organism shall pass into the river, and to perfect the system of filtration and storage. The control of the water beyond the waterworks requires more attention to eliminate the risks incurred in the mains and in the house cisterns.

ADMINISTRATIVE WORK.

In so far as statistics can indicate the work accomplished by the Department, the year's record will be found in Table VI. in Appendix A (page 97).

Infectious Disease.—During the year, 1,124 visits of inquiry have been made with respect to infec-

tious diseases, 791 rooms have been disinfected, and 36 tons of bedding, &c., removed for steam disinfection and purification.

Under Sections 62 and 65 of the Public Health (London) Act, 1891, notice of the provisions of the said sections and of the penalties incurred for infringement thereof must be served on the "master of the house or part of the house . . . in which . . . there is a person suffering from a dangerous infectious disease." The service of such notice is now effected under cover of "letter of advice" from the Medical Officer of Health, with which are enclosed a sheet of precautions suggested for the prevention of spread of infection, and blank certificate of freedom of infection. It is satisfactory to be able to report that in one case only since the introduction of this system has a medical practitioner refused to sign the certificate of recovery, and that in nearly every case the disinfection required is carried out by the Vestry Officials, and not done privately. It is somewhat anomalous that the Legislature should provide for the local authority being promptly informed of the onset of infection, but leave the matter of certification of recovery or freedom from infection—by which alone can the patient or his guardian be relieved of his responsibilities under the sections of the Public Health (London) Act, 1891, dealing with infectious diseases—to the willingness of the medical profession to co-operate with the Sanitary Officials. In all cases of puerperal

fever, the midwives and nurses are specially warned not to attend further cases until efficient disinfection shall have been carried out.

During the year a system of inter-notification has been inaugurated by the Department, and Medical Officers of Health of other districts are now advised of the occurrence of cases in this Parish due to infection acquired elsewhere, of cases imported from outside districts, &c. Duplicates of all notices sent to teachers of schools situated in other districts are sent to the Medical Officers of those districts.

At present there is no provision for the bacteriological diagnosis of diphtheria and enteric fever. Such examination is useful for the decision of doubtful cases, for the detection of cases which might otherwise remain unknown and lead to the dissemination of disease, and for the safe determination of freedom of infection on recovery of the patients. There can be little doubt that systematic bacteriological examination effects an economy in expenditure for hospital isolation, saves much anxiety to the relatives of patients, and conduces to the general health of the inhabitants of the district by the elimination of possible foci for the spread of infection.

In accordance with the provisions of the 60th Section of the Public Health (London) Act, 1891, the Vestry has provided temporary accommodation for persons excluded from the use of their homes during the processes of disinfection. The "Family Shelter"

has been opened since September, 1895, and has been most useful. During 1897, 144 individuals were accommodated, comprising 92 adults and 52 children, in 52 families. The stay in each instance has ranged from one night to three days. The house has on more than one occasion been used to receive members of families of patients needing isolation in hospital, but for whom accommodation could not be immediately obtained. The annual expenditure is very trifling, under £50.

Messrs. Armfield, the Contractors for the disinfection of bedding, &c., have done their work satisfactorily. During the year a total of £1,109 was paid for this work, as compared with £1,284 and £881 in 1896 and 1895. It is hoped that the work of erecting the new Disinfecting Station will be almost complete, if not finished, before the end of the current year.

The fumigation of rooms is still effected with sulphur di-oxide gas, evolved from the combustion of cake sulphur or (occasionally) of carbon bisulphide. A report on the results of the process of disinfection, will be found in Appendix B (page 99).

During the twelve months, £88 have been expended on disinfectants—viz., £43 for sulphur and carbon bisulphide, and £45 for soap, powder, &c., for free distribution.

There is an increasing need of a reception-house for the bodies of persons dying in small tenements,

both from infectious or other maladies. A scheme for new mortuary, &c., is before the Vestry, and it is hoped that a mortuary chapel—separate and distinct from the buildings set apart for inquest purposes—will find a place among the proposals adopted by the Vestry.

Houses let in Lodgings.—The registration of such houses in pursuance of Section 94 of the Public Health (London) Act, 1891, was commenced at about the middle of the year, an additional Inspector being appointed temporarily for the work. Inasmuch as this was the first occasion of putting these provisions into effect, some opposition was expected, but happily not experienced. The work up to the end of the year had gone on smoothly, and, on the whole, had the co-operation of the house owners. It is too early to say anything of the effect of such registration, but a good result may confidently be expected to follow the reduction in aggregation of population which has taken place, and still more, perhaps, from the annual cleansing required. Even better results would be obtained, could painted and distempered walls be accepted for living rooms; but there seems to be a prejudice against such decoration, cheap papers being preferred.

It was noticed, in going through the second street selected for registration, that many families displaced from the first street had migrated to the second, some to make a further move on, as the houses in the second street were registered.

Between the commencement of the work in June and the end of the year, 311 houses were visited for the purposes of registration, 168 demands for particulars issued, and 1,235 rooms measured up, and their cubic contents calculated. At the end of the year 86 houses were on the Register.

From an examination of the Register, it appears that there was not that amount of overcrowding in Woodchester and Clarendon Streets which was commonly reputed to exist. This means that, as a rule, the tenements were not occupied to the fullest extent permissible under the Bye-laws, which prescribe 400 cubic feet for adults, and 200 cubic feet for children under ten years of age, for the inhabitants of rooms used for the double purpose of living and sleeping. Such an extreme aggregation of individuals as is permissible under these conditions is by no means desirable, although legal. With very few exceptions, the water-closet accommodation was insufficient for the inhabitants of the houses.

House Drainage.—Regulations governing the re-draining of houses have not yet been adopted by the Vestry. The lack of such regulations makes the work of securing good drainage difficult, inasmuch as owners do not know what they have to do, and are inclined to think that the proposals of the Vestry's Officers are in excess of their legal powers. The London County Council have not yet issued Bye-laws under the 202nd Section of the Metropolis Local

Management Act, 1855, a draft of which was sent to the Vestry in January of last year.

During the year several systems of combined drainage have been dealt with. Orders were made under Section 74 dealing with combined systems of drainage :—

(NEW DRAINAGE WORKS)

Workshop and Stable in Hormead Road.
The Flats, St. Mary's Terrace.
The Drill Hall, 207, Harrow Road.
23 and 24, London Street.
346, 348, and 350, Harrow Road.
46, Westbourne Terrace North and 29, Ranelagh Road.

(OLD DRAINAGE WORKS)

2 and 3, Polygon Mews.
13 and 14, Church Place.
25 and 26, Pickering Place.
286, Elgin Avenue, and 166, Portsdown Road.
20 and 22, Westbourne Park Road.
20 and 21, Devonshire Terrace.
97 and 99, Westbourne Park Road.

In each case of old work, application for consent of the Vestry was made in the first place.

A complete examination has been made of the building plans in the care of the London County Council, as successors to the Metropolitan Commissioners of Sewers.

The work involved the examination of—

16 Vols. of Petitions or Applications from 1847 to 1855;
67 „ Court Papers;
31 „ Court Minutes:
1 Vol. of General Orders; and
25 Vols. of Minutes of General and Works Committee.

There were discovered 145 Petitions for combined drainage works, relating to 1,040 houses or premises, and 88 plans accompanying the Petitions, relating to somewhere about 888 houses. Copies were made of all the petitions and plans, and are now in the custody of the Vestry's Surveyor.

An examination of the Acts of Parliament* under which the Commissioners of Sewers acted shows that there was no provision for combined drainage at all, and that it was intended that each house should have its own independent drain. No formal order as to construction of drainage was made by the Commissioners prior to October, 1851, but the production of the petition and plan has hitherto been deemed sufficient for the requirements of the definition included in Section 112 of the Metropolis Management Act, 1862.

Trade Supervision.—All the cowsheds, slaughter-houses, and bake-houses in the Parish have been systematically inspected at the end of each half-year, and at such other times as appeared necessary. The premises occupied by milk-vendors and bakers were specially inspected during the year and detailed Registers are in course of compilation.

Under the 26th Section of the Factory and Workshop Act, 1891, the District Inspector of Factories forwards to the Sanitary Authority notices of new workshops opened in the Parish. During the year seven such notices have been received, the workrooms being duly inspected and entered on the Register. When a workroom is first inspected, it is measured, a report on it entered in a Register, and a card issued to the proprietor indicating how many persons may

* 11 and 12 Vic. c. cxii.; 12 and 13 Vic. c. xciii.; 14 and 15 Vic. c. lxxv.; 15 and 16 Vic. c. lxiv.; 16 and 17 Vic. c. cxxv.; and 17 and 18 Vic c. cxi.

be employed in it, the card to be hung in the room. The total number of rooms so inspected, measured, and entered in the Register during the year was 42. The District Inspector of Factories forwarded five complaints of insanitary conditions in workrooms, including 3 cases of dirty premises, one of overcrowding, and one of defective sanitary fittings. The matters complained of were remedied as soon as brought to the notice of the occupiers of the workrooms. The total number of inspections under the Factory Acts was 158, excluding bake-houses, &c.

The working of the Factory and Workshop Acts can hardly be called satisfactory. There is good reason to believe that the seven new workrooms reported through the Home Office do not represent all the rooms opened in the course of the year, and it is desirable that more inspections should be made by the local officials. It has, however, been found impracticable to do this, the time of the Vestry's Staff being fully occupied with other work.

Manure Nuisance.—There was the usual recurrent difficulty in connection with the manure during the summer months, hay-harvest time. With that exception, there was no cause for complaint, except of effluvia from the removal of peat-moss manure. There is no doubt that the use of this litter should be put under more restrictive regulation. It is saturated with urine and dung when removed from the stall (the excremental matters forming a far larger pro-

portion of peat than of straw manure), and emits a particularly nauseating odour when turned over. The manure should be removed from metropolitan stables daily, or, if kept on the premises for more than twenty-four hours, should be loaded direct from the stall into covered carts for removal without further handling. It is said that, if the stored peat manure be sprinkled with a dilute solution of vitriol (sulphuric acid), less smell is given off; but this has not, so far as is known, been tried in this district.

The County Council have recently taken the views of the various Metropolitan Local Authorities as to the desirability of obtaining legislation to provide for the making a charge for removal of manure under Section 36 of the Public Health (London) Act, 1891. Under Sub-section 1 of that section the Vestry has the option to make an agreement with horse owners for the removal of manure by the Vestry; but, as the sub-section now reads, there is no provision for making a charge or rate for such work, or for the speedy recovery of any expenses incurred. It would facilitate the removal of manure from the Parish, were the work done by the Vestry, but it is probable that the difficulty of the final disposal of the manure would be increased.

Legal Proceedings.—The notices issued during the year numbered 1,060, and included 861 written intimations pursuant to Section 3 of the Public Health (London) Act, 1891; 99 notices under the

4th and other Sections of the Act; and 100 notices of infringement of Bye-laws made under the same Act. Only 5 summonses were issued, under the Act, that number, however, not representing the total number of instances in which legal proceedings were authorised. In all cases, other than the five in question, the works necessary were carried out without the issue of a summons. The cases heard before the Magistrate were:—

2, Elgin Mews, North...	Order agreed to...	No costs.
85, Cirencester Street ...	Order made ...	Costs, 16s. 6d.
41, Do. ...	do. ...	do. do.
32, Portnall Road ...	do ...	do. 25s. 0d.
6, Thorngate Road ...	do. ...	do. 21s. 0d.

