[Report of the Medical Officer of Health for London County Council].

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

OF THE

ADMINISTRATIVE COUNTY OF LONDON

1895.

London County Council.

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PRINTED BY JAS. TRUSCOTT AND SON, SUFFOLK LANE, CANNON STREET, E.C.

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Administrative County of London.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

1895.

STATISTICS.

Population.

The population of the administrative county of London, estimated to the middle of 1895, was 4,402,284.

The estimates of the population of London for the middle of the years 1891–4, had been made mainly on the assumption that the increase between the two census years 1881–1891 had been since maintained. The population of London was enumerated on the 29th March, 1896, in accordance with the provisions of the Equalisation of Rates Act of 1894, and a more accurate estimate of the population for the middle of each of the years 1891–5 can therefore be made. The following results are thus obtained—

Population.

	County of London.	Administrative County of London.
1891	4,221,517 ...	4,241,943
1892	4,260,869 ...	4,281,473
1893	4,300,580 ...	4,321,370
1894	4,340,663 ...	4,361,640
1895	4,381,119 ...	4,402,284

If the population of the administrative county in 1895 had been estimated on the assumption that the increase in the period 1881–91 had been maintained, the estimate of population in that year would have amounted to 4,413,501, or 11,217 in excess of the more accurate estimate obtained by use of the census population of 1896. There has therefore been in the period 1891–5 a somewhat diminished increase of population.

The estimated population of each of the 43 sanitary districts comprised in the administrative county is shown in the following table—

Sanitary district.	Estimated population, 1895.	Sanitary district.	Estimated population, 1895.	Sanitary district.	Estimated population, 1895.
Paddington	123,476	St. Giles	38,486	St. George, Southwark	60,197
Kensington	169,832	St. Martin-in-the-Fields	13,321	Newington	120,150
Hammersmith	103,125	Strand	24,101	St. Olave, Southwark ...	11,883
Fulham	110,385	Holborn	31,398	Bermondsey	85,361
Chelsea	96,594	Clerkenwell	66,214	Rotherhithe	40,206
St. George, Hanover-square	79,725	St. Luke	41,676	Lambeth	291,967
		City of London	32,774	Battersea	162,862
Westminster	53,943	Shoreditch	122,631	Wandsworth	182,595
St. James, Westminster	23,361	Bethnal-green	129,173	Camberwell	250,334
Marylebone	141,396	Whitechapel	78,027	Greenwich	174,174
Hampstead	74,359	St. George-in-the-East ...	47,244	Lee	38,204
St. Pancras	239,790	Limehouse	58,166	Lewisham	102,691
Islington	334,042	Mile-end Old-town ...	110,528	Woolwich	41,244
Stoke Newington ...	33,091	Poplar	168,890	Plumstead	58,200
Hackney	210,812	St. Saviour, Southwark	25,656		
					4,402,284

The following table shows the increase or decrease of population in the inter-censal period 1891–96 compared with the excess of births over deaths in each sanitary district of the administrative county during the five years 1891–95; the period of five years to which the births and deaths relate,

viz., from the beginning of 1891 to the end of 1895, is sufficiently near to the five-year inter-censal period, viz., from the beginning of the second quarter of 1891 to the end of the first quarter of 1896, for the comparisons made in the table—

Increase or decrease of population 1891-96, *compared with excess of births over deaths in each sanitary district of the administrative county during the five years* 1891-95—

Sanitary district.	Population.		In the five years, 1891—95.		Excess of registered births over deaths, 1891-5.	Increase or decrease of population between 1891 and 1896.	
	1891.	1896.	Births.	Deaths.		Increase.	Decrease.
Paddington	117,846	124,506	14,712	10,295	4,417	6,660	...
Kensington	166,308	170,465	18,520	14,398	4,132	4,157	...
Hammersmith	97,239	104,199	14,600	9,314	5,286	6,960	...
Fulham	91,639	113,781	18,376	9,873	8,503	22,142	...
Chelsea	96,253	96,646	13,890	9,490	4,400	393	...
St. George, Hanover-square ...	78,364	79,967	7,596	6,172	1,424	1,603	...
Westminster[1]	55,774	53,589	6,758	6,110	648	...	2,185
St. James	24,995	23,050	2,575	2,214	361	...	1,945
Marylebone	142,404	141,188	21,931	15,180	6,751	...	1,216
Hampstead	68,416	75,449	7,402	4,396	3,006	7,033	...
Pancras	234,379	240,764	35,444	24,503	10,941	6,385	...
Islington	319,143	336,764	48,482	29,825	18,657	17,621	...
Stoke Newington	30,936	33,485	34,444	20,464	13,980	16,987	...
Hackney	198,606	213,044					
St. Giles	39,782	38,237	5,558	4,561	997	...	1,545
St. Martin-in-the-Fields	14,616	13,077	1,143	1,488	—345	...	1,539
Strand	25,122	23,782	2,959	3,240	—281	...	1,340
Holborn[2]	34,043	31,710	4,319	4,276	43	...	2,333
Clerkenwell	66,216	66,202	10,765	7,766	2,999	...	14
St. Luke	42,440	41,527	9,380	5,848	3,532	...	913
London, City of[3]	37,678	31,198	3,037	4,011	—974	...	6,480
Shoreditch	124,009	122,348	22,214	14,366	7,848	...	1,661
Bethnal Green	129,132	129,162	24,072	14,934	9,138	30	...
Whitechapel[4]	74,420	78,636	15,523	9,083	6,440	4,216	...
St. George-in-the-East	45,795	47,506	9,646	6,520	3,126	1,711	...
Limehouse	57,376	58,305	9,802	7,465	2,337	929	...
Mile-end Old-town	107,592	111,060	20,514	11,925	8,589	3,468	...
Poplar	166,748	169,267	29,756	18,271	11,485	2,519	...
St. Saviour, Southwark	27,177	25,365	4,083	3,378	705	...	1,812
St. George, Southwark	59,712	60,278	10,742	7,702	3,040	566	...
Newington	115,804	120,939	21,066	13,753	7,313	5,135	...
St. Olave	12,723	11,731	2,138	1,591	547	...	992
Bermondsey	84,682	85,475	15,886	9,497	6,389	793	...
Rotherhithe	39,255	40,379	6,820	4,193	2,627	1,124	...
Lambeth	275,203	295,033	46,117	27,568	18,549	19,830	...
Battersea	150,558	165,115	25,740	13,910	11,830	14,557	...
Wandsworth	156,942	187,264	22,421	12,596	9,825	30,322	...
Camberwell	235,344	253,076	37,200	22,302	14,898	17,732	...
Greenwich	165,413	175,774	27,051	16,424	10,627	10,361	...
Lewisham	92,647	104,521	12,235	7,011	5,224	11,874	...
Woolwich	40,848	41,314	6,485	4,171	2,314	466	...
Lee	36,103	38,588	13,661	7,068	6,593	9,301	...
Plumstead	52,436	59,252					
London	**4,232,118**	**4,433,018**	**665,063**	**427,152**	**237,911**	**200,900**	...

An examination of the preceding table shows that in thirteen of the London sanitary districts there has been a decrease of population in the inter-censal period 1891-96, while an increase is shown for the remaining districts. In only twelve of the latter districts, however, is the increase of population in the inter-censal period greater than the excess of births over deaths in the five years 1891-5.

It is interesting to observe that the increase in the population of London as a whole in the inter-censal period 1891-96, as in the previous inter-censal period 1881-91, was less than the excess of births over deaths, whereas in the inter-censal period 1871-81 the increase in the total population was considerably in excess of the "natural increase," as will be seen from the following table—

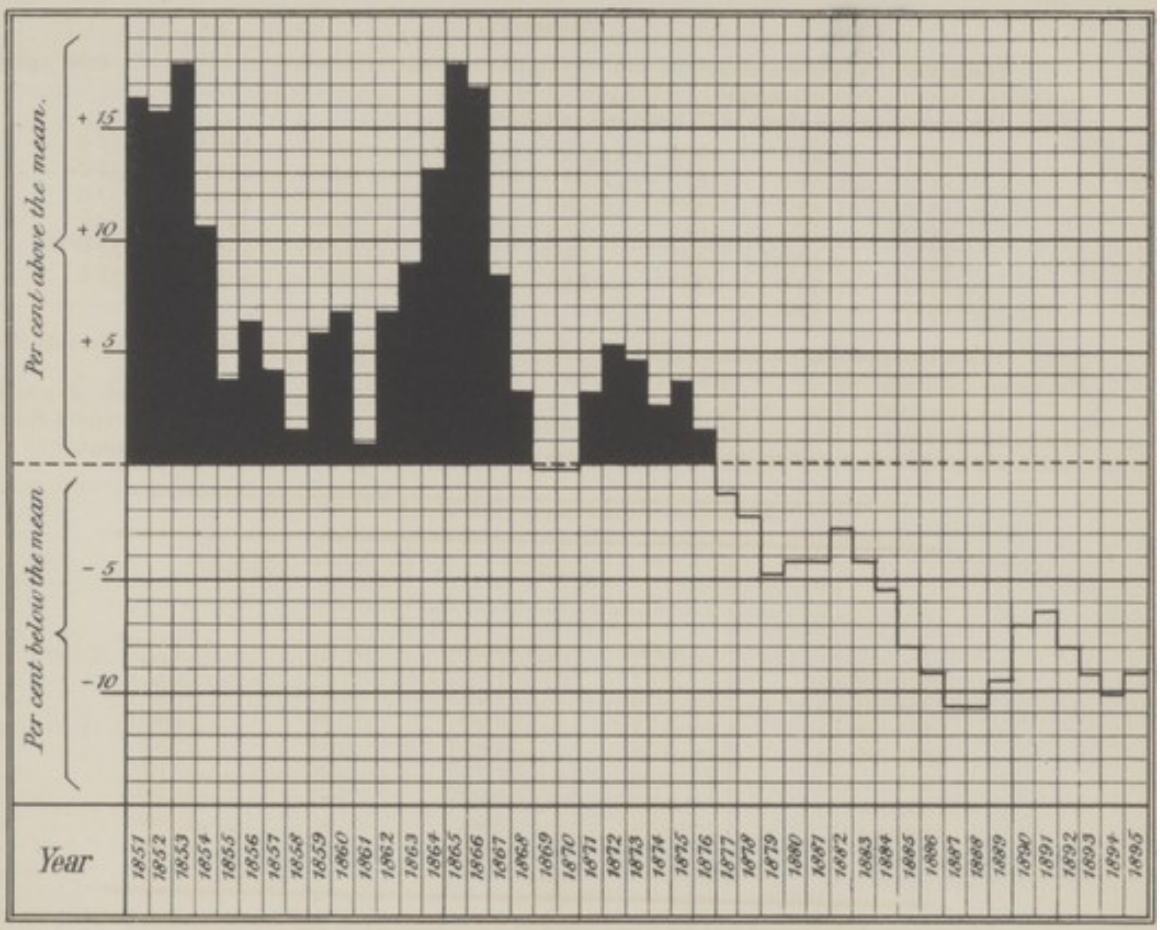
Registration County of London.

Period.	Natural increase (excess of births over deaths).	Increase of population in the inter-censal periods 1871-81, 1881-91 & 1891-96.
1871–80 ...	454,475	562,223
1881–90 ...	513,988	396,199
1891–95 ...	230,036	199,967

[1] Including the Close of the Collegiate Church of St. Peter.
[2] Including Inner and Middle Temple.
[3] Including Charterhouse, Gray's Inn, Lincoln's Inn, Staple's Inn and Furnival's Inn.
[4] Including the Tower of London.

Diagram I.

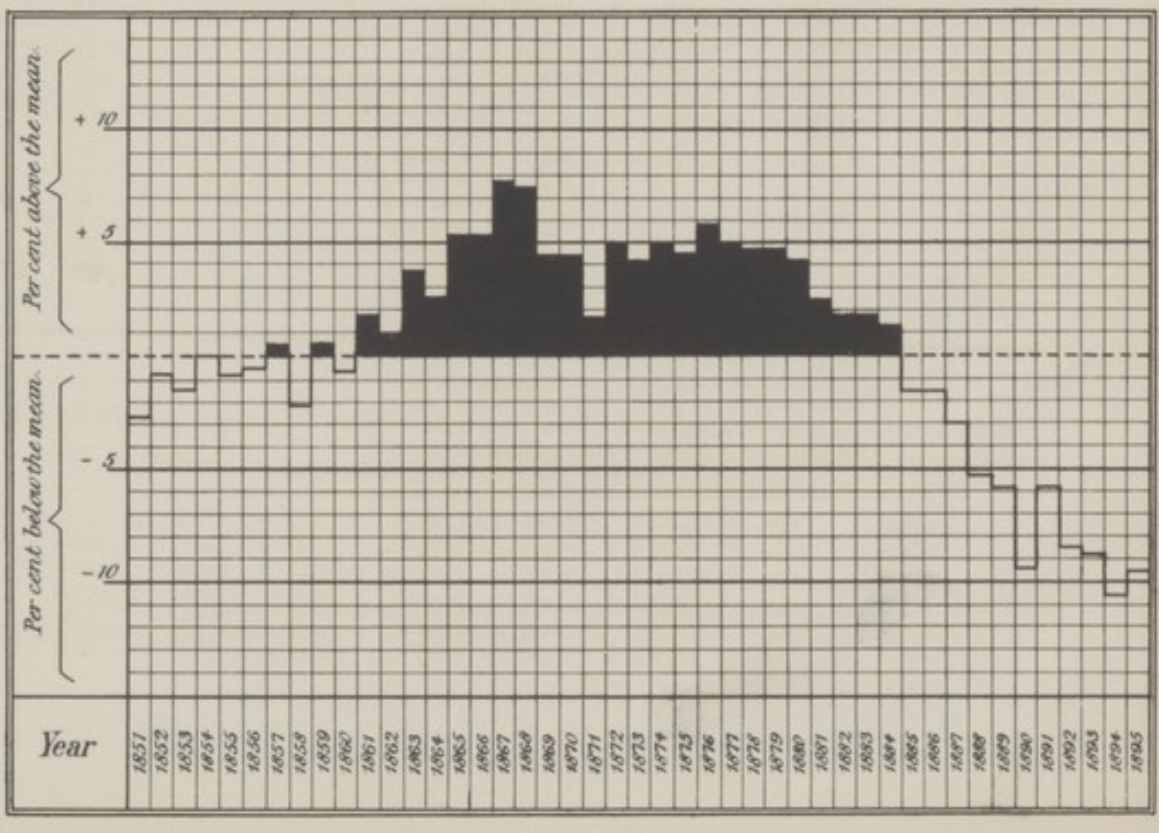
Marriages.



ean Marriage-rate 1851-95 = 18·92. per 1000.

Diagram II.

Births.



Mean Birth-rate 1851-95 = 33·91 per 1000.

Marriages.

There were 37,593 marriages in the registration county of London in 1895 (52 weeks), giving an annual rate of persons married of 17·2 per 1,000 living.

The marriage rate since 1870 has been as follows—

1871 ...	19·5	1878 ...	18·5	1884 ...	17·9	1890 ...	17·6
1872 ...	19·9	1879 ...	18·0	1885 ...	17·4	1891 ...	17·7
1873 ...	19·8	1880 ...	18·1	1886 ...	17·2	1892 ...	17·4
1874 ...	19·4	1881 ...	18·1	1887 ...	16·9	1893 ...	17·2
1875 ...	19·6	1882 ...	18·4	1888 ...	16·9	1894 ...	17·0
1876 ...	19·2	1883 ...	18·1	1889 ...	17·1	1895 ...	17·2
1877 ...	18·7						

The accompanying diagram (I.) shows the marriage rate in each year since 1850 in relation to the mean marriage rate of the period 1851-95.

In the year 1895, among the males 4·37 per cent. married were under 21 years of age, and among the females 15·85 per cent. The proportions in preceding periods are shown in the following table; the proportions in England and Wales are also given for the purpose of comparison—

Marriages of minors per cent. of total marriages.

	London.		England.	
	Males.	Females.	Males.	Females.
1851–60	2·77	11·95	5·70	17·99
1861–70	3·56	14·56	6·82	20·37
1871–80	4·71	16·90	7·96	22·03
1881–90	5·53	18·91	6·81	20·75
1891	4·86	17·45	5·90	19·01
1892	5·15	17·67	5·87	18·76
1893	4·75	16·80	5·59	18·08
1894	4·68	16·79	5·46	18·06

In my annual reports for the years 1893 and 1894 tables are published showing the number of minors married in each of the registration districts of London in the years 1885-94. The following table gives similar information for the year 1895—

Marriages of minors in London, 1895.

Registration districts.	Men.	Women.	Registration districts.	Men.	Women.
Paddington	24	113	Bethnal-green	121	350
Kensington	59	183	Whitechapel	26	87
Fulham	81	240	St. George-in-the-East	32	71
Chelsea	40	122	Stepney	19	84
St. George, Hanover-square ...	27	124	Mile-end Old-town	90	349
Westminster	7	69	Poplar	61	252
Marylebone	36	177	St. Saviour, Southwark... ...	265	769
Hampstead	9	37	St. Olave, Southwark	37	155
St. Pancras	87	324	Lambeth	80	280
Islington	84	364	Wandsworth	89	321
Hackney	41	233	Camberwell	50	223
St. Giles	13	37	Greenwich	43	163
Strand	14	40	Lewisham	8	63
Holborn	89	293	Woolwich...	27	170
London, City	9	56	**London**	**1,647**	**5,975**
Shoreditch	79	226			

Births.

The number of births registered in the administrative county of London in 1895 was 134,197, giving an annual birth rate of 30·6 per 1,000 persons living.

Since 1870 the birth rate per 1,000 living has been as follows—

1871 ...	34·5	1878 ...	35·5	1884 ...	34·3	1890 ...	30·7
1872 ...	35·6	1879 ...	35·5	1885 ...	33·4	1891 ...	31·8
1873 ...	35·3	1880 ...	35·3	1886 ...	33·4	1892 ...	30·9
1874 ...	35·6	1881 ...	34·7	1887 ...	32·9	1893 ...	31·0
1875 ...	35·4	1882 ...	34·5	1888 ...	32·1	1894 ...	30·1
1876 ...	35·9	1883 ...	34·5	1889 ...	31·9	1895 ...	30·6
1877 ...	35·6						

The corresponding figures for England and Wales were as follows—

Birth rates per 1,000 *living—England and Wales.*

1871 ... 35·0	1877 ... 36·0	1883 ... 33·5	1889 ... 31·1
1872 ... 35·6	1878 ... 35·6	1884 ... 33·6	1890 ... 30·2
1873 ... 35·4	1879 ... 34·7	1885 ... 32·9	1891 ... 31·4
1874 ... 36·0	1880 ... 34·2	1886 ... 32·8	1892 ... 30·5
1875 ... 35·4	1881 ... 33·9	1887 ... 31·9	1893 ... 30·8
1876 ... 36·3	1882 ... 33·8	1888 ... 31·2	1894 ... 29·6

The accompanying diagram (II.) shows the London birth rate in each year in relation to the mean of the period 1851-95.

The birth rate in each of the London sanitary districts in 1895 is shown in the following table—

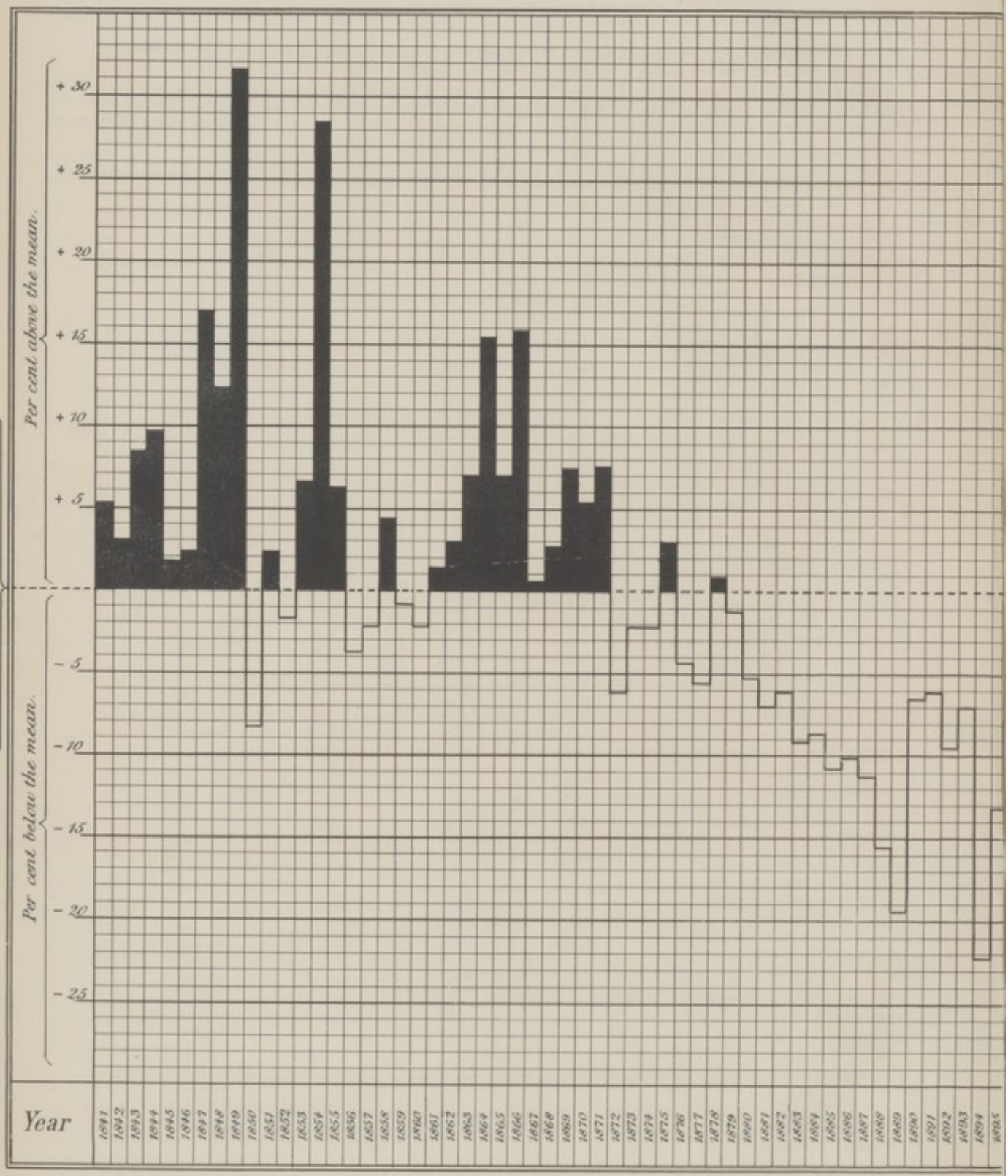
Sanitary district.	Births.	Birth rate per 1,000 living.	Births per 100 females aged 15–45.
Paddington	2,977	24·2	7·27
Kensington	3,621	21·4	6·02
Hammersmith	2,909	28·3	10·45
Fulham	3,930	35·7	13·65
Chelsea	2,734	28·4	10·48
St. George, Hanover-square ...	1,470	18·5	5·28
Westminster	1,284	23·9	8·95
St. James	542	23·3	8·01
Marylebone	4,400	31·2	9·96
Hampstead	1,453	19·6	5·37
Pancras	7,118	29·8	11·49
Islington	9,879	29·7	11·22
Stoke Newington	813	24·6	8·11
Hackney	6,172	29·4	10·99
St. Giles	1,120	29·2	10·29
St. Martin-in-the-Fields ...	189	14·2	4·88
Strand	612	25·5	9·26
Holborn	821	26·2	10·36
Clerkenwell	2,083	31·5	12·94
St. Luke	1,904	45·8	18·87
London, City of	553	16·9	6·37
Shoreditch	4,352	35·6	14·96
Bethnal-green	4,771	37·0	15·97
Whitechapel	3,130	40·2	17·15
St. George-in-the-East ...	1,972	41·9	18·33
Limehouse	2,035	35·1	15·65
Mile-end Old-town	4,204	38·1	16·01
Poplar	6,071	36·0	16·39
St. Saviour, Southwark ...	1830	32·4	14·60
St. George, Southwark ...	2,188	36·5	15·29
Newington	4,234	35·3	14·95
St. Olave	428	36·1	15·34
Bermondsey	3,212	37·7	16·67
Rotherhithe	1,304	32·5	15·21
Lambeth	9,341	32·1	12·31
Battersea	5,264	32·4	13·58
Wandsworth	4,721	25·9	8·86
Camberwell	7,528	30·2	12·02
Greenwich	5,475	31·5	13·12
Lewisham	2,519	24·6	8·34
Woolwich	1,331	32·4	16·05
Lee	826	21·7	7·07
Plumstead	1,877	32·3	14·39
London	**134,197**	**30·6**	**11·55**

DEATHS.

The number of deaths registered in the administrative county of London in 1895 was 85,416, giving an annual death rate of 19·5 per 1,000 living.

Diagram III.

Deaths (All causes)



Since the year 1870, the London death rate has been as follows—

1871 ...	24·6	1878 ...	23·1	1885 ...	20·4	1892 ...	20·3[2]
1872 ...	21·5	1879 ...	22·6	1886 ...	20·6	1893 ...	21·0[2]
1873 ...	22·4	1880 ...	21·7	1887 ...	20·3	1894 ...	17·4[2]
1874 ...	22·4	1881 ...	21·3	1888 ...	19·3	1895 ...	19·5[2]
1875 ...	23·6	1882 ...	21·5	1889 ...	18·4		
1876 ...	21·9	1883 ...	20·8	1890 ...	21·4		
1877 ...	21·6	1884 ...	20·9	1891 ...	21·0[2]		

The death rate in each year since 1841 in relation to the mean of the period 1841-95 is shown in diagram III. It will be observed that the death rate in 1895, while higher than that of 1894, was lower than the death rate of any of the four years antecedent to 1894. The year 1895 was characterized by a temperature in January and February below the average of the 124 preceding years, and in the summer months above the average. Influenza and bronchitis were more fatal in 1895 than in the previous year, although the deaths were below the average of the ten years antecedent to 1895. Again, diarrhœa, a disease largely dependent on a high summer temperature, was in 1895 more than twice as fatal as in 1894, and slightly exceeded the average of the ten years preceding 1895.

The following table has been prepared for the purpose of comparing the death rate of the registration county of London with that of other English towns having populations which exceeded 200,000 persons at the census of 1891. The columns showing "death rates corrected for age and sex distribution" have been obtained by multiplying the crude death rates by the "factor for correction" published by the Registrar-General in the annual summary for 1895.

All causes.

Town.	Estimated population, middle of 1895.	Crude death rate per 1,000 living.		Death rate per 1,000 living (corrected for age and sex distribution).	
		1885-94.	1895.	1885-94.	1895.
London	**4,331,119**	**20·1**	**19·9**[1]	**21·4**	**21·2**
Manchester	524,865	25·7	25·2	29·1	28·6
Liverpool	503,967	25·7	28·8	28·5	32·0
Birmingham ...	496,751	20·6	20·3	22·8	22·4
Leeds	395,546	21·1	20·5	23·4	22·7
Sheffield	342,768	21·7	20·5	24·1	22·8
West Ham	249,473	18·8	17·9	20·3	19·3
Bristol	228,139	19·4	18·1	20·3	18·9
Nottingham	226,658	19·7	19·0	21·2	20·4
Bradford	226,384	20·2	19·9	23·1	22·8
Hull	216,722	19·8	20·8	20·8	21·8
Salford	208,253	24·6	25·6	27·7	28·8

London had, therefore, comparing the corrected death rates in 1895 a lower death rate than that of any of these towns except West Ham, Bristol, Bradford and Nottingham, and in the period 1885–94 a lower death rate than that of any of these towns except West Ham, Bristol, Nottingham and Hull.

The following table enables comparison to be made of the death rate of London with that of several foreign cities—

All causes.

Town.	Death rate per 1,000 living.		Town.	Death rate per 1,000 living.	
	1885-94.	1895.		1885-94.	1895.
London	**20·1**	**19·9**[1]	St. Petersburg	29·7	28·8
Paris	22·8	21·3	Berlin	21·5	19·4
Brussels	20·8	19·8	Vienna	24·7	23·1
Amsterdam	21·4	17·4	Rome	23·9	20·6
Copenhagen	21·3	18·5	New York	24·9	23·3
Stockholm	20·5	17·0			

It will be seen that whereas in 1885-94 the death rate of London was lower than that of any of these cities, in 1895 it exceeded the death rates of Amsterdam, Copenhagen, Stockholm, Berlin, and Brussels.

In 1885 the Registrar-General began to distribute the deaths from all causes and from certain zymotic diseases, occurring in institutions, to the sanitary districts to which they belong, and death rates of sanitary districts corrected in this sense can therefore be obtained for each of the years 1885-95. For the purpose of a more precise statement, it is necessary to have regard to the age and

[1] See footnote (1), page 10. [2] See footnote (2), page 10.

sex distribution of the several populations, and to correct each crude death rate by the proper factor; the following table is thus obtained—

Crude and corrected death rates[3] per 1,000 *persons living in sanitary districts of London.*

Sanitary area.	Standard death rate.	Factor for correction for age and sex distribution.	Crude death rate, 1885-94.	Corrected death rate, 1885-94.	Comparative mortality figure, 1885-94. [London 1,000.]	Crude death rate, 1895.	Corrected death rate, 1895.	Comparative mortality figure, 1895. [London 1,000.]
England and Wales... ...	*19·15*	—	—	—	—	—	—	—
London	**17·96**	**1·06626**	**19·8**	**21·1**	**1,000**	**19·5**[2]	**20·8**	**1,000**
Battersea	17·80	1·07584	—	—	—	17·7	19·0	913
Bermondsey...	18·10	1·05801	22·4	23·7	1,123	22·0	23·3	1,120
Bethnal-green	18·39	1·04133	23·2	24·2	1,147	21·5	22·4	1,077
Camberwell...	18·10	1·05801	18·5	19·6	929	18·5	19·6	942
Chelsea	17·95	1·06685	20·6	22·0	1,043	19·9	21·2	1,019
Clerkenwell...	17·28	1·10822	23·0	25·5	1,209	22·6	25·0	1,202
Fulham	18·27	1·04817	—	—	—	19·9	20·9	1,005
Greenwich	18·63	1·02791	19·4	19·9	943	19·0	19·5	938
Hackney	18·30	1·04645	—	—	—	17·8	18·6	894
Hammersmith	18·05	1·06094	—	—	—	17·6	18·7	899
Hampstead	16·63	1·15153	12·4	14·3	678	12·6	14·5	697
Holborn	17·62	1·08683	25·3	27·5	1,303	25·9	28·1	1,351
Islington	17·90	1·06983	18·3	19·6	929	17·3	18·5	889
Kensington	17·38	1·10184	17·0	18·7	886	16·3	18·0	865
Lambeth	18·24	1·04989	19·5	20·5	972	19·1	20·1	966
Lee	17·67	1·08376	—	—	—	14·7	15·9	765
Lewisham	17·92	1·06864	14·4	15·4	730	14·3	15·3	736
Limehouse	17·59	1·08869	25·8	28·1	1,332	26·7	29·1	1,399
City of London	16·65	1·15015	22·6	26·0	1,232	22·0	25·3	1,216
Mile-end Old-town	18·58	1·03068	21·2	21·9	1,038	22·1	22·8	1,096
Newington	18·32	1·04531	22·2	23·2	1,100	24·0	25·1	1,207
Paddington	17·72	1·08070	16·7	18·0	853	17·1	18·5	889
Plumstead	19·09	1·00314	—	—	—	16·0	16·1	774
Poplar	18·49	1·03569	21·0	21·7	1,028	22·9	23·7	1,139
Rotherhithe...	18·49	1·03569	21·6	22·4	1,062	19·6	20·3	976
St. George, Hanover-square	17·34	1·10438	16·6	18·3	867	14·8	16·3	784
St. George-in-the-East ...	18·43	1·03907	29·2	30·3	1,436	28·2	29·3	1,409
St. George, Southwark ...	17·35	1·10375	25·7	28·4	1,346	25·4	28·0	1,346
St. Giles	17·27	1·10886	23·9	26·5	1,256	22·4	24·8	1,192
St. James	17·16	1·11597	18·9	21·1	1,000	17·6	19·6	942
St. Luke	17·72	1·08070	26·7	28·9	1,370	29·5	31·9	1,534
St. Martin-in-the-Fields ...	15·74	1·21665	21·2	25·8	1,223	18·4	22·4	1,077
St. Marylebone	17·82	1·07464	21·0	22·6	1,071	20·2	21·7	1,043
St. Olave	18·42	1·03963	23·6	24·5	1,161	26·5	27·6	1,327
St. Pancras	17·89	1·07043	20·5	21·9	1,038	20·0	21·4	1,029
St. Saviour	18·29	1·04702	25·6	26·8	1,270	26·5	27·7	1,332
Shoreditch	18·45	1·03794	22·9	23·8	1,128	23·4	24·3	1,168
Stoke Newington	17·85	1·07283	—	—	—	14·3	15·3	736
Strand	16·24	1·17919	25·0	29·5	1,398	23·7	27·9	1,342
Wandsworth	17·93	1·06804	—	—	—	15·1	16·1	774
Westminster	16·94	1·13046	21·9	24·8	1,175	21·3	24·1	1,159
Whitechapel	17·74	1·07948	22·8	24·6	1,166	23·4	25·3	1,217
Woolwich	16·99	1·12713	20·5	23·1	1,095	18·2	20·5	986

The death rates of Battersea, Wandsworth, Hammersmith, Fulham, Stoke Newington, Hackney, Lee, and Plumstead cannot be given for the period 1885-94, as during some portion of this period Battersea was combined with Wandsworth, Hammersmith with Fulham, Stoke Newington with Hackney, and Lee with Plumstead; the death rates of the combined areas for this period, however, are shown in the following table—

Sanitary area.	Standard death rate.	Factor for correction for age and sex distribution.	Crude death rate, 1885-94.	Corrected death rate, 1885-94.	Comparative mortality figure, 1885-94. [London 1,000.]
Wandsworth ... ... (combined with Battersea)	17·86	1·07223	16·5	17·7	839
Fulham ... ... (combined with Hammersmith)	18·15	1·05510	19·2	20·3	962
Hackney ... ... (combined with Stoke Newington)	18·23	1·05047	17·2	18·1	858
Plumstead ... ... (combined with Lee)	18·51	1·03458	15·0	15·5	735

The "factors for correction" in the above tables are calculated upon the age and sex distribution of the population enumerated in the district at the time when the census of 1891 was taken. This

[1] Including deaths of Londoners in the Metropolitan Workhouses, Hospitals, and Lunatic Asylums, situated outside Registration London, but excluding deaths of persons not belonging to London occurring in the Highgate Smallpox Hospital, in the London Fever Hospital, in the Middlesex County Lunatic Asylum at Wandsworth, and in the Metropolitan Asylums Board Hospitals within Registration London.

[2] These death rates are fully corrected for institutions, *i.e.*, by the exclusions of deaths of persons not belonging to but occurring in institutions situated within London, and by the inclusion of deaths of persons belonging to but occurring in institutions situated outside London.

[3] All death rates in this report relating to London Sanitary Districts are fully corrected for institutions. (See footnote [2].)

population did not include persons resident in poor law institutions belonging to the district but situated beyond its limits. If such persons were included in the population, the "factors for correction" would in a few instances be slightly modified.

London mortality in the five years 1891–5 *compared with the decennium* 1881–90.

The following table shows the mean death rates obtaining in London at the several age periods and for each sex in the decennium 1881–90 and the five years 1891–5—

Age period.	Males.			Females.		
	Mean death rate 1881-90.	Mean death rate 1891-95.	Difference per cent.	Mean death rate 1881-90.	Mean death rate 1891-95.	Difference per cent.
0—	73·09	71·23	— 2·5	63·26	61·30	— 3·1
5—	5·93	5·26	— 11·3	5·82	5·54	— 4·8
10—	2·92	2·61	— 10·6	2·89	2·64	— 8·7
15—	4·05	3·79	— 6·4	3·58	3·25	— 9·2
20—	5·44	4·98	— 8·5	4·40	3·96	— 10·0
25—	8·65	7·98	— 7·7	6·82	6·23	— 8·7
35—	14·96	14·87	— 0·6	11·42	11·26	— 1·4
45—	23·87	24·32	+ 1·9	17·23	17·46	+ 1·3
55—	41·33	42·88	+ 3·8	30·77	32·37	+ 5·2
65—	77·97	79·81	+ 2·4	63·28	65·57	+ 3·6
75—	155·93	156·82	+ 0·6	134·28	138·82	+ 3·4
85 and upwards	297·63	288·42	— 3·1	264·77	264·90	+ 0·0
All ages	22·10	21·42	— 3·1	18·83	18·45	— 2·0

An examination of the table shows that the decrease in the death rate at "all ages" is almost wholly due to a decrease in the death rates of males and females aged 0–45, seeing that the death rates of males and females aged 45 and upwards, with the single exception of males aged 85 and upwards, have actually increased.

A comparison of the figures in the columns headed "difference per cent." shows that, speaking generally, the increases in the death rates at ages 45 and upwards have been more marked in the case of females than in the case of males, and while this is also true of the decreases in the death rates shown at ages 0–, 15–, 20–, 25– and 35–, it will be seen that the decrease in the death rate of males at age groups 5– and 10– has been greater than the decrease in the female death rate at the same age groups. This difference in the percentage difference is especially marked in the case of the age group 5–.

The marked difference referred to at this age period is largely accounted for when the prevalence of diphtheria in recent years is considered. It will be seen from the table relating to diphtheria (page 33), and from similar tables published in previous reports, that the incidence of diphtheria mortality on females aged 5– is much greater than the incidence on males at this age period, and it follows, therefore, that any increase in the total mortality from this disease must, *ceteris paribus*, operate prejudicially upon the "all causes" death rate of females at this age period in comparison with that of males.

The following figures show the decrease in the death rate from "all causes, less diphtheria" in the period 1891–5, compared with 1881–90, for each sex at the age period 5—

Males at age period 5-.			Females at age period 5-.		
Mean death rate from all causes, less diphtheria.		Decrease per cent.	Mean death rate from all causes, less diphtheria.		Decrease per cent.
1881-90.	1891-5.		1881-90.	1891-5.	
5·39	4·20	— 22·1	5·13	4·13	— 19·5

In my last annual report it was shown that a more accurate estimate of the effect on the community of fluctuations of mortality could be obtained by the use of a "life table," and the following figures, calculated from the E^x and Q^x columns of the life table for London, 1881–90, were utilised for this purpose—

Table I.

Mean future lifetime of males and females in groups of ages (calculated from London life tables, 1881–90.)

Age groups.	Males.	Females.	Age groups.	Males.	Females.
	Years.	Years.		Years.	Years.
0—	49·06	52·69	35—	24·19	27·24
5—	48·94	52·68	45—	18·15	20·57
10—	45·05	48·80	55—	12·95	14·56
15—	40·79	44·55	65—	8·89	9·78
20—	36·70	40·39	75—	6·35	6·74
25—	31·04	34·51	85 and upwards	2·75	2·85

By comparing the mean deaths occurring at each age period in 1891–5 with the deaths which would have occurred at these age periods if the death rates of 1881–90 had still been maintained, the difference between the two sets of figures will be the number of lives gained or lost at each age-period by fluctuations of mortality, and by applying to these differences the figures in the preceding table the actual gain or loss may be expressed in "life capital."

The result of this process is shown in the following table—

Table II.

Age groups.	Deaths calculated according to mean rates 1881-90.	Mean deaths occurring in the five years 1891-5.	Mean annual gain (+) or loss (−) of lives in the five years 1891-5 by fluctuations of mortality.	Mean annual gain (+) or loss (−) of "life capital" in the five years 1891-5 by fluctuations of mortality.
Males.				
0—	18,628	18,154	+ 474	+23,254
5—	1,369	1,215	+ 154	+ 7,537
10—	616	549	+ 67	+ 3,018
15—	817	766	+ 51	+ 2,080
20—	1,079	989	+ 90	+ 3,303
25—	2,951	2,722	+ 229	+ 7,108
35—	3,766	3,742	+ 24	+ 581
45—	4,224	4,303	— 79	— 1,434
55—	4,173	4,330	— 157	— 2,033
65—	4,018	4,113	— 95	— 845
75—	2,243	2,256	— 13	— 83
85 and upwards	459	445	+ 14	+ 38
All ages ...	44,343	43,584	+ 759	+42,524
Females.				
0—	16,283	15,780	+ 503	+26,503
5—	1,355	1,290	+ 65	+ 3,424
10—	620	567	+ 53	+ 2,586
15—	801	727	+ 74	+ 3,297
20—	1,052	946	+ 106	+ 4,281
25—	2,671	2,438	+ 233	+ 8,041
35—	3,185	3,142	+ 43	+ 1,171
45—	3,435	3,481	— 46	— 946
55—	3,854	4,055	— 201	— 2,927
65—	4,669	4,838	— 169	— 1,653
75—	3,439	3,555	— 116	— 782
85 and upwards	977	977	—	—
All ages ...	42,341	41,796	+ 545	+42,995
Total ...	86,684	85,380	+ 1,304	+85,519

This table shows, therefore, that during the period 1891–5, as compared with the decennium 1881–90, there has been a mean annual saving of 1,304 lives, and that this represents 85,519 years of "life capital" annually saved to the community. The actual gain to the community is therefore greater than appears from the number of lives saved, and this is apparent when the great saving of life at the earlier ages shown in the table is considered. Similar treatment of the period 1891–4 showed a mean annual saving of 1,042 lives and 79,606 years of "life capital."

Infant mortality.

The deaths of children under one year of age in the administrative county of London during 1895 numbered 22,087, being in the proportion of 165 per 1,000 births.

The infant mortality in London may be compared with that in other English towns having more than 200,000 inhabitants by reference to the following table—

Towns.	1885–94.	1895.		1885–94.	1895.
London	**153**	**166***	West Ham	152	168
Manchester	182	203	Bristol	145	143
Liverpool	186	210	Nottingham	168	190
Birmingham	171	183	Bradford	167	203
Leeds	174	191	Hull	163	205
Sheffield	175	197	Salford	189	231

London had therefore a lower infant mortality in 1885-94 than all these towns except West Ham and Bristol, and in 1895 than all except Bristol.

*See footnote (1), page 10.

The infant mortality in 1895 and in the period 1885–94 in the several London sanitary districts was as follows—

Sanitary district.	Deaths under 1 year of age, 1895.	Deaths under one year of age per 1,000 births.	
		1885-94.	1895.
Paddington	488	143	164
Kensington	623	162	172
Hammersmith	483	159	166
Fulham	735	164	187
Chelsea	460	155	168
St. George, Hanover-square ...	203	138	138
Westminster	238	164	185
St. James	78	162	144
Marylebone	607	141	138
Hampstead	196	114	135
Pancras	1,239	157	174
Islington	1,411	148	143
Stoke Newington	94	137	116
Hackney	949		154
St. Giles	179	151	160
St. Martin-in-the-Fields	50	193	265
Strand	107	200	175
Holborn	174	204	212
Clerkenwell	399	169	192
St. Luke	351	147	184
London, City of	87	155	157
Shoreditch	864	170	199
Bethnal-green	772	159	162
Whitechapel	490	165	157
St. George-in-the-East	386	192	196
Limehouse	411	187	202
Mile-end Old-town	694	149	165
Poplar	1,113	152	183
St. Saviour, Southwark	170	178	205
St. George, Southwark	434	185	198
Newington	852	165	205
St. Olave	88	173	206
Bermondsey	520	155	162
Rotherhithe	193	157	148
Lambeth	1,421	144	152
Battersea	930	155	177
Wandsworth	623	129	132
Camberwell	1,235	149	164
Greenwich	823	147	150
Lewisham	348	136	138
Woolwich	204	146	153
Lee	116	115	140
Plumstead	249		133
London	**22,087**	**153**	**165***

Deaths from several classes of disease.

The deaths from the several classes of disease registered in the registration county of London (including the lunatic asylums and hospitals for infectious disease belonging to the county) are given by the Registrar-General in the Annual Summary of Births, Deaths and Causes of Death, and the following table has been prepared from the figures contained in the summary relating to the year 1895—

	Corrected annual average 1885-94.	1895.
Zymotic diseases	14,353·1	14,865
Parasitic ,, ...	96·1	61
Dietetic ,, ...	491·8	544
Constitutional diseases	16,971·4	16,679
Developmental ,, ...	5,469·8	5,579
Nervous ,, ...	9,715·6	8,636
Diseases of organs of special sense...	141·4	168
Circulatory diseases	6,949·0	6,905
Respiratory ,, ...	19,272·4	18,482
Diseases of the Digestive system ...	4,801·8	5,099
,, ,, Lymphatic ,, ...	113·9	108
,, ,, Urinary ,, ...	2,247·2	2,230
,, ,, Generative ,, ...	533·4	500
,, ,, Locomotive ,, ...	364·4	253
,, ,, Integumentary system	297·6	303
Violence (accident)	2,723·7	2,850
Violence (other than accident) ...	502·7	557
Other causes	3,155·1	3,118
All causes	88,200·4	86,937

* See footnote (¹), page 12.

Principal Zymotic Diseases.

The number of deaths in the administrative county of London from the principal zymotic diseases, viz., smallpox, measles, scarlet fever, diphtheria, whooping cough, fever, and diarrhœa during 1895 was 11,485, giving an annual death rate of 2·62 per 1,000 living, compared with 2·65 in 1894, 3·04 in 1893, 2·80 in 1892, and 2·27 in 1891.

In the period 1885–94 London had a higher death rate from the principal zymotic diseases than any of the other English towns of more than 200,000 inhabitants, except Manchester, Liverpool, Sheffield, West Ham, and Salford. In 1895 the London death rate was exceeded by the rates of all these towns, except Bristol, Nottingham, and Bradford, as will be seen by the following table—

Principal zymotic diseases—Death rates per 1,000 *living.*

Towns.	1885–94.	1895.	Towns.	1885–94.	1895.
London	**2·76**	**2·64**[1]	Bristol	2·11	3·24
Manchester	3·39	3·73	Nottingham	2·50	1·30
Liverpool	3·54	4·01	Bradford	2·38	2·23
Birmingham	2·69	2·67	Hull	2·35	2·51
Leeds	2·68	2·69	Salford	4·31	3·32
Sheffield	3·23	3·17	West Ham	3·34	4·96

The London death rate from the first six of these principal zymotic diseases, viz., smallpox, measles, scarlet fever, diphtheria, whooping cough, and fever was in 1885–94 higher than that of Paris, Brussels, Amsterdam, Berlin, and Vienna; and in 1895 was only exceeded by those of St. Petersburg and New York, thus—

Death rates per 1,000 *living.*

	1885–94.	1895.		1885–94.	1895.
London	**2·08**	**1·81**[1]	St. Petersburg	3·01	2·93
Paris	1·84	·82	Berlin...	1·73	1·51
Brussels	1·09	0·94	Vienna	1·91	1·44
Amsterdam	1·38	0·59	Rome	2·21	1·25
Copenhagen	2·11	1·47	New York	2·49	2·00
Stockholm	2·70	·61			

The death rates from the principal zymotic diseases in the several sanitary districts of London in 1895 and the period 1885–94, are shown in the following table—

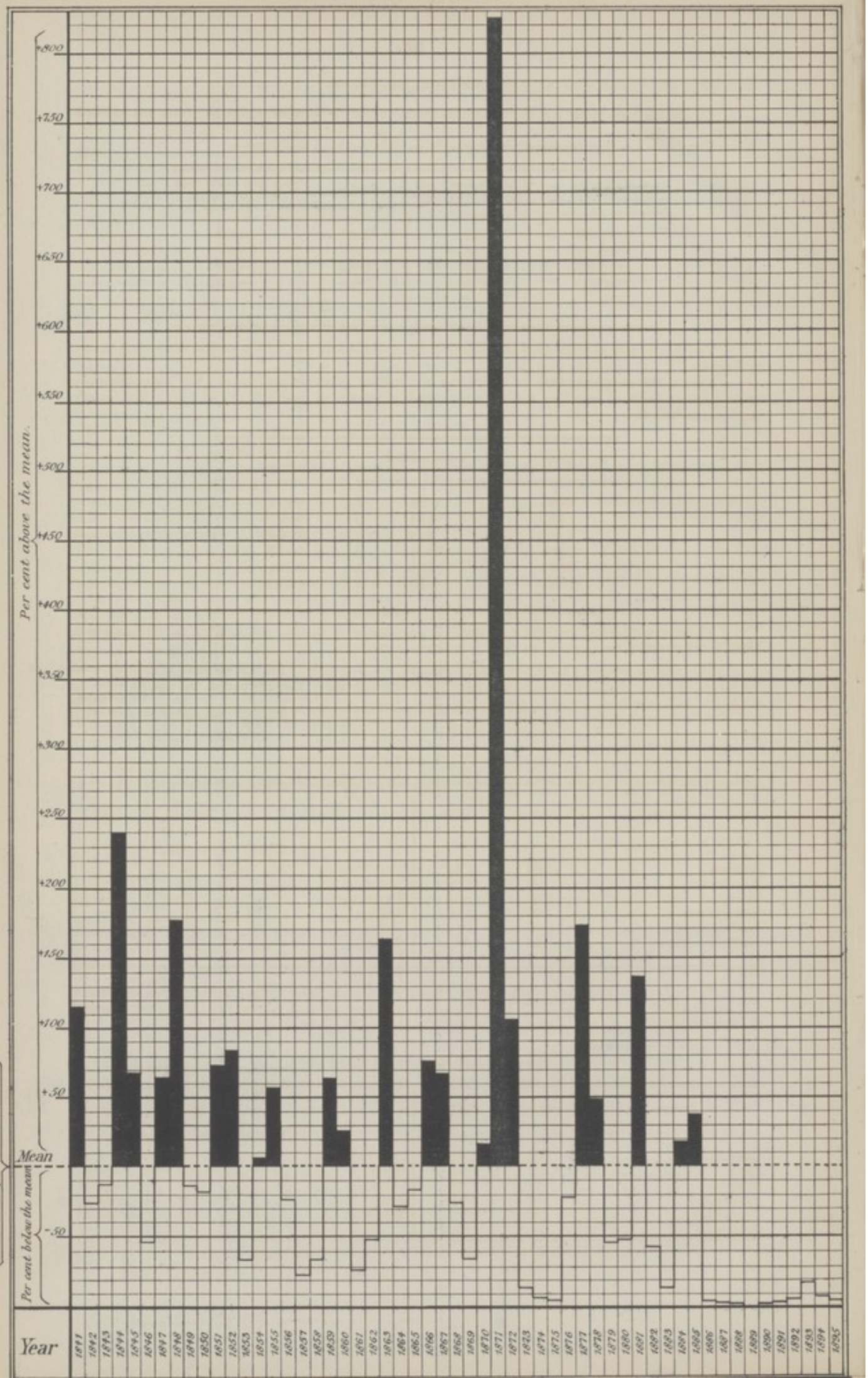
Sanitary district.	Deaths in 1895.	Death rate per 1,000 living.		Sanitary district.	Deaths in 1895.	Death rate per 1,000 living.	
		1885—94.	1895.			1885—94.	1895.
Paddington	207	2·07	1·67	Shoreditch	460	3·66	3·77
Kensington	322	2·07	1·90	Bethnal-green ...	441	3·76	3·41
Hammersmith ...	225	3·19	2·20	Whitechapel ...	250	2·98	3·21
Fulham	342		3·10	St. George-in-the-East	246	4·63	5·22
Chelsea	221	2·69	2·28	Limehouse	261	4·22	4·50
St. George, Hanover-square	117	1·64	1·48	Mile-end Old-town ...	424	3·39	3·85
				Poplar...	677	3·12	4·01
Westminster	111	2·50	2·06	St. Saviour, Southwark	76	3·27	2·97
St. James	31	1·91	1·34	St. George, Southwark	194	3·72	3·23
Marylebone	239	2·25	1·70	Newington	401	3·09	3·34
Hampstead	78	1·33	1·05	St. Olave	31	2·93	2·62
Pancras	741	2·62	3·10	Bermondsey	270	3·20	3·17
Islington	686	2·68	2·06	Rotherhithe	110	3·17	2·74
Stoke Newington ...	39	2·52	1·18	Lambeth	742	2·62	2·54
Hackney	545		2·58	Battersea	442	2·51	2·72
St. Giles	77	2·55	2·01	Wandsworth	250		1·36
St. Martin-in-the-Fields	24	1·98	1·81	Camberwell	648	2·66	2·59
				Greenwich	465	2·79	2·69
Strand...	49	2·47	2·03	Lewisham	144	1·67	1·42
Holborn	90	2·89	2·88	Woolwich	73	2·08	1·78
Clerkenwell	250	3·51	3·80	Lee	54	1·96	1·41
St. Luke	224	3·59	5·39	Plumstead	153		2·63
London, City of ...	55	1·46	1·68	**London**	**11,485**	**2·73**	**2·62**[2]

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

Diagram IV.

Smallpox.



The deaths from small pox in the administrative county of London which had been one in 1889, three in 1890, eight in 1891, 29 in 1892, 186 in 1893, and 89 in 1894, fell to 55 in 1895.

The death rate from smallpox in successive periods has been as follows—

Period.	Smallpox death rate per 1,000 living.	Period.	Smallpox death rate per 1,000 living.
1851–60	0·28	1892	0·007[2]
1861–70	0·28	1893	0·040[2]
1871–80	0·46	1894	0·020[2]
1881–90	0·14	1895	0·012[2]
1891	—[2]		

The death rate in each year in relation to the mean death rate of the period 1841-95 is shown in diagram IV.

During the complete years in which the notification of infectious diseases has been obligatory the number of cases of smallpox notified to the medical officers of health in the administrative county has been as follows—

Year.	Cases notified.	Case rate per 1,000 living.
1890	60	0·014
1891	114	0·027
1892	425	0·100
1893	2,815	0·653
1894	1,193	0 274
1895	980	0·223

There was therefore in 1894 a diminished prevalence of smallpox in London as compared with 1893, and in 1895 a less prevalence than in 1894.

The annual summary of the Registrar-General for the year 1895 shows that, compared with the large towns in England having more than 200,000 inhabitants, London had in the period 1885–94 a higher death rate from smallpox than any of these towns except Birmingham, Sheffield, West Ham, and Bradford, and in 1895 a higher death rate than any except Liverpool, Birmingham and West Ham.

Smallpox—Death rates per 1,000 *living.*

Towns.	1885–94.	1895.	Towns.	1885–94.	1895.
London	**·04**	**·01**[1]	West Ham	·38	·04
Manchester	·03	·00	Bristol	·04	—
Liverpool	·02	·03	Nottingham	·01	—
Birmingham...	·06	·02	Bradford	·07	—
Leeds...	·01	—	Hull...	·02	—
Sheffield	·23	—	Salford	·01	—

If the London smallpox death rate be compared with the rates of the following foreign cities, it will be seen that in the period 1885–94 the London rate was exceeded by the rates of Paris, Brussels, St. Petersburg, Vienna, and Rome, and in 1895 by that of St. Petersburg only.

Smallpox—Death rates per 1,000 *living.*

Towns.	1885–94.	1895.	Towns.	1885–94.	1895.
London	**·04**	**·01**[1]	St. Petersburg	·13	·09
Paris	·07	·01	Berlin	·00	·00
Brussels	·11	·01	Vienna	·17	·00
Amsterdam	·00	·01	Rome	·33	·01
Copenhagen	·00	—	New York	·04	·01
Stockholm	—	—			

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

The cases notified in the administrative county were distributed throughout the year as follows—

No. of week.	Week ending	No. of cases notified.	No. of week.	Week ending	No. of cases notified.	No. of week.	Week ending	No. of cases notified.
1	5 January	3	19	11 May	4	36	7 September ...	36
2	12 „	11	20	18 „	6	37	14 „ ...	38
3	19 „	10	21	25 „	7	38	21 „ ...	21
4	26 „	7	22	1 June	1	39	28 „ ...	22
5	2 February ...	22	23	8 „	5	40	5 October	19
6	9 „ ...	11	24	15 „	6	41	12 „	15
7	16 „ ...	9	25	22 „	8	42	19 „	7
8	23 „ ...	21	26	29 „	24	43	26 „	6
9	2 March	8	27	6 July	13	44	2 November ...	12
10	9 „	8	28	13 „	37	45	9 „ ...	9
11	16 „	10	29	20 „	20	46	16 „ ...	9
12	23 „	15	30	27 „	98	47	23 „ ...	9
13	30 „	8	31	3 August	90	48	30 „ ...	5
14	6 April	8	32	10 „	54	49	7 December ...	8
15	13 „	9	33	17 „	78	50	14 „ ...	14
16	20 „	6	34	24 „	62	51	21 „ ...	3
17	27 „	14	35	31 „	37	52	28 „ ...	6
18	4 May	11						

It will be observed that smallpox cases were notified in London in each week of the year, that in the week ending February 2nd the number of cases, which in previous weeks had not exceeded 11, in that week amounted to 22. As summer approached the number of cases notified in each week was fewer, but in the last week of June and in the months of July, August and September the disease was much more prevalent, again diminishing in the last three months of the year.

The following table shows the distribution of smallpox among the several sanitary districts of London in successive periods of four weeks. In the first three of these periods smallpox fell most heavily on Marylebone, but numerous other districts also suffered in less degree. In the four weeks ending July 13th there was marked increase in the prevalence of the disease, 26 districts being involved. In the following four weeks the number of cases greatly increased, as many as 262 cases being notified in 34 districts. The eastern districts of London were those specially affected, Whitechapel suffering more than any other, the disease being mainly distributed by persons of the vagrant class, and spreading from Whitechapel to neighbouring areas.

The following table shows the distribution of smallpox throughout the year in the several sanitary districts—

Sanitary district.	Four weeks ended												
	Jan. 26.	Feb. 23.	Mar. 23.	Apr. 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.
Paddington...	...	1	1	2	1	...	...	3	...	1	...	...	1
Kensington...	...	...	2	...	...	...	...	3	2	1	...	1	...
Hammersmith	...	...	...	...	2	1	...	1	1	1	...	2	...
Fulham	...	...	1	...	...	...	...	...	1	...	...	...	...
Chelsea	...	...	...	...	...	...	1	3	...	...	...	...	...
St. George, Hanover-square	...	...	...	...	...	...	1	...	1	2	...	...	...
Westminster	...	...	...	...	...	1	3	2	...	...	...	...	...
St. James	...	...	...	...	...	...	1	...	...	...	...	...	...
Marylebone	18	53	11	2	...	...	4	10	4	1	1	...	2
Hampstead...	...	...	...	...	...	...	...	1	1	...	...	...	...
Pancras	1	1	...	2	...	1	2	2	4	...	...	2	...
Islington	...	...	...	3	2	1	2	4	7	5	1	...	...
Stoke Newington	...	...	...	...	...	...	...	...	...	...	...	...	...
Hackney	...	...	...	...	1	...	1	5	4	3	...	...	...
St. Giles	...	...	1	...	...	...	4	6	2	...	...	...	...
St. Martin-in-the-Fields ...	...	...	...	...	...	...	1	2	...	...	...	...	...
Strand	...	...	...	...	1	...	3	1	...	...	...	...	...
Holborn	1	1	4	6	7	...	4	4	4	...	...	...	...
Clerkenwell	...	...	...	...	2	...	2	3	4	...	...	...	...
St. Luke	...	...	...	...	...	...	...	2	1	...	...	...	...
London, City of	...	...	...	...	...	...	...	4	...	1	...	1	...
Shoreditch	...	...	...	...	...	...	...	5	5	3	3	...	...
Bethnal Green	...	...	1	...	1	1	...	23	37	25	2	2	2
Whitechapel	...	...	...	1	...	...	2	67	22	8	1	...	1
St. George-in-the-East ...	...	...	1	...	...	...	...	13	4	2	1	...	...
Limehouse	...	...	...	1	...	...	2	6	5	3	...	3	1
Mile-end Old-town... ...	...	2	...	...	...	...	...	26	20	2	3	1	...
Poplar	1	...	...	...	...	...	1	5	10	3	1	4	3
Carried forward ...	21	58	22	17	17	5	34	201	139	61	13	16	10

Sanitary district.	Four weeks ended												
	Jan. 26.	Feb. 23.	Mar. 23.	Apr. 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.
Brought forward ...	21	58	22	17	17	5	34	201	139	61	13	16	10
St. Saviour, Southwark ...	...	...	...	...	...	...	...	1	2	...	...	...	1
St. George Southwark ...	...	...	1	...	...	...	11	24	9	...	...	2	1
Newington	...	1	...	...	...	1	3	7	1	1	2	...	4
St. Olave	...	...	...	...	...	...	1	...	...	...	...	...	...
Bermondsey	...	...	...	1	...	...	4	...	3	...	...	...	...
Rotherhithe	1	...	7	7	10	...	1	1	8	1	1	...	1
Lambeth	...	...	1	5	3	9	5	8	10	8	2	1	2
Battersea	5	...	1	...	...	...	1	3	2	8	2	...	...
Wandsworth	...	...	...	...	...	...	...	2	6	3	3	1	...
Camberwell	...	2	1	...	...	1	19	11	20	14	11	7	...
Greenwich	3	1	8	1	1	3	...	...	5	1	3	5	11
Lewisham	...	1	...	...	...	...	...	1	...	...	...	...	...
Woolwich	...	...	...	...	...	...	1	...	...	...	...	...	...
Lee	...	...	...	...	4	...	...	...	...	...	1	...	...
Plumstead	...	...	...	...	...	...	2	3	8	3	2	...	...
Port of London	1	...	...	...	...	...	...	...	...	...	...	...	1
Total	31	63	41	31	35	19	82	262	213	100	40	32	31

The reports of the medical officers of health of the several sanitary districts supply the following more detailed information—

Paddington—All the cases of smallpox occurring in the district were those of adults who had not been vaccinated since infancy. Three of these cases are referred to as "connected cases." One case was that of a patient who had sickened in Westminster; the origin of this case was not discovered. Another patient had been associated with a child who had been thought to be suffering from chicken-pox. The source of infection of the other cases was not discovered.

Kensington—Of the cases of smallpox notified, six were removed to hospital.

Hammersmith—No information as to the vaccination of one case of smallpox notified could be obtained, the remainder had been vaccinated in infancy but not since.

Fulham—Two cases of smallpox were reported. In one case the disease was contracted in Shoreditch. The source of infection of the second case could not be discovered.

Westminster—Of six cases of smallpox notified, one occurred in a private house and five in common lodging-houses. One of the latter had slept in five different places since he observed the rash. All the cases were removed to hospital. In September, notice was received from the medical officer of health of Battersea of a girl who had developed smallpox in that district and had been removed to hospital. She had been employed in dressmaking in a factory in Westminster. Inquiry showed that a woman, three of whose children had been removed to the smallpox hospital, had been working in the same room as the patient.

Marylebone—This district had suffered from a considerable prevalence of smallpox for the chief part in July and August of 1894, and continuing in less degree to the end of the year, ten cases being notified in the month of December. The monthly report of the medical officer of health for January, 1895, gives account of a recrudescence of the disease in that month, due to the retention in a house occupied by five families of a case of smallpox which was not recognised until just before the death of the patient after nine days' illness. "During the nine days of her illness, each of the five families had received a large number of visitors, and a fortnight after the death notifications came in from some 20 cases, nearly all of whom had been in or connected with the house in question." The medical officer in his report for the month of February states, "There have been 39 cases of smallpox during the month, all of which have been removed to hospital. Five of the cases were fatal; all the five were young unvaccinated children."

Hampstead—Two cases of smallpox occurred in this district. One patient contracted the disease in Bermondsey, the other, a patient in the North London Consumption Hospital, had been admitted from a lodging-house in the east of London, from which a porter suffering from smallpox had been removed.

Islington—Twenty-five persons were certified to be suffering from smallpox, four of whom, after removal to hospital, were returned to their home on the ground that their malady was not this disease. The medical officer of health states that the very greatest efforts were made in every instance to have the cases speedily removed to hospital, as he had "very great fears as to the consequences in this district if the disease should obtain a hold, owing to the grave neglect of vaccination by the guardians." Of the 21 cases of smallpox, 14 were vaccinated, 6 unvaccinated, and the condition as to vaccination of one was "uncertain."

Hackney—Of 14 persons certified to be suffering from smallpox, the malady of one was subsequently deemed to be chicken-pox; of the 13 remaining, 11 had been vaccinated in infancy, one had not been vaccinated, and the condition as to vaccination of one was doubtful. The last was the only person who died from smallpox during the year.

St. Giles—Thirteen persons were certified to be suffering from smallpox. Four of these were removed from a common lodging-house in Betterton-street, one was a vagrant Italian, who was found to be ill in the street, another had shortly before resided in a Salvation Army shelter in Blackfriars. The last was removed from a common lodging-house in Queen-street, where he infected another man. The medical officer of health communicated with the keepers of the common lodging-houses in the district, with a view to obtaining early information of smallpox occurring among the inmates.

St. Martin-in-the-Fields—Three cases of smallpox were notified during the year. One of these cases was that of a man who had been discharged from Wandsworth Prison, and was the same day "found to be wandering about the Strand with the smallpox eruption fully out upon him."

Strand—Five cases of smallpox occurred in this district, the source of infection in each case being traceable. Two cases, a mother and daughter, were infected by the unvaccinated son of the former, who returned home on account of his illness. A third case was a tramp who contracted the disease in Whitechapel. One person who worked, but apparently did not reside, in the district was infected by a fellow worker, also not residing in the district. "The person thus affected appears to have been the only one in the offices in which he was employed who was not protected by vaccination."

Holborn—Thirty-one cases of smallpox were certified during the year; 21 in the first six months, 10 in the last six months of the year. Dr. Hoyle, who acted as medical officer of health during the first six months of the year, states that two cases came under his notice in which infection was apparently conveyed by the atmosphere. One of these cases occurred in a house situated opposite to an institution in which six or seven cases of smallpox had occurred. He was unable to explain this case in any other manner. Dr. Bond, medical officer of health, reports that of the ten cases in the second six months of the year, two occurred in a Salvation Army shelter.

St. Luke—Of three cases of sickness certified to be smallpox, two only proved to be this disease. One of these, a "travelling tailor," showed symptoms of smallpox three days after admission into the City-road workhouse. He had lately been sleeping in the Salvation Army shelter, Clerkenwell. The other case was that of a shoemaker who had been employed in Mount-street, Whitechapel.

Shoreditch—Inquiry as to the probable source of infection of each of the cases notified as occurring in this district showed that two cases which occurred in separate houses in one street were connected with each other; and further that another group of four cases occurring in separate houses in other streets were also connected with each other. One case occurred in the Holborn Union workhouse; another, a potman, was employed at premises in Whitechapel which were frequented by the inmates of Salvation Army shelters, and a third had slept previously at Salvation Army shelters. All the cases were males, all were stated to have been vaccinated in infancy except the youngest, a boy of 13 years of age. One (a fatal case) said he had been revaccinated 12 years before, but bore no marks of the operation.

Bethnal-green—Of the total number of cases notified as smallpox, all but eleven were removed to hospital, and four were subsequently not regarded as cases of this disease. Four of the cases died, and all of these were unvaccinated.

