

Report on the vital and sanitary statistics of the Borough of Lambeth during the year 1902.

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Report

ON THE

VITAL AND SANITARY STATISTICS

OF THE

Borough of Lambeth,

DURING THE YEAR

1902

[With an Account of the work done by the Sanitary Inspectors, and of the Proceedings taken under the Food and Drugs, and Public Health, Acts],

BY

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London
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PUBLIC HEALTH DEPARTMENT,
333, KENNINGTON ROAD, S.E.
February, 1903.

To the Mayor, Aldermen, and Councillors of the
Metropolitan Borough of Lambeth.

Mr. Mayor and Gentlemen,

I have much pleasure in presenting you with the Annual Report, dealing with the Vital and Sanitary Statistics of the Borough of Lambeth during 1902 (the second year of the Borough's existence). In doing so, I would call special attention to the following important matters dealt with by you, as the Borough Council, during the year, in connection with my own (Public Health) Department:—

1. The successful stamping out of the Smallpox Epidemic by reason of the prompt and energetic action taken, thereby saving a serious, and large, expenditure to the Borough, not to mention the disorganisation of trade, etc., and the general inconvenience, that must have, of necessity, arisen, had the Epidemic been allowed to spread.

2. The opposition (started by Lambeth) to Part viii. (Milk Clauses) of the London County Council (General Powers) Bill, 1902, in which it was sought, by the London County Council, to obtain, in connection with milk supplies, powers the same as, and even greater than, those at present possessed by the Metropolitan City and Borough Councils. This opposition was successful, in that the House of Lords threw out the whole of the Milk Clauses, thereby refusing to recognise the right of the London County Council to supersede, except in default, the different Metropolitan Local Authorities, at least, in regard to the prevention of infectious diseases spread through infected milk.

3. The introduction on June 1st, 1902, throughout the Borough, of a voluntary (or optional) system of Notification of Consumption (with tuberculous expectorations), together with the approval of the principle of, and need for, the establishing, for the use of the Metropolitan Sanitary Authorities, of Sanatoria, in which to make trial of the open air treatment of patients suffering from Phthisis.

4. The inspection by Miss Gamble of the kitchens of restaurants, hotels, coffee houses, dining rooms, etc., and the consequent bettering of the conditions under which food is now being prepared, and cooked, within the Borough, special work that could only have been satisfactorily done by a female Sanitary Inspector.

5. The purchasing of an *extra* Equifex Disinfecting Machine, and the enlarging of the existing (Wanless Road) Disinfecting Station, together with the provision in the coming year, in connection therewith, of stabling, vans, sheds, etc. In this way, the Disinfecting Station will be completed, and will prove an object-lesson for Sanitary Authorities (Metropolitan and others).

6. The drawing up of a series of strict Requirements (general and special) in connection with Underground Bakehouses, that are to continue to be used as such after January 1st, 1904. Under these Requirements, no Underground Bakehouse in the Borough will be certified as "suitable" until structural (and other) alterations and improvements have been carried out to the satisfaction of the Medical Officer of Health. In this way, the health of the employees will be improved, as well as the conditions, under which bread, confectionery, etc., will, in future, be made, throughout the Borough.

There is one matter that requires the immediate attention of the Council, viz., the provision of two (or more) destructors in different parts of the Borough, for the destruction of house (and other) refuse, in place of the present method of barging. By such a change, there would be a large financial saving as well as a great sanitary improvement.

The Sanitary Staff has worked well during the year, and much good has been, thereby, accomplished, to the benefit of the Public Health of the Borough.

To my colleagues, the chief officers of the other various departments, my thanks are due for assistance willingly given as required, and also specially to the Health Committee (and the Council), for so readily supporting me in the discharge of my responsible duties of Medical Officer of Health. In this latter connection, the Council's appreciation of extra work performed, both by myself and by the Sanitary Staff, during the Smallpox Epidemic, deserves special mention, as shewing the confidence that exists between the Council and its Health Department.

I am, Mr. Mayor and Gentlemen,

Your obedient servant,

Joseph Priestley

I. VITAL STATISTICS.

In the Annual Report for 1901 (the *first* Report dealing with the newly-formed Borough of Lambeth), the populations of the new Borough were carefully worked out from the existing censal data taken from the 1901 Census and the previous decennial Census, 1891—the intermediate Census, 1896, unfortunately, not taking any account of Parliamentary and Ward Boundaries. In this way, fairly accurate Returns are obtainable, estimated to the middle of 1902, from the Censuses 1891 and 1901, and dealing with—

- (1) Wards.
- (2) Registration Sub-Districts.
- (3) Age-periods.
- (4) *Parliamentary Divisions: (a) Old, (b) Adjusted.

This estimating of populations is the necessary groundwork for all statistics, as upon the accuracy of the *estimated* populations depend all the various mortality-rates and morbidity-incidences met with throughout an Annual Report. In regard to the Borough of Lambeth, care has been taken to make these *estimated* populations as exact as possible, but they cannot be corrected until the next decennial Census, 1911, unless the next intermediate quinquennial Census, 1906, takes account of the Parliamentary and Ward boundaries. The shorter the interval between successive Censuses, the more accurate the estimated populations; and it is to be hoped that the Government will instruct the Census Office, so that full details may be obtained, and published, in connection with the next 1906 Census for London.

* The old Parliamentary Divisions retain their old boundaries, being unaffected by the London Government Act, 1899, and do not, therefore, coincide with new Municipal Lambeth. These *old* Parliamentary Divisions have been adjusted for purposes of this Report (*vide* p. 9).

The Borough of Lambeth contains 4079·6 statute acres, exclusive of 82·1 tidal water, 0·8 inland water, and 31·1 foreshore, with an *estimated* total population of 305,102 persons to the middle of 1902, consisting of 144,315 males and 160,787 females, or an excess of 16,472 females.

The total estimated increase (1901-1902) of the population is 2,569, but the "natural increment," *i.e.*, the excess of births over deaths is 3,680, so that an exodus of 1,111 in excess of those who came into the Borough during 1902 must be assumed.

The estimated Populations of the Borough of Lambeth to the middle of 1902 may be tabulated as follow :—

ESTIMATED POPULATIONS.

(Estimated Middle 1902.)

I. *Wards.*

Wards.	Males.	Females.	Total.
Marsh	} Cannot be sub-divided with sufficient accuracy on account of the <i>New</i> Borough Wards differing from the <i>Old</i> Parish Wards.	} Cannot be sub-divided with sufficient accuracy on account of the <i>New</i> Borough Wards differing from the <i>Old</i> Parish Wards.	27211
Bishop's			32160
Prince's			48002
Vauxhall			31741
Stockwell			32646
Brixton			43961
Herne Hill			30976
Tulse Hill			28079
Norwood			30326
Borough of Lambeth ...	144315	160787	305,102

II. *Registration Sub-Districts*

Sub-Districts.	Males.	Females.	Total.
Waterloo	13856	13355	27211
Lambeth Church (1st)	9144	9275	18419
Lambeth Church (2nd)	19868	20004	39872
Kennington (1st) ...	26576	27029	53605
Kennington (2nd) ...	19862	23515	43377
Brixton	9299	46443	85742
Norwood	15710	21166	36876
Borough of Lambeth...	144315	160787	305102

III. *Age-Periods.*

Age-Periods.	Males.	Females.	Total.
0—1	3691	3692	7383
1—5	12725	12658	25383
Total under 5... ..	16416	16350	32766
5—20	42004	43939	85943
20—40	50410	57355	107765
40—60	26665	30018	56683
60—80	8330	12063	20393
80 upwards	490	1062	1552
Total over 5	127899	144437	272336

IV. *Parliamentary Divisions (Old).*

<i>Old</i> Parliamentary Divisions.	Males.	Females.	Total.
North	29645	29569	59214
Kennington	39267	39674	78941
Brixton	35008	41052	76060
Norwood	39237	48736	87973
Parliamentary Area of Lambeth	143157	159031	302188

N.B.—The Parliamentary Divisions have not been altered by the London Government Act, 1899, nor by the Proceedings that fixed the Boundaries of the Metropolitan Boroughs, so that the above figures do not agree with those for the Borough as a whole, but are comparable with those of the old Parish of Lambeth given in previous Reports.

V. *Parliamentary Divisions (Adjusted).*

<i>Adjusted</i> Parliamentary Divisions.	New Wards.	Total.
North	{ Marsh } { Bishop's }	59371
Kennington	{ Prince's } { Vauxhall }	79743
Brixton	{ Stockwell } { Brixton }	76607
Norwood	{ Herne Hill } { Tulse Hill } { Norwood... .. }	89381
<i>Adjusted</i> Parliamen- tary Area of Lambeth	—	305102

* N.B.—By the adjustment of the old Parliamentary Divisions so as to be co-terminous with the new wards.

HOUSES.

At the time of the Census, 1901, there were within the Borough of Lambeth 41,511 inhabited houses and 1825 uninhabited (881 in occupation and 944 not in occupation), whilst 137 were in process of building. At the time of the 1891 Census, the inhabited houses numbered 38,899.

The estimated number of inhabited houses to the middle of 1902 is 41,837, which, with an estimated population (to the middle of 1902) of 305,102, gives an average of 7.3 persons per inhabited house.

The total number of tenements in Lambeth Borough at the time of the 1901 Census was 70,887, and of these, 44,495 were tenements of less than five rooms, as follows:—One-roomed, 10,058; two-roomed, 12,311; three-roomed, 12,120; and four-roomed, 10,006.

RATEABLE VALUE.

The estimated rateable value for the year ending March 31st, 1903, is £1,876,927, and a 1d. rate per £1 is estimated to produce £7580.

STATISTICS FOR LONDON AS A WHOLE.

The Registrar-General returns the estimated population of London for the middle of the year 1902 as 4,579,110, consisting of 2,161,987 males and 2,417,123 females, and states that there were registered during the year 40,816 marriages, 132,810 births (67,663 males and 65,147 females), and 82,540 deaths (42,854 males and 39,686 females). There were registered, 10,393 deaths from the seven chief zymotic diseases. The excess of registered births over deaths, *i.e.*, the natural increment, is 50,270 and the estimated increase of population from the middle of 1901 to the middle of 1902, is 34,126.

1902—Groups of Metropolitan Boroughs (corrected rates).

	Enumerated Population, 1891 (Census)	Enumerated Population, 1901 (Census).	Estimated Population, 1902 (middle of year).	Birth-Rate.	Death-Rate.	Zymotic Death- Rate.	Deaths under 1 year to 1000 Births.
London	4228317	4536541	4579110	28·4	17·2	2·2	141
South Group	1524472	1749956	1779709	29·04	16·5	2·2	137
West Group	770022	826985	834842	23·3	16·2	1·9	142
North Group	1013707	1056070	1062304	26·6	15·4	1·7	126
Central Group	214464	187791	184620	30·3	21·5	2·3	146
East Group	705652	715739	717635	35·9	20·4	3·04	154

N.B.—This table has been again added for purposes of comparison with previous Lambeth Reports, but is unsatisfactory on account of the differences between the boundaries of the *old* Sanitary Districts, and the *new* Cities and Boroughs, of the Metropolis.

TABLE A.

Giving the number of Births and the Birth-Rates in each Registration Sub-District of the Borough of Lambeth during 1902 (arranged Quarterly).

Registration Sub-Districts.	No. of Births.				Total for the Year 1902.	Rate per 1000 Inhabitants.
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.		
Waterloo Road 1st ...	124	110	92	117	443	} 47·9*
„ 2nd .	188	199	224	249	860	
Lambeth Church 1st ...	136	155	163	151	605	32·8
„ 2nd ...	382	356	348	359	1445	36·2†
Kennington 1st ...	463	434	441	479	1817	33·9
„ 2nd ...	253	251	278	229	1011	23·3
Brixton	547	505	526	520	2098	24·5
Norwood	199	197	193	199	788	21·4
Borough of Lambeth	2292	2207	2265	2303	9067	29·7

* Including Lying-In Hospital (446 cases, of which 126 belong to Lambeth)—corrected rate (*i.e.*, excluding non-Lambethian births), = 36·1.

† Including Workhouse (175 cases, of which 147 belong to Lambeth)—corrected rate (*i.e.* excluding non-Lambethian births), = 35·5.

TABLE B.

Shewing the Estimated Populations, Numbers of Inhabited Houses, Marriages, Births, and Corrected Deaths for the year in the Borough of Lambeth during 1902, and in the Parish of Lambeth for ten years (1891-1900).

Year.	Estimated Population.	Estimated No. of Inhabited Houses.	Marriages.	Registered Births.	Corrected Number of Deaths.			Deaths from 7 Chief Zymotic Diseases.	Deaths in Public Institutions.	
					Total Ages.	Under 1 Year.	Under 5 Years.			
New Boro' {	1902	305102	41837	2548	9067	5387	1155	1722	561	1822
	1891	276162	38634	2140	9097	5886	1387	2251	692	1438
	1892	280032	38950	2107	9226	5457	1250	2091	705	1578
	1893	283956	39265	2233	9222	5219	1325	1925	748	1741
	1894	287935	39580	2224	9232	4837	1223	1936	680	1484
Old Parish. {	1895	291970	39895	2220	9341	5559	1420	2187	732	1511
	1896	296061	40210	2445	9592	5098	1313	2045	708	1588
	1897	300048	40525	2445	9388	5251	1425	2096	734	1546
	1898	304073	40840	2589	9256	5430	1426	2089	726	1543
	1899	308108	41155	2523	9433	5886	1488	2198	782	1680
	1900	312152	41470	2454	9167	5430	1323	1884	497	1576
Average 1891-1900	294049.7	40052.4	2338	9295.4	5405.3	1358.5	2070.2	700.4	1568.5	

NOTE.—(a) Enumerated Population for old Parish at Census 1896 was 295,033, and the enumerated number of inhabited houses at Census 1891 was 38,556. (b) Enumerated population for the new Borough at Census 1901, was 301,895, and the enumerated number of inhabited houses at the same Census, 41,511.

TABLE C.

Shewing the number of persons per house, the Marriage-, Birth-, and Death-Rates, and proportion of Deaths in Public Institutions in the Borough of Lambeth for the Year 1902, and in the old Parish of Lambeth for ten years (1891-1900).

The Year	Estimated No. of Persons per house.	Marriage-Rate per 1,000 Population.	Birth-Rate per 1,000 Population.	Death-Rate per 1,000 Population.	Deaths of Children under 1 year, per 1000 Births.	Deaths of Children under 1 year, per 1000 Deaths.	Deaths of Children under 5 years, per 1000 Deaths.	Zymotic Death-Rate, per 1000 Population.	Deaths in Public Institutions per 1000 total uncorrected deaths.
New Boro' 1902	7.3	16.7	29.7	17.7	127.4	214.4	319.7	1.8	328.1
Old Parish.	7.3	1891	32.9	21.3	152.5	235.6	382.4	2.5	236.6
		1892	32.9	19.5	135.5	229.1	383.2	2.5	272.4
		1893	32.5	18.4	143.7	253.9	368.8	2.6	305.9
		1894	32.1	16.8	132.5	252.8	400.3	2.4	284.7
		1895	31.9	19.0	152.0	255.4	393.4	2.5	257.9
		1896	32.4	17.2	136.9	257.6	401.1	2.4	295.7
		1897	31.3	17.5	151.8	271.4	400.1	2.4	281.8
		1898	30.4	17.9	154.1	262.6	384.7	2.4	277.1
		1899	30.6	19.1	157.7	252.8	373.4	2.5	277.1
		1900	29.4	17.4	144.9	244.6	346.9	1.6	282.5
Average 1891-1900	7.3	15.9	31.6	18.4	146.1	251.3	332.9	2.4	276.7

NOTE.—(a) Enumerated number of Inhabited Houses for the old Parish at Census 1891 was 38,556. (b) Enumerated number of Inhabited Houses for the new Borough at Census 1901 was 41,511.

THE BIRTH-RATE.

The total number of Births registered in the Borough of Lambeth during the year 1902 was 9067. Of the total 9067 births, 4636 were males, and 4431 females, showing an excess of 205 males.

Of the total 9067 births registered in the Borough of Lambeth, 446 took place in the Lying-in Hospital (York Road), and of these, 126 belong to the Borough; whilst 175 took place in the Workhouse, and of these, 147 belong to the Borough. There are 348 births belonging to other districts, but these may be assumed to counteract births amongst Lambethians that have taken place *outside* the Borough, and any *unregistered* births.

The birth-rate for Lambeth is, therefore, 29.7 per 1,000 inhabitants (32.1 for males, and 27.6 for females), as compared with 28.4 for London (31.3 for males, and 26.9 for females); whilst in the various Registration Sub-Districts the birth-rates work out as shown in Table A, from which it will be seen that the uncorrected birth-rate in the Inner Districts is 39.2, and that in the Outer Districts 26.02, per 1000.* Tables B and C show, for comparison, the number of births, and the birth-rates for 10 years (1891-1900) in the old Parish of Lambeth.

In the Inner Districts (where the birth-rates are high) the high birth-rates help the high death-rates, owing to the great numbers of deaths amongst infants and children between 1 and 5 years of age, so that a persistently high birth-rate, instead of leading to a lower, causes a higher, death-rate, pointing to the unsatisfactory and less healthy conditions under which the inhabitants in the Inner Districts of the Borough of Lambeth exist, as compared with those in the Outer Districts. It must be remembered, too, that the Lying-in Hospital and the Workhouse tend to abnormally increase the birth-rates in Waterloo Road Second and Lambeth Second Districts, the necessary corrections being given in a footnote (*see* p. 12).

The birth-rate for the old Parish of Lambeth had been recently slowly, but surely, declining.

* The corrected birth-rate (*i.e.*, after subtracting the non-Lambethian births occurring in the Lying-in Hospital and the Workhouse), is 28.6 (Inner Districts = 35.1, and Outer Districts = 26.02).

THE MARRIAGE-RATE.

The number of Marriages registered in the Borough of Lambeth during the year 1902 was 2,548 as compared with 2,459 during 1901, and a yearly average of 2,338 in the old Parish of Lambeth for the 10 years 1891-1900.

The marriage-rate for Lambeth Borough is, therefore, 16.7 per 1,000 inhabitants, as compared with 17.8 for London.

Tables B and C show the number of marriages and the marriage-rates for the last ten years in the old Parish of Lambeth, and it will again be noticed that the marriage-rate has been gradually, but persistently, falling during that period, as also during the previous decennium. Marriage statistics are of little value.

THE DEATH-RATE.

The total number of deaths registered in the Borough of Lambeth, during the year 1902, was 5,553, as compared with 5,383 during 1901, and a yearly average of 5716.7 in the old Parish of Lambeth for the 10 years 1891-1900. Of the total 5,553 deaths, 2,865 were males and 2,688 females, showing an excess of 177 males.

The death-rate for Lambeth is, therefore, 18.2 per 1,000 inhabitants (19.9 for males and 16.7 for females), as compared with 17.7 for London (19.5 for males and 16.2 for females). These rates are, however, uncorrected, and on analysing the 5,553 deaths registered in the Borough of Lambeth, it is found that 726 represent deaths occurring within the Borough amongst persons not belonging thereto. These are to be deducted; but, on the other hand, there are 560 deaths registered outside the Borough of persons belonging thereto, and these must be added, giving a corrected number of deaths for Lambeth during 1902 of 5,387, and a corrected death-rate of 17.7 per 1,000 inhabitants, as compared with 17.2 for London (the total corrected number of London deaths being 80,105).

The Institutions, &c., where 560 Lambethians died during 1902, may be grouped as follows :—

<i>I. General Hospitals</i>		Hospital for Women, Euston Road ...	1
Charing Cross ...	16	Hospital of St. John	1
French ...	3	Lying - in Hospital, Endell Street ...	1
Guy's ..	41	National Hospital ...	1
Hostel of God ...	1	Royal Chest ...	3
King's ...	7	St. Mary's ...	1
London ...	4	St. Peter's ...	1
Middlesex ...	9	Temperance Hospital	2
Royal Free ...	1	Victoria ...	2
St. Bartholomew's ...	18	West London ...	1
St. George's ...	6	<i>Fever</i>	
University ...	2	Fountain ...	22
Westminster ...	49	Grove ...	38
<i>II. Special Hospitals</i>		Hospital Ships ...	59
Belgrave ...	5	Northern Fever ...	1
Bethlehem ...	2	South Wharf Shelter	1
Bolingbroke Hospital	1	<i>III. Infirmaries and Workhouses</i>	
Brompton ...	10	Camberwell Work- house ...	3
Cancer ...	7	Chelsea Infirmary ...	1
Central London Sick	4	Kensington Infirmary	1
Evelina ...	12	Newington Work- house ...	1
Friedenheim ...	2	Southwark Infirmary	3
German Hospital ...	1	St. Giles Workhouse	2
Gt. Ormond Street ...	9	St. Martin's Alms- houses ...	1
Grosvenor Hospital	1	Manor ...	15
Heart Hospital, Soho	1	Middlesex ..	2
Homœopathic ...	1	Peckham House ...	1
Home for Sick Child- ren ...	1	<i>V. Unclassifiable Places</i>	
Home House, Fitzroy Square ...	1	Brought dead to Hos- pital ...	3
St. Olave's Infirmary	1	Clapham Common ...	1
St. Saviour's Infirm- ary ...	1	Eagle Pond, Clapham Common ...	2
Wandsworth Infirm- ary ...	1	Gas Light & Coke Works, Battersea	1
<i>IV. Asylums</i>		His Majesty's Theatre	1
Banstead ...	21		
Bethnal House Asylum ..	2		
Camberwell House...	3		
Caterham ...	23		
Cave Hill ...	27		

Claybury	12	In Train, L. C. & D.	
Colney Hatch	5	Railway	1
Darenth	6	L. & S. W. Railway	1
Dartford	21	Private Addresses ...	7
Grove Hall Asylum	1	River Thames	6
Hanwell	6	Royal Dockyard ...	1
H o x t o n H o u s e		Royal Palace Hotel,	
Asylum	4	Kensington	1
H.M. Prison, Penton-		S.S. Eagle, Green-	
ville	2	wich Pier	7
H.M. Prison, Wands-		Streets	1
worth	1	Victoria Station ...	1
Leavesden	9		
	Total		<u>560</u>

SUMMARY.

I. General Hospitals	157
II. Special and Fever Hospitals	193
III. Infirmaries and Workhouses	15
IV. Asylums	161
V. Elsewhere (unclassifiable)	34
	<u>560</u>

Whether the corrected or uncorrected death-rates for the Borough of Lambeth (as a whole) be taken, they are very satisfactory for the year 1902, the second year of existence of the newly-formed Borough. Sub-dividing the death-rates amongst the several Registration Sub-Districts, it will be noted that the Inner Districts, *e.g.*, Waterloo, Lambeth Church 1st and 2nd, have, collectively and individually, suffered more than the Outer Districts, *e.g.*, Kennington 1st and 2nd, Brixton and Norwood. So, too, if the death-rates be sub-divided amongst the 9 new Wards, it will also be noted that the Inner Wards, *e.g.*, Marsh, Bishop's, Prince's, and Vauxhall, have collectively, and (with the exception of Prince's) individually, suffered more than the Outer Wards, *e.g.*, Stockwell, Brixton, Herne Hill, Tulse Hill and Norwood.

The Inner Districts are more congested than the Outer, and as a general law it is found that the more congested a district (houses over area), the higher the mortality, and the greater the morbidity. The status of the inhabitants and the general con-

ditions (sanitary and otherwise) under which they live are matters to bear in mind when dealing with this difference in death- and sickness-rates in the Inner as compared with the Outer Districts of the Borough of Lambeth. No efforts must be spared to lessen this difference (as it is practically impossible to obliterate it), and this can be best done by seeing that the crowded Inner Districts are kept in good sanitary condition by means of constant and regular inspections. In this way the evil effects arising from crowding and defective ventilation may be, in part, counteracted. Taking the Registration Sub-Districts (Table D), and the new Wards (Table E), into which the Borough is sub-divided, the rates for 1902 will be found to vary between the Inner and the Outer Districts as follow :—

1902.	Registration Sub-Districts.		New Wards.	
	Inner.	Outer.	Inner.	Outer.
General Death-rate (corrected)	23·4	15·4	20·9	14·9
Zymotic Death-rate (corrected)	2·1	1·4	2·5	1·3

Of the Wards, Tulse Hill has the lowest, and Bishop's the highest, general death-rate, and Herne Hill the lowest, and Marsh the highest, zymotic rates; whilst of the Registration Sub-Districts Norwood has the lowest, and Waterloo the highest, general and zymotic death-rates.

It is only by sub-dividing the rates up in this way that it is possible to see where the unsatisfactory parts of the Borough are situated, and where, consequently, most care and attention are required at the hands of the Borough Council. In this connection, Table E deals with the new Borough Wards, whilst on page 20 is given a comparison between the 1902 and the 1901 statistics for the Registration Sub-Districts of the Borough.

BOROUGH OF LAMBETH.
COMPARISON BETWEEN STATISTICS FOR 1901 AND 1902.

	Death-Rates.				Birth-Rates.		Infantile Mortality (uncorrected).		
	General.		Zymotic.		1901.	1902.	1901.	1902.	
	1901.	1902.	1901.	1902.					
INNER WARDS—									
*Waterloo	23.3	25.1	3.3	3.03	48.2	47.9	147.9	128.2	
Lambeth Church 1st	22.5	22.1	3.8	2.9	32.3	32.4	268.9	324.9	
†Lambeth Church 2nd	22.6	22.9	3.4	2.6	38.4	36.2	158.2	154.3	
OUTER WARDS—									
Kennington 1st... ..	18.5	16.8	2.8	1.7	34.5	33.9	128.5	111.7	
Kennington 2nd	14.9	17.1	1.2	1.6	23.4	23.3	100.6	111.7	
Brixton	14.4	14.9	1.5	1.3	24.3	24.5	125.9	107.2	
Norwood	10.9	12.5	1.4	0.9	20.9	21.4	134.1	114.1	
Lambeth... ..	17.2	17.7	2.7	1.8	30.1	29.7	142.3	143.0	

* Excluding the 446 Lying-In Hospital Births, the birth rate is 31.5, and the infantile mortality rate 194.9.
† Excluding the 175 Workhouse Births, the birth-rate is 31.9, and the infantile mortality rate 175.6.

Tables F, G, H and I shew the uncorrected returns (male and female) arranged as to Registration Sub-Districts, age periods, and quarters respectively, and are given for comparison with similar tables in former Lambeth Reports.

The place that the Borough of Lambeth takes amongst the Metropolitan Sanitary Districts is worthy of note, there being 16 other districts (out of 29) with a less death-rate, 10 with a less zymotic death-rate, and 7 with a less infantile mortality. Taking the South Metropolitan Districts, Wandsworth has a general death-rate per 1,000 of the population of 13.5, Battersea 15.0, and Camberwell 16.3, as compared with Lambeth 17.7, Bermondsey 20.8, and Southwark 21.4, respectively.

London, as a whole, has a birth-rate of 28.4, corrected death-rate of 17.2, a zymotic (death-) rate of 2.2 per 1,000 population, and an infantile mortality of 141 per 1,000 births.

Age-Periods of Corrected Deaths.

The 5387 corrected deaths may be further analysed, and tabulated as follow :—

1155, <i>i.e.</i> , 21.4	per cent.	of the total (corrected) deaths	took place under 1 year of age
567, <i>i.e.</i> , 10.5	„	between 1 and 5 years.	
1722, <i>i.e.</i> , 31.9	„	under 5 years.	
282, <i>i.e.</i> , 5.2	„	between 5 and 20 years.	
672, <i>i.e.</i> , 12.5	„	20 to 40 years.	
1106, <i>i.e.</i> , 20.5	„	40 to 60 years.	
1302, <i>i.e.</i> , 24.2	„	60 to 80 years.	
303, <i>i.e.</i> , 5.6	„	80 years and over.	
3665, <i>i.e.</i> , 68.03	„	over 5 years.	

These results may be compared with those for London given in Table F, which shows the estimated mortalities per 1,000 persons at each age-period for London during 1902, and the London averages for the 10 years 1881-90.

TABLE D.

Shewing the number of Births and Deaths, with Birth- and 1902. The Deaths are from all causes, and from the chief outside the Borough, by omitting strangers who die within the the Districts from which they have been removed during illness.

REGISTRATION SUB-DISTRICTS.	Persons per Acre.	Estimated Population (middle 1902).	Total Births.	Birth-rate per 1000 of the Population.	Total Deaths (corrected).	General Death-rate per 1000 of the Population.
Waterloo Road 1st } " " 2nd }	158·1	27211	1303	47·9	{ 317 } { 333 }	25·1
Lambeth Church 1st...	114·6	18419	605	32·8	391	22·1
" " 2nd...	218·5	39372	1445	36·2	896	22·9
Kennington 1st ...	109·3	53605	1817	33·9	885	16·8
" 2nd ...	82·1	43377	1011	23·3	728	17·1
Brixton	63·6	85742	2098	24·5	1264	14·9
Norwood	30·9	36876	788	21·4	446	12·5
District not stated ...	...	...	...	...	127	...
Borough of Lambeth	74·8	305102	9067	29·7	5387	17·7

N.B.—In the 127 cases where the District is not stated, the were sub-divided equally in the eight Districts. Census 1901 of tidal water

* Excluding all the Lying-In Hospital births
† Excluding all the Werkhouse births

TABLE D.

Death-rates in each of the Registration Sub-Districts of the Borough during Zymotic Diseases, and are corrected by adding Lambethians who die in the Borough, and by re-distributing persons (who die in Public Institutions) into

Total Deaths from									Total Zymotic Deaths.	Zymotic Death-rate per 1000 of the Population.	Zymotic Death-rate per 1000 of the Total Deaths.	Diarrhoea Death-rate per 10000 of the Population.	Infantile Mortality per 1000 Births (uncorrected.)
Small Pox.	Measles.	Scarlet Fever.	Diphtheria and Membranous Croup.	Whooping Cough.	Typhus.	Typhoid or Enteric.	Continued Fever.	Diarrhoea.					
3	1	3	2	10	...	1	1	21	42	3.03	126.9	9.9	191.9
	12	3	1	2	12	...	4	...	6		40		121.1	95.4
5	9	1	6	7	...	2	...	23	53	2.9	130.9	12.5	320.7
11	15	14	13	20	...	7	...	32	112	2.6	123.1	8.03	154.3
16	15	12	2	18	...	7	...	23	93	1.7	103.4	4.3	114.5
3	12	7	13	18	...	4	...	12	69	1.6	93.1	2.8	117.7
9	25	9	9	23	...	9	...	31	115	1.3	90.05	3.6	107.2
1	2	1	6	10	...	4	...	11	35	0.9	76.3	2.7	114.2
...	2	...	...	...	...	...	...	...	2	...	...	...	...
60	84	48	53	118	...	38	1	159	561	1.8	104.1	5.2	134.0

death-rates have been calculated on the assumption that these deaths Return gives the area of Lambeth as 4,080.4 statute acres (exclusive and foreshore).

the corrected rate = 31.5 per 1000.

the corrected rate = 31.9 per 1000.

TABLE E.

Giving corrected Death-rates, Zymotic Death-rates, and Zymotic Incidence-rates, in the Wards of the Borough of Lambeth during 1902.

NEW WARDS.	TOTAL DEATHS.	DEATH-RATE PER 1,000.	ZYMOTIC DISEASES.		ZYMOTIC INCIDENCE.*	
			TOTAL DEATHS.	DEATH-RATE PER 1,000 POPULATION.	TOTAL ZYMOTIC CASES.	INCIDENCE PER 1,000 OF THE POPULATION.
Marsh	658	24.2	82	3.03	294	10.8
Bishop's	928	28.9	95	2.9	455	14.1
Prince's	719	14.9	108	2.3	510	10.6
Vauxhall	609	18.9	61	1.9	302	9.5
Stockwell	467	14.3	45	1.4	261	7.9
Brixton	742	16.9	70	1.6	369	8.4
Herne Hill	464	14.9	32	1.03	286	9.2
Tulse Hill	338	12.03	33	1.2	123	4.4
Norwood	462	15.2	35	1.1	112	3.7
Borough of Lambeth ...	5387	17.7	561	1.8	2713	8.9

N.B.—Zymotic incidence for the Inner Wards is 11.2, and for the Outer Wards, 6.9.

* Excluding 1560 Chicken-pox cases.

TABLE F.

Shewing Mortalities in Lambeth Borough at different Age-Periods during 1902, compared with (1) those for London 1902, and (2) the averages for London, for years 1881-90.

AGE-PERIODS.	LAMBETH.			LONDON.		
	Estimated Populations (middle 1902).	Mortality Rates per 1000 Population, 1902. Corrected. Uncorrected.		Mortality Rates, per 1000 Population, 1902. Uncorrected.	Average of Ten Years, 1881-90. per 1000.	
0-5	32766	52.6	55.7	56.6	68.4	
5-20	85943	3.3	} 8.3	3.4	4.3	
20-40	107765	6.2		6.4	8.2	
40-60	56683	19.5	} 75.3	19.1	20.2	
60-80	20393	63.8		62.4	72.3	63.3
80 and upwards	1552	195.2		203.3	206.2	
*Under 1 year	7383	127.4	134.0	141.0	152.0	
All Ages	305102	17.7	18.2	17.7	20.5	

The Age-periods adopted in previous Lambeth Reports, are used for purposes of comparison, though it is considered more accurate to sub-divide as follows:—1-5, 5-15, 15-25, 25-35, 35-45, 45-55, 55-65, 65-75, 75-85, 85 and over.

* N.B.—The Rates under 1 year are given in terms of 1000 births.

TABLE G.

Shewing the Uncorrected Mortality (Male and Female) in the different Registration Sub-Districts of the Borough of Lambeth (arranged Quarterly), during the year 1902.

	1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.			Total No. of Deaths in each District.
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	
Waterloo Road 1st	33	37	70	24	23	47	37	36	73	26	24	50	240
„ 2nd	22	31	53	20	27	47	26	19	45	34	30	64	209
Lambeth Church 1st	145	89	234	142	75	217	146	103	249	155	109	264	964
„ 2nd	191	196	387	157	129	286	174	132	306	214	183	397	1376
Kennington 1st ...	93	100	193	70	65	135	66	59	125	105	114	219	672
„ 2nd ...	74	86	160	63	63	126	40	63	103	85	75	160	549
Brixton ...	181	225	406	100	114	214	103	111	214	139	148	287	1121
Norwood ...	71	92	163	42	40	82	32	39	71	55	51	106	422
TOTALS ...	810	856	1666	618	536	1154	624	562	1186	813	734	1547	5553

TABLE H.

Shewing the uncorrected Mortality (*i.e.*, including that of Strangers) at different Ages in each Registration Sub-Districts of the Borough of Lambeth during the year 1902.

SUB-DISTRICT.	Under 1 year.			1 to 5 years.			5 to 60 years.			60 yrs. & upwards			TOTAL
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	
Waterloo Road 1st ...	47	38	85	19	20	39	36	40	76	18	22	40	240
" 2nd ...	44	38	82	17	18	35	36	33	69	5	18	23	209
Lambeth Church 1st ...	111	83	194	57	58	115	337	190	527	83	45	128	964
" 2nd ...	121	102	223	42	46	88	293	225	518	278	269	547	1376
Kennington 1st ...	118	85	203	25	33	58	107	97	204	84	123	207	672
" 2nd ...	63	50	113	25	28	53	80	97	177	83	123	206	549
Brixton ...	139	86	225	76	84	160	182	209	391	136	209	345	1121
Norwood... ..	53	37	90	35	27	62	59	54	113	56	101	157	422
TOTALS ...	696	519	1215	296	314	610	1130	945	2075	743	910	1653	5553

TABLE I.

Shewing the Uncorrected Deaths (*i.e.*, Parishioners and Strangers) that have been registered in the Borough of Lambeth at various Age-Periods in each Quarter during the Year 1902.

	1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.			TOTAL
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	
Under 1 year	172	133	305	144	82	226	185	144	329	195	160	355	1215
Between 1 and 5 years...	92	85	177	52	64	116	51	62	113	101	103	204	610
Between 5 and 60 years	307	286	587	266	207	473	251	210	461	306	248	554	2075
60 years and upwards ...	239	358	597	156	183	339	137	146	283	211	223	434	1653
TOTALS ...	810	856	1666	618	536	1154	624	562	1186	813	734	1547	5553

INFANTILE MORTALITY, 1902.

Of the 5,387 corrected deaths, 1,155 were infants under one year of age. The total number of births is 9,067, and of these 320 occurred at the Lying-in Hospital, and belong to districts outside Lambeth Borough, and 28 occurred at the Workhouse, and belong also to districts outside Lambeth Borough. In this way, the corrected number of births is 8,719. The corrected infantile mortality (*i.e.*, rate of corrected deaths under one year per 1,000 corrected births) is, therefore, 132.5. In calculating this corrected infantile mortality, it must be remembered that, whilst we subtract the births amongst persons who are not Lambethians, we do not add the births amongst Lambethians who may happen to be residing elsewhere at the time of such births. Taking the uncorrected births and the corrected deaths under 1 year, the infantile mortality rate is 127.4.

Taking the uncorrected number of births (9,067), and the uncorrected number of deaths under 1 year of age (1,215) the uncorrected infantile mortality is 134.0, as compared with 142.3 during 1901, and an average of 150.5 for the old Parish of Lambeth during 10 years (1891-1900). The chief causes of these deaths were debility, atrophy and inanition, whooping cough, bronchitis and other diseases of the respiratory organs, diarrhœa, premature births, and convulsions. Table J gives the infantile mortality in different towns in England and Wales, and in the London Districts.

In the Registration Sub-Districts of Lambeth, the uncorrected infantile mortality varies from 320.7 per 1,000 births in Lambeth Church 1st to 95.3 in Waterloo Road 2nd (the rates of 95.3 in Waterloo Road 2nd and 154.3 in Lambeth Church 2nd being due to the fact that these Sub-Districts contain the General Lying-in Hospital and the Workhouse respectively), thus:—

	Total No. of Births.	Total Deaths under 1 year (uncorrected).	Infantile Mortality per 1,000 births (uncorrected).
Waterloo Road 1st ...	443	85	191·9
" " 2nd ...	860	82	95·3
Lambeth Church 1st ...	605	194	320·7
" " 2nd ...	1445	223	154·3†
Kennington 1st ...	1817	203	114·5
" 2nd ...	1011	113	117·7
Brixton ...	2098	225	107·2
Norwood... ..	788	90	114·2
Lambeth	9067	1215	134·0

N.B.—Waterloo Road 1st and 2nd have been amalgamated by the Registrar-General, and now form one District called Waterloo Road.

* Excluding all the Lying-in Hospital births, the corrected rate becomes 198·6.

† Excluding all the Workhouse births, the corrected rate becomes 183·5.

The Infantile Mortality (like the deaths under 1 year of age) is regarded as a sensitive index of the Sanitary state of a District, and judged by this index, Lambeth Borough takes a most satisfactory position amongst Sanitary Districts. Taking the Registrar-General's *old* 33 Large Towns of England and Wales, the uncorrected infantile mortalities vary from a *minimum* 125 Brighton and Derby, to a *maximum* 189 Preston, London being 141 and Lambeth 127. Lambeth ranks third *lowest* in such list, 31 Towns (including London) having higher infantile mortality rates. Of the 29 Metropolitan Sanitary Districts, 7 have lesser infantile mortality rates than Lambeth Borough; and of the ten South Metropolitan Districts, 2 only have lesser infantile mortality rates, viz. :—Lewisham and Woolwich, with 125 per 1000 births respectively, as compared with 127 for Lambeth Borough.

TABLE J.

Shewing the Infantile Mortalities in the Registrar-General's *old* 33 Large Towns of England and Wales (including London), and in Lambeth Borough, during 1902.

	Deaths under one year per 1000 Births.	Average Ten Years, 1892—1901.
England and Wales... .. (33 Large Towns.)	133	154
Derby	125	159
Brighton	125	155
Bristol	131	146
Croydon	132	140
Wolverhampton	134	192
Bolton	134	180
Swansea	135	169
Gateshead	136	176
Hull	137	179
Huddersfield	138	148
Newcastle	139	174
Bradford	139	170
London	141	159
Halifax	144	150
Cardiff	146	161
Oldham	148	180
Birkenhead	148	174
West Ham	149	169
Sheffield	150	188
Sunderland	152	175
Manchester	152	191
Portsmouth	152	162
Leicester	153	191
Plymouth	155	170
Birmingham	157	189
Salford	157	205
Leeds	159	180
Nottingham	159	185
Blackburn	159	203
Liverpool	163	191
Norwich	167	182
Burnley	177	211
Preston	189	235
London Districts—		
North	126	
South	137	
West	142	
Central	146	
East	154	
Lambeth	127	

CLASS I.—ZYMOTIC DISEASES.

PRINCIPAL ZYMOTIC DISEASES.

The principal Zymotic diseases are seven in number, viz., smallpox, measles, scarlet fever, diphtheria (including membranous croup), whooping cough, "fevers" (including typhus, typhoid or enteric, and simple or continued), and diarrhœa; and the zymotic death-rate is made up from the total deaths from these diseases. As a test of the sanitary condition of a Community, the zymotic death-rate is of approximate value, and the statistics for the Borough of Lambeth are satisfactory for 1902.

In the Borough of Lambeth during 1902 there were registered 517 deaths from the seven zymotic diseases, and of these 96 were strangers belonging to other districts, and 421 parishioners who died within the Borough. 140 parishioners, however, died without the Borough. Subtracting the strangers and adding on the parishioners who died without the Borough, there is a *corrected* total of 561, giving a zymotic corrected death-rate of 1.8 per 1,000 inhabitants, the corrected rate for London being 2.2, varying in the various Metropolitan Districts, as shown on page 10. The zymotic death-rates (corrected) for the different Registration Sub-Districts of the Borough of Lambeth vary also, as shown in Table D, which in addition gives the death-rates and birth-rates for comparison. Waterloo Road, Lambeth Church, 1st and 2nd, show the highest, and Norwood, Brixton, and Kennington 2nd the lowest, zymotic death-rates respectively. The corrected zymotic death-rate for the Inner Districts is 2.1, and for the Outer, 1.4—a difference explainable, as before, from the crowding and absence of proper means of home isolation and nursing in the former, as compared with the latter Districts. Crowded Districts naturally suffer more in this respect than those more sparsely populated.

Similar conclusions are obtainable by comparing the zymotic death-rates and zymotic incidences for the different new Wards of the Borough, as shewn in Table E, from which it is seen that, of the 9 new Wards into which the Borough is now divided,

Marsh, Bishop's, and Prince's show the highest, and Herne Hill, Norwood, and Tulse Hill the lowest zymotic rates; and Marsh, Bishop's, and Prince's the highest, and Norwood, Tulse Hill, and Stockwell the lowest, zymotic incidences respectively.

During the year 1902, under the Notification Clauses of the Public Health (London) Act, 1891, 2,712 cases* of Infectious Diseases have been reported, and of this number 1,907, *i.e.*, 70.3 per cent. were removed to the Hospitals of the Asylums Board, or to other Hospitals, and 804, *i.e.*, 29.7 per cent., remained under treatment at their own homes. It is still satisfactory to note the large percentage of cases removed to Hospital, showing the growing favour with which the Isolation Hospitals are being looked upon, and pointing to the fact that it is coming to be more and more realised that infectious diseases cannot be properly isolated in the homes of the people. The percentage removed is the largest registered in the annals of the Borough or of the late Vestry. Since the introduction of the Public Health (London) Act, 1891, the percentages of notified infectious cases removed are as follow:—

1891—36.6,	1894—33.9,	1897—49.0,	1900—64.5
1892—33.7,	1895—30.4,	1898—55.9,	1901—66.1
1893—23.0,	1896—43.0,	1899—61.2,	1902—70.3

Examining the removals more in detail (*e.g.*, nature of disease), it is seen that during 1902 in the Borough of Lambeth, the following are the percentages:—

Smallpox	100.0	Typhoid	65.3	
Scarlet Fever	79.4	Puerperal	23.5	
Diphtheria	} 73.4 {	Erysipelas	3.2	
Membranous		} 6.7 {		
Croup				

*1560 cases of Chickenpox were also notified during 1902, but no single case was removed to Hospital. For proper comparison with previous years, these Chickenpox cases have been omitted in dealing with the different Tables throughout the present Report.

It will be noted that *all* the Smallpox patients were removed to Hospital, whilst the large percentages of Scarlet Fever, Typhoid, and Diphtheria patients also removed to Hospital are again cause for congratulation. Yearly more and more Typhoid patients are being removed to Hospital, where treatment is more satisfactory, and where proper precautions can be taken to prevent the spread of the disease—a practical impossibility in the crowded homes of the poor, or even in the homes of the middle-classes. The discharges from the bowels and kidneys are infectious, and many ways suggest themselves by which the germs can be transferred from infected to non-infected persons.

Taking the total number of notified cases of infectious diseases (excluding Chickenpox) during 1902, it will be noticed that the zymotic incidence throughout the Borough of Lambeth is higher than it was during 1901, and this fact is to be explained by the Smallpox outbreak.

Table K gives the averages of notification certificates received in the Borough, and in the old Parish of Lambeth since 1891, and it will be noted that during 1902 (in comparison) the number of notification certificates received in connection with the Borough of Lambeth is a little over the average, as is also the incidence per 1,000 of the population during 1902, taking the average of the decennium 1891-1900 for the old Parish.

The one Cholera case notified was probably Cholera Nostras (English Cholera), or Epidemic Diarrhœa.

There is again a marked decrease in the number of Diphtheria certificates received during 1902, *i.e.*, 35.8 per cent. below the average of the statistics of the Parish of Lambeth for 10 years, and a decrease of 10.2 per cent. from those received in the Borough in 1901. The 459 Diphtheria cases occurred in 420 infected houses, and in only 9.8 per cent. of these were the drains, on testing, found defective.

The Scarlet Fever notifications were one below the average of the Parish of Lambeth statistics for the 10 years 1891-1900. The cases occurred in 1,164 infected houses, and in 11.8 per cent. of these, the drains were, on testing, found defective.

The epidemic or outbreak of Smallpox, which began in London in August, 1901, and extended to Lambeth Borough, accounts for the increase in the number of notifications of Smallpox—328 above the average for 10 years (Parish of Lambeth). Full particulars of the Smallpox cases are to be found on pages 46-78. There were 287 infected houses, and of these 13.2 per cent. showed defective drains, on testing with the chemical test.

The Enteric Fever (or Typhoid) notifications received were 12.3 per cent. above the average for 10 years (Parish of Lambeth), and represent 206 infected houses, of which 15.05 per cent. of the drains were shewn, on testing, to be defective.

No case of plague, or *suspected* plague, has been notified during 1902, within the Borough.

In the case of each of the 2,430 infected houses, an inspection was made, and the drains and the sanitary fittings tested with chemicals, with the following results as tabulated:—

- (a). 292 (*i.e.*, 12.02 per cent.) were found to have defective drains.
- (b). 909 (*i.e.*, 37.4 per cent.) were found to have defective traps, fittings, or appliances.
- (c). 1,229 (*i.e.*, 50.6 per cent.) gave no results with the tests.

It will be noted that only 12.02 per cent. of the total infected houses showed, with the test, defective drains, no results being obtained from the tests in the other cases, and 67.1 per cent defective traps, fittings and appliances.

Drains and sanitary fittings are tested, as a routine, in all infected houses, though it does not follow that, when defects are found, such defects are the causes of the diseases under investigation. They *may* indirectly be so.

The test used is the chemical test (Kingzett's), and when a result is obtained, the drain (tested) is defective but when no result is obtained, it would be unsafe to state that, therefore, the drain (tested) was sound. A negative result proves nothing with the chemical (or smoke) test. The hydraulic (water) and pneumatic

(air) tests are the only reliable tests, but too severe for the routine testing of drains of old buildings. The pneumatic (air) test is comparatively new, and most delicate, but is not much used in London.

Bearing this explanation in mind, the statistics are still useful as showing that year by year the number of defects found decreases. Taking the statistics for the Parish of Lambeth during 10 years (1891-1900), it will be noticed that the percentage of houses showing defective drains has decreased from 22.3 in 1891 to 14.3 in 1900, whilst the percentage of houses showing defective traps, fittings, and appliances has decreased from 41.4 to 30.2 per cent. during the same 10 years. Table L gives full particulars, with the averages for the 10 years worked out, and on comparing these (which relate to the old Parish of Lambeth) with those for 1902 (relating to the new Borough of Lambeth) it will be seen that the latter show a *decrease* of 33.4 per cent. *below* the average in respect of defective drains.

Sub-divided according to the different notifiable diseases, the results show as follow:—

Disease.	No. of Infected Houses.	Numbers shewing Defects as to			Percentage shewing Total Defects.	Percentage giving no Defects.
		Drains.	Traps, Fittings and Appliances.	Total.		
Smallpox	287	38	109	147	51.2	48.8
Cholera	1	...	1	1	100.0	0.0
Diphtheria	420	41	149	190	45.2	54.8
Membranous Croup	15	3	1	4	26.7	73.3
Erysipelas... ..	310	39	119	158	50.9	49.1
Scarlet Fever ...	1164	138	442	580	49.8	50.2
{ Typhus ... ..	...	...	...	...	...	...
{ Typhoid... ..	206	31	76	107	51.9	48.1
{ Continued or Relapsing	10	1	4	5	50.0	50.0
Puerperal	17	1	8	9	52.9	47.1
TOTALS	2430	292	909	1201	49.4	50.6

TABLE K.

Shewing the number of Certificates for the Notifiable Zymotic Diseases received in the Borough of Lambeth during 1902, and in the old Parish of Lambeth since the introduction of the Notification Act, *i.e.*, in ten years, 1891-1900.

Disease.	PARISH OF LAMBETH.										Annual Average of 10 years 1891-1900 (Parish).	Borough of Lambeth, Notifications received during 1902.
	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900		
Small-Pox	3	22	99	26	51	16	2	0	1	—	22.0	350
Cholera	4	26	23	10	16	6	18	7	3	2	11.5	1
Diphtheria	330	504	789	521	614	652	704	813	1080	844	715.1	459
Membranous Croup ..	29	47	49	26	23	27	17	16	22	6	26.2	15
Erysipelas	258	420	587	315	355	352	325	294	330	234	347.0	317
Scarlet Fever	858	1832	2275	1198	1389	1550	1375	1009	1006	821	1331.3	1330
{ Typhus	1	3	3	2	0	1	0	0	1	—	1.1	—
{ Typhoid or Enteric ...	149	117	160	268	201	162	185	163	219	272	189.6	213
{ Continued or Relapsing	33	34	58	48	20	16	11	13	7	17	25.7	10
Puerperal	11	20	27	19	16	19	26	14	24	13	18.9	17
*Plague	—	—	—	—	—	—	—	—	—	—	—	—
Totals	1676	3025	4070	2433	2685	2801	2663	2329	2693	2209	2658.4	2712
Average per 1000 of population	6.1	10.9	14.5	8.6	9.4	9.5	8.9	7.7	8.7	7.1	9.04	8.9

1625 cases of Chicken-Pox were notified during 1902 within the Borough of Lambeth (1560 by Medical Practitioners, and 65 by others), this disease being made compulsorily notifiable on February 7th, 1902, and remaining so up to January 6th, 1903. The Health Department has also heard of, and dealt with, the following non-notifiable infectious diseases:—Measles, 364; Whooping Cough, 110; Consumption, 488; Cancer, 34; Pneumonia, etc., 33.

* Plague was made notifiable on September, 19th, 1900.

TABLE L.

Giving number of infected houses, with percentages of (1) General Defects, and (2) Defective Drains, throughout the Borough during 1902, and throughout the old Parish during ten years (1891-1900).

	1891	1892	1893	1894	1895	1896
Number of Infected Houses	1417	2430	3179	2012	2111	2417
Number of Houses with defects found	903 =63·7%	1474 =60·7%	1641 =51·6%	1089 =54·1%	993 =47·04%	1177 =48·7%
Number of Houses with defective drains found	316 =22·3%	720 =24·7%	658 =20·6%	464 =23·06%	392 =18·6%	423 =17·5%
Number of Houses with no defects found ...	514 =36·3%	956 =39·3%	1538 =48·4%	923 =45·9%	1118 =52·96%	1240 51·3%

N.B.—Only 12·02 per cent. of the houses in 1902 showed, with the test, defective drains, no results being obtained in the other cases.

TABLE L—*continued.*

Giving number of infected houses, with percentages of (1) General Defects, and (2) Defective Drains, throughout the Borough since 1902, and throughout the old Parish during ten years (1891-1900).

	1897	1898	1899	1900	Average for ten years 1891-1900.	1902
Number of Infected Houses	2374	2094	2435	1992	2246.1	2430
Number of Houses with defects found ...	1210 = 50.9%	1044 = 49.9%	1163 = 47.5%	886 = 44.5%	1158.0 = 51.6	1201 = 49.6%
Number of Houses with defective drains found	390 = 16.4%	351 = 16.9%	384 = 15.8%	285 = 14.3%	438.3 = 19.5	292 = 12.02%
Number of Houses with no defects found ...	1164 = 49.1%	1050 = 50.1%	1272 = 52.5%	1106 = 55.5%	1088.1 = 48.4	1229 = 50.6%

N.B.—Only 12.02 per cent. of the houses in 1902 showed, with the test, defective drains, no results being obtained in the other cases.

TABLE M.

Shewing zymotic seasonal variations (deaths) in the borough of Lambeth in the different Registration Sub-Districts during 1902.

Registration Sub-Districts.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year 1902	Zymotic Death-rate per 1000 inhabitants.
Waterloo Road 1st	6	4	22	10	42	3·03
" " 2nd	11	9	13	7	40	
Lambeth Church 1st	9	4	28	12	53	2·9
" " 2nd	14	27	43	28	112	2·6
Kennington 1st	28	20	28	17	93	1·7
" 2nd... ..	7	20	21	21	69	1·6
Brixton	29	23	35	28	115	1·3
Norwood	11	7	11	6	35	0·9
District not stated	—	—	—	2	2	—
Borough of Lambeth	115	114	201	131	561	1·8

N.B.—In the case of the two zymotic deaths occurring in Districts which are not stated, they have been distributed equally amongst the eight sub-districts before working out percentages.

The seasonal mortality from the different zymotic diseases is well shown by arranging the deaths quarterly, thus :—

1902.	Smallpox.	Measles.	Whooping Cough.	Scarlet Fever.	Diphtheria.	Membranous Croup.	FEVER.			Diarrhœa.	Erysipelas.	Puerperal Fever.	Cholera.	Influenza.	TOTAL.
							Typhus	Typhoid.	Continued.						
1st Qr.	35	25	28	7	11	...	...	4	...	5	3	3	...	61	182
2nd Qr.	23	17	26	16	10	3	...	7	...	12	...	1	...	3	118
3rd Qr.	2	8	33	11	12	...	...	15	1	119	2	2	...	1	206
4th Qr.	...	34	31	14	16	1	...	12	...	23	5	...	...	13	149
TOTALS	60	84	118	49	49	4	...	38	1	159	10	6	...	78	655

Taking the zymotic diseases collectively, it is noticed that the 3rd quarter shewed the highest mortality and the 2nd quarter the lowest. Influenza and Smallpox reached their maxima in the 1st quarter. Scarlet Fever and Membranous Croup in the 2nd; Diarrhœa, Typhoid, and Whooping Cough in the 3rd; and Diphtheria and Measles in the 4th.

Table M shews the zymotic seasonal variations in the different Registration Sub-districts, while Table O gives the monthly mortalities from the zymotic diseases.

Table Q gives the deaths registered in the Borough of Lambeth from the seven principal zymotic diseases during 1902, and for ten years (1891-1900) in the old Lambeth Parish. For comparison, the deaths registered in London or the same period are also given.

TABLE N.

Shewing the total cases notified under the Compulsory Notification Clauses of the Public Health (London) Act in the Borough of Lambeth during 1902 (arranged Quarterly)

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total for 1902
Small Pox	177	157	16	—	350
Scarlet Fever	245	289	353	443	1330
Diphtheria	101	119	114	125	459
Membranous Croup	1	4	2	8	15
{ Typhus	—	—	—	—	—
{ Typhoid	34	43	70	66	213
{ Continued Fever	2	6	2	—	10
Erysipelas	55	82	97	84	317
Puerperal	8	2	2	5	17
Cholera	—	—	1	—	1
Plague	—	—	—	—	—
	622	703	657	731	2713
Chickenpox	246	496	286	532	1560

N.B.—Chickenpox was made, by special order of the London County Council, a compulsorily notifiable disease on February 7th, 1902, and remained so until January 6th, 1903. During 1902, 1625 cases were notified (1560 by medical men, and 65 by others).