Under the Sale of Food and Drugs Acts, 20 summonses were taken out, the results of the same, being set out below:—

FOR YEAR 1897.

Sample Adulterated.	Extent of Adulteration.	Fine Imposed			Costs Imposed.		
		£.	s.	d	£	s.	d.
Milk ...	30% Cream abstracted	10	0	0	0	12	6
do. ...	5% added Water	3	0	0	0	12	6
do. ..	9% do.	0	10	0	0	12	6
Butter ...	45% Margarine	3	0	0	0	12	6
do. ...	50% do.	2	0	0	0	12	6
Milk ...	17% added Water	2	0	0	0	12	6
do. .	7% do.	1	0	0	0	12	6
do. ...	10% do.	1	0	0	0	12	6
do. ...	15% Cream abstracted	1	0	0	0	12	6
do. ...	7% added Water	2	0	0	0	12	6
do. ...	6% do.	1	0	0	1	1	0
Butter ...	85% Margarine	1	0	0	0	12	6
Milk ...	7% added Water	3	0	0	1	3	0
Butter ..	80% Margarine		—		1	3	0
do. ..	70% do.	1	0	0	1	3	0
do. ...	98% do.	5	0	0	1	5	0
Coffee ..	5 % Chicory	1	0	0	1	5	0
Butter ...	80% Margarine		—		0	12	6
Milk ..	7% added Water	3	0	0	1	3	0
do. ...	12% do.	2	0	0	1	0	0

No new legislation has been effected during the year, but two Bills based on the Report of the Food Products Committee were brought before the House of Commons, one in the early part of the session by Mr. Kearley and others as a private measure, and the second in the last weeks of the session by the Government. The former measure, although not entirely acceptable, was a fairly successful attempt to give effect to the Report of the Committee, the latter a perfunctory fulfilment of a pledge given earlier in the session. Both Bills were included in the "slaughter of the innocents."

The subject of the amendment of existing legislation was referred to the Sanitary Committee by the Vestry, and ultimately the Committee presented a full Report on the reference, together with the following recommendations, which were adopted by the Vestry *nem. con.* : –

(*a.*) That all receptacles, trucks, &c , used for distributing food stuffs, should be marked with the name and address of the owner, and that penalties should be prescribed for failure to so mark or for falsely marking.

(*b.*) That mixtures should be labelled as such in letters of minimum size, either on a separate label to be attached to the package after making up, or printed on the wrapper in such a position that they shall be conspicuously visible when the package is made up.

That the composition of mixtures sold under registered trade marks should be disclosed and recorded at the time of registration and entered on the certificate of registration, and the proportions of the ingredients of other mixtures should be set out on the label. Mixtures sold under registered trade marks to be sold in the manufacturers' packages only.

(*c.*) That where a sample has been referred to Somerset House by the magistrate, the Government analyst and the public analyst should be liable to be called as witnesses for cross examination, as to methods of analysis and interpretations of results, at the adjourned hearing.

(*d.*) That the sample should be divided on all occasions into four parts, one to be given to the vendor, one to the public analyst, and two to be retained by the local authority for future use, if required.

(*e.*) That the retailer should notify the local authority within *seven* days of service of summons of his intention to rely on the warranty of the wholesale vendor; and that the invoice of the wholesale vendor, if established in the United Kingdom, should be deemed a warranty. In such case one of the reserved portions of the sample should be forwarded to the wholesale vendor, and a summons be issued forthwith against him, returnable on the same day as the summons against the retailer. In the event of the retailer proving that he sold the sample in the same state as he received it from the wholesale vendor, the summons should be dismissed against the retailer and the wholesale vendor bear the costs of the prosecution of the retailer as well as his own. On the other hand, should the summons against the wholesale vendor be dismissed, and the retailer be convicted, the latter should pay the costs of the proceedings against the former. No defence to stand with respect of a warranty on the part of any wholesale or retail vendor not established within the United Kingdom.

(*f.*) That a minimum fine should be prescribed for the second offence, and imprisonment without the option of a fine, at the discretion of the magistrate, to be prescribed for third and subsequent offences.

(*g.*) That all convictions, subsequent to the first, whether for the same form of adulteration or otherwise, should be advertised by the defendant in such papers and on so many occasions as the Court may direct at the expense of the defendant, the Court to have the power to direct the local authority to insert the advertisements and to recover the expenses from the defendant.

TABLE I.

Year.	Estimated Populations at Middle of each Year.		Births Registered.		Deaths of Parishioners.	
	St. Mary.	St. John.	St. Mary.	St. John.	St. Mary.	St. John.
1897 ...	92,788	33,465	2,586	424	1,455	355
1896 ...	91,350	33,500	2,613	455	1,583	359
1895 ...	90,577	32,173	2,526	453	1,671	428
1894 ...	88,949	32,551	2,423	411	1,449	382
1893 ...	87,708	32,772	2,567	444	1,680	473
1892 ...	86,111	33,149	2,456	478	1,632	510
1891 ...	84,156	33,682	2,420	532	1,590	520
1890 ...	82,091	36,645	2,389	512	1,602	502
1889 ...	80,324	36,736	2,346	517	1,266	398
1888 ...	78,939	36,810	2,331	512	1,472	444
1887 ...	77,578	36,884	2,368	548	1,346	439
Averages for 1887-96	84,464	35,192	2,443	486	1,529	445

TABLE II.

Year.	Per 1,000 of Estimated Population.		Deaths of Infants under 1 year.		Deaths of Children aged under 5 years per 1,000 Deaths at all ages.	Deaths in Public Institutions.				
	Birth-rates.	Corrected Death-rates.	Per 1,000 Births Registered.	Per 1,000 Deaths at all ages.		Paddington Workhouse and Infirmary.	St. Mary's Hospital.	Lock Hospital.	Children's Hospital, Paddington Green.	Outlying Institutions.
1897 ...	23·84	14·33	148	263	396	192	262*	2	63	163
1896 ...	24·2	15·3	155	245	398	188	334	2	48	160
1895 ...	24·3	17·1	164	233	330	204	332	1	17**	156
1894 ...	23·3	15·0	135	210	351	165	347	3	†	193
1893 ...	25·2	17·9	148	209	321	204	399	3	†	172
1892 ...	24·2	18·0	148	203	319	236	355	7	12	120
1891 ...	25·1	17·9	148	207	298	257	371	5	62	105
1890 ...	24·4	17·7	157	216	347	172	358	3	57	100
1889 ...	24·5	14·2	138	238	333	172	344	2	70	70
1888 ...	24·6	16·6	133	193	343	207	334	5	64	78
1887 ...	25·5	15·6	122	200	316	181	347	6	50	67
Averages for 1887-1896.	24·53	16·53	145	215	336	199	352	4	52 (7 years)	122

* Hospital closed for some weeks for repairs, &c. ** Hospital recommenced work in 3rd quarter of the year.
† Closed during re-construction.

TABLE IV.

Showing the Number of Deaths at all ages in 1897, from certain groups of Diseases, and proportions to 1,000 of Population, and to 1,000 Deaths from all causes; also the Number of Deaths of Infants under one year of age from other groups of Diseases, and proportions to 1,000 Births and to 1,000 Deaths from all causes under one year.

Division I. (all ages).	Total Deaths registered.	Deaths per 1,000 of Population, at all ages.	Deaths per 1,000 of Total Deaths, at all ages.
1. Principal Zymotic Diseases	274	2·17	151·3
2. Pulmonary Diseases...	318	2·51	175·6
3. Principal Tubercular Diseases	172	1·36	95·0

Division II. (Infants under One Year).	Total Deaths.	Deaths per 1,000 of Births.	Deaths per 1,000 of Total Deaths under One Year.
4. Wasting Diseases ...	111	36·8	247·7
5. Convulsive Diseases...	72	23·9	160·7

NOTICE.

1. Includes Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus, Enteric (or Typhoid), and Simple Continued Fevers, and Diarrhœa. 55 of the deaths occurred in Hospitals situated beyond the limits of the District.
3. Includes Phthisis, Scrofula, Tuberculosis, Rickets, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Debility, Want of Breast Milk, and Premature Birth.
5. Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE III.

MALES. WHOLE PARISH.

Deaths Registered from all Causes during the Year 1897.

NOTE.—The Deaths of Non-Residents occurring in Public Institutions situated in the District are excluded, and the Deaths of Residents occurring in Public Institutions situated beyond the limits of the District are included.

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
CLASSES.												
I. SPECIFIC FEBRILE, OR ZYMOTIC DISEASES	58	51	14	3	5	2	9	6	4	3	..	155
II. PARASITIC DISEASES	...	...	...	...	...	...	...	...	...	...	...	...
III. DIETIC DISEASES	3	...	...	...	3	3	2	1	...	...	...	12
IV. CONSTITUTIONAL DISEASES	16	13	11	12	23	23	36	21	9	6	...	170
V. DEVELOPMENTAL DISEASES	40	...	1	...	...	...	..	1	4	11	7	64
VI. LOCAL DISEASES	92	33	12	13	22	33	56	72	77	32	4	446
VII. DEATHS FROM VIOLENCE	4	1	3	4	3	5	4	7	4	1	1	37
VIII. DEATHS FROM ILL-DEFINED and NOT SPECIFIED CAUSES	22	...	...	...	...	...	..	...	...	...	...	22
TOTALS	235	98	41	32	56	66	107	108	98	53	12	906
I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASE.												
1.—MIASMATIC DISEASES.												
Smallpox... *a.* Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox... *b.* Unvaccinated	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox... *c.* No Statement	...	...	...	...	...	...	...	...	..	...	...	...
Measles	1	...	...	...	...	...	...	...	...	...	...	1
Scarlet Fever	...	9	1	...	...	...	...	...	...	...	...	10
Typhus	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	3	...	...	...	2	2	3	3	1	2	...	16
Whooping Cough	11	13	...	...	...	...	...	...	...	...	...	24
Diphtheria	1	22	12	...	1	. .	...	...	...	...	...	36
Simple Continued and Ill-defined Fever ...	...	...	...	...	...	...	1	...	...	...	...	1
Enteric or Typhoid Fever	...	...	...	3	...	...	1	..	...	...	...	4
Other Miasmatic Diseases	...	...	..	...	...	...	...	...	..	...	...	...
2.—DIARRHŒAL DISEASES.												
Simple Cholera...	...	...	...	...	1	...	...	...	1	...	...	2
Diarrhœa, Dysentery	39	6	1	...	1	...	3	1	2	1	...	54

TABLE III.

WHOLE PARISH. FEMALES.

Deaths Registered from all Causes during the Year 1897.

NOTE.—The Deaths of Non-Residents occurring in Public Institutions situated in the District are excluded, and the Deaths of Residents occurring in Public Institutions situated beyond the limits of the District are included.