Whitechapel—Of the total number of cases of smallpox notified, all but six were removed to hospital. A serious outbreak occurred in the months of July and August, of which account is given in a special report dated August 19th. In the period beginning with the week ending July 13th and extending to August 17th, 75 cases were notified. "50 per cent. of the cases were reported as coming from Salvation Army shelters, 25 per cent. from private houses, 25 per cent. from registered common lodging-houses, the Whitechapel infirmary, and from all outside philanthropic shelters." The outbreak was reported to the district board by the medical officer of health on July the 22nd, and two days later a special meeting of the sanitary committee was held, which was attended by officers of the Salvation Army. It was arranged that after that night no persons should be received who were not in the possession of a ticket, and that no person in these shelters apparently suffering from smallpox should be allowed to go into the public thoroughfare, but that each person should be isolated, and when seen by a medical man should be treated as he directed. The medical officer (who is also public vaccinator) stated that he believes he re-vaccinated all the persons who were employed in the Salvation Army shelter in the Whitechapel-road, and also the men employed at the Victoria Home, No. 1 in Commercial-street, where eight of the cases had previously occurred. In the six weeks following the period referred to 19 cases of smallpox were notified, 11 of which occurred in private houses. All but two were removed to hospital. The medical officer of health re-vaccinated persons who were exposed to infection.

St. George-in-the-East—The cases of smallpox notified in this district occurred mostly at the end of July and beginning of August, and all were in young adults living in the better class streets. In no instance could the source of infection be traced to any shelter, common

lodging-house, or casual ward. Measures were taken for the prevention of extension of the disease. Concerning one case notified there was error in diagnosis.

Limehouse—Of the total cases notified, 14 had been vaccinated in infancy, and four were unvaccinated, of whom one died. Concerning those remaining no particulars were obtained. All were removed to hospital, the vaccination officer communicated with, and the usual precautions taken. Concerning two cases notified there was error in diagnosis.

Mile-end Old-town—Smallpox was prevalent in the latter part of July and early part of August, having extended from Whitechapel. The medical officer of health reports that "for about a fortnight previous to its appearance in the hamlet your officials had seen the gradual progress of the epidemic towards this district, and preparation was made for its reception." Measures were taken for the limitation of the disease. A tabular statement gives particulars ascertained as to the origin of each case, and the condition as to vaccination of the sufferer.

Poplar—The report relating to Poplar and Bromley contains a tabular statement, showing the source of infection when this was ascertained. Referring to the precautionary measures taken, the medical officer of Poplar and Bromley reports—"Where the patients were the bread winners of the family I informed Mr. Lough (clerk to the guardians), so that the wives, and in one instance a widow lodger taking in work (which was stopped), might obtain parish relief for themselves and children without applying at the guardians' offices, and waiting among a number of persons and thereby likely to spread infection."

St. George-the-Martyr—The medical officer of health discusses in a special report the relation of cases of smallpox occurring in the district in July to the Salvation Army shelter in Blackfriars-road. Thus, of 12 cases occurring in the first fortnight of the month and one antecedent case, he writes, "Five came directly from the shelter. In addition, several of the workhouse cases sprang directly from the original patient, B. 4, reported on the 19th June, and who in all probability contracted smallpox within the Blackfriars shelter. How many of the remaining cases may be traced to the same source I am not at present in a position to state, but I think I shall not be far wrong in saying that the greater proportion of cases of smallpox that have occurred in this district during the past fortnight have arisen from the original case B. 4." He also learnt that four cases of smallpox occurring in other districts had slept in the shelter "during the period of infection." On the 7th July the medical officer, after previous refusal, obtained admission into the shelter. He writes—"Without going into minute detail I may say that my visit disclosed overcrowding of the grossest character, along with utterly inadequate ventilation."

He found on the occasion of this inspection 1,031 persons in the shelter, and application was made to the magistrate for an order to abate overcrowding. After a protracted hearing the order was made, the magistrate placing a limit of 550 persons as that which should not be exceeded.

Newington—The medical officer of health states that among the cases notified "in no single instance did the disease spread beyond the tenement in which it occurred." All were removed to hospital.

Lambeth—Of the total number of cases of smallpox notified, 43 were removed to hospital.

Battersea—The report of the medical officer of health contains a table showing that of 20 patients removed to the hospital ships 18 were vaccinated in infancy, none were re-vaccinated, and two were unvaccinated.

Wandsworth—The medical officers of health of Clapham and Wandsworth parishes supply details of the cases of smallpox occurring during the year. In Clapham the notification of one case led to the discovery of two antecedent and previously unsuspected cases of this disease. Of seven cases in Wandsworth parish three had been associated with each other in the Wandsworth workhouse.

Camberwell—The report of the medical officer of health contains a detailed account of the cases of smallpox occurring in Camberwell during the year. Eleven cases occurred in the Constance-road Workhouse, 10 of which were due to infection from the first of these cases, a man who had before admission been resident in a common lodging-house. The illness of a woman in Becket-street, which had been thought to be erysipelas and chicken-pox, appears to have been the cause of infection of a group of cases in that street. The attack by smallpox of a girl in Toulon-street also gave rise to a series of cases in that vicinity. Of 9 infants attacked, 7 were unvaccinated, and of the other 2, 1 had been vaccinated only two days, and the other only nine days, before the appearance of the eruption. Of 23 persons between 5 and 15 years of age who were attacked, 9 were vaccinated and 14 unvaccinated; of 20 persons between 15 and 30 who were attacked, 1 was unvaccinated, 15 had been vaccinated in infancy, concerning 4 there was no information. Of the attacked persons over 30 years of age, 4 were unvaccinated, 9 had been vaccinated in infancy, 5 were said to have been vaccinated but bore no scars, and concerning 10 cases no information was forthcoming. "My inquiries made me aware of the disquieting fact that at 13 houses out of 45 that were attacked there were unvaccinated people." Referring to the neglect of vaccination in the district the medical officer states that "If the arrangements of the isolation hospitals should by any means be put out of gear and smallpox were to come amongst us, nothing would preserve the parish from a wide-spread and severe epidemic."

Plumstead—Of the cases of smallpox notified all were adults, and 7 occurred in the workhouse and infirmary. All the sufferers but one were removed to hospital.

The following table shows the number of cases of smallpox notified and the deaths attributed to smallpox belonging to the several sanitary districts in 1895, together with the case rate in that year and the death rate in 1895 and in the period 1885–94.

Sanitary district.	Cases, 1895.	Case rate per 1,000 living, 1895.	Deaths, 1895.	Death rates per 1,000 living.	
				1885–94.	1895.
Paddington	10	·01	—	·018	—
Kensington	9	·05	—	·023	—
Hammersmith	8	·08	1	·021	·010
Fulham	2	·02	—		—
Chelsea	4	·04	1	·008	·010
St. George, Hanover-square	4	·05	1	·020	·013
Westminster	6	·11	—	·016	—
St. James	1	·04	—	·016	—
Marylebone	106	·75	9	·044	·064
Hampstead	2	·03	—	·025	—
Pancras	15	·06	1	·037	·004
Islington	25	·08	1	·045	·003
Stoke Newington	—	—	—	·042	—
Hackney	14	·07	1		·005
St. Giles	13	·34	2	·061	·052
St. Martin-in-the-Fields	3	·23	1	·040	·075
Strand	5	·21	2	·019	·083
Holborn	31	·99	—	·024	—
Clerkenwell	11	·17	—	·039	—
St. Luke	3	·07	—	·035	—
London, City of	6	·18	—	·025	—
Shoreditch	16	·13	2	·037	·016
Bethnal-green	94	·73	4	·031	·031
Whitechapel	102	1·31	4	·027	·051
St. George-in-the-East	21	·45	—	·039	—
Limehouse	21	·36	1	·066	·017
Mile-end Old-town	54	·49	1	·047	·009
Poplar	28	·17	1	·067	·006
St. Saviour, Southwark	4	·16	—	·040	—
St. George, Southwark	48	·80	—	·075	—
Newington	20	·17	4	·067	·033
St. Olave	1	·08	—	·016	—
Bermondsey	8	·09	—	·070	—
Rotherhithe	38	·95	1	·103	·025
Lambeth	54	·19	2	·036	·007
Battersea	22	·14	1	·018	·006
Wandsworth	15	·08	2		·011
Camberwell	86	·34	7	·078	·028
Greenwich	42	·24	3	·059	·0 17
Lewisham	2	·02	—	·022	—
Woolwich	1	·02	—	·047	—
Lee	5	·13	—	·024	—
Plumstead	18	·31	2		·034
Port of London	2	—	—	—	—
London	**980**	**·22**	**55**	**·040***	**·012***

The deaths attributed to cowpox and vaccination in 1895 numbered 20, being nearly twice the corrected average of the preceding ten years.

The report of the Statistical Committee of the Metropolitan Asylums Board for 1895 supplies the following figures, showing the state as to vaccination of the patients suffering from smallpox admitted into the institutions of the Board during the year—

Smallpox and vaccination.

Age period.	Vaccinated.		No evidence as to vaccination.†		Vaccination cicatrices absent.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
0—	—	—	—	—	15	11
1—	—	—	—	—	12	3
2—	—	—	—	—	20	6
3—	—	—	—	—	26	2
4—	—	—	—	—	12	1
5—	—	—	2	1	13	1
6—	—	—	2	—	11	1
7—	2	—	1	—	9	1

* See footnote (³), page 10.

† These cases include cases stated to have been vaccinated, but bearing no visible evidence of the operation, and also those in which no statement was made, but the nature of the eruption or other cause prevented any observation of the marks, if any existed.

Age period.	Vaccinated.		No evidence as to vaccination.*		Vaccination cicatrices absent.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
8—	2	—	1	—	14	1
9—	2	—	1	—	16	—
10—	5	—	2	—	8	—
11—	3	—	3	—	10	—
12—	8	1	—	—	10	—
13—	10	—	—	—	9	1
14—	11	—	1	—	8	—
15—	107	1	8	—	24	1
20—	134	1	5	1	16	2
25—	101	1	8	1	10	4
30—	70	1	9	2	6	—
35—	38	3	7	3	1	—
40—	78	1	15	4	2	—
50 and upwards	38	6	10	1	5	—
All ages	609	15	75	13	257	35

Since 1880 the Registrar-General has classified the deaths from smallpox under three heads, viz., "vaccinated," "unvaccinated," and "no statement." The totals of the 15 years, 1881–95, are as follows—

Smallpox deaths, London—1881–95.

Age period.	All ages.	0–1	1–5	5–20	20–40	40–60	60–80	80 and upwards.
Vaccinated	1,277	22	33	228	728	224	39	3
Unvaccinated	2,024	335	485	666	414	105	18	1
No statement	1,893	240	224	454	663	247	62	3

The following table, in which the number of deaths at each age period is expressed as a percentage of the total deaths from smallpox at "all ages," more clearly indicates the relative age incidence of this disease in the three classes under consideration—

"All ages," taken as 100.

Age period.	All ages.	0–1	1–5	5–20	20–40	40–60	60–80	80 and upwards.
Vaccinated	100	1·7	2·6	17·9	57·0	17·5	3·1	0·2
Unvaccinated	100	16·5	24·0	32·9	20·5	5·2	0·9	0·0
No statement	100	12·7	11·8	24·0	35·0	13·0	3·3	0·2
"Vaccinated" and "no statement" combined.								
"Vaccinated" and "No statement"	100	8·3	8·1	21·5	43·9	14·8	3·2	0·2
Unvaccinated	100	16·5	24·0	32·9	20·5	5·2	0·9	0·0

I have referred in my previous reports to the large increase in recent years in the number of children appearing in the vaccination returns as "not finally accounted for"; the following table shows the proportion of children born in London stated in the returns of the Local Goverment Board as "not finally accounted for" during several years to the year 1893—

London vaccination returns.

	Children not finally accounted for (including cases postponed) per cent. of total births.		Children not finally accounted for (including cases postponed) per cent. of total births.
1872	8·8	1883	6·5
1873	8·7	1884	6·8
1874	8·8	1885	7·0
1875	9·3	1886	7·8
1876	6·5	1887	9·0
1877	7·1	1888	10·3
1878	7·1	1889	11·6
1879	7·8	1890	13·9
1880	7·0	1891	16·4
1881	5·7	1892	18·4
1882	6·6	1893	18·2

The following table gives similar information for each of the metropolitan unions for the years 1881–93, inclusive—

Metropolitan Unions.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.
Bethnal-green	5·5	7·1	6·1	8·0	8·6	11·1	13·5	16·0	25·1	30·6	38·2	53·1	54·8
Camberwell	5·2	6·0	6·4	7·0	6·8	8·4	9·4	8·4	12·5	14·0	17·4	15·5	13·2
Chelsea	5·1	6·7	5·2	5·1	5·0	5·6	7·2	4·8	6·0	6·3	16·7	12·1	11·8
Fulham	5·4	4·1	3·8	4·2	4·5	4·5	4·6	5·5	6·0	6·7	5·8	6·5	9·5
St. George, Hanover-square ...	2·3	4·4	3·1	2·9	4·6	4·3	4·6	4·5	4·0	3·6	3·7	3·4	3·5
St. George-in-the-East	4·2	4·3	4·7	3·7	4·8	5·3	6·7	7·9	6·5	7·9	8·6	9·4	10·8
St. Giles and St. George	11·6	9·9	11·4	11·6	11·1	12·2	14·1	17·7	22·5	17·8	13·6	18·1	19·3
Greenwich	6·6	7·8	10·2	10·4	11·1	11·4	9·6	10·1	11·5	32·3	19·4	9·8	7·1
Hackney	4·6	6·7	6·2	6·5	9·3	9·3	8·9	12·1	18·5	26·0	40·6	49·5	52·8
Hampstead...	3·1	4·0	5·1	4·2	3·8	4·0	5·0	5·6	5·1	6·3	7·1	6·9	6·7
Holborn	6·2	7·6	8·5	9·7	8·1	7·7	8·7	10·3	11·3	12·4	12·7	14·2	14·2
Islington	8·2	8·0	8·4	8·0	8·0	7·8	8·1	9·8	9·5	9·2	10·8	12·4	12·8
Kensington...	3·9	5·4	4·6	4·9	5·5	6·5	7·0	6·9	7·5	7·6	9·6	10·3	9·2
Lambeth	7·6	8·3	8·5	8·6	8·6	9·4	11·1	12·6	13·3	14·3	16·0	19·6	19·9
Lewisham	3·2	4·1	4·8	4·2	5·2	5·0	6·5	5·9	6·6	6·3	6·2	6·6	6·8
City of London	2·9	2·9	2·4	3·9	7·4	8·0	8·0	9·0	9·2	10·3	8·8	9·3	9·3
Marylebone	5·1	6·8	5·5	7·3	5·4	4·6	4·7	4·9	8·1	7·7	13·4	16·9	24·8
Mile-end Old-town	7·5	8·8	9·8	8·7	8·8	9·7	11·3	14·4	16·6	26·5	49·9	58·8	43·5
St. Olave	4·1	5·9	10·0	7·3	8·0	9·0	17·7	15·0	15·4	14·8	15·3	15·8	16·5
Paddington	7·7	9·2	8·8	8·2	8·8	10·1	8·4	11·3	12·7	11·6	17·7	12·6	10·0
St. Pancras	6·3	5·7	4·0	5·2	6·1	6·9	8·7	11·5	13·2	15·1	15·6	15·7	15·8
Poplar	4·4	4·0	3·6	3·8	3·0	4·9	5·7	16·9	15·1	19·5	19·6	23·6	23·1
St. Saviour	5·7	6·7	6·0	8·7	9·1	13·1	18·9	17·1	12·4	11·6	12·4	12·7	14·9
Shoreditch	10·3	12·0	7·6	6·5	5·6	6·3	5·6	3·7	5·5	9·3	8·8	10·8	16·2
Stepney	6·2	4·8	2·3	3·7	4·1	5·9	5·3	6·5	8·8	12·0	19·0	22·7	26·2
Strand	7·2	8·3	7·6	9·3	8·9	8·5	9·7	10·0	16·2	7·1	12·2	15·4	12·6
Wandsworth and Clapham ...	5·4	7·1	9·0	8·2	9·1	9·7	10·6	11·5	12·1	12·9	14·7	18·5	12·2
Westminster	4·8	5·7	6·1	5·7	6·6	8·5	8·5	4·1	12·8	13·2	17·0	23·0	28·0
Whitechapel	1·4	1·6	1·6	1·4	1·5	1·8	1·7	2·1	2·8	2·7	4·1	4·4	5·3
Woolwich	1·9	1·4	1·5	1·6	1·8	2·2	2·2	2·9	3·5	3·7	3·6	3·7	3·5

The neglect of vaccination in London in recent years, to which I referred in my last report appears to be already manifesting itself in an increase in the proportion which deaths of children from smallpox bear to deaths from this disease at all ages. In the following table is shown in quinquennia for the whole period, dating back from 1892, for which the information is available, the proportion of children born, which in respect of vaccination is included under the heading "not finally accounted for, including vaccination postponed." For the purposes of comparison is also shown the number of deaths from this disease of children under five years of age, per cent. of deaths at "all ages."

Period.	Children not finally accounted for (including cases postponed) per cent. of total births.	Deaths from smallpox* of children under five years of age, per cent. of deaths from smallpox* at all ages.
1873-77	8·1	26·1
1878-82	6·8	22·6
1883-87	7·4	25·1
1888-92	14·1	28·6

It appears therefore that with increase of neglect of vaccination of infants the deaths of children from smallpox are contributing a larger share to the total deaths from this disease, showing the need for the better protection of children against smallpox.

Measles.

The deaths from measles in the administrative county of London in 1895 numbered 2,630 as compared with 3,303 in 1894.

The death rates per 1,000 living in 1895 and preceding periods have been as follows—

1851-60	0·53	1892	0·79†
1861-70	0·58	1893	0·38†
1871-80	0·51	1894	0·76†
1881-90	0·64	1895	0·60†
1891	0·43†		

The death rate in each year since 1840, in relation to the mean of the period 1841–95, is shown in diagram V.

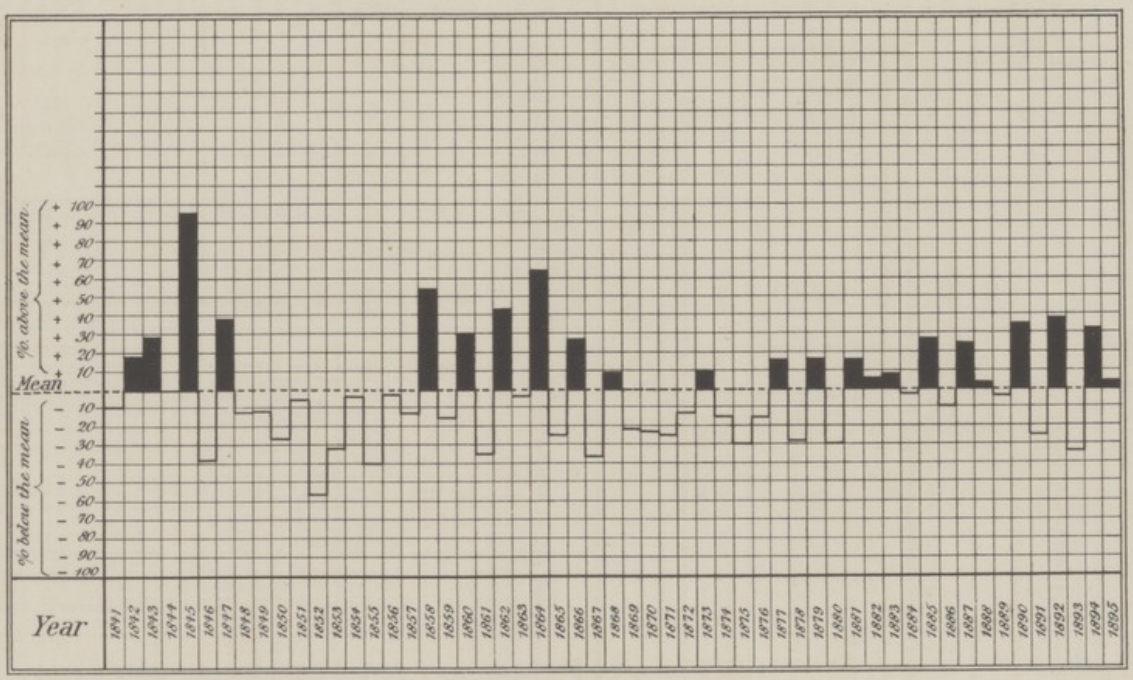
If the London death rate be compared with that of other large towns in England having more than 200,000 inhabitants it is seen that in the ten years 1885-94 and in 1895 the London death rate was greater than that of any of these towns, except Manchester, Liverpool, West Ham and Salford.

* Including deaths from chicken-pox.

† See footnote (†), page 10.

Diagram. V.

Measles.



Mean death rate 1841-95.
378 per million.

Measles—Death rates per 1,000 *living.*

Towns.	1885–94.	1895.	Towns.	1885-94.	1895.
London	**0·63**	**0·60**[1]	West Ham...	0·64	0·91
Manchester	0·80	0·97	Bristol	0·56	0·04
Liverpool	0·83	0·71	Bradford	0·50	0·08
Birmingham	0·52	0·27	Nottingham	0·47	0·00
Leeds	0·56	0·34	Hull	0·43	0·09
Sheffield	0·57	0·55	Salford	0·86	1·03

Compared with the undermentioned foreign cities the death rate in London from measles was, during the period 1885–94, in excess of that of all these cities except St. Petersburg, and in 1895 was higher than that of any of these cities.

Measles— Death rates per 1,000 *living.*

Towns.	1885–94.	1895.	Towns.	1885–94.	1895.
London	**·63**	**·60**[1]	St. Petersburg	·70	·36
Paris...	·50	·28	Berlin	·22	·19
Brussels	·36	·34	Vienna	·56	·49
Amsterdam	·45	·01	Rome	·55	·46
Copenhagen...	·43	·17	New York	·39	·42
Stockholm	·58	·09			

In London in 1895 the eastern districts as a whole suffered more heavily from measles than other groups, but the highest mortality (2·55 per 1,000 of population) occurred in St. Luke, one of the central districts of the county, the adjoining districts of Holborn and Clerkenwell also suffering severely, and having death rates respectively of 1·44 and 1·41 per 1,000 of population.

The measles death rate in each sanitary district in 1895 and in the period 1885-94, is shown in the following table—

Sanitary district.	Deaths in 1895.	Death rate per 1,000 living.		Sanitary district.	Deaths in 1895.	Death rate per 1,000 living.	
		1885-94.	1895.			1885-94.	1895.
Paddington	19	·43	·15	Whitechapel... ...	82	·71	1·05
Kensington	34	·50	·20	St. George-in-the-East	88	1·07	1·87
Hammersmith ...	27	·75	·26	Limehouse	86	1·09	1·48
Fulham	51		·46	Mile-end Old-town ...	113	·75	1·02
Chelsea	11	·61	·11	Poplar	216	·73	1·28
St. George, Hanover-square	10	·34	·13	St. Saviour, Southwark	17	·96	·66
Westminster... ...	25	·58	·46	St. George, Southwark	49	·91	·82
St. James	2	·48	·09	Newington	132	·71	1·10
Marylebone	25	·57	·18	St. Olave	3	·78	·25
Hampstead	9	·25	·12	Bermondsey	114	·77	1·34
Pancras	228	·61	·95	Rotherhithe	19	·67	·47
Islington	141	·62	·42	Lambeth	151	·54	·52
Stoke Newington ...	7	·52	·21	Battersea	98	·53	·60
Hackney	120		·57	Wandsworth... ...	30		·16
St. Giles	13	·64	·34	Camberwell	111	·57	·44
St. Martin-in-the-Fields	2	·46	·15	Greenwich	49	·63	·28
Strand	6	·62	·25	Lewisham	13	·31	·13
Holborn	45	·71	1·44	Woolwich	6	·55	·15
Clerkenwell	93	·92	1·41	Lee	18	·44	·47
St. Luke	106	·92	2·55	Plumstead	24		·41
London, City of ...	15	·27	·46	**London**	**2,630**	**·62**[2]	**·60**[2]
Shoreditch	106	·82	·87				
Bethnal-green ...	116	·90	·90				

The annual reports of the medical officers of health of the several districts contain the following information—

Kensington—The medical officer of health refers to his report for the year 1891, in which he discusses the question whether the notification of measles should be required, and states that he has since seen no reason to modify the views therein expressed unfavourable to the proposal under existing conditions.

See footnote (1), page 10.

See footnote (2), page 10.

Hampstead—The medical officer of health states that towards the end of 1895 measles assumed formidable proportions, and attacked large numbers of young children in the Netherwood-street Board School with fatal results. His experience is that "this disease is only fatal to the children of the working and labouring classes, a fact which points to a want either of care or means in the treatment of this disease."

St. Pancras—The medical officer of health summarizes the reasons for and against the compulsory notification of measles, the reasons for notification being in the main that it would assist in giving control over the attendance at schools of infectious children, and would enable the isolation and hospital treatment of children who are infected to be better secured. The chief reasons given against notification are the early infectiousness of the malady, the large proportion of cases which are not medically attended, and the difficulty of providing hospital accommodation for the sufferers.

Islington—The medical officer of health strongly recommends the compulsory notification of measles.

Stoke Newington—The medical officer of health points out the need for impressing on the poorer inhabitants the serious nature of the disease. He recommended the distribution of handbills with this object every November and May. Handbills were distributed in 1895.

St. Giles—The medical officer of health refers to the action of this authority in 1892 in adopting a resolution in favour of the notification of measles, but states that, in reply to a letter from the clerk of the Vestry of St. George-the-Martyr, the District Board of St. Giles stated that they were not in favour of hospital accommodation being provided for the patients.

Holborn—The medical officer of health expresses an opinion in favour of the notification of measles. In discussing the mortality from measles he states that he has found on investigating the history of many children whose deaths have been registered as being due to bronchitis, pneumonia and pleuro-pneumonia, that they had not long before death suffered from measles, and often other children in the same house were either ill, or had recently recovered from that disease.

City—In September, owing to an outbreak of measles among children in the infants' department of the Greystoke-place Board School, the medical officer of health recommended the sanitary authority to make an order, under article 98 of the Educational Code, to close this department for three weeks; the order was accordingly made, and the infants' department closed for this period.

St. George-in-the-East—The medical officer of health expresses the opinion that "it is doubtful whether much good would accrue from making it (measles) a notifiable disease, unless accommodation were provided for the isolation of patients, although something might be gained by being enabled to notify the schools."

Limehouse—The District Board, in reply to a letter from the Vestry of St. George-the-Martyr, stated that "as hospital accommodation could not be secured, notification of the disease was useless."

Mile-end Old-town—During the month of March the medical officer of health discovered an outbreak of measles in the neighbourhood of St. Paul's-road Board School. On visiting the school he found that about one-sixth of the children were absent, and were said to be suffering from this disease. The children were scattered over the districts of Mile-end, Poplar and Limehouse. An order was made by the vestry under article 98 of the Educational Code, and the school was closed. "Twelve days later I received an application to allow the school to be reopened, but the circumstances did not justify my acceding to the request, and I deferred doing so until the lapse of a further period of seven days. Owing to this energetic action the spread of the epidemic was arrested."

Poplar (Poplar and Bromley)—The medical officer of health refers to the outbreak of measles in the St. Paul's-road Board School, and states that in April the head teacher of that school notified to him the names and addresses of some 169 scholars in 31 houses who had been excluded from the school on account of measles occurring in their homes. *(Bow)*—The medical officer of health comments on the indifference with which measles is regarded by the poorer inhabitants of the district, and adds "This stricture is not, however, merely confined to the poorer classes, there being amongst the middle and upper classes of the inhabitants a tendency to attach little importance to this disease, and indulge in carelessness with regard to its treatment." He urges the provision of hospital accommodation for the sick, and is opposed to notification without hospital provision.

Newington—The medical officer of health states that "The locality most affected was that of St. John's, and owing to the crowded condition of that ward the mortality, as is seen, was exceptionally high. The Jewish Schools being situated in St. John's ward, and receiving pupils from all parts of London, it was thought advisable to close them for a short time. I am distinctly of opinion that during this severe epidemic, had the complaint been a notifiable one, we should have been in a better position to render more effective assistance than we did, apart altogether from hospital accommodation for the infected sick."

St. Olave—The medical officer of health reported that he was of opinion that cases of measles should be notified, and that hospital accommodation should be provided especially for those who cannot be properly isolated at home.

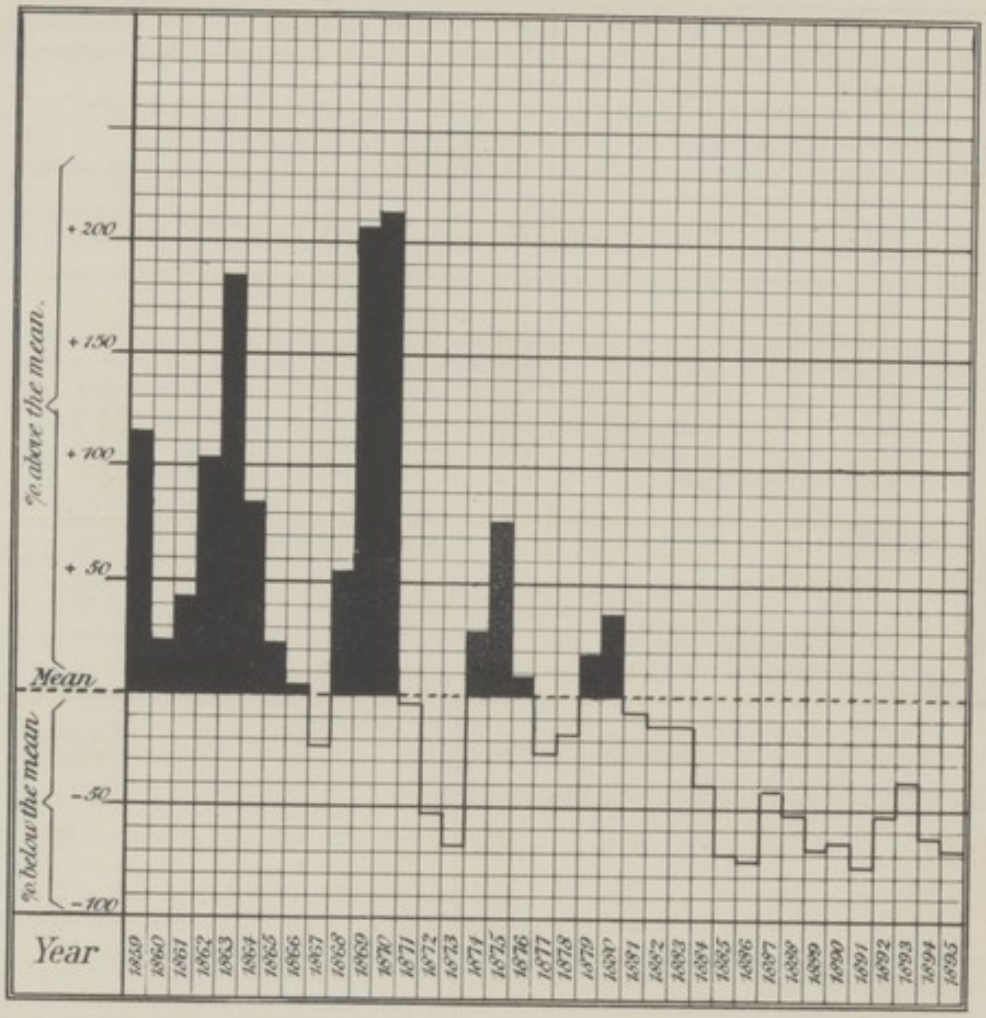
Battersea—A bill was issued giving the public instructions as to the necessary precautions to be observed during an epidemic of this disease.

Wandsworth—The medical officers of health in a special report recommended the notification of measles, mainly on the ground that it would enable children to be kept from school who were exposed to infection in their homes.

Plumstead—The medical officer of health recommended that application should be made to the Local Government Board to apply sections 64, 68 and 70 of the Public Health (London) Act to measles, with a view to inducing the public to recognise the importance of the disease.

Diagram VI.

Scarlet Fever.



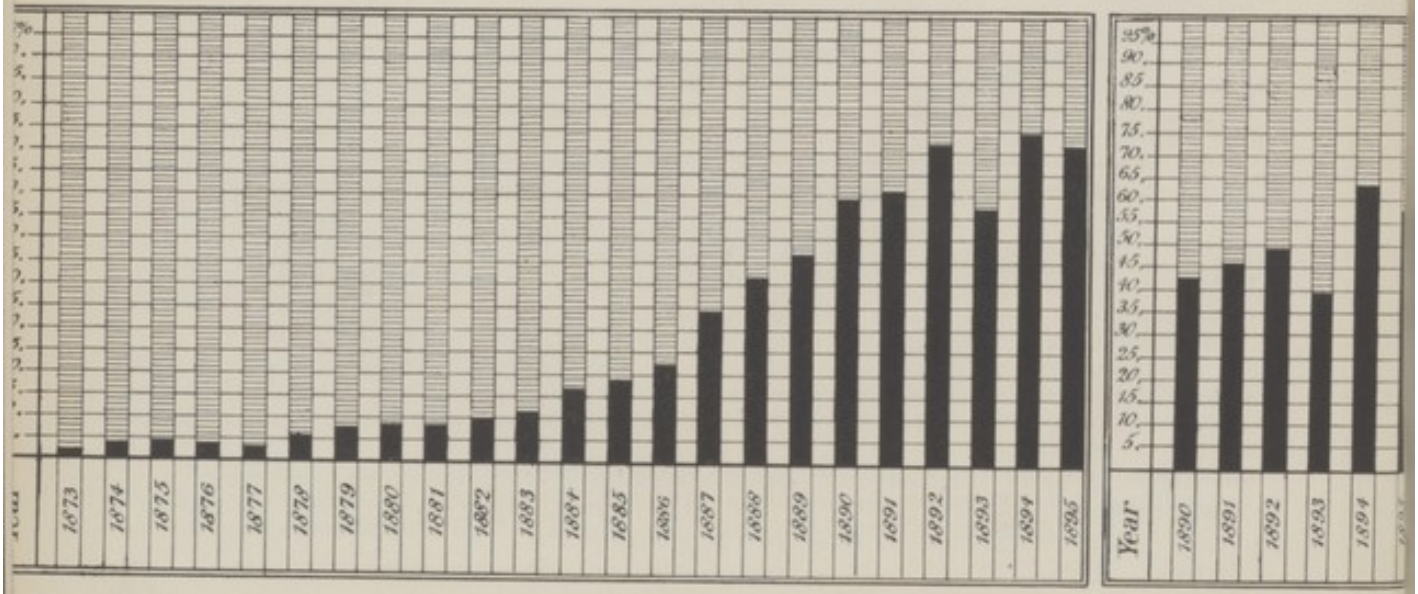
Mean Death rate, 1859-95 601 per million.

Diagram VII.

Scarlet Fever.

Number of deaths occurring in hospitals of the Metropolitan Asylums Board, per cent of total deaths in London, 1873-95.

Number of admissions to hospitals of the Metropolitan Asylums Board per cent of total cases notified in London 1890-95



Scarlet Fever.

The cases of scarlet fever notified in the Administrative County of London in 1895 numbered 19,808, compared with 18,495 in 1894. The number of deaths registered from this cause in 1895 was 829, giving a death rate of 0·19 per 1,000 living per annum.

The London rates in 1895 and previous periods are shown in the following table—

Scarlet fever.

Period.	Death rate per 1,000 living.	Case rate per 1,000 living.	Case mortality per cent.
1861–70	1·13	—*	—
1871–80	0·60	—*	—
1881–90	0·33	—*	—
1891	0·14[2]	2·7	5·1
1892	0·27[2]	6·4	4·3
1893	0·37[2]	8·6	4·3
1894	0·22[2]	4·3	5·2
1895	0·19[2]	4·5	4·2

The death rate in each year since 1858 in relation to the mean death rate of the period 1859–95 is shown in Diagram VI.

The scarlet fever death rate of London can be compared with that of other large towns having a population of more than 200,000 inhabitants by reference to the following table—

Scarlet fever—Death rates per 1,000 living.

	Ten years, 1885–94.	1895.		Ten years, 1885–94.	1895.
London	·24	·19[1]	Bristol	·26	·07
Manchester	·38	·32	Nottingham	·17	·23
Liverpool	·50	·29	Bradford	·33	·11
Birmingham	·18	·26	Hull	·18	·18
Leeds...	·30	·13	Salford	·55	·47
Sheffield	·44	·10			
West Ham	·25	·18			

In the period 1885–94, therefore, the London rate was lower than that of any of these towns except Birmingham, Nottingham and Hull, and in 1895 was lower than all except those of Leeds, Sheffield, West Ham, Bristol, Bradford and Hull.

If the London scarlet fever death rate be compared with the death rates of the following ten foreign cities, it will be seen that in 1885–94 the London rate was higher than all except Copenhagen, Stockholm, St. Petersburg and New York, but in 1895 the London rate was exceeded by all except Paris, Brussels, Amsterdam, Stockholm and Rome.

Scarlet fever—Death rates per 1,000 living.

	1885–94.	1895.		1885–94.	1895.
London	·24	·19[1]	St. Petersburg	·68	·70
Paris	·09	·07	Berlin	·21	·47
Brussels	·04	·11	Vienna	·22	·30
Amsterdam	·08	·04	Rome	·04	·04
Copenhagen	·31	·21	New York	·48	·25
Stockholm	·76	·17			

Scarlet fever, 1895—Age and sex distribution.

In the following table will be found the age and sex distribution of the cases of scarlet fever which were notified during the year 1895, together with the deaths and case mortality at each age. As in 1894 males at all ages were attacked and died in somewhat greater proportion than females, and the case mortality of males was higher than that of females. The greatest incidence of disease was in 1895, in males and females alike, on children of four years of age; the greatest incidence of death was on males of one, and on females of three years of age; the greatest case mortality occurring in males in the second year, and in females in the first year of life. At most ages in both sexes the case mortality was lower than in 1894.

* The Infectious Diseases (Notification) Act only came into force in 1889.

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

Scarlet fever,† 1895.

Age period.	Males.					Females.				
	Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.		Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.	
				Cases.	Deaths.				Cases.	Deaths.
All ages.	9,492	428	4·5	458	21	10,265	410	4·0	444	18
0—	183	34	18·6	326	61	162	22	13·6	284	39
1—	387	56	14·5	770	111	371	55	14·8	732	108
2—	677	79	11·7	1,288	150	635	82	12·9	1,203	155
3—	866	70	8·1	1,701	137	888	77	8·7	1,704	148
4—	964	60	6·2	1,947	121	981	45	4·6	1,973	90
5—	3,683	95	2·6	1,567	40	4,105	95	2·3	1,729	40
10—	1,704	22	1·3	794	10	1,830	17	0·9	837	8
15—	538	3	0·6	262	1	589	4	0·7	258	2
20—	231	5	2·2	114	2	305	9	3·0	125	4
25—	192	2	1·0	55	1	283	3	1·1	71	1
35—	52	—	—	20	—	91	—	—	32	—
45—	9	1	11·1	5	1	19	—	—	9	—
55 and upwards.	6	1	16·7	4	1	6	1	16·7	3	—

Scarlet fever—Seasonal variation in fatality.

In my last report I pointed out that the excess of the case mortality in 1894, compared with that of 1893, was certainly influenced by two circumstances, viz., a considerable prevalence of disease at the end of 1893 that affected the number of deaths in the early part of 1894, and a difference in the two years of the age and sex distribution of the notified cases of the disease. Beyond this I gave reasons for thinking that in an endeavour to determine the case mortality of a year consideration should also be had for the seasonal distribution of the disease.

In the following tables is shown the monthly case mortality of scarlet fever for the four years 1892–5*, and for the year 1895, the case mortality of each month being calculated on the number of cases of this disease notified in each month, and the number of deaths registered in each month beginning one week later than that of the notifications, the object being to apply as nearly as possible the deaths to the cases to which they belong. It will be seen on reference to diagram VIII., based upon these tables, that the case mortality of the several months exhibits considerable variations, and that there is a distinct indication of a seasonal fatality curve which has its maximum in the months of January and December, and its minimum in the months of September and October, when the disease attains its greatest prevalence.

Scarlet fever case mortality, 1895.

Month.	No. of weeks.	Cases.	Deaths.	Case mortality per cent.	Mean case mortality taken as 100.
January	5	1,117	54	4·83	113
February	4	957	41	4·28	100
March	4	880	43	4·89	115
April	4	827	46	5·56	130
May	5	1,236	68	5·50	129
June	4	1,375	53	3·85	90
July	5	2,386	96	4·02	94
August	4	1,604	89	5·55	130
September	4	2,096	78	3·72	87
October	5	3,153	109	3·46	81
November	4	2,272	77	3·39	79
December	4	1,854	89	4·80	112

Scarlet fever case mortality, 1892–5.

Month.	Cases.	Deaths.	Case mortality per cent.	Mean case mortality taken as 100.
January	5,665	329	5·81	130
February	4,677	256	5·47	123
March	5,234	292	5·58	125
April	5,579	316	5·66	127
May	7,659	356	4·65	104
June...	8,575	385	4·49	101
July...	10,330	433	4·19	94
August	10,555	491	4·65	104
September	11,890	395	3·32	74
October	13,492	450	3·34	75
November	11,557	473	4·09	92
December	6,978	379	5·43	122

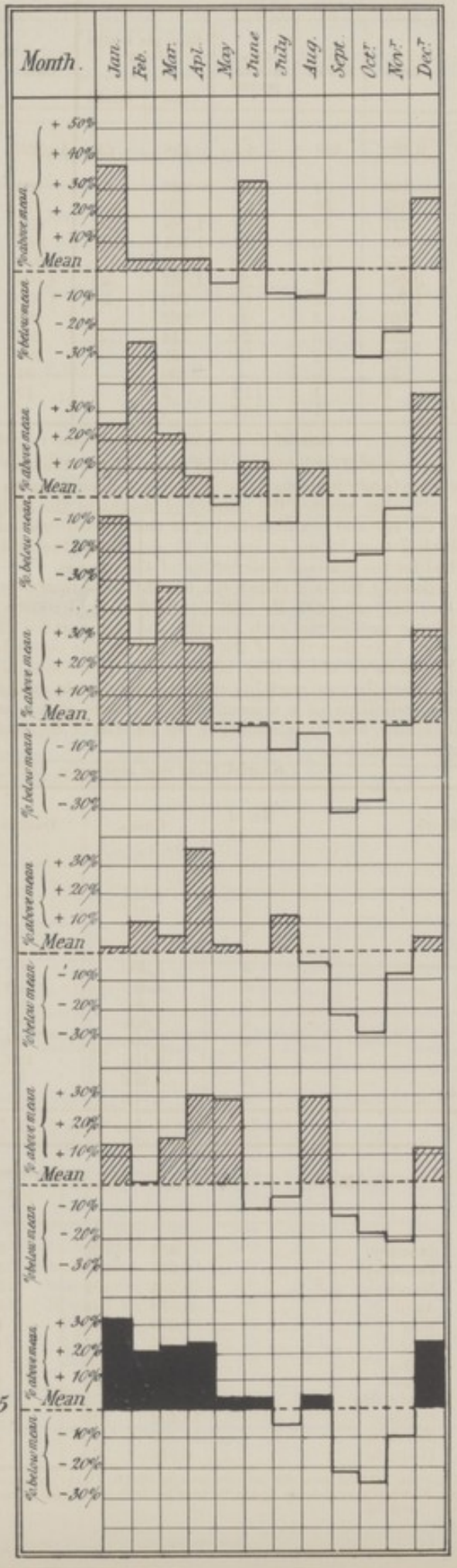
* Previous to the year 1892 the age of the patient was unrecorded in a large proportion of the notified cases of infectious disease, and it has, therefore, been necessary to exclude the figures for 1890 and 1891 from these calculations.

† See footnote (*) page 33.

Diagram VIII.

Scarlet Fever

Case Mortality 1891-5.



It is important, however, before drawing conclusions from these figures to ascertain whether any and, if any, how much of this seasonal variation in the case mortality of the disease may be due to differences in the age and sex distribution of the cases notified. For this purpose I have selected the larger figures of the period 1892–5 in preference to those of 1895, as likely to give more trustworthy results.

The mean case mortality at each age period and for each sex in the period 1892-5 is shown in the following table—

Scarlet fever, 1892–95.

Age period.	Males.			Females.		
	Cases.	Deaths.	Case mortality, per cent.	Cases.	Deaths.	Case mortality, per cent.
All ages	48,604	2,302	4·7	53,587	2,265	4·2
0—	871	137	15·7	799	111	13·9
1—	2,037	315	15·5	1,899	311	16·4
2—	3,347	404	12·1	3,251	393	12·1
3—	4,333	389	9·0	4,434	378	8·5
4—	4,628	302	6·5	4,837	286	5·9
5—	18,852	557	3·0	21,326	537	2·5
10—	8,562	100	1·2	9,781	128	1·3
15—	3,126	46	1·5	3,245	34	1·0
20—	1,349	20	1·5	1,741	35	2·0
25—	1,102	22	2·0	1,651	34	2·1
35—	294	4	1·4	458	11	2·4
45—	78	3	3·8	119	3	2·5
55 and upwards ...	25	3	12·0	46	4	8·7

In order to ascertain whether the differences in the age and sex distribution of the cases notified in each month are sufficient to materially affect the comparison of case mortalities at "all ages" at different periods of the year, I have applied the case mortalities shown in the preceding table to the cases notified at the various age periods in each month of the period 1892–5. The result of this operation is shown in the columns headed "estimated deaths" in the following table—

Scarlet fever.

Notified cases, 1892–95.

Age period.	January.				February.				March.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.
All ages ...	2,675	132·63	2,990	129·52	2,190	101·38	2,487	105·10	2,475	121·71	2,759	118·26
0—	47	7·38	47	6·53	29	4·55	34	4·73	36	5·65	38	5·28
1—	126	19·53	120	19·68	81	12·55	90	14·76	116	17·98	93	15·25
2—	174	21·05	189	22·87	130	15·73	144	17·42	179	21·66	183	22·14
3—	267	24·03	211	17·93	185	16·65	184	15·64	236	21·24	231	19·63
4—	255	16·57	288	16·99	233	15·14	242	14·28	232	15·08	252	14·87
5—	1,001	30·03	1,131	28·27	821	24·63	912	22·80	907	27·21	997	24·92
10—	418	5·02	518	6·73	398	4·78	385	5·00	395	4·74	487	6·33
15—	152	2·28	157	1·57	116	1·74	177	1·77	159	2·38	178	1·78
20—	65	·97	112	2·24	64	·96	101	2·02	72	1·08	105	2·10
25—	69	1·38	97	2·04	49	·98	75	1·57	62	1·24	87	1·83
35—	12	·17	21	·50	7	·10	42	1·01	12	·17	27	·65
45—	3	·11	7	·17	5	·19	13	·32	3	·11	3	·07
55 and upwards	1	·12	3	·26	—	—	2	·17	1	·12	3	·26
Age not stated	85	3·99	89	3·74	72	3·38	86	3·61	65	3·05	75	3·15

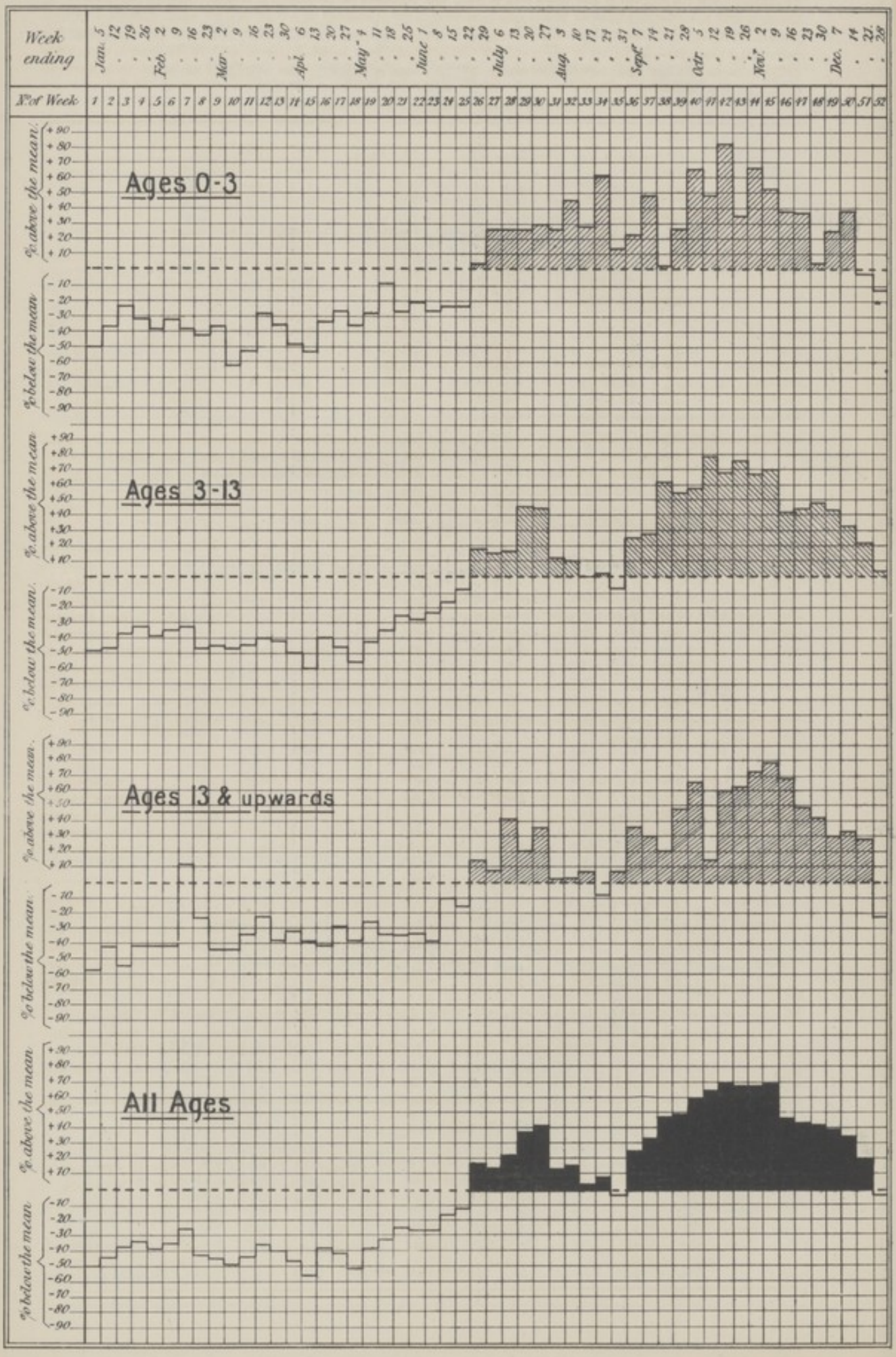
Age period.	April.				May.				June.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Estimated Deaths.	Cases.	Estimated Deaths.	Cases.	Estimated Deaths.	Cases.	Estimated Deaths.	Cases.	Estimated Deaths.	Cases.	Estimated Deaths.
All ages ...	2,595	129·12	2,984	123·66	3,608	173·94	4,051	173·67	4,008	193·22	4,567	192·33
0—	55	8·63	37	5·14	51	8·01	63	8·76	79	12·40	66	9·17
1—	121	18·75	102	16·73	158	24·49	160	26·24	160	24·80	158	25·91
2—	194	23·47	171	20·69	282	34·12	236	28·56	282	34·12	252	30·49
3—	210	18·90	244	20·74	301	27·09	333	28·30	346	31·14	389	33·06
4—	256	16·64	253	14·93	331	21·51	356	21·00	360	23·40	408	24·07
5—	955	28·65	1,134	28·35	1,295	38·85	1,530	38·25	1,542	46·26	1,805	45·12
10—	382	4·58	551	7·16	610	7·32	750	9·75	641	7·69	784	10·19
15—	162	2·43	183	1·83	250	3·75	225	2·25	258	3·87	283	2·83
20—	82	1·23	108	2·16	114	1·71	147	2·94	110	1·65	121	2·42
25—	66	1·32	97	2·04	88	1·76	120	2·52	91	1·82	138	2·90
35—	22	·31	27	·65	24	·34	25	·60	21	·29	38	·91
45—	10	·38	7	·17	5	·19	10	·25	7	·27	7	·17
55 and upwards	1	·12	3	·26	2	·24	5	·43	4	·48	3	·26
Age not stated	79	3·71	67	2·81	97	4·56	91	3·82	107	5·03	115	4·83

Age period.	July.				August.				September.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.
All ages.	5,004	232·42	5,326	219·47	4,940	244·86	5,615	243·84	5,750	258·98	6,140	250·95
0—	83	13·03	70	9·73	96	15·07	79	10·98	80	12·56	91	12·65
1—	190	29·45	165	27·06	235	36·42	220	36·08	202	31·31	183	30·01
2—	305	36·90	306	37·03	382	46·22	373	45·13	308	37·27	323	39·08
3—	430	38·70	415	35·27	442	39·78	451	38·33	491	44·19	491	41·73
4—	470	30·55	466	27·49	453	29·44	495	29·20	508	33·02	519	30·62
5—	1,864	55·92	2,116	52·90	1,651	49·53	2,109	52·72	2,308	69·24	2,553	63·82
10—	884	10·61	948	12·32	867	10·40	969	12·60	1,041	12·49	1,111	14·44
15—	325	4·87	312	3·12	364	5·46	354	3·54	354	5·31	331	3·31
20—	159	2·38	158	3·16	118	1·77	191	3·82	129	1·93	169	3·38
25—	110	2·20	149	3·13	125	2·50	163	3·42	104	2·08	146	3·07
35—	28	·39	50	1·20	45	·63	42	1·01	35	·49	40	·96
45—	7	·27	15	·37	5	·19	13	·32	7	·27	7	·17
55 and upwards.	2	·24	3	·26	1	·12	3	·26	3	·36	7	·61
Age not stated.	147	6·91	153	6·43	156	7·33	153	6·43	180	8·46	169	7·10

Age period.	October.				November.				December.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.	Cases.	Estimated deaths.
All ages.	6,517	307·74	6,975	286·97	5,520	259·59	6,037	254·22	3,322	159·75	3,656	160·97
0—	105	16·48	109	15·15	118	18·53	91	12·65	68	10·68	53	7·37
1—	258	39·99	202	33·13	203	31·46	206	33·78	131	20·30	150	24·60
2—	448	54·21	410	49·61	353	42·71	354	42·83	220	26·62	227	27·47
3—	558	50·22	530	45·05	459	41·31	498	42·33	291	26·19	341	28·98
4—	578	37·57	604	35·64	504	32·76	520	30·68	320	20·80	308	18·17
5—	2,564	76·92	2,799	69·97	2,162	64·86	2,308	57·70	1,260	37·80	1,368	34·20
10—	1,158	13·90	1,271	16·52	970	11·64	1,053	13·69	561	6·73	634	8·24
15—	371	5·56	395	3·95	345	5·17	384	3·84	181	2·71	195	1·95
20—	162	2·43	200	4·00	136	2·04	175	3·50	99	1·48	122	2·44
25—	121	2·42	203	4·26	108	2·16	212	4·45	80	1·60	123	2·58
35—	33	·46	62	1·49	28	·39	52	1·25	19	·27	34	·82
45—	7	·27	13	·32	12	·46	20	·50	5	·19	8	·20
55 and upwards.	1	·12	10	·87	5	·60	3	·26	4	·48	1	·09
Age not stated.	153	7·19	167	7·01	117	5·50	161	6·76	83	3·90	92	3·86

Diagram IX.

Scarlet Fever.



From the total "estimated deaths" and the cases notified at "all ages," a "standard case-mortality" for each month has been calculated, the differences in which are solely due to differences in the age and sex distribution of the cases notified. By dividing the "all ages" case-mortality of the period 1892-5, viz., 4·47, by each of these "standard case-mortalities," a factor is obtained for correcting the case-mortality of each month (calculated from notified cases and registered deaths) for differences in the age and sex distribution of the cases notified. The result of these calculations is shown in the following table—

Scarlet fever—Case-mortality, 1892-95.

Month.	Notified cases.	Estimated deaths.	Standard case-mortality.	Factor for correction for age and sex distribution.	Case-mortality calculated from notified cases and registered deaths.	Case-mortality corrected for differences in age and sex distribution.
No. of column ...	1	2	3	4	5	6
January	5,665	262·15	4·63	·9654	5·81	5·61
February ...	4,677	206·48	4·41	1·0136	5·47	5·54
March	5,234	239·97	4·58	·9760	5·58	5·45
April	5,579	252·78	4·35	1·0276	5·66	5·82
May	7,659	347·61	4·54	·9846	4·65	4·58
June	8,575	385·55	4·50	·9933	4·49	4·46
July	10,330	451·89	4·37	1·0229	4·19	4·29
August	10,555	488·70	4·63	·9654	4·65	4·49
September ...	11,890	509·93	4·29	1·0420	3·32	3·46
October	13,492	594·71	4·41	1·0136	3·34	3·39
November ...	11,557	513·81	4·45	1·0045	4·09	4·11
December ...	6,978	320·72	4·60	·9717	5·43	5·28

It will be seen from a comparison of columns 5 and 6 of this table that the variation in the case-mortality at different periods of the year is but slightly affected when correction is made for differences in the age and sex distribution of the disease; in other words, the variations in the age and sex distribution of the disease at different periods of the year are wholly insufficient to account for the striking differences in case-mortality shown in column 5 of the table.

It is interesting to observe (diagram VIII.) that the fatality of the month of August causes an interruption to the fall from the maximum to the minimum. This increase of the fatality in August appears partly explicable on the hypothesis that owing to the decrease, as the result of the summer holiday, in that month of the prevalence of scarlet fever among school children whose fatality rate is comparatively low, the cases of the month contain a larger proportion of younger children whose fatality rate is comparatively high, and hence the fatality of the month at "all ages" is disturbed by an exceptional age distribution. An examination of column 6 of the table shows, however, that this explanation is only partial, and that even when correction is made for the exceptional age and sex distribution of the cases notified in August, the case-mortality of that month still causes an interruption in the fall of the curve of case-mortality, although this interruption is considerably modified after correction. Experience of the statistics of a greater number of years is evidently required to show whether this increase of fatality will be maintained.

The use of hospitals.

Reference to diagram VII. shows that in 1895 there was a slight decrease in the proportion of the cases of scarlet fever which were admitted into, and the proportion of deaths which occurred in the hospitals of the Metropolitan Asylums Board, as compared with 1894. In 1895 the number of cases admitted into these hospitals was 11,271, or 57·0 per cent. of the total cases notified, and the number of deaths occurring in these hospitals was 591 or 71·3 per cent. of the total deaths registered in London from this disease.

Scarlet fever and elementary schools.

In diagram IX. I have shown, as in previous reports relating to other years, the number of cases of scarlet fever notified in each week of 1895 in relation to the mean of the year. The diagram shows a marked diminution of prevalence in the month of August, which I attribute to diminished opportunity for the dissemination of the disease by schools in that month as the result of the closure of the schools for the summer holiday. The summer holiday of the London School Board schools began in 1895, at noon, Thursday, 25th July, or the latter part of the 30th week, and reopened on Monday, the 26th August, at the beginning of the 35th week. The curve shows a fall in the number of cases notified in the 31st week, and an increase in the 36th week. If the number of cases notified in the four weeks which would be most subject to the influence of the holiday, *i.e.*, the 32nd to 35th, be compared with the number of cases notified in the four preceding and four subsequent weeks, the following results are obtained—

	Notified cases—Ages.			Increase or decrease per cent.		
	0—3	3—13	13 and upwards.	0—3	3—13	13 and upwards.
Four weeks 28th to 31st	234	1,390	312	—	—	—
" " 32nd to 35th	252	1,084	254	+7·7	—22·0	—18·6
" " 36th to 39th	229	1,518	334	—9·1	+40·0	+31·5

The decrease and subsequent increase were therefore most marked at the school age.

In the distribution of the cases throughout the year a proportionately larger number occurred in the autumn than in 1894, the autumnal prevalence of 1895 being clearly marked. During 1895 the eastern districts of the county, in proportion to population, suffered most severely from scarlet fever both in respect of the number of cases and number of deaths. The district of Limehouse had the highest case rate, and of St. George-in-the-East the highest death rate. The district of St. Olave experienced the lowest case rate, and no death from this disease occurred in that district.

The following table shows the number of cases and deaths and the case and death rates of each district in 1895 and the period 1885–94.

Sanitary district.	Cases, 1895.	Case rate per 1,000 1895.	Deaths, 1895.	Death rate per 1,000	
				1885–94.	1895.
Paddington	417	3·4	14	·14	·11
Kensington	532	3·1	28	·16	·17
Hammersmith	379	3·7	17	·22	·17
Fulham	344	3·1	21		·19
Chelsea	575	6·0	25	·18	·26
St. George, Hanover-square	303	3·8	10	·15	·13
Westminster	179	3·3	6	·23	·11
St. James	82	3·5	3	·17	·13
Marylebone	498	3·5	14	·20	·10
Hampstead	306	4·1	8	·12	·11
Pancras	1,082	4·5	52	·20	·22
Islington	1,725	5·2	67	·18	·20
Stoke Newington	131	4·0	1	·25	·03
Hackney	1,037	4·9	41		·20
St. Giles	149	3·9	6	·16	·16
St. Martin-in-the-Fields	40	3·0	2	·20	·15
Strand	111	4·6	9	·18	·37
Holborn	145	4·6	6	·24	·19
Clerkenwell	326	4·9	17	·29	·26
St. Luke	149	3·6	5	·36	·12
London, City of	142	4·3	4	·18	·12
Shoreditch	584	4·8	30	·31	·25
Bethnal-green	752	5·8	30	·42	·23
Whitechapel	508	6·5	23	·28	·30
St. George-in-the-East	300	6·4	20	·39	·42
Limehouse	401	6·9	20	·45	·34
Mile-end Old-town	671	6·1	26	·37	·24
Poplar	991	5·9	48	·32	·28
St. Saviour, Southwark	104	4·1	6	·33	·23
St. George, Southwark	185	3·1	14	·42	·23
Newington	423	3·5	16	·33	·13
St. Olave	31	2·6	—	·34	—
Bermondsey	304	3·6	16	·34	·19
Rotherhithe	257	6·4	8	·29	·20
Lambeth	1,416	4·9	53	·24	·18
Battersea	830	5·1	30	·18	·18
Wandsworth	654	3·6	16		·09
Camberwell	874	3·5	46	·24	·18
Greenwich	860	5·0	36	·22	·21
Lewisham	334	3·3	9	·10	·09
Woolwich	188	4·6	11	·16	·27
Lee	164	4·3	5	·19	·13
Plumstead	325	5·6	10		·17
Port of London	—	—	—	—	—
London	**19,808**	**4·5**	**829**	**·24***	**·19***

Reference is made to the spread of scarlet fever through schools in the reports relating to Chelsea, Westminster, Stoke Newington, Battersea, Lee (Eltham), and Plumstead, thus :—

Chelsea.—Fifty-seven cases of scarlet fever occurred in the Duke of York's Royal Military School.

Westminster.—The report contains account of two occasions in which the question of the spread of scarlet fever by schools had to be considered.

> In the first case at St. Margaret's School out of 20 cases of scarlet fever occurring in June and July, 13 were cases of children attending this school; the disease abated directly the holidays commenced. In the second case that of James-street Board School, especially in the infants' department, it was observed that 11 out of 12 cases of scarlet fever notified between September 8th and October 4th were those of children attending this school. On October 4th I communicated with the medical officer of the School Board, with the result that this department (infants) was thoroughly fumigated and the floors and desks washed with a solution of carbolic acid. It was then noticed that cases which had been cropping up at intervals of a few days only ceased with one exception, namely that of a child who had

* See footnote (²), page 10.

attended the school for the last time before the fumigation took place, viz., October 3rd. For the next three months only three cases of scarlet fever occurred in children attending this school. I think in this case it is clearly evident that the disinfection at least did good, and in the former case it is interesting to note how the separation of the children for the holidays caused the disease to decrease.

Stoke Newington.—"School attendance was ascribed as the origin of the infection of 27 cases."

Battersea.—"In consequence of an unusually large number of cases of scarlet fever occurring at St. George's Schools, the same were thoroughly disinfected during the Christmas holidays by the vestry's staff of disinfectors."

Lee (Eltham).—The report of the medical officer of health contains the following account of scarlet fever in children attending the Pope-street Board Schools—

> The majority of the cases occurred among the pupils at these schools, or in the residents in houses where they lived. The number of cases notified among the pupils was in October, 19; in November, 12; in December, 21, or 52 in all. There were, in addition, 7 cases in children who lived in Sidcup parish. Four cases in pupils occurred in the first week of January, a total of 63 cases. In October I reported the outbreak to you (the District Board), and suggested that, as it could be distinctly traced to contagion at the schools, it would be advisable to close them, if the number of infected increased, and to this you agreed. Later on I communicated with the School Board authorities at Greenwich, and was referred by them to Professor W. R. Smith, M.D., their medical officer. He, however, declined to concur in closing the schools, on the ground that there had not yet been a sufficient number of cases to warrant the proceeding. The disease went on steadily, until, at the beginning of the Christmas holidays on December 20th, the following was the state of things—

	Total pupils on school roll.	Ill with Scarlet Fever.	Excluded by teachers.	Kept away by parents.	Total number absent.
Boys	164	20	14	35	69
Girls	148	8	22	53	83
Infants ...	136	11	12	48	71
	448	39	48	136	223

> Thus about half the pupils were absent.
>
> Under the circumstances I suggested, with your concurrence, that it would be advisable to extend the holidays from two to three weeks; and I went to the School Board offices on Victoria-embankment and had an interview with Professor Smith. He again declined to co-operate, on the ground that it would be more easy, as a matter of procedure, to close the schools again after the pupils had met than to prolong the holidays. He, however, promised to make no further objections should there be more cases later. The fortnight's closure seems to have been sufficient to stop the epidemic, for no fresh case has been notified among the pupils since January 11th. Still, I venture to think that it would have been better to prolong the holidays if only to make "assurance doubly sure." There seems to me to be also a probability that closure earlier would have stopped the outbreak then, as it did when applied to the infants' school at Eltham two years ago.

Plumstead.—In the early part of the autumn most of the cases were connected with the Bloomfield-road School. The attention of the medical officer of health was directed to a female pupil whom the teacher had refused to admit to the school, suspecting her of having scarlet fever. The medical officer found the child to be desquamating.

An infected milk supply gave rise to an outbreak of scarlet fever in Islington, as many as 125 cases in the sub-district of Holloway being attributable to this cause.

The medical officer of health reports that during the early part of February he noticed unusual prevalence of scarlatina in the north-east of the parish, and that in nearly every instance the person attacked had been supplied from one local dairy. He learnt from the medical officer of health of Hornsey that there was similar prevalence in that district, the milk being supplied to the infected persons from the same dairy. Inspection of the local dairy showed that it was a clean well-conducted place of business, and he ascertained that the milk supplied from it was received from seven farms in Derbyshire and from one in Staffordshire. A meeting of the Public Health Committee of the Vestry was held on the 11th February, when the medical officer was instructed to inquire into the state of the farms, and the local vendor was informed that he should cease to supply his milk. Up to the 6th February, the milk of the several farms was not kept separate, but on this date the milk from each farm was supplied on separate rounds of distribution, and within a few days the chief incidence of disease was found to be on persons supplied with the milk from three farms. The results of the inquiry by the medical officer of health showed that there was history of connection, or probable connection, between persons engaged in the dairy business of two of these farms, and cases of scarlet fever, this disease being prevalent in the districts; the third farm, moreover, received milk from a fourth, with which its own was mixed, this fourth being similarly circumstanced in respect to the connection of its dairy people with scarlet fever. The medical officer of health points out that in only one rural district with which he was concerned in his inquiries was the notification of infectious disease obligatory.