TABLE O.
Deaths from zymotic diseases (Strangers deducted).

For the 4 weeks ending,	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	TOTAL.
Smallpox	—	—	—	—	—	—	—	1	—	—	2	1	60
Measles	4	4	12	7	10	14	9	8	3	5	28	15	84
Scarlet Fever	4	1	3	1	4	3	5	2	4	3	8	1	48
Diphtheria	4	2	5	2	2	3	5	5	4	3	4	8	49
Membranous Croup ...	1	—	1	—	—	—	—	—	—	—	—	1	4
Whooping Cough	6	13	16	18	17	11	7	5	4	4	6	8	118
{ Typhus	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Enteric	3	4	1	—	—	2	1	—	3	3	4	2	38
{ Continued Fever ...	—	—	1	—	—	—	2	—	—	—	—	—	1
Diarrhœa	—	2	4	—	4	6	56	131	50	16	5	—	159
Total of Seven Chief Zymotic Diseases }	22	26	43	28	37	39	85	152	68	34	57	36	561
Erysipelas	—	2	—	—	—	2	—	2	2	—	3	2	10
Puerperal Fever	1	—	—	—	2	2	—	1	1	1	2	—	6
Cholera Nostras	—	...	1	—	—	—	1	—	—	—	—	—	—

TABLE P.

Shewing the number of Deaths from the 7 principal zymotic ten years 1891—1900, and in the new Borough

Disease.	1891	1892	1893	1894	1895	
Smallpox	0	1	5	1	2	
Diphtheria (and Membranous Croup)	78	127	172	138	103	
Scarlet Fever	46	76	69	64	53	
Fever {	Typhus	1	0	1	0	0
	Typhoid or Enteric ...	28	22	36	46	26
	Simple Continued ...	7	2	4	0	2
Measles	128	187	113	182	151	
Whooping Cough ..	239	135	151	110	132	
Diarrhoea	165	155	197	139	263	
Borough of Lambeth	692	705	748	680	732	
County of London...	9675	11983	13223	11544	11467	

TABLE P.

diseases in the old Parish of Lambeth and in London, in the of Lambeth and in London during 1902.

1896	1897	1898	1899	1900	Annual Average of ten years 1891—1900.	Proportion of Deaths to 1000 total Deaths in 10 years.	Total Deaths in 1902.	Proportion of Deaths to 1,000 total Deaths 1902.
2	—	—	—	—	1.1	0.2	60	11.1
140	145	115	159	103	127.6	23.6	53	9.8
63	42	30	25	20	53.6	9.9	48	8.9
1	—	—	—	—	0.4	0.07	—	—
24	26	35	50	54	32.8	6.1	35	7.1
1	—	—	—	1	2.2	0.4	1	0.2
185	139	133	169	69	144.4	26.7	84	15.6
140	144	159	130	97	144.4	26.7	118	21.9
152	238	254	249	153	188.4	34.8	159	29.5
708	734	726	782	497	694.9	128.6	561	104.1
14009	11525	12482	11147	10136	11575.3	130.8	10393	129.7

SMALLPOX.

The outbreak of Smallpox, which began during the third quarter of 1901, continued until the third quarter of 1902. During 1902, 375 patients were notified, but of these 25 were found, on examination, not to be suffering from Smallpox, leaving a total of 350 genuine cases; and of these 60 died, 36 amongst the vaccinated (males 21, females 15), and 24 amongst the unvaccinated (males 10, females 14).

A special Report dealing with the Smallpox outbreak in Lambeth Borough 1901-2 is given in the Appendix, whilst in the Annual Report, 1901, will be found details of the 54 cases which occurred during 1901. Full details of the 350 cases in Lambeth Borough during 1902 are as follows:—

(1) Alice E. J. R., aged 16 years, of 28, Kennington Park Road, sickened on December 21st, 1901, the rash appearing two days afterwards; but the true nature of the disease was not recognised until January 2nd, 1902, when the patient was removed to Hospital. Alice E. J. R. had been vaccinated. There were 8 others in the family, 4 adults (3 vaccinated and 1 unvaccinated), and 4 children, 12 years of age and under (2 vaccinated and 2 unvaccinated). All were vaccinated, or re-vaccinated, at once, and two afterwards sickened, viz., Henry T. R. (the father), vaccinated in infancy, and Frank R. (the brother) unvaccinated (see cases 24 and 25). The source of the contagium was a tobacco factory in Westminster, in connection with which several Lambeth cases occurred, and many elsewhere (see case 6).

(2) Henry J. B., aged 28 years, of 11, Francis Street, sickened December 29th, 1901, and was removed to Hospital on January 1st, 1902. Henry J. B. had been vaccinated. This was a "contact" case connected with Charles H. B. (brother), who was removed to Hospital on December 22nd, 1901, having sickened December 17th, 1901.

(3) James T., aged 35 years, vaccinated, was removed from 25, Vassall Road, on January 4th, 1902, having sickened December 29th, 1901. There were, in the same house and on the same floor, at the time, 4 other persons (1 adult and 3 under 12 years of age)—all vaccinated except Ida T. (aged 8 years), who sickened thirteen days after her father. (see case 29). The source of James T.'s disease could not be satisfactorily traced.

(4) Mary W., aged 23 years, of 140, Warham Street, sickened December 31st, 1901, and was removed to Hospital on January 4th, 1902. She had been vaccinated, and contracted her disease at work in Southwark Borough. There were 7 other members of the same family inmates in the house at the time (5 adults and 2 under 12 years of age), and all were, at once, re-vaccinated. No other case occurred.

(5) Louisa F., aged 23 years, unvaccinated, was removed to Hospital from 10, Johanna Street, on January 7th, 1902, having sickened on

January 2nd, 1902. She contracted the disease from a friend (Ellen F.), who came from Erith, and called in at 10, Johanna Street, on December 20th, staying there several hours. 13 days afterwards Louisa F. sickened, as did also another inmate of the same house, Alice S. (see case 7). Louisa F. (unvaccinated) died on January 15th, 1902.

(6) Annie C., of 2, Waxwell Terrace, aged 14 years, vaccinated, sickened January 4th, 1902, and was removed to Hospital on January 6th, 1902. The source of contagium was the tobacco factory in Westminster, already mentioned (see Case 1, and Annual Report, 1901, Cases 49 and 53). Of 5 other inmates (3 vaccinated, 2 re-vaccinated, and 2 unvaccinated), not one sickened.

(7) Alice S., aged 20 years, vaccinated, sickened January 3rd, 1902, at 10, Johanna Street, and was removed to Hospital on January 7th, 1902. She contracted the disease from Ellen F., of Erith (see No. 5).

(8 and 9) Mary J. T., of 8, Lanfranc Street, aged 19 years, unvaccinated, sickened January 3rd, 1902, was removed to Hospital on January 7th, 1902, and died there on January 12th, 1902. This was a "contact" from her sister (Lucy M. T.), who sickened at 33, Grindal Street, on December 19th, 1901, and was removed to Hospital on December 23rd, 1901. Lucy M. T. also infected her father (Alfred T.), aged 44 years and vaccinated, who sickened January 4th, 1902, and was removed on January 7th, 1902, to Hospital (where he died on January 10th, 1902) from 33, Grindal Street. Of the 6 inmates (all adults and vaccinated) in the house (8, Lanfranc Street) at the time that Mary J. T. was removed, none sickened—4 being re-vaccinated at once.

(10) Isabella H., of 7, St. Andrew's Place, Windmill Street, New Cut, aged 23 years and vaccinated, sickened January 2nd, 1902, and was removed to Hospital on January 7th, 1902. The source of contagium was traced to infected clothes, purchased and handled 9 days previous to Isabella H. sickening. The child (17 months old) of Isabella H. was in close contact with Smallpox for 5 days, and did not contract the disease. This child had been well vaccinated (4 marks). The husband (Henry W. H.), vaccinated, also escaped.

(11) Henry G., of 9a, Belvedere Crescent, aged 25 years, and unvaccinated, sickened January 5th, 1902, was removed to Hospital on January 8th, 1902, and died there on January 14th, 1902. The disease was contracted outside Lambeth Borough in the course of work (carman). There were at the time 9 inmates (5 adults and 4 children under 12 years of age), all vaccinated, and 4 re-vaccinated at once, and not one caught the disease.

(12-16) Five cases occurred at 32d, The Grove, Vauxhall, and were directly traced to an unrecognised Smallpox case (James B. C.), who died December 31st, 1901 (sickening December 23rd), having been treated by the medical men in attendance for blood-poisoning—the death certificate certifying "urticaria and septicæmia" as the causes of death (?malignant Smallpox). A special Report dealing with this local outbreak is printed in the Appendix.

The 5 cases were as follow:—

- (a) Cecilia A. C., aged 16 years, vaccinated, sickened January 8th, 1902, removed January 10th, 1902.

- (b) William G. H. C., aged 13 years, vaccinated, sickened January 7th, 1902, removed January 10th, 1902.
- ?(c) Ann B. C., aged 54 years, vaccinated and re-vaccinated (25 years ago), sickened January 9th, 1902, removed January 11th 1902.
- (d) William J. B., aged 3 years, unvaccinated, sickened January 9th, 1902, removed January 11th, 1902.
- ?(e) Walter C. B., aged 37 years, vaccinated and re-vaccinated (13 years ago), sickened January 9th, 1902, removed January 11th, 1902.

(17-23) Seven other cases, traced also definitely to the unrecognised case at 32d, The Grove (*vide* cases 12-16, 81-83, and the Special Report in the Appendix) also occurred. Details are as follow:—

- (a and b) Alfred W. and Alice W., of 1, Wilcox Road, Wandsworth Road, aged 25 and 23 years respectively, both vaccinated, sickened January 8th and 12th, 1902, and were removed January 11th and 16th, 1902.

Alfred W. was the undertaker, who buried James B. C., of 32d, The Grove, Vauxhall, lifting the corpse into the coffin on December 31st, 1901, and sickening 8 days afterwards (?inoculation); and Alice W. is his wife (?inoculated from gloves used by husband at his work).

- (c) Eliza P., of 22, Bradley Street, near to 1, Wilcox Road, where she was accustomed to run in and out, aged 11 years, unvaccinated, sickened January 14th, 1902, and was removed January 17th, 1902. Eliza P. probably caught the disease from the infected gloves (or clothes) belonging to Alfred W.
- (d) Arthur S., of 13, Heyford Avenue, South Lambeth Road, aged 27 years, vaccinated, sickened January 9th, 1902, and was removed January 11th, 1902. Arthur S. visited James B. C., at 32d, The Grove, on December 29th, 1901.
- (e) Kate B., of 8, Wandsworth Road, aged 40 years, vaccinated and (?revaccinated in 1872, sickened Jan., 14th, 1902, and was, on January 17th, 1902, removed to Hospital, where she died on January 19th, 1902. Kate B. in all probability contracted her disease from the dead body of James B. C., at Tooting Cemetery on January 6th, 1902.
- (f) Nellie B., of 8 Wandsworth Road, aged 3 years, unvaccinated, sickened the same day as her mother (Kate B.), viz., January 14th, 1902, having caught the disease probably from the same source, and was removed on January 17th, 1902, to Hospital, where she died on January 22nd, 1902.
- (g) Fanny A., of 41, The Grove, Vauxhall, aged 32 years, vaccinated, sickened January 14th, 1902, and was removed to Hospital on January 18th, 1902. Fanny A. contracted her disease from passing 32d, The Grove, the infected house where several case of Smallpox occurred (see cases 12-16).

(24 and 25) Frank P. R., aged 9 years, unvaccinated, sickened January 8th, 1902, and was removed to Hospital on January 10th, 1902, from 28, Kennington Park Road, whence his sister, Alice E. J.

R., had been removed on January 2nd, 1902, having sickened December 21st, 1901 (see Case 1). Henry T. R. (the father), aged 40 years, vaccinated, was also removed from the same address on January 12th, 1902, having sickened January 9th, 1902.

(26) James P., aged 44 years, vaccinated, sickened January 6th, 1902, at Rowton House, Bond Street, Vauxhall, whence he was removed to Hospital on January 11th, 1902. James P. was a tramp. All the 32 officers (indoor and outdoor) connected with this Rowton House, were re-vaccinated at once, and no case arose amongst them.

(27) George H. Mc., of 123, Stamford Street, aged 23 years, vaccinated, sickened January 9th, 1902, and was removed January 13th, 1902. He contracted his disease from his wife (Rosina Mc.), who sickened December 21st, 1901, with what was considered, by the medical attendant, to be an attack of Influenza, but what was, in reality, a mild attack of modified Smallpox.

(28) Joseph D., of 95, Cottage Grove, Bedford Road, aged 38 years, vaccinated, sickened January 9th, 1902, and was removed to Hospital on January 13th, 1902. Joseph D. contracted the disease at Hendon, where he visited on December 26th, 1901. At the time of the outbreak there were 7 inmates in the house (5 adults and 2 children 12 years of age), all vaccinated, 2 re-vaccinated, and 4 re-vaccinated at once. No case occurred amongst them.

(29) Ida T., aged 8 years, unvaccinated, sickened January 11th, 1902, and was removed to Hospital on January 15th, 1902, from 25, Vassall Road. Ida T. was a "contact" of her father (James T.), who was removed January 4th, 1902 (see Case 3).

(30) Kate W., of 28, Carroun Road, aged 29 years, vaccinated, sickened January 8th, 1902, and was removed on January 15th, 1902. At the time of the outbreak there were 10 other inmates (7 adults and 3 children under 12 years of age), 9 vaccinated and 1 (a boy) unvaccinated. This unvaccinated boy was vaccinated at once, and 8 of the vaccinated persons re-vaccinated at once (it being thought unnecessary to re-vaccinate the vaccinated child of 20 months of age). No other case arose from this centre. The source of the contagium could not be traced.

(31) Henry F., of 10, Johanna Street, aged 22 years, vaccinated, sickened January 14th, 1902, and was removed to Hospital January 16th, 1902. Henry F. contracted his disease from his wife (Louisa F.), or from Alice S., who were removed January 7th, 1902 (see Cases 5 and 7).

(32) James T., aged 23 years, vaccinated, sickened January 11th, 1902, and was removed to Hospital on January 17th, 1902, from 10, Glynn Street, Vauxhall. James T. was a polisher working for a Lambeth firm, and contracted his disease from an infected house in North-West London, where he was engaged at work from December 24th to December 29th, 1901. At the time of the outbreak there were 11 other inmates (8 adults and 3 children under 12 years of age), all vaccinated, one re-vaccinated, and 2 who had had previous attacks of Smallpox. 7 of the vaccinated inmates were re-vaccinated at once. No case arose from this infected centre.

(33-38) Alfred G. S., aged 23 years, unvaccinated, sickened on January 14th, 1902, at 13, Priory Road, Wandsworth Road, and was re-

moved January 27th, 1902. The source of infection was an unrecognised case of modified Smallpox, treated as Influenza—Arthur W., who sickened on December 31st, 1901, at 82, Meadow Road, the spots appearing on January 2nd, 1902. From this same source the following 5 other cases also arose:—

- (a) Henry P., aged 45 years, vaccinated, sickened January 16th, 1902, removed January 20th, 1902, from 82, Meadow Road, South Lambeth Road. [Friend of Arthur W.]
 - (b) George L., aged 22 years, vaccinated, sickened January 12th, 1902, removed January 20th from 28, Dorset Road. [Friend of Arthur W.]
 - (c) George P., aged 25 years, vaccinated, sickened January 15th, 1902, removed January 18th, 1902, from 82, Meadow Road, South Lambeth Road. [Friend of Arthur W.]
 - (d) Lillie W., aged 17 years, vaccinated, sickened January 19th, 1902, removed January 23rd, 1902, from 138 Wandsworth Road. [Engaged to be married to Arthur W.]
 - (e) George W., aged 24 years, vaccinated, sickened January 17th, 1902, removed January 22nd, 1902, from 9, Trigon Grove. [Friend of Arthur W.]
- (39) Alice B., aged 21 years, vaccinated, sickened January 16th, 1902, and was removed to Hospital on January 18th, 1902, from 59, Spenser Road, Herne Hill. The source of the contagium was not definitely traced, though, in all probability, it was at her work in Wandsworth Borough (Clapham Common). There were 8 inmates at the time (all adults and all vaccinated), and they were all re-vaccinated at once with the exception of one (Richard B.), who had had Smallpox in 1884. No further case arose from this centre.
- (40) Helenor W., aged 31 years, vaccinated, sickened January 18th, 1902, and was removed to Hospital on January 23rd, 1902, from 91, Dorset Road (a corn-chandler's shop, where Helenor W. assisted, and where, it is supposed, she contracted the disease). The only other inmate was her husband (James W.), vaccinated, and he did not catch the disease.
- (41) Henry P., of 13, Dunmore Place, Newburn Street, aged 38 years, vaccinated, sickened January 21st, 1902, and was removed to Hospital on January 24th, 1902. Henry P. was working at drains outside (near) the Smallpox Hospital at Long Reach, without being previously re-vaccinated, and, consequently, like many others, contracted the disease. Of the 4 inmates (all adults and vaccinated), 2 were re-vaccinated at once. No further case arose from this centre.
- (42) Frederick C., of 96, Milkwood Road, aged 22 years, vaccinated, sickened January 21st, 1902, and was removed to Hospital on January 24th, 1902. The source of the disease was Southwark Borough, where he stayed on the night of January 9th, sickening 12 days afterwards. Of the seven inmates at the time (5 adults, and 2 children under 12 years), all had been vaccinated, 5 re-vaccinated, and 2 were re-vaccinated at once. No case arose from this centre.
- (43) Walter P., of 134, Lollard Street, aged 29 years, unvaccinated, sickened January 21st, 1902, and was removed on January 25th, 1902, to Hospital, where he died on February 8th, 1902. The source of the

contagium was traced to Bermondsey Borough, where he had been visiting. Sharing the one infected room with Walter P. for 4 days were his wife (Mrs. P.), re-vaccinated, and his 2 children, aged 4 and 1 years respectively (both vaccinated); and not one of these three sickened. A child (aged 3 years and vaccinated), living in the same house, but on another floor, caught the disease from this source (see case 86).

(44, 45 and 46) Florrie C., aged 17 years, vaccinated, of 52, Claylands Road, Clapham Road, sickened on January 24th, 1902, and was removed to Hospital on January 27th, 1902. The source of infection was an unrecognised case of modified Smallpox in her sister (May), engaged at the Kennington Theatre Pantomime, who sickened January 12th, 1902, and probably infected also—

- (a) Florence A., aged 36 years, vaccinated, sickening January 23rd, 1902, and being removed to Hospital on January 27th, 1902, from 48, Hemberton Road, Stockwell; and
- (b) Sarah B. D., aged 20 years, vaccinated, sickening February 1st, 1902, and being removed to Hospital on February 6th, 1902, from 6, Homer House, Ardville Road, Brixton.

Two other inmates at 52, Claylands Road (both adults and both vaccinated) were re-vaccinated at once, and neither caught the disease.

(47) James A. T., aged 52 years, vaccinated, sickened at 92, Westminster Bridge Road (a common lodging-house) on January 26th, 1902, and was removed to Hospital on January 29th, 1902. James A. T. was a tramp, and contracted his disease as such, in all probability. The 6 officers of the lodging-house had been vaccinated, 3 re-vaccinated and one had had an attack of Smallpox. No case occurred amongst them.

(48) James C., aged 30 years, vaccinated, of 2, Ann Street, Waterloo Road, sickened January 27th, 1902, and was removed to Hospital on January 30th, 1902. James C. was a barman engaged at the York Hotel, and probably caught his disease whilst at work. The 2 inmates of 2, Ann Street (both adults and vaccinated), were re-vaccinated at once, as also 8 of the 12 adult persons engaged in the York Hotel (all vaccinated). No case occurred from this centre.

(49) Mary Ann S., of 55, Commercial Road, aged 20 years, vaccinated, sickened January 27th, 1902, and was removed to Hospital on January 30th, 1902. The disease was probably contracted in the course of work (dust sifting in the City). The husband (re-vaccinated) and the child (unvaccinated but vaccinated at once) escaped.

(50) Louisa P., of 11, Waxwell Terrace, aged 27 years, vaccinated, sickened January 27th, 1902, and was removed to Hospital on January 30th, 1902. The source of infection was probably an unrecognised modified case of Smallpox (treated as Chickenpox) at Hertford. Of the 4 inmates (1 adult and 3 children under 12 years of age), all vaccinated, 3 were re-vaccinated at once (it not being considered necessary to re-vaccinate the infant of 10 months of age). No case arose from this centre.

(51 and 52) Mary M., of 23, Fitzalan Street, aged 27 years, vaccinated, sickened January 26th, 1902, and was removed to Hospital on January 30th, 1902. The source of the disease was Southwark Borough, where Mary M. had visited a Smallpox patient. From the

same source Henry A. aged 5 years, unvaccinated, contracted the disease, sickening January 26th, 1902, and being removed to Hospital on January 30th, 1902. Of the 7 other inmates (all adults and vaccinated), one had been re-vaccinated, and one was at once re-vaccinated. No secondary case occurred.

(53 and 54) Sarah N., of 30, Tower Street, Westminster Bridge Road, aged 24 years, vaccinated, sickened January 27th, 1902, and was removed to Hospital on January 30th, 1902. The source of contagium was an unrecognised case (Margaret L., aged 14 months, sickened December 27th, 1901) treated as Chickenpox, and from this source also arose the case of James N., aged 25 years, vaccinated, sickened February 1st, 1902, removed Feb. 4th, 1902. When Margaret L. was in an infectious state, December 27th, 1901, to January 30th, 1902, there were 3 other inmates sharing the same room (2 adults and one child aged 5 years), and of these three inmates one was re-vaccinated, one had had Smallpox, and the other (the child) had been vaccinated, and not one sickened; whereas, in a room above, there was a family of 3 (2 adults, vaccinated in infancy, and one vaccinated child of 4 years), and of these both adults caught the disease.

(55) Sarah M., aged 10 years, vaccinated, sickened January 29th, 1902, and was removed to Hospital on January 31st, 1902, from 9, Newnham Terrace, Westminster Bridge Road. The source could not be traced. Of the 5 other inmates (4 adults, 3 vaccinated and 1 unvaccinated, and 1 child of 5 years, unvaccinated) not one sickened.

(56) Herbert T., of 5k, Peabody Buildings, Duke Street, aged 26 years, vaccinated, sickened January 28th, 1902, and was removed to Hospital February 1st, 1902. The disease was caught in the course of his work (window cleaning in the City). The 2 other inmates of the tenement at the time of the outbreak were 1 adult, vaccinated (re-vaccinated at once), and infant, unvaccinated (vaccinated at once), and neither sickened.

(57) Rhoda S., aged 14 years, vaccinated, sickened on January 27th, 1902, and was removed to Hospital on February 1st, 1902, from 18, Burdett Buildings, Burdett Street, Westminster Bridge Road. Rhoda S. caught her disease from her brother (William), who had an unrecognised attack of modified Smallpox three weeks previously. Of the 5 inmates (3 adults and 2 children under 12 years) at the time of William S.'s illness, all had been vaccinated, and one sickened. The source of William S.'s attack could not be traced.

(58) Herbert H., aged 36 years, vaccinated, sickened on January 28th, 1902, and was removed to Hospital on February 1st, from 23, Monckton Street. He contracted his disease whilst at work as a printer in the City (Messrs. Reuter, Old Jewry, E.C.). The 2 inmates shared the same room (a brother and sister), both vaccinated, escaped.

(59) Thomas G. H., aged 28 years, vaccinated, of 33 Walnut Tree Walk, sickened January 28th, 1902, and was removed to Hospital on February 1st, 1902. During these four days, his wife (vaccinated) and 2 children, aged 4 and 2 years respectively (both vaccinated) shared the same room with him, whilst in an infectious state, and not one of them caught the disease. The source of infection was probably Petticoat Lane (City).

(60) Agnes B., aged 19 years, unvaccinated, of 82, Westminster Bridge Road, was removed to Hospital on February 1st, 1902, having

sickened January 28th, 1902, *i.e.*, 12 days after attending a public dance at the Holborn Town Hall, where the disease was probably contracted. At the time of the outbreak the inmates consisted of 30 employees (all vaccinated) engaged in the work of the shop (26 being at once re-vaccinated), and 5 others (adults), all vaccinated, and three of whom were at once re-vaccinated. No secondary case arose from this centre.

(61-65) Emily A., aged 5 years, unvaccinated, sickened January 28th, 1902, and was removed to Hospital on February 2nd, 1902, from 7 Upper Marsh (second floor). The source of contagium was the Empire Theatre, and at the time of the outbreak there were living in the house 15 other inmates, *viz.* :—

- (a) Second Floor: 2 adults (vaccinated, and re-vaccinated at once) and 3 children under 12 years (2 vaccinated, and re-vaccinated at once, and one unvaccinated, and vaccinated at once).
- (b) Top Floor: 2 adults (vaccinated), and 4 children under 12 years of age (all vaccinated).
- (c) First Floor: 3 adults (all vaccinated and 2 re-vaccinated at once), and 1 child of 6 years of age (unvaccinated, but vaccinated at once).

Of these 15 inmates, the following 3 contracted the disease :—

- (a) Alexander R. (top floor), aged 38 years, vaccinated, sickened February 13th, 1902, removed February 18th, 1902.
- (b) Martha R. (top floor), aged 9 years, vaccinated, sickened February 27th, 1902, removed March 3rd, 1902.
- (c) Ada R. (top floor), aged 28 years, vaccinated, sickened March 1st, 1902, removed March 5th, 1902.

It is noteworthy that the persons on the top floor were opposed to vaccination, and refused re-vaccination; whereas those on the first and second floors were vaccinated, or re-vaccinated at once, as required.

Joshua L., aged 31 years, un-vaccinated, of 2, Paris Street, visited the second floor whilst Emily A. was lying ill from January 28th to February 2nd, 1902, and sickened February 12th, 1902, being removed to Hospital on February 16th, 1902. His wife (Rose), who was re-vaccinated recently, escaped the disease.

(66) Thomas P., of 27, Pearman Street, vaccinated, aged 32 years, was removed to Hospital on February 1st, 1902, having sickened January 30th, 1902. Thomas P. was Secretary to the Stonemasons' Society, and probably caught the disease in the course of his duty, mixing with men from all parts of London. At the time of the outbreak the 3 other inmates (all adults and vaccinated) were re-vaccinated at once. No secondary case arose.

(67-71) Mary A. B., of 34, Doon Street, Cornwall Road, aged 25 years (vaccinated), sickened January 30th, 1902, and was removed to Hospital on February 2nd, 1902. Mary A. B. probably contracted her disease from her husband (an unrecognised case of modified Smallpox). There were, at the time of the outbreak, 8 inmates (6 adults and 2 children under 12 years of age), and of these 3 eventually caught the disease, as follows :—

- (a) Lilian W., aged 21 years, unvaccinated, sickened February 12th, 1902, removed February 17th, 1902.
- (b) Marie W., aged 29 years, vaccinated, sickened February 24th, 1902, removed February 27th, 1902.
- (c) George W., aged 17 years, unvaccinated, sickened February 27th, 1902, removed March 2nd, 1902.

George W. W., of 2, Stephen's Place, Tanswell Street, aged 19 years, vaccinated, also contracted the disease from visiting his fiancée, Lilian W., at 34, Doon Street. It will be noted that, of the original 8 inmates at the time the first case (William B.) occurred, 4 were unvaccinated, and of these, 2 were vaccinated at once, and escaped; 2 refused vaccination, and sickened. Of the 4 vaccinated persons (all over 20 years of age) 1 was re-vaccinated at once, and escaped; 3 refused re-vaccination, and 2 of these sickened. A vaccinated child of 2 years of age was on and off exposed to infection for a period of 6 weeks, and escaped.

(72) Emily A., aged 21 years, vaccinated, sickened on January 29th, 1902, at the "Rose and Crown," Commercial Road, and was removed to Hospital on February 2nd, 1902. Emily A. was a barmaid, and probably contracted the disease in the course of her work. Of the 6 inmates at the time of the outbreak (3 adults and 3 children under 12 years of age), all vaccinated, 5 were re-vaccinated at once (it not being considered necessary to re-vaccinate a vaccinated child of 4 years of age). No case arose from this centre.

(73) Bessie M., waitress, aged 34 years, vaccinated, living at 82, New Cut (dining-rooms), sickened January 28th, 1902, and was removed to Hospital on February 2nd, 1902, having contracted her disease, in all probability, at Brighton, where she visited on January 15th (13 days before sickening). Of the 6 inmates (5 adults and 1 infant of 6 months), 3 had been vaccinated, 2 (vaccinated) were re-vaccinated at once, and the infant (unvaccinated) was vaccinated at once. No secondary case occurred from this centre.

(74) William M. P., aged 28 years, vaccinated, contracted Smallpox whilst working as a carpenter at the temporary (Smallpox) Hospital at Dartford, without being previously re-vaccinated. He sickened on January 28th, 1902, at 59, Thurlow Hill, and was removed to Hospital on February 2nd, 1902. Of the 6 inmates (4 adults and 2 children under 12 years) of 59, Thurlow Hill, all were re-vaccinated at once, with the exception of the vaccinated infant of 9 months, and all escaped.

(75 and 76) Two cases occurred at 112, Lower Marsh, but the source of the infection was not successfully traced, viz., Ada P. (vaccinated), aged 23 years, and Bertie W. D. (unvaccinated), aged 10 years. At the time of the outbreak there were 7 inmates (4 adults and 3 children under 12 years of age), and of these 4 were unvaccinated (1 adult and 3 children). Two unvaccinated children were vaccinated at once. No secondary case occurred.

(77) Mary S., of 23, Burnley Road, Brixton, aged 16 years, vaccinated, sickened January 28th, 1902, and was removed to Hospital February 1st, 1902, having brought the disease from Hoxton (Stepney Borough). No other case occurred amongst the 5 inmates of the house (4 adults and 1 infant of 4 months), all vaccinated, and one (adult) re-vaccinated.

(78) Jane C., aged 7 years, unvaccinated, contracted Smallpox in Southwark Borough (Surrey Row), sickening at 3, St. Andrew's Place, Windmill Street, New Cut, on January 30th, 1902, and being removed to Hospital on February 3rd, 1902. Of the 5 inmates (3 adults and 2 children aged respectively 5 years and 4 months), all vaccinated, none caught the disease.

(79) Ernest G., lodging at 22, Walcot Square, aged 32 years, vaccinated, sickened January 30th, 1902, and was removed on February 3rd, 1902, to Hospital, where he died on February 6th, 1902. The source of infection was doubtful (?work at Cannon Row).

(80) Arthur G., aged 13 years, vaccinated, contracted Smallpox whilst selling sweets in the Lower Marsh on January 18th, 1902. He sickened 12 days afterwards at 15, Sapphire Place, York Street, viz., on January 30th, 1902, and was removed to Hospital February 3rd, 1902. Of the 9 inmates (5 adults and 4 children under 12 years of age), all vaccinated, 7 were re-vaccinated at once (it not being necessary to re-vaccinate the 2 children aged 7 and 2 years), and no secondary case occurred.

(81-83) Two cases of Smallpox (Jane C., aged 40 years, and Alfred C., aged 10 years) were discovered at 3, Grove Cottages, The Grove, Vauxhall, and removed to Hospital on February 3rd, 1902. Alfred C. (unvaccinated) sickened with Smallpox on January 16th, 1902, and was for 18 days treated as an out-patient at the Belgrave Hospital for Children, 79 Gloucester Street, S.W., as suffering from Chickenpox. In this way he infected his mother, Jane C. (vaccinated), who sickened January 30th, 1902, and also Henry M., aged 43 years, vaccinated, living at 78 Portland Place North, but working as a stonemason in a yard adjacent to 3, Grove Cottages. Henry M. sickened February 7th, 1902, and was removed to Hospital on February 11th, 1902. The source of Alfred C.'s infection was probably 32d, The Grove (*vide* cases 12-23 and the Special Report in the Appendix).

(84) William F. S., aged 29 years, vaccinated, contracted Smallpox from working as a decorator in infected houses in Westminster, and sickened on February 1st, 1902, at 41, Johanna Street, and was removed to Hospital on February 4th, 1902. All the 4 other inmates (1 adult and 3 children under 12 years of age) had been vaccinated, and escaped.

(85) James O'L., aged 15 years, vaccinated, sickened on February 1st, at 3, Ethelred Street, and was removed to Hospital on February 4th, 1902. He contracted his disease in the course of his work (van-boy G.N.R., Farringdon Street Depot).

(86) Charles A. D., aged 3 years, vaccinated, of 134, Lollard Street, sickened February 3rd, 1902, and was removed to Hospital February 5th, 1902. This was a "contact" of Walter P., removed January 25th, 1902 (*vide* case 43). It is to be noted that the child was well vaccinated and under 5 years of age.

(87) Maud A. S., aged 19 years, vaccinated, contracted Smallpox at her work (laundry) in Camberwell Borough, and sickened at 38, Sancroft Street, on February 3rd, 1902, being removed to Hospital on February 5th, 1902. Of the 5 inmates (all adults and vaccinated), 1 had been re-vaccinated, and 3 were re-vaccinated at once. No secondary case occurred.

(88) Louisa R., aged 37 years, vaccinated, sickened at 61, Carlisle Street, on February 1st, 1902, and was removed on February 6th, 1902,

to Hospital, where she died on February 12th, 1902. At the time of the outbreak there were 7 inmates (4 adults and 3 children under 12 years of age), and of these 2 (adults) had been re-vaccinated, 1 (adult) was re-vaccinated at once, 1 (child) had been vaccinated, and 3 were unvaccinated (1 adult and 2 children). One of the unvaccinated children was vaccinated at once. No secondary case occurred.

(89) Caroline A. S., aged 27 years, vaccinated, sickened at 163, Waterloo Road, on February 3rd, 1902, being removed to Hospital on February 6th, 1902. The source of contagium could not be traced. There were 3 inmates, the husband, who had been vaccinated, and was re-vaccinated at once, and 2 unvaccinated children aged 5 and 4 respectively, who were vaccinated at once. No other case occurred from this centre.

(90) The source of contagium could not be found in the case of Emily L. W., aged 28 years, vaccinated, of 53, Bramah Road, Brixton. She sickened February 1st, 1902, and was removed to Hospital on February 7th, an interval of 6 days, during which time the other 7 inmates (3 adults and 4 children under 12 years of age), all vaccinated, were in contact. No secondary case occurred, 4 being re-vaccinated at once (the operation not being considered necessary in the case of the other 3 inmates, aged respectively 4 and 2 years and 9 months).

(91) Alexander K., aged 18 years, vaccinated, contracted Smallpox whilst at work as an indoor porter at a coffee-house in Westminster, whence a case of Smallpox had been removed, and sickened on February 3rd, 1902, at 5, Peer's Cooperage, being removed to Hospital on February 7th, 1902. No other case occurred amongst the 8 inmates of 5, Peer's Cooperage (3 adults and 5 children under 12 years of age). 4 were re-vaccinated at once, 1 had had Smallpox, and the other 3 (children aged respectively 6, 4 and 2 years) were sufficiently protected by primary vaccination.

(92) Henry G. B., aged 5 years, unvaccinated, of 20, Burdett Chambers, Westminster Bridge Road, sickened February 3rd, 1902, and was removed to Hospital on February 8th, 1902. The source of the contagium was not traced. No secondary case occurred amongst the inmates of the house (2 vaccinated adults and 1 re-vaccinated child of 8 years of age).

(93) Ernest T., of 43, New Cut, aged 18 years, vaccinated, is believed to have contracted Smallpox from handling infected money (patient being cashier at a butcher's shop) on January 25th, 1902. He sickened 12 days afterwards, viz., February 6th, 1902, and was removed to Hospital on February 9th, 1902. The other 3 inmates (adults and re-vaccinated at once) escaped.

(94 and 95) A series of cases of Smallpox arose from Fenwick Place, Bedford Road, and is interesting as showing how the disease may spread, when not recognised in the early stages. The facts are as follows:—George B., aged 25 years, vaccinated, living at 23, Fenwick Place, had an unrecognised attack of Smallpox, sickening (about) December 25th, 1901. He infected (a) Thomas S., aged 25 years, vaccinated, living at 25, Fenwick Place, sickening January 13th, 1902, but not being removed to Hospital, as the case was not recognised as Smallpox; (b) Eliza B., aged 22 years, unvaccinated, living at 2 York Terrace (Wandsworth Borough), sickening January 24th, 1902, and dying 2 days afterwards from malignant Smallpox in Hospital, where she was removed the same day; (c) James R., aged 34 years, and Ernest C.,

aged 28 years, both vaccinated, living at 35, Hazelrigge Road (Wandsworth Borough), sickening January 18th, 1902, and February 8th, 1902, and being removed to Hospital on January 21st, 1902, and February 13th, 1902, respectively; (d) Nathaniel S., aged 49 years, vaccinated, of 5, St. Alphonsus Road (Wandsworth Borough), sickening February 14th, 1902, and being removed to Hospital February 19th, 1902.

Thomas S., at 25, Fenwick Place, infected his unvaccinated daughter (Rhoda E. S.), aged 3 years, who sickened February 3rd, 1902, and was on February 10th, 1902, removed to Hospital, where she died on February 12th, 1902. Rhoda E. S. infected Emma H., aged 35 years, vaccinated, living in the same house. Emma H. sickened February 20th, 1902, and was removed to Hospital on February 26th, 1902.

In this way 7 cases arose, directly or indirectly, from the non-recognised case of George B.—4 in Wandsworth, and 3 in Lambeth, Borough. It is interesting to note that a vaccinated child of 12 months of age did not contract the disease, though exposed directly to contagium for a period extending over six weeks.

(96) Robert W. J., aged 38 years, vaccinated, of 33, Dalberg Road, Brixton, sickened February 9th, 1902, and was removed to Hospital on February 12th, 1902. Robert W. J. was a carpenter, and contracted his disease whilst at work in Stepney Borough. No other case occurred amongst the 5 inmates of the house (2 adults and 3 children under 12 years of age), all of whom were at once re-vaccinated.

(97) Charles L., a tramp, aged 35 years, vaccinated, caught Smallpox whilst staying in a lodging-house in Stepney Borough, and sickened on February 10th, 1902, at Rowton House, Vauxhall, being removed to Hospital on February 13th, 1902.

(98) Henry C. C., of 70 Belvedere Road, aged 18 years, vaccinated, sickened February 11th, 1902, and was removed to Hospital on February 13th, 1902. He contracted his disease at his work as a printer in Holborn Borough. At the time of the outbreak there were 6 inmates (4 adults and 2 children under 12 years of age), all vaccinated, and all were re-vaccinated at once. No secondary case occurred.

(99 and 100) George H. M., aged 38 years, vaccinated, and Marie M. (his wife), aged 38 years, vaccinated, were found to be suffering from Smallpox at 13, Lingham Street ("The Royal Oak"), and the source of the contagium in both cases was probably an unrecognised case in the bar, also infected Charlotte S., of 22 Southesk Street (*vide* case 115). George H. M. sickened February 11th, 1902, and was removed to Hospital on February 15th, 1902; whilst Marie M. sickened on February 14th, 1902, and was removed to Hospital on February 17th, 1902. Of the 7 inmates (5 adults and 2 children under 12 years of age), 6 were re-vaccinated at once, and the unvaccinated child (4 months) was vaccinated at once. No secondary case arose.

(101 and 102) Elizabeth R., aged 33 years, unvaccinated, sickened at 52, Ufford Street, New Cut, on February 12th, 1902, and was on Feb. 15th, 1902, removed to Hospital, where she died on February 17th, 1902. The source of contagium could not be traced, but Elizabeth R. infected—(a) Emily R., aged 34 years, unvaccinated, living at 7, Tanswell Street, sickened February 24th, 1902, removed February 26th, 1902; and (b) James R., aged 48 years, vaccinated, living in Southwark Borough. Of the 6 adult inmates (all vaccinated) of 52 Ufford Street, not one sickened.

(103 and 104) Louisa P., aged 33 years, unvaccinated, of 29, Mitre Street, Webber Street, New Cut, sickened February 12th, 1902, and was removed to Hospital February 15th, 1902. The source of the contagium was not traced, but Louisa P. infected her husband, John P., aged 38 years, vaccinated, who sickened February 26th, 1902, and was removed to Hospital February 28th, 1902.

(105) Elizabeth S., aged 41 years, vaccinated, of 18, Walnut Tree Walk, sickened February 11th, 1902, and was removed to Hospital February 15th, 1902. It is probable that Elizabeth S. caught the Smallpox whilst attending a concert at Lambeth Baths, on January 28th, 1902. Sharing the same tenement at the time of the outbreak were Violet and Nelly S., aged 16 and 5 years respectively, both vaccinated, and neither sickened with Smallpox.

(106 and 107) Two cases were removed to Hospital on February 16th, 1902, from Carlisle Buildings, Carlisle Lane, viz.:—(a) Alfred F., from tenement 39, aged 38 years, vaccinated, sickened February 13th, 1902, and died February 22nd, 1902; and (b) Richard A., from tenement 47, aged 20 years, vaccinated, sickened February 16th, 1902. The sources of infection were (a) a pottery, where Alfred F. worked as a labourer, and (b) a printing firm in the City, where Richard A. worked as a porter. Living in the two tenements at the time of the outbreaks were 8 inmates (3 adults and 5 children under 12 years of age), all vaccinated, and 2 re-vaccinated. No other case occurred.

(108) Edward A. H., aged 22 years, vaccinated, of 7, Little Thomas Street, Coral Street, Oakley Street, sickened February 10th, 1902, and was removed to Hospital on February 17th, 1902. His wife, who was re-vaccinated at once, and his infant son (13 months), who had been vaccinated, escaped the disease. Edward A. H. is a railway porter at S.E.R. Blackfriars (Goods) Station, in connection with which several cases occurred in different parts of London, derived from an unrecognised case.

(109) Julia Mc F., aged 29 years, vaccinated, sickened on February 14th, 1902, and was on February 17th, 1902, removed to Hospital, where she died on February 25th, 1902. The husband (re-vaccinated at once), and her 3 children (all vaccinated) escaped. The source of the infection was not traced (see case 151).

(110) Arthur B., aged 16 years, vaccinated, contracted Smallpox from infected money, or papers, from the Docks, and sickened February 12th, 1902, being removed to Hospital on February 17th, 1902. The 6 inmates (5 adults and 1 boy of 12 years) escaped, having been vaccinated and re-vaccinated.

(111 and 112) Henry S. T., aged 59 years, vaccinated, whilst tramping, contracted Smallpox at a lodging-house at St. Albans, where he stayed February 1st, to 4th, 1902, and sickened on February 16th, 1902, in the Lambeth Casual Ward, being removed to Hospital on February 18th, 1902. From the same source William B., aged 20 years, vaccinated, contracted Smallpox, sickening February 20th, 1902, and being removed to Hospital on February 24th, 1902.

(113) Arthur E. S., aged 18 years, vaccinated, contracted Smallpox at Billingsgate Fish Market, and sickened at 71, Waldeck Buildings, New Cut, on February 15th, 1902, being removed to Hospital on February 20th, 1902. At the time of the outbreak, there were 7 in-

mates in the same tenement (4 adults and 3 children under 12 years of age), all vaccinated, of whom 3 (adults) were re-vaccinated at once. No other case occurred.

(114) Florence H., aged 14 years, vaccinated, of 3, Jonathan Street, sickened February 16th, 1902, and was removed to Hospital on February 20th, 1902. The source of infection could not be traced. The other 4 inmates (3 vaccinated adults and a child of 2 years, who was unvaccinated at the time but vaccinated at once) escaped.

(115) Charlotte S., aged 27 years, vaccinated, sickened at 22, Southesk Street, on February 16th, 1902, and was removed to Hospital on February 20th, 1902. The source of infection was the unrecognised case at the "Royal Oak," 13, Lingham Street, which infected also George H. and Marie M. (*vide* Cases 99 and 100). Of the 4 inmates of 22, Southesk Street, all vaccinated, 3 were re-vaccinated at once. No secondary case arose.

(116) Georgina M., aged 54 years, vaccinated, of 11, Prima Road, contracted Smallpox from an unrecognised case (George W.), living in the same house, and was removed on February 21st, 1902, to Hospital, where she died on March 1st, 1902. At the time that George W. was suffering from Smallpox, and mixing with others (a period of six weeks), there were 8 inmates (all vaccinated and 3 re-vaccinated), and of these Georgina M. was the only one to sicken.

(117-121) A series of 5 cases arose at 40, Camelia Street, Wandsworth Road. The first to sicken (on February 16th, 1902) was Ada T., aged 34 years, unvaccinated, and she was removed on February 21st to Hospital, where she died on March 4th, 1902, having 5 days previously given birth in Hospital to a child (Constance T.), who died on March 12th, 1902, from Smallpox. The 3 following cases arose from Ada T.:

- (a) George T., aged 31 years, vaccinated, sickened March 4th, 1902, removed March 7th, 1902, from 40 Camelia Street.
- (b) Ada T., aged 4 years, vaccinated, sickened March 2nd, 1902, removed March 6th, 1902, from 40 Camelia Street.
- (c) Mary A. J., aged 20 years, vaccinated, sickened March 8th, 1902, removed March 11th, 1902, from 27 Camelia Street.

(122) Louisa M., aged 30 years, vaccinated, sickened at 51, Commercial Road, where she lodged, on February 20th, 1902, and was removed to Hospital on February 24th, 1902. Source of infection was not traced.

(123) Jane L., aged 55 years, vaccinated, sickened February 18th, 1902, and was removed from 10, Riverhall Street, Wandsworth Road (where she lodged), to Hospital on February 22nd, 1902. The source of infection was not traced.

(124) Helen J., aged 29 years, vaccinated, contracted Smallpox at her work in the city, and sickened on February 21st, 1902, at her lodgings (24, Hercules Road), being removed on February 23rd, 1902 to Hospital, where she died on March 14th, 1902.

(125) Frederick K., aged 25 years, vaccinated, sickened at 1, Bird Street, Brook Street, Kennington, on February 16th, 1902, and was removed to Hospital on February 22nd, 1902. He contracted the disease whilst at work as a driver of a hearse, in which a Smallpox-infected body was carried.

(126) Rose B., aged 20 years, vaccinated, of 91, Oakley Street (lodgings), sickened February 21st, 1902, and was removed to Hospital on February 24th, 1902. 4 other inmates (3 adults and 1 child), vaccinated, escaped. Source of infection was not discovered.

(127) Louie C., aged 44 years, vaccinated, of 137, Lower Kennington Lane, sickened February 18th, 1902, and was removed from her lodgings to Hospital on February 24th, 1902. Her husband (re-vaccinated) escaped. Source of infection was not traced.

(128) Charles E., aged 58 years, a tramp, sickened at Rowton House, Vauxhall, on February 20th, 1902, and was removed on February 24th, 1902, to Hospital, where he died on March 1st, 1902.

(129) Robert W. B., aged 36 years, unvaccinated, contracted Smallpox at his work (labourer at large flour mills), and sickened February 22nd, 1901, being on February 25th, 1902, removed to Hospital, where he died on March 3rd, 1902. No other case occurred amongst the inmates (1 adult, re-vaccinated, and 4 vaccinated children under 12 years of age).

(130 and 131) Cissy H., aged 2 years, unvaccinated, and Anna H., aged 9 years, vaccinated, caught Smallpox from her mother, Fanny H., who sickened on February 10th, 1902, and was removed to Hospital on February 13th, 1902, from a house in Westminster. The rest of the family, consisting of 1 adult (re-vaccinated) and 4 children under 12 years of age (1 unvaccinated and 3 vaccinated), moved to 13, College Street, Belvedere Road, where Cissy and Annie sickened on February 23rd and March 1st, 1902, and were removed to Hospital on February 25th and March 5th, 1902, respectively.

(132 and 133) At 36 Ellerslie Road, Maud P., aged 25 years, was taken ill on January 24th, 1902, with what was thought to be an attack of Chickenpox, but must have been modified Smallpox; and on February 26th, 1902, her father and mother (Alice and William P., aged 46 years each) were removed to Hospital suffering from Smallpox, Alice sickening February 17th, 1902, and William on February 16th, 1902. Alice P. had been vaccinated and William P. re-vaccinated (20 years ago).

(134) Emily B., aged 43 years, vaccinated, sickened at 45, Cottage Grove, Bedford Road, on February 21st, 1902, and was removed to Hospital on February 25th, 1902. Source of infection was not satisfactorily traced, but infected clothes (laundry) were suspected. No secondary cases arose amongst the 3 other inmates, all of whom were re-vaccinated at once.

(135) Sydney Edwin J., aged 23 years, vaccinated, sickened February 23rd, 1902, and was removed to Hospital on February 26th, 1902, from 55, Loughborough Road (provision shop), where it is supposed he caught the disease whilst attending to customers. His wife (vaccinated) escaped the disease.

(136 and 137) Leonard V. A., aged 17 years, unvaccinated, was an attendant in the cloak-room at Kennington Theatre, and contracted Smallpox there, sickening at 18a, Brighton Terrace, Brixton, on February 19th, 1902, and being removed to Hospital on February 25th, 1902. 18a, Brighton Terrace is a tenement house, and at the time of the outbreak contained 19 inmates (14 adults and 5 children under 12 years of age), all of whom were re-vaccinated at once, except (1) Henry R. T., aged 28 years, vaccinated, who sickened March 7th,

1902, and was removed to Hospital on March 11th, 1902; and (2) Fanny A., aged 24 years, vaccinated. All the re-vaccinated inmates escaped the disease, as did also Fanny A. (vaccinated).

(138) Alfred T. C., aged 23 years, vaccinated, in all probability contracted his disease in the course of his work, attending to customers in the bar of the "Prince Alfred," 98, Cornwall Road, Lambeth, where he lived. He sickened February 25th, 1902, and was removed to Hospital on February 28th, 1902. His wife (unvaccinated) was vaccinated at once, and escaped the disease.

(139) John C., aged 29 years, vaccinated, contracted Smallpox at his work (fitter at the Electric Railway Works), and sickened February 28th, 1902, being removed to Hospital on March 2nd, 1902. At the time of the outbreak there were 7 inmates (5 adults and 2 children under 12 years of age), 4 vaccinated and 3 unvaccinated. The unvaccinated were vaccinated at once, and 2 of the vaccinated re-vaccinated at once. No secondary case occurred.

(140) Henry J., aged 26 years, vaccinated, is another instance of Smallpox being contracted whilst working at a Smallpox Hospital (Dartford) without previous re-vaccination. He sickened on February 26th, 1902, at 59, Gray Street, and was removed to Hospital on March 2nd, 1902.

(141) John H. B., aged 28 years, vaccinated, a chemist's assistant, on February 15th prescribed over the counter for a man suffering with "spots," and sickened 13 days afterwards, being removed to Hospital on March 3rd, 1902, from 6, Radcott Street, where he lodged, and where there were, at the time, 7 other inmates (all adults and re-vaccinated). No secondary case occurred.

(142) Amy S., aged 16 years, vaccinated, of 64, Regency Place, sickened February 27th, 1902, and was removed to Hospital on March 3rd, 1902, having contracted the disease from her father or brother, both of whom were engaged in stripping infected (Smallpox) rooms for the Southwark Borough Council. There were 8 other inmates (4 adults and 4 children under 12 years of age), all vaccinated except Ivy S., who was vaccinated at once. Four of the vaccinated inmates were re-vaccinated at once. No secondary case occurred.

(143) Charles H., aged 36 years, vaccinated, contracted Smallpox at his work (waiter in the City), and sickened at 74 Kennington Road, on March 1st, 1902, being removed to Hospital on March 4th, 1902.

(144) John W., aged 31 years, vaccinated, sickened at 4, Park Mews, Park Road, West Dulwich, on March 2nd, 1902, and was removed to Hospital on March 5th, 1902. He contracted his disease at Billingsgate Market (where he worked). The other 4 inmates (2 adults and 2 children under 12 years of age) were re-vaccinated at once, and not one sickened.

(145) Mary A. L. H., aged 30 years, vaccinated, sickened on March 2nd, 1902, at 374, Kennington Road, and was removed to Hospital on March 5th, 1902. A Sanitary Inspector, engaged upon Smallpox work, was living at this house, wherein there were 9 inmates (6 adults and 3 children under 12 years of age), all the adults being protected by re-vaccination and the children by vaccination, except Mary A. L. H., who caught the disease. The attack may have been contracted at the Greenwich Theatre, where the husband of Mary A. L. H. was employed, and where Mary A. L. H. visited.

(146) Isabella M., aged 24 years, vaccinated, sickened at 138, Stamford Street, on March 2nd, 1902, and was removed to Hospital on March 7th, 1902, having caught her disease whilst at work as a barmaid. 138, Stamford Street, was a "home" (or club), at which 33 barmaids, engaged in different parts of London, resided. All had been recently re-vaccinated except Isabella M., and she contracted Smallpox.

(147) Caroline O., aged 50 years, vaccinated, sickened at 15, Simpno Street, on March 3rd, 1902, 14 days after being visited by her son (Lewis O.), who left the Smallpox Ships on February 16th, 1902, having been removed there from North London. Caroline O. was removed to Hospital on March 6th, 1902.

(148) Samuel C., aged 55 years, vaccinated, contracted Smallpox at his business in the City, sickened on March 4th, 1901, at 105, Clapham Road (his private house), and was removed to Hospital on March 7th, 1902. No other case occurred amongst the 4 inmates, who were all re-vaccinated at once.

(149) Gustavus A., aged 34 years, vaccinated, sickened on March 5th, 1902, at 41, The Grove, and was removed on March 7th, 1902, to the Hospital, where he died on March 13th, 1902. He contracted the disease from his wife, who returned from the Smallpox Hospital on February 14th, 1902, having an abscess under her left arm, such abscess bursting on February 22nd, 1902 (*vide* cases 12-23).

(150) Louisa T., aged 59 years, vaccinated, sickened March 5th, 1902, and was removed to Hospital on March 7th, 1902, having contracted her disease from an unrecognised case (Julius P.) in the same house, who died from malignant Smallpox, mistaken at the time for, and certified as, "purpura hæmorrhagica."

(151-154) Doris C., aged 6 years, unvaccinated, of 4, Oakley Buildings, Oakley Street, caught the Smallpox whilst standing near the ambulance-brougham, when Julia Mc F., suffering from Smallpox, was being removed on February 17th, 1902, from 64, Oakley Street (see case 109). Doris C. sickened 13 days afterwards, viz., on March 2nd, 1902, and was removed to Hospital on March 8th, 1902. From Doris C. 3 other cases arose, as follows:—

- (a) Benjamin C. (father), aged 25 years, vaccinated, sickened March 14th, 1902, removed March 18th, 1902.
- (b) Mary A. C. (mother), aged 23 years, vaccinated, sickened March 15th, 1902, removed March 18th, 1902.
- (c) Thomas P. (friend living at 37, Tanswell Street), aged 8 years, unvaccinated, sickened March 16th, 1902, removed March 18th, 1902.

(155 and 156) Charles W., aged 29 years, vaccinated, contracted Smallpox at work (carman), and sickened at 18 Juxon Street, on March 7th, 1902, and was removed to Hospital on March 9th, 1902. He infected his wife, Martha W., aged 30 years, who sickened March 22nd, 1902, and was removed March 24th, 1902.

(157-159) Walter K., aged 8 years, unvaccinated, contracted Smallpox from some unknown source, sickening at 16, Magee Street, on March 3rd, 1902, and being removed to Hospital on March 9th, 1902. Two other cases arose from this source, (a) *direct*, Philip B., living at 9, Clarence Street, Jeffrey's Road, aged 36 years, vaccinated, sickening March 12th, 1902, and being removed March 17th, 1902; and (b)

indirect, Stanley T. L., aged 14 days, unvaccinated, living at 28, Clayton Street, Kennington Road, sickening March 17th, 1902, and being removed March 21st, 1902.

(160) Denham M., aged 28 years, vaccinated, sickened at 6, Mor-daunt Street, on March 5th, 1902, and was removed to Hospital on March 9th, 1902. Source of infection was not traced, though he may have contracted the disease whilst at work (S.E.R. works). The other 6 inmates (3 adults and 3 children under 12 years), all vaccinated, and re-vaccinated at once, escaped.