	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
I. SPECIFIC FEBRILE, OR ZYMOTIC DISEASES	58	30	18	2	5	2	2	7	6	5	..	135
II. PARASITIC DISEASES	1	...	...	...	...	...	...	...	...	...	...	1
III. DIETIC DISEASES	2	...	...	...	...	1	...	1	...	...	...	4
IV. CONSTITUTIONAL DISEASES	15	11	6	9	14	31	33	30	21	13	3	186
V. DEVELOPMENTAL DISEASES	40	1	...	...	...	...	..	...	7	18	14	80
VI. LOCAL DISEASES	63	27	12	14	23	33	35	56	95	70	18	446
VII. DEATHS FROM VIOLENCE	8	1	1	2	1	3	1	2	1	...	...	20
VIII. DEATHS FROM ILL-DEFINED and NOT SPECIFIED CAUSES	26	3	...	...	1	...	...	2	...	...	...	32
TOTALS	213	73	37	27	44	70	71	98	130	106	35	904
I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASES.												
1.—MIASMATIC DISEASES.												
Smallpox... *a.* Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox... *b.* Unvaccinated	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox... *c.* No Statement	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	1	...	...	...	...	...	...	...	...	...	1
Scarlet Fever	...	6	3	1	...	...	...	...	...	...	...	10
Typhus	...	..	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	...	1	..	...	1	1	2	3	2	4	...	14
Whooping Cough	9	5	1	...	...	...	...	1	...	...	...	16
Diphtheria	4	11	13	1	...	..	...	...	...	..	...	29
Simple Continued and Ill-defined Fever ...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever	...	...	1	...	1	...	...	...	...	...	.	2
Other Miasmatic Diseases	...	...	...	...	...	...	...	...	...	...	...	...
2.—DIARRHŒAL DISEASES.												
Simple Cholera	...	...	...	...	...	1	...	...	...	...	...	1
Diarrhœa, Dysentery	44	6	...	...	...	...	..	1	2	...	..	53

Males. TABLE III. (continued).

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
SPECIFIC FEBRILE, OR ZYMOTIC DISEASE (continued).												
3.—MALARIAL DISEASES.												
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...
Ague	...	...	...	...	..	...	...	...	...	...	...	..
4.—ZOOGENOUS DISEASES.												
Cowpox and effects of Vaccination	..	...	...	..	..	...	...	...	...	...	...	...
Other Diseases (*e.g.*, Hydrophobia, Glanders, Splenic Fever)	...	...	...	...	...	...	..	..	...	...	...	...
5.—VENEREAL DISEASES.												
Syphilis	1	1	...	...	...	...	...	...	..	...	...	2
Gonorrhœa, Stricture of Urethra	...	...	...	...	...	...	...	1	...	...	...	1
6.—SEPTIC DISEASES.												
Erysipelas	2	...	...	...	..	...	...	1	...	...	...	3
Pyæmia, Septicæmia	...	...	...	..	...	...	1	...	...	...	...	1
Puerperal Fever	...	...	...	...	...	...	...	..	..	...	...	...
II.—PARASITIC DISEASES.												
Thrush, and other Vegetable Parasitic Diseases	..	...	...	...	...	...	...	...	...	...	..	...
Worms, Hydatids, and other Animal Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...
III.—DIETIC DISEASES.												
Want of Breast Milk, Starvation	3	...	...	...	...	...	...	...	...	...	...	3
Scurvy	...	..	...	...	...	...	...	...	...	...	...	...
Chronic Alcoholism	...	...	...	...	1	3	2	...	...	...	..	6
Delirium Tremens	...	...	...	...	2	...	...	1	...	...	..	3
IV.—CONSTITUTIONAL DISEASES.												
Rheumatic Fever, Rheumatism of the Heart	...	...	1	...	...	...	...	...	1	...	...	2
Rheumatism	...	...	...	...	1	...	...	1	...	...	...	2
Gout	...	...	...	...	...	...	...	3	...	1	...	4
Rickets	2	...	...	...	...	...	...	...	...	...	...	2
Cancer, Malignant Disease	...	...	...	2	1	2	8	11	5	4	...	33
Tabes Mesenterica	5	2	1	...	...	...	...	...	...	...	...	8
Tubercular Meningitis, Hydrocephalus	8	8	4	...	...	...	...	...	...	...	...	20
Phthisis	...	1	1	10	18	17	25	4	2	...	..	78
Other forms of Tuberculosis, Scrofula	1	2	3	...	2	2	2	1	...	...	...	13
Purpura, Hæmorrhagic Diathesis	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia, Chlorosis, Leucocythæmia	...	...	1	...	...	...	..	...	...	...	...	1
Glycosuria, Diabetes Mellitus	...	...	...	...	1	2	1	1	1	1	...	7
Other Constitutional Diseases	...	...	...	...	...	...	...	...	...	...	...	...

TABLE III. (continued). **Females.**

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
SPECIFIC FEBRILE, OR ZYMOTIC DISEASES (continued).												
3.—MALARIAL DISEASES.												
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...
Ague	...	...	...	...	...	..	...	...	..	...	...	...
4.—ZOOGENOUS DISEASES.												
Cowpox and effects of Vaccination	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases (*e.g.*, Hydrophobia, Glanders, Splenic Fever)	..	...	...	...	...	...	...	...	...	...	...	...
5.—VENEREAL DISEASES.												
Syphilis	...	...	...	...	1	...	...	...	...	...	...	2
Gonorrhœa, Stricture of Urethra	...	..	...	...	...	...	...	...	...	...	...	...
6.—SEPTIC DISEASES.												
Erysipelas	...	...	...	...	...	...	...	2	2	..	...	4
Pyæmia, Septicæmia	...	...	...	...	...	...	...	...	...	1	...	1
Puerperal Fever	...	...	...	...	2	...	...	...	...	.	...	2
II.—PARASITIC DISEASES.												
Thrush, and other Vegetable Parasitic Diseases	1	...	...	...	...	...	...	...	...	...	...	1
Worms, Hydatids, and other Animal Parasitic Diseases	...	...	..	...	...	...	...	...	...	...	...	...
III.—DIETIC DISEASES.												
Want of Breast Milk, Starvation	2	...	...	...	...	...	...	...	...	...	...	2
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...
Chronic Alcoholism	...	...	...	...	...	1	...	...	...	...	..	1
Delirium Tremens	...	...	...	...	...	...	...	1	...	...	...	1
IV.—CONSTITUTIONAL DISEASES.												
Rheumatic Fever, Rheumatism of the Heart.	...	...	...	...	...	1	...	1	...	...	..	2
Rheumatism	...	...	...	...	...	...	...	...	1	...	...	1
Gout	...	...	...	...	...	...	...	...	..	1	...	1
Rickets	...	...	...	...	...	...	...	...	...	. .	...	1
Cancer, Malignant Disease	...	1	...	...	3	7	23	21	14	10	2	81
Tabes Mesenterica	...	6	2	1	...	...	...	...	...	...	...	9
Tubercular Meningitis, Hydrocephalus	...	8	4	2	...	...	...	...	...	...	...	14
Phthisis	...	...	1	1	9	10	19	6	4	3	..	1	54
Other forms of Tuberculosis, Scrofula	...	...	2	1	...	1	1	1	1	...	...	...	7
Purpura, Hæmorrhagic Diathesis	...	1	...	...	...	...	...	1	...	..	...	...	2
Anæmia, Chlorosis, Leucocythæmia	...	...	...	1	...	...	2	1	1	1	...	...	6
Glycosuria, Diabetes Mellitus	...	...	...	...	...	...	1	1	2	2	2	...	8
Other Constitutional Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...

Males. TABLE III. (continued).

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
V.—DEVELOPMENTAL DISEASES.												
Premature Birth	27	...	...	...	...	...	...	...	...	...	...	27
Atelectasis	9	...	...	...	...	...	...	...	...	...	...	9
Congenital Malformations	4	...	1	...	...	...	...	...	...	...	...	5
Old Age	...	...	...	...	...	...	...	1	4	11	7	23
VI.—LOCAL DISEASES.												
1.—DISEASES OF NERVOUS SYSTEM.												
Inflammation of Brain or Membranes ...	...	2	...	1	...	..	1	...	...	...	...	4
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	...	...	...	...	1	1	7	10	10	4	2	35
Insanity, General Paralysis of the Insane ...	...	...	...	1	2	4	2	2	...	1	...	12
Epilepsy	...	1	...	...	2	1	...	...	1	...	...	5
Convulsions	17	2	...	...	...	...	...	...	...	...	...	19
Laryngismus Stridulus (Spasm of Glottis) ...	1	2	...	...	...	...	...	..	...	...	...	3
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	...	...	...	...	2	...	1	2	2	...	...	7
Other Diseases of Nervous System	1	2	1	...	...	..	...	...	...	...	...	4
2.—DISEASES OF ORGANS OF SPECIAL SENSE.												
(*e.g.*, of Ear, Eye, Nose)	...	1	1	...	...	...	...	...	...	...	...	2
3.—DISEASES OF CIRCULATORY SYSTEM.												
Pericarditis	...	1	1	...	...	...	...	...	...	...	...	2
Acute Endocarditis	...	..	...	...	1	1	...	...	1	..	...	3
Valvular Diseases of Heart	...	...	2	...	...	2	2	4	4	...	...	14
Other Diseases of Heart	...	...	2	1	1	2	8	9	11	6	..	40
Aneurism	...	...	...	...	...	2	1	2	...	...	...	5
Embolism, Thrombosis	...	...	...	...	...	...	1	...	...	...	...	1
Other Diseases of Blood Vessels	...	...	...	...	..	...	4	2	...	1	...	7
4.—DISEASES OF RESPIRATORY SYSTEM.												
Laryngitis	...	2	1	...	...	...	...	...	...	1	..	4
Croup	...	...	...	...	...	...	...	...	...	...	...	...
Emphysema, Asthma	...	...	...	...	...	...	...	...	1	...	..	1
Bronchitis	36	5	...	1	1	3	4	14	16	11	...	91
Pneumonia	12	5	1	3	5	8	9	8	4	2	1	58
Pleurisy...	...	...	1	1	2	...	1	...	1	...	...	6
Other Diseases of Respiratory System ...	...	...	...	...	...	...	...	...	...	...	...	...
5.—DISEASES OF DIGESTIVE SYSTEM.												
Dentition	3	5	...	...	...	...	...	...	...	...	...	8
Sore Throat, Quinsy	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Stomach	2	...	1	...	...	...	...	1	...	...	...	4
Enteritis	18	3	1	2	1	..	4	...	1	...	...	30
Obstructive Diseases of Intestine	1	...	...	...	...	...	...	3	1	2	..	7

TABLE III. (continued). **Females.**

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
V.—DEVELOPMENTAL DISEASES.												
Premature Birth	30	...	...	...	...	...	...	...	...	...	...	30
Atelectasis	8	...	...	...	...	...	...	..	...	..	...	8
Congenital Malformations	2	1	...	...	...	...	...	...	...	...	...	3
Old Age...	...	...	...	...	...	...	..	...	7	18	14	39
VI.—LOCAL DISEASES.												
1.—DISEASES OF NERVOUS SYSTEM.												
Inflammation of Brain or Membranes ...	1	...	2	1	...	...	...	...	...	1	...	5
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	1	...	...	..	...	1	9	6	21	10	3	51
Insanity, General Paralysis of the Insane ...	...	...	...	1	2	3	2	1	...	2	1	12
Epilepsy	...	...	...	1	...	...	...	...	...	...	...	1
Convulsions	7	1	...	...	...	...	...	...	...	...	...	8
Laryngismus Stridulus (Spasm of Glottis)...	...	1	...	...	...	...	...	...	...	...	...	1
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	...	...	...	...	1	1	1	...	1	1	...	5
Other Diseases of Nervous System	...	..	...	...	...	1	...	1	...	...	...	2
2.—DISEASES OF ORGANS OF SPECIAL SENSE. (*e.g.*, of Ear, Eye, Nose)	...	...	...	1	1	...	1	...	...	...	...	3
3.—DISEASES OF CIRCULATORY SYSTEM.												
Pericarditis	...	...	...	...	...	1	...	...	...	...	...	1
Acute Endocarditis	...	...	1	...	1	...	...	...	...	...	...	2
Valvular Diseases of Heart	...	...	...	...	1	...	2	5	6	4	...	18
Other Diseases of Heart	...	...	3	2	2	2	6	12	16	16	4	63
Aneurism	...	...	...	...	...	1	...	...	...	...	...	1
Embolism, Thrombosis	1	1	...	...	...	2	...	1	1	1	...	7
Other Diseases of Blood Vessels	...	...	...	...	...	...	...	...	3	...	...	3
4.—DISEASES OF RESPIRATORY SYSTEM.												
Laryngitis	..	1	...	...	...	...	...	...	...	...	...	1
Croup	...	...	2	...	...	...	...	...	...	...	..	2
Emphysema, Asthma	...	...	...	..	...	...	1	2	1	1	...	5
Bronchitis	26	12	1	1	...	...	4	15	27	18	6	110
Pneumonia	9	7	1	1	...	...	2	2	7	7	2	38
Pleurisy	...	...	...	...	...	1	...	...	...	1	...	2
Other Diseases of Respiratory System ...	...	...	...	...	...	...	...	...	...	...	...	...
5.—DISEASES OF DIGESTIVE SYSTEM.												
Dentition	3	...	...	...	...	...	...	...	...	...	...	3
Sore Throat, Quinsy	...	...	1	...	...	..	...	...	...	...	...	1
Diseases of Stomach	1	1	...	1	...	2	...	...	1	3	...	9
Enteritis	9	2	1	...	3	2	...	1	2	1	...	21
Obstructive Diseases of Intestine	...	...	...	1	...	2	1	...	1	1	...	6

Males. TABLE III. (continued).