Proceedings for the wilful exposure of a person suffering from scarlet fever were instituted in Kensington, Fulham, St. Pancras, Strand, Poplar (*Poplar and Bromley*). In Kensington, owing to the impossibility of proving the knowledge of the defendant as to the nature of the malady, the proceedings fell through. In the Fulham, Strand and Poplar cases convictions were obtained. In the St. Pancras case the magistrate dismissed the summons, as he was not satisfied that at the time of the exposure the patient was in an infectious condition.

The reports of the medical officers of health with few exceptions discuss the difficulties experienced in dealing with scarlet fever cases owing to the deficiency of hospital accommodation for this disease in the latter part of the year. Reference is also made to the occurrence of cases of scarlet fever in houses shortly after the return to the houses of persons who have been treated for this malady in hospital.

An interesting table is given in the report of the medical officer of health of Paddington, showing the number of rooms occupied by invaded families, whether one, two, three, four, or five and more rooms, and showing whether in each group the number of persons per room was two or less, or more than two.

Diphtheria.

The cases of diphtheria* notified in the Administrative County of London in 1895 numbered 11,231, compared with 11,204 in 1894. The number of deaths registered from this cause in 1895 was 2,292, compared with 2,642 in 1894. The figures quoted for 1895 give an annual death rate of 0·52 per 1,000 living, and a case mortality of 20·4 per cent.

The diphtheria rates in 1895 and preceding periods are shown in the following table—

Diphtheria.

Period.	Death rate per 1,000 living.	Case rate per 1,000 living.	Case mortality per cent.
1861–70	0·18	—†	—
1871–80	0·12	—†	—
1881–90	0·26	—†	—
1891...	0·31[2]	1·5	22·5
1892...	0·44[2]	2·0	22·2
1893...	0·74[2]	3·2	23·3
1894...	0·61[2]	2·6	23·6
1895...	0·52[2]	2·6	20·4

The death rate in each year since 1858, in relation to the mean of the period 1859–95, is shown in diagram X.

If the London death rate from diphtheria be compared with that of other large towns in England having populations of more than 200,000, it will be seen that the London rate was in 1895 greatly in excess of all except West Ham, and in 1885–94 the London rate was higher than that of all the towns.

Diphtheria—Death rates per 1,000 *living.*

	Ten years, 1885–94.	1895.		Ten years, 1885–94.	1895.
London	**·38**	**·53**[1]	Bristol	·12	·15
Manchester	·25	·21	Nottingham	·08	·04
Liverpool	·16	·24	Bradford	·06	·09
Birmingham	·13	·37	Hull...	·08	·17
Leeds	·08	·16	Salford	·37	·30
Sheffield	·13	·15			
West Ham	·34	·77			

The following table enables comparison to be made between the death rate from diphtheria in London and the rates in ten foreign cities in the years 1885–94 and 1895—

Diphtheria—Death rates per 1,000 *living.*

	Ten years, 1885–94.	1895.		Ten years, 1885–94.	1895.
London	**·38**	**·53**[1]	St. Petersburg	·52	·59
Paris...	·64	·17	Berlin	·90	·54
Brussels	·14	·21	Vienna	·76	·46
Amsterdam	·33	·15	Rome	·39	·08
Copenhagen	·86	·24	New York	1·06	·88
Stockholm	·96	·23			

In 1885–94 the London rate was exceeded by the rates of all these cities except Brussels and Amsterdam, but in 1895 it exceeded the rates of all except St. Petersburg, Berlin and New York.

Diphtheria, 1895*—Age and sex distribution.*

In the following table is shown the age and sex distribution and the case mortality at each age in the year 1895. As in 1894, the female population suffered more heavily from attack than the male, but the male experienced a heavier death rate than the female. In each of the first three years of life the male death rate was higher than the female. The male case mortality was at "all ages" greater than that of the female; at all age-periods except 35— the case mortality of males, and at the majority of age-periods the case mortality of females, is less than it was in 1894, the result being

* Unless otherwise stated, cases of "Diphtheria" include "Membranous Croup."
† The Infectious Diseases (Notification) Act only came into force in 1889.
[1] See footnote (1), page 10.
[2] See footnote (2), page 10.

Diagram X. **Diphtheria & Croup.**

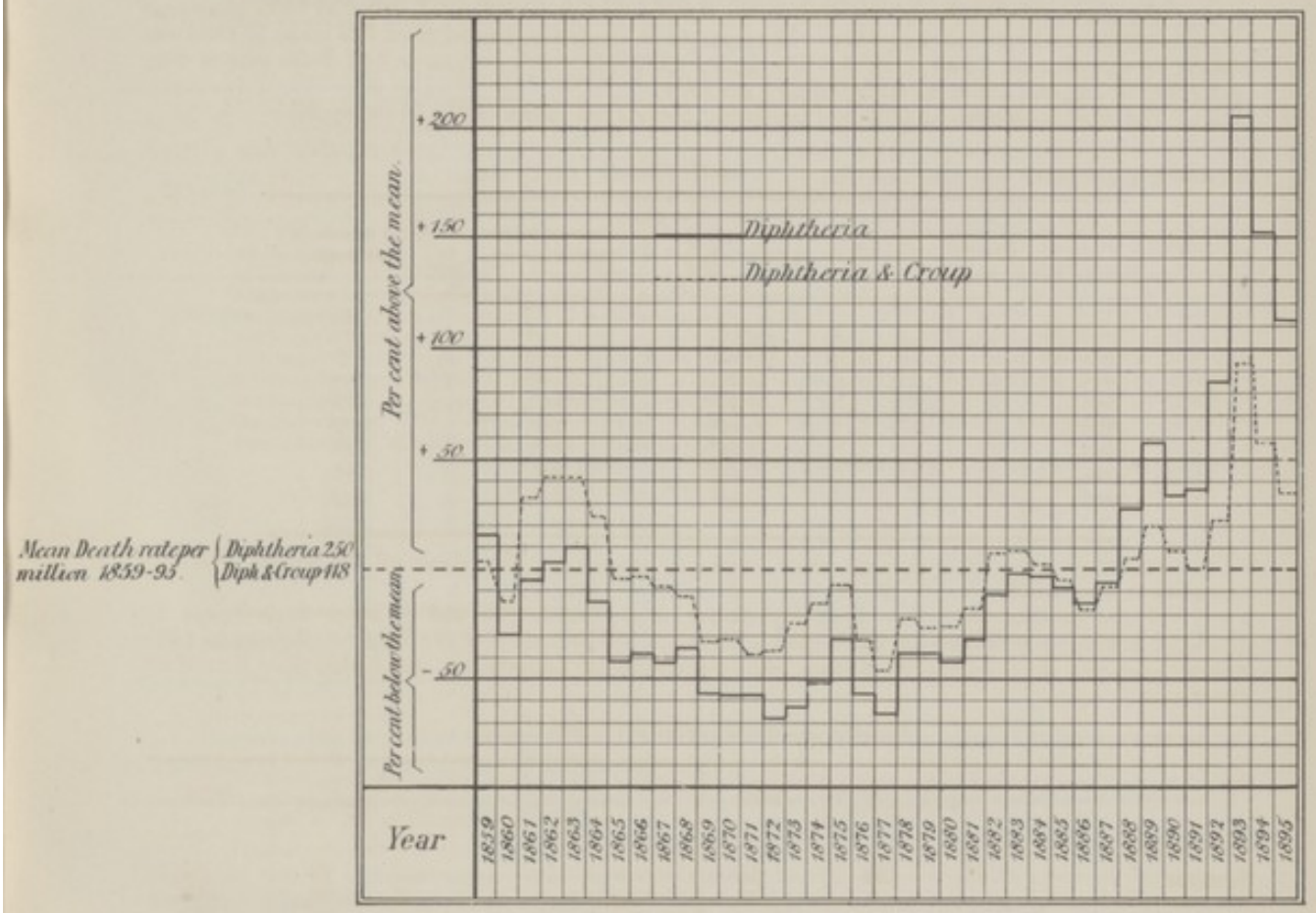
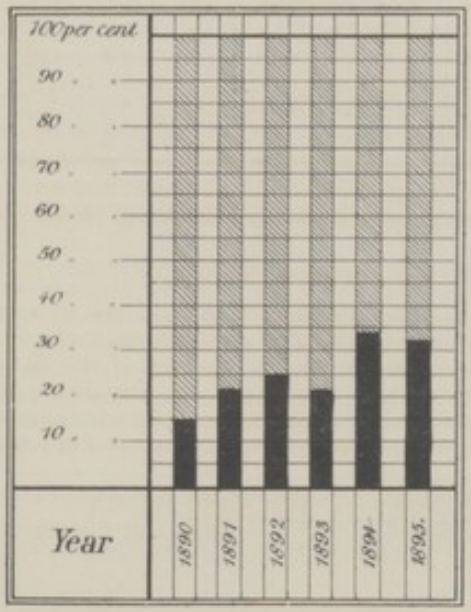
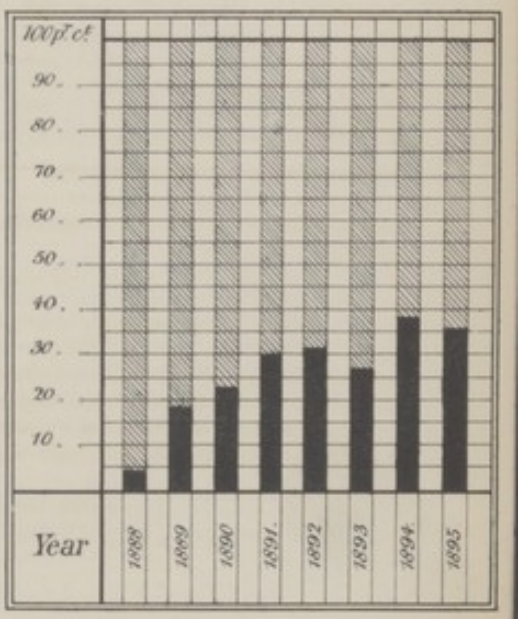


Diagram XI. **Diphtheria**

Admissions to hospitals of the Metropolitan Asylums Board per cent of total cases notified in London 1890-95.



Deaths occurring in hospitals of the Metropolitan Asylums Board per cent of total deaths in London, 1888-95.



that in 1895 the case mortality of males was 22·7 compared with 25·8 in 1894, and that of females was 19·6 compared with 23·1 in 1894. The difference in the case mortality in the two years at the early ages has been marked.

*Diphtheria,** 1895.

Age period.	Males.					Females.				
	Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.		Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.	
				Cases.	Deaths.				Cases.	Deaths.
All ages.	5,107	1,158	22·7	247	56	6,116	1,198	19·6	265	52
0—	175	92	52·6	312	164	125	66	52·8	219	116
1—	423	205	48·5	842	408	364	182	50·0	718	359
2—	486	202	41·6	925	384	434	178	41·0	822	337
3—	578	191	33·0	1,135	375	618	197	31·9	1,186	378
4—	543	165	30·4	1,097	333	577	176	30·5	1,160	354
5—	1,580	247	15·6	672	105	1,733	306	17·7	730	129
10—	554	33	6·0	258	15	733	48	6·5	335	22
15—	253	5	2·0	123	2	424	17	4·0	186	7
20—	166	5	3·0	82	2	333	6	1·8	137	2
25—	238	4	1·7	69	1	475	7	1·5	119	2
35—	72	6	8·3	28	2	191	7	3·7	67	2
45—	30	2	6·7	17	1	77	3	3·9	38	1
55 and upwards.	9	1	11·1	5	1	32	5	15·6	14	2

The following rates are interesting in view of the fact that anti-toxic serum has been, especially in 1895, employed in the treatment of diphtheria—

Age-period.	Case mortality per cent.					
	Males.			Females.		
	1893.	1894.	1895.	1893.	1894.	1895.
All ages.	26·4	25·8	22·7	21·8	23·1	19·6
0—	66·9	56·0	52·6	57·6	58·3	52·8
1—	65·8	59·5	48·5	67·2	58·6	50·0
2—	53·2	44·4	41·6	43·9	50·5	41·0
3—	45·9	40·5	33·0	45·3	37·5	31·9
4—	38·5	31·5	30·4	37·0	36·5	30·5
5—	20·9	18·5	15·6	24·2	21·6	17·7
10—	6·6	8·4	6·0	6·1	6·3	6·5
15—	2·8	3·9	2·0	3·3	2·9	4·0
20—	3·2	4·5	3·0	1·9	2·5	1·8
25—	2·8	2·4	1·7	2·9	2·9	1·5

Reference to the reports of the medical officers of the Metropolitan Asylums Board contained in the reports of the Statistical Committee of that Board shows that anti-toxin began to be used by them in the last few months of 1894.

Diphtheria—Seasonal variations in fatality.

I have already discussed the subject of seasonal variations in the fatality of scarlet fever, and it will suffice here to state that the additional figures, which the year 1895 supplies, tend to confirm the view that diphtheria fatality is subject to a like variation. This will be seen from the following tables.

It may be pointed out that, as in the case of scarlet fever, so in the case of diphtheria, the fatality of the month of August constitutes an interruption to the fall of fatality from the maximum to the minimum. This, as in the case of scarlet fever, is probably in some degree owing to a difference in the age incidence of that month compared with that of other months, due to the decrease in the prevalence of diphtheria at the school age as the result of the August holiday.

* In the preparation of this table, the question whether the persons, who were attacked and who died, belonged to London is disregarded, the percentage being calculated on the number of cases notified in London, and the number of deaths occurring in London and the institutions belonging to London. Inasmuch as the age of the patient is not in all cases recorded in the notification certificate, it has been necessary to distribute such cases among the various ages proportionately.

Diphtheria—Case-mortality, 1895.

	No. of weeks.	Cases.	Deaths.	Case-mortality per cent.	Mean case-mortality taken as 100.
January	5 weeks	847	171	20·19	98
February	4 „	461	118	25·60	125
March	4 „	527	103	19·54	95
April	4 „	581	112	19·28	94
May	5 „	823	186	22·60	110
June	4 „	844	171	20·26	99
July	5 „	1,385	244	17·62	86
August	4 „	801	150	18·73	91
September	4 „	1,052	192	18·25	89
October	5 „	1,571	337	21·45	104
November	4 „	1,238	260	21·00	102
December	4 „	1,093	261	23·88	116

Diphtheria—Case-mortality, 1891–95.

	Cases.	Deaths.	Case-mortality per cent.	Mean case-mortality taken as 100.
January	3,424	827	24·15	107
February	2,919	739	25·32	112
March	3,160	787	24·91	110
April	3,272	746	22·80	101
May	4,023	882	21·92	97
June	3,955	874	22·10	98
July	4,543	950	20·91	93
August	4,329	954	22·04	98
September	5,053	1,062	21·02	93
October	5,908	1,226	20·75	92
November	5,427	1,219	22·46	100
December	4,345	1,080	24·86	110

The use of hospitals.

Reference to diagram XI. shows that as in the case of scarlet fever there was a slight decrease in the proportion of the cases of diphtheria which were admitted into, and the proportion of deaths which occurred in, the hospitals of the Metropolitan Asylums Board in 1895, as compared with 1894. In 1895 the number of cases of diphtheria admitted into these hospitals was 3,635, or 32·4 per cent. of the total cases notified, and the number of deaths occurring in these hospitals was 820, or 35·8 per cent. of the total deaths registered in London from this disease.

Diphtheria and elementary schools.

As in previous years, I have shown, in diagrammatic form, the number of cases of diphtheria notified in each week of the year 1895 in relation to the mean of that year (see diagram XII.), and it will be seen that there was considerable diminution in the amount of diphtheria prevalence in the month of August, when, apart from some disturbing influence, it might have been expected that the prevalence would have been increasing; this diminution in August has also been pointed out in connection with scarlet fever. As in some previous years the diminution of prevalence among children under three years of age occurs somewhat later than that among children of school age, suggesting that the decrease among infants resulted from diminished opportunity of infection from older children.

The holidays of the London School Board schools began at noon, Thursday, 25th July, or the latter part of the 30th week, and the schools reopened on Monday, August 26th, or the beginning of the 35th week.

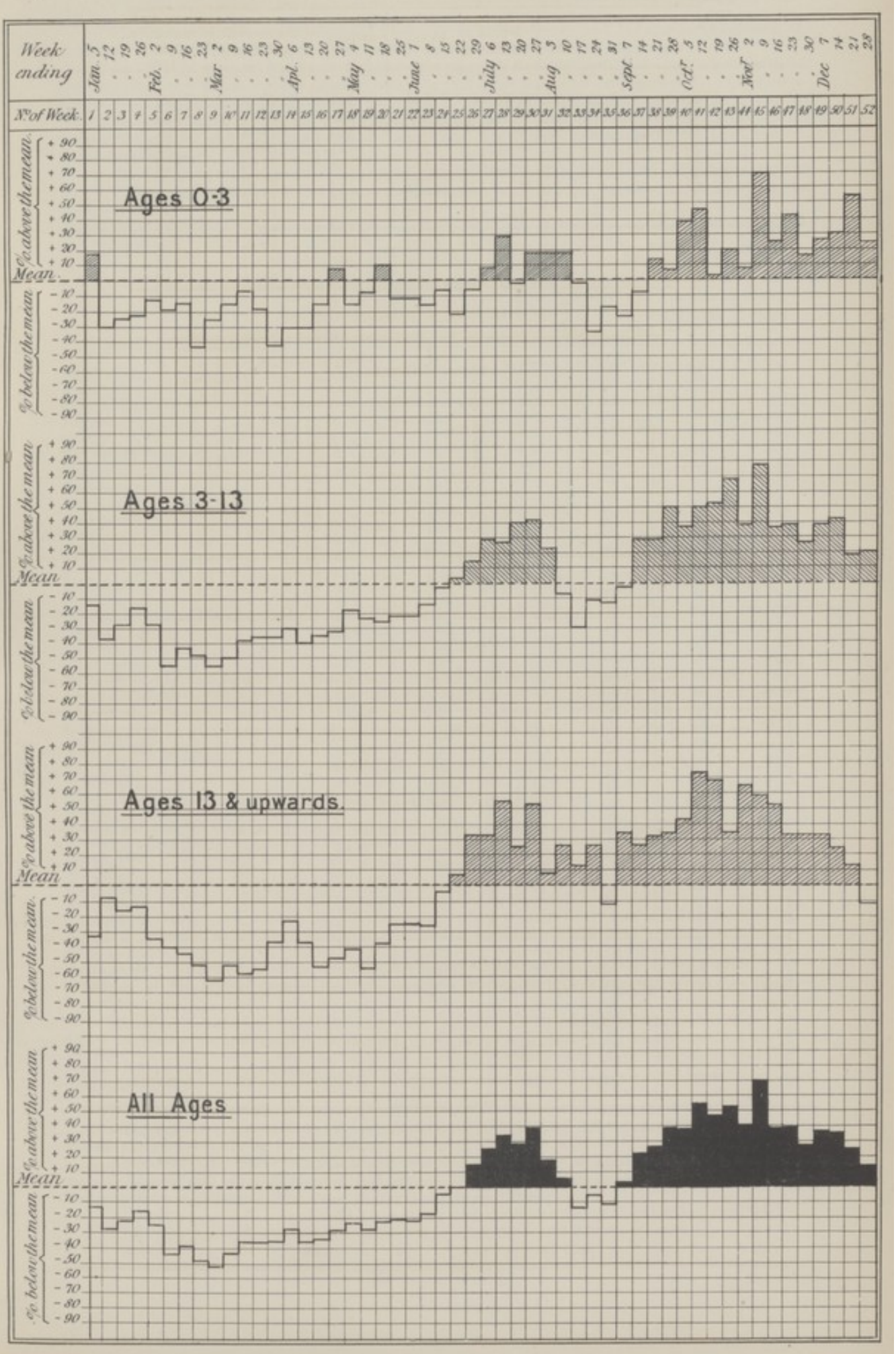
If the number of cases notified in the four weeks, which would be most subject to the influence of the holiday, *i.e.*, the 32nd–35th, be compared with the number of cases notified in the four preceding and four subsequent weeks, the following results are obtained—

Period.	Notified cases—Ages.			Increase or decrease per cent.		
	0—3	3—13	13 and upwards.	0—3	3—13	13 and upwards.
Four weeks 28th—31st	177	656	280	—	—	—
„ 32nd—35th	139	420	234	−21·5	−36·0	−16·4
„ 36th—39th	148	626	271	+ 6·5	+49·0	+15·8

NOTIFIED CASES.

Diagram XII.

Diphtheria, 1895.



The decrease and subsequent increase were therefore most marked at the school age period of life.

The frequency with which diphtheria behaves in this manner, and the similarity between the behaviour of diphtheria and scarlet fever, tend to confirm the view already expressed.

In 1895 the greatest incidence of disease was upon the eastern districts of London generally, but the district of Greenwich had the highest case rate (5·1 cases per 1,000 of population). St. George, Hanover-square, and Lee had the lowest case rates (1·2). Again, the eastern districts generally had the highest death rates, St. George-in-the-East having a rate of 1·06 per 1,000 of population. This, however, was equalled by the death rate of Greenwich. The district having the lowest death rate was Stoke Newington.

The following table shows for each of the London districts (*a*) the number of cases and the case rate in 1895; (*b*) the number of deaths and the death rate in 1895; (*c*) the death rate in the period 1885–94.

Sanitary district.	Cases, 1895.	Case rate per 1,000, 1895.	Deaths, 1895.	Death rate per 1,000.	
				1885–94.	1895.
Paddington	238	1·9	47	·39	·38
Kensington	380	2·2	90	·33	·53
Hammersmith	205	2·0	44	·43	·43
Fulham	393	3·6	77		·70
Chelsea	307	3·2	57	·35	·59
St. George, Hanover-square	96	1·2	24	·31	·30
Westminster	105	2·0	21	·38	·39
St. James	43	1·8	4	·23	·17
Marylebone	232	1·6	35	·26	·25
Hampstead	117	1·6	14	·26	·19
Pancras	555	2·3	131	·38	·55
Islington	595	1·8	146	·38	·44
Stoke Newington	60	1·8	5	·41	·15
Hackney	501	2·4	83		·39
St. Giles	63	1·6	13	·36	·34
St. Martin-in-the-Fields	18	1·4	7	·31	·53
Strand	41	1·7	13	·30	·54
Holborn	58	1·9	7	·37	·22
Clerkenwell	143	2·2	34	·41	·52
St. Luke	95	2·3	20	·37	·48
London, City of	43	1·3	8	·27	·24
Shoreditch	251	2·1	58	·44	·47
Bethnal-green	474	3·7	101	·61	·78
Whitechapel	289	3·7	58	·49	·75
St. George-in-the-East	219	4·6	50	·62	1·06
Limehouse	190	3·3	45	·50	·78
Mile-end Old-town	483	4·4	111	·42	1·01
Poplar	777	4·6	152	·40	·90
St. Saviour, Southwark	67	2·6	13	·39	·51
St. George, Southwark	105	1·7	17	·38	·28
Newington	279	2·3	52	·36	·43
St. Olave	22	1·9	4	·28	·34
Bermondsey	115	1·4	29	·34	·34
Rotherhithe	144	3·6	31	·33	·77
Lambeth	657	2·3	112	·41	·38
Battersea	404	2·5	92	·36	·57
Wandsworth	286	1·6	46		·25
Camberwell	903	3·6	179	·35	·72
Greenwich	882	5·1	184	·39	1·06
Lewisham	136	1·3	17	·27	·17
Woolwich	67	1·6	14	·13	·34
Lee	46	1·2	11	·36	·29
Plumstead	143	2·5	36		·62
Port of London	4	—	—	—	—
London	**11,231**	**2·6**	**2,292**	**·38***	**·52***

The reports of the medical officers of health of the following districts contain references to the spread of diphtheria among school children.

Fulham.—The report contains a table showing the number of children attending the London School Board's and other elementary schools in Fulham who were notified in each month to be suffering from diphtheria. The totals in this table are as follows:—

January	12	April	5	July	32	October	28
February	4	May	3	August	11	November	23
March	8	June	22	September	16	December	25

* See footnote (2), page 10.

The medical officer adds, "Two outbreaks, viz., that in July among the children attending Halford Board School, and that among children attending Hugon-road school in December, were apparently due to a child attending school when suffering from the disease in an unrecognised form."

Westminster.—"On the occasion of a small outbreak of diphtheria in November at Knightsbridge, out of ten cases the first eight were either children actually attending Montpelier-street school in Kensington parish or in houses where children resided who went to that school."

Hackney.—The report contains the account of an outbreak of diphtheria in the King Edward's Industrial School, Andrew's-road. The attention of the medical officer of health was directed to the outbreak on the 8th October by the medical attendant. Antecedent to this date cases of ill-defined throat illness had occurred from the 7th September. Bacteriological examination of the exudation from the throats of the worst cases showed the presence of diphtheria bacilli. The isolation of the sick brought the outbreak to a close on the 18th October.

Plumstead.—The medical officer of health states that the statistics relating to diphtheria in Plumstead during 1895 afford "no evidence that school attendance is the dominant factor in the recent prevalence of diphtheria. On the other hand, it would appear that diphtheria has less to do with school attendance than scarlet fever, and that it has more to do with local conditions."

In some of the reports reference is made to the occurrence of cases of diphtheria in houses in which faulty sanitary conditions existed, and in Stoke Newington there was reason for thinking that a diseased cat had been the cause of the illness in a child. Several of the reports of medical officers of health refer to the difficulties caused by deficiency of hospital provision for cases of diphtheria in 1895. The medical officer of health of St. Pancras publishes in his report a list of all hospitals in the district in which cases of diphtheria are received.

The subject of bacteriological examination of material from suspected cases of diphtheria is discussed in some of the reports, and the reports relating to St. Marylebone and Holborn show that the sanitary authorities of these districts gave opportunity for medical practitioners to send to the Institute of Preventive Medicine such material for this purpose at the expense of the authorities. The use of anti-toxic serum for the treatment of diphtheria is also discussed, and reference is made to the report on the subject by the medical superintendents of the hospitals of the Metropolitan Asylums Board. With a view to giving facilities for the use of anti-toxin in Stoke Newington, the vestry authorised the medical officer of health to supply this material to medical practitioners at cost price.

The improper use of public vehicles for the conveyance of persons suffering from diphtheria is mentioned in the reports relating to Kensington and Chelsea. The extent and use of house accommodation of families attacked by diphtheria in Paddington is shown in a table in the report of the medical officer of health of that district.

Whooping Cough.

The deaths from whooping cough in the administrative county of London during 1895 numbered 1,485, compared with 2,116 in 1894.

The death rates from this disease in 1895 and preceding periods were as follows—

Period.	Death rate per 1,000 living.	Period.	Death rate per 1,000 living.
1851–60	0·88	1892	0·58[2]
1861–70	0·88	1893	0·54[2]
1871–80	0·81	1894	0·49[2]
1881–90	0·69	1895	0·34[2]
1891	0·68[2]		

The mortality from whooping cough, therefore, shows a progressive decline during recent years.

The death rate in each year since 1840 in relation to the mean death rate of the period 1841–95 is shown in diagram XIII.

The London death rate from this disease, if compared with the death rates of other large towns in England in the period 1885–94, exceeded all but those of Manchester, West Ham and Salford; and in 1895 it was exceeded by those of Manchester, Liverpool, Birmingham, Bradford and Salford.

Whooping cough—Death rates per 1,000 *living.*

	Ten years, 1885-94.	1895.		Ten years, 1885-94.	1895.
London	**0·63**	**0·34**[1]	Bristol	0·54	0·20
Manchester	0·63	0·48	Nottingham	0·51	0·14
Liverpool	0·62	0·74	Bradford	0·47	0·47
Birmingham	0·58	0·35	Hull	0·38	0·20
Leeds	0·44	0·28	Salford	0·72	0·64
Sheffield	0·58	0·21			
West Ham	0·72	0·23			

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

Diagram XIII. Whooping Cough.

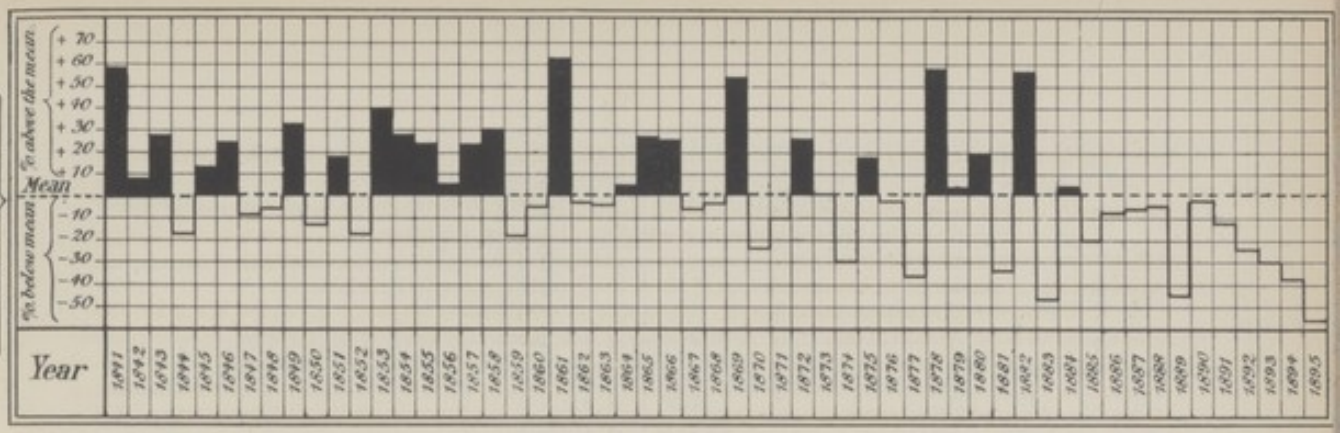
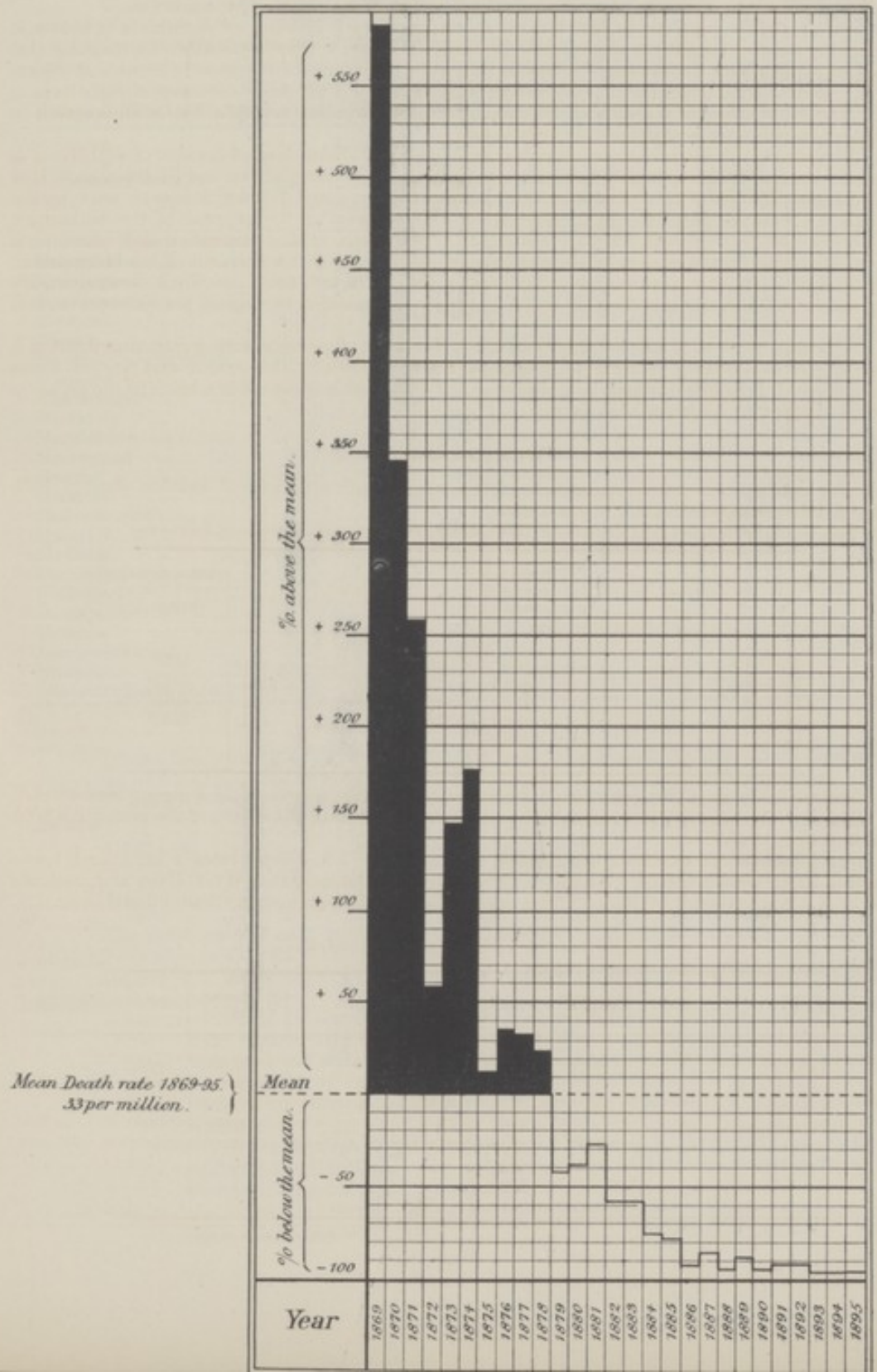


Diagram XIV. Typhus Fever.



The following table shows the London death rate compared with the death rates of ten foreign cities in 1885-94 and 1895; in the former period the London death rate exceeded that of all the foreign cities and in the latter exceeded the death rates of all but Copenhagen.

Whooping cough—Death rates per 1,000 *living.*

	Ten years, 1885-94.	1895.		Ten years, 1885-94.	1895.
London	**·63**	**·34**[1]	St. Petersburg	·23	·32
Paris	·17	·18	Berlin...	·29	·26
Brussels	·21	·11	Vienna	·11	·13
Amsterdam	·38	·27	Rome	·09	·04
Copenhagen	·41	·68	New York	·28	·27
Stockholm	·25	·03			

In 1895, of the London districts, the eastern districts suffered most from this disease, and the northern least. Shoreditch had the highest death rate (·71), and Woolwich the lowest (·07). During the preceding ten years the eastern districts had the highest rates and the western the lowest. Limehouse had the highest rate (·97), and Hampstead and the City the lowest (·31 each).

The deaths and death rates in each sanitary district in 1895, and the mean death rates of the period 1885–94, are shown in the following table—

Sanitary district.	Deaths in 1895.	Death rates per 1,000 living.		Sanitary district.	Deaths in 1895.	Death rates per 1,000 living.	
		1885–94.	1895.			1885–94.	1895.
Paddington	20	·44	·16	Shoreditch	87	·89	·71
Kensington	38	·46	·22	Bethnal-green ...	34	·84	·26
Hammersmith ...	43	·66	·42	Whitechapel	19	·51	·24
Fulham	50		·45	St. George-in-the-East	21	·72	·45
Chelsea	35	·66	·36	Limehouse	40	·97	·69
St. George, Hanover-square	26	·32	·33	Mile-end Old-town ...	42	·79	·38
				Poplar	80	·72	·47
Westminster	15	·56	·28	St. Saviour, Southwark	13	·67	·51
St. James	10	·42	·43	St. George, Southwark	38	·90	·63
Marylebone	39	·47	·28	Newington	71	·78	·59
Hampstead	7	·31	·09	St. Olave	7	·51	·59
Pancras	94	·61	·39	Bermondsey	20	·76	·23
Islington	79	·64	·24	Rotherhithe	10	·68	·25
Stoke Newington ...	5	·54	·15	Lambeth	132	·61	·45
Hackney	65		·31	Battersea	53	·62	·33
St. Giles	13	·54	·34	Wandsworth	24		·13
St. Martin-in-the-Fields	6	·38	·45	Camberwell	68	·66	·27
				Greenwich	55	·67	·32
Strand...	3	·56	·12	Lewisham	37	·45	·36
Holborn	8	·69	·26	Woolwich	3	·52	·07
Clerkenwell	41	·73	·62	Lee	5	·46	·13
St. Luke	21	·75	·51	Plumstead	5		·09
London, City of ...	3	·31	·09	**London**	**1,485**	**·63**[2]	**·34**[2]

Typhus.

During the year 1895, 15 cases of typhus were notified, and 5 deaths from this cause were registered in the administrative county of London.

The death rates from this disease per 1,000 living in 1895 and in preceding periods, were as follows—

1871–80	·055	1893	·001[2]
1881–90	·008	1894	·001[2]
1891	·002[2]	1895	·001[2]
1892	·003[2]		

The death rate of each year since 1868 in relation to the mean death rate of the period 1869–95 is shown in diagram XIV.

Inquiry as to the cases of typhus notified in London in the year 1895 resulted in the following information being obtained—

January.—On the 3rd January a male, aged 10, living in *Bermondsey*, was certified to be suffering from typhus. He had been resident in the house where he was taken ill for some time past, and attended a school in the neighbourhood. No source of infection could be traced, and no one else living in the house was attacked by illness. The boy was removed to hospital on January 3rd, and the diagnosis of typhus fever was not confirmed.

On the 27th January a male, aged 16, living in *Rotherhithe*, was certified to be suffering from typhus. The patient was removed to the South Eastern hospital, where the diagnosis was not confirmed.

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

February.—No cases of typhus fever were notified or removed to hospital during this month.

March.—On March 12th I was informed by the medical officer of health of *Islington*, that three cases of typhus had occurred in his district. All the patients were members of one family, and in the case of one of them, a female, aged 23, the disease proved fatal. The other patients affected were males, aged 27 and 23 respectively. Mr. Harris makes the following reference to these cases in his quarterly report for the first quarter of 1895, under the heading typhus fever—

"One death occurred from this disease. Originally the patient was notified as suffering from enteric fever, and the death certificate so described it. It happened, however, that two other patients living in the same house, were also notified as suffering from the latter disease, and were removed to the Metropolitan Asylums Board Hospital, where the resident physician became doubtful as to the diagnosis being correct, and therefore at once made application to me to obtain permission for a post mortem examination of the body of the deceased, who fortunately had not been buried. Leave to make the examination having been freely accorded, it was ascertained that the disease was not enteric but typhus fever. The examination was made by Dr. Goodall of the Eastern Hospital, Homerton. This death was the only one registered in London during the quarter. It is a matter for regret that the origin of the disease could not be ascertained." Mr. Harris has informed me that it was supposed that one of the patients, referred to above, contracted the disease from a man with whom he had been working in Highgate, but that further inquiries made in the last-named district had not yielded any result.

April.—On April 22nd a woman, aged 47, and on April 24th a man, aged 47, living at the same address in *Deptford*, were certified to be suffering from typhus fever. The patients were removed to the South Eastern Hospital, where the diagnosis of typhus was not confirmed.

May.—On May 10th a woman, aged 25, whose home was in *Whitechapel*, was certified to be suffering from typhus. The patient had been resident for some months in the house where she was taken ill. She was removed to the Eastern Hospital, Homerton, and was subsequently discharged cured. Dr. Loane, the medical officer of health of Whitechapel, informs me that no source of infection could be traced. The house, in one room of which the patient lived with her sister and an infant, was a back to back house without through ventilation.

June.—On June 7th a boy, aged 5, living in *Clerkenwell*, was certified to be suffering from typhus. The boy was not removed to hospital, and no further particulars have been obtainable with regard to his illness.

On June 23rd a girl, aged 8, living in *Poplar*, was certified to be suffering from typhus. The child was removed to the Eastern Hospital, where her illness terminated fatally, and the cause of death was found to be acute meningitis.

July.—On July 17th the illness of a man, aged 33, living in *Lambeth*, was certified as typhus. The case was removed to the South Eastern Hospital, and was there diagnosed as acute dermatitis. The patient was discharged from hospital on July 29th.

August.—On August 26th a girl, aged 17, living in *Hackney*, was certified to be suffering from typhus. No other cases of typhus developed in connection with this case, and no source of infection could be traced.

September and October.—Two children, living in the same house in *Islington*, were certified to be suffering from typhus, one on 30th September, and one on the 4th October. Mr. Harris writes with regard to these cases—"Their origin was most obscure, and could not be traced. The surroundings of the patients were clean and altogether unlike those I have most frequently found associated with typhus fever." Mr. Harris has informed me that one of the children had been on a visit to a place in Kent where she had been employed in "hopping."

October.—On October 16th a man, aged 24, living in *Battersea*, was certified to be suffering from typhus. There appears to have been considerable doubt as to the nature of the illness. No other cases occurred in connection with this case, and no source of infection could be traced.

November.—On November 20th a man who had recently arrived in the docks was reported to be suffering from typhus. Inquiry elicited the fact that it had been intended to notify the case as one of typhus abdominalis, *i.e.*, of typhoid fever.

It will be seen that in the majority of these cases the illness was notified as typhus in error. In three instances a diagnosis of typhus was made concerning patients who were admitted to the hospitals of the Metropolitan Asylmus Board. Two of these patients came from Islington, and as has been already mentioned, a third and a fatal case occurred in a woman who lived in the house from which these two persons were removed. The third case referred to in the Asylums Board returns was that of a woman who came from *Whitechapel*.

Enteric Fever.

The number of cases of enteric fever notified in the Administrative County of London in 1895, was 3,521, and the number of deaths belonging to the administrative county was 598, compared with 3,375 cases and 610 deaths in 1894.

The rates in 1895 and preceding periods were as follows—

Enteric fever.

Period.	Death rate per 1,000 living.	Case rate per 1,000 living.	Case mortality per cent.
1871–80	0·24	—	—
1881–90	0·19	—	—
1891	0·12*	0·8	15·6
1892	0·10*	0·6	17·2
1893	0·16*	0·9	18·4
1894	0·14*	0·8	18·1
1895	0·14*	0·8	17·0

The death rate from this cause in each year since 1868, in relation to the mean death rate of the period 1869-95, is shown in diagram XV.

The following table shows that in 1895, as in 1893 and 1894, males in London suffered more heavily than females both in respect of attacks and deaths, and that this greater incidence of disease on males in 1895 was manifested at each age period, and of incidence of deaths at all but one age period. In 1895, moreover, the case mortality of males was at "all ages" greater than the case mortality of females; at the younger ages the case mortality of females was the greater, and at the older ages that of the males.

Enteric fever, 1895.

Age period.	Males.					Females.				
	Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.		Cases.	Deaths.	Case mortality per cent.	Rates per 100,000 living.	
				Cases.	Deaths.				Cases.	Deaths.
All ages.	1,935	359	18·6	93	17	1,571	271	17·3	68	12
0—	1	2				1	2			
1—	14	3				11	3			
2—	15	1	13·6	42	6	15	4	15·8	36	6
3—	33	6				32	2			
4—	47	3				36	4			
5—	231	22	9·5	98	9	202	20	9·9	85	8
10—	329	29	8·8	153	14	230	26	11·3	105	12
15—	305	45	14·8	149	22	244	49	20·1	107	21
20—	259	45	17·4	128	22	229	40	17·5	94	16
25—	399	119	29·8	115	34	336	63	18·7	84	16
35—	182	39	21·4	71	15	145	28	19·3	51	10
45—	86	28	32·6	48	16	55	17	30·9	27	8
55 and upwards.	34	17	50·0	20	10	35	13	37·1	15	6

In 1885–94 the eastern group of districts had the highest death rate and the western the lowest; the highest was in the Strand, Poplar and Limehouse (·20 each), the lowest in Lee and Plumstead combined (·08). In 1895 the eastern group of districts had the highest rate and the western the lowest; Plumstead had the highest rate (·52), and St. Saviour's, Southwark, the lowest (·04).

In my last report I commented on an increase in the prevalence of enteric fever in London in the month of December following exceptional floods in the Thames and Lea. The returns of notified cases of infectious disease showed that the number of cases of enteric fever thus notified in January, 1895, was, although decreasing, still above the average of the number in January of the five preceding years during which notification has been obligatory. Dr. Frankland, in his report to the Local Government Board on Metropolitan Water Supply in 1895, states as the result of his bacteriological examination of London waters that "the severe frost of January, February and March seriously disarranged the filters of the seven companies drawing their supplies from rivers." Unusual prevalence of enteric fever in London was, however, not maintained after January, and such prevalence as occurred in that month was probably related to the prevalence of the preceding month of December. In May the number of cases of enteric fever again increased, as the result of an outbreak of this disease due to the distribution in Plumstead and Woolwich of an infected milk supply.

In the fiftieth week of the year there was some increase in the number of cases of enteric fever included in the weekly return of the Metropolitan Asylums Board above the number included in the forty-ninth week. Judged by the experience of the few years during which notification of infectious diseases has been obligatory in London, this increase is unusual, and it may be noted that the increase followed, as did that of 1894, the occurrence of river flood. If the cases of enteric fever be considered in relation to water supply, it is found that the increase of cases was manifested in London generally excepting in the population supplied from the Lea. The Local Government Board favours me with a return showing the number of cases of the several infectious diseases notified each week in various

* See footnote (²), page 10.

districts in England. Examination of the number of cases of enteric fever notified in a number of districts outside, but in the immediate neighbourhood of London, and included in this return, shows that increase of such cases in the fiftieth week was not limited to the County of London. In the larger towns of England included in this return, however, there was generally decrease in this week. The actual increase in the number of cases of enteric fever in London in the fiftieth week is small, and is of interest only in so far as it suggests a behaviour of enteric fever in London in 1895 differing from the usual behaviour of the disease during the few years in which notification has been obligatory, and resembling in some degree the behaviour of enteric fever in 1894, which I have discussed in the report for that year. Longer experience of notification is needed to show more certainly whether such increase occurs in the absence of river flood.

The following table shows the case rates and death rates per 1,000 living in each of the several sanitary districts in 1895, and the mean death rates per 1,000 living in the period 1885–94.

Sanitary district.	Cases, 1895.	Case rate per 1,000, 1895.	Deaths, 1895.	Death rates per 1,000.	
				1885–94.	1895.
Paddington	71	·6	13	·13	·11
Kensington	99	·6	15	·10	·09
Hammersmith	57	·6	12	·13	·12
Fulham	58	·5	12		·11
Chelsea	73	·8	13	·14	·13
St. George, Hanover-square	39	·5	9	·11	·11
Westminster	27	·5	3	·10	·06
St. James	11	·5	6	·16	·26
Marylebone	135	1·0	23	·12	·16
Hampstead	63	·8	9	·09	·12
Pancras	153	·6	30	·14	·13
Islington	197	·6	30	·14	·09
Stoke Newington	30	·9	4	·18	·12
Hackney	257	1·2	45		·21
St. Giles	26	·7	2	·19	·05
St. Martin-in-the-Fields	14	1·1	1	·13	·08
Strand	24	1·0	5	·20	·21
Holborn	20	·6	—	·18	—
Clerkenwell	56	·8	11	·14	·17
St. Luke	33	·8	6	·14	·14
London, City of	35	1·1	13	·11	·40
Shoreditch	105	·9	22	·15	·18
Bethnal-green	122	·9	17	·17	·13
Whitechapel	31	·4	10	·12	·13
St. George-in-the-East	38	·8	7	·16	·15
Limehouse	54	·9	10	·20	·17
Mile-end Old-town	78	·7	17	·19	·15
Poplar	177	1·1	33	·20	·20
St. Saviour, Southwark	11	·4	1	·11	·04
St. George, Southwark	45	·7	7	·11	·12
Newington	84	·7	15	·13	·13
St. Olave	2	·2	2	·13	.17
Bermondsey	58	·7	11	·13	·13
Rotherhithe	32	·8	9	·18	·22
Lambeth	215	·7	26	·12	·09
Battersea	133	·8	22	·13	·14
Wandsworth	134	·7	26		·14
Camberwell	237	·9	33	·12	·13
Greenwich	150	·9	17	·16	·10
Lewisham	54	·5	9	·10	·09
Woolwich	50	1·2	9	·13	·22
Lee	14	·4	3	·08	·08
Plumstead	215	3·7	30		·52
Port of London	4	—	—	—	—
London	**3,521**	**·8**	**598**	**·14** *	**·14***

The only outbreak of any considerable dimensions was that already referred to, and which occurred in Plumstead and in less degree in Woolwich. The circumstances of this outbreak were investigated by Dr. Hamer on behalf of the Council, and his report will be found in the appendix (*see Appendix I.*).

The outbreak had its beginning early in the month of May, and by the end of June 177 persons had been attacked with enteric fever, of whom 159 received their milk from a dairy in the Princes-road, or from dairies supplied from that source. This dairy was supplied with water from the mains of the Kent Waterworks Company. The milk was derived from twelve cows kept in a shed on the premises, and

* See footnote (²), page 10,

Diagram XV. Enteric Fever.

Mean Death rate 1869-95.
204 per million

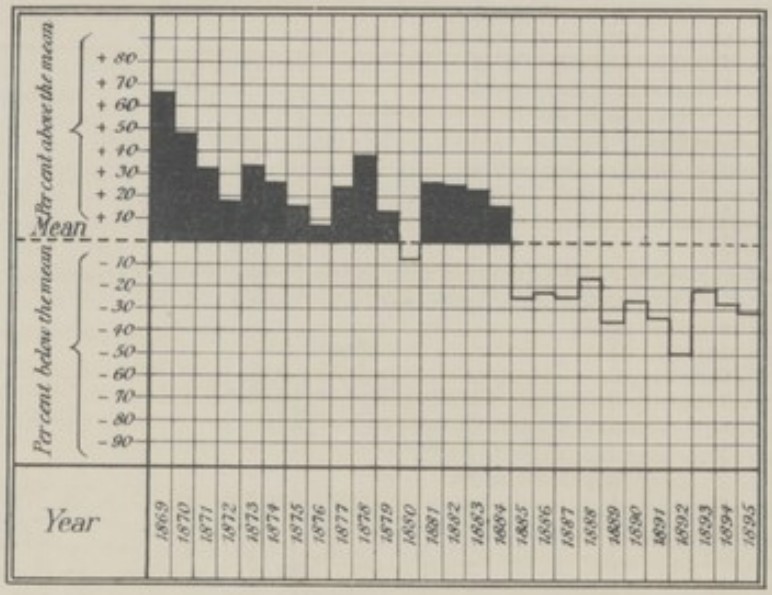
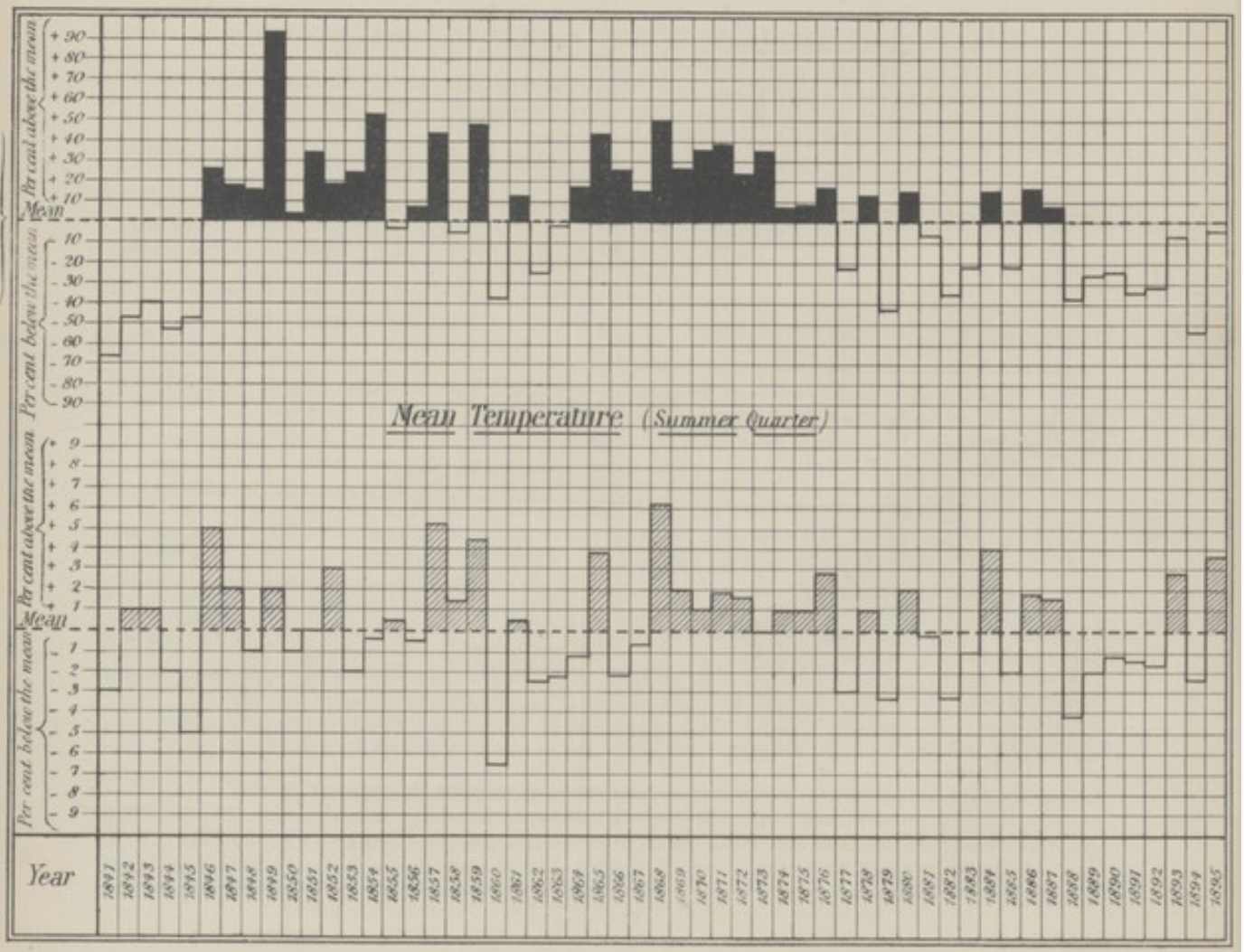


Diagram XVI

Diarrhœa.

874 per million



no other milk was received into the dairy or distributed by the dairyman. The cow last purchased was introduced into the shed on the 1st March, the day after she had calved, and before this she had been kept on the Plumstead marshes where the only water available was from ditches supplied by a stream contaminated by cesspool overflows and from other polluted sources. In the absence of any evidence of exposure of the milk to infection by human agency or of any local condition that would suffice to explain the outbreak, water from these ditches, milk from this cow, and subsequently the cow herself were sent to Dr. Klein. Dr. Klein, however, failed to find typhoid bacilli in the water or in the cow's milk, and later, when the cow was killed, he found her to be in all respects a healthy animal.

The beginning of the outbreak had been early observed by Dr. Sidney Davies, the medical officer of health, its cause ascertained, and the dairyman ordered by the sanitary authority to cease to supply milk from the dairy. This order having been disobeyed, he was prosecuted and a penalty followed. A detailed special report on the outbreak was presented by Dr. Davies, extracts from which appear in his annual report.

The medical officer of Camberwell, commenting on the number of cases notified in that district between the 3rd August and the 26th October, states that "a certain number of the cases were contracted outside Camberwell, usually at the seaside or in the country, where those attacked had gone for a change of air." The report relating to Wandsworth also points to the fact that "in this, as in previous years, there have been a number of cases of enteric fever that have been developed outside the district, the sufferers coming back ill from other places."

Articles of food as a cause of enteric fever are referred to in the reports relating to Wandsworth, the Strand, and Eltham. Thus it is stated that in Wandsworth "many of the cases were due to eating of food contaminated with the germ of the disease, but in others no definite history of infection could be ascertained." The medical officer of health of the Strand writes that "in three cases the disease was attributed to eating shellfish, and the medical officer of health of Eltham states that one patient "was supposed to have contracted the disease by eating oysters."

Diarrhœa.

The deaths in the administrative county of London attributed to diarrhœa and dysentery in the year 1895 numbered 3,581, compared with 1,774 in 1894.

The death rates per 1,000 living in 1895 and preceding periods were as follows—

1851–60	1·03	1891	0·57[1]
1861–70	1·04	1892	0·60[1]
1871–80	0·95	1893	0·80[1]
1881–90	0·75	1894	0·41[1]
		1895	0·82[1]

The death rate in 1895 was therefore double that in 1894, a result no doubt due to the higher temperature of the summer quarter of 1895.

The diarrhœal death rate of each year since 1840 in relation to the mean death rate of the period 1841–95 is shown in diagram XVI. The mean temperature of the summer quarter of each year in relation to the mean of the period 1841–95 is also shown.

The age distribution of the deaths from this disease in the registration county of London in 1895 was as follows—

Under 1 year.	1–5.	5–20.	20–40.	40–60.	60–80.	80 and upwards.
2,772	539	20	17	43	154	55

If the London death rate from diarrhœa be compared with the death rates of other large towns it will be found to be lower than any except the death rate of Bristol both in the period 1885–94, and the year 1895.

Diarrhœa—Death rates per 1,000 *living.*

	Ten years, 1885–94.	1895.		Ten years, 1885–94.	1895.
London	**·68**	**·83**[1]	Bristol	·47	·75
Manchester	1·02	1·56	Nottingham	·96	1·58
Liverpool	1·04	1·63	Bradford	·78	1·58
Birmingham	1·06	1·24	Hull...	1·04	2·46
Leeds	1·05	1·57	Salford	1·38	2·10
Sheffield	1·06	1·88			
West Ham	·78	·85			

Both in 1885-94 and 1895 the eastern group of districts suffered most heavily, and the northern least heavily, from diarrhœa. In 1895 the district of St. Luke had the highest rate (1·59), and of St. James the lowest (·26).

[1] See footnote (1), page 10.

[1] See footnote (1), page 10.

The death rates in the several sanitary districts of London, in 1895 and the period 1885–94, are shown in the following table—

Sanitary district.	Deaths, 1895.	Death rates per 1,000 living.		Sanitary district.	Deaths, 1895.	Death rates per 1,000 living.	
		1885—94.	1895.			1885—94.	1895.
Paddington	94	·51	·76	Shoreditch	155	1·00	1·27
Kensington	116	·49	·68	Bethnal-green ...	139	·77	1·08
Hammersmith ...	81	·96	·79	Whitechapel	54	·83	·69
Fulham	130		1·18	St. George-in-the-East	60	1·62	1·27
Chelsea	79	·73	·82	Limehouse	59	·93	1·02
St. George, Hanover-square	36	·38	·45	Mile-end Old-town ...	114	·82	1·04
Westminster	41	·63	·76	Poplar...	147	·66	·87
St. James	6	·42	·26	St. Saviour, Southwark	26	·76	1·02
Marylebone	93	·58	·66	St. George, Southwark	69	·91	1·15
Hampstead	29	·27	·39	Newington	110	·70	·92
Pancras	205	·64	·86	St. Olave	15	·83	1·27
Islington	219	·66	·66	Bermondsey	80	·77	·94
Stoke Newington ...	17	·57	·52	Rotherhithe	32	·90	·80
Hackney	189		·89	Lambeth	264	·65	·91
St. Giles	28	·59	·73	Battersea	145	·66	·89
St. Martin-in-the-Fields	5	·43	·38	Wandsworth	106		·58
Strand...	11	·58	·46	Camberwell	204	·63	·82
Holborn	24	·67	·77	Greenwich	121	·65	·70
Clerkenwell	53	·97	·80	Lewisham	59	·41	·58
St. Luke	66	·99	1·59	Woolwich	30	·52	·73
London, City of ...	12	·28	·37	Lee	12	·40	·31
				Plumstead	46		·79
				London	**3,581**	·68*	·82*

In connection with diarrhœal prevalence an interesting account appears in the report of the medical officer of health of Hackney concerning an outbreak of diarrhœa in a family after a meal consisting of a meat pie. The pie was eaten on two successive days for dinner, and it was after the second meal that nine persons who partook of it suffered from severe diarrhœa and vomiting. In the interval between the two meals the pie had been stored in a place where it was exposed to contaminated air from a stopped drain. The pie was made with fresh beef. Other usual causes of diarrhœa would be excluded, and milk was not concerned in the matter. Another family living in the house, and not eating the pie, escaped. Dr. Warry cites other outbreaks reported, in all of which "Some of the food was eaten soon after cooking but no ill-effects followed, but later, the period varying in each case, the food became very poisonous, and produced disastrous results in those eating it."

Cholera.

The number of deaths attributed to cholera and choleraic diarrhœa registered in the year 1895 was 74, or more than twice the number registered from this cause in 1894. During the summer and autumn of 1895, as in previous years, systematic investigation was made into cases notified as cholera or choleraic diarrhœa, and concerning deaths registered as due to those causes. In the following instances, cases to which suspicion had attached were brought to my notice by medical officers of health, with whom I had communicated, informing them that I was authorised to have a bacteriological examination made as in previous years. In all these cases, however, the result of such examination was to show that there was no evidence of the disease being Asiatic cholera.

The following is a brief account of the cases referred to—

(i.) M. R., male, aged 54, a sawdust dealer, living in Woodman's-place, Newington, was attacked at 4 a.m. on the morning of the 20th July with abdominal pain, vomiting, and diarrhœa. The evacuations were described as being "like milk." Cramps in the legs were complained of soon after the commencement of the illness. On the 21st the patient rallied somewhat, but on the 22nd he became much worse; his voice was almost entirely lost and his extremities were blue and cold. The medical man who was called to see the patient communicated the facts of the case to Dr. Millsom, medical officer of health of Newington. Dr. Millsom saw the man on the morning of the 24th. It was not possible to say whether there was suppression of urine, and the character of the evacuations could not be ascertained. The patient was indeed *in extremis*, and died soon after Dr. Millsom's visit.

A post-mortem examination was made on the 25th July, and a piece of ileum was preserved for bacteriological examination, but Dr. Klein found no evidence of cholera.

No other illness occurred in the house in which M. R. had lived. It appeared that on the 18th and 19th July the patient had eaten some boiled pork. He had not eaten any shellfish shortly before the commencement of his illness. He had not been away from home for a long time.

(ii.) H. H., male, aged 34, living at Wardley-street, Wandsworth, was employed in collecting fat and dripping from hotels for use in the business of a fatmelter. Early on the 24th August he was attacked by abdominal pains and diarrhœa, and later in the day vomiting supervened. The diarrhœa continued on the 25th, and the patient became worse on the 26th.

* See footnote (2), page 16.

On that day his voice was found to be husky, and he suffered from cramps in the arms and legs; the stools were still copious and flocculent, but apparently bile-stained; there was suppression of urine. In the evening he became collapsed and died between 9 and 10 p.m.

A post-mortem examination was made on August 27th, and a piece of ileum was sent to Dr. Klein, who reported on the following day—"The ileum on opening did not show any conspicuous congestion of its mucous membrane, there was no fluid in its contents; from the surface of the mucous membrane a greyish, filmy, sticky material could be easily lifted off. This on microscopic examination showed epithelial cells, isolated and in small masses. Amongst the crowds of bacteria present no comma bacilli could be recognised. Cultivations were made, but so far there is no evidence of cholera vibrios being present." Dr. Klein subsequently reported that the final result in this case was negative.

(iii.) J. T., female, aged 57, the wife of a tailor living at Amberley-road, Paddington, was attacked on 28th September with vomiting and diarrhœa. On the 30th she was worse, and suffered from cramps in the limbs. The stools were said to be like orange water. On the 1st October she was seen by a medical man, who found her in a state of collapse, and she died the following day. Dr. R. Dudfield, medical officer of health of Paddington, informed me of these facts, and arranged that a post-mortem examination should be made. A piece of ileum was submitted to Dr. Klein, but the result of his examination was negative.

A death occurred in Harrow-road in November, of which I was informed by Dr. Parkes and also by the coroner of the district. Inquiry was made concerning this case, but the facts elicited showed that there was no reason for supposing it to be one of Asiatic cholera.

Erysipelas.

The deaths attributed to erysipelas in the registration county of London in 1895 numbered 179, the corrected annual average of the preceding ten years being 291·3.

The number of cases notified and the number of deaths registered in the registration county of London during the last five years has been as follows—

Year.	Cases.	Case rate per 1,000 living.	Deaths.*	Death rate per 1,000 living.
1891	4,764	1·13	214	·05
1892	6,934	1·63	292	·07
1893	9,700	2·26	424	·10
1894	6,080	1·40	221	·05
1895	5,660	1·30	179	·04

The case rate and death rate in 1895 have therefore been less than the case rate and death rate respectively of the preceding year. In 1895 Bethnal-green had the highest and St. Martin-in-the-Fields the lowest case rate.

The number of cases notified and the case rate per 1,000 living in each sanitary district of the administrative county are shown in the following table—

Sanitary district.	Cases, 1895.	Case rate per 1,000 living, 1895.	Sanitary district.	Cases, 1895.	Case rate per 1,000 living, 1895.
Paddington	103	·8	Whitechapel	114	1·5
Kensington	259	1·5	St. George's-in-the-East	69	1·5
Hammersmith	88	·9	Limehouse	74	1·3
Fulham...	98	·9	Mile-end Old Town ...	205	1·9
Chelsea	107	1·1	Poplar	278	1·7
St. George, Hanover-sq.	68	·9	St. Saviour, Southwark	25	1·0
Westminster	30	·6	St. George, Southwark	62	1·0
St. James	16	·7	Newington	142	1·2
Marylebone	234	1·7	St. Olave	7	·6
Hampstead	51	·7	Bermondsey	74	·9
Pancras...	413	1·7	Rotherhithe	87	2·2
Islington	334	1·0	Lambeth	372	1·3
Stoke Newington ...	28	·8	Battersea	249	1·5
Hackney	288	1·4	Wandsworth	220	1·2
St. Giles	59	1·5	Camberwell	313	1·3
St. Martin-in-the-Fields	7	·5	Greenwich	211	1·2
Strand	17	·7	Lewisham	81	·8
Holborn	60	1·9	Woolwich	31	·8
Clerkenwell	93	1·4	Lee	41	1·1
St. Luke	82	2·0	Plumstead	55	·9
London, City of ...	24	·7	Port of London ...	1	—
Shoreditch	184	1·5	**London**...	**5,664**	**1·3**
Bethnal-green	310	2·4			

Puerperal Fever.