(161 and 162) Mary V., aged 25 years, vaccinated, sickened with Smallpox at 86, Harleyford Road, Vauxhall, on March 6th, 1902, and was removed to Hospital on March 11th, 1902, after she had infected 3 out of the 4 other inmates occupying the same room (all adults and vaccinated), viz.:—(a) Sarah D., aged 27 years, vaccinated, sickened March 22nd, 1902, removed March 24th, 1902; and (b) two other cases (both vaccinated), removed from Westminster, where they had recently removed.

(163 and 164) Samuel B., a decorator, living at 33, Tower Street, Waterloo Road, aged 29 years, vaccinated, contracted Smallpox whilst stripping the paper from the walls of an infected room in Southwark Borough (155, Union Road), whence a case of Smallpox (E. D.) had been removed on February 1st, 1902. He sickened March 6th, 1902, and was removed to Hospital on March 11th, 1902. Samuel B. infected Beatrice F., living in the same house, aged 11 years, vaccinated, sickening March 23rd, 1902, and being removed March 25th, 1902.

(165) Thomas W. C., aged 15 years, vaccinated, sickened at 10, Wootten Place, on March 8th, 1902, and was removed to Hospital on March 11th, 1902. He contracted his disease whilst at work as a van-boy, "St. James' Gazette" Office, City. No secondary case arose amongst the 4 inmates (2 vaccinated adults and 2 children under 12 years, one re-vaccinated and the other unvaccinated).

(166-171) The sources of infection in the following 6 cases could not be traced:—

- (a) Alice C. J., aged 44 years, vaccinated, 31, Combermere Road, sickened March 6th, 1902, removed March 12th, 1902.
- (b) Elizabeth D., aged 38 years, vaccinated, 18½, Little Thomas Street, sickened March 16th, 1902, removed March 19th, 1902, to Hospital, where she died March 24th, 1902.
- (c) James B., aged 7 years, unvaccinated, 37 Burdett Buildings, sickened March 16th, 1902, removed March 19th, 1902.
- (d) Gladys A., aged 9 years, unvaccinated, 197, Warham Street, sickened March 19th, 1902, removed March 22nd, 1902.
- (e) Alice M. A., aged 30 years, vaccinated, 139, Waterloo Road, sickened March 21st, 1902, removed March 23rd, 1902.
- (f) Mary S., aged 40 years, vaccinated, 6, Burdett Street, sickened March 28th, 1902, removed March 31st, 1902 to Hospital, where he died April 9th, 1902.

In connection with the above 6 cases, no further case occurred amongst the inmates of the infected tenements or houses (12 adults, all vaccinated, and 7 re-vaccinated, and 15 children under 12 years of age, all vaccinated and 2 re-vaccinated).

(172) Florence G. C., aged 30 years, vaccinated, visited North-west London on February 23rd, 1902, and contracted Smallpox, sickening 14 days afterwards, viz., on March 9th, 1902, at 68, Elm Park, Brixton, and being removed to Hospital on March 13th, 1902. No secondary case arose amongst the other 6 inmates, who were all re-vaccinated at once.

(173) Daisy H., aged 22 years, vaccinated, caught the Smallpox at the Crystal Palace, and sickened at 9, Woodland Road, on March 5th, 1902, but was, on account of the nature of the disease not being recognised, not removed to Hospital until March 12th, 1902. A troupe of 3 acrobats were living in the house at the time, and one (vaccinated) went to Portsmouth and sickened there, and the other two (both vaccinated) went to Birmingham, where one sickened.

(174) John N., aged 17 years, unvaccinated, contracted Smallpox in Stepney Borough in the course of his work (errand boy), and sickened at his lodgings (2, Finck Street) on March 11th, 1902, being removed to Hospital on March 14th, 1902.

(175) Amelia J., aged 63 years, vaccinated, had been an inmate in the Lambeth Workhouse Infirmary for the past 2 months with fractured shoulder (accident happened January 20th, 1902), and on March 13th, 1902, developed Smallpox, which must have been brought to her by a visitor, and was removed on March 15th, 1902, to Hospital, where she died on March 31st, 1902. The 23 patients, who were in the same ward, were, with 4 exceptions, at once re-vaccinated, and no secondary case occurred.

(176-183) Alfred P., aged 9 years, unvaccinated, of 2 Garden Cottages, Newburn Street, sickened March 13th, 1902, and was removed to Hospital March 16th, 1902. The source of infection was not discovered. The 2 other inmates of 2, Garden Cottages (both adults and vaccinated) escaped the disease. In the same neighbourhood (9, Courtney Street), another case was discovered, but its source, too, could not be traced—Elizabeth B., aged 37 years, vaccinated, who sickened March 16th, 1902, but was not removed to Hospital until March 25th, 1902, with the result that 6 further cases arose from this centre, viz.:

(a) Elizabeth B., aged 19 years, vaccinated, sickened March 31st, 1902, removed April 3rd, 1902.

(b) Constance B., aged 11 years, vaccinated, sickened April 3rd, 1902, removed April 5th, 1902.

(c) James A., aged 11 years, vaccinated, living next door (11, Courtney Street), sickened April 1st, 1902, removed April 5th, 1902.

(d) James A., aged 35 years, vaccinated, living at 11, Courtney Street, sickened April 19th, 1902, removed April 23rd, 1902.

(e) John E., aged 40 years, vaccinated, living at Vauxhall Chambers, who visited 9, Courtney Street, on March 22nd, 1902, sickened April 4th, 1902, removed April 8th, 1902.

(f) Frederick E. N., aged 26 years, vaccinated, living at 58, Courtney Street, sickened April 14th, 1902, and removed on April 17th, 1902, to Hospital, where he died on April 28th, 1902.

(184-190) A series of 7 cases arose from Beatrice M. S., aged 7 years, unvaccinated, who sickened at 49, Comrie Road, Bedford Road, on March 10th, 1902, and was removed on March 15th, 1902, to

Hospital, where she died on March 17th, 1902. Before being removed to Hospital, Beatrice M. S. was visited on March 10th, 1902, by her aunt, Georgina K., aged 32 years, vaccinated, living at 62, Branksome Road, who sickened March 22nd, 1902, but, on account of the true nature of the disease not being at first discovered, was not removed to Hospital until April 2nd, 1902, with the result that the four other inmates (all unvaccinated), sharing the same room, caught the disease, viz. :—

- (a) Minnie K., aged 8 years, unvaccinated, sickened April 8th, 1902, removed April 10th, 1902.
- (b) Harry K., aged 5 years, unvaccinated, sickened April 8th, 1902, removed April 10th, 1902.
- (c) James K., aged 31 years, unvaccinated, sickened April 12th, 1902, removed April 14th, 1902.
- (d) Frederick K., aged 7 months, unvaccinated, sickened April 12th, 1902, removed April 14th, 1902.

An unvaccinated man (Stephen James B.) living in the same house, aged 34 years, also caught the disease from the same source, sickening April 10th, 1902, and being removed to Hospital April 12th, 1902.

At the time of the outbreak at 49, Comrie Road, 7 young children (all vaccinated except one) were living in the house, and not one sickened.

Beatrice M. S. caught the disease from 36, Ellerslie Road, whence 2 cases of Smallpox were removed on February 26th, 1902 (*vide* cases 132-133).

(191-194) Another series of 4 cases arose at 7, Leman Place, Albert Embankment, from a Battersea case (James F., aged 42 years, vaccinated), who was removed from Hurley Road Relief Station on March 17th, 1902, sickening March 14th, 1902. James F. visited once (on March 9th, 1902) 7, Leman Place, where his married sister lived, with the result that the following 4 inmates contracted Smallpox, and were removed to Hospital on March 27th, 1902 :—

- (a) Margaret F., aged 15 years, vaccinated, sickened March 22nd, 1902.
- (b) William F., aged 11 years, vaccinated, sickened March 22nd, 1902.
- (c) Martha F., aged 9 years, unvaccinated, sickened March 22nd, 1902.
- (d) Elizabeth F., aged 12 years, vaccinated, sickened March 22nd, 1902.

The father and mother (both re-vaccinated) alone escaped the disease. At the time of the outbreak there were living in the same Court (Leman Place), in the other 7 houses, 22 adults (all vaccinated and 4 re-vaccinated at once) and 20 children under 12 years of age (all vaccinated except 5, who were vaccinated at once). No other case occurred.

(195-197) Dinah B., aged 19 years, vaccinated, had a mild unrecognised attack of Smallpox, at 61, Hackford Road, Brixton, sickening February 28th, 1902, and not being removed to Hospital until April 3rd, 1902. Dinah B. was a nurse at the time, living in a flat with Mr. and Mrs. R. (both vaccinated) and Alfred R., aged 8 months (un-

vaccinated), with the result that Mr. R. and his son (Alfred) caught the disease, sickening March 28th and March 31st, 1902, respectively, and being removed to Hospital on April 3rd, 1902. Dinah B. also visited, whilst in an infectious state, a house in Woolwich (3 adult vaccinated inmates), and gave the disease to one (female). It is probable that originally Dinah B. caught her attack of Smallpox whilst attending the Out-patients' Department of St. Thomas's Hospital.

(198) John B., aged 16 years, vaccinated, contracted Smallpox at his work (clerk at the Docks), and sickened at 2, Fentiman Road, where he lived, on March 16th, 1902, being removed to Hospital on March 18th, 1902. No secondary case occurred amongst the rest of the 5 inmates (all adults and vaccinated).

(199) Alice N., aged 41 years, vaccinated, sickened at 73, Railton Road, on March 12th, 1902, and was removed to Hospital on March 17th, 1902. Alice N. had only been out of the house on two occasions during three weeks previous to her sickening, viz., on February 28th and March 1st, 1902, when she went shopping in the Atlantic Road, Brixton. It is probable that she contracted Smallpox on the former of these occasions, sickening 12 days afterwards. No secondary case occurred amongst the inmates (4 adults and 2 children under 12 years), all re-vaccinated except the vaccinated child of 9 years of age.

(200) Elizabeth H., aged 38 years, vaccinated, contracted Smallpox in Southwark Borough, and sickened at 16, Lambeth Walk, on March 16th, 1902, being removed to Hospital on March 19th, 1902.

(201) William C. B., aged 46 years, vaccinated, of 49, Camberwell New Road, sickened March 18th, 1902, being removed to Hospital on March 21st, 1902. It is probable that William C. B. contracted Smallpox in the course of his work (a builder). No secondary case occurred amongst the 6 inmates (2 adults and 4 children under 12 years of age), all of whom were re-vaccinated at once except the vaccinated child of 3 years of age, the operation not being considered necessary in her case.

(202) Frederick H., aged 18 years, vaccinated, sickened on March 22nd, 1902, at 35, Waterloo Road, and was removed to Hospital on March 25th, 1902. It is probable that he contracted his disease in the course of his work (secondhand-furniture dealer). No secondary case occurred amongst the 4 other inmates, who were re-vaccinated at once.

(203) Henry H., aged 48 years, vaccinated and re-vaccinated in 1870, was a waiter in a Music Hall, and probably contracted Smallpox whilst at work. He sickened March 20th, 1902, and was on March 25th, 1902, removed to Hospital, where he died on March 30th, 1902. No secondary case occurred amongst the 3 inmates (all vaccinated, and 2 re-vaccinated at once).

(204) William C., aged 21 years, vaccinated, of 171, Railton Road, sickened March 23rd, 1902, and was removed to Hospital on March 26th, 1902. It is probable that he caught the disease whilst engaged at work (omnibus conductor). No secondary case occurred amongst the 4 other inmates (3 adults re-vaccinated and 1 vaccinated child of 3 years of age).

(205 and 206) William M., aged 21 years, vaccinated, of 10, Tyers Street, contracted Smallpox at his work (Gas and Coke Lighting Company, Nine Elms), sickening March 22nd, 1902, and being, on March 26th, 1902, removed to Hospital, where he died on April 3rd, 1902.

William M. was visited on March 26th, 1902, by Simon O'S., aged 23 years, vaccinated, living at 11, Albert Buildings, Vauxhall Walk, sickening 14 days afterwards, *i.e.*, on April 9th and being removed to Hospital on April 14th 1902. No secondary case occurred amongst the 6 inmates of 10, Tyers Street (4 adults and 2 children under 12 years of age), all vaccinated, but Simon O'S. infected J. H., living in 33 Albert Buildings (*vide* case 253).

(207) Frederick R., aged 23 years, vaccinated, contracted Smallpox whilst at work (house decorator), sickening on March 23rd, 1902, and being removed to Hospital on March 27th, 1902. No further case occurred amongst the three other inmates (all vaccinated and one re-vaccinated).

(208) Alice L. D., aged 29 years, vaccinated, sickened at 31, Old Paradise Street, on March 23rd, 1902, and was removed to Hospital on March 29th, 1902. The source of infection could not be definitely traced. Of the 4 inmates (1 adult, revaccinated, and 3 vaccinated children under 12 years of age), not one sickened.

(209-211) A Smallpox case treated as Chickenpox occurred at New Road, Wandsworth Road, and from this arose 3 cases as follows:—

- (a) Charles G., aged 18 years, unvaccinated, living at 3, Milton Place, sickened March 27th, 1902, removed on March 31st, 1902, to Hospital, where he died on April 1st, 1902.
- (b) Harry G., aged 11 years, unvaccinated, living at 2, Milton Place, sickened April 9th, 1902, removed April 14th, 1902.
- (c) Eliza G., aged 21 years, vaccinated, living at 8, Milton Place, sickened April 28th, 1902, removed May 1st, 1902.

(212-214) Two cases of Smallpox occurred at 25, Lambeth Palace Road (Emma R., aged 24 years, vaccinated, and Bertie S., aged 3 years, unvaccinated), sickening March 30th and 31st, 1902, and being removed to Hospital on April 3rd and 4th, 1902, respectively; but the sources of infection were not discovered. Another case arose therefrom, *viz.*, Alice M. H., aged 24 years, unvaccinated, sickened April 4th, 1902 removed April 16th, 1902.

(215) Robert J. C., aged 50 years, vaccinated, of 6, Redan Terrace, sickened April 2nd, 1902, and was removed to Hospital on April 4th, 1902. The disease was contracted in travelling to and fro between London and Little Hadham. No secondary case occurred in connection with the 5 other inmates (3 adults, re-vaccinated at once, and 2 children under 12 years of age, vaccinated at once).

(216) Edith Y., aged 34 years, vaccinated, of 97, Beechdale Road, sickened April 5th, 1902, and was removed to Hospital April 9th, 1902. The disease was probably contracted whilst at work (greengrocer's shop). No secondary case occurred amongst the 4 other inmates (all vaccinated, 2 re-vaccinated at once).

(217) Albert C., aged 45 years, unvaccinated, living at 78, Crims-worth Road, was allowed to work at the Gore Farm (Smallpox) Hospital without being previously vaccinated, with the result that he contracted Smallpox, sickening April 5th, 1902, and being removed on April 9th, 1902, to Hospital, where he died on April 17th, 1902. No other case arose amongst the 7 other inmates (3 adults and 4 children under 12 years of age), all vaccinated.

(218) Samuel J., aged 23 years, vaccinated, contracted Smallpox in the City, and sickened on April 6th, 1902, at 6, Lambert Road, Brixton Hill, and was removed on April 9th, 1902, to Hospital, where he died on April 13th, 1902. His wife and child (both vaccinated) did not contract the disease.

(219 and 220) Several cases of Smallpox arose from the Fleet Printing Works, Whitefriars Street, City, 2 sickening in Lambeth Borough, as follows: (a) Robert H. J., aged 16 years, vaccinated, of 67 Somerleyton Road, sickening April 6th, 1902, removed April 10th, 1902; and (b) Edwin S., aged 57 years, vaccinated, of 29, Camberwell New Road, sickening April 9th, 1902, removed April 12th, 1902. No secondary case arose amongst the 11 inmates of these two houses (10 adults, of whom 8 had been re-vaccinated, and 1 a vaccinated child of 10 years).

(221-227) An unrecognised case of Smallpox (a sailor) was living at 1, Bywell Cottages, Bird Street, Brook Street, Kennington, from March 24th, to April 8th, 1902, and during that time infected Daisy W., aged 6 years, unvaccinated, who sickened April 11th, 1902 and was removed to Hospital on April 14th, 1902. There were 3 other inmates, Henry W., aged 38 years (re-vaccinated), Margaret W., aged 32 years (vaccinated), and Harry W., aged 14 years unvaccinated, but they escaped the disease. From Daisy W., at 1, Bywell Cottages, the following 6 cases arose:—

- (a) Alfred W. B., aged 6 years, unvaccinated, of 7, Bird Street, sickened April 23rd, 1902, removed April 26th, 1902.
- (b) Albert E. B., aged 26 years, vaccinated, sickened May 6th, 1902, removed May 8th, 1902.
- (c) Kate P., aged 13 years, vaccinated, sickened May 6th, 1902, removed May 9th, 1902.
- (d) Nellie O'B., aged 36 years, vaccinated, of 14, Saunders Street, sickened April 25th, 1902, removed April 29th, 1902.
- (e) Jane O'B., aged 11 years, unvaccinated, sickened April 25th, 1902, removed April 28th, 1902.
- (f) Elizabeth N., aged 29 years, vaccinated, sickened May 10th, 1902, removed May 14th, 1902.

(228-231) On April 16th, 1902, Henry T. T., aged 32 years, vaccinated, and Edith T., aged 4 years, unvaccinated, were removed to Hospital, from 97, Sandmere Road, and Elizabeth T., aged 26 years, vaccinated, from 137, Hubert's Grove, suffering from Smallpox contracted at Raynes Park. Henry T. T., and his daughter (Edith), sickened on April 10th, 1902, and Elizabeth T. (Edith's aunt) two days later. Elizabeth T. gave birth to a child (Daisy E. T.) three days before removal to Hospital, *i.e.*, on April 13th, 1902, and this child sickened with Smallpox on April 20th, 1902, and was on April 23rd, 1902, removed to Hospital, where she died on April 27th, 1902.

(232) Bertram E. F., aged 29 years, vaccinated, contracted Smallpox at his work in the City, and sickened April 11th, 1902, at 66, Kellett Road, Brixton, being removed to Hospital on April 16th, 1902. His wife (re-vaccinated) and 2 children (both vaccinated) escaped the disease.

(233 and 234) Harry H., aged 36 years, unvaccinated, contracted Smallpox from a fellow worker (on the water mains in Wandsworth

Borough), and sickened April 14th, 1902, being removed to Hospital from 110, Mayall Road, on April 17th, 1902. His son (Harry Robert), aged 6 years, unvaccinated, sickened on the same day as his father, and was removed with him.

(235 and 236) Valentine T. A., aged 48 years, vaccinated, contracted Smallpox whilst working as a glass-blower at Highbury, and sickened April 14th, 1902, being removed to Hospital on April 18th, 1902, from 63, Newport Street. No secondary case occurred amongst the 6 other inmates (3 adults and 3 children under 12 years), all vaccinated; but Valentine T. A. infected a friend, Charles G. B., aged 32 years, vaccinated, living at 25, Newburn Street, sickening April 28th, 1902, and being removed to Hospital on May 1st, 1902.

(237) Eliza J. H., aged 32 years, vaccinated, of 68 Holyoake Road, sickened April 15th, 1902, and was removed to Hospital on April 19th, 1902. The source of the contagium is unknown. No secondary case occurred amongst the 4 other inmates (1 re-vaccinated adult and 3 vaccinated children under 12 years of age).

(238) A tramp (Harry F.), aged 54 years, vaccinated, sickened on April 16th, at a common lodging house (Star Chambers, Wandsworth Road), and was removed on April 24th, 1902, from the Relief Station in Stockwell Road to Hospital, where he died on April 24th, 1902. He arrived at Star Chambers on April 16th, 1902, from Hammersmith, where, he stated, he had been living during the last three weeks, and where, consequently, he must have contracted Smallpox.

(239) Charles H., aged 19 years, vaccinated, contracted Smallpox whilst at work in the City, and sickened on April 15th, 1902, at 79, Dalzell Road, being removed to Hospital on April 21st, 1902. No secondary case arose amongst the 5 other inmates (all adults and re-vaccinated).

(240) William A. K., aged 19 years, vaccinated, sickened on April 18th, 1902, at 56, Pearman Street, and was removed to Hospital on April 22nd, 1902. The source of the contagium was not traced. No secondary case occurred amongst the 7 other inmates, all re-vaccinated.

(241) Edward L., aged 22 years, vaccinated, contracted Smallpox in Southwark Borough (St. Olave's Chambers, Silvester Street), and sickened on April 19th, 1902 at 68, Vauxhall Street, being removed to Hospital on April 22nd, 1902. No secondary case occurred amongst the 5 other inmates (adults), all vaccinated.

(242) Rebecca J., aged 15 years, unvaccinated, sickened April 18th, 1902, at 10, The Parade, Lambeth Walk, and was removed to Hospital on April 22nd, 1902. The source of infection could not be traced definitely, but it was probably in connection with marketing in the Lambeth Walk on April 5th, 1902. No secondary case occurred amongst the 4 other inmates (adults), all vaccinated.

(243-247) Two cases of Smallpox occurred at 20, Johanna Street, but their source could not be traced, viz. :—(a) James C., aged 20 years, vaccinated, sickened April 18th, 1902, removed April 22nd, and (b) George C. (his brother), aged 6 years, unvaccinated, sickened April 19th, 1902, removed April 23rd, 1902. From these 2 cases 3 others arose, as follows :—

(a) Frederick W. C., aged 14 years, unvaccinated, sickened April 30th, 1902, at 20 Johanna Street, removed May 4th, 1902.

- (b) Ann D., aged 85 years, vaccinated, sickened April 25th, 1902, at the Workhouse, whither she went on April 24th, 1902, and was removed to Hospital on April 28th, 1902.,
- (c) Sidney H., aged 11 years, unvaccinated, living at 11, Waxwell Terrace, sickened May 4th, 1902, removed May 8th, 1902.

Of the 11 inmates of 20, Johanna Street at the time of the outbreak (8 adults and 3 children under 12 years of age), all had been vaccinated except two—aged 14 and 6 years respectively, and both of these unvaccinated inmates sickened, as well as a vaccinated female of 85 years of age.

(248 and 249) Arthur B., aged 35 years, vaccinated, of 102 Sussex Road, sickened April 19th, 1902, and was removed to Hospital on April 24th, 1902. The source of infection could not be traced. From Arthur B. arose another case: Frank W., aged 11 years, vaccinated, who sickened May 2nd, 1902, and was removed May 5th, 1902.

(250) Charles B., aged 24 years, vaccinated, of 7, Cottage Place, Lower Kennington Lane, sickened April 20th, 1902, with an attack of Smallpox contracted at Covent Garden (in the course of his business), and was removed to Hospital on April 23rd, 1902. No other case arose amongst the 3 other inmates—2 adults (one vaccinated and one had had Smallpox) and 1 vaccinated child of 4 years of age.

(251) Mary Ann R., aged 40 years, vaccinated, of 21, Woodcote Place, West Norwood, sickened April 20th, 1902, and was removed to Hospital on April 25th, 1902. The source of the infection was not traced. The other 3 inmates (1 adult and 2 children under 12 years of age), all vaccinated, were re-vaccinated at once, and all escaped.

(252) James B., aged 39 years, vaccinated, contracted Smallpox in the City, and sickened on April 19th, 1902, at 53, Vassall Road, being removed to Hospital on April 24th, 1902. No secondary case arose amongst the other 5 inmates (all adults and vaccinated).

(253) Agnes, J. H., aged 29 years, vaccinated, sickened on April 27th, 1902, at 33 Albert Buildings, Vauxhall Walk, having contracted the disease from a patient (Simon O'S.), who was removed from No. 11 in the same building on April 14th, 1902 (*vide* case 206). Agnes J. H., was removed to Hospital on April 30th, 1902, and no further case arose amongst the other 5 inmates of the same tenement (2 adults and 3 children under 12 years of age), all vaccinated and 3 re-vaccinated at once.

(254) Ethel H., aged 19 years, vaccinated, sickened on April 23rd, 1902, at 106, Kennington Park Road, and was removed to Hospital on April 30th, 1902. The disease was contracted from 2 unrecognised cases in the same house (Music Hall artistes), treated for Chickenpox about 3 weeks previously. All the other 5 inmates (4 adults and 1 child of 4 years of age), all vaccinated and 3 revaccinated at once, escaped the disease.

(255) John W. A., aged 34 years, vaccinated, sickened April 28th, 1902, at 5 Cottage Grove, and was removed to Hospital on May 1st, 1902. At the time of the outbreak, the source of which was traced to Holborn Viaduct Station, there were 8 other inmates (3 adults and 5 children under 12 years of age), all vaccinated and 6 revaccinated at once, re-vaccination not being deemed necessary in the case of the two youngest, aged 2 and 4 years respectively, and no other secondary case arose amongst them.

(256 and 257) Henry W. B., aged 25 years, vaccinated, contracted Smallpox at Holborn Viaduct Station, where he collected tickets and where other cases had occurred (see case 263), and sickened April 27th, 1902, at 58 Harold Street, being removed to Hospital May 4th, 1902. His wife (Fanny B.), aged 23 years, vaccinated, caught the disease from her husband before he was removed to Hospital, sickened May 10th, 1902, and was herself removed on May 14th, 1902. The baby (3 months old) had been vaccinated and escaped, although twice subjected to contact with Smallpox.

(258-260) At 25, Oakley Street, two cases of Smallpox were discovered, and removed to Hospital on May 4th, 1902, viz.:—Marian D., aged 38 years, vaccinated, who sickened April 30th, 1902, and her son William D., aged 7 years, vaccinated, who sickened April 29th, 1902, and died May 8th, 1902. The source of infection was not traced. Another case, living in the same house (William B., aged 37 years, vaccinated), sickened May 17th, 1902, and was removed on May 20th, 1902, to Hospital, where he died on May 25th, 1902.

(261) Thomas H., aged 28 years, vaccinated, caught Smallpox in a common lodging-house in Southwark Borough, and sickened May 3rd, 1902, at 50, Lansdowne Road, and was removed to Hospital on May 6th, 1902. Thomas H. arrived at 50, Lansdowne Road, on May 5th, 1902.

(262) Eliza H., aged 22 years, vaccinated, contracted Smallpox from a source unknown, and sickened on April 30th, 1902, at 1, Southesk Street, being removed on May 6th, 1902, to Hospital, where she died on May 14th, 1902. She was lodging at 1 Southesk Street, where, at the time of the outbreak, there were 8 other inmates (6 adults and 2 children under 12 years of age), all vaccinated except the child of 18 months of age.

(263 and 264) George M., aged 42 years, vaccinated, contracted Smallpox at his work (Holborn Viaduct Station, where he collected tickets and where other cases had occurred (see cases 256-257), and sickened April 30th, 1902, at 202, Milkwood Road; being removed to Hospital on May 6th, 1902. Of the 14 other inmates at the time of the outbreak 6 were adults (5 vaccinated and 1 un-vaccinated) and 8 children under 12 years of age (all vaccinated), and one sickened on May 17th, 1902, viz., Elizabeth V. S., aged 24 years, vaccinated, who was removed on May 21st, 1902.

(265 and 266) Alexander S., aged 21 years, vaccinated, contracted Smallpox at his work (a printing Firm in the City), and sickened on May 4th, 1902, at 30 Ann Street, being removed to Hospital on May 7th, 1902. Of the 4 other inmates (3 adults and 1 child of 2 years of age), all vaccinated, one sickened on May 21st, 1902, viz.: James M. E., aged 38 years, vaccinated, who was removed to Hospital on May 23rd, 1902.

(267-272) The sources of infection could not be traced in the following 6 cases:—

- (a) Annie W., aged 34 years, 14 Tanswell Street, unvaccinated, sickened May 4th, 1902, removed May 8th, 1902; died May 14th, 1902.
- (b) Ada S., aged 21 years, 28 Oakley Street, vaccinated, sickened May 4th, 1902, removed May 8th, 1902.
- (c) Arthur W., aged 19 years, 20 Victoria Road, Upper Norwood, vaccinated, sickened May 7th, 1902, removed May 10th, 1902.

- (d) Albert J. L., aged 24 years, 2 Kempsford Road, vaccinated, sickened May 7th, 1902, removed May 11th, 1902.
- (e) Anthony A., aged 45 years, 153, Waterloo Road, vaccinated, sickened May 9th, 1902, removed May 13th, 1902.
- (f) Phœbe B., aged 30 years, 35 Ashmole Place, vaccinated, sickened May 11th, 1902, removed May 14th, 1902; died May 23rd, 1902.

In connection with these 6 cases, living in close contact at the time of the outbreaks were 12 other inmates (9 adults and 3 children), all vaccinated, and 10 re-vaccinated at once; and not one of these caught the disease.

(273 and 274) Frederick T., aged 24 years, vaccinated, contracted Smallpox at his work (Printing Firm in Finsbury Borough), and sickened on May 5th, 1902, at 12 Gloucester Street, being removed to Hospital on May 9th, 1902. Of the 7 inmates at the time of the outbreak, 6 were vaccinated adults, and 1 a vaccinated infant of 1 year of age. All the adults were re-vaccinated at once, with the exception of Frederick S., aged 24 years, who sickened May 21st, 1902, and was removed to Hospital on May 23rd, 1902.

(275 and 276) William J. B., aged 28 years, unvaccinated, contracted Smallpox from his son (William B.), who was removed, suffering with Smallpox, from 13 Keppell Street, Holborn Borough, on April 23rd, 1902. William J. B. sickened May 6th, 1902, at 11 Fenwick Place, where he lived alone, and was removed to Hospital on May 13th, 1902, having previously infected his friend, Alfred H. C., aged 30 years, vaccinated, living at 7, Landor Road, who sickened May 21st, 1902, and was removed to Hospital on May 26th, 1902.

(277) George R., aged 23 years, vaccinated, contracted Smallpox at his work (King Street, Regent Street), and sickened May 10th, 1902, at 11, Vassall Road, being removed to Hospital on May 14th, 1902.

(278-280) Smallpox broke out in a Court (Cage Place), containing 17 cottages and 41 inhabitants (18 adults, all vaccinated, and 23 children under 12 years of age, 6 unvaccinated). The first case was Percy Y., aged 12 years, vaccinated, living at No. 16, who sickened May 8th, 1902, and was removed to Hospital on May 14th, 1902. Only two more cases arose, viz., Jane R., aged 27 years, vaccinated, living next door (No. 17), who sickened May 23rd, 1902, and was removed to Hospital on May 26th, 1902; and Edwin J., aged 10 years, unvaccinated, living at No. 10, who sickened May 24th, 1902, and was removed May 27th, 1902. The source of the first infection was not traced.

(281) Kate R. B., aged 29 years, vaccinated, the wife of a ticket collector at Holborn Viaduct Station, in connection with which there had been several cases of Smallpox, including 3 who sickened within the Borough of Lambeth, viz., G. M., J. W. A., and H. B. (*vide* cases 251, 252, 259), sickened on May 13th, 1902, at 109 Hargwynne Street, and was removed to Hospital on May 16th, 1902. Of the 6 other inmates (1 adult, re-vaccinated, and 5 children under 12 years of age, all vaccinated and 3 re-vaccinated at once), not one sickened with the disease.

(282 and 283) Elizabeth B., aged 30 years, vaccinated, of 186 Milkwood Road, sickened on April 30th, 1902, with what was considered to be an attack of Chickenpox, but what was an attack of modified

Smallpox. Her daughter (Katherine B.), aged 1 year, unvaccinated, caught the disease from her mother, sickened May 16th, 1902, and was removed with her mother on May 21st, 1902, to Hospital, where she died on May 28th, 1902. Elizabeth B.'s mother sickened with Smallpox on May 3rd, 1902, at a house in Camberwell Borough, and it is probable that she and her daughter contracted the disease from the same source, which, however, could not be traced. The husband (George B., aged 29 years, vaccinated) escaped the disease.

(284-290) A series of 5 cases arose from 154 Tyers Street, whence Louisa P., aged 35 years, vaccinated, and her daughter (Florence E. P.), aged 4 months, unvaccinated, were removed on May 19th, 1902, to Hospital, where Florence E. P. died on May 20th, 1902. They both sickened on the same day, *i.e.*, May 15th, 1902, and probably contracted the disease from the same source, which, however, was not traced. There were living in the house at the time 15 inmates (5 adults and 10 children under 12 years of age), all vaccinated, and of these 2 caught the disease, *viz.* :—

- (a) Edith F. P., aged 4 years, vaccinated, sickened May 31st, 1902, removed June 2nd, 1902.
- (b) Henry J. G., aged 36 years, vaccinated, sickened May 28th, 1902, removed May 31st, 1902.

In addition, two persons living next door (152 Tyers Street), and one living at 25 Vauxhall Mansions, also caught the disease from this same source, *viz.* :—

- (a) Elizabeth J. L., aged 30 years, vaccinated, sickened May 27th, 1902, removed June 1st, 1902.
- (b) Herbert F. L., aged 31 years, vaccinated, sickened May 27th, 1902, removed June 1st 1902.
- (c) Edgar M., aged 27 years, vaccinated, sickened May 28th, 1902, removed June 1st 1902.

(291) Ezrie E., aged 35 years, unvaccinated, of 162, Newington Butts, caught the disease from some source unknown, sickened May 18th, 1902, and was on May 20th, 1902, removed to Hospital, where he died on May 31st, 1902. The 8 other inmates (3 adults and 5 children under 12 years of age), all vaccinated, were re-vaccinated at once, and not one caught the disease.

(292) Julia W., aged 44 years, vaccinated, of 67 Heyford Avenue, sickened May 18th, 1902, and was removed to Hospital on May 21st, 1902. The source of the infection could not be traced. The 4 other inmates (all vaccinated) escaped, 3 being re-vaccinated at once.

(293 and 294) The source of infection was not satisfactorily traced in connection with the two following cases: (a) Benjamin B., aged 38 years, vaccinated, sickening on May 18th, 1902, at 8 Lapford Place, Tyers' Street, and being removed May 23rd, 1902; and (b) Frederick M., aged 21 years, vaccinated, sickening on May 22nd, 1902, at 114 Prince's Road, and being removed May 24th, 1902. Of the 18 inmates (8 adults and 10 children under 12 years of age), all vaccinated, of the two houses at the time of the outbreaks, not one sickened.

(295-302) In connection with an unrecognised Smallpox case (Thomas J. P.), who sickened May 6th, 1902, but was not removed to Hospital from a house in Battersea Borough until May 11th, 1902, during which

period of infectivity he visited regularly (daily) the bar of a public-house in Lambeth Borough ("The Walnut Tree"), 40 St. Alban's Street, 8 other cases arose, directly and indirectly, as follows:—

- (a) Beatrice H., aged 3 years, unvaccinated, living at "The Walnut Tree," and being accustomed to play in the bar, sickened May 21st, 1902, removed May 25th, 1902.
- (b) Charles E., aged 23 years, vaccinated, of 34. St. Alban's Street, frequenting the bar, sickened May 21st, 1902, removed May 24th, 1902.
- (c) Albert E. T., aged 26 years, vaccinated, of 18 Tracey Street, frequenting the bar, sickened May 22nd, 1902, removed May 26th, 1902.
- (d) Henry J. P., aged 24 years, vaccinated, of 2 Hamish Street, frequenting the bar, sickened May 22nd, 1902, removed May 27th, 1902.
- (e) Robert C., aged 46 years, vaccinated, of 48, Walnut Tree Walk, frequenting the bar, sickened May 24th, 1902, removed May 27th, 1902, to Hospital, where he died on June 2nd 1902.
- (f) Hattie H., aged 14 years, vaccinated, living at 41 St. Alban's Street, and visiting daily as nurse at "The Walnut Tree," sickened May 23rd, 1902, removed May 30th, 1902.
- (g) Sarah H., aged 40 years, vaccinated, living at 41 St. Alban's Street, sickened June 11th, 1902, removed June 16th, 1901, having caught the disease from contact with her daughter Hattie H. (case (f) above).
- (h) Alice C., aged 18 years, vaccinated, of 47 Newport Street, Lambeth Walk, sickened June 10th, 1902, removed June 13th, 1902, having contracted the disease from Henry J. P., of 2 Hamish Street (case (d) above).

(303-306) William C. C., aged 24 years, vaccinated, sickened at 63 Fitzalan Street, on May 24th, 1902, having contracted his disease whilst at work as a fitter with a Firm in the City, where several other cases of Smallpox had recently arisen. He was removed to Hospital on May 26th, 1902, and John S., aged 9 years, unvaccinated, of 2 Saunders Street, who watched the removal, and stood near the ambulance van, sickened 14 days afterwards, viz., on June 9th, 1902, and was removed to Hospital on June 14th, 1902. From John S. two other cases arose, viz.:—

- (a) Ellen S. (his mother), aged 33 years, vaccinated, sickened June 23rd, 1902, removed June 25th, 1902.
- (b) Emily A. (his aunt), aged 28 years, vaccinated, of 19 Saunders Street, sickened June 24th, 1902, removed July 1st, 1902.

(307) John F., aged 22 years, vaccinated, of 17 Broad Street, sickened May 24th, 1902, and was removed to Hospital on May 29th, 1902. He caught his disease whilst at work as a lighterman for a firm in the City. 6 other inmates (5 adults and 1 child of 7 years), all vaccinated, escaped the disease.

(308) Joseph P., aged 40 years, vaccinated, of 60 Wincott Street, contracted Smallpox whilst at work in Engineering Works in Finsbury Borough, and sickened May 26th, 1902, being removed to Hospital on

May 29th, 1902. No other case occurred amongst the 4 other inmates (3 adults and one child of 4 years of age), all vaccinated.

(309-311) A series of 3 cases arose in Dunbar Street, West Norwood, from a very mild unrecognised case of Smallpox, treated as Chickenpox (Mary S., aged 16 years, vaccinated, living at 53 Dunbar Street, sickening May 12th, 1902), 2 in the same house and 1 next door, as follows:—

- (a) Elizabeth S. (mother), aged 43 years, vaccinated, of 53 Dunbar Street, sickened May 30th, 1902, removed June 3rd, 1902.
- (b) Samuel S. (brother), aged 5 years, unvaccinated sickened June 3rd, 1902, removed June 6th, 1902.
- (c) Elizabeth H., aged 56 years, vaccinated, of 55 Dunbar Street, sickened June 4th, 1902, and died June 6th, 1902 (before removal to Hospital) from malignant Smallpox.

At the time of Mary S.'s unrecognised attack there were in the same house 7 other inmates, 3 adults (vaccinated) and 4 children under 12 years of age (3 vaccinated and 1 unvaccinated). The unvaccinated child and one vaccinated adult took the disease, the others escaping.

(312 and 313) Two cases of Smallpox were removed from 189-191 Upper Kennington Lane, on June 4th, 1902, both having sickened on the same day (June 1st, 1902), and presumably having caught the disease from the same source, which could not, however, be definitely traced. The patients names were John H. S., aged 24 years, vaccinated, and Ada S., aged 19 years, vaccinated—brother and sister. There were 10 other inmates (8 adults and 2 children under 12 years of age), all vaccinated, 2 re-vaccinated, and 4 re-vaccinated at once, and not one caught the disease.

(314) Daisy A. R., aged 18 years, vaccinated, contracted Smallpox from her mother's house in Camberwell Borough (177, Camberwell Road), and sickened June 1st, 1902, being removed to Hospital on June 4th, 1902.

(315) Albert F. R., aged 34 years, vaccinated, caught Smallpox whilst on a visit at Erith from May 16th to 19th, 1902, sickened at Rowton House, Bond Street, Vauxhall, on May 31st, 1902, and was removed to Hospital on June 3rd, 1902.

(316) David L., aged 17 years, unvaccinated, of 37 Neville Street, contracted Smallpox whilst at work as an orderly boy in Westminster City, sickened June 2nd, 1902, and was removed to Hospital on June 6th, 1902. The 2 other inmates (both adults and vaccinated) escaped the disease.

(317) Annie T., aged 45 years, vaccinated, living at 2 Avenue Park Road (a school, daily attended by 25 children, all vaccinated), contracted Smallpox from her son (Etien T.), living at 2 Avenue Park Road, who had three weeks previously an unrecognised attack of modified Smallpox, contracted whilst at work at a publishing firm in Westminster City. Annie T. sickened June 2nd, 1902, and was removed to Hospital on June 10th, 1902. Smallpox existed on a School premises for a period of 4 weeks, during which time the 3 other inmates (adults and vaccinated) and the 25 children (all vaccinated and 7 re-vaccinated) were exposed directly or indirectly to infection, and were watched for a period of 3 weeks at their own houses—the School itself being at once closed. No secondary case arose.

(318 and 319) Elizabeth M., aged 34 years, vaccinated, sickened with Smallpox at Ramsgate, on June 9th, 1902, her rash appearing on June 11th, 1902. The disease was diagnosed as Erythema, and Elizabeth M., together with her husband and two children (all vaccinated), was allowed to travel on June 12th to London, where they stayed for the night at 166, Westminster Bridge Road (a Coffee-house). She was removed on June 13th, 1902, to Hospital, where she died on June 15th, 1902. Her husband and her two children, aged 9 and 11 years respectively, escaped the disease, but another inmate of the coffee-house who attended upon her sickened June 25th, 1902, and was removed to Hospital on June 27th, 1902. Her name was Sarah S., aged 25 years, and vaccinated.

(320) Mary A. L., aged 33 years, vaccinated, contracted Smallpox at Chingford, and sickened at 8 Arlingford Road, on June 11th, 1902, being removed to Hospital on June 14th, 1902. Of the 3 other inmates (1 adult, re-vaccinated, and 2 children, vaccinated), not one sickened.

(321-323) The source of infection could not be traced in connection with the two following cases.—

- (a) Robert S., aged 30 years, vaccinated, living at 17 Chancellor Road, West Dulwich, sickened June 10th, 1902, removed June 14th, 1902.
- (b) Amelia C., aged 37 years, vaccinated, living at 89 Lollard Street, sickened June 12th, 1902, removed to Hospital June 17th, 1902. From this case arose another, viz., Edward A. J. C. (husband), aged 43 years, vaccinated, who sickened June 30th, 1902, and was removed July 3rd, 1902.

(324-330) Nellie S., aged 3 years, unvaccinated, sickened with Smallpox on June 1st, 1902, but the disease was treated as Chickenpox for a period of 3 weeks in a 2-roomed cottage (4 Sun Court), in which there were at the time 4 other inmates (3 adults, vaccinated, and 1 child of 10 years of age, unvaccinated), all of whom caught the disease, except a boy of 14 years of age, vaccinated, as follows:—

- (a) Willie S. (brother), 10 years, unvaccinated, sickened June 15th, 1902, removed June 20th, 1902.
- (b) Emily S. (mother), aged 38 years, vaccinated, sickened June 13th, 1902, removed June 20th, 1902.
- (c) Henry J. S. (father), aged 42 years, vaccinated, sickened June 16th, 1902, removed June 20th, 1902.

Nellie S. was removed to Hospital on June 20th, 1902, along with the rest of the family who had caught the disease from her, and the source of Nellie S.'s contagium was not traced. Sun Court is a small court containing 4 cottages, with 23 inhabitants, 13 adults (all vaccinated) and 10 children under 12 years of age (7 vaccinated and 3 unvaccinated), and of these 2 contracted the disease, viz.:—

- (a) Gordon H., aged 14 years, vaccinated, living at 2, Sun Court, sickened June 20th, 1902, removed June 24th, 1902.
- (b) Mary M. T., aged 23 years, vaccinated, living at 3 Sun Court, sickened June 17th, 1902, removed June 23rd, 1902.

A child (Helen R.), aged 12 years, vaccinated, who was accustomed to play in the Court, but who lived at 120 Denmark Hill (a shop situated at the corner of the Court), sickened on June 17th, 1902, being removed on June 21st, 1902.

(331 and 332) Edward D., aged 21 years, vaccinated, contracted Smallpox from his brother, who was removed to Hospital (where he died), suffering with the disease, from a house in Southwark Borough, and sickened June 1st, 1902, at 38 Commercial Road, being removed to Hospital on June 4th, 1902. His fiancée (Rose D., aged 18 years, vaccinated, and living at 11 High Street, Lambeth) caught the disease, sickening June 16th, 1902, and being removed to Hospital on June 19th, 1902.

(333) Frank F., aged 18 years, vaccinated, sickened at 22 Cornwall Road, on June 19th, 1902, being removed to Hospital on June 23rd, 1902. The source of his infection was not traced.

(334) Cordelia B., aged 18 years, vaccinated, contracted Smallpox at 31 Euston Road (Waverley Hotel), in St. Pancras Borough, sickened June 20th, 1902, and was removed to Hospital on June 23rd, 1902. No other case occurred amongst the 4 other inmates (all adults and vaccinated).

(335) David D., aged 22 years, vaccinated, of 84, Paulet Road, contracted Smallpox from a source that could not be traced, sickened June 18th, 1902, and was removed to Hospital on June 23rd, 1902. No secondary case occurred amongst the 8 other inmates (all adults and vaccinated).

(336) Griffith O., aged 32 years, vaccinated, contracted Smallpox at his work in the New Cut, and sickened June 20th, 1902, being removed to Hospital on June 25th, 1902. Griffith O. was in lodgings at 45 New Cut, and the other 7 inmates (5 adults and 2 children under 12 years of age), all vaccinated and 3 re-vaccinated, escaped the disease.

(337) Emily S., aged 31 years, vaccinated, sickened on June 28th, 1902, at 150 Tyers Street, and was removed to Hospital on July 1st, 1902, having probably contracted the disease whilst shopping in Lambeth Walk. No other case occurred amongst the 13 other inmates (6 adults and 7 children under 12 years of age), all vaccinated except a child of 5 years of age, 1 re-vaccinated, and 7 re-vaccinated at once.

(338) Walter F., aged 22 years, vaccinated, a decorator dealing with infected houses in Southwark Borough, contracted Smallpox at his work, sickened at 118 Farmer's Road, on June 28th, 1902, and was removed to Hospital on July 1st, 1902. The remaining 2 inmates (an adult, re-vaccinated, and a vaccinated child of 7 years) escaped.

(339) Mary A. G., aged 31 years, vaccinated, living at 33, Hemans Street, Wandsworth Road, sickened on June 29th, 1902, and was removed to Hospital on July 3rd, 1902. The source of the infection was not traced. No other case occurred amongst the 4 other inmates (2 adults, vaccinated, and 2 vaccinated children under 12 years of age).

(340) John C., aged 46 years, vaccinated, a lighterman, working near the Hospital Ships at Long Reach, contracted Smallpox therefrom, and sickened at 1 Granby Buildings, Broad Street, on July 4th, 1902. He was removed on July 6th, 1902, to Hospital, where he died on July 13th, 1902. No secondary case arose amongst the other 7 inmates of the tenement (5 adults and 2 children under 12 years of age); 4 adults had been vaccinated and 2 re-vaccinated, 1 unvaccinated) had had Smallpox, whilst 1 child was unvaccinated and the other vaccinated.

(341) Corelli F., aged 14 years, unvaccinated, contracted Smallpox whilst engaged as a Clerk in a Public Vaccinator's Office in Southwark Borough, and sickened on July 4th, 1902, at 19 Knowle Road. He

was removed to Hospital on July 8th, 1902. No other case arose amongst the other 5 inmates (3 adults, vaccinated and re-vaccinated, and 2 children under 12 years of age, both re-vaccinated at once).

(342) David W., aged 35 years, vaccinated, of 194 Norwood Road, contracted Smallpox whilst at work (attending the Borough Market, Southwark), sickened July 13th, 1902, and was removed to Hospital on July 17th, 1902. No secondary case occurred amongst the other 7 inmates (4 adults, all vaccinated and re-vaccinated at once, and 3 vaccinated children under 12 years of age, two of whom were also re-vaccinated at once).

(343 and 344) Annie H., aged 30 years, vaccinated, contracted Smallpox at Maidstone on July 1st, 1902, and sickened on July 14th, 1902, at 3 Metropole Parade, Coldharbour Lane. She was removed to Hospital on July 21st, 1902, having previously infected, on July 14th, 1902, her husband (Frank H., aged 27 years, vaccinated), who sickened July 28th, 1902, and was removed July 31st, 1902.

(345-350) A series of 6 cases arose at 91a, Wandsworth Road, from an unrecognised case, treated as Chickenpox, from July 7th to August 5th, 1902, on which day it was removed to Hospital (Nellie M. B., aged 8 years, vaccinated). At the time there were living in the house 8 other persons (3 adults, all vaccinated and 2 re-vaccinated, and 5 children under 12 years of age, 4 vaccinated and 1 unvaccinated), and of these 5 caught the disease as follow:—

- (a) Eleanor G. B. (mother), aged 35 years, vaccinated, sickened July 31st, 1902, dying on August 4th, 1902 (before removal to Hospital).
- (b) Amy G. B. (sister), aged 7 years, vaccinated, sickened July 21st, 1902, removed August 5th, 1902.
- (c) Arthur C. B. (brother), aged 5 years, unvaccinated, sickened July 31st, 1902, removed August 5th, 1902.
- (d) Ernest R. B. (brother), aged 2 years, vaccinated, sickened July 23rd, 1902, removed August 5th, 1902.
- (e) Edwin R. B. (brother), aged 9 years, vaccinated, sickened July 23rd, 1902, removed August 5th, 1902.

The special preventive measures which were employed, and which proved successful, not only in preventing the spread of the disease, but also in stamping it out, are dealt with in the Annual Report 1901, pages 71-81, and in the Special Report on the outbreak of Smallpox in Lambeth Borough, 1901-2, printed in the Appendix to the present (1902) Report.

Taking the 10 years 1891-1900, the Smallpox statistics for the old Parish of Lambeth show annual averages of 1.1 deaths and 22 notifications, as compared with, for the new Borough of Lambeth during 1901, 54 notifications and 4 deaths (case-mortality 7.4 per cent.), and during 1902, 350 notifications and 60 deaths (case-mortality 17.1 per cent.). The London figures are:—

1901—1700 cases and 229 deaths (case-mortality, 13.5).

1902—7794 cases and 1314 deaths (case-mortality, 16.9).

The Vaccination Returns of the Local Government Board for the Borough of Lambeth are given in Tables Q and R, dealing with the whole year 1901 and the first half of 1902 respectively, given for comparison with the Reports of former years, both of the new Borough, and the old Parish, of Lambeth.

TABLE Q.—VACCINATION RETURNS (LAMBETH BOROUGH), 1901.

Registration Sub-Districts.	No of Births.	Successfully Vaccinated.	Insusceptible to Vaccination.	Dead Unvaccinated.	Conscientious Objectors.	Postponed on Medical Certificate.	Removed to other Parishes.	Gone and not found.
Waterloo Road	1319	1077	1	1·2	8	173	334*	7·*
Lambeth Church 1st	571	452	—	73	5	86	34	49
Lambeth Church 2nd	1549	1099	1	196	7	244	128†	130†
Kennington 1st	1886	1498	4	178	25	221	310‡	7‡
Kennington 2nd	1011	784	1	66	20	1	30	107
Brixton	2066	1439	9	1·1	39	10	50	34
Norwood	757	523	4	68	15	6	20	107
Lambeth	9159	6872	20	914	119	741	906	880

* Hospital Cases (148) included. † Workhouse (90) Cases. ‡ Maternity Cases (124) included.

TABLE R.—VACCINATION RETURNS (LAMBETH BOROUGH) FOR THE FIRST HALF-YEAR, 1902.

Registration Sub-Districts.	No. of Births.	Successfully Vaccinated.	Insusceptible to Vaccination.	Dead Unvaccinated.	Conscientious Objectors.	Postponed on Medical Certificate.	Removed to other Parishes.	Gone and not found.
Waterloo Road	614	674	1	46	6	74	175*	65*
Lambeth Church 1st	300	407	1	39	3	36	23	46
Lambeth Church 2nd	729	959	—	79	2	107	108†	98†
Kennington 1st	875	929	—	70	9	84	183‡	55‡
Kennington 2nd	493	360	3	33	5	4	27	50
Brixton	1040	701	5	87	7	30	35	136
Norwood	389	309	1	20	6	10	4	20
Lambeth	4440	4339	11	380	38	345	553	470

The Year's Returns are not made up for the Local Government Board until the August in the following year.

* Hospital Cases (79) included. † Workhouse cases (88) included. ‡ Maternity cases (81) included

SCARLET FEVER.

During 1902, in the Borough of Lambeth, 1,330 cases of Scarlet Fever were notified, and 48 deaths registered, giving a case-mortality of 3.6 per cent.—4.5 for the Inner, and 3.2 for the Outer Districts. In 1901, there were 1041 cases notified and 39 deaths registered, *i.e.*, a case-mortality of 3.2 per cent.—4.7 for the Inner, and 3.2 for the Outer Districts. The annual averages for 10 years (1891-1900) in the old Parish of Lambeth are (1) notified cases 1331.3, and (2) deaths, 53.6.

Of the 1330 persons notified in the Borough of Lambeth during 1902, 1,056 (*i.e.*, 79.4 per cent.) were removed to Hospital, and of these, 43 died (*i.e.*, 4.1 per cent.), whereas 274 (*i.e.*, 20.6 per cent.) were treated at home, and of these 5 died (*i.e.*, 1.8 per cent.). This difference in case-mortality as between Hospital- and home-treated patients is to be explained by the greater severity of the cases sent to Hospital.

The attack-rate and death-rate of Scarlet Fever per 1000 of the population have been steadily decreasing during the last few years in Lambeth Parish, and are below the average during 1902 in the Borough—a satisfactory condition of things, which seems to point to the value of isolation (following notification) as chief preventative measures in this disease.

The age and sex incidence and mortality for Scarlet Fever cases notified in Lambeth Borough during 1902 are as follow:—

Ages.	Number of Cases Notified.			Deaths.			Death Rate per 100.
	M.	F.	Total.	M.	F.	Total.	
Under 1 year	8	8	16	2	1	3	18.7
1 to 2	20	26	46	1	1	2	4.3
2 to 3	42	50	92	6	6	12	13.04
3 to 4	57	64	121	2	5	7	5.8
4 to 5	55	81	136	6	—	6	4.4
5 to 6	72	70	142	3	3	6	4.2
6 to 7	55	76	131	2	1	3	2.3
7 to 8	55	70	125	1	2	3	2.4
8 to 9	27	50	77	1	—	1	1.3
9 to 10	63	60	123	—	—	—	0.0
Over 10 years	164	157	321	1	4	5	1.6
Total ...	613	712	1330	25	23	48	3.7

It will be noted that of the total 1,330 persons reported as suffering from Scarlet Fever during 1902 within the Borough of Lambeth, 411 (*i.e.*, 30.9 per cent.) were under five years of age, and 1,009 (*i.e.*, 75.9 per cent.) under 10 years of age; whilst the mortality was greatest amongst those between the ages 1 to 5 years (*viz.*, 56.3 per cent.). Of the 321 persons over 10 years of age, 5 (*i.e.*, 1.6 per cent.) died.

The distribution of the cases of, and the mortality from, Scarlet Fever amongst the different Registration Sub-Districts of the Borough of Lambeth is seen from the following:—

Registration Sub-Districts.	Total No. of cases Notified.	Cases treated at Home.	Cases removed to Hospital.	No. of Deaths.			Case Mortality per 100.	Rate of Persons Notified per 1,000 Inhabitants.
				At Home.	In Hospital.	Total.		
Waterloo Road 1st..	83	4	79	1	2	3	3.6	} 3.8
Waterloo Road 2nd	21	4	17	—	1	1	4.8	
Lambeth Church 1st	107	29	78	—	1	1	0.9	5.8
Lambeth Church 2nd	213	18	195	—	14	14	6.6	5.3
Kennington 1st ...	269	47	222	—	12	12	4.5	5.01
Kennington 2nd ...	257	78	179	3	4	7	2.7	5.9
Brixton	314	56	258	1	8	9	2.9	3.7
Norwood	66	38	28	—	1	1	1.5	1.8
Borough of Lambeth	1330	274	1056	5	43	48	3.6	4.3

Rate of Persons notified per 1,000 inhabitants—4.9 Inner Districts, and 4.2 Outer Districts.

As far as could be traced, no Scarlatinal Milk outbreak occurred in the Borough of Lambeth during 1902, and no school had to be closed on account of an outbreak of Scarlet Fever amongst the scholars.