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
LOCAL DISEASES.—Continued.												
5.—DISEASES OF THE DIGESTIVE SYSTEM. (Continued.)												
Peritonitis	...	...	...	...	1	1	...	...	...	1	...	3
Ascites	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	...	...	..	...	...	4	2	2	1		...	9
Jaundice and other Diseases of Liver	...	.	...	..	...	...	2	2	4	...	...	8
Other Diseases of Digestive System	...	...	...	...	...	...	...	1	...	...	...	1
6.—DISEASES OF LYMPHATIC SYSTEM.												
(*e.g.*, of Lymphatics and of Spleen)	...	1	...	1	...	...	...	...	...	...	1	3
7.—DISEASES OF GLAND-LIKE ORGANS OF UNCERTAIN USE.												
(*e.g.*, Bronchocele, Addison's Disease)	...	...	...	...	...	...	..	...	...	...	...	...
8.—DISEASES OF URINARY SYSTEM.												
Nephritis	...	...	...	...	...	1	2	1	...	...	...	4
Bright's Disease, Albuminuria	...	1	...	...	3	3	4	8	8	3	...	30
Disease of Bladder or of Prostate	...	..	...	1	...	...	...	...	10	...	...	11
Other Diseases of the Urinary System	...	...	...	...	...	...	...	...	1	...	...	1
9.—DISEASES OF REPRODUCTIVE SYSTEM.												
A. *Of Organs of Generation.*												
Male Organs	..	...	...	...	...	...	...	...	...	...	...	...
Female Organs	..	...	...	...	...	...	...	...	...	...	...	...
B. *Of Parturition.*												
Abortion, Miscarriage	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	...	...	...	...	...	...	...	...	...	...	...	...
Placenta prævia, Flooding	...	...	...	...	...	..	...	...	...	...	...	...
Other Accidents of Child-Birth	...	1	...	...	...	...	...	...	...	...	..	1
10.—DISEASES OF BONES AND JOINTS.												
Caries, Necrosis	...	...	...	1	...	...	1	...	..	...	...	2
Arthritis, Ostitis, Periostitis	...	...	...	...	...	...	...	1	...	...	...	1
Other Diseases of Bones and Joints	...	...	...	...	...	...	...	...	...	...	...	...
11.—DISEASES OF INTEGUMENTARY SYSTEM.												
Carbuncle, Phlegmon	...	...	...	...	...	...	...	...	...	...	..	...
Other Diseases of Integumentary System	..	...	...	...	...	...	...	...	...	...	...	...

TABLE III. (continued). **Females.**

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
LOCAL DISEASES.—Continued.												
5.—DISEASES OF THE DIGESTIVE SYSTEM. (Continued.)												
Peritonitis	...	1	...	1	...	1	...	...	1	...	...	4
Ascites	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	...	...	...	...	1	3	1	5	...	1	...	11
Jaundice and other Diseases of Liver	1	...	...	...	...	2	3	3	...	...	1	10
Other Diseases of Digestive System	2	...	...	1	...	...	...	...	...	...	1	4
6.—DISEASES OF LYMPHATIC SYSTEM.												
(*e.g.*, of Lymphatics and of Spleen)	...	...	...	...	...	...	...	...	...	...	...	...
7.—DISEASES OF GLAND-LIKE ORGANS OF UNCERTAIN USE.												
(*e.g.*, Bronchocele, Addison's Disease)	...	...	...	...	...	...	...	...	...	...	...	...
8.—DISEASES OF URINARY SYSTEM.												
Nephritis	...	...	...	...	...	1	...	...	1	...	...	2
Bright's Disease, Albuminuria	...	...	...	..	3	4	2	2	4	1	...	16
Disease of Bladder or of Prostate	...	...	...	...	...	...	...	...	...	1	...	1
Other Diseases of the Urinary System	...	...	...	...	...	...	...	...	...	...	...	...
9.—DISEASES OF REPRODUCTIVE SYSTEM.												
A. *Of Organs of Generation.*												
Male Organs	...	...	...	...	...	...	...	...	...	...	...	...
Female Organs	...	...	...	1	3	...	...	...	1	...	...	5
B. *Of Parturition.*												
Abortion, Miscarriage	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	...	...	...	...	...	...	...	...	...	...	...	...
Placenta prævia, Flooding	...	...	...	...	1	2	...	...	...	...	...	3
Other Accidents of Child-Birth	1	...	...	1	4	1	...	...	...	...	...	7
10.—DISEASES OF BONES AND JOINTS.												
Caries, Necrosis	...	...	...	...	...	...	...	...	...	...	...	...
Arthritis, Ostitis, Periostitis	1	...	...	...	...	...	...	...	1	..	..	2
Other Diseases of Bones and Joints	...	...	...	...	...	...	...	...	...	...	...	...
11.—DISEASES OF INTEGUMENTARY SYSTEM.												
Carbuncle, Phlegmon	...	...	...	...	...	...	...	...	...	..	..	...
Other Diseases of Integumentary System	...	...	...	...	...	...	...	...	...	...	...	..

Males. TABLE III. (continued).

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
VII.—DEATHS FROM VIOLENCE.												
1.—ACCIDENT OR NEGLIGENCE.												
Fractures and Contusions	..	..	...	2	3	3	2	3	3	1	1	18
Gunshot Wounds	...	...	...	1	...	...	...	...	...	...	..	1
Cut, Stab	...	...	...	...	...	...	...	...	...	...	...	...
Burn, Scald	...	1	1	...	...	...	...	...	..	...	...	2
Poison	1	...	...	...	...	...	...	...	...	...	...	1
Drowning	...	...	2	..	...	...	1	1	1	...	...	5
Suffocation	2	...	...	...	...	...	...	1	...	...	...	3
Otherwise	1	...	...	...	...	...	...	...	...	...	...	1
2.—HOMICIDE.												
Manslaughter	...	...	...	...	...	...	...	...	...	...	...	...
Murder	...	...	...	1	...	...	...	...	...	...	...	1
3.—SUICIDE.												
Gunshot Wounds	...	...	...	...	...	...	...	..	...	...	...	...
Cut, Stab	...	...	...	...	...	1	1	...	...	..	...	2
Poison	...	...	...	...	...	1	...	1	..	...	...	2
Drowning	...	...	...	...	...	...	...	1	...	...	..	1
Hanging	...	...	...	...	...	...	...	...	...	..	...	...
Otherwise	...	...	...	...	...	...	...	...	..	...	...	...
4.—EXECUTION.												
Hanging	...	...	...	...	...	..	...	...	...	..	..	...
VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.												
Dropsy	...	...	...	...	...	...	..	...	...	..	...	...
Debility, Atrophy, Inanition	20	...	...	..	..	...	...	...	...	...	...	20
Mortification	...	...	...	...	...	..	...	..	...	...	.	...
Tumour	...	...	...	...	...	...	...	...	..	...	...	...
Abscess	...	...	...	...	...	...	...	...	...	...	...	...
Hæmorrhage	...	...	...	...	...	...	...	..	...	...	...	...
Sudden Death (cause not ascertained)	...	...	...	...	...	..	...	...	..	...	...	...
Causes not Specified or Ill-defined	1	...	...	...	...	..	...	...	...	...	...	1
Uncertified Death	1	...	...	...	...	...	...	...	...	...	...	1

TABLE III. (continued). **Females.**

CAUSE OF DEATH.	AGES.											All Ages.
	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-	85-	
VII.—DEATHS FROM VIOLENCE.												
1.—ACCIDENT OR NEGLIGENCE.												
Fractures and Contusions	1	...	...	..	...	...	...	1	...	...	...	2
Gunshot Wounds	...	...	...	...	...	...	...	...	..	...	...	...
Cut, Stab	...	...	...	...	...	...	1	...	...	...	...	1
Burn, Scald	...	...	1	2	...	...	...	...	1	...	...	4
Poison	...	...	...	...	1	...	...	1	..	...	...	2
Drowning	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation	5	1	...	...	...	1	...	...	.	..	...	7
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...
2.—HOMICIDE.												
Manslaughter	..	...	...	...	...	...	...	...	...	...	...	...
Murder	2	...	...	...	...	...	...	...	...	...	...	2
3.—SUICIDE.												
Gunshot Wounds	...	..	...	...	...	...	..	...	...	..	..	...
Cut, Stab	...	...	...	...	...	...	...	...	..	...	...	...
Poison	...	...	...	...	...	1	...	...	...	...	...	1
Drowning	...	...	...	...	...	...	...	...	..	...	...	...
Hanging	...	...	...	...	..	...	...	...	...	...	...	...
Otherwise	...	..	...	...	...	1	...	...	...	...	.	1
4.—EXECUTION.												
Hanging	...	...	...	...	...	...	...	...	...	...	...	...
VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.												
Dropsy	...	...	...	...	...	...	..	1	...	...	..	1
Debility, Atrophy, Inanition	25	3	...	...	1	...	..	...	...	...	...	29
Mortification	...	...	...	...	...	...	...	...	...	...	...	...
Tumour	..	...	...	...	...	...	...	1	...	...	...	1
Abscess	...	...	...	...	...	..	...	...	...	...	...	...
Hæmorrhage	...	...	...	...	...	...	...	...	...	...	..	...
Sudden Death (cause not ascertained)	...	...	...	..	...	...	...	...	...	...	...	...
Causes not Specified or Ill-defined	...	..	...	...	...	...	...	...	...	...	...	...
Uncertified Deaths	1	...	...	...	...	...	...	..	...	...	...	1

TABLE V.

Table showing the Number of Deaths from the principal Zymotic Diseases in the Ten Years 1887 to 1896, and in the Year 1897.