The deaths attributed to puerperal fever in 1895 amounted to 208 in the registration of county of London, the corrected annual average of the preceding ten years being 290·8. The number of cases

* See footnote (1), page 10.

notified and the number of deaths registered from puerperal fever in each of the last five years is as follows—

	Cases.	Deaths.[1]
1891	221	222
1892	337	313
1893	397	352
1894	253	210
1895	236	208

If these cases and deaths are considered in relation to the total population and total births the following rates are obtained—

Year.	Case rate per 1,000 living.	Case rate per 1,000 births.	Death rate[1] per 1,000 living.	Death rate[1] per 1,000 births.
1891	·05	1·64	·05	1·65
1892	·08	2·55	·07	2·37
1893	·09	2·98	·08	2·65
1894	·06	1·92	·05	1·60
1895	·05	1·76	·05	1·56

The case rate per 1,000 living in 1895 shows a slight decline upon the rate of 1894, but the death rate per 1,000 living in 1895 is the same as in 1894, while the case and death rates per 1,000 births are lower in 1895 than in the preceding year. The decline in the puerperal fever rates has therefore corresponded with a decline in the rates of erysipelas.

Influenza, Bronchitis and Pneumonia.

Influenza, which had during the preceding three years steadily decreased, in 1895 again became very prevalent, and as many as 2,156 deaths were attributed directly to this cause in the registration county of London, this number being only slightly less than the numbers in 1891 and 1892.

The number of deaths attributed to influenza during 1895 was also considerably in excess of the corrected annual average of the preceding ten years. The greatest number of deaths occurred during February and March. The deaths from bronchitis were slightly below, and those from pneumonia slightly above, the corrected average.

The deaths from these diseases since 1889 have been as follows—

Year.	Influenza.		Bronchitis.		Pneumonia.	
	Deaths.[1]	Corrected annual average for preceding ten years.	Deaths.[1]	Corrected annual average for preceding ten years.	Deaths.[1]	Corrected annual average for preceding ten years.
1890	652	7·0	12,448	11,342·8	6,224	4,925·0
1891	2,336	74·0	13,136	10,887·3	6,915	4,883·0
1892	2,264	318·7	11,183	11,230·0	6,164	5,171·9
1893	1,526	556·2	10,413	11,250·0	7,198	5,341·6
1894	750	715·5	7,816	11,292·3	5,321	5,632·5
1895	2,156	795·2	10,633	11,167·1	5,989	5,755·7

Influenza in 1895 was especially prevalent in the western districts of the administrative county. The influenza death rate in that year in each of the districts is shown in the following table—

Influenza.

Sanitary district.	Deaths, 1895.	Death rate per 1,000 living, 1895.	Sanitary district.	Deaths, 1895.	Death rate per 1,000 living, 1895.
Paddington	106	·85	Bethnal-green	29	·22
Kensington	103	·61	Whitechapel	16	·20
Hammersmith	48	·46	St. George-in-the-East ..	14	·30
Fulham	60	·54	Limehouse	10	·17
Chelsea	57	·59	Mile-end Old-town	44	·40
St. George, Hanover-square	60	·75	Poplar	35	·21
Westminster	20	·37	St. Saviour, Southwark ...	8	·31
St. James	9	·38	St. George, Southwark ...	24	·40
Marylebone	89	·63	Newington	45	·37
Hampstead	50	·67	St. Olave	7	·59
Pancras	98	·41	Bermondsey	28	·33
Islington	156	·47	Rotherhithe	10	·25
Stoke Newington	22	·66	Lambeth	143	·41
Hackney	112	·53	Battersea	88	·54
St. Giles	32	·83	Wandsworth	121	·66
St. Martin-in-the-Fields ...	5	·37	Camberwell	137	·54
Strand	6	·25	Greenwich	107	·61
Holborn	18	·57	Lewisham	55	·54
Clerkenwell	22	·33	Woolwich	12	·29
St. Luke	5	·12	Lee	49	1·28
London, City of	17	·52	Plumstead	16	·27
Shoreditch	59	·48	London	2,168[2]	·49[2]

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

Phthisis.

The deaths from phthisis in the administrative county of London during 1895 were 7,755, being in excess of those during 1894. The death rates of this disease per 1,000 living in the registration county of London in successive periods have been as follows—

1851–60	... ...	2·86	
1861–70	... ...	2·84	
1871–80	... ...	2·51	
1881–90	... ...	2·09	
1891	... ...	2·02	
1892	... ...	1·89	
1893	... ...	1·91	
1894	... ...	1·74	
1895	... ...	1·83[1]	

The Registrar-General in the annual summary for 1895 relating to London has distributed the deaths from phthisis occurring in public institutions belonging to London to the sanitary districts to which they belong, and it is therefore possible to compare the phthisis death rates of the various sanitary districts.

The following table shows the number of deaths from phthisis, and the death rate per 1,000 living in the various sanitary districts in 1895—

Phthisis.

Sanitary district.	Deaths, 1895.	Death rate per 1,000 living, 1895.	Sanitary district.	Deaths, 1895.	Death rate per 1,000 living, 1895.
Paddington	163	1·32	Bethnal-green	245	1·90
Kensington	253	1·49	Whitechapel	219	2·81
Hammersmith	160	1·56	St. George-in-the-East	113	2·40
Fulham	154	1·40	Limehouse	136	2·34
Chelsea	185	1·92	Mile-end Old-town ...	182	1·65
St. George, Hanover-sq.	105	1·32	Poplar	273	1·62
Westminster	125	2·32	St. Saviour, Southwark	84	3·28
St. James	35	1·50	St. George, Southwark	186	3·10
Marylebone	299	2·12	Newington	263	2·20
Hampstead	75	1·01	St. Olave	32	2·70
Pancras	428	1·79	Bermondsey	190	2·23
Islington	532	1·60	Rotherhithe	76	1·90
Stoke Newington ...	37	1·12	Lambeth	511	1·76
Hackney	314	1·49	Battersea	247	1·52
St. Giles	127	3·31	Wandsworth	213	1·17
St. Martin-in-the-Fields	24	1·81	Camberwell	394	1·58
Strand	76	3·16	Greenwich	268	1·54
Holborn	98	3·13	Lewisham	89	0·87
Clerkenwell	159	2·41	Woolwich	92	2·24
St. Luke	113	2·72	Lee	56	1·47
London, City of ...	51	1·56	Plumstead	90	1·55
Shoreditch	283	2·31	**London**	**7,755**[2]	**1·77**[2]

From this table may be seen the variations of the phthisis death rate in different districts of London from 0·87 in Lewisham to 3·28 in St. Saviour, Southwark, and 3·31 in St. Giles.

The death rates[2] in the various groups of London districts in 1895 were as follows—

West Group	1·55
North „	1·63
Central „	2·65
East „	2·05
South „	1·70
London	**1·77**

It appears, therefore, that the death rates in the central and east districts were in excess of that of London as a whole, while the rates of the west, north and south groups were below that of London.

Cancer.

The deaths from cancer registered in London in 1895 numbered 3,612, the average for the preceding ten years being 3,221·1.

The death rates of this disease per 1,000 living in successive periods have been as follows—

1851–60	... ...	·42	
1861–70	... ...	·48	
1871–80	... ...	·55	
1881–90	... ...	·68	
1891	... ...	·78	
1892	... ...	·75	
1893	... ...	·80	
1894	... ...	·79	
1895	... ...	·83[1]	

[1] See footnote (1), page 10.

[2] See footnote (2), page 10.

Anthrax.

In my last report I gave account of certain cases of anthrax which had occurred in London subsequent to the publication of a report by Dr. Hamer which discussed all the cases known to have occurred in London in recent years. The following notes of further cases have been supplied me by Dr. Hamer. Inasmuch as notification of cases will, under the Factory and Workshops Act, 1895, be made to H.M. Chief Inspector of Factories, I now submit notes of all further cases which Dr. Hamer has investigated up to the present time. In the majority of these cases, as in former years, the patients were admitted to Guy's hospital, and for information as to such admission I am indebted to Dr. Perry, the superintendent of the hospital. The following cases occurred during 1895—

(i.) A man, aged 30, developed a malignant pustule on March 13th. His occupation was that of a casual labourer, but he had been engaged shortly before his illness commenced in unloading skins at one or more of the Tooley-street wharves. The skins with which he had been brought in contact were rabbit, opossum and basil; he had not, it was said, had anything to do with hides. The pustule was excised in Guy's hospital but the patient died. An inquest was held on March 21st.

(ii.) W. W., male, aged 17, a horsehair dresser, whose place of employment was in Tabard-street. On July 17th he developed a malignant pustule, he applied for treatment at Guy's hospital, the swelling was excised, and the patient made a good recovery.

(iii.) E. S., male, aged 32, a horsehair dresser, whose place of employment was in Sylvester-street, Great Dover-street. On July 22nd he noticed a swelling on the left side of his neck. He was advised to go to hospital but did not do so until the following day, when he was admitted into Guy's hospital and the pustule was excised. Patient died on the 24th. Anthrax bacilli were shown to be present by bacteriological examination.

The places of work in the case of the two last-named patients were in the same neighbourhood, and the men attacked had been engaged in handling similar materials. It was not found possible, however, to pursue the matter further and to trace the source of infection to any particular consignment of material which had been handled by each of the men attacked.

(iv.) J. D., female, aged 35, lived in Louisa-street, Shoreditch, and worked at a brushmaker's in Tottenham, where she was engaged in sorting horsehair. On the 19th or 20th of September a pimple developed on patient's right cheek, a day or two later attacks of vomiting commenced. A medical man was called in on the evening of September 23rd, he found the patient convulsed, and shortly afterwards she died. A post-mortem examination was made on October 26th, and it was found that there was a large meningeal hæmorrhage, a considerable quantity of blood being extravasated into the arachnoid cavity. The intestines and stomach were natural. Bacilli were subsequently found in the tissues of the skin lesion. An inquest was held.

(v.) W. C., male, aged 59, of Median-road, Clapton, was a dresser of horsehair in the employment of Messrs. List and Son. On September 22nd he noticed a pimple on his neck, he applied for treatment at Guy's hospital on the 24th, and was admitted, and the pustule was excised. Patient was suddenly attacked by dyspnœa on the 27th and died. An inquest was held in this case.

(vi.) This patient was a woman, aged 19, living at Presburg-street, Hackney, the wife of a man employed as a sorter of horsehair by the firm at Tottenham already mentioned in connection with case (iv.). The man's attention was called one evening, about November 6th, on his return from work, to a pimple on his wife's right cheek. This pimple he scratched with his finger. A few days later a swelling developed on the cheek, and the woman was admitted to the Hackney infirmary, where she died on November 11.

(vii.) J. P., male, aged 33, living at George-street, Tabard-street, noticed a pimple on the right side of his neck on or about October 28th. He was admitted to Guy's hospital on November 2nd, the pustule was excised, and he made a good recovery. For some days prior to November 2nd this man had been engaged at Sun and Topping's wharf, Tooley-street, and had unloaded sheep and goat skins and some hides.

(viii.) W. D., male, aged 36, living at Freshwater-place, Marylebone, had been working at the wharf at which J. P. (case vii.) worked, and remembered unloading goat skins and dry hides on October 24, 25 and 26. After that date he was employed at another wharf. On November 1st he noticed a pimple on the left side of his neck. The pustule in this case, as in the previous one, was excised in Guy's hospital, and the man made a good recovery. Subsequent inquiry made concerning these two men confirmed the fact that both had a few days prior to their attack handled certain goat skins and also some bales of Australian hides.

(ix.) and (x.) J. D. and C. C., two men engaged in manipulating horsehair at a "bass and fibre dresser's" in Mile-end Old-town, developed symptoms during November which led to their applying for treatment at the London hospital. The first patient was admitted on November 5th; he had a pustule on his neck, and anthrax bacilli were found. The second patient, who had a pustule of typical appearance on his right forearm, was admitted on November 18th. Bacilli were not found in this case. Both patients made a good recovery after the excision of the pustule.

(xi.) H. G., a male, aged 30, living in Spa-road, Bermondsey, worked in a tanyard not far from his place of abode. On November 29th certain goat skins were brought to this yard and handled by the men employed there. On December 6th a pimple appeared on the left side of the patient's nose, and he went to Guy's hospital. The pustule was excised, and the patient made a good recovery.

(xii.) M. M., a dock labourer, was admitted to the London Hospital on December 13th. He had first noticed a pimple on the left side of his neck on December 7th. During the

preceding week he had been engaged in unloading "Australian wool" and goat skins from a vessel in St. Katherine's Dock. The pustule was excised, and the patient recovered.

(xiii.) J. C., male, aged 31, living at Aberdour-street, Bermondsey, employed in repairing coal sacks, noticed a pimple on the right side of his lower jaw on December 11th. On the following day he was obliged to leave work, and on the 15th he went to Guy's hospital. The pustule was excised, and the man made a good recovery. There was no clue in the first instance to the source of infection in this case. It was ascertained however, subsequently, that the man's wife was in the habit of manipulating horsehair, using as a workroom the room in which the family lived. Bundles of horsehair and bristles were brought home by the wife and made into brushes, and the husband took "a turn at the horsehair" if he happened to be out of work.

The year's record is remarkable in respect of the number of cases which occurred among workers in horsehair. Isolated cases have on a few occasions been recorded in London in connection with this industry, and during 1893 a group of four such cases came under notice. In 1895, however, there was evidence of more widespread mischief. Three cases occurred in the neighbourhood of Tabard-street among persons who had handled horsehair. These three persons were each in the employ of a different brushmaker. Another case was that of a sorter of horsehair employed in St. Luke's by a firm doing a large business in horsehair. Two cases occurred in East London in which the infection appeared to be traceable to a workplace at Tottenham. The medical officer of health of Tottenham was communicated with, and he stated that two other cases had occurred in Tottenham, the individuals attacked both being workers in the workplace in question. Again, two other cases occurred in East London, the men who were attacked being engaged in manipulating horsehair at a bass and fibre dresser's in Mile-end Old-town.

There appear, therefore, to have been, including the two Tottenham cases, at least ten cases among horsehair workers, the earliest (one of the Tottenham cases) developing in May, the latest developing in December. The circumstances of the outbreak suggest that a particular consignment of horsehair may have been handled by all the ten workers, and that a limited quantity of infected material may have done all the mischief. The facts, so far as they were ascertained with regard to the distribution of horsehair to some of the workshops involved, suggest that such an explanation is the true one, but it was not found possible to conclusively prove that this hypothesis was correct.

A further point of special interest in connection with cases of anthrax occurring during 1895 is the fact that in four instances persons who developed anthrax were found to have been engaged shortly before the onset of symptoms in manipulating goat skins. Cases (vii.) and (viii.) are two of the four cases referred to. The fact that the patient had been thus employed was noted in these cases at the time, but as the patient had also handled hides, the latter were thought of as a more likely source of infection. In case (xi.) however, goat skins only were handled by the man during the few days preceding his illness, and some stress was laid by the workers in the tanyard where the skins were manipulated upon the fact that some of the skins were rotten and gave off a bad smell. It was subsequently ascertained that the skins were "sea damaged" and were disposed of at a salvage sale. The fact of the damage by water no doubt accounted for the condition noticed by the men in the tanner's yard. In case xii. goat skins again came under suspicion.

During the first few months of 1896 a number of other cases of anthrax occurred, and there is reason to suspect that in all these cases, with the exception, perhaps, of the first case to be referred to, the patients were infected through the medium of goat skins. The following are the facts ascertained concerning these cases—

R. D., aged 48, lived at Page's-walk, Bermondsey. This man worked at a large warehouse where he had been employed in handling many kinds of hides and skins. No particular class of material seemed specially open to suspicion. He noticed a pimple at the outer corner of his left eye on January 8th, 1896. This pimple was excised at Guy's Hospital on January 10th, and the man speedily recovered.

During the last day of January and during the first four days of February five men who had been employed in a particular Bermondsey tanyard were admitted to Guy's Hospital with anthrax, and on February 4th a sixth man, who had been working at a Tooley-street wharf, was admitted with this disease. The five men from the tanyard were inclined to attribute their attack to the manipulation of certain goat skins, and inquiry elicited the fact that the suspected goat skins had been supplied from the Tooley-street wharf* at which the sixth man had worked, and that this man had been engaged in carrying the said skins.

The following are the particulars concerning the six cases referred to. All the cases were treated in a similar manner. The pustule was excised and sulphur was then applied to the wound, powdered ipecacuanha being administered internally. All six men recovered.

J. K., aged 22, noticed a pimple on his left cheek on January 29th, and on the following day suffered from shivering and lassitude. He was admitted to Guy's hospital on the 31st, his temperature was then 102°. The fluid from the vesicles surrounding the pustule was found to contain anthrax bacilli.

J. E., aged 42, noticed a pimple under his lower jaw on January 29th. He was admitted on February 7th, his temperature then being 99·8°. Bacilli were found in the serum from the neighbourhood of the pustule.

* Sun and Topping's wharf.—It may be noted that at this wharf cases had from time to time occurred in association with the manipulation of goat skins. Such a case occurred in September, 1893, and another in March, 1894. In September, 1894, a man who had been working at this wharf was attacked, but in this case there is no information as to whether the man handled goat skins. Again in October, 1895, two cases (cases vii. and viii.) occurred in which goat skins had been manipulated at the same wharf.

W. M., aged 43, noticed a boil on the right side of his neck on January 30th. He did not come to hospital until February 3rd. The constitutional symptoms in this case were but slight.

E. J., aged 39, noticed a pimple on the right side of his mouth on January 28th. He applied for treatment on February 3rd. The pustule in this case was atypical.

W. B., aged 51, noticed a pimple on his left elbow on January 31st. He was admitted into Guy's Hospital on February 4th. This man's illness was complicated by abdominal symptoms and bronchitis. Bacilli were found but the pustule was atypical.

These five men were employed at the tanyard above referred to.

R. H., aged 29, noticed a pimple under his chin on February 4th, and applied for treatment on the same day. The pustule was quite typical and bacilli were found. During the course of the illness the patient suffered from delirium and other cerebral symptoms. This man was the man who loaded the goat skins at the wharf in Tooley-street for transmission to the tannery.

The owners of the tannery in which the five cases occurred afforded every assistance in their power in furthering inquiries made with a view to ascertaining the cause of the outbreak. The result of such inquiry was to throw suspicion more particularly upon certain bales of goat skins, but the evidence against them could not be regarded as conclusive.

Shortly after the occurrence of the outbreak in connection with this tanyard three other cases developed which may have been associated with it.

I. M. B., a girl aged 4, lived not far from the tannery above referred to. This child was related to the engineer at the tannery. She had gone to spend the day with her aunt (the wife of the engineer) about the end of January, and the aunt had seen the child several times since. Towards the end of February a pimple developed on the child's left cheek, and F. S., the child's uncle, a boy aged 13, remembers washing her face on a particular occasion prior to taking her for a walk over the Tower-bridge. The date of this walk would be February 28th or 29th. On March 3rd, the girl was admitted to Guy's hospital, the diagnosis was made, bacilli were found to be present, the pustule was excised, and the child made a good recovery.

On March 8th, F. S., the above-named patient's uncle, was admitted to Guy's hospital. He had noticed a pimple on his lip on March 6th, and recollected making himself a moustache with a piece of goatskin on March 4th. This piece of goatskin was at first supposed to be the source of infection, but in the light of the facts concerning I. M. B., it seems probable that F. S. was infected by her. The pustule was excised and the presence of anthrax bacilli was demonstrated. The patient made a good recovery.

J. W. H., aged 18, who was also employed at the above-mentioned tanyard, noticed a pimple on his right cheek on April 24th. He was admitted at Guy's on the 28th, the pustule was excised and the patient rapidly recovered. This man was employed in painting the inside of skins after they had been in the "soaks" and before they went to the "unhairers." This work was conducted in a place in which the skins suspected at the time of the February outbreak had been for a time deposited, but no other connection with this particular set of skins could be traced.

Meteorology.

The tables published in the annual summary of the Registrar-General and prepared by Mr. James Glaisher, F.R.S., from observations at Greenwich show that the mean temperature of the air in 1895 was 49·3 degrees Fahrenheit, or 0·7 degrees Fahrenheit above the average of 124 years. The rainfall during the year amounted to 19·73 inches, and was 5·33 inches less than the mean of 80 years.

The temperature and rainfall in each month of 1895 are shown in the following table—

Month.	Temperature of the Air.			Departure from average of 124 years.	Rain.	
	Highest by Day.	Lowest by Night.	Mean for Month.		Number of days it fell.	Amount collected.
	deg. F.	deg. F.	deg. F.	deg. F.		inches.
January	53·8	20·3	33·8	— 2·9	19	1·62
February	45·0	6·9	28·9	— 9·9	4	0·22
March	63·0	25·3	42·8	+ 1·7	19	1·43
April	67·7	31·4	47·8	+ 1·7	12	1·25
May	86·2	37·8	56·0	+ 3·5	6	0·45
June	84·3	42·2	61·4	+ 3·1	8	0·21
July	83·8	49·2	62·6	+ 1·0	16	3·39
August	82·2	45·7	62·2	+ 1·3	15	2·14
September	87·3	41·2	62·2	+ 5·7	5	0·93
October	75·8	27·4	46·5	— 3·0	15	2·69
November	64·0	32·5	47·3	+ 4·8	20	2·89
December	56·0	25·5	40·2	+ 1·2	19	2·51

ADMINISTRATION.

Dairies, Cowsheds, and Milkshops.

During 1895 the Council's inspectors made 16,628 inspections of dairies and milkshops. In 22 instances legal proceedings under the Dairies, Cowsheds and Milkshops Order were instituted, and in these, penalties amounting in the aggregate to £41 19s. were imposed. 178 cases of infectious disease occurring at milkshop premises were dealt with during the year; these included 105 cases of scarlet fever, 45 cases of diphtheria and membranous croup, 19 cases of enteric fever, 5 cases of small-pox, and 4 cases of erysipelas. In all cases the Council's inspectors visited the premises with a view to ensure the adoption of measures to prevent contamination of the milk.

The number of applications for renewal of existing licences to cowsheds dealt with during the year, was 427, of these 416 were granted.

Offensive Trades.

During 1895 the Council's inspectors made 4,631 inspections of premises upon which offensive trades (including that of a "slaughterer of cattle") were carried on. In 11 instances legal proceedings were instituted, and in 10 of these, penalties amounting in the aggregate to £86 were inflicted.

The number of applications during the year for renewal of existing licences to slaughterhouse premises was 497, of which 485 were granted. In the case of knackers' yards, six licences were renewed; seven licences were granted in 1894, but no application in respect of one of these was made in 1895.

During the year four offensive businesses which had been discontinued for a period of nine months or upwards were struck off the Council's register. These businesses included those of a soap-boiler, tallow-melter, fat-melter and blood-boiler.

With respect to the last-named business, which was the only one of its kind remaining on the Council's register, it may be noted that a magistrate's order, made under sec. 19 (5) of the Public Health (London) Act, 1891, was obtained in January, 1895, depriving the occupier of the right to carry on his business, and in December, 1895, I was instructed to cancel the entry in the Council's register regarding these premises.

The number of applications for the licence of slaughterhouses and the number of slaughterhouses licensed is diminishing each year, as will be seen from the following table*—

Year.	No. of applications received.	No. of licences granted.
1891 ...	656 ...	651
1892 ...	547 ...	537
1893 ...	542 ...	529
1894 ...	518 ...	506
1895 ...	497 ...	485

There is also evidence that the number of animals killed in private slaughterhouses in London is diminishing. In my report for the year 1892 I published a tabular statement showing, as far as could be ascertained, the average number of animals killed in each week of the winter and summer months, the return being based upon information which the occupiers of licensed slaughterhouses were good enough to supply, I am now able to submit a similar statement relating to the year 1895. The figures for 1892 are given for the purpose of comparison, and I may mention that these have been revised and are more reliable than those previously published.

These figures must, of course, not be regarded as more than approximations to the numbers actually killed, but to this extent I believe they are trustworthy.

Animals.	Average number killed weekly.			
	1892.		1895.	
	Winter.	Summer.	Winter.	Summer.
Beasts	1,283	1,025	967	837
Sheep and lambs	10,332	13,366	7,880	11,119
Calves	97	291	30	215
Pigs	1,698	1,014	978	552

Nuisances.

Trade Nuisances.

Nuisances due to trade operations are referred to in several annual reports of medical officers of health; the reports relating to the following districts give details as to such nuisances.

Kensington.—The medical officer of health writes that the business of a marine store dealer often "gives rise to offensive smells, and as it has been held by the Appeal Court to be *ejusdem generis* with the businesses scheduled in the [Public Health (London)] Act, it is to be desired that the County Council should add it to the list, as many years ago your vestry, at my instance, requested the late Metropolitan Board of Works to do, but without success."

* These figures include applications dealt with in the intervals between the annual licensing meetings in October of each year.

Hammersmith.—Complaints as to nuisances from ballast burning in Blythe-road, from brick-fields in Acton parish and from a laundry in King-street, were under consideration. The Kensington Vestry had obtained the conviction of certain brickmakers in Wood-lane. One of the brickmakers in this locality had continued to make bricks, but no complaint as to nuisance had been received.

St. Giles.—In consequence of numerous complaints as to nuisance from fried fish shops, all such premises were inspected by the vestry's principal officers; as a result a number of works were carried out for their improvement. Proceedings were unsuccessfully instituted in one instance.

Clerkenwell.—Complaint was received from ten ratepayers in Farringdon-road as to nuisance from the premises of a rag merchant. Proceedings had been instituted by the Holborn District Board in respect of a similar nuisance at these premises, and the magistrate adjourned the hearing of the case for three months, as the defendants were about to remove their business. The vestry adjourned the consideration of the ratepayers' complaint for a like period.

Whitechapel.—Application was successfully made to the magistrate in respect of two premises on which fish was fried and in respect of one in which fish was cured. Nuisance from telephone works was the subject of proceedings, which failed.

Poplar.—A return by the inspector of nuisances in manufactories and workshops shows that nuisances from the following causes were dealt with:—Defective roof of blackhouses of lamp-black works; the burning of cork in the open; vapours from fat-melting plant escaping into the atmosphere; escape of sulphuretted hydrogen from main shaft of chemical works; vapours from oil pots of printing ink works escaping into atmosphere; escape of smoke and black from lamp-black works; escape of oil refuse into roadway; discharge of noxious vapours from cupola shafts below roofs of adjoining houses; curing fish in wooden smoke holes; escape of noxious gases from tar stills; discharge of vapours from shafts of metal works below roofs of adjoining houses; escape of nitrous and sulphurous gases from main shaft of sulphuric acid works; vapours from boiling apparatus of grain and rice works allowed to escape below the roofs of adjoining houses; vapours from wash hole of bone boilers escaping into the atmosphere; escape of noxious vapours from cauldrons of asphalte works.

Rotherhithe.—Nuisances from the dressing of roker skins and the deposit of fish refuse were dealt with.

Battersea.—Improvements were effected in the deposit and precipitation pit on premises used for the manufacture of vegetable alkaloids from tea, willow bark and nux vomica bean, and which had given off offensive effluvia.

Greenwich.—Proceedings were successfully instituted against a fish curer whose business had caused nuisance.

Complaints as to nuisance.

During the year the Council received 1,345 applications for assistance in securing the removal of conditions which it was alleged were dangerous to health. Inquiries were made into the merits of each complaint, and, where necessary, communications were addressed to the sanitary authorities concerned. In all cases the subject of complaint was kept under observation until a remedy had been provided. The Council's inspector made 1,441 inspections in connection with nuisances alleged to exist.

Smoke nuisances.

In some of the reports of the medical officers of health the subject of smoke nuisance is not mentioned, but other reports refer to 453 cases which were dealt with, proceedings being taken in 4 instances. Reference is made to the appointment of a special inspector for investigating complaints in the following reports—

Marylebone.—Complaints were attended to in 23 cases.

Islington.—The medical officer of health reports that the special inspector performed his work with great success; from May to December he made 60 inspections with reference to smoke nuisances.

Hackney.—The inspector made "not less than 290 observations, each lasting on an average 15 to 20 minutes," and 11 notices were served to abate nuisances.

Holborn.—The smoke inspector reported to the medical officer of health that there were 56 furnaces and boilers on the register, two having been added during the first six months of the year. They are periodically inspected. The number of furnaces and boilers with smoke consumers is 29, and there are nine kinds of smoke consumers in the district. No notices were served during the year. Three of the furnaces of Reid's Brewery are being reconstructed with smoke consumers, and a square chimney is being built to replace a circular one. A complaint was made concerning the smell from Messrs. Ogden, Smale and Co.'s chimney in Great Saffron-hill; it was found that the shaft was too low, and after some delay it was arranged that the chimney should be raised.

Poplar.—56 cases of nuisance due to defective apparatus and burning of inferior fuel; these were all remedied.

Battersea.—Complaint was made on several occasions during the year concerning the dense black smoke from Messrs. Spiers and Pond's steam laundry, but there was a difficulty in taking proceedings as they had provided suitable apparatus, if used with care. The medical officer of health made representations to the firm and to the manager, and the latter was requested to use better coal.

In the following reports mention is merely made of the number of cases attended to: *St. George, Hanover-square.*—41 nuisances were dealt with. *St. James, Westminster.*—3 smoke nuisances abated. *St. Pancras.*—3 smoke nuisances suppressed. *Clerkenwell.*—11 smoke nuisances abated. *Whitechapel.*—6 smoke nuisances abated. *St. George-in-the-East.*—18 nuisances remedied. *Limehouse.*—7 smoke nuisances abated. *Mile-end Old-town.*—2 nuisances abated. *St. George, Southwark.*—3 abatements, 2 summonses. *Newington.*—6 smoke nuisances abated. *St. Olave.*—2 smoke nuisances abated. *Bermondsey.*—10 notices served for abatement of nuisance. *Wandsworth (Clapham).*—10 cases came under notice, 5 notices were served and complied with. *Camberwell.*—70 notices to abate

nuisances and raise chimneys. The medical officer of health of *Hammersmith* brought to the notice of the sanitary committee the case of black smoke from a chimney shaft at dye works in Latimer-road, and also smoke from ballast fires on vacant land in the occupation of Olympia.

The medical officer of health of *Westminster* reports that complaints were made of noxious fumes from Niagara-hall chimney, and during the summer great improvements were effected. In St. Margaret's parish proceedings were taken in one case against the proprietors of Queen Anne's-mansions, and they were fined five guineas and five pounds costs. In St. John's parish 16 complaints were made, but notices were served in only two cases, the owners mostly consenting to carry out necessary improvements. The medical officer of health of the *Strand* reports that "much good has been done in the district by abating nuisances caused by smoke." Notices were in some cases served by the surveyor, and in some by the health department. In the *City*, legal proceedings were taken against a restaurant keeper, and he was fined 40s. and two guineas costs, and an order made to abate the evil within fourteen days. In the report relating to *Shoreditch* it is stated that "several complaints were made to the health department, and communications containing 15 separate complaints were received from the London County Council." Notices were served and steps taken to abate the nuisances.

Removal of refuse matter.

Nuisance due to retention of stable manure is referred to in a few of the reports of medical officers of health. Thus the medical officer of health of Paddington says that when the hay harvest commences and manure is not required in the country, difficulty in securing the removal of stable manure is experienced, and he adds that if the vestry would undertake the removal of the manure, the difficulty, so far as the removal from the district is concerned, would be at an end. The medical officer of health of Kensington points out that the consent of the owners of manure for its removal by the sanitary authority would be forthcoming if it became known that the requirements of the law would be enforced in case of neglect to comply with the regulations, and inasmuch as many persons now have to pay private persons for this service, they would probably be willing to pay the sanitary authority. The medical officer of health also states that complaints arising from the storage of manure are less frequent than formerly, owing to the action of the vestry in prohibiting, in compliance with the Council's by-law, the use of sunken receptacles for dung. In Fulham penalties were recovered on four occasions for the neglect to remove manure every 48 hours, as required by the vestry. In St. George, Hanover-square, it is found that manure collects "in the height of the season, when there is great difficulty in getting rid of the dung because the farmers are too busy to fetch it away." The medical officer of health of the Strand refers to the practice of farmers using the same waggons for the removal of London manure which are also employed for the conveyance of empty fruit and vegetable baskets, and points out the powers of the sanitary authority to collect manure with the consent of the owner.

Fish offal, in course of removal, was a source of nuisance in several districts. In Limehouse penalties were recovered against the owner of a barge for conveying fish offal in contravention of the Council's by-law. The medical officer of Mile-end Old-town refers to the fact that the firm owning the largest number of vans for the conveyance of fish offal had them altered to comply with the requirements of the by-law, but it was necessary in some other cases to take out summonses "which had the effect of mitigating the nuisance." In Lambeth the conviction of a Rotherhithe collector of fish offal was obtained for not using a properly constructed vehicle.

The medical officer of health of Kensington discusses the effect of the Council's by-law, which limits the time of removal of offensive matters to certain hours of the morning, the object being that the removal shall take place during daylight, when due precautions for the prevention of nuisance can be better taken and ensured. The Kensington Vestry having instituted proceedings for the conveyance of fish offal, &c., during prohibited hours, a fish and game dealer in Kensington complained to the Vestry of Kensington that he had difficulty in securing the removal of such matter on Saturday night owing to his contractor having informed him that "he was forbidden by the action of the vestry to collect any more (of the said refuse) on a Saturday night, the consequence being that the refuse would have to remain on the premises from Saturday morning until Monday morning permeating and poisoning the adjacent houses." The Vestry of Kensington decided to communicate with the London County Council on the subject of the modification of the by-law, and also to communicate with other London sanitary authorities with a view to their adopting a similar course.

It needs to be pointed out that the Council's by-law places restrictions as to the time of conveyance of offensive matter only, and so long as refuse matter has not been retained until it becomes offensive it may be removed at any time. A similar matter was referred to in my last report. The Public Health Committee had received a memorial from soap makers, tallow-melters and bone-boilers, stating that the by-law was creating difficulties in connection with the collection of fat and bones. It was then pointed out that the by-law only put restrictions on the conveyance of these materials through the streets when they were offensive, but that when the by-laws were revised it should be considered whether some extension of the hours for removal of offensive matter should not be made.

Obviously there is advantage if the by-law leads to the earlier collection and removal of animal matter before it becomes offensive. The medical officer of health of Poplar (Poplar and Bromley) thus writes in connection with proceedings before a magistrate. "I think it was shown that on account of the London County Council by-laws, material that is likely to soon become offensive is removed more quickly since the by-laws have come into operation than previously, as the contractors cannot conveniently effect the removal within the prescribed hours, so that this by-law clearly has the effect of preventing material being kept so as to become offensive." The communications of the Kensington Vestry and of other sanitary authorities on this subject are still under the consideration of the Public Health Committee.

House refuse.

The subject of collection and disposal of house refuse has for some years engaged the attention of the Council's Public Health Committee. As a step preliminary to making inquiries, and when necessary to making representations to sanitary authorities in London whose administration failed to ensure the removal of house refuse with sufficient frequency, it was necessary to ascertain how far the method of destruction of house refuse by fire, practised in a number of towns in the north of England, was adapted to the requirements of London, and which of the several forms of destructor existing had been productive of the best results. Inquiry for the Committee, made by Mr. Santo Crimp and Dr. Hamer, satisfied the Committee that this method of disposing of refuse was deserving of adoption, and that the destruction of house refuse by fire, while relieving authorities of the difficulties which militated against the regular removal of refuse from houses, might be effected without the production of nuisance. A copy of this report was communicated to each of the London sanitary authorities.

The publication of this report was followed by the making of by-laws under the Public Health (London) Act of 1891, one of these by-laws requiring that "The sanitary authority shall cause to be removed, not less frequently than once in every week, the house refuse produced on all premises within their district." These by-laws were confirmed in 1893.

In the following year I was instructed to report on the collection and disposal of house refuse by London sanitary authorities, and during that year I presented to the Public Health Committee a series of reports by Dr. Young showing the practice of sanitary authorities in connection with this branch of administration. In October of that year I submitted to the Committee a summary of this reports, and referring to the requirements of the by-law pointed out that there was no probability that this regular removal would be effected unless there was a definite house to house collection, *i.e.*, unless all houses in the district were called at for the purpose (*see* Appendix to Annual Report for the year 1894). Dr. Young's inquiries were supplemented by inquiries made by an inspector especially appointed for the purpose, who visited numerous houses in a number of districts, and who reported how far the by-law was complied with, and communications were addressed to numerous authorities pointing out that the system which so generally prevailed in London of making the collection of refuse depend upon the householder hearing the dustman's cry or upon the exhibition of a card in the window of the house invariably failed to secure the removal of the refuse at proper periods. The work which was then in progress in 1894 was continued in 1895.

Considering first the subject of disposal of refuse, it is evident that the need of better opportunity for this purpose is leading to fuller consideration by sanitary authorities of the method of destroying this refuse by fire. Reference to the subject of dust destructors is found in the reports relating to Paddington, Kensington, Fulham, Hackney, the City, Whitechapel, Lewisham and Woolwich.

The medical officer of Paddington, referring to the collection of house refuse on the wharves in that district, says :—

> "The past year has made it clear that the canals cannot be relied upon at all times as channels for the removal of refuse out of the parish. For six weeks in the first quarter of the year not a boat left the canal basin, yet all this time the refuse of this and certain other parishes was being brought to the wharves. The last of the accumulation was not got away much before June. If there had been a destructor at work in the parish there would still have been an accumulation of clinker to deal with, but such clinker would be quite innocuous, and would have amounted to only a fraction of the bulk of the sorted refuse. A committee was appointed during the year to consider the subject of the erection of a destructor. The Committee have had several sittings on the question and inspected certain of the destructors in use in the metropolis."

The medical officer of health of *Kensington* thus concludes a reference to the report of the Council's officers on dust destructors—"I concluded by commending the report to the favourable consideration of the Committee, believing that the erection and utilisation of dust destructors in this parish would be a distinct advantage from the public health point of view." The medical officer of health of *Fulham* reports that "the vestry have now under their consideration a scheme for the erection of a dust destructor, which, if carried out, will, in my opinion, be of distinct advantage to the parish." In *Hackney* the vestry had under consideration the recommendation of a committee that the system of disposal of house refuse by dust destructor be adopted. The vestry decided that the matter should be considered later in connection with a combined system of electric lighting and dust destruction. The medical officer of health of the *City* writes that "the destructor apparatus at Letts' Wharf has not shown the same satisfactory results as obtains in some cities, owing, I believe, to the small quantity of carbonaceous matter left in domestic dustbins in London, where coal is dear, as compared with northern districts, where it is less than half the price." The report of the medical officer of health of *Whitechapel* contains the statement that "I would express satisfaction with the works carried on at the destructor yard, associated as they are with the systematic removal and destruction of house refuse." In *Lewisham* the District Board had before it a report by a committee stating that they had considered an offer by Mr. Willoughby to erect, at his own expense, a dust destructor on an improved principle. "Mr. Willoughby offers to erect this destructor at his own expense, on ground to be provided by the Board, and to remove it should it fail to realise the results promised from its use. If, however, the trial prove satisfactory, the Board is to purchase the apparatus for the sum of £3,000. The sub-committee visited several towns where destructors were in use; they also visited Calstock to see the special principle of Mr. Willoughby's machine in operation destroying ore. The sub-committee reported in favour of Mr. Willoughby's offer being accepted." This report was adopted and Mr. Willoughby is proceeding with the erection of his dust destructor. The medical officer of health of *Woolwich* states that "the destructor provided by the Board works very satisfactorily, both by night and day." In a report by the surveyor it is stated that the cost of removal of refuse by barges would have been greater by

£471 19s. 5d. than the disposal of the same quantity by the destructor. He adds that the destructor having been erected on land belonging to the Board, the value of the land is not included in the statement of the cost of the destructor.

During the year the Public Health Committee had under consideration complaints as to the deposit by two contractors, of house refuse in Plumstead and Charlton, such deposits being made at a distance from inhabited houses, contravening the Council's by-law. After communication with the Plumstead Vestry and the District Board in whose districts these deposits were respectively made, the Committee were authorised by the Council to institute proceedings in default of the sanitary authorities concerned. Information was later obtained from which it appeared the suggested proceedings could not be taken against one of the contractors, and the necessary notices were served upon the other who thereupon stopped the deposits and covered them in with earth, and informed the Council that he had done so. On his giving an undertaking to the effect that there should in future be no deposit of offensive refuse upon the land, and that the present deposits should be left covered up for two years, the Committee decided not to take further proceedings. The medical officer of health of Plumstead made frequent visits to various dust shoots, and reported to the Committee on those that were within the 300 yards limit. He writes—

> "The principal shoot has been on land specially purchased for this and other objects on the levels. This shoot came within the prescribed distance, but it was far enough away from houses not to cause any nuisance from smell. There was, however, a complaint from the nearest houses of a plague of flies, which was no doubt a result of the contiguity of this shoot. Special efforts were made to burn the worst of the refuse, and cover the surface with soil turned up in the field. I think, however, the only satisfactory remedy is to provide a shoot much farther away, which can be easily procured on the levels."

In Battersea the vestry took steps which led to the abandonment of sorting and sifting of house refuse on Hudson's wharf, where such refuse was deposited for a longer period than 24 hours, contrary to the provisions of the Council's by-law.

Considering the subject of collection of house refuse, it is evident that London is making progress. Thus the Committee reported to the Council on May 21st as follows:—

> "On the 18th of December last we submitted to the Council a printed report by the medical officer of health, showing the result of the inquiry made by Dr. Young, one of the Council's assistant medical officers of health, into the arrangements for the collection and disposal of house refuse in the various sanitary districts in London. We pointed out that the report emphasised the need that existed in many districts for a definite house-to-house collection of refuse to be made weekly from all premises as required by the Council's by-laws, irrespective of whether the occupier indicated by placing a card in his window, or in any other way, his desire for a call to be made. We have since been in correspondence with the sanitary authorities for these districts, and are glad to report that the Vestries of St. George, Hanover-square, St. George-in-the-East, and St. James, Westminster, have assented to the Council's suggestion that all houses should be called at not less frequently than once in every week, and have taken the necessary steps for the purpose. The arrangements in other districts are still under our consideration.

The medical officer of health of *Islington* reports in detail the arrangements in that district, and shows a large reduction in the number of complaints concerning non-removal of dust which has resulted from the adoption of a weekly call at every house. The need of a better system had been urged upon the vestry by him since his appointment in 1892, and in that year a scheme was prepared with this object. He writes that "nothing further was heard of the scheme till November, 1894, when the London County Council wrote asking the vestry to arrange according to the by-laws for a weekly removal of dust." On January 19th, 1895, "a second letter from the Council was received, asking the vestry whether they proposed to make arrangements for the removal of house refuse as required by the Council's by-laws," and the medical officer of health was directed to formulate a scheme, concerning which he reports that "the success of the system is now beyond dispute." The medical officer of health of *Hackney* writes that the giving effect to the Council's by-law was in 1895 attended with very good results. In the first place, the weekly house-to-house visit led to the detection and removal of large accumulations of house refuse; secondly, it led to a great diminution in the number of written requests to remove the house dust. The reports also show that in *St. George-in-the-East* every house is called at once a week; in *Lewisham*, the call is made once a week as far as practicable; in *Woolwich* the dust is removed weekly from every house in the district, and from some of the streets in the poorer parts of the town, twice or thrice weekly; in *Plumstead* arrangements have been made by the contractor for the dust to be collected weekly from every house.

In two instances the Committee thought it well that proceedings before a magistrate should be instituted against authorities for neglect to secure the removal of house refuse at proper periods, viz., against the authorities of Holborn and Lambeth. For this purpose, however, the consent of the Local Government Board had to be obtained, and in the case of Holborn was not received until more than six months had elapsed since the dates at which the Council's inspector had made his inspection. Proceedings, therefore, in respect of Holborn had to be abandoned, but a summons was taken out against the vestry of Lambeth, and the result is shown in the following report presented by the Committee to the Council, and adopted by the Council on the 1st December, 1896—

> On 19th November, 1895, we informed the Council that the consent of the Local Government Board had been given to the Council taking proceedings against the Holborn District Board and the Lambeth Vestry, under section 30 of the Public Health (London) Act, 1891, for not securing the due removal, at proper periods, of house refuse from premises in their districts. We at the same time stated that a summons had been taken out against the Lambeth Vestry, but that as the inspection in the Holborn case was made before the middle of April, 1895, and consequently more than six months had elapsed, it was too late to take proceedings against the district board. Since that time we have been in correspondence with that board, who intimated in March last that a clause had been inserted in their contract, which would come into force after the 25th of that month, requiring compliance with the Council's by-law. As, however, a further inquiry we recently caused to be made in the Holborn district showed that at a large number of houses the house refuse was not regularly removed once a week, we addressed a further letter to the board, and in reply they now forward an extract from their

contract, which requires a call to be made not less frequently than once a week at all premises in the district, and the removal of the refuse secured, and they state that they have called upon their contractor to strictly observe the terms of the contract, and that if any persons absolutely refuse (as the contractor says they do) to allow the house refuse to be removed, proceedings will be taken against such persons and penalties asked for. In view of these assurances we have adjourned the consideration of the matter for three months, when we propose that a further inquiry shall be made in the district.

In the Lambeth case proceedings were, in accordance with the Council's resolution, taken at the Lambeth police-court before Mr. Denman, Mr. Avory appearing for the Council and Mr. Bodkin for the vestry. Evidence was submitted on behalf of both bodies, and the case was adjourned from time to time, several days being occupied with the evidence. During the course of the proceedings it transpired that the vestry had made arrangements which would comply with the Council's by-laws and meet the object which the Council had in view, and several of the witnesses testified to the improvement which had taken place in the collection of the refuse. At the vestry's suggestion a conference was arranged between representatives of the vestry and the Council, and as a result the vestry suggested that the proceedings should be discontinued by the Council, as the vestry were doing everything that the Council had ever asked to have done for the removal of the dust, and as in the new contract made this year with the contractor for the outer parts of the parish not only were the positive words of the by-law inserted amongst the requirements he had to fulfil, but he was also specially required to knock at the door of every house in his district once in each week.

On receipt of this letter we instructed the solicitor to state that we should be prepared to apply to the magistrate for leave to withdraw the summons if the vestry would give a proper undertaking by their counsel in open court to the effect that the vestry were now carrying out the Act and by-laws in accordance with the Council's wishes. We at the same time gave instructions that if the summons were withdrawn a statement should be made in open court by counsel for the Council to the effect that it was not until the case was proceeding before the magistrate that the vestry intimated their readiness thus to carry out the Act and by-laws, but that the vestry having now commenced to do this, and the Council's object having been attained, the Council did not wish to continue the proceedings merely for the purpose of obtaining a penalty and costs.

The vestry clerk, in June last, wrote that he was instructed to give an undertaking, on behalf of the vestry, that a call not less frequently than once in every week was being and would be made at each house in the parish for the collection of house refuse, and that in all future contracts an obligation would be thrown upon the contractor (as in the existing contract of March, 1896), to call weekly at each house within his district in like manner for the collection of such refuse.

On receipt of this letter we instructed the solicitor to apply to the magistrate for leave to withdraw the summons, and the circumstances having been explained in court on the 6th instant, the summons was then, by leave of the magistrate, withdrawn.

We may, in conclusion, point out that before the case first came on for hearing we gave authority to the solicitor to ask for the adjournment of the summons *sine die* if a statement were made on behalf of the vestry in open court that they would do what they have now undertaken to do.

The medical officer of health of Holborn writes in his annual report—

"During the six months ending December 31st, 1895, 805 notices for the removal of house refuse were received and attended to; during the first six months there were 1,309, making 2,114 during the year. I have found that this method is most unsatisfactory, for I have often seen large quantities of offensive refuse that had been accumulating for several weeks. Many of the old dustbins are very large, and frequently the occupiers will not give notice for the removal of the refuse until the dust-bin is full. I am glad that the board has made a new contract, which came into operation on the 25th of March, 1896. This provides for the removal of house refuse at least once a week."

The use of movable receptacles is gradually extending in London. The medical officer of health of the *Strand* reports that fixed dustbins are gradually being disused and abolished. The medical officer of health of the *City* says that great benefit has accrued from the skip system. In *Whitechapel* "the pail system has been now so far extended that practically a daily collection of refuse takes place." In *Woolwich* "the pail system" continues to work most satisfactorily. An increase in the number of pails in use in the district is reported in *St. Olave* and *Rotherhithe*.

It is not matter for surprise that the weekly visits of the dust collector are not always received by the householder with satisfaction. Reference to this subject is made in the report of the medical officers of health of Islington, Hackney, and St. Olave. This, however, has not proved a serious hindrance, and householders are rapidly becoming accustomed to the new system which is designed in their interest; thus, the medical officer of health of Hackney shows that the number of refusals in the course of a few weeks materially declined.

The question, however, has been decided in the Court of Queen's Bench by the Lord Chief Justice and Mr. Justice Wills, that the refusal to permit house refuse to be removed by the officers of the sanitary authority is an obstruction of these officers in the performance of a duty under the Public Health (London) Act, 1891. This decision will go far to remove any difficulties that have been previously experienced.

Regent's-canal.

The medical officer of health of St. Pancras writes that "since the diversion of the drainage of the Zoological Gardens from the canal into the main sewers of the district, and the removal of a large amount of deposit from the water-way, lay-byes, docks, and basins of the canal, no complaints have been received of nuisances from this source."

Combined Drains.

In my last report I referred to the difficulty experienced by sanitary authorities in London in dealing with old combined systems of house drainage, and to the report of the Main Drainage Committee to the Council on this subject. The Committee at the time did not see their way to recommend the Council to promote legislation with the desired object. In February, 1895, the Committee reported to the Council that they had received a deputation on the subject, and that they were of opinion "that a grievance exists, and that a heavy responsibility is thrown upon the local authorities to repair combined drains, which it was pointed out were laid down for the benefit of the owners of the houses, and with the intention, as the deputation contended, that the owners should be held responsible for their maintenance." The Council adopted the recommendation of the Committee, "That

the Council do apply to Parliament for an amendment of the definition af the words *sewer* and *drain* in the Metropolis Local Management Act in the way desired by the local authorities, and that it be referred to the Parliamentary Committee to prepare a public bill and take such other steps as may be necessary for that purpose." A conference of local authorities, at which the Council was represented, was subsequently held, and a bill introduced into Parliament which had not been considered by either House when Parliament was dissolved.

Housing of the Working Classes.

During 1895 the following steps were taken under the Housing of the Working Classes Act in respect of unhealthy areas.

(a) Scheme undertaken by the Council under Part I. of the Housing of the Working Classes Act.

Boundary-street.—In my last annual report I referred to the fact that the greater part of the property included in this area had come into the Council's possession before the end of 1894. In July, 1895, the Public Health and Housing Committee reported to the Council that, of the 730 houses originally upon the area only 78 remained in occupation, and the hope was expressed that the further occupation of these would soon be unnecessary. In the same month the Committee reported that all the tenements in Mount-street dwellings, which had been erected on ground cleared at the north-eastern extremity of the area, were let. Of the 54 tenants occupying the dwellings—

11	removed to the dwellings	from the area.		
19	,,	,,	,,	within ¼ mile of the area.
6	,,	,,	,,	,, ½ ,,
5	,,	,,	,,	,, 1 ,,
13	,,	,,	,,	a distance over 1 mile from the area.

During the year progress was made with the erection of a number of other blocks of tenements on the Boundary-street area, and the Goldsmith-row cottages, erected on a site acquired in connection with the Boundary-street scheme, were completed.

(b) Schemes undertaken by the Council with contributions by the district authority under Part II. of the Housing of the Working Classes Act.

Mill-lane Deptford.—The acquirement of the property and clearance of the site were proceeded with during the year, and at the end of 1895 the Council had under consideration the nature of the buildings to be erected on the area. The scheme, as originally passed, provided for the erection of buildings for the accommodation of not less than 570 persons of the working class in lieu of the 715 displaced from the area.

Brooke's-market, Holborn.—This area having been cleared, the Council decided to retain the land and to itself erect dwellings upon part of it, devoting the remainder to open space. The sanction of the Local Government Board was accordingly applied for.

Ann-street, Poplar.—The properties on this area were acquired and the land was being cleared at the end of 1895. The question as to whether the Council should itself erect dwellings upon the area was under consideration. The scheme provided that accommodation should be afforded for not less than 200 persons of the working class in lieu of 261 persons displaced.

(c) Schemes undertaken by district authorities with contributions by the Council under Part II. of the Housing of the Working Classes Act.

Green-street and Gun-street, St. George the Martyr, Southwark.—These sites were cleared by the vestry in 1894, and the Council was then asked to purchase the sites and erect the necessary dwellings. The Council agreed to acquire the lands under Part III. of the Housing of the Working Classes Act, and asked the Local Government Board to make certain necessary modifications in the order sanctioning the scheme. The Board's order permitting the modifications was issued on January 13th, 1896.

Moira-place and Plumber's-place, Shoreditch.—This scheme is being carried out by the Shoreditch Vestry.

Norfolk-square, Islington.—The Vestry of Islington cleared the land and the question as to the use to be made of the cleared site was under consideration.

London-terrace, St. George-in-the-East.—This scheme is being carried out by the Vestry of St. George-in-the-East.

During the year 1895, the question as to dealing with the following areas among others was under consideration:—

Churchway, Somers-town, St. Pancras.—In my last annual report reference was made to the fact that the Public Health and Housing Committee had reported that Lady Henry Somerset, the freeholder of a portion of this area, had indicated her willingness to co-operate with the Council, and that the Committee hoped before very long to be in a position to submit a scheme which would meet with the Council's approval. A scheme was submitted which provided for the re-housing on the cleared area of 568 persons, the widening of Wellesley-street and of Churchway between Drummond-street and Grafton-place to 40 feet, and the closing of the portion of Churchway between Grafton-place and Euston-road. On October 15th, 1895, the requisite resolution under section 4 of the Housing of the Working Classes Act was passed by the Council, and the Committee was instructed to complete the scheme and to take all necessary steps for depositing and obtaining confirmation thereof.

Clare-market, Strand.—In November, 1894, the medical officer of health of the Strand district made a representation to the Council under Part I. of the Housing of the Working Classes Act, with respect to an area in his district. His representation was considered by the Public Health and Housing Committee, which, on October 8th, 1895, presented to the Council the following report—

> For some years past our attention has from time to time been called to the insanitary condition of an area lying immediately north of the Strand, adjoining Clare-market and the southern end of Drury-lane.

This is the largest and worst of those crowded collections of courts and alleys which remain to disgrace central London. The property is held by a large number of small owners who are powerless of themselves to effect any adequate improvement; and it is clearly one of those cases which Part I. of the Housing Act was designed to meet. On the 23rd of November, 1894, the medical officer for the Strand district made an official representation under section 4 of the Housing of the Working Classes Act, 1890, in respect of this area, comprising—

Sub-area A lying between Drury-lane, Stanhope-street, Blackmore-street and Kemble-street.
Sub-area B lying between Clare-street, Clare-market, Houghton-street and Stanhope-street.
Sub-area C lying between White Hart-street, Strand, Drury-lane and Drury-court and Helmet-court.

The Council's medical officer of health has reported with regard to the area as follows—

"The streets and courts which require reconstruction and rearrangement cover a total area of some 3½ acres. The first sub-area which lies on the north-eastern side of Drury-lane has at the rear of houses fronting on the street a number of narrow and confined alleys. Some of these alleys are *culs-de-sac*, and there is great crowding of the houses on the area, and consequent interference with the access of light and air to the buildings. There are upwards of 800 persons to the acre in this sub-area, the density of population being about six times that obtaining in the entire Strand district.

"The second sub-area lies to the east of the first, and is traversed by Holles-street. The space about the houses in this sub-area is very limited and the ventilation at the rear very defective.

"The third sub-area lies to the south of the first and between it and the Strand. It includes several narrow, ill-ventilated courts, the houses in which have little or no space at the rear.

"The insanitary condition of the area arises especially from the close proximity of the houses to each other, and from bad arrangement, and therefore nothing short of a scheme of reconstruction and rearrangement will provide an adequate remedy."

The rates of mortality in the area represented are shown by the medical officer of health of the district to be as follows—

	1891.	1892.	1893.	1894.
The whole area	34·18	35·84	44·83	39·03
Sub area A	41·4	32·92	38·92	41·32
„ B	22·85	39·3	50·52	25·91
„ C	30·17	40·18	47·62	41·36
The rates of mortality in the whole of the Strand district during the same years are	26·75	25·09	26·59	19·86
For the whole of London	21·4	20·24	20·09	17·7

We are satisfied that the narrowness, closeness, and bad arrangement and bad condition of the houses, courts and alleys within the area, and the want of light, air and ventilation are injurious to the health of the inhabitants, and that the evils connected with these houses, courts or alleys, and the sanitary defects in this area cannot be effectually remedied otherwise than by an improvement scheme.

The Council's officers, acting under our instructions, have prepared a scheme, the details of which we now submit for the approval of the Council. It is proposed to include in the scheme all the properties within the represented area (coloured pink on the cartoon in the Council chamber), and also the property (coloured blue) in Kemble-street and at the corner of Holles-street and Stanhope-street which is not referred to in the representation of the medical officer of the district, but which is included to enable the Council to improve the re-housing area and close the whole of Holles-street, and so obtain a much better building site than otherwise would be possible. In this, as in all schemes, the difficult question of re-housing a portion at least of the persons displaced by the scheme has to be faced; and to this question we have given very careful consideration. The experience which we have gained of late years shows that but a very small proportion of the actual persons displaced from insanitary courts and alleys by housing schemes can be induced to avail themselves of the accommodation supplied for them in the new buildings erected for that purpose. This arises from the fact that the areas cleared in housing schemes consist of the worst form of slums, and that people living under these conditions are not at once prepared to accept the more stringent regulations required in improved sanitary dwellings. There are always, however, plenty of persons living under somewhat better conditions than those of the slums in question, who eagerly appreciate the sanitary improvements to be found in dwellings provided by the Council, and these persons, by removing to the new dwellings, make room in their turn for those displaced from the courts and alleys which have been destroyed. On the land which the Council is about to acquire at Millbank, dwellings capable of accommodating more than four thousand persons can be erected. It will be remembered that one of the considerations which induced the Council to undertake the purchase of the Millbank prison site was that the Home Secretary agreed that dwelling-houses built thereon should be considered as accommodation supplied for persons displaced by any scheme within two miles distance. The Strand area in question falls within this limit. The total number of persons to be displaced is 3,038. Of this number there is a certain proportion, such as porters at Covent-garden market, persons employed at theatres, &c., whose occupations necessitate their living in the vicinity. For this class of persons we propose to make provision to the extent of about 500 on the area, and in this connection it is proposed to widen Drury-lane on its eastern side to 40 feet so far as the property taken extends. With regard to the remainder (about 2,538) it is proposed to supply accommodation for one-half (about 1,269) on the Millbank prison site, in accordance with the permission of the Home Secretary.

The estimate of the cost of the scheme is as follows—

Net cost of property	£214,250
Estimated cost of paving, &c., works	2,250
Total net cost	£216,500

On the 15th October, 1895, the Council resolved that the area was an unhealthy area within the meaning of the Act of Parliament, and directed the Public Health and Housing Committee to complete the scheme, and to take all necessary steps for depositing and obtaining confirmation thereof.

Falcon-court and adjoining courts, St. George-the-Martyr, Southwark.—Falcon-court and an adjoining court, Birdcage-alley, were the subject of a representation made under Lord Cross's Act in 1889. The Home Secretary was asked to hold an inquiry, and he decided that these courts should be dealt with under Part II. of the newly passed Housing of the Working Classes Act of 1890. It became clear, however, that in addition to these two courts there were other courts lying to the north of Falcon-court which must also be dealt with, and the vestry felt unable to undertake so large a scheme of improvement without assistance from the Council. A scheme was thereupon prepared and submitted to the Council for dealing with the two courts already named, and also with Brent's-court, Eve's-place, Red-cross-place and Maypole-alley. The vestry agreed to contribute half the cost of carrying out this scheme, but urged that provision should be made for the persons displaced. In November, 1895, the Council

approved the scheme proposed by its Committee, and as the area when cleared would be unsuitable for purposes of re-housing, it was decided to acquire two sites in the neighbourhood under Part III. of the Act for the accommodation of not less than 500 persons. The solictor was instructed to take the necessary steps for giving effect to the scheme.

Fulford-street and Braddon-street, Rotherhithe.—This area was the subject of an official representation under Part I. of the Housing of the Working Classes Act, made by Dr. Shaw, the medical officer of Rotherhithe, in February, 1893. The area as represented included about 100 houses occupied by some 730 persons, and a Committee of the Council came to the conclusion that it should be dealt with under Part II. of the Act. The Council confirmed this decision, and resolved that the Vestry of Rotherhithe should be informed that if a satisfactory scheme were presented for dealing with the area, the Council would be willing to contribute half the net cost under Part II. of the Act. In May the Committee was able to report to the Council that the vestry had intimated its willingness to prepare a scheme for dealing with the area.

Lomas-buildings, Mile-end Old-town.—The question of dealing with this area by scheme was the subject of discussion between the Council and the Vestry. The vestry was of opinion that there was adequate accommodation in the neighbourhood for persons of the working class who would be displaced, and that the cleared area could therefore be used for business purposes. It was understood that the vestry would prepare a scheme for dealing with the area.

Millbank prison site.—The purchase from the Government of 10 acres of land on this site, for the purpose of erecting dwellings for the accommodation of persons of the working class, had not been finally completed at the end of 1895. The Committee reported to the Council, however, in October, 1895, with respect to the arrangements to be made for dealing with the area, and the Council's architect was instructed to design a plan for laying out the site.

Proceedings in respect of houses represented as unfit for human habitation.

The following tabular statement shows the procedure of district authorities as to houses represented as unfit for human habitation, and concerning which the Council has received copies of representations from the 1st January to the 31st December, 1895—

Local Authority.	Total number of houses concerning which the Council has received information that representations have been made from the 1/1/95 to the 31/12/95.	Number of houses closed, demolished or improved by owners without Magisterial intervention.				Number of houses for which closing orders were granted.				Number of houses for which closing orders were refused.	Number of houses outstanding or concerning which proceedings are in progress.
		Closed.	Demolished.	Improved.	Total.	Subsequently demolished.	Subsequently improved.	No further action.	Total.		
Battersea	–	–	–	–	–	–	–	–	–	–	–
Bermondsey	27	27	–	–	27	–	–	–	–	–	–
Bethnal-green	18	–	3	3	6	6	–	2	8	–	4
Camberwell	–	–	–	–	–	–	–	–	–	–	–
Chelsea	–	–	–	–	–	–	–	–	–	–	–
Clerkenwell	7	–	–	–	–	–	–	–	–	7	–
Fulham	4	–	–	4	4	–	–	–	–	–	–
Greenwich	–	–	–	–	–	–	–	–	–	–	–
Hackney...	–	–	–	–	–	–	–	–	–	–	–
Hammersmith	–	–	–	–	–	–	–	–	–	–	–
Hampstead	–	–	–	–	–	–	–	–	–	–	–
Holborn	–	–	–	–	–	–	–	–	–	–	–
Islington	–	–	–	–	–	–	–	–	–	–	–
Kensington	–	–	–	–	–	–	–	–	–	–	–
Lambeth	16	–	–	5	5	–	–	11	11	–	–
Lee	–	–	–	–	–	–	–	–	–	–	–
Lewisham	–	–	–	–	–	–	–	–	–	–	–
Limehouse	–	–	–	–	–	–	–	–	–	–	–
Mile-end Old-town	25	2	–	15	17	–	–	2	2	–	6
Newington	–	–	–	–	–	–	–	–	–	–	–
Paddington	1	–	–	–	–	–	–	1	1	–	–
Plumstead	–	–	–	–	–	–	–	–	–	–	–
Poplar	–	–	–	–	–	–	–	–	–	–	–
Rotherhithe	5	–	–	–	–	–	–	5	5	–	–
St. George, Hanover-square ...	–	–	–	–	–	–	–	–	–	–	–
St. George-in-the-East ...	3	–	–	1	1	–	–	2	2	–	–
St. George-the-Martyr ...	106	8	4	62	74	5	–	13	18	–	14
St. Giles...	4	–	1	–	1	2	–	1	3	–	–
St. James, Westminster ...	–	–	–	–	–	–	–	–	–	–	–
St. Luke...	–	–	–	–	–	–	–	–	–	–	–
St. Martin-in-the-Fields ...	–	–	–	–	–	–	–	–	–	–	–
St. Marylebone...	–	–	–	–	–	–	–	–	–	–	–
St. Olave, Southwark ...	14	–	–	7	7	–	–	–	–	–	7
St. Pancras	–	–	–	–	–	–	–	–	–	–	–
St. Saviour, Southwark ...	–	–	–	–	–	–	–	–	–	–	–
Shoreditch	–	–	–	–	–	–	–	–	–	–	–
Strand	8	2	–	–	2	–	–	–	–	–	*6
Wandsworth	6	1	–	–	1	–	–	4	4	–	†1
Westminster	19	2	3	–	5	6	8	–	14	–	–
Whitechapel	–	–	–	–	–	–	–	–	–	–	–
Woolwich	11	–	3	5	8	–	–	–	–	–	3
Total	274	42	14	102	158	19	8	41	68	7	41

* Including two houses closed under the Public Health (London) Act, 1891.
† Dealt with under the Public Health (London) Act, 1891.

Customs and Inland Revenue Acts, 1890 and 1891.

The reports of the medical officers of health of the following districts show that many applications were made to them for certificates which would enable the owners of property to claim exemption from inhabited house duty; in some instances they were granted, in others refused.

Fulham.—Applications refused in respect of 35 houses.

Westminster.—Certificates granted to the owners of 4 houses in Lower Garden-street and Tufton-street, but an application for Buckingham-chambers was refused as the requirements were not carried out.

Shoreditch.—The medical officer of health received 19 applications, and certificates were granted in 9 instances.

St. George, Southwark.—The medical officer of health examined 16 tenements occupied by about 90 persons, and gave certificates in each case.

Battersea.—A total of 910 tenements have been inspected for this purpose (91 in 1895), and certificates granted; "many flats are now being built to obtain exemption."

Wandsworth (Putney).—Four tenements obtained certificates of exemption.

Workmen's Trains.

In my last report I referred to the action taken by the Public Health Committee in connection with the subject of workmen's trains, to the resolution of the Council to petition the House of Commons for an inquiry into this subject and into the operation of the Cheap Trains Act, 1883.

On the 3rd December the Council considered the following further report of the Committee, and adopted the recommendation which was made—

> In spite of the provisions of the Public Health (London) Act, 1891, there is much overcrowding in the more central districts of London. The following, amongst other causes, tend to produce this result, viz., the destruction of working-class dwellings to make room for commercial buildings, such as factories and warehouses, and the fact that in most districts it is unprofitable to purchase land on a commercial basis for the purpose of building artizans' dwellings, the rent obtainable from these dwellings being insufficient to pay for the interest on capital invested in highly-priced land in addition to the cost of the dwellings. In some other neighbourhoods working-class cottages are being replaced by lofty mansions. A minor cause is the closing of worn-out and unhealthy houses under those clauses of the Health and Housing Acts which do not require that the inhabitants shall be re-housed. The natural cure for this evil is that workmen should live further from the centre, in districts where land is cheaper; but to effect this very desirable result it is necessary that there should be cheap means of locomotion from the central districts where the work is done to the less crowded neighbourhoods. On this question we reported fully on May 8th, 1894, and the Council then instructed the Parliamentary Committee to prepare a petition to be presented to the House of Commons praying for an inquiry into the subject of workmen's trains and the operation of the Cheap Trains Act, 1883. The Parliamentary Committee subsequently reported that it was not desirable to take this course, and suggested that members of the Council who were also members of the House should be requested to support the reference of the question to a Select Committee when the Cheap Trains (London) Bill was again before the House. The subject was, however, not dealt with in the last session of Parliament, and as we are convinced that there is much need for inquiry into this question, we think that action should forthwith be taken to give effect to the Council's resolution. We therefore recommend that the Committee be authorised to address a communication to Her Majesty's Government, pointing out the desirability of an inquiry being made into the subject of workmen's trains and the operation of the Cheap Trains Act, 1883.