Of the 1,056 cases removed, 34.9 per cent. were from the Inner and 65.1 per cent. from the Outer Districts.

In London during 1902 there were registered 550 deaths out of a total of 18,246 cases of Scarlet Fever notified, giving a case-mortality of 3.1 per cent. (uncorrected).

MEASLES AND WHOOPING COUGH.

These two non-notifiable infectious diseases cause more deaths than all the notifiable infectious diseases together. In the Borough of Lambeth, during 1902, 84 and 118 deaths were registered from Measles and Whooping Cough, giving death-rates per 10,000 of the population of 2.7 and 3.9 respectively. In London, during 1902, there were registered 2,360 and 1,876 total deaths from Measles and Whooping Cough, giving corresponding death-rates of 5.2 and 4.1 per 10,000 of the population respectively.

Taking the Lambeth Registration Sub-Districts, it will be seen that Lambeth Church First suffered most, and Brixton and Norwood least, from Measles; whilst Lambeth Church Second suffered most, and Norwood least, from Whooping Cough (*vide* pages 85-86).

Comparing the Borough statistics for 1902 with those for the old Parish for 10 years (1891-1900), it will be seen that there has been a saving during 1902 of 60 deaths from Measles over the average for that decennium, and a saving of 26 deaths from Whooping Cough over the average during the same period.

MEASLES.

With regard to Measles, extra precautions are taken in connection with disinfection of Measles-infected houses, the exclusion of children (both infected children and also children from infected houses) from schools, the closing of classes or whole schools on account of outbreaks of Measles, the distributing of leaflets and posters, and the educating of parents to regard Measles as a serious or dangerous infectious disease, and not as a trivial complaint of childhood.

With regard to London, The County Council decided, on November 8th, 1902, to include "Measles" in the term "Dangerous Infectious Diseases" on and from January 1st, 1903, for the purposes set out in Sections 60-66, 68-70, 72-74 of the Public Health (London) Act, 1891—a suggestion that was made to the

London County Council by the Lambeth Borough Council on January 24th, 1901, and by the late Vestry on March 1st, 1900. Measles is not thereby made a compulsorily notifiable disease. With the extra power, much good should accrue.

Of the 84 deaths from Measles in Lambeth Borough during 1902, 71 (*i.e.*, 84.5 per cent.) occurred amongst children under 5 years of age, showing that it is essentially a disease of young children and especially fatal to such. The stricter the precautions taken against the spread of Measles, the better; but also the more care taken during treatment (in the way of keeping the patients warm), the less fatal the disease is.

During 1902, in the Borough of Lambeth, disinfection has been carried out in connection with 364 Measles-infected houses, as compared with 728 during 1901.

Measles is spread through Schools, especially Infants' Departments, and during 1902 special precautions have been taken in respect thereto, as follows:—

Wesleyan School, Brixton Hill.—Attention was, on May 16th, 1902, drawn to an outbreak of Measles in connection with the Wesleyan School, Brixton Hill, and on enquiry it was found that the absentees (chiefly from Measles), and average attendances per week, were as follow:—

Week ending.	Absentees.	Average Attendance.
May 2nd	29	321
„ 9th	64	286
„ 16th	81	274
„ 23rd	59	282
„ 30th	45	294
June 7th	6	328

(Average attendance 1901 = 327)

The epidemic was, therefore, a *declining* one, and the School was not, in consequence, closed, nor were any further steps deemed necessary, under the circumstances.

Yorkshire School, King Edward Street.—A declining epidemic of Measles was discovered at this School (20 per cent. of the Scholars absent), but no action was taken in regard to closing. The class-rooms were disinfected, with the result that the epidemic rapidly declined.

Stockwell Orphanage.—On account of a small outbreak of Measles at these Schools, the class-rooms were disinfected, but no action taken in regard to closing.

Licensed Victuallers' School.—Disinfection was carried out at these Schools on account of an outbreak of Measles, but no action was necessary in regard to closing, as the number of cases was never sufficient to affect the average attendance.

It will be noted that, although in several instances during 1902 it was necessary to disinfect Schools, in no case was it thought advisable to close a School on account of Measles.

WHOOPING COUGH.

Whooping Cough is also a serious disease, especially to young children. Of the 118 deaths registered in Lambeth Borough during 1902 from this disease, 115 occurred in children under 5 years of age. It is, therefore, a disease of childhood, and its prevention ought to be systematically attempted, chiefly in the way of disinfection of Whooping Cough-infected houses, exclusion of children (both infected and from infected houses), and the educating of parents up to the dangerous nature of the disease and the importance of careful nursing of the patients when suffering from this complaint. Unfortunately, Whooping Cough, like Measles, is regarded as a harmless complaint of childhood, and the ignorance displayed, and the apathy shown, in regard to this disease are well known to all who visit amongst the poorer classes.

During 1902, in the Borough of Lambeth, disinfection has been carried out in connection with 110 Whooping Cough-infected houses, as compared with 72 during 1901.

No School was closed during 1902 on account of Whooping Cough, but St. Mary-the-Less School was disinfected on account of a large number of Whooping-Cough cases amongst the Scholars (girls and boys). Details of the incidences of Measles and Whooping Cough in the different Registration Sub-Districts are as follow:—

Registration Sub-Districts.	Number of Deaths from Whooping Cough.	Number of Deaths from Measles.	Whooping Cough Deaths per 10,000 Inhabitants.	Measles Deaths per 10,000 Inhabitants.
Waterloo Road 1st ...	10	1	} 8.1	} 1.7
Waterloo Road 2nd ..	12	3		
Lambeth Church 1st ..	7	9	3.8	5.02
Lambeth Church 2nd ...	20	15	5.02	3.8
Kennington 1st ...	18	15	3.4	2.8
Kennington 2nd ...	18	12	4.2	2.8
Brixton ...	23	25	2.7	2.9
Norwood ...	10	2	2.7	0.8
District not stated*	...	2	...	...
Borough of Lambeth	118	84	3.9	2.7

* Where the District is not stated, the deaths (or death) are divided equally amongst the other Districts before calculating percentages.

CHICKENPOX.

This disease assumed great importance during 1902, as, by Order of the London County Council, it became notifiable throughout the Administrative County of London (including Lambeth Borough) on February 7th, 1902, remaining so up to January 6th, 1903. During this period, as far as Lambeth Borough is concerned, 1,600 cases were notified by Medical Practitioners, representing 1,385 infected houses.* The subject of the

* 1560 during 1902, and 40 from January 1st to January 6th, 1903, within the Borough of Lambeth, as compared with 25,708 for the whole County of London from February 7th, 1902, to January 6th, 1903.

notification of Chickenpox is dealt with at length in the Smallpox Report (*vide* Appendix, Special Report). The result of the notification was to show that Chickenpox was epidemic throughout the Borough during the year 1902 (but especially in the Norwood District), and, in consequence, 5 Schools (2 public and 3 private) had to be closed for periods of 3 weeks, the disease having broken out therein:—

- (a) Jessop Road Board School (Infants' Department).
- (b) St. Luke's School, Elden Road, West Norwood.
- (c) Mayfield College, Barston Road, West Norwood.
- (d) Private School in Wolfington Road, West Norwood.
- (e) Private School in Park Road, West Norwood.

In each case the result was the same—a marked diminution in the number of cases amongst the Scholars. After closure, the class-rooms were disinfected and the premises cleansed.

St. Stephen's Schools were also disinfected, but not closed, on account of an outbreak therein of Chickenpox.

CHOLERA AND PLAGUE.

In Lambeth Borough, during 1902, no case of Plague, suspected or otherwise, was notified.

One case of Cholera* was notified, but no death registered from that disease.

Six "contacts" were watched in connection with outbreaks of Plague and Cholera elsewhere (two in contact with Plague, and 4 with Cholera, patients).

* This was, in all probability, a case of Epidemic (or Infantile) Diarrhœa, and is the only one notified throughout the whole of the Administrative County of London during 1902.

DIPHTHERIA.

During 1902, 49 deaths were registered in the Borough of Lambeth from Diphtheria, and a total of 459 cases notified, giving a case-mortality of 10.7 per cent. Of the 459 cases notified, 347 (*i.e.*, 75.6 per cent.) were removed to Hospital, and 38 died, giving a case-mortality of 10.9 amongst the patients treated in Hospital; whilst 112 (*i.e.*, 24.4 per cent.) were treated at home, and 11 died, giving also a case-mortality of 9.9 amongst the patients treated at home. The difference in these case-mortalities is disappearing—a fact to be explained, in part, by the antitoxin-treatment that *all* Hospitals, and most home-treated patients now have the advantage of having, and the greater care in nursing that is procurable in Hospital (whither the most severe cases are sent).

The case-mortality rate for the whole of the Borough of Lambeth during 1902 is low, pointing to the mildness of the majority of cases.

The sudden decrease in the number of Diphtheria cases throughout the new Borough of Lambeth during 1902 is again remarkable, as it was during 1901, and will be seen, on comparison with the yearly mortality average of the 10 years (1891-1900) for the old Parish of Lambeth. This yearly average is 128, so that during 1902 there has been a decrease in the mortality-rate, in comparison, of 61.7 per cent. So; too, if the number of notifications received during 1902 in the Borough of Lambeth be compared with the yearly average of the 10 years (1891-1900) for the old Parish of Lambeth, *i.e.*, since the Notification Clauses of the Public Health (London) Act, 1891, came into force, the same remarkable decrease will be noticed, *viz.*, a decrease of 36.2 per cent. The yearly average of the old Parish is 715, and the number for the Borough for 1902 is 459. Fortunately the comparison can be extended further, and made for many years past as the statistics for Diphtheria have been worked out in connection with the old Parish, and are as follow:—

* 78 bottles of antitoxin have been gratuitously distributed in Lambeth Borough during 1902, with most satisfactory results.

Quinquennial Period.	Population (estimated).	Number of Deaths.	Death-Rate per million living.	
Boro' Old Parish of Lambeth.	1863—1867	902119	148	164
	1868—1872	1021165	96	94
	1873—1877	1132106	184	163
	1878—1882	1245913	255	205
	1883—1887	1315211	365	278
	1888—1892	1367734	537	393
	1893—1897	1443857	683	483
	1898	304073	108	355
	1899	308108	153	496
	1900	312152	101	323
	1901	302533	47	155
	1902	305102	49	160

Even allowing for the slight fallacy that may arise from comparing statistics of the old Parish with those of the new Borough of Lambeth, the sudden decrease in the mortality from Diphtheria is most remarkable, and when taken in conjunction with the equally sudden decrease in the number of notifications of the same disease received, points to a sudden decline in the prevalence of Diphtheria throughout the Borough of Lambeth during 1902, as well as during 1901, and that, too, although Diphtheria has been rising slowly but surely in epidemic proportions for the last 20 years. The statistics for London, as a whole, are no less remarkable.

The age and sex incidence and mortality from Diphtheria cases notified in the Borough of Lambeth during 1902 are as follow:—

DIPHTHERIA.

Ages.	No of Cases Notified.			Deaths.			Death Rate per 100.
	M.	F.	Total.	M	F.	Total.	
Under 1 year	6	4	10	—	1	1	10·0
1 to 5 ...	98	79	177	20	14	34	19·2
5 to 10 ...	61	78	139	9	1	10	7·2
10 to 20 ...	29	37	66	3	—	3	4·5
20 to 40 ..	25	39	64	—	1	1	1·6
40 to 60 ..	—	3	3	—	—	—	0·0
60 and over ...	—	—	—	—	—	—	—
Total ...	219	240	459	32	17	49	10·7

Mild and unrecognised cases cause the disease to spread, and in this way the advantage of bacteriological examinations must be apparent to all. In the report of the Bacteriological Laboratory (see page 182), it will be noted that of the 154 examinations made in 1902, in only 16 (*i.e.*, 10·4 per cent) were the true bacilli of Diphtheria found.

During 1902, no school had to be closed on account of Diphtheria.

The distribution of the disease in the different Registration Sub-Districts of the Borough of Lambeth, together with the different mortality rates for hospital- and home-, treated patients, etc., are as follows:—

Registration Sub-Districts.	Total No. of Cases Notified.	Cases treated at Home.	Cases removed to Hospital.	No. of Deaths.			Case Mortality per 100.	Rate of Persons Notified per 1000 Inhabitants.
				At Home.	In Hospital.	Total.		
Waterloo Rd. 1st	23	4	19	1	1	2	8.7	} 1.9
Waterloo „ 2nd	29	3	26	1	1	2	6.9	
Lambeth Ch. 1st	83	18	65	—	6	6	7.2	4.5
Lambeth Ch. 2nd	83	8	75	1	12	13	15.7	2.1
Kennington 1st	64	18	46	—	2	2	3.1	1.2
Kennington 2nd	75	27	48	3	9	12	16.0	1.7
Brixton ..	90	24	66	1	6	7	7.8	1.05
Norwood ...	12	10	2	4	1	5	41.7	0.3
Borough of Lambeth	459	112	347	11	38	49	10.7	1.5

The value of antitoxin* as a remedy for Diphtheria is now acknowledged, more especially when used in the early stages of the diseases, *e.g.*, first or second days. Recognising the importance of this antitoxin treatment being early administered, and remembering that no untoward results have yet been noticed, or reported, in cases where the remedy has been given to persons even when not suffering from Diphtheria, it is advisable to try this remedy at once, if necessary even before the diagnosis has been cleared up by bacteriological examination. Such early administration cannot possibly do any harm, and may do an immense amount of good, *e.g.*, by saving life, etc.

Antitoxin is found now to be useful, too, as a prophylactic, or preventative. Children and others exposed to Diphtheria may, with advantage, be injected with small doses of antitoxin, as also susceptible persons, who have been in close proximity to a Diphtheria patient, or may have to reside in a house where Diphtheria exists, owing to the patient, from any cause, not being removed to Hospital. Such persons under these conditions are less likely to catch the disease if protected by antitoxin. Antitoxin has been distributed gratuitously by the Borough Council for use both as a remedy and a prophylactic, throughout 1902, 78 vials having been so distributed within the Borough.

* Antitoxin first gratuitously distributed in Lambeth by the late Vestry on August 3rd, 1899.

MEMBRANOUS CROUP.

During 1902, in the Borough of Lambeth, 15 cases were notified from Membranous Croup, and 4 deaths were registered, giving a case-mortality of 26.7 as compared with a yearly average of 26 cases notified and 8 deaths registered throughout the old Parish of Lambeth during the 10 years (1891-1900). 1 of the 15 Lambeth cases was removed to Hospital.

In London, during 1902, there were registered 1181 deaths out of a total of 10734 cases of Diphtheria and Membranous Croup, notified, giving a mortality of 11.0 per cent. *(uncorrected).

TYPHOID FEVER.

During 1902, 38 deaths were registered in the Borough of Lambeth from Typhoid (Enteric) Fever, and a total of 213 cases notified, giving a case-mortality of 17.8 per cent. Of the 213 cases notified, 139 (*i.e.*, 65.3 per cent.) were removed to Hospital, and 27 died, giving a case-mortality of 19.4 amongst the patients treated in Hospital; whilst 74 (*i.e.*, 34.7 per cent.) were treated at home, and 11 died, giving a case-mortality of 14.9 amongst the patients treated at home.

The case-mortality rate for the whole of the Borough of Lambeth during 1902 is low, pointing to the mildness of the majority of cases, and the probability that several of the cases diagnosed were not genuine cases of Typhoid Fever, due to the Eberth-Gaffky bacillus.

If a comparison be made between the number of cases of Typhoid notified and the number of deaths from Typhoid registered in the Borough of Lambeth during 1902, and the yearly averages for 10 years (1891-1900) in the old Parish of Lambeth, it will be noted that there is a slight increase, which need

* In London Statistics, Diphtheria and Membranous Croup are now grouped together by the Registrar-General.

not be regarded. The yearly average of cases notified in the Parish is 189.6, and the yearly average of deaths registered is 32.8 as compared with 213 and 38 respectively as the numbers of notified cases and deaths in the Borough of Lambeth during 1902.

The age and sex incidence and mortality for Typhoid cases notified in Lambeth Borough during 1902 are as follow :—

Ages.	Number of Cases Notified.			Deaths.			Death-rate per 100.
	M.	F.	Total.	M.	F.	Total.	
Under 1 year ...	—	—	—	—	—	—	—
1 to 5 ...	3	4	7	—	—	—	0.0
5 to 10 ...	13	8	21	1	2	3	14.3
10 to 20 ...	45	19	64	3	3	6	9.4
20 to 40 ...	37	52	89	9	14	23	25.8
40 to 60 ...	14	13	27	3	2	5	18.5
60 and over ...	—	5	5	—	1	1	20.0
Total ...	112	101	213	16	22	38	17.8

It will be noted that there were no cases in infants under 1 year of age, no deaths amongst children between 1 and 5 years of age, and only 3 deaths in children between 5 and 10 years; whilst the greatest number of cases and deaths occurred in adults between 20 and 40 years, and the mortality-rate was greatest also amongst persons at the same age periods.

Sub-dividing the Typhoid cases and deaths amongst the various Registration Sub-districts, it will be seen that the case-mortality is lower in the Inner than in the Outer Districts, viz., 14.7 per cent., as compared with 20.3 per cent. The reason for this is not clear, as the contrary generally is the case, the case-mortality being greater in the Inner, more congested, and less sanitary, districts, where it will be noted that the incidence of the disease is greater.

Registration Sub-Districts.	Total No. of Cases notified.	Cases treated at Home.	Cases removed to Hospital.	No. of Deaths.			Case Mortality per 100.	Rate of persons Notified per 10,000 Inhabitants.
				At Home.	In Hospital.	Total.		
Waterloo Rd. 1st	8	4	4	...	1	1	12.5	} 8.8
Waterloo .. 2nd	16	2	14	1	3	4	25.0	
Lambeth Ch. 1st	26	11	15	...	2	2	7.7	14.1
Lambeth Ch. 2nd	45	7	38	1	6	7	15.6	11.3
Kennington 1st	27	6	21	2	5	7	25.9	5.04
Kennington 2nd	23	10	13	2	2	4	17.4	5.3
Brixton... ..	58	29	29	2	7	9	15.5	6.8
Norwood	10	5	5	3	1	4	40.0	2.7
Borough of Lambeth ...	213	74	139	11	27	38	17.8	6.9

The incidence of Typhoid in the Inner as compared with the Outer Districts is as 2 to 1. Of the 206 Typhoid-infected houses, 107 (*i.e.*, 51.9 per cent.) showed on inspection, defective drains, traps, fittings or appliances. In 31 (*i.e.*, 15.05 per cent.) the drains themselves were found to be defective. 11 cases were traced to sources outside the Borough, and 5 were secondary cases, *i.e.*, derived from previous cases in the Borough. No case could be traced definitely to infected water, milk, oysters or other shell-fish, ice-creams, or other well-known channels, through which Typhoid has been again and again stated to spread.

91 samples of blood were examined at the Bacteriological Laboratory during 1902 (see p. 182) for the Widal reaction of Typhoid, and in 34 cases such reaction was obtained. As Typhoid Fever in a District is a sanitary index, the Borough of Lambeth may be congratulated as far as the year 1902 is concerned.

In London during 1902, there were registered 585 deaths (uncorrected) out of a total of 3405 cases of Typhoid notified, giving an uncorrected case-mortality of 17.2 per cent.

CONTINUED AND TYPHUS FEVERS.

During 1902, 10 cases were notified in the Borough of Lambeth and one death registered from Continued Fever, as compared with yearly averages for 10 years (1891-1900) in the Parish of Lambeth of 25.7 and 2.2 respectively. The case-mortality for 1902 is 10 per cent. 6 cases were notified during 1901, and 3 deaths registered, from Continued Fever, in the Borough of Lambeth.

In London, 48 cases were notified, and 4 deaths registered from Continued Fever, giving a case-mortality of 8.3 per cent. (uncorrected). No case of Typhus was notified during 1902 in the Borough of Lambeth, but 4 cases were notified in London, but no deaths registered, giving a case-mortality of 0.0 per cent. (uncorrected).

PUERPERAL FEVER.

During 1902, in the Borough of Lambeth, 6 deaths were registered from Puerperal Fever (a disease of child-bed), and 17 cases notified, giving a case-mortality of 35.3 per cent.

The annual averages for 10 years (1891-1900) in the Parish of Lambeth are (1) notified cases, 18.9; and (2) deaths, 11.5; whilst, in the Borough of Lambeth during 1901, 16 cases were notified and 10 deaths registered.

Puerperal Fever is a preventable disease, and is caused through want of care on the part of the nurse, or the medical practitioner, attending upon a lying-in woman. 9,067 births were registered in the Borough of Lambeth during 1902, and in only 17 cases was Puerperal Fever notified—a most satisfactory fact to be able to report. Of the 17 cases notified, 4 were removed to Hospital. In each case enquiries were made, and the Midwives (when in attendance) were visited at their homes, their rooms (or houses), and clothes disinfected, and their other cases (being attended at the time) followed up and watched for periods varying from 2 to 3 weeks each. Three Midwives were cautioned, but in no instance was it found necessary to take legal action against any Midwife.

The Midwives Act, 1902, comes into force on April 1st, 1903, and the London County Council is made thereby the Supervising Authority for the Administrative County of London, but power is given to such Council to delegate all (or some) of its duties or powers to the different Metropolitan City and Borough Councils. It is to be hoped that such a delegation of duties or powers will be made (*vide* Special Report in Appendix on Midwives Act, 1902).

In London, during 1902, there were registered 201 deaths out of a total of 313 cases notified, giving a case-mortality of 64.2 per cent. (uncorrected).

ERYSIPELAS.

During 1902, in the Borough of Lambeth, 317 cases of Erysipelas were notified, and 10 deaths registered, giving a case-mortality of 3.1 per cent. Of the 317 cases, 10 were removed to Hospital. The yearly averages for the 10 years (1891-1900) in the Parish of Lambeth are (1) notified cases, 347; and (2) deaths, 17.5.

During 1901, 236 cases were notified, and 13 deaths registered, from Erysipelas within the Borough of Lambeth.

In London, during 1902, there were registered 183 deaths out of a total of 5537 cases notified, giving a case-mortality of 3.3 per cent. (uncorrected).

The advantages from the notification of Erysipelas are few, and the majority of cases notified as Erysipelas are not such as were contemplated by the framers of the Notification Act.

Registration Sub-Districts.	PUERPERAL FEVER.			ERYSIPELAS.		
	Number of Cases Notified.	Number of Deaths.	Case Mortality per 100.	Number of Cases Notified.	Number of Deaths.	Case Mortality per 100.
Waterloo Road 1st	1	—	0·0	22	1	4·5
Waterloo Road 2nd	2	—	0·0	12	—	0·0
Lambeth Church 1st	1	1	100·0	34	2	5·9
Lambeth Church 2nd	1	1	100·0	72	2	2·8
Kennington 1st	3	—	0·0	56	2	3·6
Kennington 2nd	1	—	0·0	40	2	5·0
Brixton	6	4	66·6	70	1	1·4
Norwood	2	—	0·0	11	—	0·0
Borough of Lambeth	17	6	35·3	317	10	3·1

DIARRHŒA.

During the year 1902 there were registered in the Borough of Lambeth 159 deaths from Diarrhœa, as compared with 274 during 1901.

Taking the statistics of the old Parish of Lambeth for 10 years (1891-1900), it will be seen that the annual average is 188.4, so that the figures for 1902 for the Borough are 15.6 per cent. less, which, considering the greater care exercised by medical practitioners in nomenclature, on the lines of the recommendations of the Report of the Royal College of Physicians of London, is highly satisfactory, though the small average heat during the summer months must be remembered and taken into account in connection therewith.

Of these 159 deaths, 146 (*i.e.*, 91.8 per cent.) were in children under five years, and 121 (*i.e.*, 76.1 per cent.) in infants under one year of age. August and September were the most fatal months (*see* Table S) though the disease was prevalent also during July and October. In this connection it is again interesting to note that the mean monthly air temperature was in June, 59.8 deg.; July, 63.3 deg.; August, 62.1 deg.; September, 57.9 deg.; and October, 51.0 deg.; whilst the 4ft. earth thermometer registered 56 deg. F. on June 29th, rising to a maximum 60 deg. F. on July 17th, and sinking to 56 deg. F. again on September 30th. 56 deg. F. is the so-called "critical" earth temperature for Diarrhœa, *i.e.*, the temperature at which the germs of this particular disease begin to multiply and prove themselves dangerous.*

Age mortalities from Diarrhœa were as follow:—

Age.	Total Deaths.			Percentage of Total Deaths from Diarrhœa
	M.	F.	Total.	
Under 1 year	73	48	121	76.1
1 to 5	10	15	25	15.8
5 to 20	—	—	—	0.0
20 to 40	1	2	3	1.9
40 to 60	2	2	4	2.5
Over 60	2	4	6	3.8
Total	88	71	159	100.0

* The 4 ft. earth temperatures were taken in Regent's Park, and thanks are due to Mr. Wm. Marriott, of the Royal Meteorological Society, 70 Victoria Street, S.W., for the information in connection therewith.

In London there were registered, during 1902, 2,470 deaths from Diarrhœa, giving an uncorrected rate of 5·2 per 10,000 living, and 2·9 per cent. of total deaths.

BOROUGH OF LAMBETH.		Number of Deaths.	Diarrhœa Death-rate per 10,000 Inhabitants.
Registration, Sub-Districts.			
Inner.	Waterloo Road 1st	21	} 9·9
	Waterloo Road 2nd	6	
	Lambeth Church 1st	23	12·5
	Lambeth Church 2nd	32	8·03
Outer.	Kennington 1st	23	4·3
	Kennington 2nd	12	2·8
	Brixton	31	3·6
	Norwood	11	2·9
Borough of Lambeth...		159	5·2

In the Inner Registration Sub-Districts the Diarrhœa death-rate per 10,000 inhabitants was 9·6 as compared with 3·5 for the Outer Districts, *i.e.*, nearly 3 to 1. The Inner Districts of the Borough during 1902 have *pro rata* suffered *less* from Diarrhœa than the Inner Districts of the old Parish during previous years.

It will be noted that the 4-foot earth temperature had a very low register during 1902, and, as a natural consequence, the Diarrhœa deaths were very few in number.

Under the heading of Diarrhœa may be classed the 1 case of Cholera* notified, as there is no reason to regard it otherwise than as a case of "Summer Diarrhœa"; and also the 66 deaths registered from "Enteritis" a decrease that is *pro rata* with the increase in the number of "Diarrhœa" deaths, and is due to more exact nomenclature. The yearly average number of deaths from Enteritis in the old Parish of Lambeth for the 10 years 1891-1900 is 101·8. Comparison must be made with the corrected infantile mortality rate for the Borough, which is 127 per 1,000 births.

*1 Case of Cholera was notified in London.

TABLE S.
Shewing the Diarrhœa Mortality in Lambeth Borough in each month during the year 1902.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Waterloo 1st ...	...	...	...	...	...	...	5	8	5	1	2	...	21
Waterloo 2nd ...	...	...	...	...	1	...	1	2	1	1	...	...	6
Lambeth 1st ...	1	...	...	...	...	1	1	9	10	1	...	...	23
Lambeth 2nd ..	...	...	...	...	3	2	1	9	12	5	...	...	32
Kennington 1st ...	...	1	1	...	...	...	1	5	13	1	1	...	23
Kennington 2nd ...	...	...	...	...	1	...	...	2	8	1	...	...	12
Brixton ...	...	1	1	...	1	1	1	8	10	5	2	1	31
Norwood ...	...	...	...	...	1	1	1	3	3	1	1	...	11
Total ...	1	2	2	...	7	5	11	46	62	16	6	1	159

TUBERCULOSIS.

During 1902, 521 deaths were registered in Lambeth Borough as due to consumption (tuberculosis of the lungs), 101 as due to tabes mesenterica and tubercular meningitis, and 79 as due to other forms of tuberculosis, making a total of 701 deaths from tuberculosis (all forms)—*i.e.*, 13.01 per cent. of the total deaths registered from all causes. The total deaths within the Borough during 1901 from all forms of tuberculosis was 695. Sub-dividing the consumption (or phthisis) deaths during 1902 amongst the different Registration Sub-Districts, it is found that the consumption death-rate per 1,000 living varies from 3.04 (highest) in Waterloo Road to 0.8 (lowest) in Norwood. The rate in the Inner Districts, as a whole, is 2.7; in the Outer, 1.3.

In connection with preventive measures, which have been taken in the Borough (and the old Parish) of Lambeth for several years past, *e.g.*, disinfection, distribution of leaflets, etc., a definite advance has been made during 1902 by the Lambeth Borough Council in having approved of, and adopted, a scheme of voluntary, or optional, notification of Consumption (with tuberculous excretions). A special Report was presented by the Medical Officer, and adopted by the Council, on February 6th, 1902, by which it was decided that, as tuberculosis is now a recognised infectious disease due to the entrance of a germ (the bacillus tuberculosis) from without into the human body, and as the chief danger lies in the sputum that is expectorated by those suffering from the disease (affecting the lungs), advantage might be gained from such a system of voluntary notification. It was decided that such notification should have reference merely to cases of consumption, or phthisis, accompanied with tuberculous excretions. The subjoined letter was sent round to all the Medical Practitioners in Lambeth Borough:—

re Notification of Consumption.

DEAR SIR,

I have much pleasure in informing you that the Borough Council of Lambeth has agreed to a Voluntary system of Notification of Consumption (with tuberculous excretions) throughout the Borough of Lambeth. It has been de-

cided to pay the usual notification fee of 2s. 6d. for every private case, and 1s. for every Institution (or public) case. The fee is to be paid for the first notification only, and no further fee is to be paid for any other notification of the same case.

I need not remind you that it rests with you, as one of the Medical Practitioners practising in Lambeth, to make this Voluntary Notification of Consumption a success, by at once notifying all your patients who are suffering from Consumption (tuberculosis of the lungs), accompanied with tuberculous expectorations. With such knowledge as to where the disease is mostly to be found, I hope to be able to take precautionary measures to prevent the extension of this disease, which is now acknowledged, as you are aware, to be of an infectious nature, due to the bacillus tuberculosis.

Secrecy will be observed, and the information which you give, by notification, will be regarded as strictly private.

Allow me to take this opportunity of reminding you that samples of sputum are examined, free of charge, at the Bacteriological Laboratory, at Wanless Road, Loughborough Junction. In this way you will, before notifying, be able to confirm, or settle, the diagnosis of any of your cases, should you wish to do so.

Bottles for holding samples of sputum can be obtained at the Laboratory (Wanless Road), or at the above address.

Yours faithfully,

JOSEPH PRIESTLEY,

Medical Officer of Health.

Dr.

Since June 1st, 1902 (the date on which this voluntary system of notification was commenced) up to December 31st, 1902, 315 cases have been notified. On the receipt of a notification, a letter is sent privately to the patient notified, explaining in simple language the nature of the infection in consumption and the preventive measures (disinfection, destruction of sputum, etc.)

needed to prevent the spread of the disease amongst members of the same household (and others). When the infected room or house becomes vacant (from death, removal, etc.), disinfection is carried out as required.

In connection with the voluntary notification of consumption, it appears to be competent for a Borough Council* to enter into such an arrangement, and to pay a reasonable fee for such, without the sanction of the Local Government Board, as the following letter shows:—

LOCAL GOVERNMENT BOARD,

Whitehall, S.W.

11th January, 1902.

SIR,

I am directed by the Local Government Board to acknowledge the receipt of your letter of the 9th instant, and in reply to state that it is competent to the Borough Council of Lambeth, without the Board's sanction, to enter into an arrangement for the voluntary notification by local Medical Practitioners of cases of infectious disease other than those diseases to which Section 55 of the Public Health (London) Act, 1891, applies occurring in their respective practices, and to pay a reasonable fee for such notification.

I am, Sir,

Your obedient servant,

JOHN LITHIBY,

Assistant Secretary.

J. PRIESTLEY, ESQ.,

Medical Officer of Lambeth.

The Metropolitan Asylums Board has no power to repay to a Metropolitan Borough Council the fees paid for the certificates received in connection with this voluntary notification of Tuberculosis, as must be done in the case of the compulsory notification

* Of the Metropolitan Boroughs and Cities, the following have adopted a Voluntary Notification of Consumption: City of London, City of Westminster, Boroughs of Finsbury, Greenwich, Hammersmith, Hampstead, Kensington, Southwark, Stoke Newington and Woolwich, in addition to Lambeth.

of the infectious diseases mentioned in the Public Health (London) Act, 1891. The fees paid in Lambeth Borough are for *first* notifications only.

The disinfecting work done in connection with Tuberculosis during 1902 throughout the Borough is interesting—488 houses as compared with an average 299.6 during 1897-1901.

The systematic bacteriological examination of all doubtful cases of consumption is of the greatest importance, and in this connection 212 such examinations have been made during 1902, as compared with 145 during 1901. Full particulars will be found on page 182.

Open-Air Treatment in cases of Consumption.

The Council approved, on June 5th, 1902, the principle of, and need for, open-air treatment for Consumptive patients, and the Local Government Board was communicated with, with a view to the necessary provision of Sanatoria for that purpose by the various Metropolitan Sanitary Authorities. It is felt that the Metropolitan Asylums Board, as the Hospital Authority for London for dealing with infectious diseases, might be entrusted to provide such Sanatoria, or to use some of the existing Small-pox accommodation (Gore Farm) for such a purpose. Great difference of opinion was found to exist amongst the different Metropolitan Sanitary Authorities, so that, for the present, no further action was taken in the matter by the Board—a decision to be regretted, as the value of fresh air and sunlight are now admitted as remedial measures, more especially in the early stages of the disease. By such measures, the disease can be arrested, if not permanently eradicated, and Sanitary Authorities would be wanting in their duties if they did not supply Sanatoria for the use of their respective districts, thereby preventing much suffering, ill-health, and monetary loss. To be successful, Sanatoria should be provided in conjunction with farm-colonies, where patients, after treatment in Sanatoria, may be placed, to get accustomed to open-air employment, with a view to such being followed ever afterwards. It is clear that for patients to return to their *crowded*, and often unsatisfactory, homes after open-air treatment, would be courting disaster. This view of the matter cannot be too strongly enforced in dealing with this subject of open-air treatment.

EPIDEMIC INFLUENZA.

During 1902, 78 deaths were registered from Influenza in the Borough of Lambeth, as compared with 55 during 1901, and an average of 107·5 for ten years (1891-1900) in the old Parish of Lambeth. Of the 78 deaths, 61 were registered during the first, 3 during the second, 1 during the third, and 13 during the fourth quarter of the year.

In London there were registered 1073 deaths (uncorrected from Influenza during 1902.

Reviewing the past ten years' history of the old Parish of Lambeth in relation to Epidemic Influenza, it will be seen that the disease has been practically epidemic since 1891, rising to the maximum in 1892, 1895, 1899, and 1900. The yearly average for ten years (1891-1900) in the old Parish of Lambeth is 107·5, so that the 1902 statistics for the new Borough of Lambeth show a sub-epidemic state.

Table shewing the number of deaths from Epidemic Influenza in Lambeth Borough and London during 1902, and during ten years (1891-1900), in Lambeth Parish and London.

	Old Parish of Lambeth.										Average for 10 years (1891-1900.)	Borough of Lambeth. 1902
	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900		
Lambeth ...	131	142	85	41	148	51	45	126	151	152	107·5	78
London ... (including Lambeth).	2336	2264	1526	750	2156	496	671	1283	1817	1950	1524·9	1073

The term "Influenza" is too indefinite in medical practice to permit of any satisfactory deductions being drawn from the above statistics.

The 38 deaths from venereal affections (Syphilis, etc.) are the only other point calling for note in the class of Zymotic Diseases.

Classes II. and III.—Parasitic and Dietetic Diseases.

21 deaths were registered in the Borough of Lambeth in these classes from Alcoholism and Delirium Tremens.

Class IV.—Constitutional Diseases.

Of the total 1137 deaths under this class 329 were due to Cancer, 521 to Phthisis and 180 to Tubercular Meningitis and other forms of Tuberculosis.

Class V.—Developmental Diseases.

The total number of deaths in this class was 342, consisting of 173 from Premature Birth, 126 from Old Age, and 43 from Atelectasis and Congenital Malformations.

Class VI.—Local Diseases.

1. Diseases of the Nervous System caused 474 deaths, including 52 from Convulsions, 222 from Apoplexy, and 14 from Epilepsy.
2. 551 deaths were due to diseases of the Circulatory System.
3. The diseases of the Respiratory Organs caused 1139 deaths (529 from Bronchitis, and 274 from Pneumonia).
4. Diseases of the Digestive Organs caused 342 deaths, of which 66 were due to Enteritis, 15 to Peritonitis, 94 to diseases of the Liver and 35 to Dentition.
5. Diseases of the Urinary System caused 183 deaths.

- 6 Diseases of the Reproductive System, Integumentary System, Locomotive System, Lymphatics, Organs of Special Senses, etc., caused together 73 deaths.

Class VII.—Deaths from Violence.

201 deaths in all, including 164 from Accidents, 21 from Burns and Scalds, 14 from Drowning, 36 from Suffocation in bed (32 being infants under 1 year), 33 from Suicide, and 4 from Homicide.

Class VIII.—Other Causes.

212 deaths were registered in this class, consisting of deaths from Dropsy, Tumours, Hæmorrhages, or other ill-defined or non-specified causes.

Different rates of mortality from different diseases and groups of diseases are given in terms of the total deaths (corrected and uncorrected) in Tables T and U; whilst Table T gives also the deaths from the chief Infantile Diseases, expressed in terms of the Infantile population (or number of Births). Allowing for the slight differences between corrected and uncorrected death returns, it will be noted that, in regard to both infantile and other diseases, Lambeth again compares favourably with London (*vide* Table U).

Deaths amongst infants under 1 year are a sensitive index (amongst others) of the sanitary state of a Community, and in this respect the Lambeth Borough statistics, as a whole, are satisfactory. Table F is important, too, in this connection, as comparing the Lambeth Borough statistics with those for London as a whole, taken in different age-periods.

TABLE T.

Shewing Classification of Causes of deaths in the Borough of Lambeth during 1901 and 1902.

A.—Total Deaths from all causes and at all ages, with percentages of deaths to total deaths (corrected).

CLASS OF DISEASE.	BOROUGH 1901.		BOROUGH 1902.	
	No. of Deaths (correct- ed.)	Percent- age of Total Deaths.	No. of Deaths correct- ed.)	Percent- age of Total Deaths.
I.—Zymotic Diseases	741	14.3	704	13.1
Seven Principal	627	12.1	561	10.4
Influenza	55	1.1	78	1.4
II.—Parasitic	4	0.08	4	0.08
III.—Dietetic	28	0.5	25	0.5
IV.—Constitutional	1075	20.7	1137	21.1
Cancer	281	5.4	329	6.1
Phthisis	495	9.5	521	9.7
Tubercular Diseases, ex- cluding Phthisis	198	3.8	180	3.3
Rheumatism (Acute and Chronic) and Gout	47	0.9	38	0.7
V.—Developmental	361	6.9	342	6.4
Old Age	146	2.8	126	2.3
VI.—Local Diseases	2584	49.7	2762	51.3
Circulatory System	497	9.6	551	10.2
Bronchitis	537	10.3	529	9.8
Pneumonia and Broncho- Pneumonia	415	7.9	502	9.3
Pleurisy and Pleuro-Pneu- monia	23	0.4	42	0.8
Respiratory System, ex- cluding Phthisis	1044	20.1	1139	21.1
VII.—Violence	224	4.3	201	3.7
Suicide	31	0.6	33	0.6
VIII.—Other Causes	180	3.5	212	3.9

TABLE T (Continued).

B.—Deaths (corrected) of Infants under One Year of age from the chief infantile diseases, and from all causes, expressed in terms of 1,000 births.

	BOROUGH 1901.		BOROUGH 1902.	
	Total Deaths under One Year (Corrected).	Proportion to 1000 Births.	Total Deaths under One Year (Corrected).	Proportion to 1000 Births.
From all causes	1267	139·3	1155	127·5
Diarrhœa	235	25·8	121	13·4
Convulsions	40	4·4	46	5·1
Respiratory Diseases	219	24·1	225	24·8
Premature Births	163	17·9	173	19·1
Tubercular Diseases (including Phthisis)	91	10·01	66	7·3
Measles	25	2·7	9	0·9
Whooping Cough	31	3·4	50	5·5
Suffocation in Bed	47	5·2	32	3·5
Enteritis	30	3·3	38	4·2
Dentition	28	3·1	19	2·1

TABLE U.

Shewing Classification of certain Causes of Deaths (uncorrected) in the Borough and Parish of Lambeth, compared with London, during 1901 and 1902.

A.—Deaths at all Ages.

	LAMBETH.		LONDON.	
	Percentage of total Deaths (uncorrected) Borough Borough		Percentage of total Deaths (uncorrected).	
	1901.	1902.	1901.	1902.
I. PRINCIPAL ZYMOTICS ...	12·3	10·1	12·8	12·6
Influenza	1·02	1·4	0·8	1·3
Measles	2·3	1·5	2·5	2·9
Whooping Cough ...	2·1	2·1	2·01	2·3
Diarrhœa and Dysentery ...	5·1	2·9	4·9	3·03
II. RHEUMATIC FEVER AND HEART RHEUMATISM	0·4	0·3	0·5	0·4
III. DISEASES OF CIRCULATORY SYSTEM	9·5	9·9	9·2	9·0
IV. BRONCHITIS, Pneumonia and Pleurisy	17·9	14·8	17·2	18·2
Phthisis	8·5	9·4	9·7	9·2
V. INJURIES	4·8	3·6	4·3	4·1

B.—Deaths under 1 Year of Age (per 1000 Births).

I. ALL CAUSES	142·3	127·4	149·4	140·9
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BOROUGH OF LAMBETH.

**SUMMARY OF VITAL AND MORTAL
STATISTICS, &c., FOR 1902.**

Area of Borough—4,080.4 statute acres (exclusive of tidal water 82.1, and foreshore 31.1, statute acres respectively) divided into 7 Registration Sub-Districts, 4 Parliamentary Divisions, and 9 New Wards. The Parliamentary Divisions and New Wards are not co-extensive.

Population—estimated middle of 1902—305,102 (males, 144,315 ; females, 160,787).

Density—74.8 persons per acre.

Inhabited Houses—41,511 at Census, 1901.

Rateable Value—£1,876,927.

Marriages—2548, being 16.7 per 1,000.

Births—9,067, being 29.7 per 1000.

Deaths (corrected)—5387, being 17.7 per 1,000.

Infantile Mortality—1155 deaths (corrected) under 1 year, being 127.4 per 1,000 births.

Zymotic—Death-Rate, 1.8 per 1,000.

Estimated Increase of Population 2569 ; but the natural increase or increment (*i.e.*, excess of Births over Deaths) was 3672.

TABLE V.

Local Government Board Old Table A.]

TABLE OF DEATHS during the Year 1902 in the Borough of

NAMES OF LOCALITIES adopted for the purpose of these Statistics, public institutions being shewn as separate localities.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	MORTALITY FROM					
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		1	2	3	4	5	
														Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Pue peral.
(a) Royal Infirmary (Women and Children)...	(b) 29	(c) 5	(d) 11	(e) 2	(f) 2	(g) 8	(h) 1	{ Under 5	...	...	...	...	...	1
{ Remainder of Waterloo Road First ...	{ 211	{ 86	{ 28	{ 5	{ 4	{ 67	{ 27	{ Under 5	...	1	1	...	...	...
{ General Lying-in Hospital, York Road ...	{ 23	{ 22	{ ...	{ ...	{ ...	{ 1	{ ...	{ Under 5	...	...	...	...	...	...
{ Remainder of Waterloo Road Second ...	{ 186	{ 60	{ 35	{ 7	{ 6	{ 60	{ 18	{ Under 5	...	...	1	...	...	...
{ St. Thomas's Hospital ...	{ 690	{ 102	{ 78	{ 68	{ 57	{ 342	{ 43	{ Under 5	...	...	13	...	...	...
{ Remainder of Lambeth Church First ...	{ 274	{ 92	{ 37	{ 9	{ 9	{ 92	{ 35	{ Under 5	...	...	...	...	...	1
{ Lambeth Workhouse ...	{ 162	{ 17	{ ...	{ ...	{ ...	{ 30	{ 115	{ Under 5	...	...	...	...	...	...
{ Lambeth Infirmary ...	{ 704	{ 34	{ 17	{ 3	{ 23	{ 398	{ 229	{ Under 5	...	...	...	...	...	...
{ Remainder of Lambeth Church Second ...	{ 510	{ 172	{ 71	{ 14	{ 11	{ 168	{ 74	{ Under 5	...	1	1	...	...	1
{ Clapham Maternity ...	{ 24	{ 22	{ ...	{ ...	{ ...	{ 2	{ ...	{ Under 5	...	...	...	...	...	...
{ St. Peter's House ...	{ 50	{ ...	{ ...	{ ...	{ ...	{ 5	{ 45	{ Under 5	...	...	...	...	...	...
{ Remainder of Kennington First ...	{ 598	{ 181	{ 58	{ 17	{ 33	{ 185	{ 124	{ Under 5	...	2	...	...	...	...
{ Kennington Second ...	{ 549	{ 113	{ 53	{ 16	{ 25	{ 182	{ 160	{ Under 5	...	2	2	...	...	...

TABLE V.

Lambeth, classified according to DISEASES, AGES, and LOCALITIES.

SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.

Relapsing.	Continued.	Enteric or Typhoid.	Typhus.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia and Pleurisy.	Heart Disease.	Influenza.	Injuries.	Ague.	All other Diseases.	TOTAL.																		
																		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
																		FEVERS.																	
...																	
...	4	...	3	1	1	...	...	...	...	7	16													
...	3	3	...	...	...	...	6	13													
...	1	...	...	...	...	...	9	15	...	18	...	2	2	...	...	...	59	108									
...	1	...	...	...	2	19	31	15	2	2	1	...	...	32	103												
...	1	...	...	...	1	...	...	19	22												
...	1	1																	
...	3	12	5	...	28	...	4	...	...	...	...	42	95													
...	...	1	...	...	...	...	...	...	...	12	22	12	1	8	...	...	35	91								
...																	
...	...	6	...	...	...	...	1	21	...	3	26	4	...	21	...	...	91	180											
...	3	...	...	...	...	3	20	38	49	...	54	...	...	330	510											
...	8	6	15	...	4	28	1	5	...	...	62	129															
...	1	...	...	1	...	...	30	33	22	2	22	...	...	33	145											
...	1	66	36	...	1	...	...	41	145															
...																	
...	4	...	4	1	10	...	...	2	...	...	32	51													
...	...	4	...	...	4	1	...	2	151	124	97	...	23	1	245	653	...	...															
...	12	16	25	...	8	...	123	243																
...	...	1	...	...	1	1	...	1	41	65	48	5	4	...	98	267	...	...															
...	20	23																	
...	2	2																	
...																	
...	17	11	...	...	...	...	22	50													
...	...	2	11	15	17	...	6	...	127	239																
...	...	2	1	2	1	1	1	54	80	53	6	13	...	143	359																
...	10	17	10	...	5	...	82	166																
...	...	2	1	1	4	45	79	63	7	9	...	169	383																

TABLE V.—continued.

Local Government Board Old Table A continued.]

TABLE OF DEATHS during the Year 1902, in the Borough of

NAMES OF LOCALITIES adopted for the purpose of these Statistics, public institutions being shewn as separate localities.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	MORTALITY FROM				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		1	2	3	4	5
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)						
South Western Hospital	110	4	64	27	4	9	2	Under 5	...	32	28	...	...
Remainder of Brixton ..	1011	211	96	31	29	360	274	5 upwds.	...	1	1	2	...
Lambeth Workhouse Schools	19	...	17	2	...	...	...	Under 5	...	...	...	...	...
British Home of Incurables	11	...	...	...	...	7	4	5 upwds.	...	...	...	...	...
Remainder of Norwood	392	90	45	16	12	105	124	5 upwds.	1	...	...	1	...
TOTALS	5553	1215	610	217	215	2021	1275	Under 5	...	37	49	2	...
								5 upwds.	4	14	24	2	7

The subjoined numbers have also to be taken into

Deaths occurring outside the district among persons belonging thereto	560	37	55	42	47	307	72	Under 5	7	17	14	...	...
								5 upwds.	50	14	3	...	...
Deaths occurring within the district among persons not belonging thereto	726	47	98	68	50	301	112	Under 5	...	24	28	...	...
								5 upwds.	1	10	13	...	...

TABLE V.—continued.

Lambeth, classified according to DISEASES, AGES, and LOCALITIES.

SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.

Relapsing, Continued, Enteric or Typhoid, Typhus, Cholera, Erysipelas, Measles, Whooping Cough, Diarrhoea and Dysentery, Rheumatic Fever, Fatigue's, Bronchitis, Pneumonia and Pleurisy, Heart Disease, Influenza, Injuries, Ague, All other Diseases, TOTAL.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	FEVERS.																		
	Relapsing, Continued, Enteric or Typhoid, Typhus, Cholera, Erysipelas, Measles, Whooping Cough, Diarrhoea and Dysentery, Rheumatic Fever, Fatigue's, Bronchitis, Pneumonia and Pleurisy, Heart Disease, Influenza, Injuries, Ague, All other Diseases, TOTAL.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
...
...	5
...	16	21	25	2	1	54	1	5	9	...	179	317	
...	2	...	...	...	7	1	5	4	78	131	95	26	17	...	324	694	
...	5	3	...	...	...	3	...	...	...	...	6	17	
...	1	...	...	...	...	...	1	2	
...	11	11
...	2	10	8	...	1	45	...	1	...	...	66	135	
...	3	...	...	...	...	...	2	1	18	38	44	21	8	...	118	257	
...
...	1	...	...	...	...	...	69	114	150	2	20	368	5	8	64	...	933	1825
...	...	26	12	12	3	10	18	470	729	548	70	160	1	1618	5728

account in judging of the above records of mortality.

...
...	...	...	19	...	...	...	1	1	...	3	...	53	17	1	...	...	...	23	92
...
...
...	...	...	7	...	...	...	2	...	...	...	2	20	45	61	1	45	1	321	531

TABLE W.

Table of Population, Births, and of New Cases of Infectious of Health, during the year 1902, in the Metropolitan to Diseases

Local Government Board Old Table B.]

Registration Sub-Districts. (a)	Population at all Ages.		Registered Births. (d)	New Cases of Sickness in each the knowledge of the Medical						
	Census 1901. (b)	Estimated to middle of 1901. (c)		1	2	3	4	5	6	7
				Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Typhoid or Enteric	Continued.
WATERLOO ROAD 1st	27440	27211	1303	32	83	23	1	...	8	1
WATERLOO ROAD 2nd				52	21	29	...	...	16	...
LAMBETH CHURCH 1st	18423	18419	597	35	107	83	2	...	26	1
LAMBETH CHURCH 2nd	39818	31872	1445	64	213	83	4	...	45	4
KENNINGTON 1st	53198	53605	1817	69	269	64	2	...	27	1
KENNINGTON 2nd	42896	43377	1011	34	257	75	2	...	23	1
BRIXTON	84232	85742	2098	53	314	90	3	...	58	2
NORWOOD	35888	36876	788	11	66	12	1	...	10	...
Totals	301,895	305,102	9059	350	1339	459	15	...	213	10

TABLE W.

Sickness, coming to the knowledge of the Medical Officer Borough of Lambeth, classified according and Localities.

Locality, coming to Officer of Health.					Number of such Cases removed from their Homes in the several Localities for Treatment in Isolation Hospital.											
8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Fevers.		Cholera.	Erysipelas.	Chickenpox.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Fevers.				Cholera.	Erysipelas.	Chickenpox.	
Relapsing.	Puerperal.								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.				Puerperal.
...	1	...	22	73	32	79	19	...	...	4	...	...	...	...	...	...
...	2	...	12	83	52	17	26	...	...	14	...	...	...	...	1	...
...	1	...	34	131	35	78	65	...	...	15	...	...	1	...	...	...
...	1	...	72	190	64	195	75	1	...	38	...	...	...	...	1	...
...	3	1	56	260	69	222	46	...	...	21	...	...	2	...	2	...
...	1	...	40	150	34	179	48	...	...	13	...	...	...	...	4	...
...	6	...	70	373	53	258	66	...	...	29	...	...	1	...	2	...
...	2	...	11	300	11	28	2	...	...	5	...	...	...	...	...	...
...	17	1	317	1560	350	1056	347	1	...	139	...	...	4	...	10	...

II. SANITARY WORK.

Return showing the Number of Nuisances removed or abated in the Borough of Lambeth, from the 1st January to the 31st December, 1902.

Number of Notices 15384*

NOTIFIABLE INFECTIOUS DISEASES. †

(Public Health, London, Act).

No. of Infected Houses	...	...	...	...	2430
Smallpox	...	...	...	...	287
Scarlet Fever	...	...	...	...	1164
Typhoid	...	...	...	...	206
Typhus	...	...	...	...	—
Continued Fever	...	...	...	...	10
Diphtheria	...	...	...	...	420
Membranous Croup	...	...	...	...	15
Puerperal Fever	...	...	...	...	17
Erysipelas	...	...	...	...	301
English Cholera	...	...	...	...	1

† Chickenpox was made a compulsory notifiable disease throughout Lambeth Borough (and the rest of the Administrative County of London) on February 7th, and 1560 cases have been notified representing 1349 infected houses during 1902.

* Excluding 14 Notices under the Housing of the Working Classes Act, 1890 (*vide page 151*).

A. Public Health (London) Act and Metropolis Local Management Acts.

Notices served (Preliminary and Statutory) 12954

WORKS STRUCTURAL:—

Drainage defective	1445
Intercepting Traps with Fresh Air Inlets required	516
Ventilating Pipes required	498
Indoor Sinks connected with the Drain	607
Rain Water Stack Pipes connected with the Drain	717
Bath Waste connected with the Drain	69
Traps Defective, or of Obsolete Pattern	1011
Closet Pan and Connections Defective	876
Water Supply to Closet Defective	806
Closet Dilapidated	501
Draw-off from Main for Drinking Purposes required	903
Dust Bins Defective	649
Premises Dilapidated	284
Ventilation under Floors required	89
Roofs Dilapidated	218
Soil Pipes Defective	69
Paving Defective	1221
Damp and Unwholesome Houses	84
Dung Receptacles required	71

WORKS NOT STRUCTURAL:—

Cisterns Dirty	109
Manure Accumulations	121
Underground Rooms occupied	96
Animals Improperly Kept	16
Stopped Drains	219
Overcrowding	86
Foul Urinals	27
Through Ventilation not provided	7
Refuse Accumulations	76
No Water Supply or Defective Water Supply	371
Dirty Premises	2075

13,837

B. Infectious Diseases Notification.

Notices served 2430

PARTICULARS OF SANITARY WORK

Carried out in Lambeth Borough during 1902, and for 24 years (1877-1900) in Lambeth Parish (for comparison).

Year		Total Number of Notices (excluding those under Housing of the Working Classes Act)	Sanitary Works, Structural and Permanent.	Sanitary Work not Structural.
Borough of Lambeth.	1902	15384	10634	3203
	1900	10065	10291	2303
Old Parish of Lambeth.	1899	10583	10042	2273
	1898	10469	9905	2224
	1897	11088	9058	1884
	1896	7475	6702	982
	1895	7645	8581	1104
	1894	6975	7672	1911
	1893	8769	9207	2046
	1892	7173	6931	2190
	1891	5557	7232	3173
	1890	5588	5053	3251
	1889	6854	4192	2662
	1888	4891	2969	1922
	1887	4565	2430	2135
	1886	4504	2433	2071
	1885	3567	1459	2108
	1884	3727	1621	2106
	1883	3000	1294	1766
	1882	3239	1267	1972
	1881	3730	1293	2437
	1880	3259	1106	2153
	1879	3075	960	2115
	1878	3310	1169	2211
	1877	3563	1299	2264
	Average for 24 years, 1877-1900		5944.6	4798.6	2135.1

N.B.—The increase in the numbers since 1897 is due to the increased Inspectorial Staff.

SUMMARY OF WORK DONE BY THE SANITARY
INSPECTORS DURING 1902.