DISEASE.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896 (53 wks.)	Annual Averages, * 1887—96.		Total Deaths in 1897.	Death-rates, 1897.
											Uncorrected.	Corrected.		
Smallpox ...	..	1	...	...	...	...	4	3	...	1	0·9	1	...	...
Measles ...	33	66	11	77	7	81	30	66	18	103	49·2	52	2	0·01
Scarlet Fever ...	35	14	8	6	7	17	30	13	14	22	16·6	18	20	0·15
Diphtheria ...	27	75	39	45	27	32	69	92	49	67	52·2	55	65	0·51
Whooping Cough	19	74	26	82	67	29	59	44	20	47	46·7	49	40	0.31
Fever. Typhus ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever. Enteric ...	10	15	16	10	17	7	19	23	15	14	14·6	15	6	0·04
Fever. Simple Continued ...	...	...	1	...	...	...	...	...	...	2	0·3	0	1	0·00
Diarrhœa ...	63	38	63	62	76	82	65	45	91	66	65·1	69	107	0·84
TOTALS ...	187	283	163	283	201	248	276	286	207	322	245·6	259	241	1·90

* See also Tables 17 and 18 *supra*.

TABLE VI.

Report of the Works of the Sanitary Department completed during the Year 1897.

	No of Complaints received.	Inspections of Dwelling Houses.				Houses Let in Lodgings.		Sanitary Works completed in Dwelling Houses.																To Regulate Keeping of Animals.			Trade Supervision.				Foods.		Canal Boats.	
								Drainage, &c.						Water Supply.					Dust Receptacles.		Miscellaneous.													
		"House-to-House."	On Complaint or after illness.	Cellar Dwellings.	Re-inspections of all kinds.	Houses placed on Register	Registered Houses Inspected.	Entire Reconstruction.	Drains trapped and (or) ventilated.	Waste-pipes disconnected.	Rain-water pipes disconnected.	W.C. New provided, repaired, &c.	Soil-pipes ventilated.	Services Separated.	Supplies Reinstated.	Cisterns New provided.	Cisterns cleansed, repaired, &c.	Cisterns overflow disconnected.	New provided.	Repaired, &c.	Houses cleansed.	Cases of overcrowding abated.	Cellar-dwellings closed.	Yards and Areas Paved and Drained.	Manure Receptacles Reconstructed, &c.	Accumulations Removed.	Improperly kept Removed.	Slaughterhouses.	Cowhouses.	Bakehouses.	Offensive Trades.	Seizure of Unsound Food.	Samples taken for Analysis.	Registered.	Inspected.
Quarters. 1..	194	..	698	..	2949	..	..	87	46	15	24	59	26	6	18	6	3	..	4	2	10	1	..	8	1	26	1	1	..	44	365	..	93	2	61
2..	210	26	808	..	3142	..	..	108	27	13	19	49	23	4	15	10	1	..	13	..	5	..	..	17	..	66	..	2	2	33	312	..	94	1	59
3..	238	59	722	..	3050	..	..	125	19	14	19	67	40	15	10	8	3	..	9	..	8	..	..	9	4	64	..	11	2	30	187	..	91	1	47
4..	162	..	605	..	3160	86	3	120	20	27	20	66	34	19	13	6	9	..	7	..	14	2	..	19	4	6	1	..	24	41	347	..	90	1	52
Year ..	804	85	2833	..	12301	86	3	440	112	69	82	241	123	44	56	30	16	..	33	2	37	3	..	53	9	162	2	14	28	148	1211	..	368	5	219

TABLE VII.

Meteorological Observations at Greenwich.

From the Weekly Returns of the Registrar-General.

	Quarters, 1897.				Years.			
	1	2	3	4	1897.	1896.	1895.	1894.
BAROMETER.—Mean	29·690	29·776	29·778	29·919	29·790	29·836	29·745	29·796
Total Oscillation	24·54	18·45	15·69	19·12	77·80	72·96	71·58	73·05
THERMOMETER—Mean	41·1	53·0	59·5	45·8	49·8	49·79	49·5	49·1
Absolute Maximum ..	62·2	90·2	89·5	67·2	90·2	91·1	87·3	86·0
,, Minimum.. ..	23·8	29·9	38·2	23·3	23·3	24·3	6·9	12·8
Mean Daily Range	9·6	18·4	18·7	11·5	14·5	14·6	16·1	14·8
SUNSHINE.—Hours recorded .	179·0	583·8	570·4	201·9	1,535·1	1,018·4	1,225·4	1,051·6
"Possible" Record.. ..	927·0	1,402·0	1,296·5	820·5	4,446·0	4,504·0	4,447·2	4,446·2
Per cent. of "Possible" recorded	19·3	41·6	43·9	24·6	34·5	22·6	27·5	23·6
No. of days of record ..	60	82	88	64	294	264	275	268
HUMIDITY.—Mean..	83	73	73	84	78	79	77	81
RAINFALL, &c.—Total	7·38	4·73	6·34	3·69	22·14	22·77	19·48	26·44
No. of days of fall	48	38	42	40	168	163	156	194
,, ,, Snow ..	12	—	—	1	13	7	28	5
,, ,, with Fog ..	10	7	8	36	61	43	52	55
,, ,, Thunder ..	2	7	14	1	24	17	15	19
,, ,, Lightning .	3	5	13	1	22	16	17	9
,, ,, Hail ..	2	2	1	2	7	4	4	7
Hoar frost observed ..	7	2	—	15	24	40	29	23
WIND.—Mean direction ..	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.	S.W.
Mean Hourly Velocity ..	14·0	12·0	11·0	10·8	11·9	11·2	11·7	12·3
No. of observations of calm	2	3	1	14	20	36	39	†

Appendix B.

An Examination as to the efficiency of Sulphur Dioxide Gas for the Disinfection of Rooms.

The object of disinfection is to check the spread of infection both in the family or household, and in the surrounding district. Of the success achieved in the latter direction no reliable evidence is either available, or likely to be obtainable, in a district of such complex relations as a Metropolitan Parish. On the other hand the success in limiting the spread of infection in the household can be gauged with some degree of certainty by examining the conditions under which subsequent cases occur in such household or family. Before, however, proceeding to do this, it will be necessary to clearly set out certain considerations material to the inquiry, which must be carefully weighed before any reliable conclusions can be arrived at.

The term "primary" and "secondary," as used in this Report, refer respectively to the first and each and all subsequent cases notified in 1897, from any given house or tenement. The circumstances connected with the primary cases will, for the present purposes, be ignored, except in a few special instances.

Disinfection of the sick-room is done as a matter of routine after smallpox, diphtheria, membranous

croup, and scarlet, enteric (or typhoid), and puerperal fevers. In the case of erysipelas, such disinfection is not deemed necessary, and the other diseases included in the schedule of notification are so rare that they may for present purposes be ignored. Disinfection would naturally be carried out after the occurrence of any of them. Disinfection is occasionally carried out after other infectious diseases, such as measles, whooping cough, phthisis, chicken pox, &c., but no records exist of the results of such disinfection. Practically, scarlet fever and diphtheria (including membranous croup) are the only diseases which can be dealt with here. There were 45 cases of enteric fever during the year, but in only one instance was there more than a single case in a house, and in that instance the two patients were taken ill on the same day. The circumstances attending the spread of scarlet fever differ so much from those attending the spread of diphtheria that no comparison can be safely made between the results of disinfection for the two diseases.

Were it desired to discredit any method of house disinfection, all secondary cases might be attributed to failure of such process. This would manifestly be as unfair as would be an assumption that such method never broke down and that all secondary cases were due to other sources of infection. The truth is that such secondary cases may be due to one, or other of the following conditions:—

(*a.*) Simultaneous infection of the secondary and primary patients, the later development of the secondary case being due to a longer incubation period by reason of some personal idiosyncrasy of the patient;

(*b.*) Infection derived from the primary case at some time between the onset of the illness and the inception of isolation, or removal to hospital, or, when the primary patient is kept at home, to imperfect isolation;

(*c.*) The release of the primary patient from isolation, or his return from hospital, before all infection has left him;

(*d.*) Failure of the method of disinfection, either through inefficiency of the process or material used, or the omission to disinfect some particular article; and

(*e.*) Independent sources of infection.

In an inquiry such as this, the three first and last possibilities ought to be excluded before any particular case of spread of infection is assigned to the operation of the fourth. A standard period of time for the incubation of each disease must, therefore, be determined upon, and such standard should include the longest periods recorded with some frequency, but not what may be called exceptional cases of prolonged incubation.

Without discussing the varying lengths of incubation periods, it will suffice to say that the incubation period of scarlet fever is frequently as

long as fourteen days, but more commonly from one to three days.

In the case of diphtheria, the frequent discovery of the living *bacillus diphtheriæ* in the throats of persons presenting no clinical symptoms of the disease, greatly complicates the question of incubation. In the absence of any systematic bacteriological examination of the throats of the patients and the other members of the household, it is impossible to eliminate errors due to the conveyance of infection by persons apparently quite well. As, however, a working standard is requisite, a period not exceeding three weeks will be taken as the incubation period of diphtheria, and the possibility of conveyance of infection by the method already alluded to set aside for the present.

In connection with diphtheria and diphtheritic membranous croup, there is one other circumstance having a very important relation to this inquiry. As has already been stated, systematic bacteriological examination of the throats of patients is not carried out. The result is that as regards the majority of the patients treated at home, the medical attendants have to rely on the indications visible to the naked eye in deciding as to the freedom of their patients from infection. It is almost universally agreed that the throats of such persons, while presenting no indications of diphtheritic inflammation, may still contain the *bacillus diphtheriæ* in an active and

virulent form. The bacillus may, in the absence of further treatment, give rise to a second attack of the disease in the patient, and can infect any with whom the patient may be allowed to come into contact. The want of a bacteriological test of freedom from infection renders the fixing of a period of quarantine for patients treated at home a very difficult matter. The practice of the Department is to accept the certificate of recovery sent in by the medical attendant without demur, even if such certificate be forwarded within (say) three days after notification. With scarlet fever, on the other hand, it is easier to define the infective period, by reason of the commonly accepted view that the patient is infectious so long as desquamation persists. As a rule six to seven weeks are required for the completion of desquamation, and should a certificate of freedom from infection be received after a period of isolation much shorter than that standard, the circumstances of the case are specially inquired into before disinfection is carried out.

The processes available for the disinfection of living rooms, apart from the furniture, etc., are :—

(1.) Fumigation by chlorine gas, evolved from chloride of lime, sulphurous acid gas (SO_2), nitrous acid gas, etc.

(2.) Washing of walls, ceiling, woodwork, etc., with various disinfectant solutions, such as 1% sol. chloride of lime.

(3.) Fumigation with formaldehyde vapour :—

(*a.*) By liberation under pressure of the gas from an aqueous solution of calcium chloride charged with formaldehyde.

(*b.*) By volatilisation of "formalin"—paraform tablets—in limited supply of moist air.

(4.) Spraying walls, etc., with antiseptic solutions—those most used being solutions of mercuric chloride (corrosive sublimate) and formaldehyde.

On general principles, disinfection is more likely to be efficacious if the disinfectant be applied in solution rather than in the gaseous form, but in the application of such liquid to walls, ceilings, etc., there is always the risk of missing small areas of the surfaces to be disinfected. The risk can be diminished to *very* insignificant proportions if the surfaces be gone over more than once. The ideal disinfection of a living room would include its perflation for one or more days, the stripping off of all paper, and the destruction of all paint, with subsequent re-papering, re-painting, and white-washing. Such process, superadded to a thorough cleansing of the floor boards, and removal of all dust from every corner, crack, and crevice, should free the room from all infection. Such ideal is rarely obtainable—partly on the score of expense and partly by the reason of the time the room would be out of use, a serious consideration in a

tenement of perhaps 2 rooms. The chief aims of official disinfection are reliability and speed of work.