The Regulation of Houses let in Lodgings.

During the year the work of making by-laws for houses let in lodgings was in progress, and in ten instances such by-laws were confirmed by the Local Government Board. At the end of 1895 every authority but one had either regulations made under the Sanitary Act of 1866 or by-laws made under the Public Health (London) Act, 1891, relating to this subject in force in their district. Certain authorities having regulations made under the Act of 1866, have made by-laws under the Act of 1891 which were still awaiting the confirmation of the Local Government Board at the end of 1895.

The annual reports, relating to the following districts, refer to the subject of houses let in lodgings—

Paddington.—"Efforts were made during the year to place some of the houses in North Paddington on the register, but the work was pushed aside by pressure of other matters."

Kensington.—The vestry has adopted by-laws modifying the existing regulations; they are now awaiting confirmation by the Local Government Board. Nothing has been done towards the registration of houses in fresh streets since the Public Health Act was passed, it seeming desirable to wait until the by-laws were made and confirmed.

Hammersmith.—The by-laws adopted by the vestry await confirmation by the Local Government Board.

Fulham.—Steps are now being taken to register houses under the by-laws which were confirmed by the Local Government Board in November, 1895.

Chelsea.—The preparation of by-laws is still under the consideration of the Public Health Committee of the vestry.

St. George, Hanover-square.—The houses let in lodgings (73) "have been inspected, and the regulations as to cleansing complied with."

Westminster.—Considerable progress has been made in the number of houses registered and inspected; during the year 575 houses were registered, and it is hoped that before the end of 1896 all the houses let in lodgings in both parishes will have been registered.

St. James, Westminster.—The vestry decided during the year to take steps to re-register certain houses under the by-laws recently made and confirmed.

Hampstead.—343 houses were regularly inspected.

St. Pancras.—The number of houses registered is 126.

Islington.—The special inspector employed in this work made 1,480 inspections, and as the result of his visits 1,085 nuisances were abated.

Stoke Newington.—An effort was made to register houses let in lodgings, but after inquiries had been instituted, it was considered that very little gain would result from pursuing the matter further. The amount of rent which causes exemptions is fixed so low that there are but very few houses in the parish that would come under the by-laws.

Hackney.—The by-laws made by the vestry were confirmed in November by the Local Government Board.

St. Giles.—There are 471 houses registered under regulations.

St. Martin.—The houses let in lodgings have been regularly inspected during the year.

Strand.—The number of houses registered now amounts to 72, as 5 have been closed; they are inspected weekly, with satisfactory results. In one case only it was necessary to take proceedings, and the owner was fined 10s. and costs.

Holborn.—There are 46 houses on the register. Dr. Hoyle, who acted as medical officer of health during the year, states that this list might be added to with advantage.

St. Luke.—The by-laws adopted by the vestry were confirmed in October by the Local Government Board.

City.—The "amended" by-laws were adopted in November by the Commissioners of Sewers and forwarded to the Local Government Board; they are still awaiting confirmation.

Bethnal-green.—By-laws are now in force in the district, but so far no houses have been placed on the register.

St. George-in-the-East.—The by-laws, which were adopted by the vestry, have now received the sanction of the Local Government Board; but the medical officer of health states that the limit of rent permitting exemption having been lowered, several houses already registered, and which need special inspection, will have to be removed from the register.

Poplar.—By-laws have been made and confirmed.

St. George, Southwark.—An attempt has been made to enforce the new by-laws, and 151 dwellings have been registered during the year. The medical officer of health considers that the "model" dwellings should be included under the by-laws.

Bermondsey.—The special inspector appointed for this work reports that the total number of houses on the register amounts to 313, and that during the year notices were served for the abatement of nuisances and overcrowding.

Rotherhithe.—After the by-laws had been amended, they were adopted towards the end of the year by the vestry, and confirmed by the Local Government Board early in 1896.

Battersea.—The number of houses on the register amounts to 8,046, and the number of families resident, 17,631.

Lewisham.—There are 15 houses on the register.

Woolwich.—The by-laws "have now received the approval of the Local Government Board, and will at once be put in force."

Plumstead.—There are now 4 houses on the register, but the landlords show a great objection to their houses being registered, and prefer to give notice to the tenants and let them to one family occupying all the rooms.

Common lodging houses.

The duty of administering the Common Lodging Houses Acts in the County of London was transferred in November, 1894, from the Commissioner of Metropolitan Police to the London County Council.

During the year 1895 these premises were inspected by the Council's officers, a staff of one chief inspector and eleven inspectors having been appointed for the purpose.

The following table shows the number of common lodging-houses in each district, and the authorised number of lodgers at the end of 1895, and also the number of common lodging-houses registered by the Council during the year—

	Number of common lodging-houses.	Authorised number of lodgers.	Number of houses registered by the Council in 1895.
Paddington...	3	66	—
Kensington...	33	768	—
Hammersmith	8	526	—
Fulham	3	86	—
Chelsea	19	889	1
St. George, Hanover-square ...	—	—	—
Westminster	24	1,643	—
St. James	1	88	—
Marylebone	22	881	—
Hampstead...	1	35	—
Pancras	27	909	2
Islington	45	1,222	—
Stoke Newington	1	41	—
Hackney	9	301	—
St. Giles	40	2,042	2
Carried forward ...	236	9,497	5

	Number of common lodging houses.	Authorised number of lodgers.	Number of houses registered by the Council in 1895.
Brought forward ...	236	9,497	5
St. Martin-in-the-Fields	6	225	—
Strand	11	623	—
Holborn	13	702	1
Clerkenwell	4	226	—
St. Luke	4	229	1
Shoreditch	15	636	—
Bethnal-green	15	365	—
Whitechapel	71	5,634	—
St. George-in-the-East	21	539	—
Limehouse	22	765	—
Mile-end Old-town	7	253	—
Poplar	15	927	—
St. Saviour, Southwark	18	822	—
St. George, Southwark	32	1,558	2
Newington	14	1,557	—
St. Olave	1	533	—
Bermondsey	4	226	—
Rotherhithe	3	116	—
Lambeth	20	1,389	—
Battersea	6	227	1
Wandsworth	13	281	—
Camberwell	9	506	—
Greenwich	17	742	—
Lewisham	10	109	—
Woolwich	38	877	—
Lee	1	10	—
Plumstead	—	—	—
Totals	626	29,574	10

During the year 52 cases of smallpox, 9 of scarlet fever, 7 of enteric fever, 4 of diphtheria, 19 of erysipelas, and 6 of measles occurred in common lodging-houses, and the necessary precautions were taken in connection therewith. In addition to the cases of infectious disease mentioned, 66 cases of non-infectious illness were brought to the knowledge of the Council's inspectors, and death occurred in 51 of these cases.

During the year 1895 the Council instituted legal proceedings against the keepers of 16 common lodging-houses. Fines were inflicted by the magistrate amounting to £33 and £4 6s. costs in 12 cases. In the remaining cases the summonses were either dismissed or withdrawn owing to completion of works.

Underground Rooms.

Information contained in the reports of medical officers of health shows that in 1895 the illegal occupation of underground rooms was discontinued in the following cases—Paddington, 1; Fulham, 25, and in one instance proceedings were taken against the owner and the occupier; Chelsea, 18 "reported"; St. George, Hanover-square, 4; Westminster (St. Margaret) 11; (St. John) 15, and in one case proceedings were taken and the offender fined. The vestry has for some time refused to allow nine rooms at James-street-mansions to be occupied as dwelling-houses till certain works have been carried out. St. James, Westminster, 11; St. Pancras, 18; Islington, 33; St. Giles, 13 closed or altered; Strand, 7; Holborn, 44; Clerkenwell, 36; St. Luke, 27; Bethnal-green, 1; Whitechapel, 22, and 1 prosecution; St. George-in-the-East, 22; Limehouse, 2; Mile-end Old-town, 5; St. George, Southwark, 11; Lambeth, 42; Battersea, 12; Greenwich, 5; Deptford, 6.

Factories and Workshops.

During 1895 the Public Health Committee had under consideration the Factory and Workshop Bill, which had been introduced into Parliament, and a letter containing suggestions for amendment of the Bill was addressed to the Home Secretary. The Act of that year amends preceding Acts and adds to the powers of sanitary authorities for dealing with unwholesome conditions in workshops. Under the Act of 1878 every person beginning to occupy a factory was required to give to the factory inspector notice of such occupation, and under the Act of 1891 similar notice was required to be given in respect of workshops. Under the Act of 1895 it is required that notice shall be given of every workshop concerning which notice has not already been given in compliance with the requirement of the Act of 1891. These notices are to be subsequently forwarded to the sanitary authority of the district in which the workshop is situated.

The Act of 1891 provides that the occupier of every factory and workshop and every contractor employed by him in the business shall, if required by order of the Secretary of State, keep a list of out-workers and the places where they are employed, which shall be open to inspection by the factory inspector or any officer of the sanitary authority. The Act of 1895 now requires such occupier to

send to the factory inspector of the district in which the factory or workshop is situated a list of outworkers and the places where they are employed. This requirement extends under the Order of November 2nd, 1892, to the following occupations, viz.: the manufacture of wearing apparel; the manufacture of electro-plate; cabinet and furniture making and upholstery work; the manufacture of files.

Under the Act of 1895 a minimum space is now required in each room of a factory and workshop of 250 cubic feet for each person employed, or during overtime of 400 cubic feet, and the Secretary of State may modify this proportion for any period during which artificial light other than electric light is employed, and may require, as regards any particular manufacturing process or handicraft, more cubic space. In every room must be exhibited a notice showing the number of persons who may be employed in the room. A reasonable temperature must moreover be maintained in each room in which any person is employed. The Act of 1895 empowers a court of summary jurisdiction, on complaint of a factory inspector, to prohibit the use until the necessary works are done of any place as a factory or workshop if it is in such a condition that any manufacturing process or handicraft carried on within it cannot be so carried on without danger to health, or to life or limb; the Act also prohibits the occupier of a factory or workshop, or any contractor employed by him, from giving out work to be done in any place concerning which he receives notice from the factory inspector that the place is injurious or dangerous to health. For the prevention of the infection of clothing the occupier of a factory, workshop or laundry, or any contractor employed by him, is prohibited from causing or allowing wearing apparel to be made, cleaned or repaired in any dwelling-house, or building occupied therewith whilst any inmate of the dwelling-house is suffering from scarlet fever or small pox. The provisions of the Factory Acts are extended to laundries, with certain exceptions, as if every laundry in which mechanical power is used were a factory and every other laundry were a workshop. In some other matters laundries are specially dealt with, and in the case of every laundry worked by steam, water or other mechanical power, it is provided that a fan or other means of a proper construction shall be provided, maintained and used for regulating the temperature in every ironing-room, and for carrying away the steam in every washhouse in the laundry. All stoves for heating irons shall be sufficiently separated from any ironing-room, gas irons emitting any noxious fumes shall not be used, and all the floors shall be kept in good condition and drained in such a manner as will allow the water to flow off freely.

The Act of 1895 extends to all bakehouses certain requirements previously limited to bakehouses not let or occupied before the 1st June, 1883. These requirements are that no water-closet, earth-closet, privy or ashpit shall be within or communicate directly with the bakehouse, that the cistern supplying water to the bakehouse shall be separate and distinct from any cistern supplying water to a water-closet, and that no drain or pipe for carrying off fœcal or sewage matter shall have an opening within the bakehouse. The Act of 1895, moreover, prohibits the use as a bakehouse of a place underground unless it is used at the commencement of the Act. The Public Health Committee of the Council has communicated with London sanitary authorities suggesting the preparation of a register showing all underground bakehouses existing, so that they may be able better to deal with any underground bakehouses not occupied at this time.

The duty of notifying to the chief inspector of factories cases of lead, phosphorus or arsenical poisoning or anthrax contracted in any factory or workshop is imposed upon medical practitioners, and in every factory and workshop where lead, arsenic or any other poisonous substance is used, suitable washing conveniences must be provided for the use of the persons employed.

References to inspection of workshops are found in many of the reports of the medical officers of health.

Paddington.—The factory inspector sent 15 notices to the health department dealing with overcrowding, want of water-closet accommodation, dirty and dilapidated workshops; all these were dealt with by the sanitary inspectors.

Kensington.—The work carried on by the women inspectors is set out by the medical officer of health who regrets that the vestry decided that all the work could be done by one person, and that the appointment of the second inspector was allowed to lapse at the end of the year for which she was appointed. The report of work done from April, 1895, to January 4th, 1896, shows that there were 634 workshops on the register of which 347 were under the heading of dressmakers, 240 laundries (which after January 1st, 1896, came under the heading of factories), and 47 miscellaneous. All these were regularly inspected, 144 notices were served, 124 improvements were effected, such as better ventilation, floors, roofs, &c. repaired, rooms cleansed and whitewashed; in 66 instances overcrowding was abated, and 88 nuisances were reported to the medical officer of health, who states that he cannot speak too highly of the way in which the work of inspection has been carried out.

St. George, Hanover-square.—A house-to-house inspection was made in certain districts, and where complaints were received, special inquiries were instituted. The number of workshops and workplaces inspected was 120; of these the sanitary arrangements of 100 were defective; of the 165 workrooms in the above, 38 were overcrowded and 12 dirty; there were altogether 131 persons in excess of the accommodation, taking only 250 cubic feet as the space allowed for each person.

St. James, Westminster.—There were 17 workshops cleansed and whitewashed, and 4 cases of overcrowding abated.

Marylebone.—A special inspector was appointed to carry out the work connected with factories and workshops, and the medical officer of health suggests in his report that it might be well for the vestry to consider the advisability of also appointing a woman inspector as "there are several places in the parish which cannot properly be supervised by anyone of the male sex." The inspector paid 251 visits to outworkers, ascertained the cubic space and condition of ventilation of 212 workrooms, and inspected and reported on 26 new places of business, besides attending to necessary works connected with places previously inspected.

St. Pancras.—The medical officer of health reported to the vestry during the year on the duties and powers under the various Factory Acts, including that passed in 1895, and explained that the work of the health department would be greatly increased by the recent legislation. A male and a female sanitary inspector were appointed during 1895, specially authorised to inspect workshops, the latter attending to the duties relating to laundries and workshops where women and young persons were employed. Registers of all workplaces are being compiled.

Islington.—Two inspectors of workshops, one male and one female, were appointed during the year, and they have already effected much good in the district. They have inspected 3,094 workrooms, including 693 laundries and 371 dressmakers' workrooms, many of which were overcrowded. In 21 workrooms the ventilation was deficient, and in 90 instances they were dirty. Workplaces, numbering 208, were discovered which were not on the register.

Hackney.—The number of workshops inspected was 170, of these 96 were found to be in an insanitary condition. At the end of the year the nuisances in 79 of the workshops were abated, and the necessary works in the other places were in progress.

St. Giles.—Where necessary, cleansing and sanitary orders were made upon the owners of workshops for ensuring the health of the workpeople.

St. Martin-in-the-Fields.—"Laundries have been inspected, also workshops, where known to exist."

Strand.—The medical officer of health reports that great good has resulted from the visits of the special inspector, 496 workplaces have been inspected, and orders requiring cleansing have been served in reference to 225, the ventilation in six has been improved, and overcrowding in three has been abated. Laundries have also been frequently visited. With regard to outworkers a list of 269 persons employed in the district has been prepared, most of them being engaged in making wearing apparel. Their homes and workplaces have been frequently visited, and where necessary the rooms ordered to be cleansed.

City.—The factory inspectors sent 93 communications to the medical officer of health relating to 43 cases of insanitary condition, 41 cases of change of premises, and nine cases of notice given by firms about to occupy premises for manufacturing purposes.

Shoreditch.—Notices were received from the factory inspectors concerning insanitary conditions in 39 workshops and factories, in every case notices were served by the vestry's inspectors, and the nuisances abated; they related mostly to overcrowding, dirt, want of water-closet accommodation and bad smells.

Whitechapel.—During the year 66 workshops were cleansed, in 90 the ventilation was improved, in 22 overcrowding was abated, 30 were closed, and in 60 additional water-closet accommodation was provided. Proceedings were successfully undertaken in 17 cases.

St. George-in-the-East.—The number of workshops inspected was 237, of which 45 were cleansed and repaired, and in 42 cases overcrowding was remedied.

Limehouse.—There were 211 "factory" inspections made during the year, and 27 "factory" nuisances abated.

Mile-end Old-town.—The number of workshops in the district has increased by about 60 during the last two years; there are now 280 on the register exclusive of laundries, these have been inspected and re-inspected during the year, 48 were cleansed and 96 measured; in 10 overcrowding was abated, and 265 notices were sent as to the numbers allowed in the workshops. The trade most frequently carried on in workrooms is tailoring; but the boot and slipper trade is increasing, the employer and employees in nine-tenths of the cases being aliens.

Poplar (Bow and Poplar).—Workshops were inspected in both districts and improvements effected in ventilation; in cases of insufficient water-closet accommodation additional water-closets were provided, and overcrowding abated.

St. George, Southwark.—The workshops now registered number 242, of which 78 have been registered during the year; 29 notices have been served in respect of these places.

Bermondsey.—"A large number of factories and workshops were inspected, and in many instances increased water-closet accommodation provided, and other sanitary improvements carried out."

Rotherhithe.—The sanitary inspector reports that notices were served in two instances, on one occasion owing to the dirty condition of a workshop, on another because of the want of sufficient water-closet accommodation. The notices were complied with.

Battersea.—The medical officer of health states that "the passing of the Act has entailed considerable additional work on the sanitary department."

Wandsworth (Clapham).—The workshops inspected numbered 50, of which 3 required cleansing, 2 were overcrowded, and 5 required additional water-closet accommodation. (*Putney*).—"All workshops have been inspected and found in a satisfactory condition." Lists of outworkers have been obtained twice during the year from all workshops, and notices have been sent to the authorities of the districts where they reside, but no notices have been received from any other sanitary authority, therefore "the utility of this order is practically nil." (*Wandsworth*).—Five workshops were inspected during the year, and notices were served where necessary and promptly complied with.

Camberwell.—The number of workshops inspected was 218.

Greenwich.—(*Greenwich*)—Notices were served in 37 instances to increase the water-closet accommodation in workshops, legal proceedings being taken against occupiers of two workshops; other occupiers were ordered in 4 cases to cleanse, in 2 to abate overcrowding, one workshop was closed as being underground and unfit for occupation, and 62 visits were made by inspectors to factories and workshops. (*Deptford*)—"Workshops and factories have continued to receive careful attention as to cleansing, ventilation, overcrowding and closet accommodation. 125 were visited during the year."

The medical officers of health of the following districts refer to the inspection of bakehouses and their condition:—

Paddington.—Half-yearly visits were made to the bakehouses of which there are 80 in use, nearly all (74) being underground. Considerable improvement has been effected in them since they were first inspected in 1894.

Kensington.—The bakehouses, to the number of 138, were regularly inspected, and where necessary, action was taken to ensure their sanitary condition.

Hammersmith.—The sanitary inspectors made a quarterly inspection of all the bakehouses in the parish, 59 in number, 38 of these being underground. In 8 instances notices were served upon the bakers and complied with.

Fulham.—There are 77 bakehouses in the district, they were regularly inspected, and generally found in a fairly satisfactory condition. Notices were served in 8 instances, and in one the owner was prosecuted, but as he remedied the nuisance at once a nominal penalty was inflicted.

Chelsea.—The 57 bakehouses were inspected during the year, 45 of them are underground.

St. George, Hanover-square.—There are 47 bakehouses on the register, these have been inspected thoroughly and the sanitary condition of some improved, notices issued, and the necessary works carried out by the owners.

Westminster.—The bakehouses were systematically inspected, and attention was paid to overcrowding, 11 bakehouses required limewhiting.

St. James, Westminster.—The sanitary inspectors report that the whole of the bakehouses were visited during the year, they number 28, of these 4 being underground and having been closed during part of the year, will not be allowed to be again used as bakehouses; the ventilation and water-closet accommodation of several were improved; the majority have been well kept.

Marylebone.—Inspections were made of the 126 bakehouses in the district.

Hampstead.—"The bakehouses now number 40 and are regularly inspected, with the result that the sanitary conditions have been fairly maintained."

St. Pancras.—There were 196 bakehouses on the register, 30 being below the level of the street, one has been since closed (January, 1896). A special inspector was appointed during the year to inspect bakehouses and workshops.

Islington.—There are 238 bakehouses to which the special inspector paid 558 visits; 410 nuisances were found to exist, all of which were duly abated. The medical officer of health states that "they have been systematically inspected, every one being put into such a cleanly state that never before have they been in such good order and so free from nuisances."

Stoke Newington.—There are 15 bakehouses in the district, 11 being underground; these have been frequently inspected; in 5 cases notices were served to comply with sanitary requirements, and these were duly carried out.

Hackney.—All the bakehouses, numbering 108, were re-inspected during the year, and notices were served to abate any nuisance and for cleansing. All the work was done within a reasonable time.

St. Giles.—The number of bakehouses in the district was 28, of these 21 are underground. They were all regularly inspected, and where necessary orders were served for their improvement.

St. Martin-in-the-Fields.—"The bakehouses have been duly inspected and found in a clean and satisfactory condition." In one of the bakehouses the owner consented to put up a partition between the water-closet and bakehouse so as to prevent direct communication.

Strand.—In this district exist 29 bakehouses, under the following headings:—Bread bakers, 23; pastry cooks, 3; confectioners, 2; muffin baker, 1. These have been frequently and systematically inspected; each has been cleansed and lime-washed twice during the year. In one instance legal proceedings were taken to prevent a place connected with the bakehouse being used for sleeping purposes.

Holborn.—All the bakehouses, 22 in number, have been inspected and re-inspected, and attention has been paid to all sanitary defects.

Clerkenwell.—"The bakehouses were inspected twice in the year. They were 61 in number, clean, and in good order."

St. Luke.—During the year 36 bakehouses, of which 19 are situated underground, were visited, and notices were served concerning 16. The medical officer of health reports that improvement in the bakehouses is gradually taking place, though they are not yet wholly satisfactory. The number in which water is drawn direct from the main instead of through cisterns has increased from 3 in 1893 to 21 in 1895.

Shoreditch.—"The bakehouses in the parish, 92 in number, were all inspected, and an improvement in their condition was generally observable. As the result of inspection 73 were found to be satisfactory, 16 fairly so, and 3 were unsatisfactory." In 16 instances greater attention to cleanliness was needed; lime-washing was required in 11 cases, and cautions as to animals in bakehouses were given in 5 instances; drainage works were executed in 6 bakehouses under the supervision of the vestry's inspectors.

Bethnal-green.—Regular inspection was made of 104 bakehouses in the district.

Whitechapel.—The use of 1 bakehouse as a sleeping apartment was discontinued, 1 bakehouse was closed, 29 were cleansed, and in 9 the ventilation was improved.

St. George-in-the-East.—The bakehouses, 78 in number, "were inspected and were found to be for the most part in good sanitary condition."

Limehouse.—"The bakehouses (45) were inspected and reported upon."

Mile-end Old-town.—The inspection of bakehouses has taken place twice during the year, and though a number are underground, in not the best possible situation, they are regularly lime-whited and kept in a cleanly condition.

Poplar (*Poplar and Bromley*).—There are 101 bakehouses in the two districts, of which 95 were in use when inspection was made at the beginning of 1895. Of the total, 5 were partially underground and 26 were wholly underground, 19 had drains inside the bakehouse, 5 had sinks inside, all except 3 had water direct from the main. In 4 instances the attention of the bakers was called to the state of the troughs. (*Bow*).—The bakehouses were inspected four times during the year, and where necessary notices for cleansing were served.

St. George, Southwark.—There are 52 bakehouses under inspection in the district. The medical officer of health reports that he has been instructed by the vestry to take action against 8 occupiers of retail bakeries within the last 18 months, it having been decided by the authority that the premises were, on sanitary grounds, unfit for bakehouses. Of this number only 3 were closed, and though the grosser defects in the others were remedied, structural defects of a serious character still exist.

Newington.—The number of bakehouses in the parish is 75, of which 51 are on the ground floor, and 24 in basements, of the latter number 3 are eel pie shops. They were all in a clean and satisfactory condition, with the exception of a few needing lime-washing, and 1 in which insanitary conditions existed, which have since been remedied.

St. Olave.—There are only 9 bakehouses in the district; they were inspected twice during the year; the worst of them has been since closed and demolished. Notices were served in 3 cases, where the utensils were dirty, and 1 where there were accumulations under the troughs.

Bermondsey.—During the year "81 bakehouses were inspected and maintained in a sanitary state;" of these 38 were underground.

Rotherhithe.—"The bakehouses have been inspected twice." The inspector reports that in 12 instances notices were served on the bakers, who complied with them in each instance.

Battersea.—A register is kept of all bakehouses in use in the parish; during the year 460 inspections were made, and 49 nuisances abated relating to bakehouses.

Wandsworth (*Clapham*).—"The bakehouses, 49 in number, were inspected twice during the year; lime-washing was required in 16 instances in May and 17 in October." (*Putney*).—"All bakehouses have been inspected twice during the year and found in a satisfactory condition, with the exception of three concerning which notices were served and the necessary cleaning done." (*Streatham*).—"The usual inspection of bakehouses has been effected and all sanitary requirements readily complied with." (*Wandsworth*).—All bakehouses have been inspected twice during the year, and where necessary the usual notices have been served. "Generally speaking they are all kept thoroughly clean."

Camberwell.—In all, 545 inspections of bakehouses have been made, 167 of them having been made by the medical officer of health, who reports that "owing to the attention which has always been given to them, their condition, taken as a whole, is by no means so bad as we read of as existing in other parts of the metropolis."

Greenwich.—The bakehouses were inspected, 144 visits being made, and those that were in an insanitary condition were reported to the Board. Notices were served in 150 cases to cleanse and lime-wash bakehouses, and in one instance to abolish an opening to a drain in a bakehouse. *Deptford.*—Bakehouses have received frequent and careful inspection. The total number is 91. Of these 51 are above ground, 38 below ground, and 2 partially so. They are all well maintained, and in a cleanly condition.

Lewisham.—The bakehouses, which number 90, are regularly inspected.

Woolwich.—"There are 40 bakehouses in the district; structurally many of them are most defective, but legally the greatest difficulties exist for abolishing them."

Lee (*Charlton*).—The bakehouses have received the usual attention, and beyond some minor matters there is no fault to find with their condition. (*Eltham*).—The bakehouses, 8 in number, were visited, and were found in a fairly clean condition. (*Lee*).—The bakehouses in the district (there are none in Kidbrooke) were visited, and in 6 instances, notices were served to remedy sanitary defects.

Plumstead.—The usual half-yearly inspection of the bakehouses was made. The medical officer of health reports that "there are now no bakehouses in a decidedly bad condition, and most of them are very well kept."

Unsound Food.

Many of the reports of the medical officers of health contain accounts of seizures of food considered to be unwholesome, and in some cases convictions have been obtained against the persons exposing the food for sale. The food seized generally consisted of meat, fish, fruit or vegetables. Seizures were made in the following districts:—Paddington, Chelsea, Westminster, St. James, Westminster, Marylebone, Hampstead, St. Pancras, Hackney, St. Giles, Strand, Holborn, St. Luke, City, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile-end Old-town, Poplar, St. Saviour, Southwark, St. George, Southwark, St. Olave, Bermondsey, Battersea, Wandsworth, Camberwell, Greenwich (Deptford), Plumstead. In some of the reports details are given as to the seizures; in the reports of the medical officers of health of Westminster, St. Pancras, Strand, St. Luke, Shoreditch and Whitechapel, the quantities and kind of food seized are given.

The medical officer of health of the City states that in 1895 347,283 tons of meat were delivered at the Central Meat Markets, Smithfield, and 599 tons were seized, this amount including a very small proportion from Aldgate and Leadenhall. Unsound food consisting of bilberries, onions, tea, oranges, sardines, Camembert cheeses, ox-tongues, beetroots, yeast, plums, eggs and grapes, often in large quantities, was dealt with during the year. An especially large number of Australian rabbits were seized, as many as 26,150, on the 26th July and following days. Dr. Saunders states that Australian rabbits arrive in this country frozen, but become soft in transit from the ship to the cold-air stores. In a number of instances farmers and others were successfully prosecuted for sending

unwholesome meat to the City markets. The sale of diseased meat in the Holborn district, in the immediate vicinity of, but outside, the Central Meat Market, was under the consideration of the sanitary authority, attention having been called to the matter, the medical officer of health states, "in Parliament, the London County Council and the press, and by the City Commissioners of Sewers."

The sanitary authority had before it proposals with offers of assistance by the City Commissioners of Sewers and Dr. Sedgwick Saunders, and eventually decided to appoint a special officer for the purpose of food inspection, who began his duties on the 1st January, 1896. In the last six months of the year 1895 considerable quantities of meat unfit for human food were seized and destroyed; the medical officer of health states that "there have been a great many prosecutions this year, and there are many others about to be prosecuted."

In Mile-end Old-town in July a seizure was made by the medical officer of health of a large quantity of tins of meat and a number of large tins of corned beef, salmon, and lobster unfit for food. In October "further seizures were made and proceedings instituted, with the result that two defendants were sentenced at the Old Bailey to six months imprisonment with hard labour, the Recorder referring to their guilty knowledge, and to the large extent to which the trade had been carried on.

In St. Olave, among other articles of food, 2,672 tins of meat were destroyed.

The Manufacture and Sale of Ice-cream

References are made in some of the reports of medical officers of health to the manufacture and sale of ice-cream by itinerant vendors, and several London sanitary authorities, among them the Vestries of Hammersmith and Bethnal-green and the District Boards of St. Giles and St. Saviour Southwark, decided to unite with the Vestry of Clerkenwell in making a representation to the Local Government Board asking for legislation to provide for the registration of vendors of ice-cream, and for the regulation of the conditions under which ice-cream is manufactured. Similar action was taken by the Society of Medical Officers of Health. In reply, the Local Government Board suggested that evidence on the subject should be offered to the Select Committee on Food Products Adulteration. It is stated, however, this Committee decided to receive no more evidence.

The unwholesome conditions under which this trade is often conducted is referred to in the report of Dr. Hoyle, who acted as temporary medical officer of health of Holborn, and who says that the trade is largely carried on in the Italian colony "under circumstances the reverse of hygienic." The medical officer of health of Poplar found tins used in the manufacture stored near the water-closet in a covered yard leading from the sleeping room. The Clerkenwell Vestry submitted samples of ice-cream to Dr. Macfadyen, who reported on the subject generally, and expressed the opinion that "the present state of affairs undoubtedly constitutes a source of danger to the health of the children of the poorer classes by whom the ice-creams are mainly consumed."

A subject bearing on that of ice-cream manufacture is the collection of ice from the London canals in winter. Such ice is in the main used only for freezing purposes in various trades, but the medical officer of health of Poplar thus writes concerning it: "It seems to be a practice with ice-cream vendors to collect ice from docks, canals and ditches for freezing purposes, but it has transpired that ice forms an ingredient of what is known as 'water ice,' which is also sold in the streets. In two of the premises large quantities of ice were found to be stored in cellars. The ice in one of the cellars I visited had been taken from the Millwall Docks; it was very dirty and looked like pieces of coal, and it occurred to me that should any of it—which was very likely—be mixed with the ice-cream there would be pollution at once."

The medical officer of health of Paddington referring to the same subject says, "during the winter of 1894–95 large quantities of ice were taken from the canals, and it was thought that the use of such ice derived from water of a highly polluted character would lead to a large amount of enteric fever. The experience of the year has not justified these fears. The bulk of the ice stored in this parish is used in the manufacture of ice-cream by the Italians. From inquiries made it appears that no ice enters into the composition of ice-cream, and that it is used solely as a freezing mixture with salt. The vessels in which the cream is kept are of sheet metal, with lids that fit as closely as they can be made to do. In making 'water ices,' rough ice is sometimes used, but such ice must be of the cleanest description, or else the 'ice' is too uninviting to be sold."

The effect of Food derived from Tuberculous Animals.

In the year 1890 a Royal Commission was appointed to inquire and report—

> "What is the effect, if any, of food derived from tuberculous animals on human health; and, if "prejudicial, what are the circumstances and conditions with regard to tuberculosis in the animal which "produce that effect upon man."

In the year 1895, the Royal Commission issued their report, which contained the following recapitulation—

> We have obtained ample evidence that food derived from tuberculous animals can produce tuberculosis in healthy animals. The proportion of animals contracting tuberculosis after experimental use of such food, is different in one and another class of animals; both carnivora and herbivora are susceptible, and the proportion is high in pigs. In the absence of direct experiments on human subjects, we infer that man also can acquire tuberculosis by feeding upon materials derived from tuberculous food-animals.
>
> The actual amount of tuberculous disease among certain classes of food-animals is so large as to afford to man frequent occasions for contracting tuberculous disease through his food. As to the proportion of tuberculosis acquired by man through his food or through other means, we can form no definite opinion, but we think it probable that an appreciable part of the tuberculosis that affects man is obtained through his food.

The circumstances and conditions with regard to the tuberculosis in the food-animal which lead to the production of tuberculosis in man are, ultimately, the presence of active tuberculous matter in the food taken from the animal and consumed by the man in a raw or insufficiently cooked state.

Tuberculous disease is observed most frequently in cattle and in swine. It is found far more frequently in cattle (full-grown) than in calves, and with much greater frequency in cows kept in town cow-houses than in cattle bred for the express purpose of slaughter. Tuberculous matter is but seldom found in the meat substance of the carcase; it is principally found in the organs, membranes and glands. There is reason to believe that tuberculous matter, when present in meat sold to the public, is more commonly due to the contamination of the surface of the meat with material derived from other diseased parts, than to disease of the meat itself. The same matter is found in the milk of cows when the udder has become invaded by tuberculous disease, and seldom or never when the udder is not diseased. Tuberculous matter in milk is exceptionally active in its operation upon animals fed either with the milk or with dairy produce derived from it. No doubt the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter.

The recognition of tuberculous disease during the life of an animal is not wholly unattended with difficulty. Happily, however, it can, in most cases, be detected with certainty in the udder of milch cows.

Provided every part that is the seat of tuberculous matter be avoided and destroyed, and provided care be taken to save from contamination by such matter the actual meat substance of a tuberculous animal, a great deal of meat from animals affected by tuberculosis may be eaten without risk to the consumer.

Ordinary processes of cooking applied to meat which has got contaminated on its surface are probably sufficient to destroy the harmful quality. They would not avail to render wholesome any piece of meat that contained tuberculous matter in its deeper parts. In regard to milk we are aware of the preference by English people for drinking cows' milk raw, a practice attended by danger, on account of possible contamination by pathogenic organisms. The boiling of milk, even for a moment, would probably be sufficient to remove the very dangerous quality of tuberculous milk.

The Commissioners also added—

We note that your Majesty's gracious commands do not extend to enquiry or report on administrative procedures available for reducing the amount of tuberculous material in the food supplied by animals to man, and we have regarded such questions as being beyond our province.

A Royal Commission has since been appointed to deal with this question.

Water supply.

The report of the water examiner appointed under the Metropolis Water Act, 1871, supplies the following information as to the capacity of the subsidence reservoirs and the monthly average rate of filtration of the several water companies in 1895—

	Number of days' supply.	Monthly rate of filtration per square foot per hour. Mean monthly average. Gallons.	Maximum monthly average. Gallons.
Chelsea	12·0	1·75	1·75
East London	16·9	1·33	1·33
Grand Junction	3·3	1·79	2·12
Lambeth	5·3	2·02	2·28
New River...	4·4	2·27	2·50
Southwark and Vauxhall ...	4·1	1·50	1·50
West Middlesex	5·6	1·39	1·50

Dr. Frankland, in his report to the Local Government Board on the Metropolitan water supply, includes tables of which he thus writes—

Tables C. and D. are very important; they record the amounts of organic carbon and organic nitrogen in each of the waters as determined by combustion with oxide of copper. Since these are the only two ingredients of the organic matter which can be accurately determined, these results are the only available evidence of the relative proportions of organic matter present in the waters. The tables show that, whilst both the Thames and Lee were occasionally considerably polluted with organic matter, the water actually delivered by the companies drawing from these rivers, was only found to contain it in exceptionally large quantity in the months of November and December, and this in the case of the Chelsea Company only in December, and in that of the Southwark, Grand Junction and Lambeth companies, only in November. The water distributed from the Lee by the New River and East London companies, on the other hand, never contained an abnormal proportion of organic matter, and was generally throughout the year superior to the Thames-derived waters of the Chelsea, West Middlesex, Southwark, Grand Junction and Lambeth companies; the New River Company's water often rivalling or even surpassing the average of the deep-well waters in respect of purity.

Dr. Frankland also gives in tabular form the results of his bacterioscopic examination of the water supplied to London, and, referring to these tables, thus reports concerning the following companies—

Chelsea Company.—"Except in February, the Chelsea Company delivered during the whole year, water of a high degree of bacterial purity, rivalling in some cases deep-well water in this respect. In the month of November, when the Thames at the intake contained no less than 29,260 microbes per c.c., this company's water, which was being pumped from the general filter wells into the supply mains, contained only 20."

West Middlesex Company.—"Except in the months of January, February, and March, when intense cold prevailed, this company delivered water of a high degree of bacterial purity, rivalling that of the deep-well water of the Kent Company. In November the number of microbes was only 12 per c.c., when the raw water at the intake contained 29,260."

Southwark and Vauxhall Company.—"The filtration plants of the Chelsea and West Middlesex Companies deliver the filtered water into general receptacles or wells, from which the samples for bacterioscopic examination are drawn, and there is consequently no opportunity at these works for obtaining separate samples from each of the filter beds. At the Southwark Company's works, how-

ever, I have been able to obtain samples from several of the separate filters, and the above table, giving the results of the examination of their samples, shows several cases in which effective bacterial filtration was not attained. Thus No. 8 filter only delivered two satisfactory samples during the whole year. Looking only at the average results of each filter, this record is a bad one, for it was only No. 3 filter which delivered water containing fewer than 100 microbes per c.c., and one sample only of this water was examined; but an inspection of the separate numbers in the table shows that this would not be a fair statement of the case. Thus, No. 4 filter only infringed the bacterial standard twice during the year, and this occurred when the raw Thames was, bacterially, very impure; whilst No. 9 filter only infringed very slightly."

Grand Junction Company.—"The small amount of storage possessed by this company renders it difficult for them at all times to maintain efficient bacterial filtration, and six of the 13 samples collected at the Hampton Works during the year contained an excess of microbes, or their spores, over 100 per c.c.; whilst four out of the 25 samples collected at the Kew Works also contained an abnormal number of microbes. Most of the abnormal results occurred when the raw river water was, bacterially, in a bad condition, and during severe frost."

Lambeth Company.—"This table shows that in the first three months of the year the number of microbes largely exceeded 100 per c.c. This occurred during the continuance of the severe frost, which seriously affected the filtration plants of all the companies. Except in these months, the water delivered by the Lambeth Company was of most excellent bacterial quality; and in November, when the raw Thames water contained 29,260 microbes per c.c., the filtered water delivered by this Company contained only eight."

New River Company.—"From this table it is seen that out of 36 samples, 7 contained microbes in excess of 100 per c.c. All 7 samples were collected in January, February and March, during exceptionally severe frost. On all other occasions the filtered water was bacterially of excellent quality; and in June, when the New River cut contained 1,920 microbes per c.c., the filtered water in the main well contained only 8, whilst that of No. 1 filter well contained only 4 per c.c."

East London Company.—"This table shows that, during the very severe weather of January, February and March, this company's filters were working very badly; but, with these exceptions, the standard of 100 microbes per c.c. was slightly infringed in only four samples out of 27."

These observations appear to be based on monthly examinations of samples of water from the receptacles or wells of the water companies. A more frequent testing of such water is obviously needed to show how filters were working in the intervals between these examinations.

Dr. Frankland describes important and interesting experiments on the effect of sunshine upon bacterial life in water which have been made by Mr. Burgess. These experiments show, Dr. Frankland writes, that "on May 15th the germicidal effect of sunlight on Thames microbes was nil at depths of one foot and upwards."

The low temperature during the early part of the year led to the freezing of water pipes and soil pipes, often causing not only inconvenience but serious nuisance especially in blocks of artizans' dwellings, where many water-closets are connected with a single soil pipe. The medical officer of health of Fulham referring to the regulation requiring communication pipes to be laid at least 2 feet 6 inches below the surface, writes—"The mains, also laid since 1872, should not have been laid at a less depth; but this is not the case, as some have been found to be at a depth varying from 15 to 28 inches, and there can be no doubt that if the regulations had been duly carried out, many householders would have been spared great inconvenience." He states also that the records of temperature at the Botanical Gardens show that the frost in that locality did not penetrate to quite 2 feet in the ground "so that though, of course, the nature of the soil in other places would cause a difference in the penetration of cold, probably if all main pipes have been laid to a depth of not less than 30 inches, few would have been frozen."

Numerous memorials having been addressed to the Local Government Board, General Scott was appointed to hold an inquiry into the subject so far as the areas of the Grand Junction, Kent, Lambeth, and Southwark and Vauxhall Companies were concerned. The report of the Local Government Board contains the following reference to the inquiry—

> "General Scott reported, as a result of the inquiry, that a proportion of the mains of the companies concerned, and a large number of the communication pipes of the consumers were insufficiently protected from the effects of frost, that the water supply to a large number of houses had been interrupted for considerable periods of time, and that this failure in the supply had been caused by the freezing of the water in the pipes; by the leakage subsequently ensuing, and also by a wilful waste on the part of the consumers. He recommended that a proper amount of protection for mains and communication pipes should be provided; that an efficient system for regulating house fittings, and for the prevention of waste should be built up; and that the power of supply should be continually adjusted to the most extreme contingencies of frost and drought which can reasonably be foreseen.
>
> We are glad to be able to state that several of the companies have carried out, on a large scale, the work of lowering their mains, and that, in General Scott's opinion, the depths now generally adopted should afford sufficient protection."

Serious deficiency of water occurred, moreover, in the summer months in the eastern districts of London supplied by the East London Waterworks Company. The reports of medical officers of health of those districts give account of the conditions which were caused by this deficiency.

In Bethnal-green "overflowing closets and choked drains abounded all over the district," and the medical officer of health received numerous complaints of inconvenience and distress caused by the short supply. He writes—

> "I know of cases of sudden illness in the night where poultices could not be made and hot fomentations and hot baths could not be used for the relief of pain and spasm. Many tradesmen and manufacturers complained that they were hindered and greatly inconvenienced in the conduct of their business by the short supply. All sorts of receptacles were requisitioned for storage purposes; in addition to proper water-cans and jugs, foot-baths, slop-pails, buckets, kettles, and pots and pans of various kinds were used. As a rule people do not possess a superabundance of articles of this nature,

and much inconvenience resulted to the poorer inhabitants from inability to put their cooking utensils to their proper use. Moreover, these temporary receptacles were often kept in most improper positions, under beds and in corners of living-rooms, where the contents were certain to become foul."

Communications passed between the Hackney Vestry and other authorities concerned, and complaints were made to the Local Government Board of the insufficiency of supply. The Board therefore ordered an inquiry, appointing Colonel Ducat and Dr. F. W. Barry to hold such inquiry. The inquiry was held at the Hackney Town-hall in October, 1895, and the following is a summary of the results of their consideration of the evidence placed before them—

I. That the scarcity of water in the East London Water Company's area during the summer of 1895 was due to the following causes :—

(*a*) Exceptional waste, beyond the undue waste of ordinary years, of water owing (1) to non-repair of fractures in the consumers' pipes, brought about during the unusually long and severe frost of the previous winter; and (2) to excessive garden watering during the drought in May and June.

(*b*) Decrease in the volume of the river Lee due to the unprecedented drought which occurred during the first six months of 1895.

(*c*) Means of storage possessed by the East London Water Company inadequate to enable them to meet the combined waste and deficiency of water noted under headings (*a*) and (*b*).

We would also note under this heading that in our opinion the inconvenience experienced by consumers was much aggravated by the want of proper means for domestic storage of water.

II. That although the scarcity of water undoubtedly gave rise to considerable inconvenience and hardship there is no evidence to show that it had any appreciable deleterious influence upon the public health within the area of the East London Water Company.

III. (*a*) That steps have already been taken by the East London Water Company which should in our opinion afford sufficient storage of water to meet any deficiency in the supply of water within their district for many years to come.

(*b*) That for the protection of the consumer against unavoidable temporary intermissions of the supply, we consider that there would be distinct advantage in having properly designed means for storage of water in houses.

Water fittings.

In 1895 Colonel Ducat held an inquiry into an application by the Council for the alteration of regulations as to water fittings, under the Metropolis Water Act, 1871. Particulars as to the alterations desired and the result of the enquiry are given in my last annual report.

Proceedings of the Council as to London water supply.

The following is a summary of the proceedings of the Council in 1895 in connection with London water supply. The Water Committee presented to the Council on the 12th February, 1895, a report reviewing the report of the Royal Commissions on London Water Supply, and concluding with a recommendation, which was adopted by the Council, that the Council should pass the following resolutions—

(1) That the Council is of opinion that the scheme for a system of storage reservoirs, presented to the Royal Commission on Water Supply by the water companies, coupled with the proposal to abstract large additional quantities of water from the rivers, is not the proper method of meeting the future wants of London.

(2) That any future capital expenditure on works in the Thames and Lee valleys for the supply of London should be regarded as of a temporary character, and should be restricted to such improvements as may be for the time indispensable.

(3) That the true solution of the problem is the obtaining of the necessary additional supplies from a purer source; and that accordingly the Water Committee be instructed to proceed with the preparation of a scheme to be presented for the consideration of the Council as soon as possible with a view to an application to Parliament for the necessary powers.

On the 9th April, 1895, the Council resolved that " in the opinion of the Council it is desirable that the Parliamentary Committee should press forward in Parliament the London County Council's Bills for the purchase of the Lambeth and the Southwark and Vauxhall Water Companies with all possible speed."

On the 18th June, 1895, the Parliamentary Committee reported on the position of the Lambeth Water (Transfer) Bill and the Southwark and Vauxhall (Transfer) Bill which was before a Committee of the House of Commons, and on an intimation from the chairman of that Committee as to the terms of the arbitration clause.

On the 24th June, 1895, the Parliamentary Committee submitted to the Council a draft clause concerning which they reported, " We believe this clause to be in accordance with the decision of the Committee of the House of Commons, and to follow the lines of the policy of the Council for the acquirement of the undertakings of the water companies at the fair and reasonable value of the undertakings, having regard to all the circumstances of the case." The Council adopted the recommendation of the Committee " That the draft clause be tendered to the House of Commons Committee in substitution for the provisions of the Council's Bills relating to terms of transfer."

On the 9th July, 1895, the Parliamentary Committee reported that the Committee of the House of Commons had closed its proceedings, and that the agent had been instructed to suspend all the bills until next session.

On the 15th October, 1895, the Parliamentary Committee reported that the eight bills had been suspended, and the Council, on the recommendation of the Committee, resolved—

That desiring that the supply of water in the metropolis and the surrounding districts should be in the hands of a public authority with a view to a complete agreement with all parties concerned over the entire area supplied, the Council do invite H.M. Government either to deal with the question themselves or to appoint a Royal Commission to do so.

On the 22nd October the Council resolved " that the Council having decided not to proceed with the suspended water bills, and desiring that the Council should be the water authority for London, it be referred to the Parliamentary Committee to report to the Council without delay the lines on which

they suggest that the Government should be asked to legislate. On the presentation of the Committee's report on the 17th December the Council resolved—

(1) That Her Majesty's Government be asked whether they will promote or assist legislation dealing with the metropolitan water supply on the following lines—that the entire control of the water supply within the area of the County of London shall be in the hands of the London consumers, directly represented by the County Council in conjunction with the City Corporation; that the consumers in the metropolitan water area outside the County shall not be denied, or deprived of, similar rights in their respective areas; and that the purchase price of the existing water undertakings shall not be assessed under the provisions of the Lands Clauses Consolidation Act, but shall be based upon the fair and reasonable value of these undertakings, due regard being had to the rights, special circumstances, and obligations of the companies; also that the Parliamentary Committee be instructed to report as to the reply of Her Majesty's Government immediately after the recess.

(2) That the Council do authorise negotiations to be initiated by the Water Committee with the water companies for the purchase of their undertakings.

(3) That, with a view to the Council coming to a decision on the pressing question of new sources of supply as compared with a scheme of storage reservoirs, the Water Committee be instructed to report their final conclusions without delay.

Height of Supply.

On November 5th, 1895, the Council adopted a report of the Parliamentary Committee, stating that they had instructed the Parliamentary agent to prepare a bill providing for the East London Waterworks Company, to be made subject to section 35 of the Waterworks Clauses Act, 1847, which requires that a supply of water shall be constantly laid on at such a pressure as will make the water reach the top storey of the highest houses within the limits of supply.

Constant Water Supply.

The annual report of the chief officer of the Council's Public Control department shows that constant water supply was extended during the year ending March 25th, 1896, so that at that date 86 per cent. of the houses in London were thus receiving their water.

DISINFECTION.

Appended to this report is a return showing the arrangements which exist in the several sanitary districts of London for disinfection. (See Appendix II.). During the year the districts of Poplar and Newington have been provided with steam disinfecting apparatus, and in Islington the steam disinfector, which was in course of erection in 1894, has been completed. In Marylebone and Limehouse and St. Saviour the provision of a steam disinfector has been decided upon, but in the last district no progress appears to have been made.

Account is given in the reports of the medical officers of health of the following districts of the steps taken with regard to disinfection—

Paddington.—Bedding and other goods are always disinfected after all notified diseases except erysipelas, and at times after such diseases as measles and phthisis. The work is still done by the contractor.

Kensington.—The vestry are still considering the question of doing the work without a contractor, and the medical officer of health points out that the expenditure under existing arrangements is excessive and might be materially reduced if the vestry would undertake the work themselves.

Fulham.—The medical officer of health recommends the vestry to undertake the work themselves instead of employing a contractor, and considers that provision for that purpose might be made on the same site as that for the destruction of refuse.

Chelsea.—The Public Health Committee declined to adopt a recommendation of their medical officer of health, that the vestry should themselves cleanse rooms after cases of infectious diseases, but decided that notices for this purpose should be served and enforced where such measures would be likely to prevent the spread of infection.

St. George, Hanover-square.—Notices are sent to the public library to prevent books being issued to infected houses, and certificates are sent to schools after disinfection has been done in houses that the teachers may know when to re-admit children.

Westminster.—The medical officer of health reports that all infected articles from the barracks and hospitals of the 2nd Life Guards are disinfected free of charge by the vestry, the number of articles in 1895 thus disinfected amounting to 835.

Islington.—The medical officer of health describes the new disinfecting station which he says "is probably the most complete in England," and consists of two steam disinfectors, and has a laundry in connection with it.

Stoke Newington.—"During the year arrangements have been made for the disinfection of articles of clothing and of bedding by superheated steam instead of the less effectual method of dry heat formerly employed." Notices are sent to the public library of the existence of any infectious disease, and books from infected houses are not received back by the library until they have been disinfected.

St. Martin-in-the-Fields.—The disinfection is still done by a contractor, and the medical officer of health reports that it is done "with the greatest promptitude and care."

Strand.—In addition to disinfecting after notifiable diseases, disinfection has been done on the certificates of medical men after measles; thorough cleansing of rooms, and in some cases disinfection by steam has been resorted to after deaths from phthisis. Intimation is sent to the public library as in some other districts to prevent the issue of books to infected houses.

City.—Besides articles of clothing, five cabs were disinfected and returned to their owners.

St. George-in-the-East.—The vestry have not yet been able to provide proper buildings and apparatus for the disinfection and destruction of infected articles. The delay has been caused by the breakdown of the negotiations with Limehouse for the joint use of an apparatus, and by the difficulty in finding a suitable site.

Limehouse.—Disinfection is performed by the vestry's officials, and a steam disinfector is to be provided.

Mile-end Old-town.—The medical officer of health reports that he hopes before long an efficient steam apparatus will be in use in the district: the chief difficulty is that of finding a suitable site.

Poplar.—This district has now a steam disinfector.

St. George, Southwark.—The vestry have now entered into a contract with the authorities at Guy's Hospital for the use of their incinerator, in order that all articles that cannot be properly disinfected may be burnt; hitherto they had used the furnace of the steam disinfector, which was an unsatisfactory arrangement.

Battersea.—The vestry have provided for the disinfection of conveyances free of charge, and a notice was issued to cabmen and conductors of omnibuses and tramway cars warning them not to convey persons suffering from infectious disease.

Wandsworth (Clapham).—It has been decided to provide a disinfecting station, but no progress can be made until a suitable site is found; at present the work is done by a contractor. (*Wandsworth*).—The work has been carried out by a contractor to the satisfaction of the medical officer of health.

Lee.—The disinfection for the districts of Lee and Eltham is done by the Plumstead Vestry, who have a steam disinfecting apparatus.

Accommodation for Temporary Shelter.

In the same appendix (II.) will be found an account of the shelters provided in the several districts for the accommodation of persons who are obliged to leave their homes during the disinfection of their rooms.

The provision of shelters is referred to by the medical officers of health of the following districts—

Paddington.—A "family shelter" was opened in September, 1894, for the reception of persons while their rooms are being disinfected. It consists of an ordinary six-roomed cottage, fitted with a bath and furnished with such things as are absolutely necessary. It has proved useful during the year.

Kensington.—The medical officer of health reports that the matter which was referred to the sanitary committee in 1893 "is still under consideration," and he points out the extreme difficulty of disinfecting rooms when the people occupying them have nowhere to go during the period of disinfection. He shows also that there were 101 cases of infectious disease in families occupying a single room.

Fulham.—"No shelter has yet been provided by the vestry," and the medical officer of health advises the matter should be considered when dealing with the scheme for a dust destructor and disinfecting station.

St. George, Hanover-square.—The shelter has been occupied once during the year.

Westminster.—The number of families removed to the vestry's "reception rooms" amounted to 139 during the year, or nearly six times as many as in 1894.

St. Pancras.—The shelter, which has been open two years, afforded accommodation during 1895 for 14 families, consisting of 48 persons.

Islington.—During the year the shelter has only been occupied a few times, but as its usefulness becomes more widely known it will be more generally in demand.

Hackney.—Accommodation was provided for one family while their home was being disinfected.

Strand.—The shelter was made use of by 5 families comprising 15 persons, 9 were sheltered during the day only, 6 during the night also.

Holborn.—A suitable house could not be found in the district, but as the Clerkenwell Vestry had furnished its shelter, arrangements were made for the joint use of this building. The contract, however, did not come into force until March, 1896.

City.—During the year 28 families, comprising 99 persons, were provided with lodging and food, of these, 12 families had each been occupying only one room.

Shoreditch.—The shelter provided by the vestry was used on six occasions, 25 persons being thus accommodated.

St. George-in-the-East.—The shelter has been kept in a cleanly condition and in a proper state of repair; it has been used four times during the year.

St. George, Southwark.—An excellent site has been acquired, and on this ground it has been arranged to erect an eight-roomed house with baths and all necessary appliances.

St. Olave.—The shelter has been used 18 times, 69 persons being thus accommodated, all of whom were provided with sleeping accommodation. In August, as additional room was required, a second cottage was supplied with bedsteads and bedding, and on one occasion was also used as an isolation hospital.

Rotherhithe.—Protests having been made against the use of the house selected early in 1895 for the purposes of a temporary shelter, the vestry were compelled to seek another house. After great delay had taken place, in March, 1896, they discovered one that could be adapted, and they instructed the surveyor to proceed with the necessary works.

Wandsworth (Putney).—The shelter at the parish wharf has not been used during the year.

Greenwich.—During the year 11 families occupied the shelter, 2 from Deptford and 9 from Greenwich districts.

Plumstead.—The "health refuge" was used on two occasions by families comprising 10 persons. The building was examined by the medical officer of health and necessary repairs executed.

Hospital provision for infectious disease.

The report of the Statistical Committee of the Metropolitan Asylums Board for the year 1895 states that the managers in the middle of the year found their available accommodation exhausted and were compelled to restrict the admissions of scarlet fever and diphtheria to the most urgent cases. The outbreak of small-pox in July prevented the managers from utilizing the Gore Farm hospital for fever cases and contributed to this insufficiency of accommodation.

The report states that when all additions to and works in connection with the existing fever hospitals shall have been completed, the accommodation in these hospitals will amount to 3,766 beds. It was expected that these works, with the exception of those at the north-eastern and western hospitals, would be completed in 1896. Beyond this, three new hospitals were to be added, the Brook hospital with 488 beds to be ready in the middle of 1896, the Park hospital with 548 beds towards the end of 1897, and the Grove hospital with 520 beds to be ready somewhat later.

The managers approved plans for the erection on the Joyce-green estate at Dartford of a two-storey brick hospital for the accommodation of 880 cases of small-pox and of 72 cases in special isolation buildings.

During 1895 the managers removed from their houses to the hospitals of the Board 17,770 fever, diphtheria and small-pox patients, and 326 private persons were removed on payment to other places than the managers' hospitals; 724 patients were taken from the out-patient departments of general hospitals to their homes, owing to there being no vacant beds in the managers' hospitals, and 241 enteric fever patients were removed from their homes to general hospitals, where the managers had made arrangements for the reception of this class of patient.

Mortuaries.

The reports of the medical officers of health of the following districts show the improvements and alterations which have been effected in mortuaries during the year as well as the extent of their use—

Hammersmith.—The vestry after some correspondence with the County Council, decided to abandon the site they had purchased for a mortuary at Shepherd's-bush, and to utilise part of the estate purchased by them in Fulham-palace-road for the purposes of a coroner's court and a mortuary.

Westminster.—The mortuary was used during the year by the staff of the Grosvenor hospital for making post-mortem examinations free of expense until the hospital mortuary is built, and, in addition, a large number of bodies were removed to it from different parts of the parish.

Strand.—In future the Savoy dead-house will not be used for the reception of bodies, being quite unsuited for the purpose. There will therefore be only two mortuaries in the district.

Holborn.—The medical officer of health who was temporarily appointed reports that, "It seems to adequately fulfil its purpose, and to be freely made use of by the inhabitants of the district.

Clerkenwell.—"The excellent mortuary still continues to fulfil its most useful purpose."

St. George-in-the-East.—The public mortuary is situated in the parish churchyard, and contains a separate chamber for the bodies of persons dying from infectious disease.

Limehouse.—The existing mortuary was temporarily repaired, and a new mortuary has since been erected and opened.

Mile-end Old-town.—In April, 1895, the new mortuary, which has a specially-constructed chamber for infectious cases, was finished and ready for use; its central situation is a great boon both to coroner and jurymen, as all inquests are held at the Vestry Hall which it adjoins; the opposition to its location has subsided, it has been no nuisance to the neighbourhood, nor a danger to health, nor caused property to deteriorate in value.

Poplar (*Poplar*).—As the Poplar hospital authorities have now built a new mortuary, bodies from that institution are no longer taken to the district mortuary.

St. George, Southwark.—A separate chamber for the deposit of infectious bodies has been provided, and the ventilation of the mortuary has been improved.

St. Olave.—The medical officer of health again this year reminds his authority, as he did in 1894, "that the accommodation at the mortuary is very inadequate, and that there is no satisfactory provision for the holding of inquests." Provisional arrangements were recently made with the authorities of Guy's hospital for the joint use of their mortuary, coroner's court, &c.

Rotherhithe.—By the end of 1895 the new mortuary, mentioned in the report for 1894, was ready for use; it consists of two rooms for bodies, one for infectious and one for non-infectious cases, and space is also provided for post-mortem examinations to be made.

Battersea.—The mortuary accommodation having become inadequate for the needs of the parish, plans have been prepared for "a building far in advance of the majority of metropolitan mortuaries."

Lewisham.—It was anticipated that the necessary buildings at Ladywell would be completed by the end of the year.

Plumstead.—The medical officer of health reports that there is "urgent need for the new mortuary, for which plans have already been prepared."

The London Equalisation of Rates Act, 1894.

The Equalisation of Rates Act provides that the London County Council shall in each year form a fund equal to a rate of sixpence in the pound on the rateable value of London. The contribution from each parish to the fund is to be in proportion to its rateable value. The fund thus formed is to be distributed among the sanitary districts in proportion to their population. Where a sanitary district comprises two or more parishes, and the aggregate of the contributions from such parishes is less than the grant apportioned to the district, the difference shall be paid out of the fund to the sanitary authority of the district, and no payment towards any equalisation charge shall be required from any parish in the district.

Subject to the above, when the contribution from a parish is less than the grant due, the difference shall be paid out of the fund to the sanitary authority of the district forming or comprising the parish; and if it exceeds the grant due to the parish, the Council shall, for the special purpose of meeting the excess, levy on the parish a county contribution as a separate item of the county rate.

Every sum paid to a sanitary authority must be applied in defraying the expenses of the sanitary authority incurred under the Public Health (London) Act, 1891, and so far as not required

for that purpose those incurred in respect of lighting, and so far as not required for that purpose those incurred in respect of streets, and where the sanitary district comprises two or more parishes the sum paid must be apportioned among such parishes in proportion to their population, and the amount apportioned to each parish credited to the parish in the reduction of the rate required from such parish towards the above-mentioned expenses.

The sanitary authority is required to render annually to the Local Government Board a return showing the amount of the sum so paid, and the total expenses incurred in respect of the three subjects mentioned.

If the Local Government Board, under section 101 of the Public Health (London) Act, are satisfied that the sanitary authority have been guilty of such default as in such section mentioned, and have made an order limiting a time for the performance of the duty of the authority, the London County Council shall, if directed by the Local Government Board, withhold the whole or any part of the payment of the sum due to such authority.

The Act provides that for the purposes of the distribution of the fund a census shall be taken on the 29th March, 1896, which census was taken on that date as provided. In other years an estimate of population on the 6th of April will be made by the Registrar-General upon returns which the Local Government Board will receive from the authority making the poor rate in each parish, showing the total number of houses entered in the rate book of the parish.

The following table shows the estimate of population on the 6th of April, 1895, and the amount of excess of contribution over grant or of grant over contribution in respect of each district for each of the half-years ended 30th September, 1895, and 31st March, 1896, respectively—

Sanitary District.	Estimated population, 6th April, 1895.	Equalisation charge, being excess of contribution over grant.	Net grant, being excess of grant over contribution.
		£ s. d.	£ s. d.
Paddington	121,612	4,673 – 9	– – –
Kensington	169,566	9,011 – 10	– – –
Hammersmith	99,166	– – –	2,918 4 8
Fulham	108,049	– – –	4,299 – 8
Chelsea	97,393	– – –	383 4 9
St. George, Hanover-square ...	75,436	16,105 2 11	– – –
Westminster	52,990	4,759 11 –	– – –
St. James	24,432	7,145 18 1	– – –
Marylebone	141,252	5,207 1 1	– – –
Hampstead	74,603	1,871 15 4	– – –
Pancras	241,634	– – –	3,922 15 10
Islington	326,745	– – –	10,843 – 8
Stoke Newington	31,815	– – –	714 1 6
Hackney	203,119	– – –	7,712 8 1
St. Giles	37,892	1,519 16 –	– – –
St. Martin-in-the-Fields	13,121	5,438 5 10	– – –
Strand	24,024	4,825 8 3	– – –
Holborn	32,591	1,653 15 4	– – –
Clerkenwell	64,387	– – –	1,633 – 9
St. Luke	40,320	97 15 9	– – –
London, City of	36,439	48,623 6 5	– – –
Shoreditch	120,379	– – –	3,354 5 4
Bethnal-green	127,025	– – –	7,152 12 10
Whitechapel	74,349	– – –	2,178 7 3
St. George-in-the-East	44,262	– – –	1,955 3 1
Limehouse	55,832	– – –	1,789 3 4
Mile-end Old-town	108,609	– – –	6,031 16 2
Poplar	170,296	– – –	8,009 3 8
St. Saviour, Southwark	24,369	1,899 18 4	– – –
St. George, Southwark	55,996	– – –	2,055 16 6
Newington	115,327	– – –	5,416 18 11
St. Olave	10,967	1,471 15 3	– – –
Bermondsey	83,217	– – –	2,942 6 4
Rotherhithe	37,920	– – –	1,117 19 5
Lambeth	283,265	– – –	8,348 16 3
Battersea	161,152	– – –	5,937 – 5
Wandsworth	178,356	– – –	3,141 8 2
Camberwell	244,307	– – –	10,891 11 6
Greenwich	170,197	– – –	6,058 14 8
Lewisham	100,271	– – –	1,568 6 10
Woolwich	41,978	– – –	1,412 9 3
Lee	38,749	– – –	353 1 2
Plumstead	57,488	– – –	3,306 7 2
The Charterhouse	136	138 17 3	– – –
Gray's-inn	248	177 5 6	– – –
The Close of the Collegiate Church of St. Peter	235	24 13 –	– – –
Inner Temple	88	276 7 –	– – –
Middle Temple	96	175 11 5	– – –
Lincoln's-inn	30	253 13 5	– – –
Staple-inn	19	32 10 11	– – –
Furnival's-inn	97	64 15 6	– – –

Sanitary Condition of Districts.

Lambeth.—The Public Health Committee had under consideration during 1895 a return, which I had presented to the Committee at the end of the preceding year, showing the number of sanitary inspectors in the several districts in London. Communications were addressed to seven sanitary authorities calling attention to the comparatively small number of sanitary inspectors employed by them. Among the seven districts which thus engaged the attention of the Committee was the district of Lambeth. The Vestry of Lambeth having replied that they were not aware of defects in sanitation which were not duly attended to by the present inspectors, Dr. Hamer was instructed to make an inspection of Lambeth and report on its sanitary condition and administration. Dr. Hamer found much reason for regarding the staff of inspectors in Lambeth as insufficient, and reported in this sense. A copy of his report was communicated to the Vestry of Lambeth, who in reply challenged his statements and claimed they were based on insufficient inquiry. I presented to the Committee my observations on the letter of the vestry, and these were communicated to the vestry and to the Local Government Board. The vestry have since increased their staff of sanitary inspectors by the appointment of four additional officers.

A copy of Dr. Hamer's report, the vestry's letter and my observations thereon, will be found in the appendix (see Appendix III.).

Rotherhithe.—The Council had in February, 1893, after inspection by Dr. Young, made a representation to the Local Government Board that the number of sanitary inspectors employed in Rotherhithe was insufficient. In June of that year the Local Government Board informed the Council that the vestry had appointed two assistant sanitary inspectors, and in July Dr. Theodore Thompson inspected the district on behalf of the Board. In June, 1895, the Board gave particulars of the sanitary staff which then existed, and expressed the opinion that the new arrangement should have a trial for twelve months.

Fulham.—In his annual report for 1893 the medical officer of health of Fulham expressed the opinion that the sanitary staff employed by the vestry was quite inadequate to properly perform the duties devolving upon the vestry. After some correspondence with the vestry I was authorised by a Committee of the Council to report upon the sanitary condition and administration of the district. An inquiry was therefore made by Dr. Young, who as a result of such inquiry was led to the conclusion that the appointment of an additional inspector, making a total of five for the district, would probably be sufficient for some time, though a further increase at no distant date might be necessary in the case of a district with such a rapidly increasing population. He also considered that there was need for additional clerical assistance, and that the vestry should, without further delay, provide a shelter for the use of persons during the disinfection of their rooms.