Inspections	9281
Re-Inspections	62680
Infectious Houses visited	3779
Complaints attended to	8930
Cases of Infectious Disease notified	4272
(a) Cases under treatment at home	2396
(b) Cases removed to Hospital	1876
Cases of Non-Notifiable Diseases dealt with	4984
Houses disinfected	3239
Rooms disinfected	5857
Bedding, etc., disinfected	2703
Bedding, etc., destroyed	134
Dust Yards, Manure Depots and Brickfields, inspections of	480
Drains tested (with chemical, water, or both)	10283
Sanitary Works completed	5330
Plans of Drainage received and approved	264
Premises the drains of which have been totally or partly reconstructed	195
Articles procured for the Analyst—	
(a) Food and Drugs	705
(b) Water	0
Special Smoke observations and enquiries	679
New Work-shops inspected and registered	105
Bakehouses inspected (including 87 underground)	223
Cowhouses inspected	21
Slaughter-houses inspected	37
Restaurants inspected and registered	225
Notices served—	
Sanitary Work (Preliminary and Statutory)	12954
Infectious Diseases (Public Health Act, 1891)	2430
Housing of Working Classes Act	14
Sanitary nuisances abated—	
(a) Structural	10634
(b) Non-structural	3203
Persons received at the Shelters	0
Summonses and Orders issued	50
Convictions obtained—	
Public Health Act	12
Food and Drugs Acts	19

43 summonses were issued, and of these 9 were withdrawn, the work being completed before the hearing of the summonses. Three summonses were dismissed for the following reasons:—(1) no parties appearing, (2) legal technicality, and (3) warranty proved.

INSPECTORIAL STAFF.

There have been changes in connection with the Inspectorial Staff during 1902. Inspector Emblin, after 33 years good service, found it necessary to resign on account of failing eyesight, and his resignation was accepted with regret on May 5th, 1902, by the members of the Borough Council, who, having regard to the good work done for them and for their predecessors (the late Vestry) by the Inspector, who was appointed on May 5th, 1869, voted him a superannuation allowance of £99 per annum for life (*i.e.*, thirty-three 60ths of his salary at the date of resignation), under the Superannuation Allowances Act, 1866. Inspector Emblin, at the date of his resignation, was 62 years of age, and during the last few years, since he lost the sight of his left eye in 1898, had been engaged chiefly indoors with light duties connected with the office, though retaining his position and salary as an Inspector (£170 per annum with uniform). Inspector Emblin received not only the public thanks of the Council on his retirement, but also most generous recompense for the 33 years work he had done in the form of the utmost superannuation that the Council could legally vote him. Inspector Emblin's resignation necessitated re-arranging the clerical (indoor) staff, and Mr. W. J. Lawrence was consequently raised to the position of Assistant Clerk, at a salary of £70, increasing by £10 yearly increments to a maximum £150, and E. G. Wood was appointed as a boy clerk at a commencing salary 10s. per week, rising to £1 per week by annual increments of 2s. 6d. per week.

The Inspectorial Staff consists of 12 Male Inspectors and 1 Female Inspector, whilst the Clerical Staff consists now of 1 clerk, 2 assistant clerks, and 1 boy clerk.

Inspector J. M. Scorrer commenced his duties on December 16th, 1901, having been elected Sanitary Inspector to the Borough in place of Inspector Bowden resigned.

The arrangements made by the Council in 1901 for the supervision of the drainage of *new* buildings (as well as of *old*) by the Sanitary Inspectors have continued to work satisfactorily during 1902, and to the advantage not only of the Borough, but also of property owners and builders. All private drainage work is carried out under one set of officers, and all unnecessary inconvenience is thereby avoided. Such an arrangement secures administrative efficiency, and does away with the inconvenience of dual control, and the danger of work passed by a Surveyor's Department having to be condemned by a Medical Officer's Department. Economy of administration is also secured.

Combined Drainage.

A large number of combined drainage systems have had to be reconstructed at the cost of the Council, where such systems are, in the eyes of the existing Law, sewers, not having received the previous sanction and approval of the Sanitary Authority as combined systems. The *estimated* cost for the year 1902 for this work is £984 18s.*

During 1902, in the Borough, 195 houses have been redrained throughout, or in part; whilst 264 plans (representing 465 houses) have been received, approved, and the work (shewn thereon) carried out under the personal supervision of the Sanitary Inspectors, and water-tested.

10,283 tests (hydraulic or smoke) have been made by the Inspectors during 1902.

420 Water Certificates have been issued during 1902 in accordance with Section 48 of the Public Health (London) Act, 1891.

The two following seizures of unsound food have been made by the Inspectors during 1902:—

- (1) 790 eggs were seized at 227 Wandsworth Road, and condemned by the Magistrate on January 14th, 1902, and afterwards destroyed at the Council's Wharf. A satisfactory explanation being offered as to the presence of

* This does not represent the Council's total estimated expenditure in connection with combined drainages, but merely the expenditure arising through the Sanitary Inspectors in the course of their daily routine works during 1902.

the eggs (in such a condition) on the premises, a summons was not taken out—the Council's expenses being paid by the wholesale dealer.

- (2) 3 baskets (partly filled) of apples and oranges were exposed for sale in Lambeth Walk, seized, and condemned by the Magistrate on April 29th, 1902, and afterwards destroyed at the Council's Wharf. When the summons came on for hearing, the vendor could not be traced.

In addition to the above, 2 cwt. fish and 10 cwt. onions were voluntarily surrendered, and destroyed, at the Council's Wharf.

The work in connection with disinfection, smoke abatement, workshops, bakehouses, restaurants and dining (coffee) rooms, and the carrying out of the Food and Drugs Acts, is dealt with under special headings in this Report (*vide post*).

The work carried out by the Sanitary Inspectors during 1902 is shewn by the large number of Notices served, viz., 15,384, dealing with 10,634 structural, and 3203 non-structural, defects. Full particulars will be found on pages 118-120, whilst the summary of work done (given on page 121) deals with 9,281 inspections and 62,680 re-inspections carried out by the Inspectors, as well as with the rest of the work carried out in connection with the Sanitary (Public Health) Department. The work of the Female Inspector (Miss Gamble) is dealt with separately on pages 125 to 128, including the special inspections and registration of Restaurants, Dining-rooms, etc. (*vide* Special Report in Appendix).

In only 12 instances (*i.e.*, 0.1 per cent.) were summonses taken out—the result of these summonses being penalties to the extent of £9 (with £3 13s. costs), and the carrying out of the necessary necessary works within specified times.

The Inspectorial Staff has worked well during 1902, more especially in connection with the Smallpox outbreak, involving a large amount of extra work and overtime, for which the Council generously voted a sum of £5 to each of the 12 male Inspectors and to 2 of the Sanitary Clerks (Messrs. W. R. Lawrence and A. L. Baxter).

FEMALE SANITARY INSPECTOR.

Much good work has been done during 1902 by the Female Sanitary Inspector (Miss Gamble)—work that justifies the appointment of such an officer by the Borough Council on October 3rd, 1902.

Factories, Workshops, Work-places, Shops, Out-workers' Homes Laundries, etc., wherein women and girls are employed, are now systematically inspected, and much-needed work accomplished in connection therewith; whilst the Underground Conveniences (belonging to the Council) and Sanitary Conveniences (in connection with Railway Stations) are visited frequently.

The work may be tabulated as follows:—

Summary of work carried out by Female Sanitary Inspector during the year 1902.

Workshops visited and inspected—				
(a) Dressmakers	...	..	...	142
(b) Milliners	...	...	...	20
(c) Laundries	...	...	...	70
(d) Tailors	...	...	...	14
(e) Upholsterers	...	...	...	1
(f) Dyers	...	...	...	1
(g) Others	...	...	...	32
Workrooms inspected	...	...	...	325
Workshops re-inspected	...	...	...	333
Workrooms re-inspected	...	...	...	305
Restaurants re-inspected	...	...	...	118
Workshops: workrooms therein measured	...	...	...	318
Workshops removed from Register	...	...	...	29
Workshops reported to H.M. Inspector	...	...	...	48
Workshops reported by H.M. Inspector	...	...	...	3
Workshops newly discovered and registered	...	...	...	102
Workrooms: Cards distributed stating number of persons who may be employed	...	...	...	—
*Premises visited, but no female hands found to be employed	...	...	...	80

*Houses where the business plate, or the local directory, or advertisements in newspapers, implied a probability that female workers would be employed, but at which none were found.

Female Conveniences visited and inspected—					
Public (visits paid)	...	...	...	...	276
Private (visits paid)	...	...	...	...	35
Schools visited --					
Public	...	...	...	...	10
Private	...	...	...	...	1
Special places visited and inspected—					
†(a) Restaurants and Hotels, etc.	...	...	...	...	220
(b) Private Houses	...	...	...	...	199
(c) Others	...	...	...	...	5
Written Intimations and Statutory Notices served					262
No. of Workshops, etc., in which no defects were found on inspection	...	...	...	...	282
No. of Workshops in which defects were found on inspection	...	...	...	...	322

Particulars of defects found.

Workrooms—					
Overcrowded	...	...	...	...	4
Damp	...	...	...	...	7
Dirty	...	...	...	...	208
Ill-ventilated	...	...	...	...	7
Badly-lighted	...	...	...	...	—
Insufficiently warmed	...	...	...	...	—
Otherwise	...	...	...	...	3
Defects—					
Yards	...	...	...	...	29
Floors	...	...	...	...	19
Roofs	...	...	...	...	7
Windows	...	...	...	...	4
Ceilings	...	...	...	...	17
Rain Water Pipes	...	...	...	...	13
Premises generally	...	...	...	...	9
Sanitary Appliances: Waterclosets—					
Dirty	...	...	...	...	86
Ill-lighted	...	...	...	...	1
Unventilated	...	...	...	...	2

† Five hotels in Stamford Street and York Road were inspected by a Male Inspector in addition to the above.

Choked	...	...	...	...	...	15
Defective	...	...	...	...	...	44
Defective Flushing Tanks and Water supply						91
Drainage—						
Defective	...	...	...	...	...	9
Dustbins—						
Wanting	...	...	...	...	...	72
Defective	...	...	...	...	...	34
Lavatories—						
Defective	...	...	...	...	...	8
Miscellaneous defects (not included above)—						
Animals improperly kept	...	...	...	...	...	3
Accumulations in yards	...	...	...	...	...	20
Sink wastes defective	...	...	...	...	...	8
Nuisances referred to M. O. H. for attention by Male Inspectors (defective drains, w.c.'s, etc.)	...	...	...	...	...	68

An inspection of a workplace takes up much time, as the different workrooms have to be measured up, a plan drawn of the premises, and a large number of enquiries made in connection with the filling up of the Register.

The special inspection of the Kitchens of Restaurants, Hotels, Coffee Houses, Dining Rooms, etc, throughout the Borough has also taken up a large amount of the Inspector's time. This work is fully set out in the Appendix, from which it will be seen that such special work was much required, and that the conditions under which food is prepared in the Borough are now much improved, as also, consequently, the Public Health. Miss Gamble has also been engaged during the year in visiting all houses wherein deaths from infantile (summer) Diarrhœa have been reported as having occurred, with a view to helping to further elucidate the predisposing causes of this disease; and in inspecting schools, and the homes of the scholars, in connection

with outbreaks of disease (more especially an outbreak of Small-pox in a school in Norwood). This special work in connection with Diarrhœa is giving satisfactory results.

The value of a Female Inspector is proved from the above account of important work done during 1902, dealing specially with workshops, work-places, etc., where females only, or chiefly, are employed. The Council is to be congratulated, not only on having made the appointment, but also in having secured the services of Miss E. G. Gamble, who has given every satisfaction, and whose work in connection with the inspection of the Kitchens of Restaurants, Hotels, etc., calls for special mention.

The Female Underground Conveniences (belonging to the Council), and the Sanitary Conveniences of Railway Stations, Shops, etc., are now kept under constant supervision, and are, consequently, kept up to a fair state of sanitary efficiency and cleanliness.

The new Factory and Workshop Act, 1901, throws upon Sanitary Authorities increased duties in connection with out-workers of certain trades, chiefly tailors and dressmakers. This is work that naturally falls to the lot of a Female Inspector, and next year's Report will bear witness to the way in which this work is carried out in Lambeth Borough.

DISINFECTING DEPARTMENT.

The year 1902 has proved a record year in connection with the amount of work carried out by the Officers of the Disinfecting Department of the Borough Council—5857 infected rooms and 42,035 infected articles (bedding etc.) being dealt with, as compared with 3040 and 28,224 respectively during 1901. This large increase is due principally to (1) the Smallpox outbreak, (2) the making of Chickenpox a *compulsorily* notifiable disease, and (3) the making of Tuberculosis a *voluntarily* notifiable disease. In addition, there are several non-notifiable infectious diseases, which require attention, and in connection with which disinfection is now systematically carried out in Lambeth Borough, wherever such diseases are known to exist, *e.g.*, Measles, Whooping Cough, Cancer, etc. Full details are to be found on page 136-7, from which it will be noted that disinfecting work tends to grow with the advances of our knowledge of the infectious nature of different diseases. Especially is this marked in connection with Tuberculosis and Measles—in the former disease 1481 cases being dealt with during the 3 years 1899-1901, as compared with 17 during the preceding 3 years 1896-1899; and in the latter disease, 2442, as compared with 204 respectively during the same triennial periods. During 1902, 364 Measles- and 488 Tuberculosis-infected houses have been dealt with within the Borough, the increase in connection with Tuberculosis being due to the fact that the Borough Council made Tuberculosis (with expectoration) voluntarily notifiable throughout the Borough of Lambeth from June 1st, 1902.

Whooping-cough is another disease in connection with which disinfection is being more systematically carried out. During 1902, 110 Whooping-cough infected houses have been dealt with in Lambeth Borough. Prior to 1899, no disinfection was carried out in connection with Whooping-cough, and since then the numbers have been 58, 126, and 72 during 1899, 1900 and 1901 respectively. Unfortunately Whooping-cough is regarded as a harmless complaint of childhood, and few (if any) precautions are, consequently, taken. It is, nevertheless, a deadly

disease, 118 deaths having been registered as having taken place within the Borough during 1902. The routine is to visit the houses wherein Whooping-cough is known to exist, and leave with the occupiers a printed circular, dealing with its infectious nature, and pointing out that disinfection will be carried out gratuitously as may be required (*vide* Appendix).

Cancer-infected houses are disinfected and cleansed as they become known to the Borough Council, either through the Death Returns, or otherwise. During 1902, 34 Cancer cases were dealt with.

During 1902, 12 schools (4 private, 8 public) have been disinfected in connection with outbreaks of infectious disease.

Of the compulsorily notifiable diseases, 4273 cases have been dealt with, including 1560 cases of Chickenpox, which was made a compulsorily notifiable disease throughout Lambeth Borough (and the rest of the Administrative County of London) on February 7th, 1902, and remained so until January 7th, 1903.

*Particulars as to disinfection carried out in the
Borough of Lambeth during 1902.*

Total No. of rooms disinfected by Council ...	5857
Cases in which bedding has been disinfected at home	20
Do. do. do. at Chambers	3702
Do. do. do. destroyed	134
Bedding replaced by the Council (cases) ...	—
Premises disinfected and disinfectants supplied	12607
Infected cabs disinfected	9
No. of Cleansing Notices served in connection with infected houses	4836
Certificates of Medical Practitioners received in lieu of disinfection by the Council ...	292
Certificates of disinfection left with, or sent to, occupiers of disinfected premises	5186

Articles of bedding, etc., disinfected.

Beds	2361
Bolsters	1768

Pillows	.....	...	...	...	...	5297
Mattresses	...	...	...	...	...	1807
Palliasses	...	...	...	...	...	1139
Chair Cushions	...	...	...	...	...	2353
Clothing	...	...	...	...	...	10640
Blankets	...	...	...	...	...	3863
Rugs and Mats	...	...	...	...	...	1139
Counterpanes and Eiderdown Quilts	...	...	...	...	...	2113
Carpets	...	...	...	...	...	658
Extras (not mentioned in above)	...	...	...	...	...	7762
Bags of articles of Clothing	...	...	...	...	...	129
Total						... 41029*

Articles of bedding, etc., destroyed.

Beds	...	...	...	...	...	34
Bolsters	...	...	...	...	...	2
Pillows	...	...	...	...	...	15
Mattresses	...	...	...	...	...	21
Palliasses	...	...	...	...	...	172
Chair Cushions	...	...	...	...	...	14
Clothing	...	...	...	...	...	347
Sundries	...	...	...	...	...	394
Carpets	...	...	...	...	...	3
Rugs, Mats, etc.	...	...	...	...	...	4
Total						... 1006†

It is satisfactory to be able to report that practically *all* the disinfection has been carried out by the Borough Council's own officers, and, therefore, to the satisfaction of the Medical Officer of the Borough. Certificates of efficient disinfection, if signed by medical practitioners, are accepted in lieu of disinfection being carried out by the Borough officials. Such certificates are not encouraged, but during the past year, 1902, 282 such certificates have been accepted, but only after satisfactory evidence that proper and efficient disinfecting methods have been employed.

This large increase in the number of certificates received is due to Chickenpox being made a notifiable disease. 198 of the 282 certificates received related to Chickenpox. Particulars as to these 282 certificates are as follow:—

Medical Certificates accepted in lieu of Disinfection being carried out by the Borough Council.

Nature of Certificate.	1st Q.	2nd Q.	3rd Q.	4th Q.	Total.
For Rooms <i>only</i> ...	4	5	2	7	18
For Bedding, &c., <i>only</i>	—	—	2	2	4
For Rooms and Bedding, &c.	41	81	50	88	260
	45	86	54	97	282

* 198 relate to Chickenpox.

The Borough is provided with two refuges, one at the Wharf* Belvedere Road, and the other at Wanless Road, Loughborough. The situation of the former is not ideal, being at the entrance to the Council's dust wharf. During 1902, neither refuge has been used—the improved methods of disinfection (spraying) rendering such places practically unnecessary.

DISINFECTING STATION.

The Borough Council is now in possession of two up-to-date disinfecting machines (Equifex or Herscher-Geneste patent), working on the high pressure *saturated* steam principle. They are situated at Arlington Lodge, Wanless Road, Loughborough, in the old building, which, for that purpose, has been altered and enlarged (practically doubled in size). The building is divided

* The Wharf is to be extended and enlarged, but it is not proposed to in any way interfere with the Refuge accommodation there provided (*vide Minutes 1902, page 2051.*)

into two separate and distinct parts—an infected and disinfected side, so that there is no danger of infected and disinfected bedding, articles of clothing, etc., getting mixed together. Separate vans (and separate attendants) are provided in the same way for carrying the infected and disinfected goods respectively. The machines are provided with two vertical boilers, and a series of galvanized iron racks upon which the bedding, clothing, etc., can be temporarily stored have been fitted round the walls of the disinfected side; whilst a *cremator*, for destroying infected bedding, etc., has been built in connection with the infected side.

Stabling,* van-sheds, etc., are to be provided during the coming year, and then the Lambeth Borough Disinfecting Station will be a model establishment, and one of which the Council may be justly proud. The Council is to be congratulated.

The new Equifex Machine cost £385 complete, and the removal of the old machine into its present new position, alongside the new machine, together with certain alterations made to this old machine (new lagging, etc.) cost an additional sum of £194. The cremator was fitted up complete for £55 12s.

The expenses (estimated)† connected with the enlargement of and alteration to, the old (existing) building, together with the paving of the courtyard, and the covering over portions of the same with glass roofs, amount to a total of £2,288, and a further sum of £888 is estimated for the erection of stables, making a total of £3,176. Thus, the total expenses connected with the

* At present the horses and vans are kept at the Wharf, at an *estimated* cost of £1 1s. per horse per week for keep and stable expenses, the four horses having cost to purchase originally £154 8s. 3d.

† In connection with the work, it was decided to have open tendering with the result that 14 tenders were received, varying from a *maximum* £4,060 (£924 for stabling), to a *minimum* of £3,077 (£885 for stabling). The tender selected was that of Mr. T. G. Sharpington, of Machell Road Works, Kimberley Road, Nunhead, for £3,176 (£888 for stabling).

alteration of the buildings at Wanless Road so as to enable all the disinfecting work of the Borough to be carried out from this one centre, with the provision of an extra machine and stable accommodation, may be tabulated for future reference as follows :—

	£	s.	d.
Alteration and enlargement of existing (old) building (£1116 14s. 2d), paving of courtyard and covering with glass roofs (£1171 5s. 10d.) ...	2288	0	0
Erection of Stables	888	0	0
	<hr/>		
	3176	0	0
Cost of new Machine, alterations to old Machine, erection of Cremator, etc.	634	12	0
	<hr/>		
Total ...	£3810	12	0

The Disinfecting Station is insured for £2,000 (buildings) and £600 (machines).

Objection was raised to the proposed use of the Wanless Road premises as a central disinfecting station for the Borough, and a petition (signed by 973 persons) was presented to the Council on January 23rd, 1902, by a deputation consisting of the Rev. J. Bayfield Clark and 5 other gentlemen. No action was taken by the Council on the petition, and the central station was completed.

The Staff, both collectively and individually, has again given satisfaction during the year 1902, more especially in connection with the Smallpox outbreak, during which much extra work, which was carried out in an exemplary manner, was thrown upon the officials both day and night. The Borough Council generously voted a sum of £60 as a gratuity to be distributed amongst the Disinfecting Staff of 10 officers.

William Harris, stove attendant at Wanless Road, resigned April 17th, 1902, and was succeeded by Alfred Blake, who had had previous experience as Engineer in charge of a disinfecting machine. One of the drivers (John Arthur) resigned, and was succeeded by David Jarman. Another driver (William Sanger) was transferred to other duties under the Surveyor, and his place was taken by Thomas Bavin.

NON-NOTIFIABLE INFECTIOUS DISEASES, ETC.

	1st Q.	2nd Q.	3rd Q.	4th Q.	Total 1902.	1901.	1900.	1899.	1898.	1897.	Yearly average 5 years (1897-1901).
Measles	116	113	83	52	364	728	941	773	129	70	528.2
Whooping Cough	31	29	22	28	110	72	126	58	—	—	51.2
Chickenpox* ...	276	510	295	544	1625	78	88	21	4	1	38.4
Tuberculosis† ...	115	122	101	150	488	483	524	474	4	11	299.6
Cancer	9	12	7	6	34	15	23	13	7	5	13.4
	547	786	508	780	2621	1376	1702	1339	144	87	706.8

† Tuberculosis *voluntarily* notifiable throughout the Borough since June 1st, 1902.

*Chickenpox *compulsorily* notifiable throughout the Borough (the whole of the Administrative County of London) from February 7th, 1902, to January 6th, 1903—1560 notified by medical men, and 65 by others.

N.B.—33 other diseases (not classified) *i.e.*, Rheumatic Fever, Pneumonia, etc., were dealt with during 1902.

DISINFECTION STATISTICS.

For eight years prior, and twelve years subsequent, to the passing of the Notification of Infectious Diseases Act; and for the year 1902.

		1882	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Yearly average for 8 years pre- ceding the Not- ification Act.	1902.
No. of Cases in which Bedding, etc., has been disinfected.	At Home	332	258	278	10	62	52	7	144	143.6	20
	At Chamber	85	56	162	509	236	722	902	951	460.4	3702
No. of Cases in which Bedding, etc., has been destroyed.	...	37	23	62	52	8	57	48	79	45.7	134
	...	1526	1437	1895	2275	916	3078	3121	3778	2253.2	41029*
No. of Articles of Bedding, etc., disinfected.	...	63	104	114	144	59	92	61	267	113.0	1006*
	...	727	680	657	727	736	1276	1255	1277	916.9	12607
Premises Disin- fected and Dis- infectants Sup- plied.	...	...	...	...	...	...	...	...	...	...	4273
	...	..	...	...	...	...	...	...	...	...	1094

DISINFECTION STATISTICS—*Continued.*

	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	Yearly average for 12 yrs succeeding the Notification Act.	1902.
No. of cases in which Bedding, etc., has been disinfected.														
At Home... ..	179	246	593	343	177	251	368	217	132	81	62	37	223·8	20
At Chamber	1391	1570	2540	3042	2206	2472	2447	2126	2424	2998	2450	3040	2392·2	3702
No. of Cases in which Bedding, etc., has been destroyed.	185	275	314	224	119	6	49	39	27	44	59	75	118·0	134
No. of Articles of Bedding, etc., disinfected.	3013	6747	9909	11513	8022	13516	20349	21487	21597	27923	27528	27265	16572·4	41029*
No. of Articles of Bedding, etc., destroyed	353	467	605	674	544	186	178	162	126	326	1783	959	528·6	1006*
Premises disinfected and disinfectants supplied.	1722	1816	3157	5896	5742	7146	7210	8715	8441	9146	9124	9522	6469·8	12607
Infectious Diseases dealt with.														
Notifiable† .. ..	...	1676	3025	4070	2433	2685	2801	2663	2329	2693	2209	2025	2600·9	4273
Non-Notifiable ...	...	...	..	...	...	...	20	87	144	1339	1702	1376	778·0	1094

* Including 26145 and 355 Smallpox articles disinfected and destroyed respectively.

† The Notification Clauses of the Public Health (London) Act, 1891, came into force on January 1st, 1891, and previous to 1896 practically no attention was paid to disinfection in connection with the non-notifiable infectious diseases.

N.B.—The Statistics for 1901-2 refer to the Borough Council; those for all previous years to the late Vestry.

ANALYSIS OF FOOD AND DRUGS, WATER, Etc.

1. FOOD AND DRUGS.

During the year 1902, 704 samples have been purchased within the Borough of Lambeth and submitted to the Public Analyst for analysis. Taking the average of 10 years (1891-1900), the annual number of samples taken in the old Parish of Lambeth is 501, of which 74 (*i.e.*, 14.8 per cent.) were found on analysis to be adulterated. The annual average number of summonses issued is 53, with 52 convictions (together with 16 cautions), and £104 5s. 5d. in penalties, and £35 0s. 3d. in costs, during the same decennium. In the Borough, 710 samples were taken during 1901.

Of the 704 samples taken during 1902, 51 (*i.e.*, 7.2 per cent.) were reported by the Analyst to be adulterated; 22 summonses were issued, with the result that 19 convictions* were obtained, together with £14 5s. in penalties, and £16 5s. 6d. in costs; and in several cases the vendors were cautioned. Full details are to be found on pages 140-142 and in the Appendix.

The minimum number of samples of food and drugs to be taken each year is 600, and it is to be hoped that the Borough Council will not rest satisfied until 1000 yearly samples are taken throughout the large Borough of Lambeth.†

A recent case in the High Court (*McNair versus Cave*) has laid down that a Sanitary Inspector has no power to take samples for analysis under the Sale of Food and Drugs Acts *outside* his own district, and that, therefore, the words "places of delivery" in Section 3 of the 1879 Act mean "places of delivery *within* the district of a Sanitary Authority in connection with which the Inspector taking the samples has been appointed." A sug-

* One summons was dismissed on a legal technicality, and one on account of the warranty being proved.

† The Council has decided that a *minimum* 1,000 samples per annum shall in future be taken (*vide Minutes*, 1903, page 585).

gestion has been made that some plan of combined action should be agreed upon, whereby, at the request and expense of the Council of the City or Borough to which milk is consigned, samples might be taken at the railway depots by the Inspectors of the Councils of the respective Boroughs or Cities in which such depots are situated. To this suggestion the Lambeth Borough has agreed, but no practical steps have yet been taken by the Metropolitan Sanitary Authorities to bring about such a plan of combined action. Lambeth Borough possesses two large Railway Depots to which milk is consigned daily from the country, viz., Vauxhall and Waterloo, and many samples have been there taken by the Inspector at midnight.

Inspector J. W. Perrin is the special Food and Drugs Inspector, and the results of the year's work are not so satisfactory as those of previous years, judging by the percentage of samples found, on analysis, to be adulterated, and the amount of penalties and costs obtained on conviction (see Tables in Appendix).

In regard to penalties and costs, a serious diminution has taken place during 1902, viz.: £14 5s. in penalties (with £16 5s. 6d. costs) as compared with £114 15s. in penalties (with £33 14s. costs) during 1901, and a *yearly* average during the 10 years 1891-1900 of £104 5s. 5d. in penalties (with £35 0s. 3d. costs). This is an unsatisfactory state of affairs.

2. WATER.

No sample of water has been taken for analysis during 1902.

3. SALE OF BUTTER REGULATIONS.

These regulations (made by the Board of Agriculture) came into force on May 15th, 1902, and state that, when the proportion of water in a sample of butter exceeds 16 per cent., it shall be assumed that the butter is not genuine by reason of the excessive amount of water therein.

SALE OF FOOD AND DRUGS ACTS.

Samples procured, together with the results of Analyses
during the year 1902.

Samples.	Number Procured.	Number Adulterated.
Milk	311	24
Butter	171	25
Coffee	42	1
Mustard	18	...
Pepper	23	...
Whisky	3	...
Beer	6	...
Lard	17	...
Cream of Tartar	5	...
Margarine (not labelled)	6	1
Sago	17	...
Tartaric Acid	5	...
Milk of Sulphur	7	...
Tea	20	...
Sweetmeats	4	...
Ground Rice	12	...
Oatmeal	17	...
Gin	2	...
Sugar	14	...
Vinegar	3	...
Oil of Eucalyptus	1	...
Totals	704	51

Year.	No. of Samples Analysed.	No. of Samples adulterated.	Percentage of Samples adulterated.	No. of Summonses issued.	No. of Convictions.	No. of Cautions.	Penalties.	Costs,
Borough Council } 1902	704	51	7.2	21	19	6	£ s. d. 14 5 0	£ s. d. 16 5 6
Late Vestry. { 1900	603	73	12.1	57	52	10	104 10 0	42 6 6
1899	601	65	10.8	52	49	6	76 10 0	29 12 6
1898	602	74	12.3	57	54	6	69 0 0	34 9 0
1897	546	41	7.5	7	21	2	48 0 0	24 5 0
1896	549	66	12.02	66	60	2	93 0 0	35 11 6
1895	500	87	17.4	64	62	23	149 15 0	41 18 0
1894	495	107	21.6	81	79	26	199 0 0	45 11 0
1893	493	120	24.09	79	79	41	207 17 0	48 19 0
1892	332	65	19.5	43	43	22	66 8 6	32 9 0
1891	292	48	16.4	25	24	23	28 13 6	15 1 0
Average of 10 years 1891—1900	501.7	74.6	15.1	53.1	52.5	16.1	104 5 5	35 0 3

Inspector Perrin commenced his duties on February 21st. 1898, *vice* Inspector Wiggs, who did the work from August 1892, to November, 1897.

Shewing percentage of different adulterated Samples during 1902 (Borough), and in ten years (Parish).

YEAR.	Milk.	Butter.	Coffee.	Bread and Flour.	Cocoa and Chocolate.	Cheese and Lard.	Other Groceries.	Sundries.	Spirits.	Brandy.	Gin.	Rum.	Whiskey.	Ale and Porter.	Wines.	Aerated Waters.	Drugs.	
Boro' Council	1902	7.7	14.6	2.4	...	...	0.0	0.7	0.0	...	0.0	...	0.0	0.0	...	...	...
	1900	14.2	11.0	17.8	...	...	0.0	3.5	0.0	...	...	...	0.0	0.0	...	...	0.0
Late Vestry,	1899	10.9	14.5	6.9	...	...	0.0	2.7	0.0	21.4	33.3	...	0.0	0.0	...	...	0.0
	1898	13.6	14.5	10.3	...	0.0	0.0	0.0	0.0	11.1	...	0.0	20.0	...	...	0.0	0.0
	1897	10.5	7.3	3.03	0.0	0.0	0.0	2.0	11.1	17.7	...	25.0	18.2	...	...	...	18.8
	1896	11.06	17.7	15.1	0.0	0.0	...	0.0	0.0	0.0	0.0	0.0	0.0	...	...	...	14.3
	1895	21.05	14.7	26.4	...	0.0	0.0	0.0	16.6	16.0	...	12.5	25.0	...	...	0.0	0.0
	1894	27.6	22.4	30.0	...	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1893	30.4	35.04	11.1	0.0	18.2	0.0	3.3	0.0	8.7	20.0	0.0	0.0	11.1	0.0
	1892	31.3	36.4	18.4	...	66.7	0.0	2.1	0.0	0.0	0.0	0.0	0.0	...	0.0	0.0
	1891	47.8	5.0	3.8	0.0	2.6	0.0	0.0	0.0	0.0	...	0.0	0.0	...	0.0	0.0

0.0 means that all samples were reported to be genuine and unadulterated.
 — means that no samples were taken during the year.

SMOKE ABATEMENT.

Inspector Perrin is special Smoke Inspector to the Borough Council of Lambeth, and during 1902 has made 679 observations and enquiries in connection with smoke abatement throughout the Borough, as compared with 620 during 1901. This is an important duty, and one that a Sanitary Authority is right in carrying out rigorously.

57 smoke notices have been served, and the nuisances abated without it having been necessary to proceed to summonses in any case during 1902.

The following Firms have been under special observation *weekly* during 1902:—

Charing Cross and Strand Electricity Supply Company, 85,
Commercial Road.

Messrs. Clowes & Sons, Duke Street.

City and Waterloo Railway Generating Station, Launcelot
Street..

Messrs. Walkers, Parker & Co., Belvedere Road.

Messrs. Seth Taylor, Commercial Road.

Messrs. McGaw, York Road.

New London Brewery, Durham Street.

Beulah Laundry, South Lambeth Road.

Sunnybank Laundry, South Lambeth Road.

Messrs. Doulton & Co., Albert Embankment.

Messrs. Hammerton & Co., Stockwell Brewery.

Messrs. Stiff & Sons, Albert Embankment.

Electric Light Works, Electric Avenue.

Messrs. Clarke, Brixton.

52, Acre Lane (rear of).

Messrs. Mumford, Albert Embankment.

Messrs. Nightingale, Albert Embankment.

Waltham Brewery, Stockwell Green.

Messrs. Higgs & Hill, South Lambeth Road.

Messrs. Barretts & Eler, 268, South Lambeth Road.

Bon Marche, Brixton.

South Metropolitan Gas Company, Works, Vauxhall.
 Messrs. Francis & Son, Brixton.
 Bonanza Bakery, Lyham Road.
 South London Electric Supply Company, Bengeworth Road.
 Phœnix Wharf, Commercial Road.
 Army and Navy Stores, Lambeth Palace Road.
 Mr. Cookson's Destructor, Tinworth Street.
 Mr. Clarkson's Destructor, Tinworth Street.
 City and South London Railway, Clapham Road.
 Messrs. Webb & Sons, Albert Embankment.
 Messrs. Younghusband, Burns & Co., Belvedere Road.

The above list will give an idea of the amount of work involved in carrying out the Nuisance Clauses of the Public Health Act, which have reference to the emission of black smoke from a chimney (other than the chimney of a private dwelling-house) in such quantity as to be a nuisance. In addition to this special work carried out by the Borough's Smoke Inspector, the London County Council has, during 1902, written 26 letters to the Borough Council, drawing attention to smoke nuisances observed by their own officers as follow :—

Messrs. Rottenburg, Romany Road.
 Messrs. Mumford, Albert Embankment.
 Arlington Laundry, Cambria Road.
 Messrs. Holloway, Belvedere Road.
 Messrs. Howe & Sons, 72, Brixton Hill (2 occasions).
 Messrs. Brotherhood, Belvedere Road.
 Electrical Company, 9, Juxon Street.
 Messrs. J. W. Clarke, Brixton Road.
 Messrs. Doulton & Co., Albert Embankment (6 occasions).
 Messrs. Stiff & Sons, Albert Embankment (6 occasions).
 Sunnybank Laundry, South Lambeth Road.
 City and South London Railway, Generating Station, Clapham Road (5 occasions).
 New London Brewery, Durham Street (2 occasions).
 Mr. B. E. Nightingale, Glasshouse Street, Builder (2 occasions).
 South Metropolitan Gas Company, Vauxhall.
 Messrs. Hammerton & Co., Stockwell Brewery (3 occasions).
 Messrs. Holloway Bros., Belvedere Road.
 Messrs. Webb & Sons, Albert Embankment (2 occasions).

Messrs. Clowes & Sons, Duke Street.

Messrs. Rendell's Works, Little Duke Street (3 occasions).

With one or two exceptions, the whole of these Firms reported by the L.C.C. were already under observation at the time of the receipt of the Council's complaints; as also were the following Firms, reported to the Borough Council in the 12 communications of the Coal Smoke Abatement Society, whose head offices are at 61, Godolphin Road, Shepherd's Bush, W.:--

Lion Brewery (3 occasions).

City of London Electric Railway, Stockwell (2 occasions).

City of London Electric Railway, Stockwell.

Messrs. Lister & Biggs, Commercial Road.

Messrs. Piggott, Westminster Bridge Road.

Messrs. Oakey & Sons, Westminster Bridge Road.

Messrs. Mumford, Albert Embankment (7 occasions).

Messrs. Younghusband, Barnes & Co., Commercial Road.

Messrs. Clowes & Sons, Duke Street (4 occasions).

Messrs. Stiff, Lambeth.

Messrs. Doulton, Lambeth (2 occasions).

Messrs. Nightingale, Albert Embankment (5 occasions).

New London Brewery, Durham Street (3 occasions).

Finsbury Borough Council Wharf, Commercial Road (10 occasions).

Messrs. Seth Taylor, Albert Embankment (7 occasions).

Messrs. Holloway Bros., Belvedere Road (3 occasions).

Sunnybank Laundry (3 occasions).

Messrs. Webb & Sons, Albert Embankment (6 occasions).

Messrs. Brotherhood, Belvedere Road.

City Sewers Destructor, Commercial Road.

Fortnightly reports in connection with smoke have been presented by the Public Health Committee to the Council during the year.

The Act lays down that *black* smoke only is a nuisance liable to be dealt with summarily under the Nuisance Clauses, and there is, consequently, great differences of opinion (at times) as to what is, and what is not, *black* smoke. Further, is a Sanitary Authority justified in allowing a definite amount of black smoke, *e.g.*, 5-10 minutes per hour? Most Authorities do, to cover stoking, etc.

REFUSE AND MANURE DEPOTS.

Several refuse and manure depots exist within the Borough of Lambeth, and have been, during the past year 1902, subjected to careful and periodical inspections. With the exception of deposits of refuse at Shot Tower Wharf, owing to foggy weather, and the inability of the barges to be got off down the river, there have been no nuisances discovered, and these necessary businesses have, therefore, been carried out, on the whole, in a satisfactory manner.

There is great improvement in connection with the Herne Hill Sidings, used as a temporary depot for manure and house refuse—only one complaint having been received during the year 1902.

The depots situated within the Borough of Lambeth are as follows:—

1. Lett's Wharf, Commercial Road (City of London).
2. Shot Tower Wharf, Commercial Road (City of Westminster).
3. Phoenix Wharf, Commercial Road (Borough of Finsbury).
4. Lambeth Wharf, Belvedere Road (Borough of Lambeth).
5. Gabriel's Wharf, Waterloo Bridge (Private Contractor).
6. Canterbury Wharf, Waterloo Bridge (Private Contractor).
7. Cookson's Wharf, Albert Embankment (Private Contractor).
8. Cookson's Yard, Tinworth Street (Private Contractor).
9. Clarkson's Yard, Tinworth Street (Private Contractor).
10. Boyce's Yard, Tinworth Street (Private Contractor).
11. Herne Hill Siding, Herne Hill Station (C. and S.E. Railway).
12. Tulse Hill Siding, Tulse Hill Station (L.B. and S.C Railway).

Daily inspections are carried out during the summer months in connection with these depots.

The Bye-laws relating to the removal of offensive matters apply now to manure, *i.e.*, horse dung and litter other than straw, except such manure be removed or carried in a suitable carriage or vessel, properly constructed and furnished with a sufficient cover.

EFFLUVIUM NUISANCES.

1. The dust destructor belonging to the City of Westminster, and situated at Shot Tower Wharf, Commercial Road, has given no trouble during the year 1902, in respect of effluvia emitted from the chimney.

2. Complaints* have again been received during 1902 with regard to fine dust issuing at times from the chimney or chimneys belonging to the Charing Cross and Strand Electricity Supply Corporation Works, Commercial Road. The Corporation has made further alterations in the provision of extra baffle plates, settling chambers, etc., and there has been no nuisance from fine dust sufficiently serious to justify the Borough Council in taking action before the Courts.

3. A few complaints have been received during 1902 with regard to the destructor of Mr. Clarkson, situated in Tinworth Street, but in each case it was found that the nuisance arose on account of the secondary coke fire not being kept burning, or by the refuse (previous to burning) being allowed to lie at the door of the furnace for a longer time than was necessary in the ordinary course of the business. It was not found necessary to take Magisterial proceedings.

There are several destructors in the Borough, and these have been watched carefully during the year, but in no instance has a serious nuisance been found to exist. A destructor *per se* is not a nuisance. Indeed, I cannot emphasise too strongly the need that exists for the provision by the Lambeth Borough Council of destructors for the destruction of house (and other) refuse. It is now admitted that for a large Municipality such as Lambeth destruction by fire is the only satisfactory method, from a sanitary point of view, for dealing with refuse. Considering the peculiar shape of the Borough of Lambeth, it is clear that 2 (at least) destructors should be provided, one for the Outer and one for the Inner Wards. The former might be placed at Norwood on a site that has been offered to the Council, and which is situated at Windsor Road, West Norwood; and the latter on the river frontage (Belvedere or Commercial Road).

* Including a Memorial signed by 68 residents in the neighbourhood.

Great care, however, will have to be exercised in deciding upon a site in Belvedere or Commercial Road. It is clear that the Council's Wharf in Belvedere Road is unsuitable from sentimental reasons alone, *i.e.*, the close proximity of St. Thomas's Hospital and the Houses of Parliament. As far as the rate-payers are concerned, this question of sentiment is one not to be brushed aside without careful thought and consideration, thereby avoiding trouble hereafter. The financial considerations involved in the erection of a destructor plant for the burning of refuse deserve notice, as it would appear that, owing to the expenses (yearly increasing) of carting and barging, there would be a saving by adopting the former method. The present estimated expenses in connection with carting and barging are (roughly) £5,000 per annum, and this sum capitalised would far more than cover any such schemes as are suggested above, whilst the Sanitary advantage accruing to the Borough would be considerable. The Council would then have means for destroying trade refuse, condemned food, etc.

The matter is deserving of the attention of the Council at an early date.

Greengrocers' Refuse.

There has been, during 1902, a noticeable improvement in connection with the nuisance complained of (during 1901), due to the throwing of refuse by greengrocers into the public thoroughfares, opposite their shops or stalls. In no single instance has it been found necessary to take out a summons.

In this connection, the Council, on February 20th, 1902, decided to provide four bins for the use of the costers in the Atlantic Road, so as to prevent paper, etc., blowing about the roadway. All refuse from the stall is to be placed in these bins, to await removal by the Council's collecting vans, which pass down the street *thrice* daily on market days. The cost of each bin was £7 18s.

HOUSES LET IN LODGINGS.

No house has been registered during 1902.

The 371 registered houses have been inspected regularly, and they are, consequently, in a fair sanitary condition. The practice adopted by the Borough Council is to decide what houses shall be registered, it not being compulsory to register *all* the houses that are let in lodgings throughout the Borough, nor would such a course of action be desirable.

Bye-law 2 reads as follows :—

A lodging house shall be exempt from the operation of these Bye-laws until the landlord of such lodging-house shall have been required to furnish the statement of particulars necessary for the registration of such house.

The difficulty in dealing with the Registered Houses is in connection with the *annual* cleansing, which is to be carried out by the landlord, who is often a person of limited means, with the result that the work is not done. To take legal proceedings against such an one would be an injustice, and further would fail to accomplish the end desired, as, under the Bye-laws, the Magistrate has not power to make an Order for work to be done, but merely to inflict a penalty. Proceedings under Section 2 of the Public Health (London) Act, 1891, are more satisfactory.

Another difficulty is that the large majority of houses, especially in the Inner Wards, are let out in lodgings, and would, consequently, require registration if it were thought desirable to register all lodging-houses. A very large addition to the present sanitary staff would be required if all lodging-houses were to be registered throughout the Borough, without any corresponding sanitary advantage in any way commensurate with the extra expense involved. If it is thought to be advisable, or practicable, for all houses to be inspected regularly and systematically, a house-to-house inspection, with the serving of notices, as required under the Public Health (London) Act, 1891, will give much more satisfactory results, and could be carried out with much less friction than a wholesale registration of houses under the Bye-laws.

COMMON LODGING HOUSES.

There are 9 registered Common Lodging Houses (for men) situated within the Borough of Lambeth, as follows:—

Date when registered.	Situation.		Authorised No. of Lodgers	Date of Approval of Premises.
18th July, 1900 ...	108	Lambeth-walk (c.h.) (house in rear).	38	2nd April, 1889.
30th October, 1890 ...	55	Belvedere-road	53	1st October, 1900.
16th October, 1901 ...	161	Stamford Street	24	15th October, 1901.
21st December, 1883...	92	Westminster-bridge-road	171	21st November, 1883.
28th December, 1898...	24	Lower-marsh (c.h.)	19	30th June, 1890.
24th October, 1885 ...	89 & 91	Wandsworth-road	216	7th October, 1885.
12th February, 1887 ...	126	Wandsworth-road	149	20th January, 1887.
31st August, 1891 ...	45	Lower Kennington-lane (c.h.) ...	6	7th August, 1891.
23rd June, 1894 ...	65	Upper Kennington-lane	12	22nd February, 1892.

Under the Common Lodging Houses Act, 1853-5, the London County Council has control over all the Common Lodging Houses situated within the Metropolis—a duty which the newly-formed City and Borough Councils might, with advantage, have had transferred to them when the London Government Bill, 1899, was brought in.

31, New Park Road was cancelled as a Common Lodging House on December 29th, 1902.

HOUSING OF THE WORKING CLASSES.

14 houses have been represented during 1902 to the Borough Council by the Medical Officer of Health under Part II. of the Housing of the Working Classes Act, 1890, as being unfit for human habitation on account of (1) the premises being dwelling-houses built over stables, with the living rooms communicating directly with the stables, the effluvia from which ventilate into such living rooms; and (2) defective drains, unpaved yards, and the positions of the w.c.'s within living rooms and communicating directly therewith. These houses have been already put, or are being put, into proper sanitary states, and in no single instance has it been found necessary to permanently close, and therefore displace the tenants. As may be expected, fewer and fewer houses are found to be sufficiently bad to require action under Part II. of the Housing of the Working Classes Act, as years go on, on account of the good work being done under the usual notices served by the Inspectors daily (10,000 notices being served annually on an average). This fact must be remembered in gauging the work done by the Borough Council in connection with the carrying out of statutory duties under the Housing Acts.

Four blocks of labouring-class dwellings (erected by the London and South-Western Railway Company) have been completed during 1902. They are situated in Miles Street, South Lambeth Road, and are models of what such buildings should be. The scheme of the Ecclesiastical Commissioners for the erection of cottages, etc., in the Webber Street and Ufford Street area has made great progress during the year 1902.

The question has been raised by the Council (March 20th, 1902) as to opening up, and improving, the network of narrow courts between Lambeth Walk and St. Alban's Street. The houses referred to are in fair sanitary condition, and cannot, therefore, be dealt with under the Housing Acts as unfit for human habitation, either singly or as forming an area.

HOUSING OF THE WORKING CLASSES ACT:—
DETAILS OF HOUSES CONDEMNED DURING 1902.

Date of representation of M.O.H. to, and of resolution of, Borough Council	Address of Premises.	No. of Houses.	Date of Service of Notices.	Result.	Remarks.
June 5th	1, 2, 3, 4, Albert Mews, Albert Square, Clapham Road.	4		Rendered fit	Premises being dwellings houses built above Stables and unfit for human habitation by virtue of the effluvia which pass into the living rooms from the Stables, such living rooms communicating direct therewith.
Oct. 30th	66-84, Rommany Road, West Norwood.			Being rendered fit.	Defective drains, unpaved yards and the positions of the w.c.'s in the living room.

CUSTOMS AND INLAND REVENUE ACTS

During 1902, 2723 Certificates under the Customs and Inland Revenue Acts, in connection with tenements (or dwellings) so constructed as to afford suitable accommodation for each of the families inhabiting the same, have been applied for, and of these 1688 have been granted *unconditionally*; 785 have been granted *conditionally*; *i.e.*, on condition that certain sanitary improvements and alterations are carried out at once or within a reasonable time (say, six to twelve months); 250 have been refused.

(a.) Certificates granted unconditionally.

Address.	Blocks or Houses.	Tenements
Albert Embankment, 14	1	3
Belvedere Road, 64A	1	8
Brockwell Mansions, Crownstone Road ...	4	24
Cleveland Mansions, Chapel Street, 1—36 } Cleveland House, Hackford Road, 1—9 }	6	36
Coldharbour Lane, 137B, 139, 139A, 139B, } 141, 141A, 143, 143A, 145, 145A }	10	30
Cranworth Gardens, 6, 7, 8, 11, 13, 17, 19, 21 } Russell Street, 24, 26, 28 } Aigburth Mansions, 43, 44, 45, 46, 50 ... }	13	71
Cranbrook Mansions, 1-36 } Albert Mansions, 1-24 and 49-78 } Athol Mansions, 25-48 } Victoria House, 1-52 } South Lambeth Road. }	4	139
Durban Road, 2-72A	36	72
„ „ 1A-3B	2	4
„ „ 9-17	5	10
„ „ 23-45A	12	24
Electric Mansions, Electric Avenue	3	23
Emily Mansions, Landor Road	1	12
Glencoe Mansions, Chapel Street	3	18
Glenshaw Mansions, Brixton Road	5	30

Glengariff Mansions, South Island Place	...	1½	...	9
Guinness's Trust Buildings, Vauxhall, 1-332	...	5	...	332
Langley Mansions, Langley Lane	...	1	...	19
Lollard Street, 62-73	...	3	...	12
The Maisonettes, Holland Street, 1-6, & 7-12	...	12	...	36
Martell Road, West Dulwich, 25, 27, 29, 31	...	4	...	16
New Clive Road, 73-75	...	2	...	4
Peabody Buildings, Rosendale Road, A, B, C,	}	3	...	57
D, E, F, G, H, I, K, L, M		9	...	171
Peabody Buildings, Duke Street, s, r, u, v	...	4	...	86
Rita Road, 1-55 and 2-34	...	45	...	135
Rose Villas, Strathleven Road, 1-3	...	3	...	6
Russell Gardens, Stangate Street	...	2	...	96
Stangate Buildings	...	2	...	55
Vauxhall Mansions, 125-131	...	6	...	96
Vaughan Road, 90, 92, 94, 96, 98, 100	...	6	...	18
Vauxhall Street, 48, 50, 52	...	3	...	9
Walcot Gardens, 1-19	}	2	...	23
Walcot Buildings, 1-4				
Wolffington Road, West Norwood, 72, 72A,	}	2	...	4
74, 74A				
Totals	...	221	...	1688

(b). *Certificates granted conditionally.*

"Attwood," Auckland Hill	...	1	...	3
Albert Dwellings, Lollard Street	...	1	...	14
Model Dwellings, Albert Embankment	...	2	...	62
Barrington Mansions, Brixton	...	1	...	6
Brading Road, 18, 20, 22, 24	...	4	...	8
Burton Houses, 1-14, Brief Street	...	2	...	14
Carlisle Buildings, Carlisle Lane	...	1	...	47
Comrie Road, 1-9 (odd) and 2-16 (even)	...	13	...	26
Comrie Road, 26-44	...	10	...	20
Connaught Mansions, Brixton	...	3	...	35

Dorset Road, 15, 17, 19, 21, 23, 25	...	...	6	...	18
Dover Mansions, 1-20	...	...	2	...	24
Eastcote Terrace, Stockwell, 1-8	...	...	8	...	16
Ethelred Street, 1-12	...	...	1	...	12
Felix Street, 10, 12, 14	...	...	3	...	18
Fitzalan Street, 40, 41, 42, 43, 44	...	}	7	...	21
Topaz Street, 2, 4	...				
Fitzalan Street, 88, 89, 89A	...	...	3	...	8
The Gardens, Eastcote Terrace, 1-15	...	...	1	...	15
Gordon Terrace, Strathleven Road, 11-19 (inclusive)	...	}	13	...	26
Comrie Road, 18-24 (even)	...				
Grantham Road, 94-112 and 39-43	...	...	13	...	26
Hackford Road, 30-94	...	...	32	...	96
Lambeth Palace Road, 7, 13, 19	...	...	3	...	15
Martell Road, 33, 35	...	...	2	...	8
Morratt Street, 2-12 and 1-23	...	...	18	...	54
Oakley Street, 63, 65	...	...	1	...	8
Oval Chambers	...	...	8	...	60
Paris Gardens, Broadwall	...	...	1	...	57
Stamford Buildings, S. Lambeth Road, 1-12	...	...	1	...	12
Stangate Chambers and Felix Buildings	...	...	2	...	12
Stockwell Mansions, Eastcote Street	...	...	1	...	24
Tunstall Road, 18, 26, 28, 30	...	...	4	...	12
Upper Marsh, 7	...	...	1	...	8
Totals	...	...	<u>169</u>	...	<u>785</u>

(c) *Certificates refused.*

Dante Road, 6-42	...	...	19	...	76	
Holyoake Road	{	1-19	...	10	...	30
		2-72	...	36	...	144
Totals	...	...	<u>65</u>	...	<u>250</u>	

WORKSHOPS.*

During 1902, 105 new Workshops have been added to the Register, consisting of the following:—

Name of Trade or Business.	No. of Workshops.
Dressmakers	50
Laundries†	29
Milliners... ..	7
Waistcoat Makers	2
Corsetieres	1
Ladies' Shirts	1
Ladies' Tailors	2
Babies' Flannels	1
Fancy Goods	2
Children's Pelisses	2
Basket Maker	1
Underclothing	1
Tailors	2
Tie Makers	2
Shirt Maker	1
Cycle Maker	1
	105

† 3 of the laundries are steam laundries, *i.e.*, factories.

Full particulars concerning these 105 Workshops have been entered up in the Register, and it is found that there are connected therewith 178 workrooms, in which were working at the time of inspection 623 persons—26 males and 597 females (*females alone* being employed in 87 workshops). There were found being employed—

	M.	F.	Total.
Children	—	—	—
Young Persons	—	91	91
Adults	26	505	532
	26	597	623

* The new Factory and Workshop Act, 1901, came into force on Jan. 1st, 1902, and entails much extra work, *e.g.*, outworkers, etc.

Notices as to the "protected persons" (*i.e.*, children, young persons, and women) were sent on, as required, to the Factory Inspectors, from time to time.

25 Notices of occupation of Workshops have been received during 1902 by the Borough Council from the Factory Inspectors, as compared with 32 during 1901, and 3, 32, 60, 31, and 29 respectively received by the late Vestry during the five years 1886-1890.

5 written Notices have been received by the Borough Council from the Factory Inspectors with reference to contraventions of the Public Health Acts in connection with Factories and Workshops, and all such nuisances have been abated, and due notice sent to the Factory Inspectors within one month as to action taken in each case. The number of notices received in 1901 was 17, as compared with 16, 8, 27, 25 and 66 respectively received by the late Vestry during the five years 1886-1900.

In connection with the 105 new workshops, the following insanitary conditions were met with at the time of the inspections:—

1. *As to Ventilation and Warming and Lighting.*

In 1 out of the 105 workshops (*i.e.*, 0.9 per cent.) only was the ventilation unsatisfactory, and in 104 out of 105 workshops (*i.e.*, 99.1 per cent.) the workrooms, at the time of inspection, were found to be reasonably warmed by open fireplaces, open or closed stoves, gas jets, etc., and sufficiently lighted.

2. *As to Cleanliness.*

In 30 workshops (*i.e.*, 28.6 per cent.), the workrooms were dirty and required cleansing.

3. *As to Sanitary Appliances.*

In 32 (*i.e.*, 30.5 per cent.), the sanitary fittings and appliances were bad; whilst in 2.9 per cent. there were no w.c.'s. The w.c.'s were outside in 33.3 per cent., inside in

30.5 per cent., and outside and inside in 33.3 per cent. Separate closet accommodation for the sexes was wanting in 14 cases (*i.e.*, 13.3 per cent.).

The soil pipes were found to be unventilated, or insufficiently ventilated, in 9 cases (*i.e.*, 8.6 per cent.), a condition of things which may, or may not, be a nuisance; and in 3 cases (*i.e.*, 2.9 per cent.) there was found to be direct communication between w.c.'s and workrooms.

4. *As to Dampness.*

In one workshop only was any dampness found on inspection.