It will be convenient to describe here the present method of house disinfection, before proceeding to inquire into its efficiency. The room to be fumigated is first roughly measured up and its cubic contents approximately ascertained. All openings, such as the fireplace, crevices round the window frames, ventilators, etc., are then sealed up by pasting paper over them. Any boxes, drawers, or other closed receptacles in the room, are opened and their contents opened spread out to allow the fumes to come into contact therewith as freely as possible. The disinfectant used is Sulphur Dioxide gas (SO_2), which is obtained by the combustion of either cake sulphur, in the form of "candles," or of Carbon Bisulphide (CS_2). A few years ago the latter was almost exclusively used, but now the former. The tin containing the candle, or the vessel containing the Carbon Bisulphide, is set in a second vessel containing water, mainly as a precaution against fire, but the water which is vaporised by the heat of the burning sulphur assists in the process of disinfection. As soon as the sulphur is lighted, the door of the room is shut, locked, and the cracks round the frame carefully closed up from the outside by pasting on paper, not forgetting the keyhole. The rule is to keep the room shut up for 24 hours, after which it is freely ventilated until the sulphur fumes have entirely disappeared. The only

advantage Carbon Bisulphide has over the "candle" is that, with the amounts usually used, the former is completely volatilised in about twenty (20) minutes, whereas the candle requires some two (2) hours or more. The disadvantages of the bisulphide are that it is an explosive liquid, that there is always the risk of breaking the bottles containing it in the course of transport, and that copper pans, which are heavy and expensive, are necessary. The fumes from the carbon bisulphide are peculiarly unpleasant and persistent, in both respects more so than those from the candle.

When cake sulphur is used, 1 lb. of sulphur is allowed for every 1,000 cubic feet, or fraction of that quantity, of air space to be fumigated. If carbon bisulphide be used, a trifle over one pint is used as the equivalent of 1 lb. of sulphur. Theoretically, about 8 fluid ounces of the bisulphide should give as much SO_2 in the gaseous form as 1 lb. of sulphur. The general instruction is in all cases to use an excess of the standard rather than err in the direction of false economy. In the point of expense, there is very little difference between the two materials.

Hitherto it has not been the practice of the Department to require re-papering of the walls, white-washing of the ceilings, or re-painting of the wood-work of the room, unless the state of the room as regards dirt and dilapidation be such as would favour the harbouring of disease germs under conditions

which might prevent the proper destruction of the infective particles. In by far the larger number of cases, the patients are removed to hospital, so that there is but a slight probability of any infective particle becoming attached to the walls, ceilings, etc. When the patients are treated at home, the following extra precautions are recommended :—

"After the room has been disinfected by the Vestry's Officer, it should be left with the windows open (top and bottom) for several hours—24 if possible. At the end of that time, all woodwork, including furniture, floor-boards, doors, etc., should be washed with a disinfecting solution, and the wall-paper cleaned or stripped off. For cleaning wall-paper, use crumb of bread, and burn all the dirtied bread and bread crumbs. Every article in the room, not removed by the Vestry's Officials, should be washed, or, if washing be impossible, wiped over with a cloth damped with a disinfectant.

"Very special care should be taken to remove all dust from the room, using plenty of water for this purpose."

The methods of dealing with the bedding, clothes, etc., removed from the room, will not be dealt with here.

Tables A and B appended hereto contain complete lists of houses in which more than one case of scarlet fever or diphtheria occurred during 1897. For convenience of reference, the addresses of the houses

have been omitted and the groups of cases numbered consecutively. Any group can be identified by reference to the preliminary tables which have been preserved.

Scarlet Fever.—During 1897, 490 cases of this disease were notified from 366 houses, distributed as follows :—

From	281	houses,	1 case
,,	56	,,	2 cases
,,	21	,,	3 ,,
,,	6	,,	4 ,, and
,,	2	,,	5 ,,

In 56 of the 85 groups of cases,* the spread of infection was apparently due to the operation of causes *(a)* and (or) *(b)*. The groups are :—Nos. 2-4, 8-12, 15, 17-19, 23, 25-28, 33, 34, 36-44, 47-60, 62, 66, 68, 69, 71, 74, 76-79, and 81-84.

In 18, cause *(c)* appears to have been operative, viz. :—Nos. 1, 6, 11†, 16, 21, 24, 30-32, 35, 61, 64, 65, 67, 70, 73†, 80, and 85.

In 13 groups, none of the three causes already specified appeared to have operated, viz. :—Nos. 5, 7, 13, 14, 20, 22, 29, 45, 46, 63, 72, 73†, and 75. In these cases it was impossible to eliminate the possibility of independent fresh sources of infection. For the present purpose they may be assumed as due to failure of the process of disinfection.

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* By a "group of cases" is meant the cases occurring in any one house.

† Groups 11 and 73 are mentioned twice owing to differences in the circumstances attending certain of the secondary cases in each group.

Altogether, disinfection was carried out 429 times after scarlet fever, and, if the classification given above be correct, "the breakdowns" were equivalent to 3·0 per cent. of the whole. The cases following such breakdowns numbered 15, or 3·0 per cent. of the total number of cases recorded.

Diphtheria.—The cases of diphtheria and membranous croup recorded during 1897 numbered 322 in all from 249 houses, the cases being distributed as follows :—

From	195	houses	1 case each
,,	43	,,	2 cases
,,	6	,,	3 ,,
,,	3	,,	4 ,,
,,	1	house,	5 ,, and
,,	1	,,	6 ,,

In 44 out of the 54 groups of cases tabulated, causes *(a)* and (or) *(b)* were operative. The groups referred to are :—Nos. 1-11, 13-15, 18-23, 25, 27-30, 32, 34, 35, 39-54.

In 2, cause *(c)* was apparently operative, viz., in Nos. 12 and 16.

Of the remaining cases, 5 require some special mention, namely, Nos. 17, 26, 31, 37, and 38.

In group 17, the first patient was subsequently certified not to have had diphtheria at all.

Of the four cases in group 26, the first had an origin in this Parish, but the remaining three cases were attributable to imperfect measures of isolation and disinfection in another district. There were

reasons for thinking that the cases in the other district, giving rise to the three secondary cases of this group, may have been due to the primary, and local, case of the group. It was ascertained that there had been communication between the household in this Parish and that in the other district during the course of the illness of the primary cause of the group. In any case, it was concluded that the three secondary cases of this group were in no way attributable to imperfect methods of disinfection practised in this Parish.

Groups 31 and 37 were intimately associated, the patients in each group being orphans under the care of the Sisters of the Church Extension Association. The cases in group 37 appeared to have been due to direct personal infection, with in all probability some laxity in the matter of disinfection. Disinfection was done by the Department after the primary case of this group only, the other children being at the date of their attacks at the Sanatorium, where any disinfection performed was carried out privately. The whole of the cases in group 31 were transferred from Hampstead, being children taken ill at a branch establishment of the Sisterhood and brought to the Sanatorium in this Parish. There were reasons for thinking that this group was due to persistence of infection in the throats, or elsewhere, of one or more of the patients in group 37, the fifth case in group

31 being one of the patients in group 37. At the close of the sequence of cases in group 31 disinfection of the premises, &c., was carried out by the Department. From the date of the official disinfection up to the time of writing, no further cases have occurred.

The two cases included in group 38 were two notifications with regard to the same patient. The boy was removed to hospital when first notified to be ill with diphtheria, was detained there for about a month, and within a week of his return home had a relapse of the disease, was re-admitted, and died.

The foregoing remarks dispose of 51 out of the 54 groups of cases tabulated. The remaining three groups, viz., Nos. 24, 33, and 36, could not be explained on any of the before-mentioned grounds. Of these groups, No. 24 may be eliminated from present consideration, inasmuch as the disinfection after the primary case was done privately, and certified to by the medical attendant. There remain, therefore, but two groups which, supposing all independent sources of infection be excluded, an exclusion which cannot be demonstrated, were due to breakdown in the process of disinfection.

During the year, disinfection of the sick room was carried out by the Department 257 times after diphtheria and membranous croup. The two breakdowns would, therefore, be equivalent to 0·7 per cent. of the total disinfections. The cases secondary to

such breakdowns numbered 2, or 0·6 per cent. of the cases notified. It may be noted here that the secondary case in group 33 occurred in the same house but in another family and tenement.

So far it appears that in 3·0 per cent. of the disinfections after scarlet fever, and in 0·7 per cent. of those after diphtheria, the process of disinfection may have been inefficient. In a communication to the British Medical Association, read at the Annual Congress of 1896, Dr. Kenwood reported that he had collected statistics from 6 sanitary areas in and around London with reference to 1,330 disinfections of premises after scarlet fever and diphtheria. Taking the view that all cases occurring within fourteen days after such fumigation—a view which he stigmatises as "extreme and unjustifiable"—he found that there had been 55 cases so attributable to defective disinfection, equal to 4·1 per cent. of the total disinfections performed. The 55 cases included cases of both scarlet fever and diphtheria. For the purpose of making some comparison with Dr. Kenwood's result, the number of times secondary cases occurred within fourteen days of disinfection have been determined. During the year 686 disinfections were carried out, and after 58 operations, secondary cases were reported within fourteen days—giving a percentage of "breakdowns" on Dr. Kenwood's supposition of 8·4. For reasons already set out, no value is attached to this mode of examining the question.

TABLE A.—SCARLET FEVER, 1897.