The Council has been in correspondence with the vestry on this subject, and has since been informed that an additional sanitary inspector has been appointed, but that the question of providing a shelter had been deferred pending the decision of the vestry with regard to the erection of a "dust destructor." A copy of Dr. Young's report will be found in the appendix. (See Appendix IV.)

Medical Officers of Health and Sanitary Inspectors.

The Public Health (London) Act, 1891, requires that the Council shall pay a moiety of the salary of every medical officer of health and sanitary inspector appointed or re-appointed after the passing of the Act. Up to the end of the year 1895, 39 medical officers of health and 153 sanitary inspectors had been thus appointed or re-appointed.

The following table indicates those London districts in which the medical officer of health has been elected in accordance with the above provision of the Public Health (London) Act, up to the end of 1895—

District.	District.	District.	District.
*Battersea	*Holborn	*Poplar (*Bow*)	*St. Pancras
Bermondsey	*Islington	* ,, (*Bromley and Poplar*)	*St. Saviour, Southwark
*Bethnal-green	*Kensington	Rotherhithe	*Shoreditch
*Camberwell	*Lambeth	St. George, Hanover-square	*Stoke Newington
*Chelsea	Lee (*Charlton*)	*St. George-in-the-East	*Strand
*City	* ,, (*Eltham*)	*St. George-the-Martyr	Wandsworth (*Clapham*)
Clerkenwell	,, (*Lee*)	*St. Giles	,, (*Putney*)
*Fulham	Lewisham	St. James, Westminster	,, (*Streatham*)
Greenwich (*Deptford*)	*Limehouse	*St. Luke	,, (*Tooting*)
,, (*Greenwich*)	*Mile-end Old-town	*St. Martin-in-the-Fields	* ,, (*Wandsworth*)
*Hackney	*Newington	St. Marylebone	*Westminster
Hammersmith	*Paddington	*St. Olave	Whitechapel
Hampstead	*Plumstead		*Woolwich

Sanitary districts mentioned in Schedule C of the Metropolis Local Management Act, 1855.

*St. Peter, Westminster (close of the Collegiate Church)	*Gray's-inn	*Inner Temple	*Furnival's-inn, Staple-inn, and Liberty-of-the-Charterhouse
	*Lincoln's-inn	*Middle Temple	

* Appointment or re-appointment sanctioned by Local Government Board. A moiety of the salary appertaining to these appointments is payable by the London County Council.

In 1895 I presented to the Public Health Committee a report based upon information supplied by London Medical Officers of Health as to the number of Sanitary Inspectors in each district of the County (see Appendix V.).

By-laws under the Public Health (London) Act, 1891.

At the close of 1895, the Public Health Committee desired information as to the extent to which sanitary authorities had made by-laws under the Public Health (London) Act. Inquiry was made for that purpose, and in December of that year I presented to the Committee a report giving the information required. A copy of this report will be found in the appendix (see Appendix VI.).

In my last report I stated that the date on which an annual report relating to London could be presented to the Council depended on the dates on which the annual reports of the medical officers of health were received. The following table shows the month in which the reports for the year were received—

	No. of reports.		No. of reports.
February, 1896 ...	2	July 1896	4
March „ ...	0	August „	6
April „ ...	4	September „	5
May „ ...	7	October „	3
June „ ...	12	November „	1

Shirley F. Murphy,
Medical Officer of Health.

10th December, 1896.

APPENDIX I.

London County Council.

PUBLIC HEALTH DEPARTMENT,
SPRING GARDENS, S.W.,
19th November, 1895.

Report by the Medical Officer, presenting a Report by Dr. Hamer on a recent outbreak of Enteric Fever in Plumstead.

(Printed by order of the Public Health Committee, 11th November, 1895.)

In presenting Dr. Hamer's report on an outbreak of enteric fever in Plumstead, due to an infected milk supply, I may point out that interest attaches to this outbreak especially because the dairy from which the milk was derived was supplied with water from a source which there is no reason for thinking was contaminated. Inquiry into all the circumstances of the dairy failed to throw light upon the cause of the milk acquiring its infective property. But although the result of the inquiry was completely negative, there is advantage in putting the history of this occurrence on record, inasmuch as an account of the actual facts observed may possibly prove useful to future investigators. Appended to Dr. Hamer's report is the report of Dr. Klein on samples of water from certain ditches which served for the supply of a cow antecedent to her removal to the dairy, and on the milk and the condition generally of this cow.

SHIRLEY F. MURPHY,
Medical Officer of Health.

DR. HAMER'S REPORT.

On May 14th a letter was received from Dr. Sidney Davies, medical officer of health of Plumstead, stating that an outbreak of enteric fever had occurred in his district, 18 cases of this disease confined to a limited area having come to his knowledge since the 9th of May. Dr. Davies wrote, "the information at hand points to the milk supply as the source," and he added that he was taking steps to stop the supply implicated. I saw Dr. Davies on the afternoon of the same day, May 14th, and in company with him visited the premises of the vendor whose milk was under suspicion. At these premises, situated in Princes-road, Plumstead-common-road, 12 cows were kept, and the milk of these cows was the only milk distributed by the vendor. Dr. Davies informed me that there was a special incidence of the malady upon consumers of this milk, and that a meeting of the Public Health Committee of the vestry was to be held the same evening to decide what action should be taken in the matter. At this meeting it was decided, in accordance with the terms of section 71 of the Public Health (London) Act, 1891, to serve 24 hours' notice on the dairyman, to show cause why an order prohibiting the sale of milk from his dairy should not be made. Such an order, bearing date May 15th, was ultimately served upon him.

On the 18th May, however, it was found that milk was being distributed by the Princes-road vendor, and a summons against him was accordingly applied for by the vestry. Difficulty at first arose in connection with proving that the defendant was "selling milk from the dairy," but ultimately, on May 20th, at the Woolwich Police Court, the vendor was convicted and fined £5 and £2 2s. costs.

After this occurrence no more milk was supplied from the dairy as long as the cows remained at Princes-road. On the 28th May, however, the 12 animals were sold by auction, and were removed from the premises.

The results of inquiry into the circumstances of the outbreak may be set out under the following heads—

The extent and duration of the outbreak.

During the early part of 1895, Plumstead was comparatively free from enteric fever, as although five cases were notified in January, the number had fallen to one in February, and no cases at all were reported in March or in April. It may be noted that the January cases and the February case were notified from houses not situated within the limited area already referred to. Early in May it became apparent that an outbreak of the disease was in course of development; the first case was notified on May 7th, and was followed by two more cases on the 10th. The number of notifications per day speedily reached its maximum, viz. 12, this number being recorded on May 16th. By the end of the month the number of notifications per day was beginning to show a tendency to decline, but it was not until after the middle of June that the outbreak was manifestly at an end. For some weeks after this time, although there was no longer an epidemic prevalence of enteric fever, the number of cases notified was greater than is usual at the time of year in Plumstead.

In a special report on this outbreak, dated 20th August, Dr. Davies estimates the number of cases occurring between the commencement of the outbreak and the 30th June, at 177, of which 159, or 90 per cent., were found to have had milk from the Princes-road dairy, or from other dairies which supplied the same milk. With a view to testing the extent to which consumers of this milk had been effected, Dr. Davies made a house to house inquiry in Barnfield-road and Princes-road, two roads particularly affected by the epidemic, and found that "of 49 houses which had had milk from the Princes-road dairy, only 20 escaped having a case of enteric fever," while on the other hand "only two had the fever out of 150 houses which were stated not to have had this milk."

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The proportion of houses attacked was therefore 59 per cent. in the case of houses said to be supplied with milk from the Princes-road dairy, and 1⅓ per cent. in the case of houses said not to be so supplied.

In addition to the cases occurring in the Plumstead district it must be noted that there was an increased prevalence of enteric fever in Woolwich during May and June, and Dr. Davies states in his special report that it was ascertained that Princes-road milk had been consumed by nearly all the persons attacked in that district.

In studying the time relations of the epidemic it is desirable to include the Woolwich cases with those occurring in Plumstead; there is, moreover, advantage in excluding second cases occurring in a house from which a case had been already notified. If the number of notifications of first cases occurring in houses be considered, it is found that after reaching the maximum on May 16 the numbers received from day to day showed no marked tendency to increase or diminish until the end of the month. The first few days of June however showed a diminishing number of new houses implicated. On June 3rd no notification was received relating to a member of a household not previously attacked; the number of new houses notified as being implicated was on the 4th two, on the 5th, four, and on the 6th, one, while on June 7th it rose to five. After this last date the falling off in the number of fresh houses invaded was marked. It may be noted that the date of the order stopping the sale of milk made by the vestry was May 15th, and that the date of hearing the summons for contravention of the order was May 20th.

Description of the milk-vendor's premises.

The cowshed premises are approached by a gateway at the side of a house in Princes-road. The latter is a road running north and south, and the premises extend from Princes-road to the road at the rear, parallel to it, called Barnfield-road. At their northern extremities Princes-road and Barnfield-road enter the Plumstead-common-road.

The house which was occupied by the milk vendor lies on the west side of the site, and is separated from the cowshed on the east side of the site by a yard. Passing through a gateway to the south of the house in Princes-road access is obtained to a covered approach leading to the yard. Immediately on the left on entering is a side entrance to the house. This entrance gives access to a staircase leading down to a cellar. The latter is lighted from an area covered by a grating; in the area is a drain inlet trapped with a bell-trap the top of which was found to be broken. The cellar was, it was found, occasionally used for the purpose of setting milk for cream, although no notice of the intention to use the building for this purpose had been given to the Council, as is required by Article 7 of the Dairies, Cowsheds and Milkshops Order.

Beyond the entrance above referred to and opening out of the yard is another door on the left leading into the house, and beyond this, again on the left, are the water-closet and (adjoining it but entirely separated from it) a scullery in which the milk cans are cleansed. In this scullery is a tap supplied by a service pipe communicating with the Kent Company's main in Princes-road. The drains of the house are not ventilated save in so far as ventilation is effected by a number of rain-water pipes which are not disconnected from the drain. On testing the drains, the officers of the sanitary authority found them to be defective. The defects were, however, all outside the buildings.

Beyond the house and its appurtenances the yard broadens considerably, extending behind the house next door to the milk vendor's house and on its north side. In the north-west corner of this extended part of the yard is situated the dung-pit, which is a large one; it has not a proper cover, and its floor is below the level of the yard. Difficulty has from time to time been experienced in securing the removal of dung at sufficiently frequent intervals, and nuisance having been thereby caused the occupier of the shed was last year cautioned with regard to this matter.

South of the yard are situated outhouses, used for stabling, &c. The shed itself occupies the north-eastern portion of the site and abuts upon Barnfield-road. It is a spacious and fairly well-ventilated shed; a few cobwebs were visible in the rafters, but the general condition of cleanliness of the shed was fairly satisfactory.

The cows stand in two lines along the east and west sides of the shed, and the troughs under their heads have each an opening at the ends which admits of the contents being carried to a trapped inlet situated in the middle of the floor adjoining the wall at the north end of the shed. The troughs are not used, however, for watering the cows, but are dry, merely serving to receive roots, &c. A rain-water pipe also discharges over the trapped inlet referred to, and the floor of the shed is sloped so that the surface drainage finds its way there.

South of the cowshed and adjoining it is a shed containing a water tank and the grain pit, and beyond this is another shed in which roots are stored. The water tank is filled by a tap discharging over it, and supplied by a service pipe communicating with the Kent Company's main in Barnfield-road. The tank is usually kept full of water, and into it pails are dipped and the tank water is used for watering the cows, for flushing the floor of the cowshed, and for cleansing purposes generally. It was in the first instance stated by the occupier that the tank water was not used for cleansing the milk-cans, which, he said, were scalded out in the scullery. It subsequently transpired, however, that the tank water was used for this purpose occasionally, and it was of necessity so used during the long frost of February, inasmuch as at that time the supply of water from the tap in the scullery was not available.*

* The damage caused by the severe frost of February to water fittings on the premises was only slight. On February 2nd the service pipe from Barnfield-road was repaired, it having burst close to the tap which discharges over the tank. On March 5th a similar piece of work was carried out in the front of the house, the service pipe supplied from the main in Princes-road having burst. During the five weeks ending March 5th no water was obtainable from the scullery tap; but with the exception of one day in February, water was obtained day by day from the tap discharging over the tank. Indeed, many neighbours were accommodated with water from this source during February. No underground pipe on the premises burst as a result of the frost, and a local plumber stated that it had not been found necessary to break up the roadway in either Princes-road or Barnfield-road.

The tank has an opening through which water can escape on to the floor adjoining. The water in the tank is said to be run off and the tank to be cleansed once a fortnight. When seen on May 14th, however, the sides of the tank presented discolorations, which had probably remained undisturbed for more than that time. Dr. Davies refers in his special report to the result of the examination of a sample of water from this tank. The water was pronounced to be "unfit for drinking purposes on account of vegetable débris. It was also examined bacteriologically with a negative result as regards the specific organisms of enteric fever."

Adjoining the grain-pit a cement-lined excavation had been constructed to catch the liquid draining from the grains. This excavation had no connection with any drain.

An account of the conduct of the milk-vendor's business, and of the cows kept in the shed.

Three persons were engaged in the conduct of the business, the occupier of the premises, who exercised general supervision and undertook part of the milking operations; the cowman, who took part in the milking operations and went on "the round" distributing the milk; and a lad who acted under the directions of the two persons already named, but took as a rule no part in milking the cows.

The house on the Princes-road premises was occupied by the milk-vendor, his wife and their niece. The cowman lived with his wife and three children in a house in Barnfield-road. Two rooms in this house were sub-let to a woman with one child. The lad lived in a house in Barnfield-road, the other occupants of which were a man, two women and five children. Inquiry was made as to the health of all these persons prior to the outbreak. None of them had suffered from any illness in the least degree suggestive of typhoid fever.

The milk was said to be delivered at about 180 houses on the morning round, and at about 230 houses on the afternoon round. Most of the customers were served both morning and afternoon, but on the other hand, to a certain extent persons were supplied with milk in the afternoon who did not have it in the morning. An attempt to estimate the number of households supplied was also made in a different manner. The regular customers were enumerated by the cowman who went on the "milk round," and this resulted in 165 addresses being specified. A few of these customers were themselves purveyors* of milk, retailing the Princes-road milk in small quantities to other consumers. Again, the list of regular customers did not include, as a rule, persons who bought less than a pennyworth of milk in the day.

It was stated that no customers were separately supplied, save on exceptional occasions, with cream.

At the time of the outbreak there were five cows and seven heifers in the cowshed. During the summer of 1894 the milk vendor had kept his animals in a field some 400 yards away from the shed, and in this field they remained from May until the end of October or the beginning of November. A black cow, a bull and three heifers, which then formed part of the stock, remained in the field a few weeks longer than the rest of the herd. This field was situated on the slope of a hill, and water for watering the cows was provided in a tank placed in the field to which it had to be conveyed by cart. Kent Company's water from the cowshed was used to fill the tank.

All the animals had been removed from the field to the cowshed before the end of 1894. In January the black cow already referred to calved. The calf was suckled for about a month, and the milk, amounting to some six quarts a day, was at the end of that time added to the general stock, the calf being sold. Early in January eight fat cows were sold to a dealer who took away three of them about the 11th January, and the remainder a week or two later. About the middle of January three new cows were introduced into the shed; these cows were purchased at the Metropolitan Cattle Market.

On March 1st a roan heifer was brought into the shed. This heifer yielded from the first some 16–20 quarts of milk a day; she had calved the day before her arrival, and her milk was not added to the general stock until the 5th or 6th of March. At the end of March or beginning of April the bull and two heifers were sold and taken away from the shed. The number of animals then remaining was 12 (the five cows and seven heifers already mentioned).

On inquiring of the dealer who sold the roan heifer, it was ascertained that the animal was one of a batch bought at Maidstone, and then placed until sale could be effected in a field on Plumstead-marshes. In this field the roan heifer calved on the last day of February. [This animal was subsequently bought and transferred to the Brown Institution, where it was examined by Dr. Klein, with the result set out in his report.]

On visiting the field in question it was found to be surrounded by ditches, which received water from a stream contaminated by cesspool overflows and from other polluted sources. Water thus contaminated was the only water available for the cows to drink. In the field were a barn and a cottage, neither of which however drained directly into the ditch from which the cows drank. The inhabitants of the cottage usually had a little water brought to them with their provisions, but it was admitted that they sometimes drank ditch water, having previously boiled it. Two houses were situated within a few hundred yards of this field; both of them drained into cesspools, but as far as could be ascertained there was no communication between these cesspools and the ditch from which the cows drank.

A detailed inquiry was made as to the nature of the pollution to which the water consumed by the cows in the field on Plumstead-marshes was liable. Plumstead-marshes is a tract of land consisting of fields separated one from another by ditches; these ditches present somewhat complicated intercommunications, and in some instances are provided with sluices for the purpose of directing the flow of water in particular directions. Griffin manor-way crosses the marshes (from south to north) at their western border, and Harrow-manor-way (forming the county boundary) crosses in a similar direction at the eastern border. About midway between the two and parallel to them (*i.e.*, running from south to north) is Church-manor-way. This last-named road, however, after proceeding

* These purveyors bought Princes-road milk because it was available quite early in the morning; they obtained their main supply, however, from other sources.

some distance turns at right angles and runs eastward to meet Harrow-manor-way. The South Eastern Railway between Plumstead and Abbey-wood stations traverses the southern portion of the marshes. The surface drainage from the high ground on the south to a certain extent finds its way across the marshes, flooding the ditches in time of rain. The chief streams in which this surface drainage is collected are—

(*a*) An old watercourse which may be traced from a culvert discharging on the north side of the railway embankment between Griffin-manor-way and Church-manor-way. Flood water finding its way into this watercourse may reach the river by several different routes. It may travel almost directly northwards, it may cross Church-manor-way before it is carried far in a northerly direction, and it may pursue a still more easterly course and cross Harrow-manor-way before reaching the river.

(*b*) A ditch which is situated nearer to Church-manor-way than the last ditch and which runs beneath the railway and appears to find an outlet mainly by means of ditches which extend north-eastwards crossing Church-manor-way and Harrow-manor-way.

(*c*) A stream which, after running by the side of Wickham-lane and continuing northwards beneath the railway east of Church-manor-way, turns eastwards and crosses Harrow-manor-way. [A sample of water from this stream was sent to Dr. Klein, and it is referred to as sample A in his report.]

The crossing of Church-manor-way by intercommunicating ditches is effected at two points; similarly two main ditches cross Harrow-manor-way. One of the latter ditches, shortly before it reaches Harrow-manor-way, forms the southern boundary of the field in which the roan heifer was kept, and from this ditch the sample B referred to in Dr. Klein's report was taken. A broadened out portion of the same ditch constitutes the drinking place of the cows kept in the field. This drinking place is in more or less direct communication with all three streams referred to above.

There was no water in stream (*a*) at the point where it crosses the railway line, at the end of May. Just below this point a very offensive stagnant ditch commenced, but the communication of this ditch with the stream (*a*), and therefore with the cows' drinking place, was only traceable on the assumption that the water levels were raised a few inches, a condition of things which would of course obtain after heavy rain. Stream (*b*) was in a less polluted condition than the ditches of stream (*a*); on its banks a gipsy party was found encamped. Stream (*c*) was known from previous inquiries to receive, more or less intermittently, the overflow from a number of cesspools. On consulting the notification returns, however, it was found that no case of typhoid fever had been recorded during the early months of 1895 as having been removed from a house draining into stream (*c*).

A review of the facts which have been detailed shows that it is not possible to frame any positive conclusion as to the way in which infective property was communicated to the Princes-road milk.

Careful inquiry made as to illness occurring among persons associated with the premises yielded a negative result, nor could it be ascertained that any case of enteric fever had, within a period of several months, occurred in the neighbourhood of the shed.

Defects existed in the drainage arrangements at the Princes-road premises, but it did not appear likely that the milk had by reason of such defects been exposed to contamination.

There was no ground for suspecting pollution of the water supplied to the shed. Kent Company's water was being distributed over a wide area, but the epidemic occurred in a limited area and in association with a particular milk supply. It was of course possible that the water used for washing cans, utensils, &c., was liable to local contamination. No leakage, however, could be detected from the service pipes on the premises, and no evidence could be obtained that the mains in Princes-road and Barnfield-road were defective. The tank just outside the cowshed was suggested as a possible source of mischief. No evidence was however forthcoming to show that this tank was liable to specific pollution.

Finally, the possibility that the milk was rendered infective by the existence of a diseased condition in the cow remained to be considered. Only one animal in the shed had been newly brought upon the premises within a period of upwards of three months prior to the outbreak, and inquiry showed that this animal, previous to its removal to the shed on March 1st, had been consuming sewage-contaminated water. The possibility presented itself that the heifer in question, on arriving at Princes-road, was the subject of some condition which resulted some six or seven weeks later in the milk becoming infective. Examination was therefore made of the milk of this heifer, and the animal was killed and examined by Dr. Klein. The results of this examination were, however, negative.

W. H. Hamer,
Assistant Medical Officer of Health.

Appendix.

Dr. Klein's report.

St. Bartholomew's Hospital,
June 25th, 1895.

I have now completed the inquiry into the Plumstead water and Plumstead milk, and beg herewith to report thereon—

1. On May 22nd I received, through Dr. Hamer, a small bottle of milk from a roan cow. This sample was examined in two lots of 25 c.c. each, to each lot sufficient solution of phenol was added before incubation in order to exclude microbes not colon bacillus or typhoid bacillus. Both these

samples were incubated for several days at 37° C., but neither developed any growth of bacillus coli or typhoid.

2. On May 23rd Dr. Hamer brought two bottles of milk, one (*a*) labelled "from roan cow," the other (*b*) "mixed milk." To 500 c.c. of each in flasks sufficient phenol was added for purposes of detecting by cultivation either the bacillus coli or the bacillus of typhoid. On incubation at 37° C. the milk in both flasks was found clotted after 48 hours. Subcultures were made, but only bacillus coli was discovered.

3. On May 25th Dr. Hamer sent me two bottles of water, one was marked "A. from main stream," the other "B, from ditch." Of each sample 1,200 c.c. were driven through a sterile Berkefeld filter, then the material on the outside of the filter was brushed off into a few cubic centimetres of sterile water, and the whole of this was used for cultivation in phenol gelatine and phenol broth. The result was the demonstration of bacillus coli in both samples, in sample A very abundantly. In the plates from sample A one other suspicious-looking colony was met with, which in almost all respects, morphological and cultural, resembled the typhoid bacillus, and at first I was inclined to regard it as such, but it commenced to liquefy gelatine after 6—7 days, and thereby proved itself to be a different species.

4. A roan cow was received at the Brown Institution on May 29th. The animal was in first-rate condition, its skin and udders perfectly normal; it fed well and gave ample milk of normal aspect.

(*a*) On May 30th, after thoroughly cleaning the teats and udder (washing with soap and water, then with carbolic lotion), and after cleaning thoroughly the milker's hands, milk was received into a sterile beaker. Each of two flasks received 500 c.c. of this milk, phenol was added, and the flasks were then incubated at 37° C. After 48 hours incubation plates were made, but no typhoid bacilli could be discovered.

(*b*) On May 31st the milking was repeated, and the result of incubation was again negative, two flasks, each containing 500 c.c. of milk, being used.

(*c*) On June 4th the experiment was repeated with the same negative result, two flasks, each containing 500 c.c. of milk, being used.

(*d*) On June 6th the experiment was repeated, two flasks, each containing 500 c.c. of milk, being used.

(*e*) On June 7th the animal was killed. Internally it was extremely fat, and the viscera were all in perfectly normal condition. Cultivations were made—(1) From heart's blood; (2) From the mesenteric lymph glands; (3) From the spleen; and (4) from the contents of the ileum. The cultivations of 1, 2, and 3 remained sterile; those of 4 yielded no typhoid bacilli.

E. KLEIN.

Appendix II.

London County Council.

PUBLIC HEALTH DEPARTMENT,
SPRING GARDENS, S.W.
December, 1895.

DISINFECTION AND DESTRUCTION OF INFECTED ARTICLES.

REPORT BY THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON ON THE PROVISIONS WHICH HAVE BEEN MADE IN THE SEVERAL DISTRICTS OF THE COUNTY FOR DISINFECTION AND DESTRUCTION OF INFECTED ARTICLES, AND FOR THE SHELTER OF PERSONS DURING THE DISINFECTION OF THEIR HOMES.

The Public Health (London) Act, Section 59, requires "that every sanitary authority shall "provide either within or without their district, proper premises with all necessary apparatus and "attendance for the destruction and for the disinfection, and carriages or vessels for the removal of "articles (whether bedding, clothing, or other) which have become infected by any dangerous infectious "disease, and may provide the same for the destruction, disinfection, and removal of such articles when "infected by any other disease; and shall cause any such articles brought for destruction or disinfec-"tion, whether alleged to be infected by any dangerous infectious disease or by any other disease, to "be destroyed or to be disinfected and returned, and may remove, and may destroy, or disinfect and "return such articles free of charge."

"Any sanitary authorities may execute their duty under this section by combining for the pur-"poses thereof, or by contracting for the use by one of the contracting authorities of any premises "provided for the purpose of this section by another of such contracting authorities, and may so combine "or contract upon such terms as may be agreed upon."

I now present a return which is based upon information supplied by medical officers of health in London, and which shows the provisions which the London Sanitary Authorities have made in pursuance of this section or of the optional power which was conferred upon them by the Sanitary Act of 1866.

Apparatus for disinfection.

The return shows that twenty-four sanitary authorities have provided themselves with disinfecting apparatus, in which disinfection is effected by steam; six authorities possess apparatus in which disinfection is effected by dry heat; eight authorities arrange with a contractor.

The districts provided with steam apparatus are—

1. Chelsea.
2. St. George's, Hanover-square.
3. Westminster.
4. St. James, Westminster.
5. Hampstead.
6. St. Pancras.
7. Islington.
8. Hackney.
9. St. Giles.
10. Strand.
11. Shoreditch.
12. Bethnal-green.
13. Whitechapel.
14. Mile End Old Town.
15. Poplar—
    Poplar and Bromley.
    Bow.
16. St. George-the-Martyr.
17. Newington.
18. Bermondsey.
19. Lambeth.
20. Camberwell.
21. Greenwich—
    Greenwich.
    Deptford.
22. Lewisham.
23. Woolwich.
24. Plumstead.

The districts provided with dry-heat apparatus are—

1. Hammersmith.
2. St. Marylebone.
3. Clerkenwell.
4. St. Luke.
5. Limehouse.
6. St. Saviour.

The districts which have not made any provision of their own, but which depend on the services of a contractor, are—

1. Paddington (steam).
2. Kensington (dry-heat principally used. Super-heated steam when beds are in a foul condition).
3. Fulham (steam).
4. St. Martin-in-the-Fields (steam).
5. Holborn (steam).
6. Rotherhithe (steam).
7. Battersea (steam).
8. Wandsworth (steam).

The sanitary authority of St. Olave makes use of the steam disinfector at Guy's hospital, and the sanitary authority of Stoke Newington makes use of the disinfecting apparatus of the Islington Vestry; the sanitary authority of St. George-in-the-East is still, as noted in previous reports, unprovided with a disinfecting apparatus. Two of the parishes belonging to the Lee district (Lee and Eltham) make use of the steam disinfecting apparatus at Plumstead; the third parish, Charlton, destroys instead of disinfecting articles.

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The number of districts provided with steam apparatus has increased from 16 in April, 1893, to 24 at the present time. I have, in previous reports, pointed out the necessity of providing for the disinfection of infected articles suitable steam apparatus. I think some step should now be taken to secure for the inhabitants of sanitary districts in which dry-heat alone is now depended upon, the greater security which disinfection by steam affords. In other words, I would submit that the failure to provide proper steam apparatus should be regarded as failure to provide "all necessary apparatus" as required by section 59 of the Public Health (London) Act.

It is worthy of observation that eight authorities still arrange with a contractor for the disinfection of infected articles. I do not regard it as a satisfactory principle that this work should be in other hands than those of the sanitary authority.

There would be advantage if in connection with the machinery for disinfection, a laundry were provided, thus giving opportunity for the washing as well as the disinfection of articles which can be thus treated. In the disinfecting station erected by the Vestry of Islington a laundry is provided.

Apparatus for destruction.

The following statement shows the existing arrangements for the destruction as distinguished from the disinfection of infected articles.

Kensington	... By contract.
Hammersmith ...	... Burnt in a heap on the ground at the vestry's wharf after being saturated with paraffin.
Fulham	... By contractor, who has a cremator erected for the purpose.
Paddington	... By contractor.
Chelsea	... Burnt, after soaking the goods in paraffin, at one of the vestry's wharves. No special apparatus.
St. George, Hanover-square	... Burnt in a destructor erected at a cost of £170. The fumes from the burning material before escaping pass through the furnace of the disinfector.
Westminster (St. Margaret and St. John)	Provision is made at the vestry's depôt, Monk-street, for destruction as distinguished from disinfection of infected articles.
St. James, Westminster	... When occasion requires, bedding is burnt in the large furnaces for the steam boilers at the baths and washhouses.
Marylebone	... No special appliance.
Hampstead	... Bedding, clothing, &c., burnt in the dust destructor when necessary.
St. Pancras	... Destroyed in a furnace which adjoins the disinfecting apparatus. The dust destructor at King's-road is also available for this purpose.
Islington	... A crematory has been erected at the disinfecting station.
Hackney	... No apparatus for destruction.
Stoke Newington ...	... Destroyed in the furnace at the Islington disinfecting station.
St. Giles	... Removed by contractor in covered vans and burnt in a destructor.
St. Martin-in-the-Fields	... By contractor who has a cremator erected for the purpose.
Strand	... A destructor has been in use since 1885.
Holborn	... Sent to contractor.
Clerkenwell	... Occasionally burnt in the wharf in Commercial-road.
St. Luke	... An apparatus has been erected for the purpose of destroying any old, dirty, and infected articles.
Shoreditch	... Burnt in a destructor which is under the same roof as the disinfector.
Bethnal-green ...	... Burnt at the stone-yard after being saturated with paraffin. No special apparatus.
Whitechapel	... Burnt in the dust destructor.
St. George-in-the-East	... No special apparatus.
Limehouse	... No provision made for destruction at present.
Mile End Old Town ...	... Burnt in a destructor.
Poplar—	
Poplar and Bromley	... Burnt in the open air on land adjoining the disinfecting station. No special apparatus.
Bow...	...
St. Saviour, Southwark	... Burnt in an open stove in the yard after being subjected for some hours to temperature of 280°F. in the disinfecting oven.
St. George, Southwark	... Burnt in the incinerator at Guy's hospital under contract.
Newington	... An incinerator has been constructed, and is now in use.
St. Olave	... Burnt in a furnace at St. Olave's wharf, Shad Thames.
Bermondsey	... Burnt in a furnace near the disinfecting apparatus.
Rotherhithe	... Mode of destruction left to sanitary inspector to determine.
Lambeth	... Burnt in a furnace in the stone-yard.
Battersea	... Burnt in the dust destructor.
Wandsworth	... Clapham possesses a special furnace in the stone-yard. Putney, Streatham, and Wandsworth have made no provision, but contractor for disinfection could destroy articles.

Camberwell	... A stove is employed for the purpose.
Greenwich—	
Greenwich	... The sanitary authority are provided with a destructor as well as a disinfector.
Deptford	... Burnt when necessary at the Board's yard. No special apparatus.
Lewisham	... Burnt in the dust destructor.
Woolwich	... Burnt in the dust destructor.
Plumstead	... Burnt on the open ground near the river.
Lee—	
Charlton	... The bedding is burnt in the open air at the parish wharf by the river-side
Lee and Kidbrooke ...	... Apparatus for destruction is at Plumstead.

Accommodation for temporary shelter.

Section 60 of the Public Health (London) Act requires every sanitary authority to provide, free of charge, temporary shelter or house accommodation with any necessary attendants for the members of any family in which any dangerous infectious disease has appeared, who have been compelled to leave their dwellings, for the purpose of enabling such dwellings to be disinfected by the sanitary authority. It will be seen by reference to the return, that provision of a shelter has only been made in about half the districts. I would therefore beg to remind the Committee that four years have elapsed since this duty was imposed upon sanitary authorities. It is therefore important that the Committee should ascertain the circumstances of this delay with a view to all necessary steps being taken to ensure the provision of such shelters. The following statement shows the districts which have already provided shelters and the nature of the accommodation each affords—

1. Paddington ...	... 2, Wellings-place, Church-place. A three-storey six-roomed house, two of the rooms are occupied by the resident caretaker. On the ground floor are a kitchen and bath-room, the bath is supplied with an apparatus for heating water. Cooking utensils, &c., are provided. The shelter during the first three months of its existence has been used by fifteen families comprising fifty persons.
2. St. George, Hanover-square	The shelter consists of a basement with two rooms and a water-closet. It is provided with a fireplace, chairs, bed-stead and crockery. There is no special attendant. It has been in existence since February, 1893, and has been used eleven times. It is said that difficulty is experienced in inducing people to use the accommodation.
3. Westminster (St. Margaret and St. John)	Five rooms, with one bed in each, have been provided in connection with the new mortuary and coroner's court. There is moreover a bath-rooom with hot and cold water services laid on.
4. St. James, Westminster	... 6, Dufours-place. A house adjoining the vestry's stone-yard has been fitted up for use as a shelter. There are two rooms, sitting-room and bedroom, on the second floor, and there is a similar accommodation on the third floor. There are two water-closets. No bath is provided. There is a resident caretaker, and crockery and cooking utensils are available for the use of persons coming into the shelter. This shelter is frequently used.
5. Marylebone ...	... At present a house in Orcus-street, Lisson-grove, is used temporarily until the erection of a shelter which has been sanctioned by the vestry, and which will provide accommodation for at least four families.
6. Hampstead ...	... A two-storey two-roomed house has been provided in the stone-yard, Lithos-road. The ground floor and upper floor are approached by separate entrances, and each has a water-closet in connection with it. Each room is furnished with a fireplace, a table, chairs and crockery. This shelter is in the care of the man in charge of the stone-yard.
7. St. Pancras ...	... Situated at Cambridge-street; four rooms on first floor of a building the ground floor of which is used as a coachhouse for the disinfecting vans and ambulance. These four rooms are approached by a single staircase, adjoining each room is a bath-room with hot and cold water laid on. The rooms are furnished, but there are no beds. Crockery and cooking utensils are provided. There are two water-closets. The shelter has been used by sixty or seventy persons. An ambulance is available to carry persons to the shelter.

8. Islington ... ... The shelter house (Seven-sisters-road) adjoins the disinfecting station. It consists of four two-roomed tenements, each provided with a bath-room and water-closet. There is a separate approach to each set of tenements. The rooms are now being furnished, beds, bedding, crockery, &c., will be provided. The caretaker's cottage is situated near the shelter-house.

9. Strand ... ... No. 3, Little Chapel-street, Wardour-street, has been taken on lease by the Board, and is occupied by the assistant inspector, rooms being set apart for use as a shelter. On the first floor is a sitting-room with an adjoining lavatory. On the second floor are two bedrooms, each containing two beds. The rooms have been used more frequently during the last six months.

10. Clerkenwell ... ... A three-storey six-roomed house has been provided. It has one water-closet. The rooms are furnished with fireplaces, chairs and crockery, and in one ground floor room there are two beds for children to lie down on. The caretaker lives next door. This accommodation has been in existence three years, and has been used ten times. Difficulty is experienced in inducing people to avail themselves of it.

This accommodation is shared by the Charterhouse, Staple-inn and Furnival's-inn.

11. Shoreditch... ... ... No. 18, Branch-place, a house fronting the canal and with good yard space at the rear. On the second floor is a furnished room. The second floor back is not furnished. On the first floor are a sitting-room and a bedroom, both furnished. On the ground floor are the caretaker's-room and a furnished bedroom. Beds and bedding, washing utensils, crockery, knives, forks, &c., are provided. Every room is disinfected after it is used. Since it was opened forty-three persons have been accommodated in the shelter, in some instances people have remained there for two or three days. The place has mainly been made use of in cases of small-pox.

12. St. George-in-the-East ... A two-storey four-roomed house has been provided. The house has a back yard, in which is situated the water-closet. Each room is furnished with a fire place, chairs, crockery, &c. The gardener of an open space adjoining is the only available attendant.

13. Limehouse... ... ... A three-storey house, No. 82, High-street, Shadwell, has been provided; there is a resident caretaker. The first and second floor front rooms are furnished with couch, chairs and washhand-stand; crockery is provided. The caretaker lives in the ground floor front room. The shelter has hitherto only been used on two occasions, and there is considerable difficulty in inducing people to avail themselves of the accommodation.

14. Mile End Old Town ... A house, No. 47, Globe-road, has been furnished as a shelter. There are three rooms; beds, bedding, crockery, &c., are provided; there is a resident caretaker. The shelter is said to be used on an average about once a week.

15. St. Olave ... ... Three cottages (Nos. 2, 3 and 4, New Cottage-row) have been acquired by the Board for use as a shelter. New Cottage-row is a narrow court adjoining, and entered from Parish-street. It consists of four two-storey cottages; No. 1, is occupied by the caretaker of the shelter, No. 2, is furnished with beds, bedding, chairs and table; cooking utensils, &c., are provided. No. 3 is also provided with beds and bedding. No. 4 has not yet been furnished. Since the shelter was provided in December, 1893, it has been used by thirty-two families, consisting of 132 persons, and it has proved specially useful in the case of persons occupying rooms in blocks of tenement dwellings.

16. Rotherhithe ... ... A house, 15, Cathay-street, containing four rooms and two garrets, has been purchased by the vestry for use as a shelter. It has not as yet been put in habitable repair as objection has been raised to its use as a shelter by the police, there being a police station near the premises acquired by the vestry.

17. Battersea ... ... A waiting room at the Municipal-buildings, Lavender-hill, is available for use as a shelter. It contains a fireplace, table

and chairs, There is water-closet accommodation in connection with it. There is no bed, and no provision is made for cooking meals. It is not intended that the shelter shall be occupied at night time. No use has as yet been made of it.

18. Wandsworth—
Putney ... ... One room has been provided at the vestry's new wharf on the Putney-embankment. The room is now furnished as a kitchen, and bed furniture has been supplied. The house is now occupied by the clerk of the wharf. It has been used as a shelter on one occasion.

Clapham ... ... One room furnished as a kitchen has been provided in a lean-to building at the vestry's stone-yard. No provision for sleeping has been made.

19. Greenwich ... ... A house, No. 86, East-street, has been provided for the whole district. It is partially fitted for use. A sitting-room and two bedrooms are available. There is no bath-room, and crockery, cooking utensils, &c., are not provided. There is a resident caretaker.

20. Woolwich ... ... A house has been provided containing five bedrooms (three furnished), a dining-room, a kitchen, and a bath-room. There are also in the house two rooms occupied by a caretaker. It is stated that people have no great aversion to going there. The house has been much used, the average stay in it being one night, but some persons have been there six nights.

21. Plumstead ... ... No. 38, The Slade, a two-storey detached house overlooking the common. One of the inspectors lives here, and two bedrooms and a sitting-room are furnished for use of persons requiring temporary shelter. Such persons have the use of the kitchen and of cooking appliances, and crockery, &c., is provided. In the bedrooms there is washing accommodation, but there is no bath-room. There is one water-closet in the yard at rear. Nine families have used the house up to the present time. No one has stayed in the shelter more than one night.

22. Lee—
Charlton ... ... One room has been provided in a lean-to building at the parish wharf. It is supplied with chairs and a table and a small gas-stove. No provision has been made for cooking or sleeping. It has only been used once since it was opened a year ago.

It will be seen that somewhat different views have been taken by the several sanitary authorities who have provided a shelter as to the character of the accommodation which is required. In most of the shelters this accommodation is provided for use by night, but in a few instances only day accommodation has been considered necessary. The time occupied in the removal of infected articles to the disinfecting station, in their disinfection, and in their return, extends to several hours. The time occupied in the purification of the room, often the only room of the family, extends to many hours. It is obvious that the use of the shelter by night must be contemplated in any arrangements made.

The provision of baths is another consideration which should be borne in mind, for opportunities for personal cleanliness are especially necessary for those coming from infected houses.

The opinion was frequently expressed during the enquiry of 1894 that poor persons were unwilling to use the accommodation which has been provided. In connection with this difficulty it deserves to be pointed out that these people need the experience which time only can give; they will eventually find this accommodation meet their convenience, and I do not doubt that the use of shelters will grow from year to year. Indeed, there is already evidence of increased use of shelters, but it must be remembered that the expectation that the poor will avail themselves of these temporary homes must depend very largely upon the shelter being made reasonably attractive.

Districts mentioned in Schedule C to the Metropolis Local Management Act, 1855.

The tabular statement does not give account of the arrangements made in these districts in respect to disinfection, but it may be stated briefly that Lincoln's-inn makes use of the St. Giles disinfecting apparatus; the Inner Temple and the Middle Temple have arranged with the Commissioners of Sewers for the disinfection of infected articles; the Charterhouse, Staple-inn, and Furnival's-inn, included in the Holborn Union, use the dry-heat oven belonging to the guardians of that union; the Close of the Collegiate Church of St. Peter has arranged with a contractor; and Gray's-inn has left the arrangements to its medical officer of health.

SHIRLEY F. MURPHY,
Medical Officer of Health.

Return showing particulars of replies received from Medical Officers of Health as to the Methods of Disinfection adopted in the several sanitary districts within the County of London.

No.	Parish or District.	Whether Sanitary Authority has provided disinfecting oven.	Where oven is situated.	Whether disinfection effected by dry heat or steam.	Manner in which dry heat is produced.	Arrangements made where no oven has been provided.	Whether any chemicals used in connection with the oven.	Length of time feather bed of average size is retained in oven, and highest temperature in centre of bed.	Arrangements made for removal of infected articles to and from oven.	Method adopted for disinfecting houses.	Disinfectant recommended for disinfection of excreta.	Whether charge is made for disinfection.	Whether shelter has been provided as required by Section 60 of the Public Health (London) Act, 1891.	Diseases after which Authority carries out disinfection.	Remarks.
									WEST DISTRICTS.						
1	Paddington ...	No	...	Bedding, carpets, and large woollen fabrics by superheated steam	...	By contract with Messrs. Armfield, of Battersea	No	...	In waterproof bags and covered van, by Messrs. Armfield, who call daily at the Vestry at 11 a.m.	Sulphurous acid gas	Solution of 12½ oz. zinc sulphate, 4½ oz. copper sulphate, 1½ oz. manganese sulphate, to one gallon of water. Used without further addition of water for chamber purposes, and in proportion of 1 oz. to a pint of water for drains	Only occasionally	Yes	All notifiable diseases, except trifling cases of erysipelas	Carbolic soap supplied gratuitously to poor for washing and cleansing purposes. Everything done by Messrs. Armfield is cleansed as well as disinfected, bedding being taken to pieces, purified, and re-made.
2	Kensington ...	No	...	1. *Dry heat* principally used 2. *Superheated steam* when beds are in a foul condition	Gas ...	Disinfection carried out by a contractor	No	4 to 5 hours. Feather bed 245° F., common mattress 232° F., hair mattress 237° F. Temperature in chamber ranges from 260° to 270° F.	Necessary vehicles provided by contractor. Infected articles taken away in waterproof canvas bags. Disinfected articles taken back in separate and non-infected vehicles	Sulphurous acid gas	Sulphate of iron, 1 lb. to 1 gallon of water recommended. But it is mainly left to discretion of medical man in attendance	No	No	Smallpox, scarlet fever, diphtheria, continued fevers, cholera; and puerperal fever occasionally	Articles disinfected are also cleansed.
3	Hammersmith...	Yes	The Vestry's wharf, Chancellor's - road, Hammersmith	Dry heat ...	Furnace	...	Sulphur	3 hours. Temperature of oven 250° F.	Articles removed in an iron cart which is part of disinfecting apparatus; carts and contents being placed inside disinfector during process	Sulphurous acid gas. Floors, &c., washed with carbolic acid solution	Perchloride of mercury 1 in 5,000	No	No. Clerk authorised to provide accommodation when occasion arises	Smallpox, chicken-pox, scarlet fever, diphtheria, typhus, typhoid, erysipelas, continued fever, puerperal fever and cholera, also measles, when sanction can be obtained	When requested clothes infected with pediculi corporis are disinfected.
4	Fulham ...	No	...	Steam	...	By contract with Mr. Lacy, of Fulham	No	20–40 minutes; 250° F.	... ...	Sulphurous acid gas. Floors, &c., washed with corrosive sublimate 1 in 960, whitewashing and repapering	Condy's fluid 1 oz. to the pint	No	No	Every disease enumerated in the Public Health (London) Act, 1891, sec. 55, sub-sec. 8	The disinfection of houses is done by a separate officer, and if assistance is required a temporary officer is employed.
5	Chelsea... ...	Yes	Lot's-road ...	Steam (Washington Lyon)	...	...	No	30–40 minutes; 220°-250° F.	Two vans supplied by Vestry, one for infected and one for disinfected articles	Sulphurous acid gas by burning sulphur, or by use of liquified SO_2	St. Bede disinfectant	No	No	Rooms are disinfected, and bedding, clothing, &c., removed, for steam disinfection, after all notifiable diseases except erysipelas	
6	St. George, Hanover-square	Yes	Commercial-road, Pimlico	Steam (Goddard, Massey and Warner)	...	...	No	45 minutes; 248° F.	Two vans, one for infected and one for disinfected articles	Sulphurous acid gas. Scrubbing with carbolic soap and water. Removal and destruction of wall papers.	Alkalised gas creosote	No	Yes	Smallpox, scarlet fever, diphtheria, membranous croup, enteric fever, erysipelas, puerperal fever, continued fever, typhus, relapsing fever, cholera	
7	Westminster (St. Margaret and St. John)	Yes	Disinfecting station, Horseferry-road	Steam	...	...	...	35 minutes; 240° F.	Special vans ...	Sulphurous acid gas	Left to discretion of medical man in attendance if case is treated at home	No	Yes	Smallpox, cholera, diphtheria, membranous croup, scarlet fever, typhus, enteric, puerperal and continued fevers, and sometimes erysipelas. Fumigation has been carried out in many cases of measles	
8	St. James, Westminster	Yes	Dufours - place, Broad - street, Golden-square	Steam (Washington Lyon)	...	...	No	2 hours ...	Covered hand truck	Sulphurous acid gas. Cylinders containing liquified SO_2 are employed	Chloride of lime ...	According to circumstances	Yes	All notifiable diseases, but not always in cases of erysipelas or diphtheria	

Return of Replies from District

No.	Parish or District.	Whether Sanitary Authority has provided disinfecting oven.	Where oven is situated.	Whether disinfection effected by dry heat or steam.	Manner in which dry heat is produced.	Arrangements made where no oven has been provided.	Whether any chemicals used in connection with the oven.	Length of time feather bed of average size is retained in oven, and highest temperature in centre of bed.	Arrangements made for removal of infected articles to and from oven.
									NORTH
9	St. Marylebone...	Yes	The Stone-yard, Capland-street	Dry heat ...	Hot-water pressure pipes	...	No	2–3 hours. Temperature of centre of beds not known	Special men employed. Infected articles fumigated with liquified sulphur dioxide before removal in vestry's van to disinfecting apparatus
10	Hampstead ...	Yes	Stone-yard, Lithos-road	Steam (Washington Lyon)	...	...	No	About 1 hour	Two carts, one for infected, one for disinfected articles
11	St. Pancras ...	Yes	Cambridge-st., N.W.	Steam (Goddard, Massey and Warner)	...	...	No	Entire process ½ to 1 hour; 212° F.	Two vans, one for infected and one for disinfected articles, and a van kept in reserve in case of epidemic or breakdown
12	Islington ...	Yes	Seven Sisters'-road	Steam (Goddard, Massey and Warner)	...	...	No	20 minutes steam at 20lbs. pressure; 10 minutes hot air	The Vestry provide covered vans
13	Hackney ...	Yes	Hackney-marshes	Steam (Washington Lyon)	...	...	No	½ hour ...	Two hand-carts, one for infected, one for disinfected articles
14	Stoke Newington	No	...	Steam	...	By contract, for use of Islington disinfector	...	3 hours; temperature of oven, 220° F.	Two hand-carts, one for infected and one for disinfected articles
									CENTRAL
15	St. Giles ...	Yes	Stone-yard, 197, High Holborn, W.C.	Steam (Washington Lyon)	...	...	No	30 minutes; 265° F.	Hand trucks ...
16	St. Martin-in-the-Fields	No	...	Steam	...	By contract with Mr. Lacy, of Fulham	No.	30 minutes; 250° F.	A special zinc-lined van
17	Strand	Yes	Denzell-street, Clare-market	Both: Washington Lyon's steam and Fraser's dry air oven	... ...	...	With the Fraser sulphur may be employed	Lyon's, 1 hour; steam at 20lbs. pressure being on for 20 mins.; 250° F. Fraser's used for leather articles, books, &c.	Air-tight iron cart for removing infected articles, separate truck to return them from oven
18	Holborn ...	Yes, but useless for the purpose	In Stone-yard at Town Hall, (used only for cases of itch)	Steam used by Contractor	...	By contract with Messrs. Armfield, of Battersea	Yes	About 1 hour; about 250° F.	A preliminary fumigation with strong sulphurous acid gas before leaving house
19	Clerkenwell ...	Yes	49, Northampton-road	Dry heat ...	Gas ...	...	No	At least 4 hours; 250° F. or under 300° F.	Sheet-iron truck ...
20	St. Luke ...	Yes	Warwick-place, Whitecross-street	Dry heat ...	Gas ...	...	No	7 hours; temperature of oven, 240° F.	A covered van ...

Medical Officers of Health—*continued*.

Method adopted for disinfecting houses.	Disinfectant recommended for disinfection of excreta.	Whether charge is made for disinfection.	Whether shelter has been provided as required by Section 60 of the Public Health (London) Act, 1891.	Diseases after which Authority carries out disinfection.	Remarks.
DISTRICTS.					
Liquified sulphur dioxide	Commercial carbolic acid 90–95 per cent. For drains 40–45 per cent.	A charge is made only in cases of request for disinfection after non-notifiable diseases	Yes	Notifiable diseases, except erysipelas. By request measles and influenza	A new steam disinfector will be erected at the Stone-yard, Capland-street.
Sulphurous acid gas, white-washing and cleansing	Carbolic acid, sulphate of iron for sewers	No	Yes, at Stone-yard. Accommodation for two families	Smallpox, scarlet fever, diphtheria, typhoid, puerperal fever; by request measles, whooping cough, diarrhœa, rötheln	
Sulphurous acid gas, stripping, cleansing, white-washing and washing with alkalised gas creosote	Left to discretion of medical attendant, but alkalised gas creosote is left for washing and cleansing	No; except for special service at night	Yes	All notifiable diseases except erysipelas	
Sulphurous acid gas, washing with carbolic acid, or solution of perchloride of mercury, stripping walls, and white-washing walls and ceilings	Carbolic acid or solution of perchloride of mercury	No	Yes	Smallpox, cholera, diphtheria, scarlet fever, typhus, typhoid fever, continued fever, measles, membranous croup, and erysipelas	The disinfecting station is also provided with a laundry and a crematory.
Sulphurous acid gas	Sanitas powder, carbolic acid solution 1 in 150	No	No	Notifiable diseases	
Sulphurous acid gas, stripping, cleansing, &c., when judged necessary	Perchloride of mercury	No	No	All notifiable diseases except erysipelas	
DISTRICTS.					
Sulphurous acid gas	Pechloride of mercury	No	A temporary shelter is provided in spare rooms at the public mortuary in Goldsmith-street	Notifiable diseases, except erysipelas and croup. When cases of erysipelas occur at the workhouse the bedding there is disinfected	
Sulphurous acid gas	Calvert's carbolic powder 20 per cent. and Jeyes' fluid	A small charge to those who can afford	An arrangement is in contemplation	Smallpox, cholera, typhus, typhoid, scarlet fever, diphtheria, puerperal fever	
Sulphurous acid gas and stripping walls	Corrosive sublimate, Calvert's No. 5 carbolic acid and crude Sanitas, according to nature of case	No	Yes	All notifiable diseases, and any others required. Cleansing is carried out after deaths from phthisis	
Sulphurous acid gas	Carbolic acid and Jeyes' fluid	No	In communication with Vestry of Clerkenwell with reference to the use of shelter in that district	Notifiable diseases and measles	
Sulphurous acid gas 1 lb. of sulphur to every 300 cubic feet, all apertures being tightly closed	Carbolic acid ...	No	Yes	Notifiable diseases, except erysipelas and puerperal fever	
Sulphurous acid gas	Carbolic acid solution and powder	No	Now in course of erection in connection with buildings at new wharf premises belonging to the vestry	Notifiable diseases	Bedding, &c., subjected to fumigation before removal.

Return of Replies from District

No.	Parish or District.	Whether Sanitary Authority has provided disinfecting oven.	Where oven is situated.	Whether disinfection effected by dry heat or steam.	Manner in which dry heat is produced.	Arrangements made where no oven has been provided.	Whether any chemicals used in connection with the oven.	Length of time feather bed of average size is retained in oven, and highest temperature in centre of bed.	Arrangements made for removal of infected articles to and from oven.
									EAST
21	Shoreditch ...	Yes	Town Hall, Old-street	Steam(Goddard, Massey and Warner)	...	...	No	40 minutes ...	Two vans (one horse), one for infected and one for disinfected articles
22	Bethnal-green...	Yes	Vestry - yard, Digby-street	Steam (Washington Lyon)	...	...	No	1 hour ...	Covered hand-carts
23	Whitechapel ...	Yes	Wentworth-street and George - yard, Whitechapel	Steam(Goddard, Massey and Warner)	...	...	No	1 hour. Highest temperature probably 280° F.	Two trucks are used; two men are employed to bring and return the articles, and one man superintends the oven
24	St. George-in-the-East	No	Negotiations are in progress for the acquisition of a suitable site	...	...	Washable articles are dipped in liq. sod. chlor. and other articles are opened and exposed to the fumes of burning sulphur	...	...	...
25	Limehouse ...	Yes	Little John-street, Dorset-street, Commercial-road	Dry heat ...	Gas ...	...	No	4 hours ...	A hand box-truck is used to take infected articles to the oven, and another similar truck is used to take them home after disinfection
26	Mile End Old Town	Yes	Riga-wharf, Emmett-street	Steam	...	...	No	2 hours; 250° F. in centre of bed	Two zinc-lined hand-carts, one for infected, one for disinfected articles
27	Poplar—*Poplar and Bromley*	Yes	Board's depot, Violet-road	Steam (Washington Lyon)	...	...	No	...	Two vans drawn by horses, one to fetch and the other to return articles
	Bow	Yes	do.	do.	...	...	No	2 hours; 225° F.	
									SOUTH
28	St. Saviour ...	Yes	Ewer-street ...	Dry heat ...	Gas	...	Sulphur	6 hours ...	A closed van used for conveying articles to and from oven
29	St. George-the-Martyr	Yes	Stone - yard, King James-street, Borough-road	Steam (Washington Lyon)	...	...	No	1 hour; temperature within apparatus 260° F.	Infected articles carried in covered hand-truck to oven, taken back in another closed truck
30	Newington ...	Yes	Depot, Manor-place, Walworth-road	Steam (Manlove and Co.)	...	...	No	...	Special vans and men; bedding wrapped in macintosh; men dressed in overalls of canvas
31	St. Olave ...	Yes	Guy's Hospital	Steam	...	...	No	...	In cases where bedding, &c., is to be destroyed or disinfected a properly covered zinc-lined truck is used

Medical Officers of Health—*continued.*

Method adopted for disinfecting houses.	Disinfectant recommended for disinfection of excreta.	Whether charge is made for disinfection.	Whether shelter has been provided as required by Section 60 of the Public Health (London) Act, 1891.	Diseases after which Authority carries out disinfection.	Remarks.
DISTRICTS.					
Sulphurous acid gas; whitewashing and washing with chloride of lime	Left to discretion of medical attendant	No; except for special service at night	Yes	Notifiable diseases	
Sulphurous acid gas	Sanitas and perchloride of mercury	No	No	Smallpox, scarlet fever, typhus, typhoid, diphtheria, cholera, and at any time on application by occupier	
Sulphurous acid gas and when deemed necessary solution of perchloride of mercury. The latter is always used in cases of smallpox and scarlet fever	Calvert's carbolic powder, 20 per cent. strength	No	Permanent provision is in process of arrangement, at present coroner's court room is available, if necessary	Notifiable diseases. Measles in case of death and when other children are resident in the house	In deaths from choleraic diseases, &c., and where articles are particularly dirty and offensive they are destroyed in the cremator.
Sulphur, walls stripped and washed with hot lime and ceilings cleansed and lime whitened	Carbolic acid, liq. sodæ chlorinatæ	No	Yes	Smallpox, scarlet fever, diphtheria, typhoid, typhus, cholera, and membranous croup when supposed to be diphtheritic, and in other cases when recommended by the medical officer of health	Infected articles from smallpox and cholera cases are burnt.
Sulphur, stripping walls, and washing ceilings, paint and floors with disinfectants	Carbolic acid ...	No	Yes	Typhoid, typhus, diphtheria, smallpox, scarlet fever, puerperal fever, simple continued fever and cholera	A Washington Lyon's steam disinfector has been ordered, and will shortly be erected in place of that now in use.
Sulphur	Burnett's fluid ...	No	Yes	Scarlet fever, typhoid, diphtheria, smallpox	
Sulphur, chloro-naphthalene, corrosive sublimate	Chloro - napthalene undiluted and carbolic acid	No	No	Smallpox, scarlet fever, diphtheria, membranous croup, puerperal fever, typhus, enteric, erysipelas, simple continued fever, cholera, or any case as occasion arises	
Sulphur, and in certain cases washing with a mercurial disinfectant	Chloro - napthalene and Condy's fluid	No	No	Notifiable diseases, except erysipelas (save in fatal cases or when the premises are very dirty)	
DISTRICTS.					
Sulphur	Solution of perchloride of mercury, 1 in 1000	No	Rooms were provided, but are no longer available	Notifiable diseases, except erysipelas	The authority has resolved to provide a steam apparatus.
Sulphur	Carbolic acid, 5 per cent. solution	No	Plans and specification for houses prepared and lease of land under consideration	Notifiable diseases and such other infectious diseases as come to knowledge of medical officer of health	Medical officer of health observes that "many cases occur in parish where inefficient fumigation is practised, owing to want of a reception house or temporary shelter."
Sulphur, stripping walls, whitewashing	Sulphate of iron, 1 in 40; perchloride of mercury, 1 in 1000; carbolic acid, 1 in 50	No	No. Plans are prepared	Smallpox, diphtheria, membranous croup, scarlet fever, typhus, typhoid, puerperal fever	
Sulphur, walls stripped; paint, &c., washed with acid or solution of carbolic acid or perchloride of mercury	Perchloride of mercury, 1 in 1000 or 1 in 2000	No	Yes	Scarlet fever, smallpox, diphtheria, typhus, typhoid, puerperal fever; occasionally measles, tuberculosis, erysipelas	

Return of Replies from District

No.	Parish or District.	Whether Sanitary Authority has provided disinfecting oven.	Where oven is situated.	Whether disinfection effected by dry heat or steam.	Manner in which dry heat is produced.	Arrangements made where no oven has been provided.	Whether any chemicals used in connection with the oven.	Length of time feather bed of average size is retained in oven, and highest temperature in centre of bed.	Arrangements made for removal of infected articles to and from oven.
									SOUTH DISTR
32	Bermondsey ...	Yes	Town-hall, Spa-road	Steam (Goddard Massey and Warner)	...	...	No	½ hour; 230° F.	Two zinc-lined trucks, one for disinfected and one for infected articles
33	Rotherhithe ...	No	...	Steam (Washington Lyon)	...	By contract with Messrs. Lyon, of Old Kent-road	...	Feather, hair, or flock beds, 2 hours average; 260° F.	A zinc-lined van belonging to Vestry conveys articles in canvas bags to the disinfecting ovens. The same van takes them back
34	Lambeth ...	Yes	Vestry Wharf, Belvedere-road	Steam	...	...	No	20 minutes under steam and afterwards 30 minutes to dry; 200° F.	Covered vans, two for infected and one for disinfected articles
35	Battersea ...	No	...	Steam	...	By contract with Mr. Lacy, of Fulham	No	Not less than 25 minutes; 230° F.	...
36	Wandsworth—								
	Clapham ...	No	...	Steam	...	By contract with Mr. Lacy, of Fulham	No	20 minutes; 260° F.	Special zinc-lined vans. Articles removed in canvas bags
	Putney ...								
	Streatham ...								
	Tooting ...								
	Wandsworth ...								
37	Camberwell	Yes	Peckham Park-road	Superheated steam	...	...	No	About 1 hour..	Air-tight iron carts
38	Greenwich—								
	Greenwich ...	Yes	Chester-street, East Greenwich	Dry heat; steam disinfector (Washington Lyon) in course of erection	...	...	No	½ hour; temperature of oven 240° F.	Two metal-lined carts, one for infected and one for disinfected articles
	Deptford ...	Yes	The Board's Yard, Knott-street, Deptford	Steam (Washington Lyon)	...	...	No	40 minutes; 251° F.	Two separate vans for infected and disinfected articles
39	Lewisham ...	Yes	The Depot, Molesworth-street, Lewisham	Steam (Washington Lyon)	...	...	No	...	Iron tank carts ...
40	Woolwich ...	Yes	Dockyard Wharf	Steam (Washington Lyon)	...	...	No	30 minutes; 230° F.	Special vans ...
41	Plumstead ...	Yes	Parish Yard, Maxey-road	Steam (Washington Lyon)	...	...	No	4 hours; 250°–260° F.	Two zinc-lined covered carts, one for infected, one for disinfected articles
42	Lee—								
	Charlton ...	No	...	...	...	None ..	...	...	...
	Lee and Kidbrooke	Yes	At Plumstead ...	Steam	...	...	No	About 3 hours; 250° F.	A properly constructed closed van
	Eltham ...	Yes	At Plumstead ...	Steam	...	...	No	About 3 hours	Brought in carts lined with zinc

Medical Officers of Health—*continued.*

Method adopted for disinfecting houses.	Disinfectant recommended for disinfection of excreta.	Whether charge is made for disinfection.	Whether shelter has been provided as required by Section 60 of the Public Health (London) Act, 1891.	Diseases after which Authority carries out disinfection.	Remarks.
ICTS—*continued.*					
Sulphur, subsequent cleansing with carbolic acid	Carbolic acid, 98 per cent. and 30 per cent. In cholera, sulphate of iron and carbolic acid would be used, or perchloride of mercury in Sanitas fluid	No	No	Smallpox, typhus, diphtheria, scarlet fever, erysipelas, typhoid, cholera	Disinfector erected Jul 1892.
Sulphur	Sanitas, carbolic acid, Condy's fluid	No	Yes	Smallpox, scarlet fever, typhus, typhoid, diphtheria	
Cleansing and sulphur or chlorine ...	Carbolic acid for drains	No	No, but arrangement on occasion is made for the use of a suitable house or rooms in the district, House purchased by Vestry for such a purpose	All notifiable diseases and measles (when known of)	
Sulphur. In certain cases corrosive sublimate is burnt with sulphur	Sanitas, carbolic acid, Condy's fluid	No	Yes	All notifiable diseases ...	If bedding is very foul is destroyed in the dus destructor, and compensa tion given.
Sulphur. Subsequent stripping of walls and thorough cleansing of woodwork	Carbolic powder, permanganate of iron, perchloride of mercury, sulphate of iron	No	Clapham and Putney have provided shelters. Wandsworth, Streatham and Tooting about to do so	All infectious diseases ...	It has been decided to erec a disinfecting station Clapham.
Usually rooms are washed with corrosive sublimate solution, sometimes sulphur fumigation is employed	Perchloride of mercury	No	Not at present...	Notifiable diseases, except erysipelas	
Sulphur	Carbolic acid, Jeyes' disinfectant, perchloride of mercury with hydrochloric acid	No	Yes	Notifiable diseases	
Sulphur	Solution of perchloride of mercury	No	Yes. Share the use of the above	Notifiable diseases	
Sulphur, washing, and cleansing. Repapering if necessary	Jeyes' fluid, one pint to three gallons of water, carbolic, sanitas, and permanganate of potash	No	No	Notifiable diseases	
Sulphur	Perchloride of mercury, eight oz., methylated spirit two pints, aniline green half oz., water to 50 gallons	No	Yes	Notifiable diseases	
Sulphur, general cleaning	Solution of perchloride of mercury 1 in 1,000	No	Yes	Notifiable diseases, and phthisis when application is made	
Fumigation with chlorine gas	Carbolic powder ...	No	Yes	Scarlet fever, smallpox, diphtheria and puerperal fever	Infected bedding is d stroyed and compensati given, if necessary.
Fumigation with chlorine gas, stripping walls, washing floors with carbolic acid solution	Pure carbolic acid ...	No	No	Scarlet fever, diphtheria, smallpox, typhoid and typhus fevers	
By burning sulphur	Carbolate of lime ...	No	No	Scarlet fever, typhoid, diphtheria, smallpox	

APPENDIX III.

London County Council.

PUBLIC HEALTH DEPARTMENT,
SPRING GARDENS, S.W.,
3rd October, 1895.

Report by the Medical Officer, submitting report by Dr. Hamer on the Sanitary Condition and Administration of the Parish of Lambeth.

(Ordered by the Public Health, &c., Committee to be printed on 14th October, 1895.)

In presenting Dr. Hamer's Report on the sanitary condition and administration of Lambeth, I may make a few observations.

Dr. Hamer shows that for a proper understanding of the requirements of the district it is necessary to bear in mind that it is not homogeneous, that, in fact, broadly speaking, two separate areas have to be considered, differing widely from each other in respect of population and in respect of sanitary circumstances. Of these areas the southern, which is the larger, is occupied by a population living under conditions of comparative comfort; the northern, which is the smaller, is occupied by a much poorer population, whose conditions demand an active sanitary supervision.

The population of the northern part of the district is about 85,000, and it may be well to learn the number of staff employed in other districts of London which are comparable with it.

If the census figures relating to "overcrowding"* of tenements of one to four rooms be referred to, it will be found that the northern area of Lambeth (with 31·75 per cent. of its population living under conditions of "overcrowding" in tenements of one to four rooms) occupies a position intermediate between St. Giles and the Strand on the one hand (with corresponding percentages of 29·8 and 30·95 respectively), and St. Saviour and St. George-the-Martyr on the other (with corresponding percentages of 32·37 and 33·59 respectively). On referring to returns as to the sanitary inspectors in the several districts of the Administrative County of London, which have been made by medical officers of health, I find the number of inhabitants to each sanitary inspector in these several districts does not exceed 15,000.

The northern part of Lambeth comprises the whole of one inspector's district with about 60,000 inhabitants, and a part of a second inspector's district with about 50,000 inhabitants.