5. *As to Overcrowding.*

The cubic capacities of the different workrooms were found to vary considerably, but in no workroom was overcrowding found to exist.

In addition to inspecting the above workshops wherein females were employed, the special work done by the Female Inspector is dealt with on pages 125-128; whilst in the Appendix a Special Report is printed dealing with Inspections made in connection with the Kitchens of Restaurants, Dining Rooms, Hotels, Coffee Rooms, etc., throughout the Borough of Lambeth.

Out-Workers.

Under the Factory and Workshop Act, 1901, certain trades and businesses must keep, and send periodically to Sanitary Authorities, lists of out-workers, together with the addresses of the houses wherein they work. These houses have to be visited and inspected with a view to being kept in a wholesome and sanitary condition, free from infectious disease. This duty entails a large amount of work, and will be chiefly carried out by the Female Inspector, as the trades and businesses chiefly affected are those of dressmakers, tailors, and the makers of wearing apparel of all kinds.

I.—WORKSHOPS REGISTERED DURING 1902:
Number of Rooms and Persons employed.

New Wards and Inspectors in charge thereof.	No. of Workshops.	No. of Workrooms.	Children.		Young Persons.		Adults.		TOTALS.		
			M.	F.	M.	F.	M.	F.	M.	F.	Total
Marsh ... { Scorer	1	1	...	...	...	...	...	6	...	6	6
Marsh ... { Wallis	2	3	...	...	...	...	2	7	2	7	9
Bishop's ... { Hooper	1	1	...	...	...	...	5	...	5	...	5
Prince's ... { Howes	8	12	...	...	...	5	3	22	3	27	30
Prince's ... { Jones	1	2	...	...	...	...	...	2	...	2	2
Vauxhall ... { Jackson	1	1	...	...	...	1	...	2	...	3	3
Stockwell { Baxter	21	38	...	...	...	43	6	148	6	191	197
Stockwell { Perrin	11	14	...	...	...	13	1	31	1	44	45
Brixton ... { Gavin	28	61	...	...	...	19	4	177	4	196	200
Brixton ... { Bott	16	25	...	...	...	7	4	57	4	64	68
Tulse Hill Smith	11	13	...	...	...	1	...	36	...	37	37
Norwood... Barfoot	4	7	...	...	...	2	1	18	1	20	21
Total	105	178	...	...	...	91	26	506	26	597	623

N.B.—With four exceptions, the Inspections were made in connection with the above 105 Workshops by the Female Inspector.

II.—WORKSHOPS :—Details as to Sanitary

Details as to Sanitary Conditions and Defects found.	Old Parish Districts, and the				
	Marsh.		Bishop's and Prince's.		
	Scorrer.	Wallis.	Hooper.	Jones.	Howes
Ventilation { satisfactory ...	1	2	1	1	8
{ not ...	...	...	...	...	...
Cleanliness { satisfactory ...	1	1	1	...	5
{ not ...	...	1	...	1	3
Workrooms { damp ...	...	...	...	...	...
{ not ...	1	2	1	1	8
Workrooms { warm ...	1	1	1	1	8
{ not ...	...	1	...	...	...
State of sanitary fittings, &c. { good ...	1	2	1	1	5
{ bad ...	...	...	...	...	3
Soil pipe { ventilated ...	1	2	1	1	5
{ not ventilated ...	...	...	...	...	...
{ no soil pipe ...	...	...	...	...	3
Position of W.C. { outside ...	1	1	1	1	2
{ inside ...	...	1	...	...	2
{ outside & inside ...	...	...	...	...	3
Separate W.C. accommodation { Yes ...	1	2	1	1	7
{ No ...	...	...	...	...	1
Communication (direct) between W.C.'s & rooms { Yes ...	...	...	...	...	...
{ No ...	1	2	1	1	8

N.B.—The Wards of the old Parish of Lambeth are retained so that this
The Workshops (with 4 exceptions) were inspected

Conditions and Defects found.

	Inspectors in charge thereof.						TOTALS.
	Vauxhall & Stockwell.			Brixton.		T'Isle Hill, N'rw'd	
	Jackson.	Baxter.	Perrin.	Gavin.	Bott.	Smith.		Barfoot.
1	20	11	28	16	11	4	104
...	1	...	...	...	...	...	1
1	13	7	21	13	8	4	75
...	8	4	7	3	3	...	30
...	...	...	...	...	1	...	1
1	21	11	28	16	10	4	104
1	19	11	27	15	10	4	99
...	2	...	1	1	1	...	6
...	12	6	23	13	5	4	73
1	9	5	5	3	6	...	32
1	15	8	14	8	7	2	65
...	3	...	4	...	1	1	9
...	3	3	10	8	3	1	31
...	3	2	11	7	3	3	35
...	8	3	9	5	4	...	32
1	8	6	8	4	4	1	35
...	2	...	...	...	...	...	3
1	15	11	25	13	11	3	91
...	6	...	3	3	...	1	14
...	...	1	2	...	1	...	3
1	21	11	26	16	10	4	102

Table may be comparable with those in previous Reports (1897-1901).
by the Female Sanitary Inspector.

BAKEHOUSES.

The 224 Bakehouses have been inspected during the year 1902, and the necessary annual white-washing and cleansing carried out

LIST OF BAKEHOUSES IN LAMBETH BOROUGH.

(* Means that Bakehouse is empty at present.)

(† " " " " situated underground.)

MARSH WARD:—

Broadwall, 24†	Roupell street, 62
Cornwall road, 64†, 73, 78†	Tower street, 5, 28
Doon street, 22*†	Westminster Bridge road, 120
Duke street, 14†	Waterloo road, 59†, 102
Lower Marsh, 14†, 20†, 43, 49†, 139	Webber street, 43
New Cut, 44, 81†	York road, 102
Oakley street, 26†, 70†	

BISHOP'S WARD:—

Broad street, 13†	Monckton street, 2†
Brook street, 106	North street, 27
China walk, 16†	Prince's road, 101*
Crozier street, 12*†	Saville place, 19*†
Ethelred street, 107	Stangate street, 32
Hercules road, 4*†, 66*	Tracey street, 22†
Lambeth road, 81†	Upper Marsh, 18†
Lambeth walk, 17, 71, 82, 115, 121†, 126†, 148*, 154†, 191†, 204†	Walnut Tree walk, 43†
Lollard street, 124	Westminster Bridge road, 189†, 219

PRINCE'S WARD:—

Auckland street, 1†	Newburn street, 20
Bonnington square, 13†	Newington butts, 150
Church street, 10, 25	Prince's road, 19, 152
Clapham road, 24†	Stannary street, 39*
Cleaver street, 12†	Trigon road, 46
Glasshouse street, 60	Tyer's street, 49
Holyoake road, 74†	Upper Kennington lane, 76, 107, 199†
Hurley road, 17*†	Vauxha'l street, 36, 86, 126
Kennington Park road, 202	Vauxhall walk, 18A, 79, 123
Kennington road, 334†	White Hart street, 24, 58
Lower Kennington lane, 32, 84,* 177	Windmill row, 10

VAUXHALL WARD:—

Clapham road, 226,* 264†	South Lambeth road, 108, 158, 175*
Dorset road, 55, 129	Thorparch road, 1
Harington road, 42, 58, 129†	Wandsworth road, 181, 227, 230†, 259, 283
Lansdowne road, 74	Wilcox road, 29†, 44, 3†
Portland place south, 20	
Paradise road, 30†	

STOCKWELL WARD:—

<p>Acre lane, 120, 144† Bedford road, 29 Brixton road, 466-8† Clapham road, 247 Dalyell road, 46† Dorrell place, 11† Ferndale road, 118,† 185 *(late 1, Shepherd's lane)</p>	<p>Kepler road, 14† Lingham street, 76, 39 Lander road, 80†, 99†, 147† Santley street, 13† Stockwell road, 63, 143, 150†, 170† Sydney road, 26 Tasman road, 52†</p>
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BRIXTON WARD:—

<p>Akerman road, 45† Atlantic road, 40 Beresford street, 271† Brixton road, 37, 267, 447,* 56, 66A, 274. Camberwell New road, 167 Clapham road, 93 Coldharbour lane, 76, 203, 240, 326, 386 Denmark street, 25</p>	<p>Gordon grove, 9† Holland street, 22 Lothian road, 100† Loughborough road, 73* 76 Russell street, 17* St. Mark's road, 1 Treherne road, 12† Vassall road, 54, 75 Warham street (late Thomas street), 44, 81</p>
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HERNE HILL WARD:—

<p>Atlantic road, 65†, 74 Barnwell road, 91† Coldharbour lane, 203, 223, 439, 459 Denmark hill, 120 Dulwich road, 67 Effra parade, 11</p>	<p>Hinton road, 51 Hurst street, 28 Kemerton road, 7 Milkwood road, 6†, 69 Railton road, 45†, 64†, 78†, 111† 205† Shakespeare road, 84† Sussex road, 75</p>
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TULSE HILL WARD:—

<p>Acre lane, 115 Brixton hill, 72†, 232 Cornwall road, 32, 76†, 146 Elm park, 58† Lyham road, 159 New Park road, 59</p>	<p>Probert road, 1† Somer's road, 27 Tulse hill, 5†, 25†, 182† Upper Tulse hill(The Exchange),3† Water lane, 25, 87 Norwood road, 90†, 202†, 222</p>
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NORWOOD WARD:—

<p>Approach road, 6† Barnfield road, 28 Chapel road, 2*† Eden road, 7 Elder road, 1A Gipsy hill, 53†, Gipsy road, 193, 253† Hamilton road, 134</p>	<p>High street, 34 (rear of)†, 87, 94†, 63* Knight's hill, 26, 49, 58, 190 Norwood road, 427 Rommany road, 191†, 123† Westow hill, 33† Wood street, 5 Woodland hill, 31*</p>
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There are 88 Underground Bakehouses situated in the Borough, and these have been specially inspected* by the Medical Officer of Health and the Inspectors, with a view to structural (and other) alterations and improvements being carried out so as to render them "suitable" in construction, light, ventilation, and in all other respects—as required under Sec. 101 of the Factory and Workshop Act, 1901. By this Section, no underground Bakehouse in Lambeth(or elsewhere)can be used as such after January 1st, 1904, unless certified by the Borough Council as suitable, bearing in mind the points mentioned above. In the case of Lambeth, it was found that not one Bakehouse could be certified in the condition in which it was found to be at the date of inspection. A register is being compiled, shewing the conditions of the different Underground Bakehouses before alterations (necessary to comply with the Act) are carried out, and dealing with the following points:—

Occupier's Name.....Owner's Name.....Owner's Address.....
Construction.....

No. of Baking Rooms.	Room used as	DIMENSIONS IN FEET:							Floors paved with	Walls covered with	Ceilings made of
		Length.	Width.	Height.	Cubic Capacity.	Depth below level of adjoining ground at					
						Front.	Side.	Rear.			

Sanitary Arrangements.—Are drains Interceptor?.....Vented?.....When relaid?.....Are gullies in bakehouse?.....Positions—...Course of drain (if known).....Number and position of sinks?.....Undertrapped?.....What sanitary conveniences

* A Sub-Committee of the Public Health Committee visited specimens of the different Lambeth Underground Bakehouses, and reported to the Council on November 27th, 1902.

are provided for the workers? (1) w.c. : No.....Position.....(2) Urinal : No.....Position.....(3) Washing basins : No.....Position.....

Water Supply.—If from cistern?.....Position of cistern..... Are taps provided on rising main?.....

Light.—What provision made for lighting?.....Number and area of windows?.....Do windows open into areas?.....Number of gas burners or other artificial lights?.....Is stall-board glazed?

Ventilation.—What provision made for ventilation?..... Number and areas of openings?.....Does stall-board open?..... How?.....Any special inlets or outlets?.....

All other respects.—Are troughs on castors?.....Fixed?..... Position of flour store?.....Any receptacle for refuse in Bakehouse?.....Position?.....Size?.....If covered?..... Is Bakehouse subject to flooding?.....Where are coals kept?.....How is Bakehouse approached?.....State position of oven : does oven run under street or yard?.....Number of workers employed in Bakehouse?.....Are any rooms on same floor as Bakehouse— (1) Used for baking.....(2) Not used for baking.....

Date of Inspection?.....

Inspector's Name.....

A special Report* on the subject of Underground Bakehouses was prepared by the Medical Officer, and presented to, and adopted by, the Borough Council on November 27th, 1902, when it was decided that the subjoined Requirements (General and Special) shall be insisted upon before any Underground Bakehouse in Lambeth be certified as suitable :—

I. General Requirements.

(A). CONSTRUCTION.

- (1) Cubic capacity : A minimum of 1,500 cubic feet to be provided.
- (2) Height : A minimum of 7 ft. throughout, measured from the floor to the ceiling, to be provided (such height to be increased where the floor space exceeds 250 square feet).

* *Vide Appendix.*

- (3) Walls: To be rendered smooth, even, and impervious throughout, *e.g.*, with (a) suitable cement, (b) glazed bricks or tiles, or (c) other equally efficient material.
- [Tiles are best for the portions of the wall or walls immediately adjacent to the ovens, cement being liable to crack or flake with the heat.]
- (4) Flooring: To be made of a smooth, even, and impervious material throughout, *e.g.*, with (a) a minimum of 4 ins. of cement concrete (floated over smooth with cement), (b) tiles (or flags) on solid foundation and embedded in cement, or (c) some other equally efficient impervious paving.
- (5) Ceilings: To be properly ceiled with smooth, even, and impervious material, *e.g.*, with (a) granite plaster, (b) parian cement, (c) well-fitting match-boarding properly painted or varnished, or (d) some other equally efficient material.
- (6) Drains: To be constructed of gas- and water-tight pipes (and joints) when situated under the Bakehouse, and no gully to be within the Bakehouse, unless the drain connected therewith be made to discharge over, or into, a trapped gully outside.
- (7) Sinks: To be situated, as far as possible, outside the Bakehouse, and all sink-waste pipes to be under-trapped.
- (8) Water Supply: A tap or taps to be provided direct from the rising main for the supply of drinking water.

(B). LIGHT.

- (1) Windows: To be provided of a size (exclusive of sash-frames) in total area not less than one-tenth of the floor space, extending, as far as possible, above the level of the adjoining ground, and opening into (a) the external air, or (b) partly into the external air, and partly into an area, which area is to be lined with white tiles or white glazed bricks, or fitted with suitable reflectors (or prisms), or rendered in cement and periodically lime-washed, so as to admit daylight to every part of the Bakehouse.

- (2) Artificial Lighting: Some form of incandescent light, or electric light, to be used, as far as practicable, instead of ordinary gas.

(c). VENTILATION.

- (1) Windows: To be constructed, where used for ventilating, so as to open (wholly or in part) inwards towards the Bakehouse, by means of hinges on the bottom (or other) rails, such openings to be provided with side dust-boards (or wings) so as to allow of fresh air entering in an upward direction (*i.e.*, without draught), and the hanging rails to be situated at such a height above the ground level (*e.g.*, *minimum 12 inches*) as to prevent the entrance, as far as possible, into the Bakehouse of street dust and dirt through such openings.

(d). ALL OTHER RESPECTS.

- (1) Troughs and other Furniture: To be fitted on strong castors (or wheels), or in some other equally efficient way, so as to be readily movable for cleansing purposes.
- (2) Receptacle for Refuse: To be provided for the storage of all refuse matters, and to be (*a*) properly covered, (*b*) of small size, and (*c*) emptied once in every 24 hours.
- (3) Flour Store: To be provided in a suitable room, elsewhere than in the Underground Bakehouse itself, except where the Underground Bakehouse has a large cubic capacity so that a portion of such Bakehouse can be divided, and partitioned, off for use as such.
- (4) General Statutory Requirements: To be carried out at all times.

II. Special Requirements.

These "Special Requirements" are in addition to the "General Requirements" already mentioned, and are to be given in the form of a separate specification for each individual Bakehouse situated within the Borough of Lambeth—such specifications to be drawn up after careful inspection and examination in each case.

OFFENSIVE TRADES.

During 1902, no nuisance has been reported in regard to the 6 Offensive Trades, which exist in the Borough of Lambeth, and which are now under the supervision of the Borough Council:—

1. Fat Melters—Upper Marsh (Messrs. J. C. & J. Field).
2. Tallow Melters—144, Broadwall (Messrs. Harris, Blackman & Sons).
3. Soap Boilers—Upper Marsh (Messrs. J. C. & J. Field).
4. Soap Boilers—144, Broadwall (Messrs. Harris, Blackman & Sons).
5. Tripe Boilers—103, Lambeth Walk (Messrs. Bennett, Son & Co.).
6. Tripe Boilers—115, Lower Marsh (Messrs. Bennett, Son & Co.).

SLAUGHTER-HOUSES.

There were within the Borough of Lambeth at the end of 1901, 37 registered Slaughter-houses, and at the Annual Licensing of the London County Council, held on October 27th and December 4th, 1902, respectively, the licenses were renewed with the following exceptions:—

113, Lower Marsh—Slaughterhouse (but not the shop) pulled down by the London and South Western Railway Company in the course of their Waterloo Station extensions. No application made.

Ernest Street and High Street (rear of)—The Slaughterhouse having been unoccupied as such for a period exceeding 9 months at the time of the renewals of licenses, the license was refused.

36, Clapham Road—The Slaughterhouse being unoccupied at the time of the renewals of licenses, the license lapsed.

116, High Street, West Norwood—No application for license made.

LIST OF LICENSED SLAUGHTER-HOUSES IN THE
BOROUGH OF LAMBETH, 1902.

Ward.	Situation of Premises.	Name of Licensee.
Marsh ...	106, Lower Marsh ...	Thomas, Robert Edwin
„ ...	124, „ „ † ...	Mabbott, Wm.
„ ...	99, „ „ * ...	Holdstock, Jno. Thos
Bishop's ...	38, Walnut Tree Walk (rear of)	Climpson & Co.
„ ...	151, Lambeth Walk ...	Wright, Samuel
„ ...	165, „ „ ...	Wright, Samuel
„ ...	172, „ „ ...	Ward, Geo. Osborne
Prince's ..	406, Kennington Road ...	Parsons, B. W.
„ ...	60, Kennington Park Road ...	Grellier, Frederick
„ ...	171, Lower Kennington Lane ...	Clark, Arthur
„ ...	158, Newington Butts ...	Look, Ernest J.
„ ...	4, Clapham Road ...	Holdsworth, Chas.
Vauxhall ...	302, „ „ ...	Holdsworth, Geo.
„ ...	152, „ „ ...	Lawrence Bros.
„ ...	18, Paradise Road (rear of) ...	Smith, Wm. Geo.
„ ...	1, Lansdowne Road ...	Copeman, Walter George
Stockwell...	97, Stockwell Road ...	Rooksby, Walter
„ ...	27, Bedford Road ...	Mercer, Wm. Jas.

Ward.	Situation of Premises.	Name of Licensee
Brixton ...	Near Railway Hotel Brewery, Electric Lane	Elphich, Edwin
„ ...	263, Brixton Road*	Knight, Harry
„ ...	10, Foxley Road*	Malden, Robert Levers
„ ...	Industry Terrace (yard leading to)	Warren, James Edward
Herne Hill	207, Coldharbour Lane ...	Spindler, Morris G.
„	309, „ „ ...	Ford, Hy. & Co., Ltd.
„	77, Dulwich Road	Atkins, Jim Cook
Tulse Hill	45, New Park Road	Beaumont, Hy. (trading as Mar- tin & Beaumont)
„	12, Lower Tulse Hill	Hayden, Wm.
Norwood ...	120, High Street*†	Bull, John
„ ..	121, „ „ (rear of) ...	Griffiths, Fredk.
„ ...	66, Knight's Hill Road ...	Crittall, Daniel Pearce
„ ...	125, Hamilton Road	Newman, Jno. Herbert (trading as R. Casswell)
„ ...	32, Chapel Road	Arnold, Jno. Daniel
„ ...	107, Hamilton Road (east side of)	Miller, Geo. Wm.

Sanitarily, these 33 Slaughter-houses are in good condition, and the chemical test, which was applied to the drains in each case, failed to give a single result. Constant inspection of the Slaughter-houses within the Borough is now carried out, as the officers of the Borough Council are responsible for the due en-

* Small cattle only to be killed.

† Special conditions laid down.

forcement of all Bye-laws and regulations made in pursuance of the Slaughter-houses, etc. (Metropolis) Act, 1874, and the Local Government Act, 1888—an important duty, which was formerly carried out by the officers of the London County Council. This duty was transferred to the Borough Council by the London Government Act, 1899, Section 6 (4), the London County Council not having concurrent powers. One summons was taken out against a butcher for removing offal not in accordance with the Bye-laws.

All the Slaughter-houses are retail, with the exception of two (which are both retail and wholesale), and the estimated weekly number of animals killed in the 33 private Slaughter-houses within the Borough is (roughly) as follows:—Cattle, 53; Sheep, 768; pigs, 68; total, 889. Calves occasionally.

The sanitary defects requiring to be dealt with during 1902 were trifling:—Defective gutters, 1; defective paving, 3; defective roof, 1; choked w.c., 1; dirty lair, 1; and broken gully-grid, 1.

No complaint was received during 1902 with respect to Mr. Bull's premises (120, High Street, West Norwood), in connection with which serious action had to be taken in 1901 (see Annual Report, 1901, pages 204-206).

The London County Council has taken no further action in regard to the provision of Public Abattoirs for London, and the consequent abolition of all private Slaughter-houses. It has been decided, however, that in all future cases, no new Slaughter-house shall be licensed in London which is situated within 100 feet of a dwelling-house—a statutory provision. The wholesale abolition of all private Slaughter-houses throughout the Metropolis is neither justifiable nor advisable.

COWHOUSES.

There are, within the Borough of Lambeth, 20 licensed Cow-houses, the licenses of which were renewed by the London County Council at the Annual Licensings held on October 27th, and December 4th, 1902, respectively :—

LIST OF LICENSED COWHOUSES IN THE BOROUGH OF LAMBETH.

Ward.	Situation of Premises.		No. of Sheds.	No. of Cows kept
Marsh	...	6, Coral Street, Lower Marsh	1	10
Bishop's	...	Cambria Cottage, 36, Tracey Street	1	13
„	...	71, Ethelred Street	1	7
„	...	24, Distin Street	2	9
Prince's	...	30, Upper Kennington Lane	1	7
Vauxhall	...	38, Hartington Road	1	22
„	...	9, Dawlish Street	1	12
Stockwell	...	8, Moat Place	1	7
Brixton	...	34, Ingleton Street	1	5
„	...	1, Elliot Road	2	9
Herne Hill	...	67, Coldharbour Lane	1	7
„	...	329, Coldharbour Lane	1	8
„	...	56, Railton Road	1	5
Norwood	...	156, Hamilton Road	3	26
„	...	76 and 78, Gipsy Hill	3	27
„	...	67, Rosendale Road	1	10
„	...	93, Clive Road	1	4
„	...	196, Norwood Road	1	20
„	...	Elder Road Dairy, West Norwood	3	35
„	...	15, Croxted Road	1	3
			28	246

Sanitarily, these 20 Cowhouses are in good condition, and they have been inspected carefully during 1902, and the drains in each case tested with the chemical test, without a result being obtained in any single instance. The only sanitary defect found during 1902, consists of defective paving (in 4 cases).

The Borough Council is now responsible for the periodical inspection of the Cowhouses, and the due enforcement of all Bye-laws and regulations which have been made in connection therewith under the Dairy, Cowsheds, and Milk-shops Orders, 1885-6. Such duties were carried out by the London County Council previous to the passing of the London Government Act, 1899.

These duties, highly important, are better carried out by the different local Sanitary Authorities (acting for their respective districts) than by the London County Council, acting for the whole of the administrative County of London. The inspections are more systematic, and more frequent, with the result that the states of the Cowhouses (at least as far as Lambeth Borough is concerned) are better as to cleanliness and general sanitation. No single summons has had to be taken out on account of contravention of a Bye-law, though in one instance a cow-keeper had to be cautioned for keeping his cows dirty.

DAIRIES, MILK-SHOPS AND MILK-STORES

Several new Milk-shops and Milk-stores have been registered during 1902, and all existing ones have been under inspection. A special Report was published in the 1901 Report, (p.p., 209-217), dealing with the 458 known Milk-shops and Milk-stores, within the Borough of Lambeth.

The supervision of the Milk supply is an important duty as infectious diseases have been spread through the agency of milk, especially Scarlet Fever, Typhoid and Diphtheria. All powers in connection with outbreaks of infectious diseases through milk under the Public Health (London) Act, 1891, are given by Section 71 to the City and Borough Councils by the Legislature, and recently (1900) even the registration of Milk Stores and Milk Shops, and the carrying out and enforcing of all Bye-laws and Regulations for the time being in force in respect of Dairies, Cowsheds, and Milk Shops, have been transferred to the same Authorities from the London County Council by the London Government Act, 1899.

The intention of the Legislature is, therefore, plain in regard to London, and the year 1902 will be memorable on account of the introduction before Parliament of a London County Council (General Powers) Bill, 1902, by which it was sought by the London County Council to obtain, in connection with milk supplies, not only powers concurrent with the City and Borough Councils, but also increased powers for themselves to the detriment of the Local Sanitary Authorities named. The principle enunciated in the Bill was clearly contrary to the ideas of Parliament already expressed in Section 71 of the Public Health (London) Act, 1891, and in Section 6 (and other Sections) of the London Government Act, 1899, by which all powers connected with Dairies and Milk Supplies infected with dangerous and infectious diseases are vested in the City and Borough Councils of the Metropolis, and not in the London County Council, except in the case of default of such City and Borough Councils. Further,

the Notification Sections of the Act are in the hands of the City and Borough Councils, by which immediate information is obtained of the source of infectious disease outbreaks.

The Bill, as drafted, was unnecessary, and would have tended to over-ride and interfere with the powers at present possessed by such City and Borough Councils. Dual control would have led to friction as between the Local Metropolitan Authorities and the London County Council. Fortunately, the House of Lords took this view of the Bill, and threw out the whole of Part viii., dealing with the Milk Supply in relation to Infectious and Dangerous Disease Outbreaks and Epidemics. To Lambeth Borough Council belongs the honour of starting the opposition to the Bill, and in this opposition they were joined by Stepney, Paddington, St. Pancras, Southwark, Hampstead, Westminster, and other Metropolitan Sanitary Authorities. The Commons passed the Bill, after altering seriously the provisions of Part viii. (Milk Clauses), and other portions of the Bill, by which, in regard to Milk control, the sought-for powers of the London County Council were practically rendered useless; and the Lords went further, and ordered the crippled and mutilated Part viii. (Milk Supply) of the Bill to be put out of its misery. Part viii. was, consequently, thrown out by the Lords' Committee on July 7th, 1902.

The expenses borne by the various Local Sanitary Authorities (and forced upon them) in fighting the London County Council over an unnecessary Bill (at least, as far as Part viii. is concerned) is unsatisfactory food for thought. It is hoped that the London County Council has learnt its lesson, and will not endeavour to over-ride the Sanitary Districts of London in future in connection with powers dealing either with Milk Supplies or other matters of sanitary administration and control. In any case, where the London County Council asks Parliament for such increased powers, the same powers should be at the same time asked for for the different Metropolitan City and Borough Councils.

The expenses connected with Lambeth's opposition amounted to £272 14s. 3d.

* Mr. Courthorpe-Munro was Counsel appearing for the Lambeth Borough Council.

MORTUARIES AND CORONERS' COURTS.

The total number of bodies received at the two Borough Mortuaries (High Street and Wanless Road) during 1902 was 443, as compared with 485 during 1901, and an annual average for the old Parish of Lambeth for 5 years (1896-1900) of 450. Of the 443 bodies, 328 were received at High Street and 115 at Wanless Road.

57 bodies were brought in by the Police (48 to High Street and 9 to Wanless Road), and the rest by undertakers or private persons.

The Coroner's Court sat 52 times at Wanless Road, 130 times at High Street.

Wanless Road Mortuary alone is provided with a separate room for bodies dead from infectious disease, and during 1902 3 infectious bodies were received there, viz., 2 bodies (both female) dead of Smallpox, and 1 (female) dead of Diphtheria.

For comparison, details are given in tabular form of the work carried out by the late Vestry of Lambeth in connection with the Wanless Road and High Street Mortuaries during the five years (1896-1900). Taking an average, it will be seen that the total number of bodies received during 1902 in connection with the Borough is 7 less than the yearly average (450) received by the late Vestry during the preceding 5 years.

The number of post-mortems conducted for the Borough during 1902 is 237, as compared with 253, 281, 275, 285 and 267 respectively during the 5 years (1896-1900) for the old Parish, *i.e.*, 23.5 less than the *yearly* average (272.5) during the same quinquennium. Of the post-mortems, 48 took place at Wanless Road, and 189 at High Street.

Unfortunately, the High Street Mortuary is not separately provided, as it might be, with such separate accommodation for infectious bodies, so that bodies from the Inner Wards have at present to be taken to Wanless Road, Loughborough. Norwood and

Gipsy Hill, too, might, with advantage, be provided with a separate Mortuary for infectious dead bodies as well also as for other (non-infectious) dead bodies, thereby doing away with the necessity of taking such dead bodies all the way to Wanless Road, Loughborough, as at present.

This question as to the need for a separate Mortuary for Norwood Ward has been again raised during the year 1902, and its need agreed to. Up to the date of this Report, unfortunately, no site has been yet obtained.

A small Mortuary *alone* is needed, with accommodation for (1) infectious cases, and (2) other dead bodies. It is not only in the case of bodies dead from violence or sudden death, necessitating post-mortems or inquests, that such a Mortuary building would be of use. There are often times, in addition, when it is advisable to remove the bodies of persons who have died from infectious or other diseases from crowded centres to await burial. There is no immediate necessity, at present, for a new Inquest-room and Coroners' Court for Norwood. Norwood Ward is growing rapidly, and the crowded parts of the district are south of the Cemetery, so that it is a long way to have to take bodies (especially infectious ones) to the Mortuary at Wanless Road.

With a new Mortuary in Norwood, accommodation would be provided for Tulse Hill and Norwood Wards, whilst the Wanless Road Mortuary would supply Brixton, Herne Hill, and Stockwell Wards; and the High Street Mortuary, Marsh, Bishop's Prince's and Vauxhall Wards.

The 2 Mortuary-Keepers and the Deputy Keeper have given satisfaction in the performance of their duties, which are mostly of an unpleasant and trying nature. At High Street Mortuary a subsidence under the floor of the dead-house occurred during 1902, with the result that the floor has been relaid with concrete and iron joists laid across, at an estimated cost of £20. The roof of the Mortuary-Keeper's house has also been repaired during 1902 at an estimated cost of £10.

Numbers of bodies received at the Lambeth Borough Mortuaries during 1902, and at the Lambeth Parish Mortuaries during the five years (1896-1900).

1902.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total 1902.	Total 1900.	Total 1899.	Total 1898.	Total 1897.	Total 1896.	Yearly Average for 1896-1900.
<i>High Street—</i>																			
Males	16	18	13	13	24	15	19	17	13	18	19	17	202	237	239	222	218	221	227.4
Females	10	13	13	8	9	10	10	14	7	9	11	12	126	142	126	143	109	152	134.4
<i>Wanless Road—</i>																			
Males	9	6	2	1	7	5	3	3	3	8	6	9	62	58	71	72	41	...	48.4
Females	2	8	3	0	4	9	7	3	1	4	6	6	53	62	47	58	32	...	39.8
Totals	37	45	31	22	44	39	39	37	24	39	42	44	443	499	483	495	400	373	450

N.B.—The New Wanless Road Mortuary was opened on April 12th, 1897, and is under the superintendence of Mr. Joshua Fazey—High Street Mortuary being under Mr. S. G. Albin. Mr. Elverson is the Deputy Mortuary Keeper.

Particulars as to cases of Drowning, Accidental Death, and Suicide that have occurred in the Borough of Lambeth during 1902, and in the old Parish during the five years (1896-1900).

	High Street.			Wanless Road.			Boro'	Parish of Lambeth.					Average 5 years 1896- 1900.
	M.	F.	Total.	M.	F.	Total.	Total 1902.	Total 1900.	Total 1899.	Total 1898.	Total 1897.	Total 1896.	
Drowning	9	...	9	...	...	...	9	6	1	1	13	16	7.4
Suicides ... ..	...	...	...	...	...	...	...	14	13	21	6	13	13.4
Poisoning	1	...	1	1	4	5	6	3	4	3	4	4	3.6
Hanging	1	1	2	2	1	3	5	4	3	9	...	2	3.6
Throat cutting	2	2	4	1	1	2	6	3	4	5	1	2	3.0
Jumping off heights ... ..	...	...	...	...	...	...	...	1	...	...	...	2	0.6
Cutting Arteries ... ..	...	...	...	...	...	...	...	1	1	...	...	...	0.4
Shooting ... ..	...	1	1	3	...	3	4	2	1	4	1	3	2.2
Railway Accidents ... ..	...	...	...	1	...	1	1	4	4	1	1	3	2.6
Accidental Death	3	...	3	...	...	...	3	6	1	12	...	...	3.8
Street Accidents ... ..	...	...	...	4	1	5	5	3	9	7	4	3	5.2
Murder	1	1	2	...	...	...	2	1	2	...	2	2	1.4
Burning	1	3	4	...	...	...	4	1	2	3	1	...	1.4
Falling	1	...	1	3	3	6	7	1	1	4	4	...	2.0
Bicycle Accidents ... ..	...	...	...	...	...	...	...	2	...	1	...	...	0.6
Strangulation and Suffocation ... ..	...	...	...	...	...	...	...	...	...	2	...	...	0.4
Found Dead	3	...	3	...	...	...	3	...	...	...	...	...	...
Bursting Blood Vessel	1	...	1	...	...	...	1	...	...	...	...	...	...
Killed	1	...	1	...	...	...	1	...	...	...	...	...	...
Manslaughter ... ..	...	...	...	1	1	2	2	...	...	...	...	...	...

N.B.—Two bodies (both female) dead from Smallpox, and one body (female) dead from Diphtheria, were admitted into the special room provided for infectious bodies at Wanless Road Mortuary.

**Ages of bodies received at the Lambeth Borough Mortuaries, 1902, and at the
Lambeth Parish Mortuaries during the five years (1896-1900).**

Registered Ages of Bodies.	1902.		Boro'	Parish.					Yearly Average for 1896-1900.
	High Street.	Wanless Road.	Total 1902.	Total 1900.	Total 1899.	Total. 1898.	Total 1897.	Total 1896.	
0-1	71	28	99	133	121	160	101	121	127.2
1-5	26	9	35	47	44	50	39	22	40.4
5-10	10	1	11	12	22	17	9	12	14.4
10-20	17	5	22	17	13	8	18	9	13.0
20-30	24	4	28	31	29	26	26	24	27.2
30-40	45	8	53	43	59	45	35	35	54.2
40-50	27	15	42	80	67	64	48	37	59.2
50-60	32	12	44	61	53	42	59	46	52.2
60-70	34	16	50	50	47	39	30	35	40.2
70-80	26	7	33	16	19	32	20	22	21.8
80-90	9	2	11	6	8	5	9	7	7.0
90-upwards...	1	...	1	...	1	1	...	3	1.0
Age not stated	6	8	14	3	...	6	6	...	3.0
Totals	328	115	443	499	483	495	400	373	450

INQUESTS.

During the year 1902, within the Borough of Lambeth 482 cases were submitted to the Coroner, who, in 54 instances decided that no further inquiries were necessary; but in the other 428 cases, held inquests with the following results:—

I. NATURAL CAUSES	...	...			200
II. ACCIDENTAL CAUSES	...	...			188
Burns and Scalds	...	...		27	
Drowning	...	...		10	
Run over	...	...		12	
Falls, &c.	...	...		41	
Suffocation	...	...		42	
Alcoholism	...	...		2	
Knocked down by Engine	...			1	
Gunshot Wounds or Fractures				29	
Rupture	...	...		2	
Misadventure...	...	...		8	
Self Neglect	...	...		1	
Blood Poisoning	...	...		12	
Improper Feeding	...	...		1	
III. HOMICIDAL CAUSES	...	...			40
Suicide	...	...		34	
Murder	...	...		4	
Manslaughter...	...	...		2	
IV. OPEN VERDICTS	...	...		—
Found Drowned	...	...		—
Found Dead	...	...		—
Total	...				428

BACTERIOLOGICAL LABORATORY.

The Bacteriological Laboratory, situated at Arlington Lodge, Wanless Road, Loughborough Junction, has again proved most useful during 1902—having been much used by the Medical Practitioners practising within the Borough. All examinations are carried out free of cost to the Medical Practitioners.

The Laboratory was originally fitted up by the late Vestry in 1899, and since then (up to the end of 1902) 2,037* examinations have been made, viz. :—Tuberculosis 565, Typhoid Fever 385, Diphtheria 1072, and others 15 (ice-creams, urine, etc.).

During 1902, 466 examinations have been made, and the subjoined details are given in connection therewith :—

Tuberculosis—

212 samples of sputa from doubtful tuberculosis cases have been examined, and in 108 (*i.e.*, 50.9 per cent.) tubercle bacilli have been found. The importance of tuberculosis cases being diagnosed at as early a date as possible is now acknowledged by all physicians, as in the early stages this disease may be arrested, if not cured, by proper treatment. In 104 instances (*i.e.*, 49.1 per cent.), no tubercle bacilli were found. In two instances, pneumococci (of Friedländer) were found.

The increase in the number of samples submitted is due to the Council having made Consumption (with tuberculous expectorations) voluntarily notifiable throughout the Borough on (and after) June 1st, 1902.

Typhoid Fever—

91 samples of blood from suspected Typhoid cases have been examined, and in 34 (*i.e.*, 37.4 per cent.) the characteristic Widal reaction has been obtained, although in 9 of the cases (*i.e.*, 9.9 per cent.) this reaction was but slightly or feebly marked. Experience shows that, with a well-marked reaction obtained with a high dilution of the suspected blood-serum (1-60 to 1-100), the Widal test is most trustworthy, and exceedingly useful, conse-

*1899—389; 1900—703; 1901—479; 1902—466; Total—2037.

Vide Special Report in Appendix.

quently, in settling the diagnosis in doubtful cases of illness which have the appearance of Typhoid. It is not advisable to lay too much stress upon a feebly (slightly) marked reaction, unless accompanied by one (or more) of the well-known clinical symptoms of typhoid in the patient from whom the sample of blood has been taken.

Diphtheria—

154 samples of throat membranes and secretions from doubtful Diphtheria cases have been examined, and in 16 (*i.e.*, 10.4 per cent.) the true (Klebs-Löffler) bacilli have been obtained. In 12 instances (*i.e.*, 7.5 per cent.) the Klebs-Löffler bacilli were obtained in pure cultivation—*i.e.*, without admixture with other bacilli, whereas in the remaining 4 (*i.e.*, 2.5 per cent.) the Klebs-Löffler bacilli were found combined with other well-known bacilli as follows:—

Klebs-Löffler + Staphylococci ...	3 <i>i.e.</i> ,	18.8 per cent.
Klebs-Löffler + Torulæ ...	1 <i>i.e.</i> ,	6.3 per cent.

In 138 (*i.e.*, 89.6 per cent.) of the total number of throat samples examined the Klebs-Löffler bacilli were not isolated, but other bacilli were as follow:—

Streptococci ...	20 <i>i.e.</i> ,	14.5 per cent.
Pseudo-bacilli ...	1 <i>i.e.</i> ,	0.7 per cent.
Pseudo-bacilli + Staphylococci ...	4 <i>i.e.</i> ,	2.9 per cent.
Pseudo-bacilli + Streptococci ...	1 <i>i.e.</i> ,	0.7 per cent.
Pseudo-bacilli + Staphylococci + Streptococci ...	1 <i>i.e.</i> ,	0.7 per cent.
Staphylococci ...	90 <i>i.e.</i> ,	65.2 per cent.
Streptococci + Staphylococci ...	2 <i>i.e.</i> ,	1.5 per cent.
Staphylococci + Torulæ ...	10 <i>i.e.</i> ,	7.2 per cent.
Smegma ...	1 <i>i.e.</i> ,	0.7 per cent.
Smegma + Staphylococci ...	1 <i>i.e.</i> ,	0.7 per cent.
Strephycocci + Torulæ ...	2 <i>i.e.</i> ,	1.5 per cent.
Streptococci + Sarcinæ ...	3 <i>i.e.</i> ,	2.2 per cent.
Torulæ ...	2 <i>i.e.</i> ,	1.5 per cent.

The pseudo-bacilli (Hoffman) were found in pure cultivation in only one instance, and in no instance were pseudo-bacilli and true Diphtheria (Klebs-Löffler) bacilli found together. Pseudo-bacilli were found mixed with streptococci (1), with staphylococci (4), with streptococci and staphylococci (1).

As to whether or not the pseudo-bacilli (Hoffman) are modified Klebs-Löffler bacilli, or *vice versa*, is a question still under discussion, but the practice in Lambeth Borough is to regard pseudo-throats as infectious, and to take the usual precautions in regard to patients having such throats, viz., notification, isolation, and disinfection. Removal to hospital is not advised until separate accommodation is provided away from the *true* Diphtheria cases.

Other Examinations—

3 separate samples of urine have been submitted for examination on account of the suspected presence therein of tubercle bacilli, streptococci and staphylococci respectively. The result of the bacteriological examinations was negative in the case of the suspected tuberculosis urine, but positive in the other two—streptococci being found in the one, and both streptococci and staphylococci in the other,

6 samples of ice-creams were examined, and in 3 (*i.e.*, 50 per cent.) bacilli coli were found.

1902.	SPUTA. Tub. Bac. found.			*BLOODS. Typhoid reaction obtained.			THROAT MEMBRANES AND DISCHARGES. Klebs-Lœffler bac. found.		
	Yes	No.	Total.	Yes.	No.	Total.	Yes.	No.	Total.
January ...	8	9	17	2	5	7	—	19	19
February ...	6	2	8	4	2	6	1	11	12
March ...	14	9	23	2	5	7	1	8	9
April ...	4	5	9	1	2	3	1	9	10
May ...	10	12	22	—	2	2	1	11	12
June ...	14	18	32	2	6	8	2	18	20
July ...	16	7	23	5	6	11	3	12	15
August ...	4	7	11	4	1	5	2	7	9
September ...	6	4	10	6	4	10	1	8	9
October ...	13	10	23	6	6	12	1	15	16
November ...	6	8	14	1	8	9	1	12	13
December ...	7	13	20	1	10	11	2	8	10
TOTALS ...	108	104	212	34	57	91	16	138	154

* In 9 cases (*i.e.*, 99 per cent.) the reaction was slightly (or feebly) marked.

Antitoxin—

The Borough Council, following the example of the late Vestry, has continued to distribute, free of cost, to medical practitioners practising in Lambeth Borough antitoxin for the treatment of Diphtheria cases, with most satisfactory results. The value of antitoxin in the treatment of Diphtheria (early in the disease) is now a fact, and its use, too, as a preventative, or prophylactic, is being tried with marked results. The Borough Council distributes gratuitously antitoxin for this latter purpose also.

78 vials of antitoxin have been distributed during the year

UNDERGROUND CONVENIENCES.

Several changes have taken place in the *personnel* of the Staff during 1902. Miss Davies left the Council's employ on May 1st, 1902, and her place at the Hercules Convenience was filled by Mrs. Mason, who was appointed by the Council on June 5th, 1902, whilst Mrs. Carrett, permanent attendant at Stockwell, resigned on account of ill-health (paralysis) on June 1st, 1902.

The temporary appointments of Mrs. Hawkins and Mrs. Richards were made permanent on June 5th, 1902.

W. Baker resigned his position as permanent attendant at Kennington Cross in August, 1902, and his place is being temporarily filled by W. Suerrier.

In consequence of these changes, the Staff was re-arranged as follows:—

Attendants at Underground Conveniences.

Brixton—Male: C. Lester and F. Parsons; Female: Kimber and Smith.

Stockwell—Male: W. H. Bennett and T. Rhodda; Female: Hawkins and Richards.

Hercules—Male: T. Moody and W. Holbrook; Female: Lockett and Bachelor.

Kennington Cross—Male: W. Baker (W. Guerrier) and G. Cooper.

Vauxhall—Male: F. Cooper and H. Hazell.

Permanent Relief Attendants—Male: H. Fazcy; Female: Mrs. Mason.

Temporary Relief Attendants—Male: T. Langley; Female: Mrs. Greasley.

At Kennington Cross, on account of complaints received as to a nuisance due to the abuse of the railing around the Convenience late at night, after the public-houses are closed, an iron skirting was provided around the bottom of such railing.

Tenders in connection with the 2 new Underground Conveniences, to be placed at Loughborough Junction and Stangate, were accepted during 1902, at inclusive prices of £3495 and £3289 respectively—the South-Eastern and Chatham Railway Company contributing £1000 towards the cost of the former.

CLERICAL STAFF.

The Clerical Staff consists of 3 Clerks—a chief (W. R. Lawrence), a second (A. L. Baxter), a third (W. J. Lawrence), and a junior, or boy (E. G. Wood)—two of whom are able to type and shorthand write.

The Clerical work in connection with the Department during 1902 deserves recognition, and will best be realised in the form of the following Statement, shewing the work done in the Borough during 1901 and 1902, as compared with the yearly average for the old Parish of Lambeth during five years (1896-1900).

	1902.	1901.	Average 5 years (1896-1900).
	BOROUGH.		PARISH.
Letters, etc., received (entered in letter book)	8760	9417	8611.4
Letters, etc., sent out (entered in postal book)	19504	21703	26096.6
Notices served—			
Infectious Diseases	3789	1848	2290.2
Public Health Acts (Preliminary) ...	5732	7195	7812.0
Public Health Act (Statutory)	722	7	2015.0
Housing of the Working Classes Act ...	—	13	43.6
Cases entered in Inspectors' Report Books ...	8930	7821	8307.2
Complaints entered in book	4378	5421	5474.0
Copies of Infectious Diseases Notifications—			
(a) Entered in Notification Book ...	4426	2025	2619.2
(b) Sent off to Asylums Board	4426	2025	2619.2
Notices of Infectious Diseases sent to Schools	3410	2425	1953.6
Workshops (with full particulars) entered up in Register	105	69	144.6
Milkshops (with full particulars) entered up in Register	—	458	—
Cowsheds (with full particulars) entered up in Register	—	—	6.6
Slaughter-houses (with full particulars) en- tered up in Register	—	—	9.2
Bakehouses (with full particulars) entered up in Register	—	—	51.6
Water Certificates for new buildings given out	420	183	112.2
Disinfection Certificates given out	5186	2710	1010.2
Stamps used	17398	14274	19730.6
Reports to Committee (Fortnightly) ...	20	21	20.2
Reports to Vestry (Monthly and Quarterly)	4	4	17.0
Special Reports	15	12	12.2
Letters Typed	5816	4867	4905.4
Bacteriological Reports	466		546.0
Inland Revenue Certificates given out ...	2723		719.5
Summonses and Orders entered in Book ...	50		98.6

* These averages refer to two and three years only respectively.

APPENDIX.

Local Government Board.

(Table i.)

VITAL STATISTICS OF LAMBETH BOROUGH DURING 1901 and 1902, AND OF LAMBETH PARISH DURING 10 YEARS (1891—1900).

YEAR.	Population estimated to Middle of each Year.	Births.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.			
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.*	Number.	Rate.*
				Number.	Rate per 1000 Births registered.	Number.	Rate.*							
1	2	3	4	5	6	7	8	9	10	11	12	13		
Parish.	1891	276162	9097	32.9	1433	157.2	6073	21.9	1438	539	351	5886	21.3	
	1892	280032	9226	32.9	1303	141.2	5794	20.7	1578	651	314	5457	19.5	
	1893	283956	9222	32.5	1415	148.5	6165	21.7	1741	811	338	5219	18.4	
	1894	287935	9231	32.1	1264	136.9	5213	18.1	1484	775	399	4837	16.8	
	1895	291970	9341	31.9	1470	157.4	5857	20.6	1511	702	404	5559	19.0	
	1896	296061	9592	32.4	1371	142.9	5370	18.1	1588	705	433	5098	17.2	
	1897	300048	9388	31.3	1459	155.4	5486	18.3	1546	664	429	5251	17.5	
	1898	304073	9256	30.4	1447	156.3	5567	18.3	1543	592	455	5430	17.9	
	1899	308108	9433	30.6	1527	161.9	6064	19.7	1680	663	485	5886	19.1	
	1900	312152	9167	29.4	1350	147.3	5578	17.9	1576	606	458	5430	17.4	
Averages for years 1891-1900		294049.7	9295.3	31.6	1403.9	151.03	5716.7	19.4	1568.5	670.8	406.6	5405.3	18.4	
Boro'	1901	302533	9093	30.1	1294	142.3	5383	17.8	1590	691	505	5197	17.2	
	1902	305102	9067	29.7	1215	134.0	5553	18.2	1822	726	560	5387	17.7	

* Rates in Columns 4, 8 and 13 are calculated per 1000 of estimated population.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the Borough of Lambeth. The deaths included in Column 12 are the numbers in Column 7, corrected by the subtraction of the numbers in Column 10 and the addition of the numbers in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" (taken into account for the purpose of these Tables) are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made, will be found on pp. 27, 112-115 of the Report.

Area of Lambeth Borough in acres } 4079.6 Statute Acres.
(exclusive of area covered by water)

Total population at all ages 301895 }
Number of inhabited houses 41511 }
Average number of persons per house ... 7.3 }
At Census of 1901.

(Table ii.)

VITAL STATISTICS OF REGISTRATION SUB-DISTRICTS OF THE BOROUGH OF LAMBETH IN 1901 and 1902, AND OF THE PARISH OF LAMBETH IN 10 PREVIOUS YEARS.

NAMES OF LOCALITIES.		1.—WATERLOO.				2.—LAMBETH CHURCH 1ST.				3.—LAMBETH CHURCH 2ND.			
YEAR.		Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).
		<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>
Parish.	1891 ...	28657	1431	866	230	18110	605	468	158	39191	1630	987	299
	1892 ...	28601	1473	687	179	18249	610	432	160	39571	1639	907	259
	1893 ...	28545	1521	688	222	18388	610	448	165	39951	1632	858	272
	1894 ...	28489	1505	691	203	18522	624	384	139	40331	1553	789	266
	1895 ...	28433	1516	755	212	18666	618	457	189	40711	1629	995	284
	1896 ...	28377	1445	642	201	18805	649	364	169	41091	1687	930	262
	1897 ...	28333	1397	683	203	18947	597	442	188	41476	1595	934	301
	1898 ...	28282	1381	715	193	19090	581	438	175	41864	1613	853	265
	1899 ...	28232	1398	733	189	19234	627	436	151	42252	1517	1048	315
	1900 ...	28183	1348	678	202	19377	582	423	153	42642	1543	840	266
	Averages of Years 1891 to 1900	28413.2	1441.5	713.8	203.4	18739.3	610.3	429.2	164.7	40908.0	1603.8	914.1	278.9
Boro'.	1901 ...	27393	1319	650	195	18423	595	411	160	39828	1530	898	242
	1902 ...	27211	1303	682	167	18419	605	407	194	39872	1445	912	223

(Table ii.—continued).

NAMES OF LOCALITIES.		4.—KENNINGTON 1ST.				5.—KENNINGTON 2ND.				6.—BRIXTON.				7.—NORWOOD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	Population estimated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	Population estimated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	Population estimated to middle of each year.	Births registered.	Deaths at all Ages (corrected).	Deaths under 1 year (uncorrected).	
Parish.	1891 ...	50681	1722	1092	252	40065	1069	802	136	73707	2014	1835	291	25751	626	336	67
	1892 ...	51002	1733	1008	226	40695	1058	756	123	75431	2051	1305	287	26483	662	362	69
	1893 ...	51241	1759	953	270	41004	1059	719	127	77812	2002	1182	286	27015	639	371	73
	1894 ...	51721	1802	871	212	41713	1053	672	107	79507	2037	1050	258	27647	657	380	79
	1895 ...	52201	1736	969	263	42222	1099	742	169	81267	2093	1259	276	28470	650	382	77
	1896 ...	52581	1886	902	232	43429	1125	747	157	82267	2139	1174	281	29511	662	339	69
	1897 ...	52971	1859	952	249	44136	1110	721	132	83946	2131	1135	286	30239	699	384	100
	1898 ...	53361	1888	989	259	44852	1009	727	141	85647	2143	1274	334	30977	641	434	80
	1899 ...	53753	1871	1086	309	45570	1089	812	154	87350	2179	1342	296	31717	752	429	113
	1900 ...	54146	1856	1018	233	46289	990	732	123	89057	2112	1283	279	32458	736	456	94
	Averages of Years 1891 to 1900	53365.8	1811.2	984.0	250.5	42997.5	1066.1	743.0	136.9	81599.1	2090.1	1233.9	287.4	29026.8	672.4	387.3	82.1
Boro'.	1901 ...	53280	1886	986	236	42991	1004	640	101	84532	2056	1218	259	36608	753	394	101
	1902 ...	53685	1817	901	203	43377	1011	744	113	85742	2098	1280	225	36876	788	461	90

NOTES.—(a) Deaths of residents occurring in public institutions beyond the district are included in sub-columns *c* of this table, and those of the non-resident registered in public institutions in the district are excluded. (See note on Table i. as to meaning of terms "resident" and "non-residents.")
 (b) Deaths of residents occurring in public institutions, whether within or without the district, are allotted to the respective localities according to the addresses of the deceased.
 (c) Deaths under 1 year are not corrected, and the gross total of sub-columns *d* agrees with the total of column 5 in Table i.

N.B.—Where the District is not stated, the deaths are sub-divided equally amongst the Registration Sub-Districts.

CASES OF INFECTIOUS DISEASE NOTIFIED WITHIN THE BOROUGH OF LAMBETH
DURING THE YEAR 1902.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.								TOTAL CASES NOTIFIED IN EACH LOCALITY.							NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.						
	At all Ages.	At Ages†—Years.							Waterloo.	Lambeth Church 1st.	Lambeth Church 2nd.	Kennington 1st.	Kennington 2nd.	Brixton.	Norwood.	Waterloo.	Lambeth Church 1st.	Lambeth Church 2nd.	Kennington 1st.	Kennington 2nd.	Brixton.	Norwood.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.															
Small-pox	350	4	9	56	104	176	1	81	35	64	69	34	53	11	84	35	64	69	34	53	11	
Cholera	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Diphtheria	459	10	177	187	49	36	...	52	83	83	64	75	90	12	45	65	75	46	48	66	2	
Membranous croup	15	1	9	3	2	...	...	1	2	4	2	2	3	1	...	...	1	...	...	...	...
Erysipelas	317	3	10	23	45	196	40	34	34	72	56	40	70	11	1	...	1	2	4	2	...	
Scarlet fever	1330	16	395	762	116	41	...	104	107	213	269	257	314	66	96	78	195	222	179	258	28	
Typhus fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	213	...	7	51	57	95	3	24	26	45	27	23	58	10	18	15	38	21	13	29	5	
Relapsing fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	10	...	...	7	2	1	...	1	1	4	1	1	2	...	...	...	...	...	...	...	...
Puerperal fever	17	...	...	...	3	14	...	3	1	1	3	1	6	2	...	1	...	2	...	1	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	2712	34	607	1089	378	560	44	303	289	486	492	433	596	113	244	194	374	362	278	409	46	

NOTES.—(a) The localities adopted for this table are the same as those in Tables ii. and iv.

(b) Patients are removed to the Isolation Hospitals of the Metropolitan Asylums Board, one of which is situated in Brixton Registration Sub-district.

N.B.—1560 cases of Chickenpox were also notified during 1902 (from Feb. 6th up to Dec. 31st), but not one of these was removed to Hospital.

Local Government Board.