Group No.	Sex & Age of Patient.	Dates of Sickening.	Dates of Disinfection.	Notes.
1	m. 4	21 June	23 June	Home again 5-8 Aug.
	f. 2	26 Aug.	27 Aug.	R.
2	f. 2	10 Sept.	13 Sept.	
	m. 30	14 Sept.	20 Sept.	
3	f. 4	21 Aug.	22 Sept.	
	f. 31	3 Sept.	22 Sept.	
	f. 6	14 Sept.	22 Sept.	
4	m. 4	30 Sept.	8 Oct.	
	m. 2	30 Sept.	8 Oct.	
5	f. 7	30 Aug.	4 Sept.	
	f. 3	21 Oct.	29 Oct.	
6	m. 15	14 May.	18 May	
	m. 43	13 July	15 July	R.
7	m. 5	28 Jan.	14 April	
	m. 6	3 Mar.	14 April	
	m. 3	1 May	9 June	
8	f. 1	26 Aug.	29 Aug.	
	f. 3	27 Aug.	29 Aug.	
9	f. 2	13 Mar.	10 May	
	m. 34	29 Mar.	10 May	
	f. 7	1 April	1 April	Second family
10	f. 7	8 Oct.	16 Oct.	
	m. 3	19 Oct.	22 Oct.	
11	f. 16	?	23 July	
	m. 12	?	23 July	Home again,
	f. 8	?	23 July	11, 28, & 30 Sept.
	m. 9	13 July	21 July	
	f. 8	26 Sept.	4 Oct.	Second family, R.
12	f. 4	25 Oct.	29 Oct.	
	m. 2	26 Oct.	29 Oct.	
13	f. 6	30 Nov.	1 Dec.	
	m. 12	20 Dec.	20 Dec.	
	m. 4	20 Dec.	23 Dec.	
14	m. 7	26 Oct.	2 Nov.	
	f. 3	15 Dec.	15 Dec.	
15	f. 5	7 Oct.	12 Nov.	
	m. 11	12 Nov.	17 Nov.	[8 Oct.
16	f. 6	12 Aug.	17 Aug.	Home again
	f. 7	16 Oct.	22 Oct.	R.
17	m. 12	17 Dec.	20 Dec.	
	f. 14	18 Dec.	20 Dec.	
18	m. 2	15 Dec.	18 Dec.	
	m. 4	16 Dec.	18 Dec.	
19	f. 16	30 Oct.	10 Nov.	
	f. 20	1 Nov.	10 Nov.	
	m. 9	2 Nov.	10 Nov.	
	f. 12	5 Nov.	10 Nov.	
20	f. 11	10 June	15 June	
	m. 5	11 Sept.	18 Sept.	
	f. 18	17 Dec	20 Dec.	[25 Aug.
21	f. 11	7 July	9 July	Home again
	f. 8	4 Sept.	7 Sept.	R.
22	f. 4	18 May	22 May	Home again 16 July.
	f. 2	19 Sept.	22 Sept.	
23	f. 8	6 Mar.	18 Mar.	
	f. 9	15 Mar.	18 Mar.	
	f. 6	20 Mar.	24 Mar.	[14 Sept.
24	m. 8	10 July	12 July	Home again
	m. 19	25 Sept.	25 Sept.	R.
	m. 43	26 Sept.	27 Sept.	R.
25	f. 8	18 June	23 June	
	f. 12	24 June	26 June	
26	f. 6	?	12 Oct.	
	f. 3	?	12 Oct.	
27	f. 5	25 Oct.	1 Nov.	
	m. 24	1 Nov.	5 Nov.	
28	f. 5	28 Oct.	30 Oct.	
	m. 6	15 Nov.	29 Nov.	
29	f. 4	27 June	13 July	Died in hospital.
	f. 5	19 Nov.	23 Nov.	Second family.
30*	m. 4	4 Jan.	9 Jan.	R.
	m. 2	7 Jan.	9 Jan.	Second family R.
31*	f. 8	9 Feb.	10 Feb.	R.
	f. 34	15 Feb.	17 Feb.	R.
32	m. 4	29 May	29 May	Home ag. 21 Oct.
	f. 2	27 Oct.	2 Nov.	R.
	f. 1	31 Oct.	2 Nov.	R.
33	f. 6	19 July	20 July	
	m. 8	21 July	22 July	
	f. 4	21 July	26 July	
	m. 12	22 July	26 July	
34	f. 6	28 Nov.	30 Nov.	
	f. 11	2 Dec.	4 Dec.	
35	f. 15	18 Feb.	22 Feb.	[8 May.
	f. 3	10 May	14 May	Home again.
36	f. 6	19 June	23 June	R.
	f. 2	22 June	26 June	
	m. 10	28 June	2 July	
37	m. 10	14 Nov.	25 Nov.	
	m. 2	19 Nov.	25 Nov.	
	m. 5	24 Nov.	26 Nov.	
38	m. 9	9 Feb.	31 Mar.	
	m. 11	14 Feb.	31 Mar.	
39	f. 8	1 Feb.	25 Feb.	
	m. 10	13 Feb.	25 Feb.	
40	m. 14	20 July	21 July	
	f. 11	28 July	30 July	
41	m. 6	17 June	21 June	
	f. 3	18 June	21 June	
42	m. 5	4 April	6 April	
	f. 2	16 April	18 April	
43	m. 1	12 Mar.	16 Mar.	
	f. 3	12 Mar.	16 Mar.	
	m. 4	12 Mar.	16 Mar.	

Group No.	Sex & Age of Patient.	Dates of Sickening.	Dates of Disinfection.	Notes.
44	f. 3	15 Nov.	13 Dec.	
	m. 6	9 Dec.	13 Dec.	
45	f. 4	4 May	6 May	
	m. 5	9 June	16 June	
46	m. 2	8 Nov.	19 Nov.	
	f. 1	7 Dec.	8 Dec.	
47	m. 12	1 April	7 June	
	m. 18	6 April	7 June	
48	m. 8	30 Aug.	1 Sept.	
	f. 4	6 Sept.	9 Sept.	
49	m. 4	23 Jan.	27 Jan.	
	f. 2	23 Jan.	27 Jan.	
50	m. 4	12 Dec.	17 Dec.	
	m. 3	18 Dec.	20 Dec.	
	f. 4	23 Dec.	27 Dec.	
	m. 1	23 Dec.	27 Dec.	
	m. 6	24 Dec.	27 Dec.	
51	m. 2	11 July	13 July	
	m. 1	14 July	16 July	
52	f. 4	12 July	16 July	
	f. 2	16 July	17 July	
53	f. 4	15 April	21 April	
	f. 6	21 April	21 April	
	f. 10	21 April	21 April	
54	f. 11	16 Nov.	12 Jan.	
	m. 13	19 Nov.	12 Jan.	
55	f. 7	25 Oct.	20 Dec.	
	f. 9	3 Nov.	20 Dec.	
	f. 12	10 Nov.	20 Dec.	
56	m. 7	7 Dec.	10 Dec.	
	m. 2	9 Dec.	11 Dec.	
	m. 4	9 Dec.	11 Dec.	
	f. ½	11 Dec.	30 Dec.	
57	f. 2	1 Nov.	5 Nov.	
	f. 3	6 Nov.	9 Nov.	
	f. 26	8 Nov.	9 Nov.	
58	f. 4	2 May	9 July	
	m. 15	19 May	9 July	
59	m. 7	16 Oct.	6 Dec.	
	m. 4	16 Oct.	6 Dec.	
60	f. 11	12 Nov.	24 Nov.	
	f. 8	30 Nov.	2 Dec.	[June
61	f. 6	13 April	16 April	Home again 15
	f. 16	1 July	2 July	R.
	m. 5	28 Dec.	1 Jan.	
62	f. 3	25 Sept.	5 Nov.	
	f. 6	28 Sept.	5 Nov.	
63	f. 7	6 March	6 March	
	f. 5	20 Nov.	12 Jan.	[15 Sept.
64†	f. 3	25 July	28 July	Home again
	f. 8	22 Sept.	24 Sept.	R.
65†	m. 10	1 Oct.	6 Oct.	R.
	m. 7	7 Oct.	13 Oct.	R.
66	f. 10	23 Oct.	29 Oct.	
	f. 35	30 Oct.	2 Nov.	[16 Oct.
67	f. 8	7 Aug.	10 Aug.	Home again
	f. 3	27 Oct.	30 Oct.	R.
68	f. 14	4 Feb.	22 March	
	f. 16	4 Feb.	22 March	
	f. 17	18 Feb.	22 March	
69	m. 3	?	2 Dec.	
	m. 2	27 Nov.	30 Nov.	
	m. ½	1 Dec.	6 Dec.	[of Nov.
70	m. 20	10 Sept.	15 Sept.	Home again end
	f. 20	4 Dec.	7 Feb.	R. (?)
71	f. 7	1 July	2 July	
	f. 12	11 July	12 July	A second family
72	m. 2	15 May	18 May	
	f. 5	10 July	13 July	A second family
73	f. 8	11 June	30 June	
	m. 10	14 June	30 June	
	m. 7	31 July	3 Aug.	Another family Home ag. 7 Oct.
	f. 5	10 Oct.	12 Oct.	First family. R.
74	m. 6	4 June	8 June	
	f. 9	7 June	10 June	
	f. 12	10 June	10 June	
75	m. 14	28 June	1 July	
	f. 9	28 Oct.	30 Oct.	A second family
76	f. 14	17 Nov.	6 Jan.	
	f. 7	19 Nov.	6 Jan.	
	m. 4	19 Nov.	6 Jan.	
77	m. 8	22 April	30 April	
	m. 6	25 April	30 April	
78	f. 5	10 April	15 April	
	m. 4	11 April	15 April	
	m. 2	18 April	20 April	
	m. 12	21 April	22 April	
79	f. 7	26 August	12 Oct.	
	f. 10	1 Sept.	12 Oct.	[19 Oct.
80	m. 12	11 August	17 Aug.	Home again
	m. 6	1 Nov.	11 Nov.	R.
	f. 17	11 Nov.	16 Nov.	R.
	f. 9	2 Nov.	11 Nov.	R.
81	f. 7	29 Dec.	22 Feb.	
	m. 4	6 Jan.	22 Feb.	
82	f. 4	3 July	19 Aug.	
	m. 5	3 July	19 Aug.	
	f. 7	3 July	19 Aug.	
83	m. ½	11 Sept.	?	
	f. 2	11 Sept.	?	
	m. 3½	11 Sept.	?	
84	f. 6	2 July	9 July	
	m. 4	16 July(?)	27 July	[24 Ap.
85	f. 9	2 Feb.	5 Feb.	Home again
	m. 2	27 April	30 April	R.

NOTES.—Where two or more cases are bracketed together, the cases were notified simultaneously.
"R" indicates "return" cases.
* From patients removed to hospital in 1393. † These groups had common origin from discharged patient.

TABLE B.—DIPHTHERIA, 1897.