The number of inhabitants per sanitary inspector is therefore in this northern area upwards of 50,000, or more than three times as many as in the districts referred to.

In view of the smallness of the staff of sanitary inspectors, it is not matter for surprise that Dr. Hamer's report contains ample evidence of the results of lax administration, manifested in the overcrowding which he found in numerous tenements, and in the neglected condition of houses occupied by poor persons. These conditions, it will be observed, were especially conspicuous in the northern area, but the southern area also presented much evidence of want of supervision.

A complete rearrangement of the sanitary administration is undoubtedly needed to remedy these evils, and a sufficient staff must be provided to deal with the unwholesome conditions which abundantly exist throughout the district, and especially with the prevention of overcrowding which is more marked in the northern area.

With an adequate staff it would be possible for the authority to undertake what it has not hitherto seriously attempted, a house-to-house inspection throughout the district, and it would then be possible to regulate by by-law those houses let in lodgings for which this greater power of control is necessary, and to obtain the information which is required for the effectual supervision of workshops.

Dr. Hamer also directs attention to certain areas for which there is no effectual remedy but reconstruction and rearrangement. Certain of these have already been brought to the knowledge of the Council, especially Salutation-place and Peers-cooperage.

Among other points discussed in Dr. Hamer's report, I may especially direct attention to the need of providing a second disinfecting station and a shelter or shelters for the accommodation of persons compelled to leave their dwellings for the purpose of enabling such dwellings to be disinfected.

SHIRLEY F. MURPHY,
Medical Officer of Health.

* The word "overcrowding" is here used in the same sense as in the census report, viz., as applying to tenements in which the proportion of inmates to rooms is more than two.

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Dr. Hamer's Report.

The parish of Lambeth is conterminous with the registration district and with the sanitary area of the same name. On the north and north-west the river Thames forms the boundary. On the west Lambeth adjoins the Battersea and Wandsworth sanitary areas, on the south it extends to the boundary of the County of London, and adjoins the Croydon district, and on the east it is bounded by the sanitary areas of St. Saviour, St. George-the-Martyr, Newington and Camberwell. The junction between Camberwell and Lambeth areas is in part interrupted by the interposition of a small detached portion of the parish of Streatham. This portion (which with the rest of Streatham parish forms part of the area under the jurisdiction of the Wandsworth Board of Works) lies like an island completely surrounded by Camberwell and Lambeth, and separated from the rest of Streatham parish by that portion of Lambeth which bounds it on its western side.

Lambeth is an irregularly shaped area, having a long axis some 6 miles in length, measured from the river Thames to the Norwood hills on the county boundary. The breadth of the area measured from east to west is very variable, ranging from only a little less than two miles at the broadest to about a quarter of a mile at the narrowest part. The total area is 3,941 acres, and in superficial extent Lambeth is only exceeded by four sanitary areas in London—those of Camberwell, Lee, Lewisham and Wandsworth. Lambeth is said to be "a good example of the long narrow pattern after which so many old parishes were modelled, comprising a piece of high ground, a belt of forest, and a meadow in the valley."* This peculiarity of shape must be borne in mind in comparing the total area of Lambeth with that of other sanitary areas, as the question of the facility of transport from one part of a district to another is dependent upon shape as well as upon total area.

The southernmost portion of Lambeth which comprises "the piece of high ground" already alluded to, is the most outlying part. The ridge of hills which forms the boundary of the parish and of the county of London varies in elevation from upwards of 200 to upwards of 350 feet above ordnance datum. The highest altitudes given on the ordnance sheet (on Westow-hill at its junction with Gipsy-hill, and again close to the Crystal Palace) are 363 and 367 feet respectively.

To the north of the ridge the ground slopes rapidly downwards, with some interruption, however, in the neighbourhoods of Tulse-hill, of Knight's-hill and of Herne-hill.

The altitude in the broad central portion of the parish ranges for the most part between 20 and 50 feet above ordnance datum, with greater elevation on the eastern boundary in the neighbourhood of Denmark-hill and of Herne-hill, and in the south-western part of the broad central portion of Lambeth where Brixton-hill is situated.

The considerable part of Lambeth parish which lies north of the broad central portion is for the most part at the level of Trinity high-water mark, that is to say, at about an average height of 12½ feet above ordnance datum; the figures given in the ordnance sheets are sometimes slightly in excess and sometimes fall somewhat short of this reading. The names North Marsh Ward and South Marsh Ward applied to two wards in this portion of the parish are sufficiently suggestive. There are numerous indications, too, that the low-lying northern parts of Lambeth parish were formerly actually submerged at high tides, and to the present day the dampness of the site gives quite a distinctive character to this in common with some of the adjoining parts of south London.

In the high ground of the southern part of the parish, the London clay comes to the surface save in two isolated localities in the south-west where there are superficial deposits of gravel of small extent, and in a third locality in the neighbourhood of Brockwell-park where, on the borders of the parish, beds belonging to the Woolwich and Reading series are exposed.

In the northern part of the parish the London clay is covered for the most part by gravel; over one very small area, a superficial deposit of brick earth is however found, and in the low-lying ground bordering upon the river the surface layers are composed of alluvial deposits.

The gravel districts of Lambeth are for the most part at a low elevation; the clay districts on the other hand are, as a rule, elevated and undulating, thus favouring the escape of surface water. Dampness of walls appears to be more commonly met with in the houses of the low-lying gravel districts than in those of the clay districts of the southern part of the parish.

Statistics.

The population of Lambeth, as enumerated at the census of 1891, was 275,203 persons, being an increase of 21,504 on the 1881 census. In respect of population Lambeth stands second among London sanitary areas (Islington with a population of 319,143 at the 1891 census being first) and stands seventh on the list if sanitary areas throughout the whole of England are included in the comparison.

The number of inhabited houses in Lambeth at the census of 1891 was 38,556, this number being larger than that obtaining in any other sanitary district of London.

The rate of increase in the population of Lambeth between 1881 and 1891 was less considerable than that which occurred in a number of London sanitary districts, and the actual increase was less than the excess of births over deaths in Lambeth for 1881-90. There was an increase during the ten years of 3,152 in the number of inhabited houses. This increase was chiefly manifested in the southern and more outlying parts of the parish, indeed in the northern parts of the parish there was an actual decrease in the number of inhabited houses. An indication of the extent of area built over in periods, antecedent to 1881 is given in a map published with Loftie's History of London, which shows that the extensive process of filling up the southern part of Lambeth has in the main been effected since 1867, although building operations had already been carried along Brixton-hill and Tulse-hill prior to that date.

The rateable value of Lambeth (6th April, 1895) was £1,575,325, being exceeded by that of five only of the 43 sanitary districts of London. The total rates raised in the year 1893-4 amounded to 6s. 5d.

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in the £. Under the Equalisation of Rates Act, 1894, the parish receives for the half-year 1st April to 30th September, 1895, £8,348 16s. 3d., being a relief of the rate to the extent of about 2¼d. in the £ annually.

The number of persons to an acre in Lambeth, calculated on the estimated population at the middle of 1894, is 72, the corresponding number for London being 58, and the numbers in the several sanitary districts ranging from six in Plumstead to 212 in St. George-the-Martyr.

The population contains only a small foreign element, the last census return giving a total of only 2,782 foreigners enumerated in the district; of these 1,136 were Germans.

The annexed table compares the birth rate and marriage rate of Lambeth in the years 1892-3 and 4, with the corresponding rates in London—

	Birth rate.		Marriage rate.	
	Lambeth.	London.	Lambeth.	London.
1892	33·2	30·9	15·1	17·4
1893	33·0	30·9	15·9	17·2
1894	32·8	30·1	15·7	17·0

The following table compares the death rate in Lambeth from all causes and from the principal zymotic diseases with the corresponding figures for London as a whole—

	Deaths from all causes per 1,000 living.		Deaths from principal zymotic diseases per 1,000 living.	
	Lambeth.	London.	Lambeth.	London
1885-91	19·8	19·9	2·67	2·70
1892	19·7	20·3	2·55	2·80
1893	20·6	20·9	2·72	3·04
1894	17·2	17·4	2·40	2·64

The figures given above have been quoted with a view to enabling comparison to be made between the entire sanitary area of Lambeth and the whole of London. From what has already been said, however, it appears that between the northern and southern parts of the large parish of Lambeth there exist differences in the conformation of the ground, in the character of the subsoil, in the age and arrangement of the streets and buildings, and it may be added in the social condition of the inhabitants, which materially affect the value of any inferences based upon study of the statistics of Lambeth as a whole. If the sanitary areas which extend on the eastern or on the western side of Lambeth from the river to the county boundary were treated in combination, and the statistics of the combined areas studied, it would of course be found that in either case, whether in that of the area on the east or in that of the area on the west of Lambeth, local peculiarities would be altogether lost in the general result. In such a statement for example the density of population of St. George-the-Martyr, Southwark, would be diluted so to speak by the comparative sparseness of population in outlying parts of Camberwell. In a similar way it will be found that the figures for Lambeth parish in many respects give totals which are no guide to the conditions which obtain either in the northern or in the southern parts of the area, and it will be seen when the figures of sub-districts come to be dealt with, that they bring to light important facts of which there is no indication in the figures relating to the entire district.

Lambeth is divided into eight sub-districts for registration purposes; the following table relating to the area, houses and population in these sub-districts is abstracted from the 1891 census report—

Sub districts of Lambeth registration district.	Area in statute acres.	Houses.						Population.					
		Inhabited.	Uninhabited.	Building.	Inhabited.	Uninhabited.	Building.	Persons.		Males.		Females.	
		1881.			1891.			1881.	1891.	1881.	1891.	1881.	1891.
1. Waterloo-road First	67	1,899	89	—	1,470	89	5	15,195	14,031	7,695	7,046	7,500	6,985
2. Waterloo-road Second	100	1,890	87	4	1,780	120	3	16,351	14,644	8,308	7,482	8,043	7,162
3. Lambeth Church First	162	2,253	198	9	1,999	103	12	19,876	18,075	9,927	9,087	9,949	8,988
4. Lambeth Church Second	186	4,689	79	12	4,529	191	37	39,859	39,097	19,870	19,471	19,989	19,626
5. Kennington First ...	490	6,390	239	71	6,909	288	14	45,232	50,586	21,447	24,730	23,785	25,856
6. Kennington Second	498	5,595	170	19	6,093	277	41	35,332	39,708	15,904	18,294	19,428	21,414
7. Brixton	1,429	9,847	740	173	11,660	756	79	62,837	73,405	27,460	32,731	35,377	40,674
8. Norwood	1,009	2,841	274	194	4,116	341	74	19,017	25,657	8,565	11,148	10,452	14,509
Lambeth ...	3,941	35,404	1876	482	38,556	2,165	265	253,699	275,203	119,176	129,989	134,523	145,214

An examination of the figures in this table shows the number of persons per acre in the several sub-districts to be 209, 146, 112, 210, 103, 80, 51 and 25; while the number of houses per acre in the sub-districts is as follows: 23, 19, 13, 26, 15, 13, 9, 4. There is thus an almost uninterrupted decrease in the extent of crowding in proceeding from sub-district one which lies at the northern extremity of the parish to sub-district eight which adjoins the county boundary.

In Lambeth as in adjoining parts of South London, poverty and crowding of persons upon area tend to be associated with distance from that part of the north side of the river to which so many South Londoners travel daily to their work. With the exception of the potteries there is a remarkable absence of local industries in Lambeth, and the distance from the place of work, which is often on the other side of the Thames, exercises a marked influence upon the distribution of population and upon the social conditions obtaining in different parts of the parish. As a general rule the well-to-do travel furthest, the houses of the middle class are found in an intermediate situation, and the poorest people live in the near neighbourhood of the river.

The eight sub-districts of Lambeth may with advantage be studied in two groups, and the most obvious line of cleavage appears to be that between the four inner and the four outer sub-districts. This division has been made use of from time to time by Dr. Verdon in his annual reports, and will be found to present some instructive contrasts.

The four inner sub-districts (Nos. 1–4, see preceding table) had at the 1891 census a population of 85,847 and an area of 515 acres, *i.e.*, a density of population of 167 persons to the acre.

The four outer sub-districts (Nos. 5–8) had at the 1891 census a population of 189,356 and an area of 3,426 acres, *i.e.*, a density of population of 55 persons to the acre.

A valuable indication as to the extent to which crowding of persons prevails in a given area is afforded by the census figures relating to tenements of less than five rooms. These figures are given for sanitary districts in London in the census return, and show that 52·2 per cent. of the inhabitants of Lambeth live in tenements consisting of one, two, three or four rooms, and 15·87 per cent. of the total population live in such tenements under conditions of "overcrowding."* These percentages are somewhat smaller than the corresponding figures for London as a whole, which are 55·5 per cent. and 19·7 per cent. respectively.

It now appears desirable to learn to what extent the figures for all Lambeth are followed in the case of the four inner and four outer sub-districts. The material upon which such a comparison can be based is not furnished in the census return. By the kindness of Dr. Tatham, the Superintendent of Statistics of the General Register Office, I have been able, however, to obtain the necessary figures. It has thus been possible to prepare the annexed table:—

	Population.	One-room tenements.		Two-room tenements.		Three-room tenements.		Four-room tenements.		Percentage of population living in overcrowded tenements of less than five rooms.
		Number of occupiers of over-crowd-d tenements.	Percentage of total population in overcrowded tenements.	Number of occupiers of overcrowded tenements.	Percentage of total population in overcrowded tenements.	Number of occupiers of overcrowded tenements.	Percentage of total population in overcrowded tenements.	Number of occupiers of overcrowded tenements.	Percentage of total population in overcrowded tenements.	
Four inner sub-districts of Lambeth	85,847	8,418	9·81	9,918	11·55	6,132	7·14	2,792	3·25	31·75
Four outer sub-districts of Lambeth	189,356	3,127	1·65	5,868	3·10	4,625	2·44	2,762	1·46	8·65
Lambeth district ...	275,203	11,545	4·20	15,786	5·74	10,757	3·91	5,554	2·02	15·87

It appears, therefore, that while in Lambeth as a whole the percentage of the population living in tenements of one to four rooms under conditions of "overcrowding" is 15·87 per cent. the corresponding percentage in the four inner sub-districts of Lambeth is just about twice as great, viz., 31·75 per cent. Lambeth stood 13th on the list of 41 sanitary districts into which London was divided at the time of the census, in respect of "overcrowding" *i.e.*, 12 districts were less crowded; had, however, the four inner districts of Lambeth been substituted for the entire parish in the comparison with London sanitary districts, the place taken would have been a very different one. In fact the high percentage of "overcrowding" in the four inner sub-districts of Lambeth was only exceeded in 1891 throughout the rest of London in nine sanitary districts, those of St. Luke, Whitechapel, St. George-in-the-East, Clerkenwell, Holborn, Bethnal-green, Shoreditch, St. George-the-Martyr and St. Saviour.

It is necessary now to refer to the death rates in registration sub-districts of Lambeth. From Dr. Verdon's annual reports I am able to obtain since 1888 the deaths in sub-districts corrected by the distribution to their proper districts of deaths occurring in public institutions. The annexed table shows the mortality rates which are deduced from these figures—

	Average 1888-91.	1892.	1893.
Waterloo-road First	26·7	22·5	26·2
„ Second	27·4	25·4	26·1
Lambeth-church First	25·6	24·0	24·5
„ Second	23·4	23·2	24·6
Kennington First	20·5	19·6	20·6
„ Second	18·0	18·8	18·5
Brixton	17·1	17·5	17·6
Norwood	14·0	14·0	14·3
Lambeth	20·1	19·6	20·3

* The Registrar-General applies the term overcrowding to cases where there are more than two occupants per room in tenements of less than five rooms.

From the above table it is clear that the four inner sub-districts of Lambeth compare very unfavourably with the four outer sub-districts as regards death rates, just as has been shown to be the case in respect of "overcrowding." The figures as to mortality and "overcrowding" suggest that in these four inner sub-districts there will be found conditions making large demands upon a sanitary staff, indeed it would appear that the circumstances can only be compared with those obtaining in a very limited number of the other sanitary districts of London.

Sanitary circumstances.

Results of Inspection.—I have inspected upwards of 1,000 different sets of premises in Lambeth, 796 of these being dwelling houses occupied for the the most part by persons belonging to the working class. I found defects of one kind or another in 519 of the 796 houses referred to, that is in 65 per cent. As a result of similar inspections made in the districts of Whitechapel and Mile End Old Town, rather more than a year ago, the percentage of houses in which defects were noted was found to be, in the case of Whitechapel 58 per cent., and in that of Mile End Old Town 32 per cent. Defective conditions in the houses inspected were thus found to be of rather more frequent occurrence in Lambeth than in Whitechapel, and to be more than twice as frequent in Lambeth as in Mile End Old Town.

With regard to the nature of the defects noted in Lambeth the following statement may be made.

Dampness of walls of rooms was noted in 71 instances; dirty condition of rooms in 126 instances; conditions of dilapidation in 108 instances; defective yard paving in 62 instances; defective roofs in 31 instances; defective traps in yards or cellars in 26 instances; defective sink waste pipes in 9 instances; defective rain-water pipes in 15 instances; eaves guttering absent or defective in 3 instances.

With regard to water-closets, the following defects were noted. Ten water-closets were found in a blocked condition; in 13 instances water-closet pans were found broken; in 2 instances there was no apparatus for the supply of water to closets; in 82 instances the apparatus provided was out of order; 14 water-closet pans were found to be in a foul condition; in 15 instances the flush of water provided was inadequate; and in 5 cases the seat of the closet was broken. In the majority of cases water-closet pans were found to be of the "long hopper" pattern, improved types of apparatus being met with only in a small number of instances.

Further defects to be referred to are the absence of a proper receptacle for dust or a broken condition of such receptacle, 106 instances; an accumulation of dust on the premises, 44 instances; stopped drains, 3 instances.

Conditions of overcrowding* were found in no less than 210 instances.

A comparison of the results with those obtained last year in the two East End districts already referred to is instructive. The following table has been prepared to exhibit the number of defects of certain different kinds found per 100 houses visited in Lambeth and in Whitechapel and Mile End Old Town—

	Total number of houses visited.	Percentage of houses in which defects were found to exist.	Number of instances per 100 houses visited in which defective roofs, yard paving, water closets, traps or rain water pipes were found.	Number of instances per 100 houses visited in which there was no receptacle or a broken receptacle for dust, or in which an undue accumulation of dust was found to exist on the premises.	Number of instances per 100 houses visited in which dirty conditions or dilapidated conditions, other than those already specified, were found.	Number of instances of overcrowding per 100 houses visited.
Lambeth	796	65	36	19	29	26
Whitechapel... ...	497	58	61	5	34	9
Mile End Old Town...	507	32	24	5	10	2

This table shows how very unfavourably Lambeth compares, in all the respects referred to, with Mile End Old Town, while in some respects it compares favourably, in others unfavourably, with Whitechapel.

The result of comparison between Lambeth and Whitechapel in regard to overcrowding is to show that this condition is found nearly three times as frequently in the tenements of the former as in those of the latter district. This result is rendered the more remarkable by the fact that Whitechapel is one of the most thickly-populated districts in London, and one in which the overcrowding difficulty is particularly felt.

Lambeth is seen to compare very unfavourably with both the other districts in regard to the removal of house refuse.

If the Lambeth figures are analysed so as to separately show the extent to which defects have been met with in the four northern sub-districts and the four southern sub-districts, it transpires that the percentage of houses found defective in each group of districts is almost precisely the same. In the northern sub-districts defects in connection with dust removal are comparatively rare. Overcrowding is much less frequent in the southern than in the northern sub-districts, and this fact renders the extent of the overcrowding noted in the northern part of Lambeth the more remarkable.

At the time of the 1891 census, the returns relating to tenements of one to four rooms, to which reference has already been made, showed that in the northern part of Lambeth the amount of "overcrowding" (using the term in the sense of the Registrar-General) was a little less than it was in White-

* This term is here used to include cases in which there was found to be less than 300 cubic feet per person in rooms used exclusively as sleeping rooms, and less than 400 cubic feet per person in rooms not used exclusively as sleeping rooms. Two children under twelve are reckoned as one adult.

chapel. The results of my inspections (of Whitechapel in 1894 and of Lambeth in 1895) show far more overcrowding (in the sense indicated in the footnote to page 5) in the northern part of Lambeth than in Whitechapel. These circumstances certainly suggest that the relative positions of Whitechapel and of the northern part of Lambeth in respect of the excessive occupation of rooms have changed during recent years. In this connection it may be noted that at the time of my inspection there were four inspectors and an assistant inspector in Whitechapel, while the four inner sub-districts of Lambeth, with a considerably larger population, only commanded the full attention of one inspector and part of the time of a second inspector.

A condition frequently met with in Lambeth is the use as a sleeping apartment of an underground room which does not comply with the requirements of sec. 96 of the Public Health (London) Act. Such underground rooms are very common in the inner sub-districts of Lambeth, street after street being met with, in every house of which they occur. Attempts appear to have been made from time to time to prevent these places being used for human habitation, but these attempts have not been attended with much success. Even if such a room is emptied for a while, it is soon occupied by new tenants. In illustration of the difficulty experienced with tenants in regard to the use of these places I may refer to the following instance. I made inquiry as to the use of a cellar which had quite recently been emptied of its occupants by the action of the sanitary inspector. The incoming tenant stated that she intended to sleep in the cellar, that she preferred to live underground and always had lived underground. This singular preference was not the result of want of experience, for she added "I have been underground in Peckham for seven years, the things under my bed there used to be all covered with blue mould, and I used to wring the wet off the walls with my hands." A further difficulty in connection with underground rooms was illustrated by this case. The woman proposed to rent other rooms in the house and only to sleep in the cellar, and sec. 96 of the Public Health (London) Act merely deals with "separate occupation" of an underground room. This need of proving "separate occupation" renders the section inoperative in a very large number of cases.

In the course of my inspection of Lambeth, it became obvious that a large number of the premises which I visited had not previously been brought under the notice of the inspector in whose district they were situated; the owners of such premises had never, therefore, had their attention called by the sanitary inspector to the existence of defects. On the other hand, there were localities in which there was evidence that visits had been made by the inspector, and in which the sanitary condition of the premises was still very unsatisfactory. It is not possible to state with any degree of exactness to what extent this condition of things may have been due to the insufficiency of the amount of attention the inspector had been able to give to the localities in question, and to what extent it may have been attributable either to neglect and unwillingness to carry out necessary improvements and repairs, or to the fact that the tenants occupying the houses were especially difficult to deal with.

The following places may be referred to as being particularly conspicuous for the number of defects noted—

Victoria-place, Broadwall.
Sidwell-place, Broadwall.
Princes-square, Commercial-road.
Bond-place, Bond-street.
Commercial-buildings, Waterloo-road.
Le Grand-place, Waterloo-road.
Cornwall-place, Cornwall-road.
Peers-cooperage, Cornwall-road.
Salutation-place, Cornwall-road.
Princes-buildings, York-road.
Gloucester-street.
Fountain-court, Lambeth-walk.
Paved-court, Lambeth-walk.
Francis-court, Lambeth-walk.
Coad-place, Union-street.
Rood-cottages and Garden-cottages, Opal-street.
Cottage-place, Lower Kennington-lane.
White Hart-square, White Hart-street.
Frank-street, Newburn-street.
Mary's-cottages, Newburn-street.
Salamanca-court, Salamanca-street.
Wake-street, Lambeth-walk.
Laud-street, Tyers-street.
Horace-street, Wilcox-road.
Simpson-street, Wilcox-road.
Pascal-street, Wandsworth-road.
Portland-cottages, Wandsworth-road.
Gladstone-place and Milton-place, Belmore-street.
Bedford-cottages, Bedford-street.
Chapel-street, Brixton-road.
Bromgrove-road, Stockwell-road.
Ridgway-road, Loughborough-road.
Bloxham's-buildings, Denmark-hill.
The Retreat, Camberwell-road.
Hamilton-road, Railton-road.
Knight's-hill-square, Lower Norwood.
Victoria-place, Chapel-road, Lower Norwodd.
Benton's-lane, Lower Norwood.
East-place, Lower Norwood.

In some of the above-named localities in addition to the existence of defects admitting of comparatively easy remedy, there were other more radical defects of such a character as to raise question whether it was possible to render the premises fit for habitation.

The following cases must be more particularly referred to in this connection:—

1. On the west side of Broadwall, and near the borders of Lambeth parish, are two confined and ill-ventilated courts. *Victoria-place*, the more southerly of these, is about 12 feet across in its widest part, and extends from Broadwall on the one hand to Eaton-street on the other. Out of the south side of the court opens a *cul de sac* in which there are four houses, Nos. 7 to 10. The court is below the level of the adjoining streets. The houses have yards at the rear, the ground floors are above the level of the court adjoining, and ventilation beneath the floor boards has been provided. At the time of my visit, work was in progress in many of the houses and some degree of improvement was being effected. The worst house was No. 11 on the south side of the court; it adjoins the entrance to the *cul de sac* already referred to, and obstructs the access of light and air to No. 7 on the other side of the *cul de sac*. No. 11 was in the occupation of a dealer in tinware, and was in a very dirty condition. The rooms and yard were so filled with rusty tins, baskets, iron hoops and rubbish that it was difficult to move about the premises, and the surface of the yard was nowhere visible. It was said, however, that there were openings which directly communicated with the drains, and that "the place swarmed with rats in consequence."

Sidwell-place, which adjoins Victoria-place, is a *cul de sac* entered by a 7 ft. passageway under a house in Broadwall; it contains twelve two-storey houses with small yards at their rear (six houses on each side of a court about 12 ft. wide). The houses in this court were in a dilapidated condition at the time of my visit, but works of improvement were said to be under contemplation.

To the north of these courts there was, until recently, a court known as Mitre-court, in which there were eight houses. The owner of these houses on being served with notices by the vestry, elected to demolish the houses rather than to spend money upon them. It is to be regretted that matters appear to be taking a different course in Victoria-place and Sidwell-place.

2. *Commercial-buildings.*—This row of buildings is approached from a roadway on its eastern aspect, but the block really consists of the two-storey basements of houses which rise four storeys above pavement level in Waterloo-road. It is into the areas of these houses that the back rooms of Commercial-buildings open, and at the bottom of the said areas, some 30 feet below the level of Waterloo-road, are situated the "yards" of Commercial-buildings.

The buildings are numbered 1 to 10, and each front door gives access to four rooms. The two rooms on the side of the buildings remote from Waterloo-road are fairly lighted. The two rooms opening into the area on the Waterloo-road side are quite dark. The enquiry whether it was under any circumstances possible to see to read in these rooms without artificial light was received by one of the tenants with a smile.

The staircases are narrow and dark and the walls are damp. At the time of my visit many other defects were noted, and overcrowding was found in nine of the ten houses. These buildings are quite unfit for human habitation, and there is need for the institution of proceedings with a view to closing them.

3. *Fountain-court, Paved-court and Francis-court, Lambeth-walk.*—These courts are badly arranged, narrow and confined, and the cottages in them are in a very neglected condition; dampness of walls, dilapidated conditions, dirt and overcrowding were repeatedly found to exist. Faults of original construction and planning render it difficult to believe that the houses in these courts can be made fit for habitation, and suggest the need of application being made for closing orders.

The bad arrangement of several courts in the neighbourhood of Cornwall-road, and their general condition of dampness, has led to particular attention being directed to them on many occasions.

As long ago as 1878 a representation was made to the Metropolitan Board of Works with regard to an unhealthy area including Bond-court, Bond-street, John-street, Cottage-place, Elizabeth-place, Henry-place, James-place and Perry-place, and also with regard to an adjoining unhealthy area including Salutation-place, Peers-cooperage and a portion of Cornwall-road.

In 1891 the Sanitary Committee of the Vestry recommended that Cornwall-place, Le Grand-place and Cornwall-mews should be dealt with by a scheme under Part II. of the Housing of the Working Classes Act.

In 1893 the Public Health and Housing Committee of the Council made a similar recommendation with regard to Salutation-place and Peers-cooperage.

None of these schemes have been put into execution, and the areas in question remain with their original faults of bad arrangement and dampness of site substantially unaltered, while additional defects become manifest as the general state of repair of the buildings deteriorates.

In the first group of courts referred to above, there are a number of houses without through ventilation, and in Bond-place (Bond-court it appears to have formerly been called) there are 32 cottages which front upon a *cul de sac*, and have no open space or means of ventilation at the rear. Inquiry was made at several of these cottages with the result that in every instance the rooms were found to be overcrowded.

Le Grand-place and Cornwall-place presented numerous instances of overcrowding; conditions of dilapidation were particularly abundant in Cornwall-place.

Salutation-place and Peers-cooperage I inspected house by house in 1893, antecedent to the recommendation of the Public Health and Housing Committee referred to above, and on re-inspecting them recently, found them in even worse condition than was the case two years ago. Overcrowding existed in the large majority of the cases investigated.

In nearly all the localities referred to in the list on page 6, dirty conditions and overcrowding were conspicuous. The need of enforcement of by-laws relating to houses let in lodgings was particularly apparent in such instances. I visited a number of other streets and courts in Lambeth, containing houses let out in tenements, in which similar defects were of frequent occurrence, but some of the most striking instances of the need of enforcement of by-laws dealing with overcrowding, &c., are included in the above named list. A few examples may be quoted.

No. 5, Wake-street.—A two-storey house with four rooms, two of which are overcrowded; a man, his wife and three children occupy the ground floor front room, 900 cubic feet in capacity. A man, his wife and two children occupy the first floor front room which is about 1,000 cubic feet in capacity. The dust-bin is dilapidated, there is an accumulation of dust, the roof is defective, the staircase is dirty. The water-closet is stopped up.

No. 16, Laud-street.—An eight-roomed house in a dirty condition. Two of the rooms are occupied by a man, his wife and seven children; it is admitted that both these rooms are overcrowded and the family is going to leave. Two other rooms are occupied by a man, wife and six children, the two adults and three children sleeping in a room of less than 800 cubic feet in capacity.

No. 15, Portland-cottages.—Staircases and rooms dirty. Sink waste-pipe defective. Water-closet stopped. A man, his wife and six children all sleep in a room of 940 cubic feet capacity. The family rents two rooms, but only occupies one, as in the other the plaster has come away, exposing the brickwork; moreover the laths are bared and the condition is one of great dilapidation. In an adjoining house overcrowding resulted in a somewhat similar manner from the tenant's unwillingness to put his children into one of the rooms, as the walls were, to use his expression, "swarming with living vermin."

No. 5, Victoria-place, Lower Norwood.—The ground floor front room, which is less than 1,000 cubic feet in capacity, is occupied as a living and sleeping room by a woman and her grown-up son, aged 18, two daughters 15 and 14, and three younger children.

The above are given as examples of some of the more striking cases met with, but evidence of the need of putting into execution by-laws relating to houses let in lodgings was forthcoming in almost every house occupied by members of more than one family in the localities referred to in the list already given.

Workshops.—The officers of the vestry appear to have no precise information as to the number of workshops in Lambeth. Section 26 of the Factory and Workshop Act, 1891, extends to workshops the requirement of the 75th section of the Act of 1878, that written notice shall be given to the Home Office inspector by any person beginning to occupy a factory. It is, moreover, provided that notices so received shall be forwarded to the sanitary authority of the district in which the workshop is situate. Again, under an order of the Secretary of State, lists of outworkers in certain specified trades must be kept by occupiers of workshops and contractors employed by such occupiers, and these lists are open to inspection by any inspector under the Factory and Workshop Act, or by any officer of a sanitary authority.

During a period of about two years, information relating to 42 sets of premises had, I was told, been received from the Home Office inspector. These premises were, for the most part, found, on being inspected by the vestry's inspector, to be places where one or two outworkers were employed.

No systematic attempt was being made by the vestry, on its own initiative, to deal with workshop inspection, or to carry into execution the outworkers' order. One inspector charged with the execution of a number of other duties was in the habit of making inquiry concerning complaints relating to workshops. The quality of this work was good, the quantity of it quite out of proportion to the needs of the district.

By the kindness of Mr. Lakeman, superintending inspector of factories and workshops in London, I have been furnished with a statement as to the number of workshops in Lambeth under inspection by the Home Office inspectors. Mr. Lakeman finds there are 720 workshops under inspection at the present time, and he considers that fully 100 more will be added when the list is more complete. In addition to this there are many workshops which do not employ protected persons, and which are not inspected by the Home Office inspectors. Mr. Lakeman estimates the number of these as being about 350.

There are certainly therefore upwards of 1,000 workshops in Lambeth, and until a house-to-house inspection of the district is made it will not be possible to determine with exactness how much larger than this is the actual number of workshops existing in the parish.

In the course of my inspection of the district I happened by chance to come across a few workshops, and in company with the inspector who deals with complaints relating to this class of premises, I visited a number of places to which his attention had been directed. I have notes concerning fifty-eight workshops in all. The majority of these were occupied by dressmakers. There were a few tailors', bootmakers' and picture-frame makers' workshops, an artificial flower maker's workshop, a surgical instrument maker's workshop, and some others.

In three instances no abstract of the Factory and Workshop Act was exhibited as required by law; in one case overcrowding existed. These observations, however, it must be remembered, relate for the most part to premises to which the inspector's attention had been directed, and in connection with which he had caused improvements to be effected. In some of the cases not on the inspector's list, complete ignorance of the existence of any law dealing with workshops was professed by the occupiers. A woman who had just taken a front basement room with the intention of carrying on "ladies' tailoring" expressed astonishment when she was told the cubic capacity of the room was not sufficient for more than seven workers. She said there was room for more than twice that number at the table without their interfering with one another's elbows; and added that although she had been in the trade all her life, she had "never before been in a workroom where the girls did not sit so thick that there was not sufficient room for their elbows."

A satisfactory control of the workshops in Lambeth can only be exercised in conjunction with a system of house-to-house inspection.

Bakehouses.—I visited fifty-three bakehouses, of which twenty-three were underground.

In seven instances the ventilation was noted as unsatisfactory, in seven instances the bakehouse needed cleansing or lime-whiting, and in three instances water was drawn from a cistern and not directly from the main. In ten instances drain inlets were found inside bakehouses, such inlets were, however, in all cases trapped.

Slaughterhouses, cowsheds and offensive trades.—At the time of my inspection there were fifty-four licensed slaughterhouse premises in Lambeth; I visited fifty-one of these. In a few instances the slaughterhouses visited were fairly well adapted for the purpose, in the majority of cases they were situated in objectionally close proximity to inhabited houses. The slaughterhouses at 7, Lambeth-walk, 213, Wandsworth-road, and 113, Lambeth-walk, were particularly badly situated. Very little slaughtering appeared to be carried on, in many instances the only use made of the premises was to kill a few sheep in the summer months. Putting aside all questions of suitability of site the slaughterhouses, as regards compliance with the by-laws of the Council, with one or two exceptions, were found to be in a satisfactory condition.

I visited the thirty-five licensed cowhouse premises in the district. Some excellent work has recently been accomplished by the Lambeth Vestry in connection with the drainage of cowsheds and the improvement of receptacles for dung. In almost all instances it was found that the drainage had been entirely re-constructed, and with one or two exceptions new dung pits had been provided, which complied with the by-laws made by the Council under sec. 39 (1) of the Public Health London Act. There are few really good cowsheds in Lambeth. The allowance of cubic space is cut down by most of the cowkeepers to the minimum which the law requires, and there is a strong prejudice manifested against ventilation. Ventilating openings can be insisted upon, but the cowkeepers persistently close them with a view to raising the temperature of the shed and encouraging secretion of milk. The premises upon which businesses within the meaning of sec. 19 of the Public Health Act are carried on are the fat-melting and olein soap-making works in Upper-marsh, the soap-boiling works in Broadwall, and premises in Lambeth-walk, in New-cut, aud in Lower-marsh at which tripe boiling is carried on. The premises in Lower-marsh are not suitable for carrying on the business of a tripe boiler. They appear to be hardly ever used.

Common Lodging-houses.—There are nineteen registered houses in Lambeth, only four* of them, however, are large houses with more than fifty beds. In several instances one or two rooms only are registered in the small houses. The lodging-house at the rear of No. 108, Lambeth-walk was found to be a very old, two-storey, mainly wooden structure, only separated by a narrow passage from No. 108, Lambeth-walk. The stairs to the upper room were very steep, the floor of the downstairs room was dirty, only one water-closet was provided, although 35 lodgers were said to be sometimes accommodated at one time, and there were no fixed washing-basins. The question of re-constructing these premises was under consideration.

Keeping animals in such a way as to constitute a nuisance.—I met with no nuisance from pig-keeping in the course of my inspection. A few of the licensed slaughterhouse premises appeared to be somewhat extensively used for the slaughter of pigs. The licensee of a small slaughterhouse in an outlying portion of the parish informed me that he had killed 20 pigs on the previous day. The practice which is said to occasionally obtain of keeping pigs upon slaughterhouse premises for a number of days before they are slaughtered is very objectionable. The Council's inspector found it necessary to make careful inquiry into this question a year or two ago, and since then there seems to have been greater care exercised with regard to the matter.

A great many animals of one kind or another are kept in the back yards of the poorer class houses in Lambeth. In cases where the yard space is very confined, the hutch, cage or kennel is sometimes placed in the living room, and I have seen rabbits, in default of better accommodation, relegated to the water-closet.

In the small yard of a two-storey cottage I found a goat, three dogs, a cock, six hens, four chickens, four ducks, a cat and six rabbits. This yard was littered with grain and peapods, and it was stated that it was the practice of the neighbours on either side to throw all kitchen refuse over the fence for the animals to eat.

Disinfection.—The disinfecting chamber is situated at the Vestry wharf, near Westminster-bridge. It has been at work some years, and is said to give satisfactory results. Hot water pressure pipes heat the chamber, and steam at 10 lb. pressure is then introduced. The steam is after a time shut off, and the chamber kept closed until the goods are dry. There is only one entrance to the chamber, separate vans are, however, used for conveying infected and disinfected articles to and from the depot.

A second disinfecting station appears to be needed; at present infected material from Norwood has to be conveyed all the way to Westminster before it can be dealt with.

No shelter for the accommodation of persons compelled to leave their dwellings for the purpose of enabling such dwellings to be disinfected has been provided in Lambeth, as required by sec. 60 (4) of the Public Health London Act, 1891. North Lambeth is a part of London in which such a shelter is particularly needed.

Mortuary.—There is a mortuary, with post-mortem room attached, in High-street, Lambeth, which is conveniently situated for serving the needs of the northern part of the district. The lack of accommodation for the southern part of the parish has led to the acquirement of a site in Wanless-road, Herne-hill, on which it is proposed to erect another mortuary.

Dust removal.—In the portion of the parish north of Lambeth-road, a large number of pails (uncovered) have been provided by the vestry, this practice, however, has been discontinued. In the inner wards, or northern part of the parish, the removal of dust is carried out by the vestry itself, and a weekly call is made at each house. The number of accumulations of dust noted in this part of the parish was small. In the outer wards, or southern part of the parish, the removal is carried out by contractors; the streets are said to be perambulated once a week, but it is not the custom to make a house-to-house call. In this part of the parish many accumulations of dust were noted.

Lambeth presenting as it does a considerable river frontage with wharf accommodation, affords special facilities for the removal of dust, and a number of depots have been established in the parish. The City Commissioners of Sewers, the Strand Board of Works, and the Clerkenwell Vestry, all have dust depots in Commercial-road. The Lambeth Vestry's depot is situated in Belvedere-road, and in this road there is also a wharf, Gabriel's-wharf, to which house dust from St. Martin-in-the-Fields is taken. There are, moreover, two wharves on the Albert-embankment—Providence-wharf from which manure is removed, and Cookson's-wharf, to which house dust from St. Giles and Holborn districts is brought to be barged away. There are further, three yards in Tinworth-street, a street communicating with Albert-embankment, which are said to be used in connection with refuse removal. One of these, on the north side of the street, was not in use and was locked up at the time of my visit. A second is a yard adjoining the railway, also on the north side of Tinworth-street, and here some manure was deposited. Opposite this yard, on the south side of the street, is a yard known as Cookson's dust yard. Here house dust from St. Giles and Holborn districts is received and stable manure is deposited. Sorting was being carried on at the time of my visit by 13 women and 7 men. It is stated that as a rule the offensive portions of the refuse brought upon the premises are removed within 24 hours. On the day of my visit, stable manure was being deposited on the roughly-paved yard, and was being watered in order that the manure might "be ready by the time it reached the farmer." Pools of water were standing in the yard, and water was in part soaking into the ground, and in part finding an escape by means of a drain inlet. The time required for banking up the manure and leaving it to stand after watering was said to be "a day or two." The yard is objectionably situated within 100 yards of inhabited houses, and complaints of nuisance from time to time arise. There is need for more careful supervision of this yard, the situation of which is unsuitable for the purposes for which it is used. The existing arrangement, which provides for the material being deposited and manipulated in the yard in Tinworth-street before it is conveyed to the wharf situated on the other side of the Albert-embankment for removal from the county, is a bad one, and for health reasons there would be advantage in the refuse being tipped directly into the barges at the wharf.

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* In this number the large lodging-house, "Rowton House," at Vauxhall, is not included.

Water supply.—The parish is supplied in part by the Lambeth Company and in part by the Southwark and Vauxhall Company. There is a "constant supply" in the greater part of the parish, the only areas on intermittent supply being the neighbourhood of Tulse hill and the extreme southern portion of the parish, both supplied by the Lambeth Company. At the time of my inspection a few leakages in roadways or in courts were noted, suggesting that the damage done by the severe frost of the preceding February had not been entirely remedied.

By-laws under the Public Health (London) Act.—The vestry has fulfilled the duty imposed upon it under the Public Health (London) Act of making by-laws with regard to various nuisances, sec. 16 (1); with respect to the keeping of water-closets supplied with sufficient water for their effective action, sec. 39 (2); and with respect to securing the cleanliness and freedom from pollution of tanks, cisterns, &c., sec. 50. These by-laws were confirmed by the Local Government Board in Oct., 1894, and it is therefore, perhaps, too early to express any opinion concerning their operation in the district. It is the duty of the vestry, moreover, to enforce by-laws made by the Council with respect to the removal of refuse, sec. 16 (2); and with respect to water-closets, earth-closets, privies, ash-pits, cesspools, and receptacles for dung, sec. 39 (1) of the Public Health (London) Act. As regards the former of these two, I found reason for believing the provision that offensive refuse should only be removed during certain specified hours was not generally observed in the parish. As regards the latter, reference has already been made to the improvement which has been effected in Lambeth cow-houses by the action of the vestry in insisting upon the requirements as to receptacles for dung being complied with.

The large number of tenement houses in the parish and the widespread existence in them of conditions of dirt and dilapidation and overcrowding, emphasise the need for putting into force by-laws dealing with houses let in lodgings. It appears that regulations made under the Act of 1866 dealing with this matter were adopted by the vestry in 1873, and eighty-eight houses have been registered in the vestry book. At the present time, however, no action appears to be taken under the old regulations, and the adoption and carrying into effect of by-laws under sec. 94 of the Public Health (London) Act, 1891 (which reproduces sec. 35 of the Act of 1866, and sec. 47 of the Amending Act of 1874), are urgently required.

Sanitary Administration.

When I commenced an inspection of Lambeth in June last, the medical officer of health, Dr. Verdon, had resigned, and the question of the appointment of his successor was under consideration. The staff of sanitary inspectors consisted of a chief inspector, Mr. Baxter, six district inspectors, each dealing with the complaints relating to, and the notified cases of infectious disease occurring in, his own district, and an inspector performing duties under the Food and Drugs Acts and other special duties.

Mr. Baxter's sudden death occurred early in July, and I was deprived of the opportunity of learning from him any details as to the method of conducting the work of the sanitary department. Mr. Baxter's connection with Lambeth had been a long one, and his knowledge of the parish and experience of its needs must have been unique. It was impossible in inspecting the district not to be impressed with the thoroughness with which such work as he had been able to carry out had been executed, and with the large amount of use he had been able to make of the staff at his disposal.

Under these circumstances, I have not hitherto made any inquiry into the details of the routine of the office work of the sanitary department of the vestry, and I think in the light of the results of my inspection this is unnecessary. The magnitude of the evils existing in Lambeth, and the entire want of proportion between the number of inspectors and the demands made on the sanitary department, obviously call for a complete re-organisation of the sanitary staff.

The six inspectors' districts do not follow the divisions into registration sub-districts, and I am not able to give the exact figures as to population. In No. 1 district, however, there are about 60,000 persons, and in No. 2 district about 50,000 persons. The average for the remaining districts being about 43,000 persons.

The districts are all too large, and the number of defects found in them clearly demonstrates that such is the case. The disproportion between the amount of work requiring to be done in the northern part of Lambeth (corresponding to No. 1 district and part of No. 2 district), and the provision made for doing it is, I believe, far greater than exists in any other part of London.

The inadequacy of the staff of sanitary inspectors has been brought to the notice of the Lambeth Vestry by its late medical officer from time to time for a number of years past. In his annual report for 1888, Dr. Verdon dealt at some length with the subject. He pointed out that the number of inspectors in 1871 was four, and that in 1888 their number remained the same. He discussed the growth of the parish in the interval, and the "alteration of public opinion upon questions relating to health," and he selected Islington as being a district with which Lambeth may be compared, and pointed out that in the former parish the sanitary staff was numerically more than twice as strong as in the latter parish. In October, 1890, the number of inspectors in Lambeth was increased to eight, and for a brief period the strength of the staff in Lambeth compared more favourably with that in other districts of London. The change which has taken place since 1890 in London as a whole, in matters relating to public health, has been a remarkable one, but while most of the other sanitary authorities in the county have been strengthening their permanent staffs to meet increasing demands, Lambeth has not done so.

In January, 1892, Dr. Verdon reported to the vestry upon the Public Health (London) Act, 1891, and pointed out that the new duties which would necessarily devolve on the sanitary staff were numerous and important. "Perhaps the provision which requires the largest share of attention," he said, "is that contained in sec. 1 of the Act." Dr. Verdon remarked that the legal interpretation of this section had been held to impose on the sanitary authority the duty of instituting a system of

house-to-house inspection, and he added, "this interpretation, which appears to be in accordance with the common sense meaning of the text, will necessarily involve your sanitary department in a large amount of additional work."

No increase in the staff in accordance with Dr. Verdon's recommendation was made. In August, 1892, when cases of cholera occurred in this country, the Lambeth Vestry appointed six temporary inspectors for a period of three months. At the expiration of the period named, the question of retaining the services of the temporary inspectors was considered, but did not commend itself to the vestry. It was pointed out by a committee recommending the addition to the staff that in 14 large provincial towns the average ratio of inspectors to population was 1 to 14,558, and in London sanitary districts the average ratio was one 1 to 23,684, whereas in Lambeth the rate was 1 to 34,400.

During recent years the whole of the time of the inspectors has been taken up in dealing with complaints and with inquiries at houses brought under their notice in connection with the notification of infectious disease. Systematic house-to-house inspection does not appear to have been attempted, save for a brief period in the summer of 1892, when the temporary inspectors were at work. The enforcement of regulations for houses let in lodgings has not been carried out, and no by-laws under sec. 94 of the Public Health (London) Act, 1891, dealing with this matter, are in force in the district. The inspection of workshops has been recently undertaken by an inspector who has to carry out the Food and Drugs Acts, to deal with smoke nuisances and to inspect bakehouses, and who has very little opportunity of learning even where the workshops are. The chief need of the parish is that it should be divided into districts of a size such as can be dealt with by an inspector, and that a systematic house-to-house inspection should be undertaken. Tenement houses should be registered and by-laws relating to them enforced. The situation of workshops should be noted, and it will then be possible to ensure that the law relating to them is complied with. In addition to these needs, as has been already remarked, a new disinfecting station appears to be needed, and provision for the accommodation of persons whose rooms are being disinfected is urgently required.

W. H. Hamer,

Assistant Medical Officer of Health.

London County Council.

PUBLIC HEALTH DEPARTMENT,

3rd December, 1895.

Memorandum by the Medical Officer of Health on the observations of the Sanitary Committee of the Lambeth Vestry on Dr. Hamer's report.

(*Printed by order of the Public Health Committee, 28th November*, 1895.)

The Public Health Committee will, I feel sure, desire me to limit myself to a discussion of questions of fact referred to in the communication of the Sanitary Committee of the Lambeth Vestry. I therefore submit the following observations on the statements made therein—

OBSERVATIONS OF THE SANITARY COMMITTEE OF THE LAMBETH VESTRY.

The Sanitary Committee of Lambeth thanks the Public Health Committee of the London County Council for the opportunity of making a few observations on the report of Dr. Hamer on the sanitary condition and administration of the parish.

The Committee ventures to point out that the Public Health Committee has taken the opportunity of a transition stage in sanitary administration in Lambeth to give Lambeth the benefit of the visit of an expert, who appears unable to correctly represent such elementary facts as the number of officials engaged; the tenure of office by temporary inspectors; the efforts of our Sanitary Committee to apply the whole of the inspectors' time to visitation; the method of the distribution of his own visits; and the difference between Lambeth property immediately adjacent to the Thames, and that of districts like Whitechapel and Mile End Old Town.

COMMENTS BY THE MEDICAL OFFICER.

Inasmuch as the Sanitary Committee in their fifth paragraph state that they append the details upon which their foregoing observations are based, I reserve all discussion of them to the time when the reader has these details before him. At the present moment it may be useful that I should state the circumstances that led to the inquiry, and the course adopted by the Public Health Committee of the Council in connection therewith.

On the 10th of December, 1894, I presented to the Committee a return showing *inter alia* the number of sanitary inspectors employed in the several sanitary districts of London. The Committee on the 28th January, 1895, ordered copies of this return to be forwarded to seven sanitary authorities calling attention to the apparently small number of officers employed by them, and inviting their observations. Among these authorities was the Vestry of Lambeth.

A letter, dated the 2nd March, 1895, was received from the vestry clerk, stating that "although the number of inspectors in Lambeth may be less than the number in some of the other London parishes, yet the vestry are not aware of defects in sanitation which are not duly attended to by the present inspectors."

On March 25th the Vestry's letter was under the consideration of the Committee, and on the 3rd of April a letter was written to the Vestry by the Committee's order informing the Vestry of the decision of the Committee that Dr. Hamer should inquire into the sanitary condition and administration of Lambeth, and asking that assistance might be afforded him in the duty. To this letter no reply was received. On the 14th May Dr. Hamer called on the vestry clerk, and was informed that it was not likely the Vestry would take any action on the Council's letter, but the clerk stated that if a further communication were sent stating more precisely what assistance was required, it would be laid before the Vestry at its meeting on the 16th May. A further letter was accordingly addressed to the Vestry, and to this letter again no reply was received. The Committee therefore decided on the 27th May that Dr. Hamer should commence his inspection as soon as he could arrange to do so.

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OBSERVATIONS OF THE SANITARY COMMITTEE OF THE LAMBETH VESTRY.

The Committee regrets that in the course of a reputed enquiry into administration the expert did not, as stated by himself, "make any enquiry into the details of the routine of the office work of the sanitary department of the vestry"; that he has chosen to give to a very efficient and deeply lamented officer the credit belonging to the committee which had charge of sanitary work; and, further, that he altogether suppressed the fact, well-known in the parish months before his visit, that the vestry had resolved to get the utmost efficiency of sanitary supervision by the appointment of a medical officer who will spend his whole time in the service of the parish.

The Committee is of opinion that its members, who give no little time to parochial affairs, should be protected from the serious reflections induced by inaccuracy, want of knowledge, and the capricious visitation of a paid official, who seems determined to give point to his report by omitting anything that might tell in favour of the vestry's sanitary administration. This has already been pointed out in the matter of the medical officer. It is further exemplified by his references to areas with which the vestry long ago proposed to deal, but was prevented by the action of the Duchy of Cornwall; and by the fact that the expert omitted to state he failed to report on three properties in the neighbourhood, as they had been already closed owing to the action of the vestry.

The Sanitary Committee appends the details upon which the foregoing observations are based, and trusts that the Health Committee of the Council will give their representative the opportunity of revising a document so destitute of any evidence of an attempt to do justice to public men, no less anxious than the members of the Council themselves to give their fellow-parishioners every sanitary advantage.

Dr. Hamer reports upwards of 1,000 sets of premises visited. Dr. Hamer does not add that to find these premises he included areas already condemned by the vestry, and chose not a complete district, but went from court to place. In this way were visited 206 streets, courts, etc., only 39 of which are noted for special number of defects. The defects tell their own story. They are such as are daily produced, and might be found if selected courts were inspected in any other parish of London. To show the value of Dr. Hamer's observations on the streets, etc., specially enumerated as "particularly conspicuous for the number of defects," the Committee submits the following illustrations—

Victoria-place.—Dr. Hamer visited 10 out of 12 houses. In the only house dealt with in detail, the wife of the occupier was ill. In all the other houses our own inspector, who accompanied Dr. Hamer, reports that at the time the average back yard was 40 square feet; the width of courts was 8 feet and 3 feet 6 inches respectively; ground ventilation provided; also through ventilation; conspicuous absence of dampness in every case;

COMMENTS BY THE MEDICAL OFFICER.

As the result of application to Dr. Verdon, the medical officer of health, Dr. Hamer was put in communication with the chief inspector, who arranged for the inspector of each district to accompany him in the course of his inquiry. Under these circumstances, Dr. Hamer was enabled to learn the duties of the several sanitary inspectors. He had proposed later to learn from Dr. Verdon, or from the chief sanitary inspector, the details of the office administration. Unfortunately, however, the retirement of the former, and the death of the latter, deprived him of this opportunity, and in the absence of any reply from the Vestry to the Council's letters, he felt himself debarred from pursuing this branch of his inquiry further.

Dr. Hamer's willingness to give credit to anything which tells in favour of the Vestry's sanitary administration is made apparent by reference to the last paragraph on page 8 of his report, as well as by reference to his statements with regard to the chief inspector cited by the Sanitary Committee of the Vestry in their preceding paragraph. Dr. Hamer throughout his report has never stated that the work done was badly done; his sole contention is that the amount of work was insufficient.

His reference to the areas which the Vestry and Council had under consideration will be found on page 7 of his report. That the Vestry had closed three houses did not appear of such large importance as to be deserving of comment.

Dr. Hamer's inspection was made as such inspections should be made. He used his best efforts to make himself acquainted with the district generally, and to ascertain the actual state of houses in many streets throughout a large area. He thus, as it were, sampled the streets and courts he visited. To have done more would obviously have been unnecessary. His report does not of course profess to give account of every house he inspected, but supplies sufficient illustrations of the conditions found in the district. Dr. Hamer's report (page 5) enables comparison to be made between the number of defects which he met with in Lambeth and in two other districts which he had somewhat recently inspected. For the information of the Committee, Dr. Hamer has now extracted from his notes fuller account of the localities mentioned in the observations of the Sanitary Committee of the Vestry.

Further information supplied by Dr. Hamer—

Victoria-place.—I referred to this court (page 6) as presenting, in addition to defects admitting of easy remedy, other more radical defects of position and arrangement of the houses. In addition, however, to what I have said, my notes show that in two instances in this court the water-closet trap was broken, and in one of these serious nuisance was caused by the sewage welling up in the yard. In three instances water-closets

Observations of the Sanitary Committee of the Lambeth Vestry.	Comments by the Medical Officer.
interior walls all clean; drainage down the back; water supply in all cases direct from the main, and the paving good throughout the court.	were found to be without water supply. Three houses were unprovided with a receptacle for house refuse, and in one case the receptacle was overflowing and house refuse was littered over the yard. Several instances of dilapidated conditions are noted. In No. 4 a man, his wife, and three children under 12 years of age were living and sleeping in the first floor back room (less than 1,000 cubic feet in capacity), and a man, his wife, one child over 12, and three children under 12 were living and sleeping in the first floor front room (about 1,000 cubic feet in capacity). In No. 6 a man, his wife, and two children were living and sleeping in the ground floor front room (800 cubic feet in capacity). I deal in detail in my report with No. 11, because it impressed me as a house especially wanting careful inspection and remedy of the conditions existing therein.
Bedford-cottages.—A damp cupboard, caused by absence of ventilation in external wall.	*Bedford-cottages.*—These cottages are approached by a four foot passage-way, and the ground floor rooms are darkened by the wall opposite them. My notes show that the yard paving was defective in two of the houses, the water-closet pan in No. 4 was in a foul condition, there was overcrowding in three rooms which I visited, and the ground floor room in No. 6 was very damp, so damp that the occupier said they "could not use it for the children to sleep in."
Bloxam's-buildings.—Here Dr. Hamer visited 3 of 14 houses. The vestry took action months ago. A new sewer was constructed with a manhole for cleansing purposes. The owners were called upon to put the premises in order, and some had already complied with the order. Dr. Hamer makes no mention of this in his report!	*Bloxam's-buildings.*—A cul de sac; the houses are below the level of the central path-way, and complaint is made that the ground floor rooms are flooded when it rains. The buildings consist of 14 two-storey cottages which are old, have damp walls, and are very dilapidated, they have no space at the rear, and are thus without through ventilation, save for an opening which has been made on the staircase. The six houses of which I made detailed notes were taken quite at random. No. 2 was dilapidated, and the back wall of the ground floor room showed evidence of dampness. No. 5. The rooms were in a very dirty and dilapidated condition, there was a hole in the ceiling of one of the rooms. No. 7. The back wall damp, the roof defective, several conditions of dilapidation. No. 9. Ground floor room overcrowded, floor boards defective, damp walls, roof defective. No. 10. Roof defective—water-closet pan foul. No. 12. Damp ground floor rooms—defective roof. Complaint was made of the smell caused by the fact that three of the dust receptacles were not provided with covers.
The Retreat.—Three houses only visited out of 14 houses; some of the water closets were without water owing to trifling defects in fittings.	*The Retreat.*—A cul de sac containing 14 two-storey cottages; those on the left on entering have small yards, those on the right have not, though in some instances means of access to the back of the cottages have been made by the occupiers. The rooms of Nos. 7 and 8 were noted as being in a particularly dirty condition; a room in No. 3 was overcrowded. At No. 13 the dust receptacle had no cover. Four water-closets were found to be without a supply of water for flushing purposes.
Hamilton-road.—Four houses visited out of 18; defective water supply to w.c. in one; dirty closet with broken pan in another; yard paving defective in the third; no defects in the fourth. The above places are condemned by Dr. Hamer as "particularly conspicuous for number of defects," and they are fair samples of the whole list.	*Hamilton-road.*—These houses have no through ventilation save such as is afforded by an inlet provided on the staircase. Those which I visited were taken quite at random. I found them let out in tenements, and much in need of the systematic enforcement of by-laws regulating houses let in lodgings. The rooms of No. 6 were very dirty, and No. 13 was a particularly dirty and

OBSERVATIONS OF THE SANITARY COMMITTEE OF THE LAMBETH VESTRY.

Overcrowding.—Dr. Hamer remarks "that overcrowding is much less frequent in the southern than in the northern sub-districts, and this fact renders the extent of the overcrowding noted in northern part of Lambeth the more remarkable." Why? The southern part of Lambeth is nearly seven miles from the Thames. The industries are all carried on near the river. The bridges afford immediate access to work on the other side of the river. The southern parts of the parish can only be reached by long and circuitous tram routes, or by trains notable for high fares, unpunctuality, infrequency, and overcrowding. In the face of these matters of common knowledge, an expert reports on this local overcrowding as "remarkable!" To give further evidence of his grasp of contributory causes, Dr. Hamer notes that overcrowding in the riverside districts has increased since 1891, while in Whitechapel it has decreased. Then he is mindful to add that Whitechapel has more inspectors. Dr. Hamer does not seem to know of railway and other extensions in this district, involving, with vestry action, the closing of very many inhabited houses. This, not the absence of inspectors, has accentuated overcrowding. The fact is, the proximity of the district to industrial centres makes the rent very different from that of similar tenements in Whitechapel.

Here are further samples of streets "particularly conspicuous" for the number of defects, according to Dr. Hamer—

Wake-street.—One house only of 40 houses visited.

COMMENTS BY THE MEDICAL OFFICER.

dilapidated house. The basement of this house was damp, and very serious nuisance was caused by the fact that soil from a water-closet had been for some time escaping from a broken trap.

Overcrowding.—The statement quoted has evidently been misunderstood. It should be read with the context. It stands in my report at the end of a short paragraph in which comparison is made between certain results in Lambeth as a whole, and in the northern and southern sub-districts separately considered.

> In the whole of Lambeth 26 instances of overcrowding were found per 100 houses visited. (Table page 5).
>
> "Overcrowding is much less frequent in the southern than in the northern sub-districts."

Hence, in the northern sub-districts, the number of instances of overcrowding per 100 houses visited is even more remarkable than the number (26) already given for Lambeth as a whole. In fact, upwards of 40 instances of overcrowding per 100 houses visited were found in the northern part of Lambeth.

The railway extension referred to is evidently the clearance on the east side of the L. and S. W. line, between Westminster-bridge-road and Hercules-buildings. At the time of my inspection, about 100 houses and cottages had been closed in this locality. A clearance, not for the purposes of railway extension, affecting about the same number of houses and cottages had moreover been made between Felix-street and Lower-marsh. Occurrences of this kind are to be considered with such events as the opening of Rowton-house, with its accommodation for 470 lodgers, and the letting of 332 one, two, and three-room tenements at the Guinness Trust buildings, Vauxhall-square. In an area, such as the northern sub-districts of Lambeth, which contained, at the last census, some 10,000 houses occupied by 85,000 people, such occurrences cannot be regarded as exceptional, or as affording any explanation of the overcrowding found. With regard to rents, the contention of the Sanitary Committee of the Lambeth Vestry appears to be that rents of tenements are higher in the northern part of Lambeth than in Whitechapel. Reference to notes which I have made of rents of tenements in both districts shows, however, that the Whitechapel rents are, generally speaking, higher than the rents in the northern sub-districts of Lambeth.*

Dr. Hamer supplies the following notes on the undermentioned places—

Wake-street.—I visited eight houses in this street. The houses were very dilapidated and neglected. In No. 44, the drain was blocked and soil from the closet was escaping through the drain inlet of the yard; in No. 5, the water-closet was stopped up. I found three rooms overcrowded, and noted four

* The medical officer has asked the Council's valuer for an opinion on this point, and the valuer replies as follows—"I have perused the criticisms made by the Local Authority on Dr. Hamer's report on the point of overcrowding. I quite agree with the statement that the rent of tenements in North Lambeth is very different from that of similar tenements in Whitechapel, as, in my opinion, Whitechapel rents are, generally speaking, on a higher scale than those in North Lambeth. If therefore, as the local authorities appear to infer, higher rents are conducive to overcrowding, there should be, under normal circumstances, more overcrowding in Whitechapel than in North Lambeth. It may be worth while to remark that the contiguity of large business centres or special manufacturing industries is likely to reduce the number of empty tenements in a district, but it by no means necessarily follows that the tenements would be inhabited by a larger number of persons than their cubical contents will healthily accommodate."

Observations of the Sanitary Committee of the Lambeth Vestry.	Comments by the Medical Officer.
	large accumulations of house refuse, moreover, in four instances dust receptacles were found to be in a dilapidated condition, and in three instances roofs were found defective.
Laud-street.—One of 20 houses only visited. One of the children of the six away in service for nine months. Father earns 22s. weekly; wife casually hawks grass, &c., bringing in 2s. on the average. Rent 4s. 9d. Of the seven children in the other case, two sleep at the grandmother's.	*Laud-street.*—I visited six houses in this street. In addition to the overcrowding referred to in my report, I found four large accumulations of house refuse, two water-closets without proper water supply, and other defects.
15, *Portland-cottages.*—Only four children slept here.	15, *Portland-cottages.*—My note is to the effect that a man, his wife and six children slept in this room. Even if there were only four children however, the room would still have been overcrowded.
Workshops and Bakehouses.—The vestry is making arrangements consequent upon the appointment of the new medical officer.	*Workshops and Bakehouses.*—The Act relating to workshops was passed in 1891. The Sanitary Committee does not challenge Dr. Hamer's statement that in 1895 "no systematic attempt was being made by the vestry, on its own initiative, to deal with workshop inspection."
Disinfection.—The vestry has made many attempts to secure a site for another mortuary and disinfecting chamber, but has encountered most violent opposition from persons in the neighbourhood. A site was acquired before the visit of Dr. Hamer, and now an injunction is threatened to stay the hand of the vestry.	Dr. Hamer's report states that a site for another mortuary had been acquired by the vestry at Wanless-road, Herne-hill.
Shelter.—The absence of this provision is not peculiar to Lambeth. The subject is now under the consideration of the vestry.	*Shelter.*—The Act requiring the vestry to provide a shelter was passed in 1891.
Dust Collection.—As this subject is now under the consideration of the magistrate, the Committee refrains from making observations.	
Dust Yards.—These places have never been reported upon adversely by our late medical officer, though they were under constant supervision, and reported upon fortnightly to the vestry.	
Removal of Refuse.—The vestry has several times taken action against offenders in this respect. Had Dr. Hamer troubled to enquire, he could have ascertained this fact.	*Removal of refuse.*—Dr. Hamer states in his report that the by-law was not generally observed in the parish. Inquiry would of course have been made as to steps taken by the Vestry to secure this observance had the Vestry, in reply to the Council's letters, expressed their willingness to assist Dr. Hamer in his inquiry.
By-laws re *Houses let as lodgings.*—The Committee had new by-laws before them at the beginning of the year, and appointed a Special Sub-Committee, but pressure of business has prevented final decision by the vestry.	
Sanitary staff.—At the time of Dr. Hamer's visit, as at present, there were seven, not six, inspectors duly qualified, besides the chief inspector and the special inspector for foods, drugs, &c. These salaried inspectors are fully qualified, and their salaries are much above the average in other districts. In addition to these inspectors, two clerks and a junior are specially employed to relieve the inspectors of the clerical work which occupies so much of inspectors' time in other parishes. There are also two men engaged in disinfecting work, who in other parishes are classed as inspectors. A third man is casually employed in similar work. There are, in addition, two clerks of works and an assistant, who take sole charge of supervision of the drains of new houses, and thus materially relieve the inspectors.	Dr. Hamer states in his report that, at the beginning of his inquiry, the staff of sanitary inspectors consisted of a chief inspector, six district inspectors, and an inspector performing duties under the Food and Drugs Acts. The Sanitary Committee of the Lambeth Vestry now states that at that time there were seven, not six, inspectors, duly qualified, besides the chief inspector and special inspector for food and drugs. Dr. Hamer suggests that the difference may be due to the inclusion by the Sanitary Committee of an officer who was formerly an inspector but who, he was told, was now employed as an indoor officer. The Sanitary Committee in claiming a total of nine inspectors, apparently adopts a similar method of reckoning for a return as to sanitary inspectors in the county of London, which I am now preparing, and which has in its relation to Lambeth been kindly corrected for me by the present medical officer of health of the district, makes mention of only eight inspectors.

Observations of the Sanitary Committee of the Lambeth Vestry.

In times of epidemic and alarm the vestry has always responded to any appeal for temporary help. The vestry acted in this way in August, 1892. Dr. Hamer says: "In August, 1892, when cases of cholera occurred in this country, the Lambeth Vestry appointed six temporary inspectors for a period of three months." Dr. Hamer does not add that the vestry again appointed help in September, 1893. Two additional inspectors were then appointed, one of whom remained in the service of the vestry, and is now on the permanent staff.