(Table
CAUSES OF, AND AGES AT, DEATH
Name of District—BOROUGH

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.							8
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
1	2	3	4	5	6	7	8	
Small-pox	60	4	3	2	8	43	...	
Measles	84	9	62	10	...	2	1	
Scarlet Fever	48	3	27	15	3	...	...
Whooping Cough	118	50	65	3	...	...	...
Diphtheria and Membranous Croup... ..	53	1	36	15	...	1	...	
Croup	4	3	1	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...
Enteric	38	...	...	5	13	19	1	
Other continued	1	...	1	...	...	...	...
Epidemic Influenza	78	6	2	8	2	28	32	
Cholera Nostras ... ..	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...
Diarrhoea	159	121	25	...	...	8	5	
Enteritis	66	38	5	3	6	11	3	
Puerperal fever	6	...	...	...	...	6	...	
Erysipelas	10	...	...	...	...	7	3	
Other Septic diseases... ..	7	1	1	1	...	3	1	
Phthisis	521	9	9	10	77	395	21	
Other Tubercular diseases	180	57	63	30	9	19	2	
Cancer, malignant disease	329	...	1	...	3	217	108	
Bronchitis	529	91	31	3	5	146	250	
Pneumonia	274	38	43	7	6	122	58	
Pleurisy	18	2	4	1	1	8	2	
Other diseases of Respiratory organs... ..	318	94	82	5	4	87	46	
Alcoholism	21	...	...	...	...	21	...	
Cirrhosis of Liver	61	...	...	...	...	53	8	
Veneral diseases	38	29	...	...	...	8	1	
Premature birth	173	173	...	...	...	...	...
Diseases and Accidents of parturition	21	...	...	...	4	17	...	
Heart diseases	483	7	...	15	24	228	189	
Accidents	164	35	13	12	17	57	30	
Suicides	33	...	...	...	3	27	3	
All other causes	1192	384	90	56	27	474	471	
All causes	5387	1155	567	191	212	2027	1285	

iv.)
DURING THE YEAR 1902.
OF LAMBETH.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO REGISTRATION SUB-DISTRICTS (AT ALL AGES).										TOTAL DEATHS IN PUBLIC INSTITUTIONS IN DISTRICT.
	Waterloo.	Lambeth Church First.	Lambeth Church Second.	Kennington First.	Kennington Second.	Brixton.	Norwood.	District not stated.	16	16	
1	9	10	11	12	13	14	15	16	16	16	
Small-pox	15	5	11	16	3	9	1	...	2	1	
Measles	4	9	15	15	12	25	2	...	...	8	
Scarlet Fever	4	1	14	12	7	9	1	...	...	45	
Whooping Cough	22	7	20	18	18	23	10	...	...	8	
Diphtheria and Membranous Croup... ..	4	6	13	2	13	9	6	...	...	62	
Croup ... ..	...	...	...	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...	...	...
Enteric	5	2	7	7	4	9	4	...	...	15	
Other continued	1	...	...	...	...	...	...	...	...	...
Epidemic Influenza	5	2	5	5	7	32	22	...	...	...
Cholera Nostras ... ..	...	...	...	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...
Diarrhoea	27	23	32	23	12	31	11	...	...	31	
Enteritis	7	3	12	3	8	24	9	...	...	...
Puerperal fever ... ..	...	1	1	...	...	4	...	...	...	1	
Erysipelas	1	2	2	2	2	1	...	...	...	7	
Other Septic diseases... ..	3	...	1	2	...	1	...	...	...	1	
Phthisis	79	48	98	93	60	99	29	15	...	182	
Other Tubercular diseases	22	17	33	43	23	35	5	2	...	...
Cancer, malignant disease	24	14	47	46	61	97	32	8	...	...
Bronchitis	62	34	88	91	66	127	46	15	...	...
Pneumonia	46	25	48	51	36	52	10	6	...	293	
Pleurisy	2	1	2	6	2	4	...	1	...	...
Other diseases of Respiratory organs... ..	36	28	59	61	40	52	36	6	...	...
Alcoholism	2	1	2	5	3	5	1	2	...	...
Cirrhosis of Liver	7	1	3	17	8	21	4	...	...	...
Veneral diseases	5	3	8	8	...	11	3	...	...	...
Premature birth	14	16	30	25	31	45	12	...	...	...
Diseases and Accidents of parturition	2	3	1	4	1	8	2	...	...	...
Heart diseases	42	25	84	75	77	116	42	22	...	201	
Accidents	22	23	24	25	21	35	10	4	...	103	
Suicides	4	2	6	7	5	7	1	1	...	...
All other causes	183	89	230	223	208	373	147	43	...	865	
All causes	650	691	896	885	728	1264	446	127	...	1822	

LAMBETH BOROUGH.—Deaths Registered (Sub-districts) during

	SUB DISTRICTS.							
	Waterloo Road First.		Waterloo Road Second.		Lambeth Church First.		Lambeth Church Second.	
	M.	F.	M.	F.	M.	F.	M.	F.
Rheumatism ...	...	2	...	...	...	...	...	1
Gout ...	...	...	1	...	...	...	...	...
Rickets ...	...	...	...	...	1	1	1	1
Cancer, Malignant Disease ...	5	5	5	9	6	8	15	32
Cancrum Oris (Noma) ...	...	...	...	...	...	...	...	...
Tabes Mesenterica ...	1	1	3	1	...	1	5	2
Tuberc.-Meningitis, Hydrocephalus	3	3	2	1	1	2	4	6
Phthisis ...	23	20	23	13	34	14	63	35
Scrofula ...	...	...	...	...	1	...	...	1
Other forms of Tuberculosis	1	1	2	3	9	3	6	9
Purpura, Hæmorrhagic Diathesis ...	...	...	...	...	...	...	...	...
Anæmia, Chlorosis, Leucocythæmia	1	2	...	...	1	...	1	1
Glycosuria, Diabetes Mellitus ...	1	...	1	...	...	...	...	...
Other Constitutional Diseases	...	1	...	...	...	...	...	...
Premature Birth ...	4	1	5	4	8	8	17	13
Alectasia ...	...	1	...	1	...	1	4	3
Congenital Malformations ...	3	...	...	...	2	1	2	2
Old Age ...	2	1	...	4	1	1	9	8
Inflammation of Brain or Membranes	1	1	3	2	4	3	4	3
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis ...	5	6	5	8	7	6	14	12
Insanity, General Paralysis of Insane	1	1	2	1	...	...	21	7
Epilepsy ...	1	...	2	...	1	1	1	1
Convulsions ...	3	2	2	2	1	1	5	5
Laryngismus Stridulus (Spasm of Glottis) ...	...	...	1	...	...	...	...	...
Diseases of Spinal Cord, Paraplegia, Paralysis Agitans ...	...	...	...	...	1	2	...	...
Other Diseases of Nervous System	1	2	2	2	2	...	7	7
Diseases of Ear, Eye, Nose ...	...	1	1	...	...	...	...	...
Pericarditis ...	...	...	...	...	1	...	...	1
Acute Endocarditis ...	...	...	...	...	...	...	1	...
Valvular Diseases of Heart ...	5	2	6	4	5	7	18	20
Other Diseases of Heart ...	7	4	6	8	6	6	15	29
Aneurism ...	1	...	1	...	3	...	2	1
Embolism, Thrombosis ...	1	...	...	...	1	1	1	1
Other Diseases of Blood Vessels ...	...	1	2	...	2	2	1	2
Laryngitis ...	...	1	...	...	...	...	2	1
Croup ...	...	...	...	...	...	...	...	...
Emphysema, Asthma ...	...	...	...	...	...	...	2	4
Bronchitis ...	18	13	13	18	18	16	41	47
Pneumonia ...	13	10	17	6	16	9	25	23
Pleurisy ...	1	...	...	1	1	...	2	...
Bronchopneumonia ...	5	4	13	5	12	10	20	23
Pleuropneumonia ...	1	...	1	...	3	2	2	3
Other Dis. of Respiratory System ...	3	2	...	...	1	...	2	...
Dentition ...	...	...	3	2	2	...	5	2
Sore Throat, Quinsy ...	...	...	...	...	...	...	1	...
Diseases of Stomach ...	4	3	1	2	...	1	3	3
Enteritis ...	3	4	...	...	1	2	7	5

from all Causes (sub-divided into Registration the Year 1902.

	SUB-DISTRICTS.										Total.		
	Kenning-ton First.		Kenning-ton Second.		Brixton.		Norwood.		No Address.			All Ages.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.
1	...	1	1	1	2	...	3	...	...	3	9	12
2	...	2	...	1	1	...	1	...	1	...	6	2	8
2	1	1	2	4	5	...	...	...	...	9	10	19
21	25	22	39	37	60	17	15	4	4	132	107	329	
...	...	...	...	...	...	...	...	1	...	1	...	1
...	...	4	1	5	1	...	...	...	...	26	9	35
5	11	3	2	13	6	3	1	...	...	34	3	66
59	34	29	31	63	36	18	11	6	9	318	203	521	
1	1	...	...	...	...	...	...	...	...	2	...	4
5	10	7	6	4	6	1	...	2	...	37	38	75	
...	...	...	...	...	...	...	...	...	...	7	...	12
3	...	...	...	1	1	1	1	...	...	...	...	12
2	...	4	5	4	3	1	3	...	...	12	12	24
1	1	...	3	...	2	1	1	...	1	2	11	13	
15	10	16	15	19	20	7	5	...	...	91	82	173
3	1	2	1	1	3	1	...	...	...	11	11	22
5	...	2	...	3	1	2	...	...	...	13	8	21
9	15	8	10	12	28	7	10	2	4	45	81	126	
6	3	1	2	3	1	1	1	...	...	24	23	47
19	8	13	28	20	46	5	10	7	3	95	127	222	
...	...	2	2	8	2	...	3	5	32	25	57	57	
...	2	1	2	1	...	1	...	1	...	6	8	14	
6	3	2	2	6	6	4	2	...	...	29	23	52
1	1	...	...	...	1	...	...	...	...	2	2	4
5	3	3	2	3	5	3	2	...	...	16	13	29
1	5	5	4	4	4	...	3	...	...	22	27	49
...	...	1	2	...	1	1	...	...	...	4	2	7
...	...	...	...	...	1	...	...	...	...	1	2	3
...	...	...	...	...	...	...	...	...	...	4	4	8
...	3	2	1	...	1	...	1	...	...	4	...	...
17	12	9	14	21	20	1	8	3	4	85	96	181	
21	22	21	23	34	40	16	15	10	5	139	152	291	
...	...	4	1	...	1	...	...	...	...	12	2	14
...	1	1	1	2	3	1	1	...	...	6	4	15
5	4	...	1	2	7	...	6	3	1	15	24	39	
...	...	...	1	1	1	...	1	...	...	3	5	8
...	
2	1	2	1	3	3	...	2	1	...	10	11	21	
26	65	33	33	51	76	20	26	8	7	228	301	529	
33	18	23	13	28	24	8	2	4	2	167	107	274	
...	...	1	3	1	...	...	1	...	...	11	7	18
2	4	1	1	3	1	...	...	...	...	1	...	...
29	14	10	16	21	13	13	15	2	1	125	103	228	
1	2	4	1	1	...	2	...	1	...	16	8	24	
9	3	2	3	4	5	1	2	...	...	22	15	37
...	4	1	1	4	4	4	3	...	...	19	16	35
1	1	1	...	...	1	...	1	...	...	4	2	6
6	4	...	2	8	11	2	3	1	...	25	29	54	
1	2	3	5	12	12	5	4	...	...	32	34	66

LAMBETH BOROUGH.—Deaths Registered Sub-districts) during

	SUB-DISTRICTS.							
	Waterloo Road First.		Waterloo Road Second.		Lambeth Church First.		Lambeth Church Second.	
	M.	F.	M.	F.	M.	F.	M.	F.
Obstructive Diseases of Intestine ...	1	1	2	3	4	...	1	1
Peritonitis ...	...	...	...	...	...	...	...	3
Ascites ...	...	...	...	...	...	...	...	...
Cirrhosis of Liver ...	1	2	3	1	1	1	...	3
Jaundice and other Diseases of Liver	...	...	...	...	...	...	2	2
Diseases of the Pancreas ...	...	...	...	...	...	...	...	...
Other Diseases of Digestive System	1	...	1	...	...	...	1	...
Diseases of Lymphatics and of Spleen	1	...	...	...	1	...	...	...
Bronchocele, Addison's Disease ...	...	...	...	...	...	...	...	...
Nephritis ...	...	...	1	...	1	1	1	1
Bright's Disease, Albuminuria ...	3	2	7	5	6	5	11	12
Disease of Bladder or of Prostate ...	...	...	...	1	...	...	1	...
Calculus (Stone) ...	...	...	...	...	...	...	...	2
Other Diseases of the Urinary System	...	...	2	1	1	...	...	2
Male Organs ...	...	...	...	...	...	...	...	...
Female Organs ...	1	...	...	...	...	...	...	3
Abortion, Miscarriage ...	1	...	...	...	1	...	...	1
Puerperal Convulsions ...	...	...	...	...	...	...	...	...
Placenta Prævia, Flooding ...	...	...	...	...	1	...	...	...
Other Accidents of Child Birth ...	1	...	...	...	1	...	...	...
Caries, Necrosis ...	...	...	...	...	...	1	...	...
Arthritis, Ostitis, Periostitis ...	...	...	...	...	...	...	...	...
Other Diseases of Bones and Joints	...	...	1	...	...	...	...	...
Carbuncle, Phlegmon ...	1	...	...	...	1	2	...	...
Other Dis. of Integumentary System	...	...	...	...	1	1	1	...
Fractures and Contusions ...	1	...	3	2	...	3	3	1
Gunshot Wounds ...	...	...	...	...	1	...	...	...
Cut, Stab ...	...	...	...	...	...	...	...	...
Burn, Scald ...	1	1	...	1	2	1	1	...
Poison... ..	...	...	...	...	1	1	...	...
Drowning ...	...	...	1	6	...	4	...	...
Suffocation ...	1	1	...	5	1	2	5	4
Otherwise ...	2	1	2	...	2	4	4	...
Manslaughter... ..	...	...	...	...	...	1	...	...
Murder ...	...	...	1	...	...	1	...	...
Gunshot Wounds	...	...	...	...	...	1	...	...
Cut, Stab ...	1	...	...	...	2	...	1	...
Poison ...	...	1	...	...	...	2	1	...
Drowning ...	...	1	1	...	...	1	...	...
Hanging ...	...	...	...	...	...	...	...	...
Otherwise ...	...	...	...	...	...	...	...	...
Hanging(Execution)... ..	...	...	...	...	...	...	...	...
Dropsy ...	...	...	...	...	...	...	...	...
Debility, Atrophy, Inanition ...	13	12	9	5	9	9	23	11
Mortification ...	...	1	...	...	...	...	...	1
Tumour ...	...	...	...	...	...	...	1	...
Abscess ...	...	1	...	...	...	...	...	...
Hæmorrhage ...	...	...	...	...	...	...	...	...
Sudden Death (cause not ascertained)	...	...	...	...	...	...	...	...
Causes not specified, or ill-defined ...	1	...	...	...	1	...	1	...

from all Causes (sub-divided into Registration the Year 1902.

	SUB-DISTRICTS.												Total.
	Kennington First.		Kennington Second.		Brixton.		Norwood.		No Address.		All Ages.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	1	7	2	5	4	9	1	4	1	...	18	30	48
...	1	4	...	1	1	1	2	2	...	4	11	15	
...	...	...	...	1	...	1	...	...	...	2	...	2
...	11	6	6	2	8	13	...	4	...	29	32	61	
...	3	2	1	6	2	10	1	3	...	10	23	33	
...	...	...	...	...	...	...	...	...	...	13	9	22
...	6	2	2	2	1	2	1	2	...	6	4	10	
...	1	...	3	...	1	3	...	...	...	11	6	17
...	...	...	...	...	...	...	...	...	...	66	61	127
...	7	7	9	6	16	17	4	7	3	12	1	13	
...	1	...	4	...	5	...	...	1	...	1	...	1
...	1	5	2	2	3	3	1	...	2	12	13	25	
...	...	...	1	...	...	...	...	...	...	1	...	1
...	1	...	1	...	3	...	...	1	...	10	10	10
...	...	...	...	...	1	...	...	...	...	5	...	5
...	1	...	...	...	1	...	1	...	...	3	...	3
...	...	...	...	...	1	...	...	...	...	2	...	2
...	2	...	...	1	5	...	1	...	...	11	...	11
...	...	1	...	...	1	...	...	...	...	2	1	3
...	...	...	...	...	...	1	1	...	...	1	1	2
...	...	1	...	...	...	1	1	...	...	3	1	4
...	2	...	...	...	1	1	...	...	...	7	1	8
...	1	...	...	1	...	1	...	...	...	3	4	7
...	4	2	1	4	10	3	7	1	...	27	16	43	
...	1	...	...	...	...	...	...	1	...	1	2	3
...	...	...	...	...	1	...	...	...	...	7	14	21
...	1	3	...	3	2	3	...	1	...	3	3	6	
...	1	...	1	...	1	...	1	...	...	13	1	14
...	1	5	3	2	4	1	...	1	...	15	21	36	
...	3	3	6	...	4	5	1	1	2	26	14	40	
...	...	...	1	1	...	...	...	...	...	1	1	2
...	...	...	2	...	1	...	...	...	...	4	...	4
...	5	1	...	...	1	1	...	1	...	6	5	11
...	1	...	1	1	2	1	...	...	...	7	4	11
...	...	...	...	...	...	...	...	...	...	2	1	3
...	1	1	1	...	1	...	...	...	...	3	1	4
...	
...	14	11	17	11	24	9	11	9	...	120	77	197	
...	...	...	1	...	...	...	...	...	...	3	...	3
...	2	...	...	...	1	2	...	...	...	4	3	7
...	
...	...	1	...	1	...	...	...	...	...	4	1	5

LAMBETH BOROUGH.—Deaths Registered from

	AGES.									
	Under 1 year.		1-5		Under 5 years.		5-10		10-15	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
I. SPECIFIC FEBRILE, OR ZY- MOTIC DISEASES ...	131	93	111	113	242	206	29	19	9	3
II. PARASITIC DISEASES... ..	1	1	...	...	1	1	...	...	...	...
III. DIETETIC DISEASES... ..	2	2	...	...	2	2	...	...	...	...
IV. CONSTITUTIONAL DISEASES	49	28	45	45	91	73	13	16	8	12
V. DEVELOPMENTAL DISEASES	113	101	1	...	114	101	1	...	...	...
VI. LOCAL DISEASES ...	229	180	110	119	339	299	20	19	12	15
VII. DEATHS FROM VIOLENCE ...	16	21	2	11	18	32	4	4	3	2
VIII. DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES	118	70	5	5	123	75	2	...	...	...
TOTALS	659	496	274	293	933	789	69	58	32	32
Smallpox { Vaccinated ... ..	...	1	...	...	1	...	...	...	...	...
{ Unvaccinated	1	1	...	3	1	4	...	1	...	...
{ No Statement ... ..	...	1	...	...	...	1	...	...	...	...
Measles	7	2	29	33	36	35	4	5	1	...
Whooping Cough	22	28	31	34	53	62	2	1	...	...
Scarlet Fever... ..	2	1	15	12	17	13	7	6	...	2
Typhus ... ..	...	...	...	...	...	...	...	...	...	...
Simple Continued and Ill-defined Fever ... ..	...	...	1	...	1	...	...	...	...	...
Enteric or Typhoid Fever ... ..	...	...	...	...	...	1	2	1	1	1
Diphtheria ... ..	...	1	20	14	20	15	9	1	3	...
Membranous Croup ... ..	...	...	1	1	1	1	1	1	...	...
Influenza	4	2	2	...	6	2	3	2	3	...
Other Miasmatic Diseases ... ..	...	...	1	1	1	1	1	...	...	...
Cholera, Nostras ... ..	...	...	...	...	...	...	...	...	...	...
Cholera, Asiatic ... ..	...	...	...	...	...	...	...	...	...	...
Diarrhœa, Dysentery	73	48	10	15	83	63	...	...	...	...
Remittent or Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Ague ... ..	...	...	...	...	...	...	...	...	...	...
Cowpox and effects of Vaccination	...	...	...	...	...	...	...	...	...	...
Other Diseases (<i>e.g.</i> , Hydrophobia, Glanders, Splenic Fever)	...	...	...	...	...	...	...	...	...	...
Syphilis	21	8	...	...	21	8	...	...	...	...
Gonorrhœa, Stricture of Urethra	...	...	...	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...
Pyæmia, Septicæmia	1	...	1	...	2	...	...	...	1	...
Puerperal Fever ... ..	...	...	...	...	...	...	...	...	...	...
Thrush, and other Vegetable Para- sitic Diseases	1	1	...	...	1	1	...	...	...	...
Worms, Hydatids, and other Animal Parasitic Diseases ... ..	...	...	...	...	...	...	...	...	...	...
Want of Breast Milk, Starvation ...	2	2	...	...	2	2	...	...	...	...
Scurvy ... ..	...	...	...	...	...	...	...	...	...	...
Chronic Alcoholism ... ..	...	...	...	...	...	...	...	...	...	...
Delirium Tremens ... ..	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever	1	...	1	1	1	1	...	2	3	...
Rheumatism of the Heart ... ..	...	...	...	...	...	...	...	...	...	...

all Causes during the Year 1902.

	AGES.																Total.		
	15-20		20-25		25-40		40-60		60-65		65-80		80 and over.		Over 5 Years.			All Ages.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.
I. SPECIFIC FEBRILE, OR ZY- MOTIC DISEASES	5	5	8	8	27	40	28	16	3	12	13	19	4	8	126	130	368	336	
II. PARASITIC DISEASES... ..	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	3	1
III. DIETETIC DISEASES... ..	...	...	...	...	1	4	9	7	...	...	...	...	...	...	10	11	12	13
IV. CONSTITUTIONAL DISEASES	16	24	33	22	115	99	206	167	43	44	61	59	4	25	502	468	596	541	
V. DEVELOPMENTAL DISEASES	...	...	...	...	...	...	...	...	...	...	...	...	...	...	46	81	160	182
VI. LOCAL DISEASES ...	13	17	21	20	114	108	342	289	126	134	302	392	66	116	1016	1108	1355	1407	
VII. DEATHS FROM VIOLENCE ...	8	3	4	3	23	16	28	11	5	2	17	11	4	1	98	53	116	85	
VIII. DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES	...	...	...	...	2	2	1	2	...	1	...	2	...	2	5	9	126	85
TOTALS	42	49	68	53	254	267	614	492	177	193	418	514	101	202	1805	1860	2738	2649	
Smallpox ... ..	...	1	2	13	10	8	2	...	1	...	...	...	...	22	15	22	16	38
Measles ... ..	...	2	1	...	2	2	...	...	...	...	...	...	...	5	5	6	9	15
Whooping Cough	1	...	1	...	1	1	...	1	...	...	...	...	...	4	2	4	3	7
Scarlet Fever... ..	...	...	...	...	...	2	...	...	...	1	...	...	...	6	7	42	42	84
Typhus ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	55	63	118
Simple Continued and Ill-defined Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	8	10	25	23	48
Enteric or Typhoid Fever	2	2	4	5	5	9	3	2	...	...	1	...	...	16	22	16	22	38
Diphtheria ... ..	...	...	...	...	...	1	...	...	...	...	...	...	...	12	2	32	17	49
Membranous Croup ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	4
Influenza	1	...	1	...	1	4	7	6	...	10	9	13	3	28	42	34	44	78	
Other Miasmatic Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	3
Cholera, Nostras ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera, Asiatic ... ..	...	...	...	...	...	1	2	2	1	...	1	3	...	1	5	8	88	71
Diarrhœa, Dysentery ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Remittent or Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowpox and effects of Vaccination	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases (<i>e.g.</i> , Hydrophobia, Glanders, Splenic Fever)	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	1
Syphilis ... ..	...	...	...	...	...	1	2	1	...	1	1	...	...	3	4	21	12	36
Gonorrhœa, Stricture of Urethra	...	...	...	...	...	2	...	2	...	...	...	...	...	2	...	2	...	2
Erysipelas ... ..	...	...	...	...	...	2	1	1	2	1	...	2	...	7	3	7	3	10
Pyæmia, Septicæmia ... ..	...	...	...	...	...	1	1	1	...	...	1	...	...	3	2	5	2	7
Puerperal Fever ... ..	...	...	...	...	...	5	...	1	...	...	...	...	...	...	6	...	6	6
Thrush, and other Vegetable Para- sitic Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Worms, Hydatids, and other Animal Parasitic Diseases ... ..	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	2	...	2
Want of Breast Milk, Starvation ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Scurvy ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	10	9
Chronic Alcoholism ... ..	...	...	...	...	...	1	3	8	7	...	...	...	...	1	1	1	1	2
Delirium Tremens ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	10	7
Rheumatic Fever	1	1	1	1	4	1	1	...	...	...	1	...	...	6	10	7	11	18
Rheumatism of the Heart ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

LAMBETH BOROUGH.—Deaths Registered from

	AGES.									
	Under 1 Year.		1 5		Under 5 Years.		5-10		10-15	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Rheumatism ... ..	...	...	...	...	...	...	...	2	1	1
Gout ... ..	...	...	...	...	...	...	...	...	...	...
Rickets	3	5	6	5	9	10	...	...	...	...
Cancer, Malignant Disease ... ..	...	...	1	...	1	...	...	...	...	...
Cancrum Oris (Noma) ... ..	...	...	1	...	1	...	...	...	...	...
Tabes Mesenterica	16	4	4	2	20	7	2	2	1	...
Tuberc.-Meningitis, Hydrocephalus	13	4	15	23	28	27	5	3	1	1
Phtisis	4	5	6	3	10	8	1	3	1	5
Scrofula	1	1	1	1	2	...	...	...	...	...
Other forms of Tuberculosis	10	7	12	6	22	13	5	6	1	2
Purpura, Hæmorrhagic Diathesis ... ..	...	...	...	...	...	...	...	...	...	...
Anæmia, Chlorosis, Leucocythæmia	1	...	...	2	1	2	...	...	...	...
Glycosuria, Diabetes Mellitus ... ..	...	...	...	...	...	...	...	...	...	...
Other Constitutional Diseases ... ..	...	1	...	2	...	3	...	...	...	...
Premature Birth	91	82	...	...	91	82	...	...	...	...
Atelectasis	11	11	...	...	11	11	...	...	...	...
Congenital Malformations	11	8	1	...	12	8	1	...	...	...
Old Age ... ..	...	...	...	...	...	...	...	...	...	...
Inflammation of Brain or Membranes	15	5	3	9	15	14	1	1	...	2
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	2	1	2	...	4	1	...	...	...	1
Insanity, General Paralysis of Insane ... ..	...	...	...	...	...	...	...	...	...	...
Epilepsy ... ..	...	...	...	...	...	...	...	...	...	...
Convulsions	25	21	4	2	29	23	...	...	...	...
Laryngismus Stridulus (Spasm of Glottis)	2	1	...	1	2	2	...	...	...	...
Diseases of Spinal Cord, Paraplegia, Paralysis Agitans ... ..	...	...	...	...	...	...	1	...	...	...
Other Diseases of Nervous System	1	1	3	4	4	5	3	1	...	3
Diseases of Ear, Eye, Nose... ..	...	...	1	2	1	2	...	...	2	...
Pericarditis ... ..	...	1	...	...	1	...	...	...	...	...
Acute Endocarditis ... ..	...	...	...	...	...	...	...	...	...	...
Valvular Diseases of Heart... ..	2	...	...	2	...	3	1	3	2	2
Other Diseases of Heart	2	2	...	...	2	2	1	2	1	2
Aneurism ... ..	...	...	...	...	...	...	...	...	...	...
Embolism, Thrombosis ... ..	...	...	...	...	...	...	...	...	...	...
Other Diseases of Blood Vessels ... ..	...	...	...	...	...	...	...	...	1	...
Laryngitis	1	...	1	3	2	3	...	2	...	...
Croup ... ..	...	...	...	...	...	...	...	...	...	...
Emphysema, Asthma ... ..	...	...	...	...	...	...	...	...	...	...
Bronchitis	48	43	16	18	64	61	3	...	...	...
Pneumonia	24	14	19	24	43	38	2	3	...	2
Pleurisy	1	1	2	2	3	3	...	1	...	...
Bronchopneumonia	47	34	35	38	82	72	2	...	1	...
Pleuropneumonia	1	1	2	...	3	1	...	...	...	...
Other Dis. of Respiratory System	7	3	2	1	9	4	...	...	...	...
Dentition	8	11	11	5	16	16	...	...	...	...
Sore Throat, Quinsy ... ..	...	1	...	...	...	...	...	...	...	...
Diseases of Stomach... ..	7	11	3	1	10	12	...	1	...	...
Enteritis	18	20	3	2	21	22	1	1	1	...

from all Causes during the Year 1902.

	AGES.														Total.					
	15-20		20-25		25-40		40-60		60-65		65-80		80 and over.			Over 5 years.		All Ages.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	M.	F.	
Rheumatism	12
Gout	8
Rickets	6	2	6	2	9	8
Cancer, Malignant Disease	10	19
Cancrum Oris (Noma)	131	197	132	197	329	329
Tabes Mesenterica	1
Tuberc.-Meningitis, Hydrocephalus	6	2	26	9	35	35
Phtisis	6	5	34	32	66	66
Scrofula	15	15	28	19	97	71	137	71	13	6	16	5	...	...	308	195	318	203	521	521
Other forms of Tuberculosis	4
Purpura, Hæmorrhagic Diathesis	1	5	1	1	3	7	3	2	1	...	1	...	1	15	25	37	38	75	75	
Anæmia, Chlorosis, Leucocythæmia
Glycosuria, Diabetes Mellitus	1	1	...	1	...	3	2	1	...	...	...	...	6	3	7	5	12	12	
Other Constitutional Diseases	3	4	3	3	2	3	4	1	12	12	12	12	24	24	
Premature Birth	1	1	...	2	1	2	...	3	2	8	2	11	13	13
Atelectasis	173
Congenital Malformations	22
Old Age	1	...	13	8	...	21
Inflammation of Brain or Membranes	126
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	1	1	...	...	2	2	1	2	...	1	1	...	...	...	6	9	24	23	47	47
Insanity, General Paralysis of Insane
Epilepsy	1	1	...	8	3	18	9	2	...	1	5	2	7	52	25	32	25	57	57
Convulsions	2	3	2	2	...	...	2	3	...	6	8	6	8	14	14	14
Laryngismus Stridulus (Spasm of Glottis)	52
Diseases of Spinal Cord, Paraplegia, Paralysis Agitans	4
Other Diseases of Nervous System	1	...	3	...	7	3	2	3	3	6	...	...	16	13	16	13	29	29	
Diseases of Ear, Eye, Nose...	1	...	5	7	6	...	2	5	...	...	...	18	22	22	27	49	49	
Pericarditis	1	...	...	...	...	1	...	...	1	3	1	4	3	7	7
Acute Endocarditis	1	...	...	1	1	1	2	3	3	3
Valvular Diseases of Heart...	2	2	...	1	...	...	...	...	1	1	...	...	4	4	4	4	8	8	8
Other Diseases of Heart	2	2	...	2	2	1	2	1	2	...	...	...	1	8	83	96	85	96	181
Aneurism	1	1	2	3	14	13	42	39	21	19	45	60	10	11	137	150	139	152	291
Embolism, Thrombosis	9	1	2	1	...	...	...	...	...	12	2	12	2	14
Other Diseases of Blood Vessels	2	6	9	6	15	15
Laryngitis	1	2	2	2	7	11	4	9	15	24	15	24	39	39
Croup	1	2	3	5	8	8	8
Emphysema, Asthma
Bronchitis
Pneumonia	1	2	...	2	4	41	37	21	41	76	120	20	34	164	240	228	301	529	529	
Pleurisy	5	30	18	4	6	124	69	167	107	274
Bronchopneumonia	1	...	...	1	1	3	1	1	1	2	...	...	...	8	4	11	7	18	18
Pleuropneumonia	3	2	16	10	7	3	10	10	3	6	43	31	125	103	228
Other Dis. of Respiratory System	1	1	...	3	1	8	1	...	2	1	2	...	...	13	7	16	8	24	24
Dentition	2	2	7	2	1	2	2	3	...	13	11	22	15	37
Sore Throat, Quinsy	35
Diseases of Stomach...	3	2	4	2	6	6
Enteritis	4	...	3	...	8	4	2	1	1	4	1	1	15	17	25	29	54	54	
Total	4	1	1	...	3	3	1	3	...	1	...	2	...	1	11	12	32	34	66	66

SUMMARY OF DEATHS IN LAMBETH BOROUGH DURING 1902.

	No. of Deaths.		Total.		No. of Deaths.		Total.
	M.	F.			M.	F.	
				Brought forward ...	2369	2356	4725
I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASES.				VI.—LOCAL DISEASES—<i>continued.</i>			
1. Miasmatic Diseases	241	242	483	6. Diseases of Lymphatic System	6	4	10
2. Diarrhœal "	88	71	159	7. Diseases of Gland-like Organs of Uncertain Use	...	...	...
3. Malarial " ... ..	...	...	...	8. Diseases of Urinary System...	102	81	183
4. Zoogenous "	1	...	1	9. Diseases of Reproductive System—			
5. Venereal "	26	12	38	(a) Diseases of Organs of Generation	1	10	11
6. Septic "	12	11	23	(b) Diseases of Parturition ...	...	21	21
II.—PARASITIC DISEASES	3	1	4	10. Diseases of Bones and Joints	6	3	9
III.—DIETETIC DISEASES	12	13	25	11. Diseases of Integumentary System	10	5	15
IV.—CONSTITUTIONAL DISEASES	596	541	1137	VII.—VIOLENCE.			
V.—DEVELOPMENTAL DISEASES	160	182	342	1. Accident or Negligence ...	92	72	164
VI.—LOCAL DISEASES				2. Homicide	2	2	4
1. Diseases of Nervous System	226	248	474	3. Suicide... ..	22	11	33
2. Diseases of Organs of Special Sense	4	3	7	4. Execution ... ..	...	...	...
3. Diseases of Circulatory System	262	289	551	VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES.	128	84	212
4. Diseases of Respiratory "	582	537	1139				
5. Diseases of Digestive "	156	186	342				
Carried forward ...	2369	2356	4725	TOTAL ...	2738	2649	5387

0 1 0
0 2 0
0 3 0
0 4 0
0 5 0
0 6 0
0 7 0
0 8 0
0 9 0
1 0 0

Offences under the Food and Drugs, and
Public Health Acts, during 1902.

NATURE OF OFFENCE, AND AMOUNTS OF
PENALTIES AND COSTS IN EACH CASE.

Summonses—Public Health (London) Act.

OFFENCE.	PENALTY.	COSTS.
	£ s. d.	£ s. d.
On 4th March a summons was heard before Mr. Hopkins, at Lambeth Police Court, against the owner, for non-compliance with the notice of the Council to put the drain, soil pipe and w.c. into proper order and condition at No. 27, Benedict Road. The Magistrate made an order to do the work in seven days, and to pay 4s. costs.	...	0 4 0
On 4th March, two summonses were heard before Mr. Hopkins, at Lambeth Police Court, against the owner, for non-compliance with notice of Council to repair drains at No. 68 Branksome Road.	...	0 4 0
On 20th March, a summons was heard before Mr. Hopkins, at Lambeth Police Court, against the owner, for non-compliance with notice of Council to put drains into proper order and condition at 153, Warham Street. Order made to do work in 7 days, and to pay 7s. costs.	...	0 7 0
On 10th April, a summons was heard before Mr. Shiel, at Westminster Police Court, against the owner, for non-compliance with notice of Council to remove an accumulation of dung, etc., at No. 3, Tinworth Street. An order was made prohibiting the recurrence of the nuisance, and the defendant was ordered to pay 4s. costs.	...	0 4 0
On 14th May, a summons was heard before Mr. Horace Smith, at Westminster Police Court, against the owner, for non-compliance with notice of Council to put the drains in order and cleanse premises at No. 1, Nine Elms Lane. Order made for work to be done within 14 days, and owner to pay 4s. costs.	...	0 4 0
On 11th June, a summons was heard before Mr. Sheil, at Westminster Police Court, against the owner, for removing offal from slaughtered animals in an improperly constructed cart, from 4, Clapham Road. Also for removing, after 10 o'clock a.m., sheep offal in an improperly constructed cart, contrary to Bye-laws of London County Council.	2 0 0 1 0 0	0 2 0 0 2 0
On 17th June, a summons was heard before Mr. Horace Smith, at Westminster Police Court, against the owner, for non-compliance with Magistrate's order to put drains, etc., into proper order and condition at No. 1, Nine Elms Lane.	1 0 0	0 2 0
On 31st October, a summons was heard before Mr. Hopkins, at Lambeth Police Court, against the owner, for non-compliance with notice of Council to put drains and sink waste into proper order and condition, at 35, Lorn Road. Order made to do the work in 14 days, and to pay 4s. costs.	...	0 4 0
On 26th November, summonses were heard before Mr. Hopkins, at Lambeth Police Court, against the builder, for repairing a drain so as to be a nuisance and injurious to health, at No. 81, Holland Road, Brixton.	5 0 0	0 12 0
Against the owner, "Beechcroft," Bushey, Herts., for non-compliance with notice of Council to put drain and upper w.c. into proper order and condition at No. 81, Holland Road, Brixton. Order made to do the work, and owner to pay 8s. costs.	...	0 8 0
	£9 0 0	£2 13 0

Sale of Food and Drugs Act.

OFFENCE.	PENALTY.	COSTS.
	£ s. d.	£ s. d.
On 23rd March, two summonses were heard before Mr. Paul Taylor, at Southwark Police Court—(1) selling Milk containing added water 6 per cent. ; (2) selling Milk from which the cream had been abstracted to the extent of 10 per cent.	0 10 0	5 0 0
On 27th March, summonses were heard before Mr. Plowden, at Lambeth Police Court, <i>re</i> selling Butter containing Margarine (not Butter) 92 per cent.	0 10 0	0 12 6
<i>Re</i> selling Milk, containing added water to the extent of 14 per cent.	0 10 0	0 12
On 24th April a summons was heard before Mr. Francis, at Lambeth Police Court, <i>re</i> selling Butter containing Margarine (not Butter) 94 per cent.	1 0 0	0 12 6
On 14th May, a summons was heard before Mr. Smith, at Westminster Police Court, <i>re</i> selling Butter, containing Margarine (not Butter) 90 per cent.	0 10 0	0 14 6
On 29th May, a summons was heard before Mr. Horace Smith, at Lambeth Police Court, <i>re</i> selling Butter, containing water to the extent of 20.5 per cent.	0 5 0	0 14 6
On 3rd July, 2 summonses were heard before Mr. Hopkins, at Lambeth Police Court, <i>re</i> selling Milk, from which the cream had been abstracted to the extent of 16 per cent.	1 0 0	0 12 6
<i>Re</i> selling Butter, containing Margarine (not Butter) 93 per cent.	1 0 0	0 12 6
On 17th July a summons was heard before Mr. Hopkins, at Lambeth Police Court, <i>re</i> selling Milk, from which the cream had been abstracted to the extent of 13 per cent.	0 10 0	0 12 6
On 1st August 3 summonses were heard before Mr. Horace Smith, at Westminster Police Court, <i>re</i> selling Butter, containing Margarine (not butter) 93 per cent.	0 10 0	0 12 6
<i>Re</i> non-labelling of a parcel of Margarine.	0 10 0	0 12 6
<i>Re</i> non-labelling of a parcel of Margarine.	...	0 12 6
On 7th August a summons was heard before Mr. Hopkins, at Lambeth Police Court, <i>re</i> selling Butter containing Margarine (not Butter) 90 per cent.	3 0 0	0 12 6
On 20th August a summons was heard before Mr. Francis, at Westminster Police Court, <i>re</i> selling Milk, from which the cream had been abstracted to the extent of 30 per cent.	1 0 0	0 12 6
On 2nd September a summons was heard before Mr. Rose, at the South-Western Police Court, <i>re</i> selling Butter containing Margarine (not Butter) 90 per cent.	1 10 0	0 12 6
On 9th October, 2 summonses were heard before Mr. Hopkins, at Lambeth Police Court, <i>re</i> selling Milk, from which the cream had been abstracted to the extent of 20 per cent.	0 10 0	0 14 6
<i>Re</i> selling Milk, from which the cream had been abstracted to the extent of 17 per cent.	1 0 0	0 14 6
On 4th December a summons was heard before Mr. Francis, at Lambeth Police Court, <i>re</i> selling Milk, from which the cream had been abstracted to the extent of 12 per cent.	0 10 0	0 17 6
	£14 5 0	£15 5 6

Voluntary Notification of Consumption (with tuberculous expectorations).

(Special Report by the Medical Officer of Health).

Tuberculosis is a recognised infectious disease due to the entrance of a germ (the bacillus tuberculosis) from without into the human body, and this germ is voided from a tubercular patient chiefly (of not entirely) by the sputum. Such sputum, when dried, is apt to be borne about as dust, and may, by inhalation or otherwise, become a serious menace to the Public Health. Its promiscuous distribution must, therefore, at all costs, be avoided.

This infectivity of tuberculosis cannot be too much emphasised, and the simplicity of the preventive measures that can be readily taken by all, brought more and more to the knowledge of the people. As far as possible, every person suffering from consumption or phthisis (tuberculosis of the lungs), should be presented with a leaflet such as I have already drawn up for distribution in Lambeth Borough, containing simple instructions with regard to the prevention of consumption by disinfection, etc. The difficulty is to know of the persons suffering from consumption. Hitherto, the methods I have used in Lambeth (with the consent of the late Vestry, who adopted my report on December 8th, 1898), have consisted of:—

(1). Systematically disinfecting, free of cost, all rooms (and contents) that have been previously recently occupied by tuberculous-infected invalids (more especially those suffering from the pulmonary form of the disease known as consumption or phthisis), and which have become unoccupied owing to the deaths or removals of such patients, either when requested to do so by the medical men in attendance, or when localities of deaths are reported weekly by the Registrar General.

N.B.—1481 houses infected with consumption have been dealt with during the last three years, and the necessary disinfection and cleansing carried on.

(2). Examining bacteriologically, free of cost, for medical men and others, sputum from doubtful or suspected infected persons so as to demonstrate the presence of the bacilli, and so put all doubt as to diagnosis out of the question.

N.B.—320 samples of sputum have been examined bacteriologically.

(3). Disseminating knowledge as to the nature and dangers of the disease and the ready means at hand for its prevention by distributing leaflets and letters (*a*) amongst clergymen, district visitors, school teachers, etc., and through them amongst the Lambeth ratepayers generally; and (*b*) amongst all consumptive patients in Public Institutions, or attending Dispensaries or Hospitals.

N.B.—St. Thomas's Hospital, amongst out-patients, distributes about 1200 of these leaflets annually, and up to the present 3000 others have been issued.

The success with which these methods have met, encourage me to advise the Council to take one step further forward, and adopt a voluntary or optional method of notification of this disease (tuberculosis) in Lambeth Borough, and so materially increase their knowledge of tuberculous infected centres, and enable me, as Medical Officer, to take *pro rata* increased preventive measures. It is clear that what is required is knowledge of the infected centres during the patients' lifetimes, and not after their deaths—the danger arising wholly during life, when a man or woman, unfortunately stricken down by this disease, is left to infect others in crowded rooms, or houses, or districts.

Lambeth is prepared for such notification of consumption, as the above described methods of prevention that have been in vogue for the last three years have been highly successful, and prepared the way for such a further advance being made.

Notification has proved invaluable in combating other infectious diseases, giving certain knowledge as to their states, especially their dissemination, their increase and decrease, showing where help and instruction may, with advantage, be given and where disinfection can be forthwith effected (more especially when consumptives die, or change their residences). What has proved valuable in other infectious diseases, must give similar good results in connection with tuberculosis, which is (as already stated) also an infectious disease.

Where overcrowding, defective ventilation, damp, and general insanitary conditions exist, there consumption will spread, both directly by the passage of the germs from person to person, and indirectly by predisposing the inmates of houses, etc., where such conditions exist, to attack by such germs, by weakening their powers of resistance and lowering the standard of their general health. There must, therefore, be no relaxation on the part of the Council in keeping the borough in as sanitary and healthy

a state as possible by due regard to questions of sewerage, drainage, and general municipal cleanliness, including the systematic flushing and cleansing of all courts, alleys, and narrow streets in populous districts. Notifications will materially assist in this direction, showing where the disease principally lurks, and the special conditions under which it is likely to spread.

All cases of tuberculosis (for tuberculosis affects different organs and parts of the body) need not be notified, nor even all cases of tuberculosis of the lungs (*i.e.*, consumption or phthisis), but only those attended with tuberculosis expectorations, *i.e.*, those that are sources of danger to others, owing to domestic conditions. Such limited notification must be optional or voluntary. That such notification will lead to increased preventive action must be admitted when it is remembered that the Lambeth Borough Council is equipped with the necessary efficient sanitary administrations to adopt the consequential measures. The machinery for preventing the disease extending is ready and in proper working order; all that is wanted is the knowledge as to where the disease exists. Such a method of voluntary or optional notification of phthisis has been already tried in New York and in Brighton and Manchester, etc., and with success in limiting the spread of the disease, not only by enabling preventive measures to be taken, but also by teaching the people by leaflets left at the house and instruction given, the danger of the disease, and the simplicity of the methods required to prevent an infected person being a danger to others. The notification may in this way be controlled through the medical attendant either by the relatives of the patients, or by the patients themselves, and no case need be notified unless the medical attendant is of opinion that good will accrue therefrom.

That the Local Government Board will acquiesce is practically assured, as they have already stated that the Board is advised that a Local Authority may pay to medical practitioners a reasonable fee for the voluntary notification of phthisis, or other infectious diseases.

I have no hesitation in recommending the Committee to advise the Council to apply to the Local Government Board for confirmation (if necessary) of a voluntary or optional system of notification of phthisis (or consumption), with tubercular expectorations, with the payment of a fee of 2s .6d. to every medical practitioner, for each notification certificate sent in to the Borough Council's medical officer.

It must be remembered that tuberculosis causes more deaths and more permanent ill-health than all the other infectious diseases put together, over 600 dying annually in Lambeth, whilst very many more are permanently maimed or injured, and their health ruined thereby.

The cost of such voluntary notification can only be approximated. Taking an average of 600 cases of consumption that prove fatal annually in Lambeth Borough, and remembering that such cases are, as a rule, accompanied with dangerous tuberculous expectoration during the last 12 months of the patients' lives, it may be roughly assumed that an average of 600 is the maximum number of notifications that could be received in one year, *i.e.*, at 2s. 6d. per notification, £75, or allowing for duplicate or triplicate notifications, £100. I am assuming that all the medical men in Lambeth will fall in with this voluntary or optional notification, but, probably, the expenses will be at least 50 per cent. less. In any case, any information relating to a case of consumption with tubercular expectoration, 12 months before it proves fatal, will be invaluable. Taking the full amount, the expense would be more than justified, even if only a few cases of consumption or phthisis were thereby prevented.

JOSEPH PRIESTLEY.

January 13th, 1902.

History of the Smallpox Epidemic in Lambeth Borough, 1901-2.

(*Special Report by the Medical Officer of Health*).

Smallpox, which had been quiescent for many years in London, broke out in epidemic form (probably imported, during August, 1902, from Paris in the first instance, and spread through a suburban laundry) in the N.W. Districts (St. Pancras and St. Marylebone), and slowly (but steadily) increased, spreading eventually into all other parts of London. The Table on page 67 gives the total cases in London and Lambeth removed to the Hospitals of the Asylums Board, together with the number of deaths, since 1885, the year in which Smallpox patients were first removed away from London. The first case that appeared in Lambeth Borough was notified on August 27th, 1901, at 11, Meadow Place, South Lambeth Road (Henry O., aged 50 years), and was traced to St. Pancras Borough, where at that time the Smallpox was spreading rapidly. This was the only case in Lambeth in August, and in September 2 further cases occurred, followed by 11 in October, 18 in November, and 22 in December—making a total of 54 up to the end of the year 1901. Since then, 350 additional Smallpox cases have been notified in Lambeth Borough, so that the total number of cases that have occurred during the epidemic in Lambeth is 404, and of these 64 have died, giving a death-rate of 15.8 per cent.

Of the 404 notified cases, 220 were males and 184 females, whilst of the 220 males, 177 were vaccinated and 43 unvaccinated; and of the 184 females, 148 were vaccinated and 36 unvaccinated. 6 of the cases notified were *stated* to have been also re-vaccinated, and 2 to have had previous attacks of Smallpox, but both the re-vaccinations and the previous attacks of Smallpox took place many years ago (in each instance over 20 years). The ages of the re-vaccinated cases were—

Males : 37, 46, 48 years.

Females : 34, 35, 40 years.

and in two instances (Henry H, aged 48, and Kate B., aged 40) death resulted.

The two men who were stated to have had previous attacks of Smallpox, were 38 and 44 years of age respectively, and of these one (Alfred T.), aged 44, died.

Of the 64 deaths, 33 were males and 31 females ; whilst of the 33 males, 22 were vaccinated and 11 un-vaccinated ; and of the 31 females, 16 were vaccinated and 15 un-vaccinated. Subdividing into age periods, it is seen that

a. Of the 404 notified cases, there were—

- 6 under 1 year of age (all unvaccinated),
- 13 between 1 and 5 years (4 vaccinated and 9 unvaccinated),
- 31 between 5 and 10 years (7 vaccinated and 24 unvaccinated),
- 83 between 10 and 20 years (64 vaccinated and 19 unvaccinated),
- 211 between 20 and 40 years (191 vaccinated and 20 unvaccinated),
- 57 between 40 and 60 years (56 vaccinated and 1 unvaccinated),
- 3 60 years and over (all vaccinated).

b. Of the 64 deaths, there were—

- 4 under 1 year of age (all unvaccinated),
- 3 between 1 and 5 years (all unvaccinated),
- 3 between 5 and 10 years (1 vaccinated and 2 unvaccinated).
- 2 between 10 and 20 (both unvaccinated),
- 36 between 20 and 40 years (22 vaccinated and 14 unvaccinated).
- 15 between 40 and 60 years (14 vaccinated and 1 unvaccinated).
- 1 60 years and over (vaccinated).

These interesting and important facts will be more readily understood in tabular form as follow :—

TABLE I.

Details as to the 404 cases of Smallpox and 64 Deaths

	CASES.			DEATHS.			Death rate per cent			
	M.	F.	Total	M.	F.	Total				
404 Smallpox cases and 64 deaths.	Under 1 year	Vaccinated ...		—	—	—	0·0			
		Unvaccinated		3	3	6	1	3	4	66·6
Between 1 and 10 years ...	Vaccinated ...	Vaccinated ...		4	7	11	1	—	1	9·1
		Unvaccinated		16	17	33	1	4	5	15·1
10 years and over ...	Vaccinated *	Vaccinated *		173	141	314	21	16	37	11·8
		Unvaccinated		24	16	40	9	8	17	42·5
TOTALS (all ages) ...				220	184	404	33	31	64	15·8

Total Death-rates = 15·8.

Vaccinated, 11·7 { Male, 12·5
Female, 10·8

Unvaccinated, 32·9 { Male, 25·6
Female, 41·7

* 6 (3 males and 3 females) of the notified patients were stated to have been revaccinated over 20 years ago (and two, a male and a female, died), and 2 (both males), to have had previous attacks of Smallpox (and 1, a male, died).

TABLE II.

Ages and Sex of the 404 Smallpox Cases.

Age	Male.		Female.		Age.	Male.		Female.	
	Vacc.	Not.	Vacc.	Not.		Vacc.	Not.	Vacc.	Not.
Und. 1	—	3	—	3	Br'ght forwd.	126	40	114	36
1	—	—	—	1	36	4	2	2	—
2	1	—	—	1	37	2	—	3	—
3	1	1	—	5	38	10	—	4	—
4	—	—	2	1	39	1	—	—	—
5	—	5	—	1	40	3	—	7	—
6	—	3	1	2	41	—	—	2	—
7	1	1	1	2	42	3	—	—	—
8	—	3	1	2	43	6	—	2	—
9	1	3	2	2	44	2	—	3	—
10	—	4	1	—	45	3	1	1	—
11	3	2	2	2	46	4	—	1	—
12	2	—	2	—	47	—	—	—	—
13	2	—	3	—	48	2	—	—	—
14	1	2	5	—	49	1	—	1	—
15	2	—	2	2	50	3	—	1	—
16	3	—	5	—	51	—	—	—	—
17	1	4	4	—	52	1	—	—	—
18	7	1	6	—	53	—	—	—	—
19	6	—	7	2	54	1	—	2	—
20	4	—	6	1	55	1	—	1	—
21	6	—	3	1	56	—	—	1	—
22	11	—	3	—	57	1	—	—	—
23	10	1	6	1	58	1	—	—	—
24	9	—	4	1	59	1	—	1	—
25	7	1	3	—	60	1	—	—	—
26	9	—	1	1	61	—	—	—	—
27	4	—	6	—	62	—	—	—	—
28	9	1	4	—	63	—	—	1	—
29	5	1	9	—	64	—	—	—	—
30	3	—	9	—	65	—	—	—	—
31	4	2	4	—	66	—	—	—	—
32	5	—	3	—	67	—	—	—	—
33	—	—	2	2	68	—	—	—	—
34	3	1	3	3	69	—	—	—	—
35	6	1	4	—	70	—	—	—	—
					& over*	—	—	1	—
	126	40	114	36	Totals	177	43	148	36

* The patient over 70 years of age was Ann D., aged 85, vaccinated in infancy. She recovered.

N.B.—VACCINATED PERSONS.

- (1) *No death* occurred amongst *vaccinated infants* under 1 year of age.
- (2) *No death* occurred amongst *vaccinated children* between 1 and 5 years of age.
- (3) *One death* occurred amongst *vaccinated children* between 5 and 10 years of age.
- (4) *One death* occurred amongst *vaccinated children* under 10 years of age.
- (5) 37 deaths occurred amongst 314 vaccinated (including 6 re-vaccinated) persons 10 years of age and over, giving a percentage death-rate of 11.8.
- (6) Total death-rate amongst the vaccinated, 11.7 per cent.
- (7) Amongst persons *stated* to have been re-vaccinated, 2 deaths only are recorded, and one death only amongst persons who are *stated* to have had previous Smallpox attacks.

UNVACCINATED PERSONS.

- (1) 4 *deaths* occurred amongst *unvaccinated infants* under 1 year of age.
- (2) 3 *deaths* occurred amongst *unvaccinated children* between 1 and 5 years of age.
- (3) 2 *deaths* occurred amongst *unvaccinated children* between 5 and 10 years of age.
- (4) 9 *deaths* occurred amongst *unvaccinated children* under 10 years of age.
- (5) 17 deaths occurred amongst 40 unvaccinated persons 10 years and over, giving a percentage death-rate of 42.5.
- (6) Total death-rate amongst the unvaccinated, 32.9 per cent.

To estimate the true importance and significance of the above notes, the *ratio* of unvaccinated to vaccinated children under 10 years of age, and of persons 10 years of age and upwards, throughout the Borough of Lambeth, must be taken into account. Roughly, these *ratios* may be taken as follow :—

- (a) 1 unvaccinated to 5 vaccinated (in persons under 10 years of age).
- (b) 1 unvaccinated to 12 vaccinated (in persons 10 years of age and over).

Bearing these proportions in mind, and assuming that vaccination is *no* protection (as claimed by the anti-vaccinators), the vaccinated children under 10 years of age in Lambeth ought to have added to the epidemic 195 cases (instead of the 11) and 45 deaths (instead of the 1). So, too, adults 10 years of age and over in Lambeth ought to have added 480 cases (instead of the 314) and 204 deaths (instead of the 37).

In this way it will be seen that the incidence rate upon the population is very much less amongst the vaccinated than amongst the unvaccinated, whether regard be had to the number of cases of Smallpox notified, or to the deaths from Smallpox registered. The same argument applies to both the child and the adult populations of Lambeth Borough (or elsewhere throughout London). In this way, the smallness of the figures will not prevent satisfactory conclusions being drawn in regard to the efficacy of *recent* vaccination as, practically, a preventative against death from Smallpox, as well as against even an attack of the disease. Even when a lengthened interval has elapsed between the operation of vaccination or re-vaccination and the Smallpox attack, the disease appears to be modified and rendered less fatal.

As was to be expected, all parts of the Borough have not suffered equally. The incidence of the disease shews a rate of 7.5 in the Inner, as compared with 0.7 in the Outer, Wards, and is found to have varied from a *maximum* 3.9 in Marsh to a *minimum* 0.3 in Norwood, per 1000 inhabitants. The incidence throughout the whole of the Borough of Lambeth was 1.3 per 1000 inhabitants—the smallness of the rate being due to the energetic precautionary measures that were taken (*vide infra*).