Group No.	Sex & Age of Patient.	Dates of Sickening.	Dates of Disinfection.	Notes.
1	*m.* 4	14 April ...	21 April ...	D.-N. 15 April.
	m. 6	15 May ...	17 May ...	
2	*f.* 7	15 Mar. ...	23 Mar. ...	
	m. 3	22 Mar. ...	23 Mar. ...	
3	*m.* 5	14 Jan. ...	19 Jan. ...	
	f. 3	14 Jan. ...	20 Jan. ...	
4	*f.* 5	13 April ...	20 April ...	
	m. 9	21 April ...	23 April ...	
5	*m.* 6	23 Jan. ...	26 Jan. ...	
	m. 2	23 Jan. ...	26 Jan. ...	
6	*f.* 4	30 Mar. ...	30 Mar. ...	
	m. 32	8 April ...	24 May ...	
7	*m.* 2	18 Feb. ...	24 Feb. ...	D.-N. 22 Feb.
	f. 11	22 Feb. ...	24 Feb. ...	
	m. 4	22 Feb. ...	24 Feb. ...	
8	*f.* 2	21 Jan. ...	30 Jan. ...	
	f. 7½	24 Jan. ...	30 Jan. ...	
9	*f.* 6	24 Jan. ...	30 Jan. ...	
	f. 3	26 Jan. ...	30 Jan. ...	
10	*f.* 5	31 Jan. ...	2 Feb. ...	
	m. 4	4 Feb. ...	15 Feb. ...	
	f. 34	22 Feb. ...	27 Feb. ...	
	f. 7	6 Mar. ...	19 Mar. ...	Second family
	f. 1	6 April ...	1 May ...	Third family
11	*m.* 9	23 Oct. ...	5 Nov. ...	
	f. 8	1 Nov. ...	5 Nov. ...	
	f. 10	1 Nov. ...	5 Nov. ...	
12	*m.* 4	13 Jan. ...	18 Jan. ...	Returned home 16 March.
	m. 3	2 April ...	9 April ...	R.
13	*m.* 5	15 Nov. ...	23 Nov. ...	
	m. 6	18 Nov. ...	23 Nov. ...	D.-N. 19 Nov.
	f. 8	18 Nov. ...	23 Nov. ...	
	m. 6	22 Nov. ...	22 Nov. ...	Another family,
14	*m.* 6	29 May ...	12 June ...	
	f. 4	4 June ...	12 June ...	
	f. 1	8 June ...	12 June ...	
15	*f.* 15	8 Aug. ...	10 Aug. ...	
	f. 6	11 Aug. ...	13 Aug. ...	
16	*f.* 5	20 June ...	24 June ...	Home again 15 Oct.
	m. 1	19 Oct. ...	21 Oct ...	R.
17	*f.* 1	3 Mar. ...	Certified not diphtheria.	
	f. 10/12	2 Aug. ...	13 Aug. ...	Another family.
18	*m.* 2	29 May ...	1 June ...	
	f. 29	1 June ...	4 June ...	
19	*f.* 2	7 Dec. ...	12 Dec. ...	
	m. 6	13 Dec. ...	14 Dec. ...	
20	*f.* 3*	30 June ...	5 July ...	* R.
	f. 5	6 July ...	7 July ...	R.
21	*m.* 3	1 Dec. ...	6 Dec. ...	
	m. 5	7 Dec. ...	9 Dec. ...	
22	*m.* 1	5 July ...	24 July ...	
	m. 27	14 July ...	24 July ...	
23	*f.* 3	19 Jan. ...	11 Feb. ...	
	f. 2	27 Jan. ...	11 Feb. ...	
24	*m.* 11	27 Nov. ...	d p.	
	f. 7	23 Dec. ...	24 Dec. ...	
25	*f.* 16	16 Oct. ...	23 Nov. ...	
	f. 12	17 Oct. ...	23 Nov. ...	
26	*f.* 4	9 Aug. ...	27 Aug. ...	
	f. 10	20 Sept. ...	6 Oct. ...	
	m. 13	21 Sept. ...	6 Oct. ...	
	m. 5	?	6 Oct ...	
27	*f.* 33	28 Nov. ...	22 Dec. ...	
	m. 1	3 Dec. ...	22 Dec. ...	
28	*m.* 4	18 Dec. ...	1 Jan., '98	
	f. 29	18 Dec. ...	1 Jan., '98	
29	*m.* 2	11 Jan. ...	15 Jan. ...	D. 14 Jan. N. 15 „
	m. 1	18 Jan. ...	21 Jan. ...	
30	*f.* 4	16 Sept. ...	17 Sept. ...	
	f. 7	21 Sept. ...	23 Sept. ...	
31	*f.* 5	30 Aug. ...	5 Nov. ...	
	f. 4	4 Sept. ...	5 Nov. ...	
	m. 4	4 Sept. ...	5 Nov. ...	
	f. 4	4 Sept. ...	5 Nov. ...	
	m. 4	18 Sept. ...	5 Nov. ...	
	m. 4	22 Sept. ...	5 Nov. ...	
32	*f.* 1	11 Nov. ...	23 Nov. ...	D.-N. 22 Nov.
	f. 2	25 Nov. ...	25 Nov. ...	
33	*m.* 2	9 Jan. ...	11 Jan. ...	
	m. 4	16 July ...	21 July ...	A second family.
34	*m.* 13	6 Aug. ...	23 Aug. ...	
	f. 3	6 Aug. ...	23 Aug. ...	
35	*f.* 11	13 Nov. ...	17 Nov. ...	
	f. 15	13 Nov. ...	17 Nov. ...	
36	*m.* 9	18 Feb. ...	19 Feb. ...	
	f. 5	30 July ...	9 Aug. ...	
37	*m.* 3	3 Mar. ...	3 Mar. ...	
	f. 4	26 Mar. ...	d. p. ...	
	m. 4	6 May ...	d. p. ...	
	m. 4	19 June ...	d. p. ...	
38	*m.* 3	20 Sept. ...	25 Sept. ...	
	m. 3	28 Oct. ...	29 Oct. ...	Same patient.
39	*f.* 11	11 Sept. ...	14 Oct. ...	
	f. 12	15 Sept. ...	14 Oct. ...	
40	*f.* 11	18 June ...	24 June ...	
	f. 36	19 June ...	24 June ...	
41	*f.* 8	4 Aug. ...	9 Aug. ...	
	m. 4	7 Aug. ...	9 Aug. ...	
	f. 2	8 Aug. ...	9 Aug. ...	
42	*m.* 14	3 June ...	5 June ...	
	m. 14	9 June ...	10 June ...	
43	*f.* 4	13 July ...	26 July ...	
	f. 29	20 July (?)	26 July ...	
44	*m.* 14	28 April ...	5 May ...	
	f. 1	5 May ...	8 May ...	
45	*f.* 2	19 Jan. ...	22 Jan. ...	
	f. 4	20 Jan. ...	22 Jan. ...	
46	*m.* 1	14 Nov. ...	9 Dec. ...	
	f. 9	24 Dec. ...	Jan., '98	
47	*f.* 7	2 July ...	5 July ...	
	f. 3	23 July ...	26 July ...	
48	*f.* 10	19 April ...	30 April ...	
	f. 2	8 May ...	10 May ...	
	f. 3	11 May ...	3 June ...	A second family.
49	*f.* 7	21 July ...	24 July ...	D.-N. 23 July.
	f. 5	30 July ...	2 Aug. ...	
50	*f.* 5	1 July ...	5 July ...	
	m. 11	14 July ...	16 July ...	
51	*f.* 2	17 Sept. ...	23 Sept. ...	
	m. 6	27 Sept. ...	28 Sept. ...	
	f. 1	10 Oct. ...	10 Oct. ...	
52	*m.* 4	15 July ...	16 July ...	
	f. 1	19 July ...	20 July ...	
53	*m.* 3	6 July ...	20 July ...	
	f. 4	13 July ...	20 July ...	
54	*m.* 11	25 May ...	28 May ...	
	m. 1	23 May ...	28 May ...	

* Came home, after treatment for Scarlet Fever, 28th June.

NOTES.—"D" indicates Death, and "N" Notification, thus "D.-N. 15 April" means patient's case was notified on 15th April, and that death took place on the same day.

As the conditions under which bacteriological investigations touching methods of disinfection are carried on in the laboratory differ so greatly from those attending the every-day use of such methods, it has been thought preferable to consider the matter on the basis of statistical results obtained from the year's work. Unfortunately whilst the published results of the laboratory investigations are voluminous (and many contradictory), the only known communication based on statistics is that of Dr. Kenwood, of which mention has already been made.

On this occasion no comparison can be made with the results of other methods, but should any fresh information be obtained from other sources the same will be communicated to the Committee. It may be mentioned that whilst this Report was in preparation, formaldehyde, both as gas and as spray, has been adopted by the Department to be used alternately with sulphur, and the results will be carefully noted.

It seems reasonable to conclude that the results of disinfection by sulphur during 1897 were satisfactory, although it is desirable that the margin of 3·0 per cent. of breakdowns should be eliminated.

APPENDIX C.

RETURN CASES, 1897—

No.	First Patients.		Hospital.		Subsequent Cases.			Interval (days).
	Initials.	Sex Age.	Removed to.	Discharged from.	Initials.	Sex Age.	Date of Sickening.	
1	J. P.	f., 7	Nov. 18, '96	Dec. 31, '96	C. P. W. S.	m. 4 m. 2	Jan. 4, '97 Jan. 7	4 7 or 8
2	T. W. W. W.	m. 8 m. 4	Dec. 2, '96	Jan. 20, '97 Jan. 13, '97	A. W.	f. 6	Feb. 1	19 or 12
3	A. S.	m. 7	Dec. 3, '96.	Feb. 3, '97	C S. L. S.	f. 8 f. 34	Feb. 9 Feb. 14	6 11 or 5
4	L. W.	f. 9	Feb. 5.	April 24	D. W.	m. 2	April 27	3
5	T. H.	m 5	April 6	June 11	W. H.	f. 2	June 14	3
6	W. H.	f. 2	June 18	Sept. 4	M. H.	f 4	Sept. 13	9
7	G. A.	m. 4	June 23	Aug. 4	D. P.	f. 2	Aug. 26	22
8	A. R.	f. 11	July 9	Aug. 25	E. R.	f. 8	Sept. 4	10
9	M. D.	f. 11	June 15	Aug. 21	L. D.	m. 5	Sept. 11	21
10	D. G.	f. 3	July 28	Sept. 15	H. W. L. G.	f. 1 f. 8	Sept. 19 Sept. 22	4 7 or 3
11	J. C.	m. 8	July 12	Sept. 14	W. H. J. C.	m. 19 m. 43	Sept. 25 Sept 27	11 13 or 12
12	A.E.S.	m. 7	Aug. 3	Oct. 7	E. S.	f. 5	Oct. 10	3
13	E. P	f. 6	Aug. 17	Oct. 8	N. P.	f. 7	Oct. 16	8
14	P. C.	m. 4	May 29	Oct. 21	J. C. E. C.	f. 2 f. 1	Oct. 27 Oct. 31	6 10 or 14

SCARLET FEVER.

Notes.

J. P., seen Jan. '98, presented no abnormal symptoms. Efficiency of disinfection suspected, room full of odds and ends.

T. W. & W. W., seen Feb. 4th.
T. W. desquamation on soles of feet; reported to have had scurf about ears; slept with A.W. after his return from Hospital

Mother of A.S. had sore throat about Feb. 12th.
A. S, seen Feb. 10th. History of discharging sore on wrist; nasal catarrh; enlarged glands; unhealthy throat; probably albuminuria; had been kept apart from Feb. 3rd to Feb. 6th.

L. W., seen May 1st. Apparently well except for cold. Skin rough, not desquamating. History of foul linen sent home, disinfected, not washed.

M. H. (f., 4), sickened with Diphtheria June 14th.
T. H., seen June 19th. Mucous discharge from nose; cracked nostrils; nasopharyngeal catarrh; enlarged glands of neck.

W. H., seen Sept. 16. Only noted some scurf in head and cracks behind ears. (Same family as Case 5, but in another house.)

C. A. (m. 1), removed with Diphtheria Aug. 2nd, came home Aug. 9th. No school attendance.
G. A., not seen.*

A. R., not seen.*

M.D., not seen.*

D.G., seen Sept. 24th. No cause assignable.

J. C., junr., at home Sept. 14th to 20th, then to Country. M.O.H. called to see him Sept. 26th.

A. E. S., seen Oct. 13th Nasal discharge; cracked nostrils; enlarged tonsils; congested throat; probably adenoid growths in pharynx.

R. P., seen Oct. 20th. Nasal discharge; cracked nostrils; dryness and roughness of skin. [illegible]. attending school.

P. C. seen Nov. 2nd. Purulent nasal discharge; cracked nostrils; throat apparently normal. Has been kept quarantined from Oct. 2nd to 24th. Special Bath Oct. 23rd. No School attended for over six months. Fresh home since first case.

* Occurred during vacation.

Appendix D.

TABULATED LIST OF FOOD AND DRUGS ANALYSED

During the Year ending March 31st, 1898.

Article analysed.	Total number.	Number adulterated.	Percentage adulterated.
Milk	193	11	5·7
Butter	56	8	14·3
Coffee	24	2	8·3
Bread and Flour	12	0	0
Spirits	12	0	0
Sweets	12	0	0
Lard	9	0	0
Cheese	6	0	0
Oatmeal	6	0	0
Lemon Squash	6	0	0
Glycerine	6	0	0
Cocoa	5	0	0
Pepper	5	0	0
Mustard	4	0	0
Arrowroot	3	0	0
Tapioca	3	0	0
Rice	2	0	0
Potted Meat	2	0	0
Condensed Milk	1	0	0
	367	21	5·7

Total of Fines imposed	£26 0 0
„ „ Costs „	£13 10 0
Average of Fines imposed	£1 4 9
„ „ Costs „	12 10

ALF. W. STOKES, F.C.S., F.I.C.,
(*Public Analyst.*)

Laboratory,
Vestry Hall,
Paddington Green, W.