These are the details upon which the Committee bases its general statements. How incorrect is the impression of Lambeth administration conveyed by Dr. Hamer's report the Committee demonstrate by stating that, on the very night Dr. Hamer's report was presented, our own medical officer, in pursuance of previous instructions, submitted a recommendation that three inspectors be appointed instead of one chief inspector. This recommendation was immediately approved, and will no doubt be sanctioned by the vestry.

Comments by the Medical Officer.

Dr. Hamer had no information that two temporary inspectors were appointed in September, 1893.

In conclusion, I submit that in no single particular has any inaccuracy in Dr. Hamer's report been established, and I am satisfied it gives a fair and correct account of the condition of Lambeth. I note the proposal of the Sanitary Committee to increase the staff of the Vestry's sanitary inspectors. The sufficiency of the staff which will then exist will no doubt in due time be considered by the Council's Public Health Committee.

Shirley F. Murphy,
Medical Officer of Health.

APPENDIX IV.

London County Council.

PUBLIC HEALTH DEPARTMENT,
SPRING GARDENS, S.W.,
January 21st, 1896.

Report by the Medical Officer, submitting a report by Dr. Young on the Sanitary Condition and Administration of the Parish of Fulham.

(Ordered by the Public Health &c. Committee to be printed.)

I present a report by Dr. Young on the Sanitary Condition and Administration of the Parish of Fulham. The recommendations embodied in the report should, I think, be adopted by the sanitary authority.

SHIRLEY F. MURPHY,
Medical Officer of Health.

The sanitary district of Fulham is situated in the western part of the metropolitan area on the north bank of the river Thames. The course of the river here makes a considerable curve and forms the boundary of the district on the south-west, south, and south-east. On the north-west the boundary is formed by Hammersmith, and on the east and north-east by Chelsea and Kensington.

The character of the soil of the district is practically the same throughout the area, and consists of gravel and sand overlying the London clay. During the recent construction of a sewer in the neighbourhood of Dawes-road the depth of the gravel at this part was found to be 27 feet.

The area of Fulham is 1,701 acres, including 8 acres of water. The adjacent tidal water and foreshore is equal to an area of 156 acres.

Until the year 1886, Hammersmith and Fulham together formed one sanitary district under the jurisdiction of the Fulham Board of Works. By the Metropolis Local Management Act, 1885, this Board was dissolved, and the parish of Fulham was constituted a separate sanitary district under the control of the Vestry of Fulham as the local authority.

The rateable value of the district at the present time is £511,738. I have extracted from the annual reports of the vestry the rateable values at different periods since 1861, which show the large increase that has taken place in this respect since that date. The figures are as follows :—

1861	...	...	£58,296	1881	...	...	£190,136
1871	...	...	100,121	1891	...	...	426,551

Under the Equalisation of Rates (London) Act, 1894, the amount payable to Fulham from the equalisation fund for the half-year ending September, 1895, amounted to £4,299 0s. 8d., and for the previous half-year to £4,402 3s. 6d., which is equivalent to the production of a rate in Fulham of nearly 4¾d. in the £1 for the whole year.

For statistical purposes the sanitary area of Fulham forms one of the sub-districts of the registration district of Fulham, which includes three sub-districts, namely Fulham, St. Peter, Hammersmith, and St. Paul, Hammersmith.

The census returns as to the population and number of inhabited houses in the sub-district of Fulham show that a marked change has been taking place during the last thirty years. The following table gives the figures obtained at each census since 1861—

	Population.	Houses (inhabited).
1861	15,539	2,481
1871	23,350	3,469
1881	42,900	5,833
1891	91,639	12,896

From these it is seen that there has been a very rapid increase in the population, and especially since the year 1871, for whereas between 1861-1871 there was an increase of 50 per cent., between 1871-81 the increase was equal to about 83 per cent. of the population, and during the intercensal period of 1881-91 the population more than doubled itself. This increase is no doubt largely due to the extensive building of houses in the district, and the immigration of persons from the more central parts of the metropolis.

At the date of the ordnance survey of London some thirty years ago the district of Fulham consisted of four villages, namely, Fulham, North-end, Parsons-green, and Walham, separated by land used chiefly for agricultural purposes; at the present time the greater part of this area, with the exception of some 500 acres, for the most part situated along the bank of the river, has been built over, and building operations are still being carried on. During the period which has elapsed since the census was taken in 1891, considerable increase in the number of houses and of residents, has continued to take place, though there is reason to believe that the rate of increase has not been quite so great as during the period 1881-1891.

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The density of the population in Fulham, as measured by the average number of inhabitants per acre and per inhabited house in the census year 1891 and previous censuses, was as follows :—

	Per acre.	Per inhabited house.
1861	9	6·2
1871	14	6·7
1881	25	7·3
1891	54	7·1

In the registration County of London in 1891 there was an average of 56 persons to each acre, and 7·7 persons per inhabited house.

The proportion of the population living in one and in two rooms was in 1891 less than in the other districts of London except Camberwell, Greenwich, Hackney, Hampstead, Lewisham, Plumstead and Wandsworth. The number of persons living in one room was greater, and in two rooms less than in Battersea.

In the last census return of the population of Fulham it is shown that the total number of inhabitants, viz., 91,639, consisted of 42,861 males or 46·8 per cent., and 48,778 females or 53·2 per cent. The proportion which obtained in London was 47.3 per cent. males and 52·7 per cent. females.

The following figures give the proportion of persons of each sex at different age periods. The figures for London generally are also given :—

	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards
Fulham—											
Males	7·12	6·15	4·94	3·84	3·76	8·19	6·08	3·72	1·76	0·91	0·30
Females	7·06	6·27	5·17	4·49	5·11	9·79	6·69	4·09	2·53	1·46	0·57
London—											
Males	5·92	5·36	4·90	4·69	4·61	7·92	5·85	4·11	2·35	1·20	0·37
Females	5·99	5·42	4·99	5·21	5·56	9·11	6·49	4·64	2·92	1·72	0·69

A marked difference in the constitution of these two populations is the excess of persons under 15 years and between the ages 25–45 in Fulham. The relatively greater proportion of persons at these ages is probably due to newly-married persons, and persons with young families having taken up their abode in Fulham, consequent upon the large number of houses which have been built there of late years. The high birth rate which prevails in Fulham no doubt largely accounts for the excess of persons under 15 years, but the presence of the Western Fever Hospital in the district may to a small extent have some effect.

In the next table are given the birth and death rates for Fulham and London respectively.

The rates for Fulham have been calculated upon the number of deaths occuring in the parish after the correction for the deaths of non-residents. These figures have been supplied by Dr. Jackson the medical officer of health of Fulham.

The rates from all causes so obtained, as well as those for London generally, have been further corrected for age and sex distribution by the factor given by the Council's medical officer in his annual report.

	Fulham.				London.			
	Birth rate.	Death rate.	Deaths under one year old to 1,000 births.	Zymotic death rate.	Birth rate.	Death rate.	Deaths under one year old to 1,000 births.	Zymotic death rate.
1891	38·7	21·3	163	3·18	31·8	22·4	153	2·27
1892	35·3	19·8	166	3·5	30·9	21·6	154	2·80
1893	35·4	20·2	177	3·3	30·9	22·3	163	3·04
1894	34·9	18·4	149	3·9	30·1	18·6	143	2·64

Fulham shows a considerably higher birth rate than that which prevailed in London during these years, and though in both cases the rates have decreased, the decrease is more marked in the former.

During the same period both the infantile mortality and the zymotic death rate have been greater than in London, but the rates for deaths from all causes have been less except during the year 1894.

The houses in the parish of Fulham consist for the most part of two-storey buildings, and generally speaking, they are well situated as regards light and air. In a few instances, however, the open space at the rear of houses cannot be regarded as adequate, owing to the fact that the rear wall of the back addition portion of the house has been built up to the rear boundary of the site, leaving open space which extends for a portion only of the entire width of the house. In one instance, where

the open space provided at the rear of a small two-storey house was measured, it was found to consist of two small spaces on either side of the back addition, one of which measured 24 superficial feet, and the other some 12 superficial feet.

A marked feature which attracted attention in this district is the inferior character of the building which has taken place in some parts. Houses, which I found had only been built within recent years, were already becoming defective, owing apparently to the inferior quality of material used in their construction and to inferior workmanship. As illustrating these remarks, I quote the following facts, which I noticed in houses situated in one street, all of which I understand have been built within the last ten years or so:—

Moolton-street.—The houses in this street are two-storey buildings. The brickwork is bad and the pointing defective, especially at the rear. The houses, generally speaking, show signs of damp; the window frames have apparently in several cases been taken from other buildings and made to serve for these houses; the front doors have warped and are ill-fitting; the soil pipes are ventilated by unsubstantial-looking zinc piping.

The following defects found in particular houses are illustrative of conditions generally existing in this street.

(*a*) Fore-court unpaved, passage-wall damp, front room wall damp, stack pipe defective, water-closet pan dirty. The rear wall of back addition is within four feet of building at rear.

(*b*) Fore-court unpaved, front room wall damp, brickwork defective, wash-house plaster broken, yard paving bad, soil-pipe ventilator defective, water-closet pan cracked, rear stack-pipe defective, roof defective.

(*c*) Roof of back addition building defective, window defective and framework dilapidated, rear brickwork defective.

(*d*) Fore-court and yard unpaved, wall of ground floor front and back rooms very damp, rear brickwork defective, painting defective, rear doorway framework dilapidated.

In another part of the district houses of somewhat older date were seen which were of the same character as the above, but in these, owing to action on the part of the sanitary authority, defects have been rectified and alterations effected, and most of the houses at the time of my visit were in a fair state of repair.

During the course of my inspection of the district I visited 406 dwellings, and at 283 of them I found one or more defects existing. I made notes of the following:—

Defective roofs	In the case of	33	houses.
Defective drains or drain inlets	„	26	„
Defective water-closets or foul pans	„	102	„
Defective paving of yards and forecourts	„	92	„
„ domestic water cisterns	„	36	„
„ or absence of, dustbins	„	100	„
Dirty or dilapidated walls and defective flooring	„	100	„
Damp walls	„	86	„
Defective brickwork	„	30	„
Defective stack pipes and gutterings	„	17	„
Accumulations of house refuse	„	4	„

Generally speaking I found drain inlets to be well trapped, and water-closets provided with separate cisterns for flushing purposes. In many houses the drains were ventilated, properly trapped and disconnected from the sewers, though in a few cases it was noticed that ventilation of the soil pipe had been effected by means of a rain-water stack pipe in such a way as to be liable to cause nuisance, owing to the proximity of its upper end to an adjoining window.

With reference to the existence of overcrowding in dwellings, instances were not wanting where this was found to exist as judged by the standard adopted in the model by-laws of the Local Government Board. These by-laws require that every room used both as day and sleeping room shall be of such cubic capacity as to allow 400 cubic feet, and every room used solely for sleeping, 300 cubic feet per person, two children under ten years of age being regarded as equivalent to one adult.

The following are notes which I made in connection with this subject during my inspections—

A top floor room of about 1,120 cubic feet, occupied as a living and sleeping room by a family consisting of father, mother, one adult, and three children.

A room of about 988 cubic feet, used both for sleeping and living by a family of father, mother, and three children.

A family, consisting of father, mother, one adult child, and five children, occupying three small rooms, all sleep in one room of about 864 cubic feet. This house was in a very defective condition.

A two-storey house of four rooms, occupied by four separate families. In one room of about 1,080 cubic feet, father, mother, and one child, aged ten years, live and sleep. House dirty throughout.

Three rooms occupied by a family consisting of father, mother, four children over ten years and three under that age. Two rooms were occupied as bedrooms, one by the father and mother and one child, the other by the rest of the family. The size of this room was about 1,080 cubic feet.

There are four licensed cowsheds and six licensed slaughterhouses in Fulham. At the time of my visit to these premises I found that they were in a good state of repair, and that the by-laws and regulations were duly observed. The milk shops which were inspected were also found to be well kept, and with few exceptions the utensils were in a cleanly condition. There are no registered offensive businesses in the district.

I also inspected thirty-four bakehouses. The majority of these were situated in the basement of the premises, either partially or wholly below the level of the adjoining roadway. In some cases these were bakehouses which had only recently been constructed, and the means of light and ventilation were, generally speaking, fairly good. As regards seven bakehouses, however, the provisions for ventilation did not appear to me to be adequate. Cleanliness was well observed in each, and there is evidence that periodical limewashing of the walls is enforced by the sanitary authority. In only a few instances did I notice a drain inlet situated inside the bakehouse. In all these cases the inlet was fitted with a proper trap.

I was unable to obtain a list of the workshops which there are in the district, as it appears to have been impossible for the existing sanitary staff to devote any special attention in carrying out the provisions of the Factory and Workshop Act. Dr. Jackson, the medical officer of health, however, accompanied me to some premises, the addresses of which had been supplied to him as workshops within the meaning of the Act. These were found to be mostly private houses at which one or more of the occupiers himself worked but did not employ labour, and a few were large millinery establishments. As regards these little fault was to be found; in the absence of any definite information as to the number and character of workshops which there are in the district, it is impossible to form an opinion as to their needs.

There are three registered common lodging-houses in Fulham; these comply with the requirements of the Acts and regulations respecting such premises. Two of the houses differ in character from the ordinary common lodging-houses in that the keepers, who reside on the premises, do not take in casual lodgers; they receive only men employed at certain nursery gardens in the neighbourhood, who are recommended by the proprietor. These lodgers are boarded as well as lodged, and often remain for lengthy periods.

The vestry have provided a mortuary in connection with a coroner's court, for the use of the parish. The building contains two mortuary chambers and a post-mortem room. I extract from the annual reports of the medical officer of health of the district the following information relating to the use of the mortuary during the last two years. During 1893, 130 bodies were brought to the mortuary, of which twelve were brought at the request of the medical officer of health, six being cases of infectious disease. During 1894, 123 bodies were removed to the mortuary, five at the request of the medical officer of health, four being cases of infectious disease.

The removal of house refuse and the scavenging of the streets is carried out by the vestry. As regards the house refuse, it is the custom to have every house called at once in each week, and in order that the collection shall be made periodically, the parish has been divided into six sub-districts, each of which is visited upon a fixed day. The result appears to be generally satisfactory, and during the course of my inspection I seldom noticed any accumulations of house refuse.

The refuse is taken to the vestry's wharf on the river and there at once loaded into barges and removed.

The vestry have not made provision for undertaking the disinfection of articles of clothing, bedding, &c., after the occurrence of infectious disease, but have arranged with a contractor in the district for this purpose. By the terms of this contract, inquiry is made twice daily at the vestry hall on behalf of the contractor for the purpose of ascertaining the occurrence of cases of infectious disease concerning which disinfection is required. The articles are removed from and returned to the houses in separate vans. The disinfection is effected by steam. The disinfection of rooms is carried out by an official in the employ of the vestry.

The vestry have not up to the present time provided a shelter for the use of the district, under section 60 of the Public Health (London) Act, 1891, which requires that every sanitary authority shall provide a shelter for the use of persons during the period necessary for the disinfection of their dwellings.

The water supply for the parish of Fulham is supplied partly by the Chelsea and partly by the West Middlesex Water Works Companies.

The sanitary staff of the vestry consists at the present time of :—

A medical officer of health.
Four sanitary inspectors.
One assistant for disinfection.
A sanitary clerk.

The medical officer of health is not allowed to engage in private practice. The sanitary staff is under his control, and he attends at the offices of the vestry daily to supervise the work of the department.

The inspectors have districts allotted to them, and each performs in his allotted district all duties arising under the Public Health Acts and the Food and Drugs Act. They attend at the offices daily in the morning to carry out certain clerical duties, such as preparing the intimation notices, and also to see builders and others who may seek advice. They also attend in the afternoon if necessary. The disinfection assistant is employed in carrying out the disinfection of rooms in which cases of infectious diseases have occurred.

The clerk devotes his time to keeping the register of complaints, the inspection book which contains a record of the conditions found to exist in all premises visited by the inspectors and of the action taken in each case, the register of infectious disease occurring in the district, the register of samples taken under the Food and Drugs Act, and the mortuary and correspondence registers. He also makes out the statutory notices, and notices which are sent to the School Board, the public library, and the master of the house, in connection with the occurrence of infectious disease. He also keeps a record of the returns forwarded by the Metropolitan Asylums Board, of the fees paid to medical practitioners for notification returns, of houses certified by the sanitary authority as being provided with a proper and sufficient supply of water, and of certificates granted under the Customs and Inland Revenue Acts. Another register has recently been commenced, of all the houses in the district, with a view to a record being kept of all cases of infectious disease, and of deaths from other diseases which occur in each house in the district.

The sanitary authority for the district is the vestry of the parish of Fulham. There is a sanitary committee for the special consideration of matters arising in connection with the work of the public health department, consisting of all the members of the vestry, but no powers under the Public Health (London) Act, 1891, are delegated to this committee by the vestry.

Under the Public Health (London) Act, 1891, the sanitary authorities in the metropolis must make and enforce by-laws in respect to the following matters :—

(1) The prevention of particular nuisances.

(2) The keeping of water-closets supplied with sufficient water for their effective action.

(3) The cleansing of receptacles used for storing water likely to be used for drinking purposes.

(4) Houses let in lodgings or occupied by members of more than one family.

The vestry of Fulham have made by-laws on these subjects, which have been confirmed by the Local Government Board. The by-laws are based on the model by-laws, and are similar to those which have been made and are now in force in most districts in the metropolis. As regards the amount of rental which is considered sufficient to exempt houses from the operation of by-laws which relate to houses let in lodgings, this is not the same in all parts of London. In the case of Fulham, by-laws have recently been confirmed by the Local Government Board giving the sanitary authority power to register all unfurnished lodgings of no greater rental than 6s. a week, and all furnished lodgings which do not exceed a rental of 7s. 6d. a week.

These by-laws require the same amount of cubic space as the model by-laws of the Local Government Board already referred to, namely, 400 cubic feet for each person in rooms used both for living and sleeping purposes, and 300 cubic feet in those used for sleeping only, two children under ten years being regarded as equivalent to one adult. No houses had been registered at the time of my inspection.

A considerable amount of work has been carried out by the sanitary authority under the powers conferred on them by the Public Health (London) Act, and under the Housing of the Working Classes' Act as regards houses unfit for human habitation. I find from the reports of the medical officer of health for the years 1893 and 1894 that under the last-mentioned Act, thirty-nine and ninety houses respectively were certified by him as being unfit for human habitation. Of these houses eleven were demolished, and the remainder were either closed by the owners or by a magistrate's order. During my inspection I had opportunities of seeing premises in which drainage improvements were being effected owing to action by the sanitary authority; in all such cases the requirements of the vestry appeared to be comprehensive, including ventilation and disconnection, and the provision of inspection chambers in the course of the system of drains. All drains, whether in newly-built houses or after reconstruction, are now subjected to a water test before being passed as satisfactory.

The work thus carried on is as a rule limited to the case of premises which have been brought to the notice of the sanitary authority by complaint, or by the occurrence of infectious disease. Some parts of the district however known to require periodical visits are thus treated, but it has not been possible to undertake a systematic house-to-house inspection of the whole district.

The results of this inquiry into the sanitary condition of Fulham may be summed up as follows:—

(1) The general death rates for the last four years have been less than in London generally, but the infantile death rates and the zymotic death rates have been greater in Fulham. The birth rate, which in 1891 showed a marked excess over London, has decreased.

(2) Much work has been carried out by the health department for the remedying of insanitary conditions, but in more than two-thirds of the houses visited by me defective conditions were found to exist.

(3) Systematic house-to-house inspection has not been undertaken, owing to the time of the existing staff being fully occupied.

(4) No sufficient steps have been taken to carry out the provision of the Factory and Workshop Act.

(5) No shelter for the provision of families during the disinfection of their rooms has been provided.

(6) The enforcement by the vestry of the by-laws relating to houses let in lodgings will cause a considerable increase in the duties of the sanitary inspectors and clerk.

(7) The Vestry have not provided themselves with proper apparatus for disinfection beyond arranging with a contractor.

These facts lead to the conclusion that, in order that the duties devolving upon the public health department may be efficiently carried out, the vestry should take steps to increase their staff. The appointment of another inspector, making a total of five for the district, would probably at the present time be sufficient, though, in a district which is increasing so rapidly as Fulham, a further increase at no distant date may possibly be necessary. Additional clerical assistance is also needed.

The vestry should without further delay, provide a shelter for the use of persons during the disinfection of their rooms.

C. W. F. Young,
Assistant Medical Officer of Health.

Appendix V.

London County Council.

PUBLIC HEALTH DEPARTMENT,

SPRING GARDENS, S.W.

16*th December*, 1895.

SANITARY INSPECTORS.

REPORT OF THE MEDICAL OFFICER OF HEALTH, SUBMITTING A RETURN SHOWING PARTICULARS AS TO THE SANITARY INSPECTORS IN THE SEVERAL DISTRICTS OF THE ADMINISTRATIVE COUNTY OF LONDON.

(Ordered to be printed by the Housing of the Working Classes Committee, 5th March, 1896.)

In December, 1894, I presented to the Public Health and Housing Committee a return showing the number of sanitary inspectors in the service of the several sanitary authorities in the Administrative County of London.

Similar returns had been prepared in 1889 and in 1893; the former of these, however, gave no information as to the number of sanitary inspectors in the City and in Whitechapel.

The return I now present is based upon information received for the most part in November, 1895, but there was delay in receiving information concerning some districts.

The following comparison can be made between the numbers in the four years.

	1889.	1893.	1894.	1895.
Number of sanitary inspectors in London, excluding the City and Whitechapel, and the districts mentioned in Schedule C of the Metropolis Local Management Act ...	115	173	204	215
Number of sanitary inspectors in the whole of London, excluding the districts mentioned in Schedule C of the Metropolis Local Management Act	—	188	219	231

The returns therefore show some increase in the year 1895, an increase which is proportionately somewhat greater than the increase in population. It is necessary, however, to state that difficulty has been experienced in ascertaining in each district the number of officers actually employed as sanitary inspectors, for the reason that men, who in some districts would be regarded merely as assistants to the sanitary inspectors, are in other districts included as sanitary inspectors themselves. In some cases, again, temporary officers are included; and with regard to some of these the same difficulty is experienced. Moreover, in one or two instances it was found that certificated sanitary inspectors were employed upon duties which are not within those prescribed in the Sanitary Officers' Order of the Local Government Board. Corrections have, as far as possible, been made for these circumstances. Taking the figures that are thus obtained, there is in December, 1895, in London, one inspector to 18,706 inhabitants, the corresponding number in 1894 being one inspector to 19,320.

The number of sanitary inspectors (including temporary officers) and the number of houses and population, to each sanitary inspector, in each district is shown in the following table—

	Number of Sanitary Inspectors.			Average number of Houses to each Sanitary Inspector, 1895.	Average number of inhabitants to each Sanitary Inspector, 1895.
	Permanent.	Temporary.	Total.		
West—					
Kensington	7	—	7	3,360	24,223
Hammersmith	6	—	6	2,521	16,528
Fulham	4	—	4	3,921	27,012
Paddington	5	—	5	3,126	24,322
Chelsea	3	—	3	4,159	32,464
St. George, Hanover-square	3	—	3	3,289	25,145
Westminster	3	—	3	1,912	17,663
St. James	2	—	2	1,669	12,216
North—					
St. Marylebone	6	—	6	2,596	23,542
Hampstead	4	—	4	2,601	18,651
St. Pancras	10	—	10	2,678	24,163
Islington	18	—	18	2,216	18,152
Hackney	9	3	12	2,517	16,927
Stoke Newington	2	1	3	1,689	10,605

Sold by Edward Stanford, 26 and 27, Cockspur-street, Charing-cross, S.W.

No. 208.—*Price* 3*d.*

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	Number of Sanitary Inspectors.			Average number of houses to each Sanitary Inspector, 1895.	Average number of inhabitants to each Sanitary Inspector, 1895.
	Permanent.	Temporary.	Total.		
Central—					
St. Giles	5	—	5	806	7,578
St. Martin-in-the-Fields	1	1	2	746	6,560
Strand	3	—	3	1,093	8,008
Holborn	3	—	3	1,051	10,864
Clerkenwell	3	—	3	2,265	21,462
St. Luke	2	—	2	2,158	20,160
London, City of	10	—	10	1,024	3,644
East—					
Shoreditch	5	—	5*	3,071	24,076
Bethnal Green	6	—	6*	2,593	21,171
Whitechapel	4	2	6	1,139	12,391
St. George-in-the-East	3	—	3	1,780	14,754
Limehouse	3	—	3	2,495	18,611
Mile End Old Town	3	—	3	4,950	36,203
Poplar	7	—	7	3,324	24,328
South—					
St. Saviour, Southwark	2	—	2	1,382	12,184
St. George, Southwark	4	—	4	1,503	13,999
Newington	6	—	6	2,295	19,221
St. Olave, Southwark	1	—	1	1,081	10,967
Bermondsey	4	—	4	2,670	20,804
Rotherhithe	2	—	2	2,685	18,960
Lambeth	8	—	8	5,187	35,408
Battersea	7	—	7	3,214	23,022
Wandsworth	14	—	14	2,123	12,740
Camberwell	12	—	12	3,071	20,359
Greenwich	9	—	9	2,921	18,911
Lewisham	6	—	6	3,071	16,712
Woolwich	3	—	3*	1,844	13,993
Plumstead	3	—	3	3,137	19,163
Lee	3	—	3	2,201	12,916
London	224	7	231	2,545	18,706

Districts mentioned in Schedule C of the Metropolis Local Management Act, 1855—

Close of the Collegiate Church of St. Peter, Westminster	1	—	1	28	235
Gray's Inn	1	—	1	51	248
Inner Temple	1	—	1	47	88
Middle Temple	1	—	1	75	96
Lincoln's Inn	1	—	1	35	30
Staple Inn Furnival's Inn Liberty of the Charterhouse	1	—	1	68	252

In connection with the sanitary administration of the places mentioned in Schedule C of the Metropolis Local Management Act, 1855, inspectors have been appointed as follows—

One of the sanitary inspectors of the district of Westminster acts also for the Collegiate Church of St. Peter, Westminster. For the purposes of Gray's Inn the medical officer of health holds also the office of sanitary inspector. A sanitary inspector of the district of Clerkenwell acts also for the district of Furnival's Inn, Staple Inn and Liberty of the Charterhouse. Sanitary inspectors have also been appointed at nominal salaries to the districts of Lincoln's Inn and the Inner and Middle Temples. In the last instance the surveyor holds the office.

SHIRLEY F. MURPHY,
Medical Officer of Health.

* Including one appointment not filled up at the time of this return.

Return of replies received from Medical Officers of Health of the several districts as to number of sanitary inspectors and particulars of their appointments and duties.

The population and number of houses in each district are those obtained for the purposes of the Equalisation of Rates Act.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
					WEST DISTRICT.				
Chelsea	£ 740,615	97,393	12,478	2	2	Jan., 1888 21st Feb., 1893	£170 p. ann. £130 p. ann.	No	The inspectors receive no clerical assistance. There are also two disinfectors. A third disinfector is employed during times of exceptional prevalence of infectious disease.
Chelsea (detached)	...	...	...	1	1	June, 1888	£150 p. ann.	No	With residence, gas, &c. Also acts as assistant surveyor for Kensal Town.
Fulham	511,738	108,049	15,684	3	4	25th Mar., 1886 15th Oct., 1890 7th Jan., 1891 19th June, 1895	£130 p. ann. £130 p. ann. £130 p. ann. £120 p. ann.	No. Each inspector has a district allotted to him.	The first three inspectors were re-appointed under the Public Health (London) Act, 1891, in June, 1895. Clerical assistance to inspectors provided.
Hammersmith	551,856	99,166	15,128	6	6	16th Dec., 1874 20th May, 1884 8th May, 1880 15th April, 1884 16th Jan., 1893 12th Dec., 1894	£2 10s. p.wk. £2 10s. p.wk. £2 10s. p.wk. £2 10s. p.wk. £2 10s. p.wk. £2 10s. p.wk.	District assigned. District assigned. Yes. Removal of dust, and Food and Drugs Act. District assigned. House to house inspector. District assigned.	These appointments were made by the late Fulham District Board. The actual date of the appointment by the Hammersmith Vestry is 26th March, 1886. Do. do. 12th May, 1886. Clerical assistance provided. Two clerks.
Kensington	2,063,709	169,566	23,522	7	7 including a female inspector of workshops.†	June, 1891 Aug., 1892 Aug., 1892 Dec., 1893 Dec., 1894 June, 1895 † April, 1895	£120 £120 £120 *£110 £110 £110 £100 p. ann.	Rising by annual increments of £10 to £165.	There are also two street inspectors whose duties include inspection of mews and the yards, &c., of private stables. One appointed Nov., 1890, at £78, and now receiving £100 per annum; the other appointed Aug., 1892, at £78, and now receiving £95 per annum. There were two female inspectors whose duty it was to visit workshops, work places and laundries where women are employed. In July, 1895, the Vestry decided that one inspector could do the work for the whole parish. This officer has now the status of sanitary inspector.

*Visits all cases of infectious disease and superintends all disinfection with assistance of a disinfector. He is also responsible for the inspection of a district.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 16th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, natur of such duty.	Remarks.
Paddington	£ 1,336,912	121,612	15,629	3	5	4th Mar., 1873 16th July, 1889 6th July, 1891 5th Nov., 1894 5th Nov., 1894	£200 and an additional sum of £10 for duties in connection with canal boats £150 p. ann. £150 p. ann. £100 p. ann. £100 p. ann.	General duties. The inspection of canal boats is exclusively performed by the inspector appointed in 1873.	The parish is divided into five districts; each inspector being responsible for one. There is also a man employed to fumigate rooms and for disinfection of small articles of clothing. There is a clerk to the sanitary department at a salary of £200.
St. George, Hanover-sq.	1,885,804	75,436	9,866	3	3	June, 1891 July, 1892 May, 1893	£200 p. ann. £150 p. ann. £120 p. ann. rising to £150 p. a.	No	The inspectors receive no clerical assistance.
St. James, Westminster	765,154	24,432	3,339	2	2	April, 1877 May, 1891	£185 p. ann. £150 p. ann.	No	The inspectors receive clerical assistance.
St. Margaret and St. John, Westminster	800,402	52,990	5,737	3	3	13th Mar., 1889 9th Mar., 1892 28th June, 1893	£180 p. ann. rising to £200 p. a. £170 p. ann. rising to £200 p. a. £150 p. ann. rising to £200 p. a.	No	Clerical assistance provided.
NORTH DISTRICT.									
Hackney	291,546	203,119	30,199	4 and 3 temporary inspectors	9 and 3 temporary inspectors	Jan., 1881 Feb., 1883 April, 1891 Nov., 1895 Nov., 1895 Nov., 1895 Nov., 1895 Nov., 1895 Nov., 1895 *Dec., 1894 *Dec., 1894 *Dec., 1894	£130 p. ann. £130 p. ann. £130 p. ann. £104 p. ann. £104 p. ann. £104 p. ann. £104 p. ann. £104 p. ann. £104 p. ann. £91 10s. p. a. £91 10s. p. a. £91 10s. p. a.	Inspectors perform ordinary duties under the Sanitary Officers (London) Order. Two inspectors in addition to this administer the one the Food and Drugs Act, the other the Canal Boats Act.	Clerical assistance provided. *Temporary inspectors.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				NORTH DISTRICT—*Continued.*				
Hampstead	740,537	74,603	10,406	4	4	March, 1881	£225 p. ann.	Senior inspector—Management of summary proceedings, clerical work, duties in connection with infectious diseases, disinfection, cow-houses, slaughter-houses, bake-houses and dairies, factories and workshops, and smoke consumption.	
						Feb., 1892	£120 p. ann.	Divisional inspectors. The parish is divided into districts, each inspector being responsible in his own district for such duties as are not specified for senior inspector.	
						Sept., 1892	£120 p. ann.		
						Sept., 1892	£120 p. ann.		
Islington	1,720,114	326,745	39,886	15	18	25th July, 1890	£250 p. ann.	Superintendent and chief inspector.	The chief inspector was re-appointed under the Public Health (London) Act, 1891, on 5th May, 1893.
						6th Feb., 1874	£145 p. ann.	Factories and workshops.	
						4th Jan., 1875	£145 p. ann.	Registered lodging houses.	
						12th Feb., 1886	£140 p. ann.		
						7th Nov., 1890	£136 p. ann.		The next four inspectors were re-appointed under the Public Health (London) Act, 1891, on 17th June, 1892.
						19th Feb., 1892	£136 p. ann.		
						4th Mar., 1892	£136 p. ann.		
						5th May, 1893	£130 p. ann.		
						5th May, 1893	£130 p. ann.		
						5th May, 1893	£130 p. ann.		
						5th May, 1893	£130 p. ann.		
						5th Sept., 1894	£130 p. ann.		
						16th Nov., 1894	£130 p. ann.		
						15th Mar., 1895	£130 p. ann.		
						15th Mar., 1895	£130 p. ann.		
						15th Mar., 1895	£130 p. ann.		
						15th Mar., 1895	£130 p. ann.		
						26th April, 1895	£100 p. ann.	Factories and workshops. Female inspector.	Clerical assistance is provided.
St. Marylebone ...	1,535,166	141,252	15,574	6	6	30th Oct., 1884	£3 per week	... ...	Each inspector carries out all the duties in the portion of the Parish which is allotted to him, with the exception of one inspector whose duty it is to inspect the factories and workshops in the parish, and also to investigate smoke nuisances.
						20th May, 1886	£2 15s. p. w.		
						20th May, 1886	£2 15s. p. w.		
						30th Jan., 1890	£2 15s. p. w.		
						29th June, 1893	£2 10s. p. w.		
						16th May, 1895	£2 2s. p. w.		Clerical assistance is provided.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				NORTH DISTRICT—*Continued.*				
St. Pancras	1,599,723	241,634	26,778	9	10	July, 1874	£150 p. ann.	Duties comprised in order of Local Government Board of 8th December, 1891.	In addition to the inspectors there are three disinfectors. The caretaker of mortuaries and disinfecting station is a statutory sanitary inspector, but has not been included among the sanitary inspectors as he does not engage in actual inspectorial work. The clerical staff consists of a chief clerk, a senior clerk, three assistant clerks, a junior clerk, a temporary clerk and a messenger.
						June, 1878	£150 p. ann.		
						Oct., 1885	£180 p. ann.		
						Nov., 1892	£150 p. ann.		
						June, 1892	£150 p. ann.		
						July, 1892	£150 p. ann.		
						Oct., 1892	£150 p. ann.		
						Nov., 1895	£120 p. ann.		
						Nov., 1895	£120 p. ann.	Duties as above and to include workshops, &c.	
						Nov., 1895	£80 p. ann.	Female inspector with duties as above, and to include workshops, &c.	
Stoke Newington ...	194,823	31,815	5,066	2	2 and 1 temporary inspector	Mar., 1894	£100	Chief sanitary inspector...	Also receives £200 per annum as surveyor.
						Mar., 1894	£2 5s. p. week	Assistant sanitary inspector.	
						July, 1894	£2 per week	Appointed temporarily as "house to house" inspector.	
					CENTRAL DISTRICT.				
City	4,178,433 15	36,439 (night population only)	10,244	10	10	Re-appointed annually in the month of February.	Three at commencing salary of £200 per ann.	First-class, rising to £250	This return does not include keeper of mortuary, engineer for steam disinfector, and three sanitary labourers.
							Three at commencing salary of £140 per ann.	Second-class, rising to £200.	
							Four at £150 to £300 per ann.	Slaughter-houses and meat.	
Clerkenwell	379,250	64,387	6,796	2	3	Aug., 1885	£182 p. ann.	No.	The inspectors receive no clerical assistance.
						Jan., 1888	£173 p. ann.		
						June, 1895	£2 10s. p. wk.		
Holborn	390,396	32,591	3,152	2 and 1 assistant inspector	3	13th June, 1892	£140 p. ann.	A meat inspector has just been appointed; his duties commence Jan. 1st, 1896.	Clerical assistance provided. Street inspector and Smoke inspector provided in addition. There is also a man who attends to the mortuary and disinfecting of rooms.
						13th June, 1895	£130 p. ann.		

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				CENTRAL DISTRICT—*Continued.*				
St. Giles...	421,658	37,892	4,029	5	5	22nd July, 1879 8th June, 1880 26th June, 1883 9th Jan., 1885 12th Apr., 1892	£150 p. ann. £150 p. ann. £150 p. ann. £93 12s. p. an. £119 12s. p.a.	Two deal with nuisances on private property and perform duties in connection with the sale of Food and Drugs Act. Two deal with nuisances on the public way. One devotes his time to dustbins.	Clerical assistance provided.
St. Luke	327,125	40,320	4,317	2	2	13th July, 1891 27th Mar., 1893	£105, rising by £5 annually to £120 do. do.	... ...	Each inspector has special charge of a division of the parish. Clerical assistance and a general assistant provided.
St. Martin-in-the-Fields	538,971	13,121	1,492	1 and 1 temporary inspector	1 and 1 temporary inspector	Sept., 1871 Mar., 1894	£164 p. ann. £2 12s. 6d. p. week	No ... ... Drainage inspection.	Clerical assistance provided in respect of notices only.
Strand	576,284	24,024	3,279	6	3	4th Aug., 1884 Nov., 1893 Nov., 1893	£186 p. ann. £104 p. ann. £104 p. ann.	... ... Inspector of workshops, and out-workers' houses. Inspector for smoke nuisances and offences under by-laws relating to nuisances in streets, &c.*	There is also an assistant inspector. *Also performs certain duties under surveyor.
					EAST DISTRICT.				
Bethnal-green	433,724	127,025	15,557	4	5, a sixth inspector is being appointed	Mar., 1862 Jan., 1886 Mar., 1890 Nov., 1893 Dec., 1894	£200 p. ann. £200 p. ann. £200 p. ann. £120 p. ann. £120 p. ann.	Five district inspectors and a chief inspector who supervises the whole parish.	There are two clerks.
Limehouse	299,011	55,832	7,486	3	3	1890 1894 1895	£165 p. ann. £2 2s. p. wk. £2 2s. p. wk.	No	Clerical assistance provided.
Mile-end Old-town ...	377,551	108,609	14,851	3	3	1884 May, 1892 May, 1892	£200 p. ann. £160 each, rising by £10 annually to £200	General duties, and duties in connection with the Food and Drugs Acts. No	Each inspector is responsible for a district. Clerical assistance provided. Two men are engaged in assisting the inspectors in drain testing, &c. There are also four men employed in disinfecting.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				EAST DISTRICT—*Continued.*				
Poplar	707,872	170,296	23,265	7	7	*Oct., 1871 Feb., 1890 Feb., 1890 June, 1893 June, 1893 July, 1893 Nov., 1893	£225 p. ann. £165 p. ann. £165 p. ann. £150 p. ann. £150 p. ann. £145 p. ann. £145 p. ann.	*Yes. Inspection of nuisances in manufactories, canal boats, and under Factory and Workshops Act.	The first three inspectors were re-appointed under the Public Health (London) Act, 1891, in June, 1893. Clerical assistance provided by three sanitary clerks.
St. George-in-the-East ...	194,107	44,262	5,340	3	3	Sept., 1887 Feb., 1890 June, 1892	£165 p. ann. £150 p. ann. £130 p. ann.	No.	Each inspector is responsible for a district. Clerical assistance provided.
Shoreditch	684,963	120,379	15,357	4	4 and 1 appointment to be made	Dec., 1873 Oct., 1884 April, 1892 Feb., 1895	£200 p. ann. £150 p. ann. £150 p. ann. £120 p. ann.	The first inspector has general superintendence of other inspectors and of houses let in lodgings which are under by-laws.	Each of the last three inspectors has a district of the parish under his care. One inspector is specially appointed to carry out the Food and Drugs Acts. Clerical assistance provided.
Whitechapel	414,515	74,349	6,837	4	4 and 2 assistant inspectors	20th July, 1868 26th Nov., 1888 5th Jan., 1891 18th July, 1892 18th Mar., 1895 18th Mar., 1895	£190 p. ann. £150 p. ann. £150 p. ann. £150 p. ann. £2 per week £2 per week	General duties; but senior inspector performs, in addition, duties under the Food and Drugs Acts.	In addition there is also an office clerk at 30s. per week; three men perform disinfection work at a salary of 30s. per week each, and 1s. each per week for washing overalls, &c.
					SOUTH DISTRICT.				
Battersea	801,232	161,152	22,497	1 chief and 6 district inspectors	1 chief and 6 district inspectors	9th Mar., 1892 Nov., 1884 Mar., 1893 Mar., 1893 Mar., 1893 July, 1893 Nov., 1894	£200 p. ann. rising by £10 p. ann. to £250. £130 p. ann. rising by £10 p. ann. to £150. £125 do. £125 do. £125 do. £125 do. £111, rising by £10 p. ann. to £150.	No	The chief inspector was appointed assistant inspector of nuisances in July, 1889, and with the second inspector was re-appointed under the Public Health (London) Act, 1891, in March, 1892. Inspectors perform duties in connection with the Food and Drugs Acts, Margarine Act, &c. A drain inspector has been appointed to inspect the drains of new houses. Clerical assistance provided (two clerks). Four disinfectors and drain testers.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				SOUTH DISTRICT—*Continued.*				
Bermondsey	423,626	83,217	10,680	4	4	April, 1876 April, 1892 July, 1893 June, 1893	£350 p. ann. £150 p. ann. £130 p. ann. £100 p. ann.	No	Also a clerk at £75 per annum.
Camberwell	1,063,388	244,307	36,852	14	12	1872 1884 1887 1889 1890 1891 1891 1892 1892 1892 1892 1893	£175 p. ann. £175 p. ann. £175 p. ann. £166 p. ann. £153 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann.	No	The parish is divided into twelve districts, one inspector being appointed to each. There is also a clerk at £2 5s. per week employed in connection with the notification of infectious diseases, and four men are employed on special work of disinfecting.
Greenwich District ...	863,124	170,197	26,291	8	9				
Greenwich	303,282	59,507	9,687	3	3	Aug., 1890 May, 1892 June, 1893	£175 p. ann. £150 p. ann. £150 p. ann.	General duties, and performs duties under the Food and Drugs Acts. General duties. Infectious disease (whole time).	The inspectors receive no clerical assistance. There is also a disinfector at a salary of £91 per annum.
Deptford	559,842	110,690	16,604	5	6	May, 1881 Oct., 1891 Feb., 1893 Feb., 1894 May, 1894 June, 1895	£150 p. ann. £150 p. ann. £125 p. ann. £125 p. ann. £125 p. ann. £125 p. ann.	General duties, with the exception of one of the inspectors, who performs the duties in connection with infectious disease and the sale of Food and Drugs Acts.	The inspectors receive no clerical assistance.
Lambeth	1,575,325	283,265	41,498	8	8	May, 1869 July, 1871 Oct., 1890 Oct., 1890 Oct., 1890 Oct., 1890 Mar., 1895 Aug., 1892	£170 p. ann. £170 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £140 p. ann. £150 p. ann.	No ... ... Smoke nuisances: Sale of Food and Drugs Acts: workshops, &c.	This return appears to include an officer who in 1895 was employed as an indoor officer. Two disinfecting men are employed. The Vestry is proposing to make additions to the staff of inspectors.

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				SOUTH DISTRICT—*Continued.*				
Lee District	278,616	38,749	6,604	3	3				
Charlton	70,496	13,516	2,179	1	1	16th Mar., 1892	£2 p. week	No.	Charlton parish. The inspector receives no clerical assistance. The opening of drains and removal of dust is superintended by the foreman of roads.
Eltham	52,013	5,971	1,117	1	1	Nov., 1886	£75 p. ann.	... ...	Eltham parish. Acts also as road foreman. The inspector occasionally receives clerical assistance in the keeping of registers and preparation of notices.
Lee	133,878	16,905	3,030	1	1	July, 1892	£3 p. week	General inspector	Lee and Kidbrooke parishes. Superintends opening of existing drains; but not the removal of dust. No clerical assistance provided.
Kidbrooke	22,229	2,357	278						
Lewisham	668,598	100,271	18,424	6	6	May, 1888	£140 p. ann.	No, except that three inspectors are usually engaged in house-to-house inspections.	
						Aug., 1893	£110 p. ann.		
						June, 1894	£130 p. ann.		
						June, 1894	£110 p. ann.		
						Nov., 1894	£110 p. ann.		
						July, 1895	£100 p. ann.		
Newington	479,941	115,327	13,768	5	6	19th May, 1869	£200 p. ann.	No	Clerical assistance provided.
						18th Dec., 1889	£150 p. ann.		
						27th June, 1894	£115 p. ann.		
						27th June, 1894	£115 p. ann.		
						27th June, 1894	£115 p. ann.		
						11th July, 1894	£115 p. ann.		
Plumstead	190,750	57,488	9,410	3	3	Jan., 1890	£160 p. ann.	Chief inspector supervising other inspectors; giving certificates as to water supply for new houses, &c.	Clerical assistance rendered by clerk to Public Health Department,
						Jan., 1894	£104 p.ann.	General duties. District divided between them.	There is also an officer who devotes his whole time to supervising the collection of dust.
						Jan., 1894	£104 p.ann.		
Rotherhithe	210,858	37,920	5,370	1 chief and 1 assistant	1 chief and 1 assistant	Jan., 1894	£200 p. ann.	Acts as inspector under Food and Drugs Acts; as inspector of smoke nuisances; streets inspector and superintendent of dust collection.	Clerical assistance provided.
						Jan., 1876	£3 10s. p. wk.	Carries out the orders of chief inspector.	

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				SOUTH DISTRICT—*Continued.*				
St. George the Martyr	278,977	55,996	6,012	4	4	Nov., 1865 Dec., 1886 Dec., 1893 April, 1895	£210 p. ann. £150 p. ann. £135 p. ann. £120 p. ann.	General duties; but the chief inspector carries out the provisions of the Food and Drugs Acts.	There is also a disinfector at 37s. 6d. per week, and an assistant disinfector at 27s. per week, who also attends to mortuary and coroner's court. A youth at 25s. per week acts as sanitary clerk.
St. Olave	204,591	10,967	1,081	1	1	15th Mar., 1892	£200 p. ann.	No. Does duty under Sale of Food and and Drugs Acts.	The inspector receives no clerical assistance.
St. Saviour	344,976	24,369	2,765	2	2	July, 1889 12th Dec., 1894	£165 p. ann. £150 p. ann.	The duties of these inspectors are limited to work under the Public Health (London) Act, 1891, and the Food and Drugs Acts.	The inspectors receive no clerical assistance.
Wandsworth	1,161,123	178,356	29,723	13	14				
Clapham Parish ...	287,180	47,058	7,857	3	3	April, 1884 Aug., 1889 Dec., 1891	£3 3s. p. wk. £3 p. wk. £2 16s. p. wk.	No	The senior inspector has charge of the work in connection with infectious diseases. The junior inspector has charge of the inspection of new house drains. Otherwise there is no definite division of their duties. The inspectors receive no clerical assistance.
Streatham	367,777	51,413	8,667	5 (1 chief and 4 assistants)	5 (1 chief and 4 assistants)	Dec., 1891 July, 1893	£2 15s. p. wk. £2 10s. p. wk.	No	No clerical assistance provided.
and Tooting	32,667	6,156	1,241			July, 1883 Nov., 1893 July, 1884	£1 15s. p. wk. £1 15s. p. wk. £1 13s. p. wk.	Dust inspector.	
Putney	172,186	19,856	3,361	1	1, and 1 assistant inspector	2nd Sept., 1889 1st Jan., 1894	£3 p. wk. £2 p. wk.	No. Drain inspection.	

Vestry or District Board.	Rateable Value, 6th April, 1895.	Population, 6th April, 1895.	Rated houses, 6th April, 1895.	Number of Inspectors at date of last return, 10th Dec., 1894.	Number of Inspectors at present time.	Date of appointment of each Inspector.	Present Salary.	Whether Inspectors limited to the performance of any particular duty, if so, nature of such duty.	Remarks.
	£				SOUTH DISTRICT—*Continued.*				
Wandsworth ...	301,313	53,873	8,597	4 (1 chief and 3 assistant inspectors)	4 (1 chief and 3 assistants)	3rd July, 1891 30th Nov., 1892 30th Nov., 1892 14th Aug., 1893	£3 p. wk. £2 4s. p. wk. £2 4s. p. wk. £2 p. wk.	... ...	A division of the sub-district is assigned to each inspector, the chief inspector in addition supervising the cowsheds, slaughter-houses, factories, and workshops. There is also an officer who devotes his whole time to the supervision of the dust collection. Clerical assistance provided.
Woolwich	219,435	41,978	5,533	3	2, and one appointment vacant	Dec., 1889 Aug., 1892	£130 p. ann. £110 p. ann.	One inspector (recently deceased) superintended the removal of house and other refuse, also dealt with smoke nuisances and inspected the common and registered lodging-houses.	The inspectors receive no clerical assistance.

Sanitary Districts mentioned in Schedule C of the Metropolis Local Management Act, 1855.

Close of the Collegiate Church of St. Peter, Westminster	3,833	235	28	1	1	Nov., 1892	£5 5s. p. ann.	No.	
Gray's-inn	16,146	248	51	1	1	23rd Mar., 1892	£25 p. ann.	Also medical officer of health of district.	
Inner Temple	22,805	88	47	1	1	1st Jan., 1893	£20 p. ann.	Is clerk of the works also.	
Lincoln's-inn	20,531 10/	30	35	1	1	Feb., 1893	£10 p. ann.	No.	
Middle Temple ...	14,806	96	75	1	1	18th Jan., 1893	£5 p. ann.	Is surveyor of the district.	
Staple Inn, Furnival's-inn, and Liberty of the Charterhouse	20,890	252	68	1	1	7th Sept., 1892	£30 p. ann.	No.	

Appendix VI.

London County Council.

Public Health Department,
Spring Gardens,
December, 1895.

BY-LAWS UNDER THE PUBLIC HEALTH (LONDON) ACT, 1891.

Report of the Medical Officer of Health, submitting a tabular statement showing the By-Laws and Regulations which are in force in the several sanitary districts of the County of London.

I present a return showing the position of the several sanitary authorities in London in relation to by-laws under the Public Health (London) Act, 1891.

Under the following sections of this Act it is *obligatory* on the sanitary authority to make the by-laws referred to—

Sec. 16.—(1.) Every sanitary authority shall make by-laws—

(*a*) For the prevention of nuisances arising from any snow, ice, salt, dust, ashes, rubbish, offal, carrion, fish, or filth, or any other matter or thing in any street; and

(*b*) For preventing nuisances arising from any offensive matter running out of any manufactory, brewery, slaughterhouse, knacker's yard, butcher's or fishmonger's shop, or dunghill, into any uncovered place, whether or not surrounded by a wall or fence; and

(*c*) For the prevention of the keeping of animals on any premises in such place or manner as to be a nuisance or injurious or dangerous to health; and

(*d*) As to the paving of yards and open spaces in connection with dwelling-houses.

Sec. 39.—(2.) Every sanitary authority shall make by-laws with respect to the keeping of water-closets supplied with sufficient water for their effective action.

Sec. 50.—Every sanitary authority shall make by-laws for securing the cleanliness and freedom from pollution of tanks, cisterns, and other receptacles used for storing of water used or likely to be used by man for drinking or domestic purposes, or for manufacturing drink for the use of man.

Sec. 94.—Every sanitary authority shall make and enforce such by-laws as are requisite for the following matters (that is to say)—

(*a*) For fixing the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family, and for the separation of the sexes in a house so let or occupied;

(*b*) For the registration of houses so let or occupied;

(*c*) For the inspection of such houses;

(*d*) For enforcing drainage of such houses, and for promoting cleanliness and ventilation in such houses;

(*e*) For the cleansing and lime washing at stated times of the premises;

(*f*) For the taking of precautions in case of any infectious disease.

It will be seen from the accompanying return that by-laws under Secs. 16 (1), 39 (2) and 50 are in force in each of the London sanitary districts.

Sec. 94, dealing with houses let in lodgings, replaces Sec. 35 of the Sanitary Act of 1866, and Sec. 47 of the Sanitary Law Amendment Act of 1874. Under section 35 of the Act of 1866, the Secretary of State was empowered, on the application of the nuisance authority, to declare the enactment in force in a district authorising the authority to make regulations dealing with houses let in lodgings. Ten of the vestries and district boards in London made application under this section in 1866 or 1867 to the Secretary of State. The Local Government Board Act, 1871, substituted the Local Government Board for the Secretary of State as the authority to which application must be made. The Sanitary Law Amendment Act of 1874 extended the list of subject matters with which regulations might deal, and empowered the Local Government Board to declare the enactment in force in any part of the metropolis without previous application having been made. Any regulations framed by a sanitary authority were of no validity however until confirmed by the Local Government Board.

In 1883 the enactment had been put in force in 22 of the 38 districts of the Metropolis outside the city boundaries, but regulations had actually been made in only thirteen of those districts. The Local Government Board in this year declared the enactment to be in force in the 16 districts which had not made application. A circular letter was moreover issued by that Board asking what action had been taken with reference to the enforcement of regulations. It is stated in the report of the Royal Commission on the Housing of the Working Classes, 1885, "that two authorities, Chelsea and Hackney, had been specially active, but that comparatively little had been done by others." The same report contains the recommendation that "the vestries and district boards which have not already made and enforced by-laws should proceed to do so."

A return prepared by Captain Sinclair at the request of a Committee of the Council in 1890, showed that out of a total of 40 districts regulations had been adopted at various dates in 31 districts, and were then enforced in 21 districts.

The Public Health (London) Act, 1891, made it obligatory upon London sanitary authorities to make and enforce by-laws relating to houses let in lodgings. The accompanying return shows that by-laws under sec. 94 of the Public Health (London) Act, 1891, are in force in 26 of the 42 London districts, and in five other districts such by-laws have been framed, and await confirmation by the Local Government Board. In these five districts and in the 11 districts which yet remain of the total number unaccounted for regulations, made under the Act of 1866, are in force.

With regard to the exemption of certain houses from the action of the by-laws, it may be noted that the "exemption clause" is a feature not met with in the early regulations made under the Sanitary Act of 1866.

The Local Government Board in 1880 thought it desirable to suggest in the model series of by-laws a clause providing "for the exemption of lodging-houses, as to which it may be reasonably inferred that such supervision as elsewhere a local authority alone can efficiently exercise, will in fact be exercised by the lodgers themselves."

The by-laws of several London sanitary authorities possess such an exemption clause. The lowest limits assigned are those of the Stoke Newington by-laws, in which unfurnished lodgings, the rent of which exceeds 2s. 6d., and furnished lodgings, the rent of which exceeds 4s., are exempted. In St. Luke the corresponding limits are 3s. and 5s. 6d., and in Lee 5s. and 7s. In Paddington, Whitechapel, St. George-in-the-East and Camberwell the limits are 5s. and 7s. 6d. In Fulham, Hackney, St. Olave, Battersea, St. George's Southwark, and St. Saviour's, Southwark, limits somewhat higher than those already quoted are assigned, and in Westminster and Wandsworth the highest limit for unfurnished lodgings obtains viz., 8s.

It will be seen that the limits assigned in some of the above cases are so low as to make it likely that houses will be excluded from the operation of the by-laws which the sanitary authority might find it desirable to register.

In some of the by-laws recently confirmed it is provided that after certain preliminary procedure, such as the passing of a resolution by the Health Committee or by the Vestry, the by-laws may be applied to any house let in lodgings in the district.

With regard to provision as to cubic air space the by-laws of the model series issued by the Local Government Board in 1880 are adhered to in the majority of instances, and 300 cubic feet of free air space for each person of an age exceeding 10 years, and 150 cubic feet of free air space for each person of an age not exceeding 10 years are required in the case of a room used exclusively as a sleeping apartment, while the corresponding amounts of space required in the case of a room not used exclusively as a sleeping apartment are 400 and 200 cubic feet.

In none of the by-laws confirmed since the passing of the Public Health (London) Act, 1891, has a provision of less air space than that just stated been prescribed. A further indication of improvement is afforded in some of the by-laws recently confirmed (Plumstead, St. Pancras and Strand) in that distinction has not been made between children and adults in the requirements as to air space.

The number of houses on the register at the present time in the various districts is given in the annexed table; in some instances the replies received state that although no houses are now on the register, steps are being taken with a view to carrying the by-laws into effect.

Under the following sections of the Public Health (London) Act, 1891, the sanitary authority is given a *permissive* power to make by-laws.

Sec. 45.—1. (*a*) Where a sanitary authority provide and maintain any public lavatories, ashpits, or sanitary conveniences, such authority may make by-laws as to the decent conduct of persons using the same.

Sec. 66.—(3.) Any sanitary authority may make by-laws for removing to any hospital to which that authority are entitled to remove patients, and for keeping in that hospital as long as may be necessary any persons brought within their district by any vessel, who are infected with a dangerous infectious disease.

Sec. 88.—Every sanitary authority shall provide and fit up a proper place for the reception of dead bodies before interment (in this Act called a mortuary), and may make by-laws with respect to the management and charges for the use of the same.

Sec. 95.—A sanitary authority may make by-laws for promoting cleanliness in, and the habitable condition of tents, vans, sheds, and similar structures used for human habitation, and for preventing the spread of infectious disease by the persons inhabiting the same, and generally for the prevention of nuisances in connection with the same.

The accompanying return, which gives a summary of replies received from medical officers of health, shows that by-laws under Sec. 45, 1. (*a*) are in force in one district (St. James, Westminster), and that none of the authorities have made use of the power to make by-laws under Sec. 66 (3). Sec. 88 reproduces Sec. 27 of the Sanitary Act 1866, under which section several authorities already possessed regulations as to mortuaries. The replies received from a few authorities show that by-laws with regard to mortuaries have been made under Sec. 88 of the Act of 1891.

Sec. 95 of the Act of 1891, reproduces Sec. 9 of the Housing of the Working Classes Act of 1885. By-laws under Sec. 95 of the Public Health (London) Act, 1891, are in force in Lewisham, and the District Board of Wandsworth has submitted draft by-laws for the approval of the Local Government Board.

Under the following sections of the Public Health (London) Act, 1891, the sanitary authority is given a permissive power to make regulations.

Sec. 45 (1) (*a*) "Where a sanitary authority provide and maintain any public lavatories, ashpits or sanitary conveniences, such authority may make regulations with respect to the management thereof."

Sec. 90 (1) Any sanitary authority may and if required by the County Council shall, provide and maintain a proper building (otherwise than at a workhouse) for the reception of dead bodies during the time required to conduct any post-mortem examination ordered by a coroner or other constituted authority, and may make regulations with respect to the management of such building.

Replies have been received from five districts stating that regulations are in force under the first-named section.

Sec. 90 reproduces Sec. 28 of the Sanitary Act of 1866, and under one or other of these sections a few authorities (as shown in the tabular statement) have made regulations.

In the tabular statement appended the districts mentioned in Schedule C to the Metropolis Local Management Act, 1855, are not included. Replies have been received, however, which show that by-laws under Secs. 16 (1), 39 (2) and 50 of the Public Health (London) Act, 1891, are in force in the close of the Collegiate Church of St. Peter, in the Charterhouse, Furnival's-inn and Staple-inn, in the Inner Temple and Middle Temple, and in Gray's-inn. By-laws were made by the steward to the Honourable Society of Lincoln's-inn in August. 1894.

As regards the City, by-laws under sections 16 (1), 39 (2) and 50 are now in force, and by-laws under section 94 have been submitted to the Local Government Board, but are not yet approved. About 1,350 tenement houses are on the register.

SHIRLEY F. MURPHY,
Medical Officer of Health.

Tabular Statement showing whether By-laws and Regulations have been made by the several sanitary authorities under the sections of the Public Health (London) Act, 1891, which confer obligatory or permissive powers for this purpose; or whether regulations dealing with the same subject had been made before 1891 under preceding acts.

Sanitary District.	By-laws which Authority "shall" make.				Provision as to cubic air space.			Number of houses on register regulated at the present time.	By-laws which Authority "may" make.				Regulations which Authority may make.	
	34 (1.) Various nuisances.	39 (2.) Supply of water to water closets.	50. Cleansing of cisterns.	91. Houses let in lodgings.	Cubic feet for each person when room is used exclusively as a sleeping apartment.	Cubic feet for each person in a sleeping apartment which is not used exclusively for that purpose.			45 (a.) Conduct of persons using public sanitary conveniences.	66. Removal to hospital.	88. Mortuaries.	85. Tents and vans.	90. Management of post mortem rooms.	45 1 (a.) Management of public sanitary conveniences.
Kensington	Yes	Yes	Yes	*1886	300	400	Two children under 12 count as one adult	1800			Have regulations		Have regulations	
Hammersmith	,,	,,	,,	*1887	300	400	,, ,,	0					Have regulations	
Fulham	,,	,,	,,	1895	300	400	Half these amounts for children of an age not exceeding 10 years	0			Have regulations		Have regulations	
Paddington	,,	,,	,,	1894	300	400	,, ,,	0						
Chelsea	,,	,,	,,	†1868	300	350	Two children under 10 count as one adult	0			Have regulations			
St. George, Hanover-square ...	,,	,,	,,	1894	300	400	Half these amounts for children of an age not exceeding 10 years	73					Have regulations	
Westminster	,,	,,	,,	1893	300	400	,, ,,	950			Yes		Yes	
St. James	,,	,,	,,	1895	300	400	Two children under 12 count as one adult	29	Yes		Yes			Yes
Marylebone	,,	,,	,,	†1890	300	400	No special mention of children	931			Have regulations			
Hampstead	Yes	Yes	Yes	†1885	300	400	Two children under 12 count as one adult	1107			Have regulations		Have regulations	
St. Pancras	,,	,,	,,	1893	300	400	No special mention of children	166			Yes		Yes	
Islington	,,	,,	,,	1894	300	400	Half these amounts for children of an age not exceeding 10 years	300			Yes			
Hackney	,,	,,	,,	1895	300	400	,, ,,	0			Have regulations			
Stoke Newington	,,	,,	,,	1895	300	400	,, ,,	0			Yes			
St. Giles	,,	,,	,,	†1887	300	400	Two children under 12 count as one adult	481			Have regulations			
St. Martin-in-the-Fields ...	,,	,,	,,	†1884	300	400	Half these amounts for children of an age not exceeding 10 years	180						Yes
Strand	,,	,,	,,	1894	300	400	No special mention of children	86			Have regulations		Have regulations	Have regulations
Holborn	,,	,,	,,	†1885	300	350	Two children under 12 count as one adult	35			Have regulations			
Clerkenwell	,,	,,	,,	*1887	350 cubic ft. per person in a room occupied as a sleeping room whether used exclusively for that purpose or not		Half this for children of an age not exceeding 12 years	0			Have regulations			
St. Luke	,,	,,	,,	1895	300	400	Half these amounts for children of an age not exceeding 10 years	0						
**London, City of	,,	,,	,,											

* The date given is that of regulations made under the Act of 1866, by-laws under the Act of 1891 have been framed, but have not yet been confirmed by the Local Government Board.
† The date given is that of regulations made under the Act of 1866, it does not appear that there is any present intention of replacing these by by-laws under the Act of 1891.
** Regulations have been enforced, and about 1,350 tenement houses in the City are now registered. New by-laws have been framed under the Act of 1891, and these are now awaiting confirmation by the Local Government Board.

Sanitary District.	By-laws which authority "shall" make.				Provision as to cubic air space.			Number of houses on register regulated at the present time.	By-laws which Authority "may" make.				Regulations which Authority may make.	
	16 (1.) Various nuisances.	39 (2.) Supply of water to water closets.	50. Cleaning of cisterns.	94. Houses let in lodgings.	Cubic feet for each person when room is used exclusively as a sleeping apartment.	Cubic feet for each person in a sleeping apartment which is not used exclusively for that purpose.			45 1 (a.) Conduct of persons using public sanitary conveniences.	65. Removal to hospital.	88. Mortuaries.	95. Tents and vans	90 Management of post mortem rooms.	45 1 (a.) Management of public sanitary conveniences.
Shoreditch	Yes	Yes	Yes	1894	300	400	Half these amounts for children of an age not exceeding 10 years	4						
Bethnal-green	„	„	„	1895	300	400	„ „	0						
Whitechapel	„	„	„	1893	300	400	„ „	0			Have regulations			Have regulations
St. George-in-the-East	„	„	„	1895	300	400	„ „	28			Yes		Yes	
Limehouse	„	„	„	1893	350	400	„ „	69						
Mile End Old Town	„	„	„	†*1885*	300	350	Two children under 10 count as one adult	174						
Poplar—														
Poplar and Bromley	„	„	„	**1886*	300	400	„ „	0						
Bow	„	„	„	„	300	400	„ „	0						
St. Saviour, Southwark... ...	„	„	„	1894	300	400	Half these amounts for children of an age not exceeding 10 years.	0						
St. George, Southwark... ...	„	„	„	1894	300	400	„ „	98			Have regulations		Have regulations	Have regulations
Newington	„	„	„	†*1890*	300	350	Two children under 10 count as one adult.	0						
St. Olave	„	„	„	1893	300	400	Half these amounts for children of an age not exceeding 10 years.	0						
Bermondsey	Yes	Yes	Yes	1895	300	400	Two children under 10 count as one adult.	308			Yes		Yes	
Rotherhithe	„	„	„	**1867*	300	400	No special mention of children	0						
Lambeth	„	„	„	†*1873*				88			Yes		Yes	
Battersea	„	„	„	1893	300	400	Half these amounts for children of an age not exceeding 10 years.	—			Have regulations	*Have by-laws		
Wandsworth—												**By-laws have been submitted for approval but are not yet confirmed		
Wandsworth	„	„	„	1893	300	400	„ „	0						
Clapham	„	„	„					28						
Putney...	„	„	„					0						
Streatham	„	„	„					0						
Tooting	„	„	„					0						
Camberwell	„	„	„	1895	300	400	„ „	84						
Greenwich—														
Deptford	„	„	„	†*1884*	300	400	„ „	0						
Greenwich	„	„	„	†*1884*	300	400	„ „	9						
Lewisham	„	„	„	1895	300	400	„ „	††				*Have by-laws		
Woolwich	„	„	„	†*1869*	350	400	150 and 200 cubic feet in case of children between 3 and 14.	10						
Plumstead	„	„	„	1894	300	400	No special mention of children	4			Yes		Yes	
Lee—														
Lee and Kidbrooke	„	„	„	1895	300	400	Half these amounts for children of an age not exceeding 10 years.	0						
Charlton	„	„	„					0						
Eltham	„	„	„					0						

* The date given is that of regulations made under the Act of 1866, by-laws under the Act of 1891 have been framed, but have not yet been confirmed by the Local Government Board.
† The date given is that of regulations made under the Act of 1866, it does not appear that there is any present intention of replacing these by by-laws under the Act of 1891.
** By-laws relating to tents and vans were made by the Wandsworth and Lewisham Boards under the Housing of the Working Classes Act of 1885. The parish of Battersea was included at the time in the district under the jurisdiction of the Wandsworth Board, and hence inherits these by-laws. The Wandsworth Board has submitted for approval of the Local Government Board new by-laws under the Public Health (London) Act, 1891.
†† Some houses let in lodgings in Arpley-road, Penge, have been registered.