The 404 cases represent 333 infected houses, and may be classified according to Wards as follow :—

<i>Inner—</i>	Population, enumerated Census, 1901.	Infected Houses.	Infected Persons.	Incidence per 1000 Inhabitants*
Marsh ...	27410	88	107	3.9
Bishop's ...	32340	60	64	1.9
Prince's ...	47618	61	79	1.7
Vauxhall ...	31487	28	42	1.3
<i>Totals for Inner Wards ...</i> }	38885	237	292	7.5
<i>Outer—</i>				
Stockwell ...	32339	27	29	0.9
Brixton ...	43474	30	31	0.7
Herne Hill ...	30199	21	28	0.9
Tulse Hill ...	27574	9	14	0.5
Norwood ...	29424	9	10	0.3
<i>Totals for Outer Wards ...</i> }	163010	96	112	0.7
Borough of Lambeth }	301895	333	404	1.3

The Inner Wards being more congested than the Outer, and work-places being more numerous in the former than in the latter, it was only natural to suppose that the Smallpox incidence would be greater in the Inner Wards, which were also nearer to the Smallpox-infected areas north of the Thames, and consequently more likely to become infected by workers from such districts returning to Lambeth to sleep. Such is found to have been the case in Lambeth during the Smallpox epidemic 1901—2.

PREVENTIVE MEASURES.

The preventive measures used with success in stamping out the epidemic may be tabulated as follows :—

- (1) Notification,
- (2) Isolation,
- (3) Disinfection,
- (4) Quarantining,
- (5) Vaccination and re-vaccination.

1. NOTIFICATION.

The importance of early and exact notification is the first step in dealing with an epidemic of Smallpox, as it is clear that without exact knowledge as to where the cases exist in the Borough, preventive measures cannot be taken. Knowing the difficulties that medical men (especially the younger medical men, who have had no experience of the disease) have in diagnosing Smallpox in some of its modified forms, I communicated by letter early in the outbreak (October 15th, 1901), with every medical man residing or practising in Lambeth Borough, pointing out the danger of the Smallpox spreading on account of modified cases being mistaken for other diseases (*e.g.*, Chickenpox, Lichen, etc.), and the consequent importance of correctly diagnosing the disease in all its varied forms. To accomplish this I suggested that all doubtful or suspicious cases should be voluntarily notified to me, as Medical Officer, and I undertook to act as consultant in such cases and take all responsibility. As a result, 277 doubtful or suspicious cases were notified, and all these the Medical Officer visited and removed to the Smallpox Hospital, or left at home, according as they were Smallpox, or other diseases. During 1901 (four months), 53 cases were notified, and during 1902 as follows :—January 51, February 38, March 30, April 40, May 30, June 24, July 10, and August 1; total 277. Of the 277 cases, it is of medical interest to note that 94 were Smallpox, 84 Chickenpox, 17 Lichen, 15 Erythema, 19 Acne and Ecthyma, 14 Porrigo and Eczema, 6 Vaccinia, 6 Measles, 4 Herpes, 4 Psoriasis, 3 Scarlet Fever, 2 Erysipelas, 9 other skin diseases.

Had the 94 doubtful cases, which proved to be Smallpox, been left to be treated as doubtful cases at home, it is appalling to think what proportions the epidemic might have assumed in Lambeth Borough. Copy of the letter sent out is as follows :—

PUBLIC HEALTH DEPARTMENT,
333, Kennington Road, S.E.

October 15th, 1901.

DEAR SIR,

re Smallpox.

As Smallpox appears to be taking an epidemic form in London, and as several imported cases have already been notified in Lambeth Borough, it is of importance that the greatest care should be exercised in correctly diagnosing suspicious or doubtful cases. Unfortunately, as you are probably aware, Smallpox in its various modified forms is, at times, extremely difficult to diagnose, and in this way the disease may spread. To prevent this, I shall be glad if you will kindly advise me of any suspicious or doubtful cases which you may meet with in your practice, more especially cases which may be mistaken for Chickenpox, etc. I will gladly see them in consultation with you, if you wish it, and will kindly let me know. Do not hesitate to make use of me at any time.

I need not add that any information which you may send will be considered strictly private.

Yours faithfully,

JOSEPH PRIESTLEY.

Notification of Chickenpox.

In view of the ready response to this letter by the medical men throughout the Borough, it was not thought necessary to go to the needless expense of making, temporarily or permanently, Chickenpox a compulsorily notifiable disease, as suggested by the Local Government Board in a letter dated December 27th, 1901. It is true that modified Smallpox cases are frequently mistaken by medical men for Chickenpox, and that in a few instances persons desiring to evade the obligation to report cases of Smallpox to the Sanitary Authority may declare such cases of Smallpox to be cases of Chickenpox. On the other hand, for compulsory notification of Chickenpox to be of use, the Medical Officer of Health should have the power to visit and examine every case notified, and the difficulties in the way of this being carried out *practically* are obvious. Several other Metropolitan Borough Councils, whose officials had not arranged with the medical men practising in their respective Boroughs in the same way as the Lambeth Borough Council had, were in favour of the compulsory notification of Chickenpox throughout London, and the London County Council, on January 28th, 1902, with the approval of the Local Government Board, under Section 55 of the Public Health (London) Act, 1891, made an Order, which came into operation on February 7th, 1902, making Chickenpox a notifiable disease throughout the administrative County of London for a period of three calendar months, on the ground of emergency owing to the prevalence of Smallpox in London, and the fact that the failure in many cases to distinguish between Chickenpox and Smallpox had led to the spread of the

latter disease. The notification is dual, viz.: a notice by the head of the family (or other responsible person), and a certificate by the medical attendant; and the penalty for non-compliance is a fine not exceeding forty shillings.

This Order was extended on April 22nd, 1902, for a further period of 6 months from May 7th, 1902; and again on October 21st, 1902, for a further period of two months from November 7th, 1902, after which period the compulsory notification of Chickenpox was discontinued. During this period (February 7th, 1902, to January 6th, 1903), there have been notified within the Borough of Lambeth 995 cases as follows:—

Ages.	Feb.	Mar.	April.	May.	June.	July.	August.	Total.
0—1	6	11	10	17	19	7	8	78
1—2	8	16	11	17	18	15	10	95
2—3	6	13	13	14	20	12	11	89
3—4	10	27	13	19	19	14	10	112
4—5	21	26	15	24	35	16	10	147
5—6	20	36	18	29	38	10	13	164
6—7	11	13	11	10	29	15	7	96
7—8	5	10	8	9	18	5	5	60
8—9	2	5	2	7	4	2	4	26
9—10	4	3	6	3	6	5	—	27
10—11	1	5	—	2	2	2	1	13
11—12	2	3	2	3	4	3	—	17
12 and over	17	4	7	15	11	12	5	71
TOTALS	113	172	116	169	223	118	84	995*

All the 939 Chickenpox-infected houses, in which the 995 cases occurred, were visited, and the usual precautions as to isolation, disinfection, etc., carried out, whilst, as Chickenpox is a rare disease in adult life, and may be at that age-period more readily mistaken for modified Smallpox, the 71 cases notified amongst adults (12 years and over) were the subject of special investigation and examination by the Medical Officer. Four cases notified as Chickenpox proved, on examination, to be Smallpox, but these cases would have been heard of without the compulsory notification of the disease on account of the system of voluntary notification of all doubtful or suspicious cases of "spots," which was inaugurated in Lambeth Borough at the commencement of the epidemic. In the late epidemic (as far as Lambeth Borough is concerned) the compulsory notification of Chickenpox has proved practically useless, as well as being, in the opinion of your Medical Officer of Health, a needless expense, under the special circumstances mentioned.

*From September 1st, 1902, to January 6th, 1903, 605 more cases of Chickenpox were notified, and of these 33 were amongst persons 12 years of age and over.

The practical difficulties in grappling with these large numbers of Chickenpox cases soon appeared, and the London County Council, on February 24th, 1902, appointed 37 medical men throughout the Administrative County of London to act as consultants or experts in connection with the diagnosis of doubtful cases of Smallpox, the London County Council to pay the fees (10s. 6d. for each case visited). The notification fee is, in addition, 1s. each certificate, the Metropolitan Asylums Board, in a letter dated April 5th, giving the opinion that such experts act in a public capacity as Medical Officers of a public body. This action of the London County Council gave rise to a large amount of ill-feeling amongst the different Metropolitan Authorities, it being thought that such appointments, if required, should be made by the Metropolitan City and Borough Councils concerned. As regards Lambeth, objection was taken on behalf of the Borough Council by your Medical Officer of Health in a letter dated February 20th, 1902, and previously at a personal interview with the London County Council's Medical Officer, with the result that no experts were appointed in Lambeth. The Borough Council protested formally on March 6th, 1902. Experts living in neighbouring Boroughs were, in a very few instances (less than a dozen), called in in connection with doubtful cases occurring in Lambeth Borough, and in three instances the diagnoses made by such experts were found to be wrong—in one instance (a case of Smallpox diagnosed by the expert as Chickenpox) 5 cases arising therefrom, and in the others, the patients (suffering from Chickenpox, but diagnosed by the experts as suffering from Smallpox) being removed to the Smallpox Hospital (but fortunately sent back at once). It is clear that such appointments of experts should be made by the Borough Councils concerned, so that the greatest care might be exercised in order to secure the services of only competent men (if their services are required at all) to act under, and be responsible to, the Medical Officers of Health. The Society of Metropolitan Medical Officers of Health protested officially against the appointments of these experts by the London County Council, and they were discontinued on November 6th, 1902.

In Lambeth, the Medical Officer of Health acted as expert and consultant for the Borough, and this arrangement was found to work well, though much extra work devolved in consequence upon such officer.

Before leaving the subject of notification, it is only fair to state that, speaking generally, the promptness with which the cases of Smallpox (and all doubtful cases) have been notified throughout the Borough calls for special mention, and that in this connection

the medical men practising in Lambeth are to be congratulated. There can be little doubt that the circular letter, which was sent out early in the epidemic, helped materially in securing the prompt notification of all cases.

2. ISOLATION.

Every case was at once removed to Hospital*—a most efficient, and the only efficient, way of isolating Smallpox patients. Isolation at home is practically impossible, and everything depends on the cases being isolated in Hospital as soon as notified. This has been accomplished in Lambeth, patients being removed, and disinfection commenced, within an hour of such patients being notified. In many instances, removal took place at night, and in a few instances at midnight, arrangements having been made at the Sanitary Offices for a person to be on duty *at all hours* (Sundays and week-days). The routine adopted by the Metropolitan Asylums Board (the Hospital Authority for London) is to take each patient (when notified) first to the Shelters or Observation Wards at Rotherhithe (South Wharf), since enlarged. From these the patient, if found suffering from Smallpox, is sent in one of the river ambulances to the Hospital Ships, which are moored at Long Reach (the mouth of the Thames). Here the patient is again medically examined, and if still thought to be suffering from Smallpox (but not otherwise), is admitted on to the Ships.† In this way, all danger of allowing a patient (not suffering from Smallpox) to be placed in a Smallpox Hospital is practically reduced to a minimum, and the method has been found to work satisfactorily. 33 notified cases of Smallpox from Lambeth were returned at once from the Shelters, such patients, in the opinion of the Metropolitan Asylums Board's officials, not suffering from Smallpox at the times of their removals from their homes. These cases have been withdrawn and do not appear in the total number of cases (404) dealt with in the Report. These 33 wrongly-diagnosed cases consisted of Chickenpox, Measles, Acne, Influenza, Erythema, etc.

No possible harm can arise from the removal to the Shelters for observation of doubtful or suspicious cases.

* Two patients (malignant Smallpox), died before the ambulance arrived so that they could not be removed to Hospital. Their bodies were at once removed to the Mortuary for infectious cases, at Wanless Road, to await burial, at a cost of £1 14s. 6d. Strict precautions were taken as to disinfection, etc.

†At the beginning of the Outbreak, the Metropolitan Asylums Board had available 1250 beds (ships 250 and Gore Farm, 1000). Extra accommodation was needed, and provided, so that the present accommodation (1903) is 3238 beds.

Smallpox Ambulance Service.

The Metropolitan Asylums Board, on the 8th March, 1902, adopted a proposal of their Ambulance Committee, by which all necessary preliminary steps were to be taken with the view of securing sufficient freehold land for the purposes of an Ambulance Station and Shelters for patients midway between London and Dartford. There being considerable doubt as to what

the intention of the Asylums Board really was, the Society of Metropolitan Medical Officers of Health sent a deputation to the Board on April 28th, and were then officially informed that the proposed Smallpox Ambulance Service was intended to supplement, and in no way to take the place of, the River Ambulance Service—it being definitely stated to the deputation that, in the opinion of the Asylums Board, the River Service was satisfactory except in a few cases where delays occur from frost and fog. To avoid inconvenience from such delays, and to ensure the patients suffering from Smallpox being at all times at once removed to the Smallpox Hospitals at Long Reach, is the object of the Metropolitan Asylums Board, and, therefore, their new proposal (mentioned above) was approved by the Lambeth Council as satisfactory and necessary, more especially as the Local Government Board naturally and rightly objects to any important extension of the present temporary observation Shelters, either at Rotherhithe or elsewhere near London.

3. DISINFECTION.

As soon as a case of Smallpox had been removed, the next important preventive measure was to get rid of every trace of infection by efficiently and at once disinfecting the room or rooms in which the patient had lived prior to removal, and, indeed, the rest of the house, together with all clothes, bedding, etc., that had become directly, or indirectly, infected. Upon the efficiency of such disinfection depends the success (in part) of the action taken in dealing with Smallpox outbreaks. To ensure the disinfection being as efficient as possible, the Medical Officer of Health arranged for the use of formalin, or perchloride of mercury, spray, the stripping off of all papers from infected rooms, washing of ceilings, walls, floors, etc., in addition to the routine sulphur fumigation, which is found so useful as a means to ensure the occupiers using plenty of soap and water, and fresh air (by open windows and doors), to get rid of the smell of the sulphur fumes which are very penetrating and lasting. All articles of clothing, carpets, curtains, bedding, etc., were disinfected with saturated steam in the Equifex Disinfecting

Machine, Wanless Road. The means adopted proved efficient, as no single secondary or return case of Smallpox arose in connection with inefficient disinfection of any of the infected houses or clothing and bedding—a most satisfactory statement to be able to make.

The rooms from which the Smallpox patients were removed have all been fumigated with sulphur, and sprayed with formalin or per-chloride of mercury solutions, and the other rooms, passages, etc., in connection with infected houses have also been sprayed with formalin. During the epidemic, 514 infected rooms, and 2217 other rooms, have been in this way dealt with (not to mention passages and staircases), and the amount of bedding, clothing, etc., removed and disinfected with steam at Wanless Road will be appreciated from the subjoined statement:—

Articles of bedding, etc., disinfected.

Beds	786
Bolsters	689
Pillows	1162
Mattresses	648
Palliasses	744
Chair Cushions	860
Clothing (articles of)	10610
Blankets	1374
Rugs and Mats	71
Counterpanes and Eiderdown Quilts	772
Carpets	346
Extras (Curtains, Laundry Goods, etc.)	7654
Various Sundries, too many to count, and kept in bags (bags)	129
Total ...	<u>26145</u>

Articles of bedding, etc., destroyed:

Beds	27
Bolsters	2
Pillows	7
Mattresses	14
Palliasses	59
Chair Cushions	9
Clothing	4
Carpets	2
Rugs and Mats	4
Sundries (Curtains, Rags, etc.)	207
Total ...	<u>355</u>

In connection with articles of bedding, etc., destroyed, the following goods have been replaced by the Council at a cost of £27 4s. 9d.:—

- Palliasses 51.
- Flock beds 4,
- Wool mattresses 2,
- Bolster 1, and Pillows 2.

Despite this large amount of disinfection carried out, complaints from owners of bedding, etc., were few and far between—£11 5s. only having been paid as compensation for damage to disinfected articles during the whole 12 months of the epidemic.

Stripping off of wall papers of infected rooms was considered an important measure, and a total of 392 rooms have been stripped, 49 by private owners and 343 by the Council's own officers—the latter at a total cost of £97 5s. 6d. It was felt to be unfair to allow private builders' men to do this particularly dangerous work, especially recognising the difficulty of ensuring such men being efficiently protected by re-vaccination. It was decided, therefore, to employ, on behalf of the Lambeth Borough Council, 2 temporary officers (accustomed to the work) for the purpose. These temporary officers were re-vaccinated by the Medical Officer previous to their beginning work, and they have, during the epidemic, stripped 322 infected rooms (the other 21 having been previously done by the disinfecting men) at an inclusive charge of 6s. per room stripped (inclusive of collecting the paper in bags, and having it removed to, and burnt at, the Wharf). Neither of the men caught Smallpox, though there have been many instances throughout London of strippers, unprotected by re-vaccination, having caught the disease (3 cases having occurred in Lambeth amongst strippers employed on infected houses in outside Boroughs).

The disinfecting staff has worked well, day and night, and much praise is due to one and all for the prompt and thorough way in which they have carried out their duties. In one or two instances disinfection has been carried out after midnight, and often late at night, necessitating one or more members of the staff being on duty continuously, as the extra pressure of work due to the Smallpox outbreak was not allowed to interfere with the routine work of disinfecting after the notifiable diseases, Scarlet Fever, Diphtheria, Chickenpox, etc.; or with the special work, which is being carried out in Lambeth, in connection with Tuberculosis, Measles, Cancer, etc. It is subject for congratulation that the epidemic was not allowed to interfere with the routine work of the Disinfecting Department.

The Borough Council, on May 1st, 1902, voted a sum of £40 to be distributed amongst the disinfecting staff for extra work done during the first half of the epidemic, and doubtless the Council will see fit to again vote some further sum for extra work done during the second half of the epidemic. Such extra remuneration is well deserved by the disinfecting staff.

4. QUARANTINING.

Without belittling in any way the three preventive measures, which have already been dealt with, it cannot be too much emphasised how very important it is to carefully quarantine all "suspects" or "contacts." Smallpox is a disease that takes 12-14 days to incubate, and it follows that, when Smallpox breaks out, all persons who have been in contact with a Smallpox patient or patients must be watched for 12-14 days (preferably 16 days) from the time that such patient or patients have been removed to Hospital, and the necessary disinfection carried out. Any "contact" who is not efficiently protected by previous recent vaccination, may sicken with the disease, and the necessity, therefore, of following up such a person must be apparent to all. On the care with which this quarantining, or watching of "contacts" or "suspects," is carried out will depend largely the success of the preventive measures taken in dealing with an outbreak of Smallpox. With one or two cases of Smallpox nothing is easier, but as the cases of Smallpox increase in numbers, the practical difficulties in the way of quarantining increase proportionately.

These "contacts" have arisen in connection with cases of Smallpox (1) in the Borough of Lambeth, or (2) elsewhere. "Contacts" living in Lambeth have been watched for the incubation period of 16 days by the Lambeth Inspectors, and outside "contacts" watched by the officers of the Sanitary Authorities, in whose districts such "contacts" reside, for a similar period. So, too, "contacts" from other districts have, in the same way, been watched during the 16 days' incubation period, and the number of these *outside* "contacts" watched in Lambeth was large, especially when the epidemic was in full swing throughout London and the adjoining Counties.

A daily inter-communication of information *re* Smallpox patients and "contacts" was started at the commencement of the epidemic amongst the different Metropolitan Medical Officers of Health, at the instigation of their Society, and these daily returns were sent out from the office of the County Medical Officer of Health, and have proved of the greatest value. The telephone service has also been requisitioned enormously

(*hourly*) during the epidemic, and many cases in this way have been followed up at once, and prompt action taken. The Metropolitan Asylums Board decided in the early days of the Epidemic to send out daily returns to all Medical Officers in London *re* discharges from, and deaths at, the Smallpox Hospitals, together with the names and addresses of all visitors to the Smallpox Hospitals.

The amount of work involved in carrying out systematically and carefully this quarantining will best be gauged by the numbers of persons dealt with in the Borough of Lambeth by your officials, careful details of all quarantined persons having been tabulated for this purpose by the Medical Officer of Health.

In connection with the 333 infected houses and the 404 cases of Smallpox notified in Lambeth, a total of 4182 persons have been watched and quarantined—3236 adults 10 years of age and over, and 946 children under 10 years of age; whilst in connection with cases of Smallpox outside Lambeth, a total of 739 persons have been watched and quarantined in Lambeth Borough, consisting of 677 adults 10 years of age and over, and 62 children under 10 years of age. In addition, 133 persons visited the Smallpox Hospitals for the purpose of seeing their friends when dangerously ill, and these 133 persons (all adults) were watched and quarantined.

The total number quarantined during the epidemic in Lambeth is, therefore, 5054 persons—4046 adults and 1008 children—and to realise the numbers of visits paid, it must be remembered that each "contact" was under observation for the usual quarantine period of 16 days. Allowing for persons being out when their homes were visited, and remembering that a quarantined house generally contained several persons under observation, we may fairly allow, as an average, 8 visits per person, making a total (rough) of over 40,000 visits paid during the 12 months during which the epidemic has lasted.

To show the value of this quarantining, out of the 5054 persons watched, 141 (*i.e.*, 2.8 per cent.) afterwards developed Smallpox, and were at once removed to Hospital, and the usual disinfection immediately carried out. In this way, these 141 fresh centres were at once dealt with. Had they been allowed to spread, a large increase to the number of Lambeth cases would have, of necessity, followed, whereas, by dealing promptly with them, no *single* further case resulted from such sources. In this way, the amount of work involved has been more than justified. Of the 141 cases, 134 arose amongst the 4182

direct "contacts" belonging to the Lambeth notified cases, whilst 6 arose in connection with the 739 *outside* "contacts" belonging to cases notified outside Lambeth Borough, and 1 in connection with the 133 visitors to the Smallpox Hospitals. Full particulars as to the vaccination states of all "contacts" will be found under the heading of "Vaccination and Re-vaccination"—the 4th preventive measure dealt with in this Report. Suffice it to say, at this point, that the following statistics tell the old well-known story as to the value of vaccination, if not as an absolute preventative, at least as a modifier, of Smallpox:—

"Contacts" (full totals).		Vaccination states.		Number sickening with Smallpox.
Direct	... 4182	3236 adults	{ vacc. or re-vacc. } 3199	100
			{ unvacc. } 37	9
Outside	... 739	946 children	{ vacc. } 873	13
			{ unvacc. } 73	12
Visitors to Smallpox Hospitals	133* (all adults)	677 adults	{ vacc. or re-vacc. } 677	6
			{ unvacc. } 0	0
Visitors to Smallpox Hospitals	133* (all adults)	62 children	{ vacc. } 62	0
			{ unvacc. } 0	0
			{ re-vacc. } 115	0
		{ vacc. } 18	1	
		{ unvacc. } 0	0	

N.B.—Unvaccinated persons vaccinated whilst under quarantine observation, and vaccinated persons re-vaccinated whilst under quarantine observation, are included under the headings "vaccinated" and "re-vaccinated" respectively.

*Visitors are re-vaccinated before going into the Smallpox Hospitals unless previously protected, or unless they conscientiously object.

Much difficulty has arisen in making enquiries concerning Smallpox cases and "contacts" on account of the inaccuracy of some of the statements made, not to mention reticence, or even concealment of facts. The danger that may arise from persons withholding necessary information must be apparent to all, and to obviate such a danger it has been unanimously decided, at a Conference of Metropolitan Sanitary Authorities held February 7th, 1902, that, in the opinion of such Conference, it shall be an offence under the Public Health (London) Act, 1891, to refuse or withhold information or give false information with respect to persons living in a house in which Smallpox has broken out. Such information has reference to names, employments, schools attended by children, out-workers, etc. The Local Government Board is to be approached with a view to promoting legislation in this direction. Islington Borough Council brought the matter

forward in a letter dated December 3rd, 1901, addressed to the Lambeth and other Metropolitan Borough Councils. As far as Lambeth Borough is concerned, comparatively little difficulty has been encountered in this respect during the recent epidemic, though it is clear that, where there is difficulty, some such powers as those suggested should be forthcoming, and the Lambeth Borough Council on January 23rd, 1902, decided to support the Islington Council in regard thereto.

The vagrant classes moving from Workhouse to Workhouse (and from town to town) are a cause of Smallpox spreading—9 separate introductions of the disease by tramps having taken place in Lambeth during the epidemic. It follows, as a corollary, that the importance of quarantining "contacts" in connection with Smallpox cannot be over-estimated, more especially when such "contacts" are amongst the vagrant class. It has been suggested that the law should be altered, or fresh legislation introduced, so that (1) such "contacts" should be compulsorily (*a*) quarantined indoors and kept under observation at their own homes, or in a Sanitary Authority's own Refuges, for at least a fortnight, (*b*) re-vaccinated and their clothing and persons disinfected and cleansed, and (*c*) registered; and (2) that Sanitary Authorities should be empowered to expend moneys out of the rates for such purposes. It is doubtful if the general feeling in the country will countenance such compulsion.

The quarantining and inspection of "contacts" can, with best results, as far as the recent Lambeth experience goes, be carried out at their homes, supplemented, if necessary, with a small monetary allowance when the "contacts" are prevented from going to work by their employers, or for other reasons, and where their wages are consequently stopped (in whole or in part). Such monetary allowances need only be sufficient to cover rent and maintenance, and are, as such, sufficient to ensure the recipients following out instructions as to necessary precautions, *e.g.*, preventing such "contacts," as far as possible, from entering other persons' houses, or any public institution (or meeting), under penalty of forfeiting their monetary allowances. The quarantined persons have been allowed to go about, and, under conditions satisfactory to the Medical Officer, certain of them have been allowed to continue at work during the whole or part of their period of quarantine. Quarantining of "contacts" in a special building is quite unnecessary, except as occasions may require for a few hours whilst their houses (and clothing) are being disinfected; and for this purpose the existing Refuges at Wanless Road and the Wharf are ready to hand, though, fortunately, even these have only been found necessary on two occasions. It has been found during the

epidemic that disinfection of houses by spraying is much more quickly carried out than the old-fashioned method of sulphur-fumigation, and without it being necessary to turn the inmates of such houses out. Whilst the infected room or rooms are under sulphur, the other rooms in the house can be used immediately after, or even during the time that they are sprayed with formalin.

The vaccination and re-vaccination of "contacts" as required has been advised, and ensured as far as possible, and all necessary disinfection carried out.

In connection with quarantining, the Medical Officer communicated with the Guardians, suggesting the need for quarantine and isolation wards being provided for the Workhouses, so that persons from unknown infected houses or areas might be quarantined for 14-16 days prior to being drafted into the House. The suggestion was readily adopted by the Guardians, and special isolation buildings provided, and such a sieve or filter (together with the other measures taken) has undoubtedly saved the House from becoming infected. The Board of Guardians has acted in complete harmony with the Borough Council—a condition of things highly satisfactory, and courteously allowed the Borough Medical Officer an interview, at which many suggestions for dealing with the epidemic of Smallpox were offered to the Borough, and afterwards adopted in their entirety. The thanks of the Borough Council are due to the Board of Guardians, and will, I feel sure, be readily given.

Compensation paid to "Contacts."

The total compensation paid during the epidemic (12 months) in connection with the quarantining of "contacts," or "suspects," in Lambeth Borough amounts to the small sum of £53 8s.—such compensation being for loss of work, etc. When the number of "contacts" is borne in mind, the sum expended is practically infinitesimal ($2\frac{1}{2}$ d. per person quarantined).

A large amount of extra work has been thrown upon the clerical staff in connection with the 5054 "contacts," or "suspects," under observation, e.g., letters to Medical Officers of Health, employers of labour, teachers of schools, librarians, vaccinating officers, etc.

Before leaving the subject of quarantining, reference may be made to a letter sent round by the Local Government Board, and dated February 22nd, 1902, officially drawing attention to the necessity for medical observation of "contacts" for a fortnight after their exposure to infection, and stating that, when under

special circumstances "contacts" are kept at their homes or in a special Refuge, a reasonable expenditure out of the Rates will be sanctioned by the Board. The Lambeth Borough Council had, long before the receipt of the Board's letter, *i.e.*, on December 12th, 1901, adopted the practice of medically observing all "contacts," or "suspects," for a period of 16 days with compensation for loss of work, etc., the Council laying much stress on such medical observation as one of the preventive measures in dealing with Smallpox outbreaks.

5. VACCINATION AND RE-VACCINATION.

The Vaccination Officers and Public Vaccinators (officials under the control of the Board of Guardians) have worked well, and in complete unison with the officials of the Borough Council. Immediately on a patient being removed suffering from Smallpox, the vaccination officials were informed by the Medical Officer of the Borough, visited the house and offered vaccination and re-vaccination to the inmates and others, not only to the members of the infected family, but also to other persons living in the same house, court, or street. The people did not respond as they might have done to the offers of free vaccination thus given, though statistics (when ready) will show that very large numbers of persons have been vaccinated or re-vaccinated by the Public Vaccinators, and it is reasonable to conclude that Private Practitioners have also been performing an equally large amount of private vaccinations and re-vaccinations. The full statistics are not yet prepared for publication, but the following are significant facts:—

1. The total number of successful primary vaccinations at all ages performed by the Public Vaccinators amongst persons living in Lambeth was 7992 during 1901, as compared with 6571 during 1900—the increase in 1901 being during the 3rd and 4th quarters, and due to the Smallpox epidemic that began in London in July, and in Lambeth in August. Further, the total number of primary vaccinations performed in Lambeth Borough by the Public Vaccinators during the 12 months of the epidemic (August, 1901, to August, 1902) is 10,183.

2. From the commencement of the epidemic in August up to the end of the year 1901, the following are the numbers of vaccinations and re-vaccinations that have been performed in the Inner Districts of Lambeth tabulated monthly, *viz.*: July 266, August 235, September 339, October 739, November 1522, December 860, *i.e.*, an increase from 840 during July, August and September

to 3121 during October, November and December. Of these 3961 vaccinations and re-vaccinations, 2668 were performed at the persons' own homes (as required by the 1898 Act), and 1293 elsewhere (*e.g.*, Vaccination Stations, etc.). Further, taking the 10,183 primary vaccinations performed by the Public Vaccinators during the year (August, 1901, to August, 1902), and allowing an average of 5 re-vaccinations to every 1 primary vaccination (a small allowance), the total number of re-vaccinations performed during the same period by the same Public Vaccinators may be reckoned as (roughly) 50,000, *i.e.*, a sixth of the population of Lambeth. It is clear that the large number of vaccinations and re-vaccinations performed in Lambeth must have had some influence in stopping the spread of Smallpox.

"Contacts" and their Vaccination States.

The statistics in connection with the "contacts" dealt with during the Epidemic are noteworthy. Of the 4182 *direct* "contacts," 3236 were adults and 946 children. Of the 3236 adults, 925 were re-vaccinated forthwith; 549 had already been done, or had had attacks of Smallpox, previously; 40 were unvaccinated, and of these 3 were vaccinated forthwith; and 1722 had been only vaccinated in infancy. Of the 946 children, 109 (unvaccinated) were vaccinated, and 208 (vaccinated) were re-vaccinated, forthwith; whilst 73 were unvaccinated, and 556 had been only vaccinated in infancy.

In this way, out of a total of 3236 adults of 10 years of age and over, 37 were unvaccinated, and therefore unprotected, and of these 9 sickened with Smallpox (24.3 per cent.); whilst of the 3199 vaccinated or re-vaccinated, and therefore partly or wholly protected, adults, 100 sickened with Smallpox (3.1 per cent.). Of the total 946 children under 10 years, 873 were vaccinated or re-vaccinated, and therefore partly or wholly protected, and of these 13 sickened with Smallpox (1.5 per cent.); whilst 73 were unvaccinated, and therefore unprotected, and of these 12 sickened (16.4 per cent.).

Of the *outside* "contacts," 677 were adults and all vaccinated, and of these 223 were re-vaccinated forthwith; 19 had already been done, or had had attacks of Smallpox, previously; and 441 had been only vaccinated in infancy. All the 677 adults were protected partly or wholly, and of these 6 sickened with Smallpox (0.8 per cent.). The 62 children (all vaccinated in infancy) were all protected partly or wholly, and of these none sickened.

Of the 133 adult visitors to the Smallpox Hospital, 115 were, before admission, re-vaccinated or had had previous attacks of Smallpox, and of these none sickened; whereas of the 18 adults vaccinated in infancy, who refused re-vaccination, 1 sickened (5.5 per cent.).

In tabular form these results show up clearly:—

Vaccinated	{ Under 10 years	727 (6 sickened).
	{ 10 years and over.	2184 (88 sickened).
Re-vaccinated or had previous Smallpox attack.	{ Under 10 years.	0 (0 sickened).
	{ 10 years and over.	568 (5 sickened).
Unvaccinated	{ Under 10 years.	73 (12 sickened).
	{ 10 years and over.	37 (9 sickened).
Vaccinated during quarantine	{ Under 10 years.	109 (6 sickened).
	{ 10 years and over.	3 (3 sickened).
Re-vaccinated during quarantine.	{ Under 10 years.	99 (1 sickened).
	{ 10 years and over.	1254 (11 sickened)
Total 5054 {	Vaccinated (in- cluding those re- vaccinated in quar- antine).	4264 (106 sickened) = 2.5%
	Re-vaccinated or had previous at- tack of Smallpox.	568 (5 sickened) = 0.9%
	Un-vaccinated (in- cluding those vac- cinated in quar- antine).	222 (30 sickened) = 13.5%

In other words, of those persons who were, by vaccination, re-vaccination, or a previous attack of Smallpox, protected (partially or wholly), 2.3 per cent. contracted Smallpox, as compared with 13.5 per cent. of those not so protected.

An unprotected person in Lambeth Borough ran, during the late Epidemic, 6 times as much risk of contracting Smallpox as a protected person.

Taking the full totals, it is seen that of the 4944 protected (partly or wholly) persons (adults and children), 120 sickened on exposure to Smallpox, *i.e.*, 2.4 per cent.; whilst of the 110 unprotected persons (adults and children), 21 sickened, *i.e.*, 19.1 per cent.

It is difficult to get away from these figures, which have been most carefully collected and tabulated, and the conclusions to be drawn therefrom are sufficiently obvious.

Everyone who has had experience of Smallpox outbreaks knows the great value of *recent* vaccination and re-vaccination as certain preventatives against attacks of Smallpox. Even vaccination performed in infancy appears to have a considerable modifying power in connection with the disease. These statements have been proved again and again in connection with the present epidemic. What has to be realised to-day, however, is that a Sanitary Authority must be prepared to fight an epidemic of Smallpox without too much reliance upon vaccination and re-vaccination. It is an uphill fight, but that it can be done will be admitted after the perusal of this Report. It is unfortunate that it has to be done, as compulsory vaccination and re-vaccination rapidly stamp out Smallpox, though the days of compulsion in any shape or form are rapidly passing away, and the action of the future must be based on non-compulsion—at least as far as vaccination and re-vaccination are concerned.

As showing the value of recent re-vaccination as an absolute preventative against an attack of Smallpox, the following details (small though they be), as to the Lambeth official staff, are interesting :—

Details as to the Lambeth Protected Staff.

At the commencement of the epidemic, the members of the Staff (disinfecting men, inspectors, strippers, sanitary clerks, and others) who had not already been sufficiently protected by re-vaccination or otherwise, were re-vaccinated by the Medical Officer with glycerinated calf lymph, and no single official has sickened with Smallpox, although in several instances such officials were in constant contact with infected persons and goods. The history of the 2 temporary men who were engaged to strip for the Council all the infected rooms, and who were successfully re-vaccinated before commencing work, is especially interesting, as neither of them contracted the disease, although they have stripped, during the epidemic, 322 Smallpox-infected rooms. In other districts, strippers, unprotected by previous recent vaccination, have caught the disease. So, too, the disinfecting men, who have dealt with the Smallpox-infected bedding and clothes from the infected houses, have escaped the disease, having been recently and efficiently re-vaccinated.

The Medical Officer of Health and the Inspectors, who must often have come in contact with Smallpox-infected persons and goods, have also escaped, being efficiently protected against Smallpox by re-vaccination.

These statistics, when compared with those for certain other Metropolitan Boroughs, where similar precautions as to re-vaccination were not taken, are most satisfactory. A Sanitary Authority, which does not protect by re-vaccination its officials against contracting Smallpox, is blameworthy, and the Lambeth Borough Council is, in this respect, fortunately blameless—a statement that cannot be made with respect to other neighbouring Boroughs.

The end justifies the means adopted, no case of Smallpox occurring amongst the staff.

Efficient Re-vaccination.

At the time of the large increase in vaccinations and re-vaccinations, some difficulty was experienced by medical practitioners in obtaining calf lymph of sufficient activity to give satisfactory results both in primary vaccinations and re-vaccinations. The Local Government Board was appealed to with a view to the Board supplying registered medical practitioners, as well as (at present) Public Vaccinators, with a supply of active glycerinated calf lymph. The Board, however, declined to accede to this appeal, in an official letter sent to the Kensington Borough Council, dated February 6th, 1902. It has also been suggested that all registered medical practitioners residing or practising in Lambeth, and in other Metropolitan Districts, should act as Public Vaccinators at a uniform fee for efficient vaccination or re-vaccination.

Transfer of Vaccination Powers.

The question was raised at the end of 1901 by the Kensington and Stoke Newington Borough Councils and by the Paddington and Wandsworth and Clapham Guardians, as to the advisability of placing such important preventive measures as vaccination and re-vaccination under the direct control of the Sanitary Authority. Theoretically, such a change is desirable, as it is certainly an anomaly that vaccination and re-vaccination alone, of all the well-known preventive measures in connection with the stamping out of Smallpox, should rest with an outside Authority (the Guardians)—the Sanitary Authorities being responsible for all the other preventive measures. From a point of view of efficient administration, all such measures should be under one responsible Authority, as it might happen, for instance, that friction or difference of

opinion might exist between members of the Guardians and members of a Sanitary Authority. In this way the health of a district may be prejudiced. The Borough Council of Lambeth, on the advice of the Medical Officer, approved (on December 12th, 1901) the principle of *all* preventive measures in connection with Smallpox being in the hands of one responsible Authority, and that Authority being the Sanitary Authority, which deals with all other infectious diseases and their prevention. It was decided, however, that no action should be taken during the epidemic of Smallpox, but that after such epidemic was over the Local Government Board (or other Department) might be approached with a view to such transference of powers being effected. It has been suggested that a transference from the Guardians to a Borough Council (practically the same electorate) will not benefit matters much, and that a Central Authority (uninfluenced, to a similar extent, by the popular vote) might be able to do this important work more satisfactorily. This is merely a suggestion, and the unanimous vote given at a Conference of Metropolitan Borough Councils held on February 7th, 1902, was in favour of the newly-formed Borough Councils rising to the occasion and doing the best for the public good, on the advice of their responsible Medical Advisers, and uninfluenced by popular feeling. The Borough Councils deserve to be allowed to try the experiment.

As far as the Lambeth Borough is concerned, the Guardians have worked in harmony with the Borough Council; but the fact remains that *all* preventive measures might, with advantage, from an efficient administrative point of view, rest with one responsible Authority, and that Authority the Borough Council, as the Sanitary Authority, with whom rest all preventive measures with the sole exception of vaccination.

Conscientious Objectors.

As far as Lambeth Borough is concerned, the conscientious objectors are practically non-existent, an annual average of 100 certificates having been granted since the introduction of the new Vaccination Act. Vaccination is, therefore, practically as much compulsory as ever. Consequently, the Lambeth Borough Council on March 6th, 1902, decided to take no action in connection with the suggestion of the Beckenham District Council (supported by the Wandsworth Borough Council) that "The Local Government Board be asked to take steps to repeal Section 2 of the Vaccination Act, 1898." This Act, which was brought in as a 5 years' experiment, will die a natural death next year (1903), unless re-enacted.

Re-vaccination of Workers in Lambeth.

To secure general re-vaccination of workers throughout the workplaces situated within the Borough, irrespective of the workers being residents of Lambeth, the Local Government Board was communicated with by the Medical Officer of Health, as also the Lambeth Board of Guardians, asking them to give instructions to their vaccinating officers to vaccinate and re-vaccinate all persons working in Lambeth workplaces, whether Lambeth residents or not. The Board of Guardians and the Local Government Board on Jan. 22nd, 1902, gave their consent to such a course, and it was arranged to pay fees in connection with all re-vaccinations of workpeople working in Lambeth Borough, irrespective of such workpeople's places of residence. Article 3 of the Local Government Board's Order to vaccinating officers, dated October 18th, 1898, is not very explicit on the point, and the action of the two Boards was most fortunate. In any case, it is a "give and take" arrangement as other Boroughs acted on the same lines, and what might have proved a serious hitch, not only in Lambeth Borough but throughout the Metropolis, was thereby avoided.

Vaccination states of School Board Children.

A letter was also received in October, 1901, from the Clerk of the London School Board, enclosing copy of the following resolution, dealing with the examination of School Board children as to their vaccination states—a resolution which was passed by the Board on September 23rd, 1901 :—

"That facilities be given to the Public Vaccination Officers of the Metropolis, on the application of the Proper Local Authority (*i.e.*, Borough Council) to enter the schools in infected areas for the purpose of examining the arms of the children with a view to advising the parents to allow their children to be vaccinated; providing that the School Board issues a circular to the parents of the children asking if they have any objection to this examination, and, in case of such objection in any particular case, that such examination shall not take place, and that the Local Government Board and the Public Vaccination Officers be informed accordingly."

Fortunately, no use had to be made in Lambeth of the School Board's offer, as the Smallpox did not invade any school or class. All children from infected houses, courts, etc., were rigorously excluded from school during the quarantine periods. As a point of interest, and as showing what a Sanitary Authority has to contend with, it may be mentioned that an anti-vaccination circular

was distributed broadcast throughout principally the Inner Districts of Lambeth Borough, advising parents not to allow their children to be inspected by the Public Vaccinators, nor to be "poisoned with filth taken from animals, which the Doctors call Vaccine, the evil effects of which they do not themselves understand, but to abolish the filthy practice (of vaccination) altogether."

THE LOCAL GOVERNMENT BOARD AND THE SMALLPOX EPIDEMIC IN LONDON.

At the commencement of the Metropolitan Smallpox epidemic, the Local Government Board wrote to the Lambeth Borough Council (and to the other Sanitary Authorities throughout London) drawing attention to the increase of Smallpox throughout the Metropolis, and suggesting energetic measures in the form of isolation of all cases, vaccination of all persons who have been exposed to infection, disinfection of premises, etc. Copies of the Board's memorandum dealing with steps specially requisite to be taken in places where Smallpox is prevalent were enclosed for distribution amongst the Sanitary Inspectors. Previous to the receipt of such communication from the Board, detailed instructions had been given, and all the machinery duly prepared, by the Lambeth Borough Council, for dealing with Smallpox cases as they arose in the Borough.

CONFERENCE OF METROPOLITAN CITIES AND BOROUGHS.

At the beginning of 1902, an important Conference of Metropolitan Sanitary Authorities was convened, on the initiative of the Metropolitan Borough of Holborn, and held on February 7th, 1902, in the Board Room of the Asylums Board Offices, Victoria Embankment—kindly lent for such a purpose. This Conference was considered necessary on account of the continued prevalence of Smallpox in the Metropolis, and with a view to suggesting further preventive measures (if any). Councillors H. J. Turner and Thwaite attended with the Medical Officer of Health as the appointed delegates of the Lambeth Borough Council—all the other Metropolitan Borough Councils (except Lewisham and Shoreditch), together with the London County Council, being represented. The Chair was taken by the Chairman of the Public Health Committee of the Metropolitan Borough of Holborn, and the Town Clerk of Holborn was appointed the Clerk of the Conference. The result of the Conference may be given in the following resolutions which were passed, such resolutions putting in concrete form the opinions arrived at by the majority of Metropolitan Sanitary Authorities as the result of experience gained in the epidemic, in so far as it had, at that date progressed:—

1. "That, in the opinion of the Conference, the powers and duties at present vested in Guardians of the Poor with regard to vaccination and re-vaccination, should be transferred to, and enforced by, Borough Councils."—[*Nem. Con.*]

2. "That, in the opinion of the Conference, an amendment of the law is necessary, to ensure compulsory vaccination and re-vaccination of all persons in a dwelling house wherein Smallpox has broken out."—[*For, 46; Against, 3.*]

3. "That, in the opinion of the Conference, it should be declared an offence, under the Public Health (London) Act, 1891, to refuse or withhold information, or give false information, with respect to persons living in a house in which Smallpox has broken out, with regard to (a) their names, (b) employment or occupation, (c) schools attended by their children, or (d) as to any persons not living in such house, but employed therein."—[*Unanimous.*]

4. "That, in the opinion of the Conference, all disinfections should be carried out by the Sanitary Authority."—[*Unanimous.*]

5. "That, in the opinion of the Conference, the provisions of the Public Health (London) Act, 1891, with regard to the prevention of infectious diseases, require amendment by (a) shortening the period of twenty-four hours, allowed by Section 60, for the master of a house to decide whether he will undertake the disinfection or allow the Sanitary Authority to do so—[*For, 23; Against, 12*]; and (b) extending the provisions of Section 64 to the taking of any house, or part of a house, by a person suffering from an infectious disease, or who has been exposed to infection."—[*Unanimous.*]

6. "That, in the opinion of the Conference, it is advisable that application be made to the Metropolitan Asylums Board to send out, to every Medical Officer of Health in London, *daily* lists of Smallpox cases only, with age and addresses of patients, as is done *weekly* in the case of all infectious diseases."—[*Unanimous.*]

7. "That the Conference approve the communication, addressed by the Town Clerk of the Royal Borough of Kensington, to the Local Government Board, requesting them to undertake the supply of lymph to any registered medical practitioner who may apply for the same, instead of to Public Vaccinators only."—[*Unanimous.*]

8. "That, in the opinion of this Conference, an amendment of the law is necessary to the effect that any person inhabiting any part of a house which has been infected by Smallpox, and who,

knowingly, associates with other persons without having his person and clothes cleansed and disinfected to the satisfaction of the Sanitary Authority, shall be liable to a fine not exceeding £20."—[*For, 26; Against, 16.*]

9. "That, in the opinion of this Conference, Borough Councils should be allowed to make provision for contacts for whom they may have no accommodation available in their shelters."—[*Unanimous.*]

In connection with Resolution 1, an amendment suggesting that the administration of the Vaccination Acts should be vested in a Central Authority, so as to secure uniform and consistent action, was lost by 26 to 16, and the resolution, as originally proposed, was afterwards put and carried *nemine contradicente*.

ORIGINS OF THE SMALLPOX CASES.

Each case of Smallpox, as it arose, was carefully investigated, and traced, where possible, to its source. It is interesting to note the following particulars as to sources of infection:—

1. Smallpox was introduced into the Borough from *outside* sources on 154 separate and distinct occasions, viz.:—Work-places outside 88, "contacts" with outside cases of Smallpox 48, tramps 9, Smallpox Hospitals (Long Reach) 7, infected articles (wearing apparel and carpets) 2. The *outside* sources are the City and other Metropolitan Boroughs (Stepney, Southwark, Holborn, City of Westminster, Wandsworth, Marylebone, St. Pancras, Battersea, Greenwich, and Camberwell), St. Albans, Raynes Park, Erith, Swanscombe, Maidstone, Chingford, Dartford, Tottenham, Hertford, Hendon, and Hoxton.
2. Smallpox was spread *within* the Borough itself on 202 separate and distinct occasions, viz.:—Work-places in Lambeth 27, "contacts" with notified Lambeth cases of Smallpox 108, modified Smallpox unrecognised and treated for some other disease 66, infected laundry 1.
3. In 49 cases (*i.e.*, 12.1 per cent.), the sources of contagium could not be satisfactorily traced.

Arising out of the above, the following remarks call for attention:—

1. The Metropolitan Asylums Board (as the Hospital Authority for London) has done much good work in connection with the removal to, and treatment in, Hospitals of notified

Smallpox patients, but the disease throughout London has undoubtedly been spread through workmen, who had not been previously protected by vaccination, being allowed to work on the Board's Hospitals Extension at Dartford, near to the existing Smallpox Hospitals, which were at the time occupied by Smallpox patients. In this way, and from this source, many cases of Smallpox have occurred throughout London and elsewhere (5 such workmen sickening in Lambeth Borough alone). The Borough Council's Medical Officer (and others) protested to the Board at the time against this preventable state of affairs being allowed to continue, with the result that it was eventually stopped, and only re-vaccinated men employed on dangerous works. Two cases of Smallpox occurred in Lambeth within 12-14 days of the return from the Smallpox Hospitals of two different patients, and may be causally connected therewith as return cases of Smallpox.

2. Workshops and work-places have proved common sources from which Smallpox has spread—88 cases being traced to work-places *outside* Lambeth and 27 to work-places *inside* Lambeth, making a total of 115 cases, *i.e.*, over a fourth of the whole number of cases notified.
3. "Contacts" account for 156 cases, 108 connected with patients suffering from Smallpox within the Borough, and 48 with patients outside the Borough.
4. The difficulties of diagnosing Smallpox in its protean modified forms have been dealt with elsewhere in the Report, and in this connection 65 cases have arisen from patients suffering from Smallpox but diagnosed as suffering from other diseases, *e.g.*, Chickenpox and Influenza.
5. The part that tramps or vagrants play in disseminating the disease, not only from one part of a district to another, or from one workhouse to another, but also from one town to another, is well known, and of the 404 cases in Lambeth, 9 were tramps who introduced the disease. The Lambeth Workhouses have been exceptionally free, on account of the adoption of the Borough Council's Medical Officer's suggestions, and the untiring energy displayed by the Guardians' own Medical Superintendent (Dr. Quarry) in practically carrying out such suggestions. On 8 separate occasions a Workhouse or Infirmary was infected, but in no single instance did the disease spread, on account of strict isolation by removal to Hospital, disinfection, and

medical inspection (together with re-vaccination of "contacts.") The staffs at the Workhouses and Infirmary were all re-vaccinated as required.

6. In four instances Common Lodging Houses in Lambeth Borough were infected, and in each case, by prompt isolation of the patient, followed by the disinfection of the infected bedroom (or cubicle) and the bedding, etc., the disease was arrested and its extension prevented. The inspected common lodging-house was in each case visited daily for a period of 16 days after removal of the patient and disinfection, and any case of illness amongst the inmates at once investigated medically. No closing of a common lodging-house nor compulsory keeping indoors of the inmates have been rendered necessary, daily enquiries on the premises being found to be all sufficient. The different Workhouses were advised whenever a common lodging-house became infected. Rowton House, in Vauxhall, was carefully watched during the outbreak, and in only 4 instances became infected (in each case the infection being limited to the notified infected person). The usual precautions were also taken in these cases, and in this connection it may be mentioned that the Manager courteously assisted at all times the Borough Officials. The comparative freedom of the Vauxhall Rowton House compared with other Rowton Houses in other Boroughs is cause for congratulation, more especially remembering the numbers of inmates and the natures of their occupations taking them all over London.
7. Tenemented blocks were infected on 20 separate occasions, but in no single instance did the disease spread from the particular tenements infected to neighbouring tenements. The usual precautions were taken.
8. 4 shops, 3 dining-rooms, and 6 public-houses were infected during the epidemic, but in no single instance did the disease spread. The usual precautions were taken, and in no case was the business interfered with.
9. Infected clothes and carpets appear to have caused the disease in Lambeth Borough in 3 instances—in 2 from outside districts (wearing apparel and carpets), and in 1 in Lambeth through the medium of washing underclothing infected from a case of Smallpox. Bearing in mind the *actual* danger that exists of Smallpox spreading through the sorting or washing of infected clothes, careful enquiries have been made in each notified case of Smallpox

in Lambeth as to the laundry or laundries in use, and all suspected, or possibly dangerous clothes, have been traced, taken to the Disinfecting Chamber, and disinfected with steam, and afterwards washed or re-washed. This part of the work has been extensive, on account of several large laundries suspected, and much extra trouble involved; but that this extra trouble was justified will be admitted from a comparison of the one case only in Lambeth that has been traced to infected clothes as compared with the large numbers of cases reported from other districts in this connection. Lambeth's experience of last year in connection with an outbreak of Typhoid Fever spread through infected mangles suggested special precautions being taken during the Smallpox epidemic in regard to laundries and infected clothes. A notice was sent to the occupiers of each infected house prohibiting the sending of infected clothes to the Public Wash-houses.

10. The small percentage (12.1) of cases, the sources of which are not satisfactorily accounted for, is cause for congratulation, and may be regarded as some indication of the care displayed in investigating the different origins of the disease. Upon the care with which such investigations are carried out depends much of the success of dealing with Smallpox outbreaks.

LESSONS TO BE LEARNT FROM THE EPIDEMIC.

1. *Conditions which have favoured the extension or continuance of the Smallpox Epidemic in Lambeth Borough.*
 - (a). Dropping cases of Smallpox being continually introduced from *outside* infected districts.
 - (b). Difficulties in diagnosing cases of modified Smallpox.
 - (c). Workmen allowed to work, by the Metropolitan Asylums Boards' contractors, near to Smallpox hospitals (outside London), without previous re-vaccination; and also workmen allowed to strip the walls of infected rooms (in other districts) without being previously re-vaccinated.
 - (d). Antipathy to, or neglect of, vaccination and re-vaccination, due to thoughtlessness, or to the promptings of others.

2. *Conditions which have tended to check the extension or continuance of the Smallpox Epidemic in Lambeth Borough.*
 - (a). Prompt notification of Smallpox and all doubtful cases.
 - (b). Daily inter-communication amongst Metropolitan (and other) Medical Officers of Health of all information connected with Smallpox cases and "contacts," and the daily issuing by the Metropolitan Asylums Board or returns of patients discharged or dead, visitors to Hospitals, etc.
 - (c). Strict isolation in Hospital of *all* cases.
 - (d). Careful disinfection (with fumigation and spraying), not only of infected rooms, but also of the other rooms and passages and staircases of infected houses, together with stripping off of wall papers of infected rooms by the Borough Council's own men (previously re-vaccinated), etc.
 - (e). Quarantining of all persons in infected houses and districts for 14-16 days, together with the medical inspection of all cases of suspicious illness amongst such quarantines, *e.g.*, absentees from work-places or schools, etc.

- (f). Vaccination and re-vaccination, which have been carried out in large numbers throughout the Borough, including the re-vaccination of the Sanitary Staff of the Borough Council.
- (g). Sending lists of infected houses to all schools, libraries, public wash-houses, etc.; the preventing of infected clothes going to the public wash-houses; and the collecting and destroying of all Library books found in infected houses (36 books dealt with).

The lessons to be learnt from the epidemic in regard to Lambeth are, from the vaccination point of view, the same *pro ratâ* as those to be learnt from the epidemic throughout London as a whole. An unbiassed mind must admit that vaccination and re-vaccination recently and efficiently performed are absolute preventatives against an attack of Smallpox, and that vaccination and re-vaccination (even though performed many years back) tend to modify and render harmless the disease, which, in the case of persons unprotected by such means, generally runs a most loathsome and serious course. It is only too apparent that, despite the large amount of vaccination and re-vaccination that have taken place in Lambeth and elsewhere during the epidemic, the epidemic has had to be combatted by other means, which may be tabulated as—

- (1) Exact notification.
- (2) Prompt isolation.
- (3) Efficient disinfection.
- (4) Careful quarantine and medical inspection of all "contacts" or "suspects."

Vaccination and re-vaccination have, unfortunately, not been able to play the part that one could have wished, owing to the pronounced apathy amongst the people in that respect. It is to be feared that Lambeth, and other places, will have to depend upon means of prevention other than vaccination in battling with a Smallpox outbreak in future.

CONCLUSION.

Whilst, as your Medical Officer and as head of the Sanitary Department, I am responsible for the measures that have been taken in dealing with the Smallpox epidemic, I feel that special mention should be made of the loyal support that I have received at all times from the Sanitary Staff, individually and collectively.

The inspectors, the disinfecting men, and the sanitary clerks have worked splendidly, and to them is due the credit of having stamped out the Smallpox epidemic in Lambeth Borough, which, though the second largest Metropolitan District, will be found to have suffered *pro rata* less than any other.

My thanks are due to (1) the Metropolitan Asylums Board, whose officers have promptly removed and treated all Lambeth Smallpox patients notified to them; (2) the Lambeth Guardians, who have carried out my suggestions as to isolation or quarantine wards being provided, and have assisted me in every other possible way through their officials—Dr. Quarry (and his staff), in connection with the Workhouse, and the Vaccination Officers, Messrs. Brooks and Warren, who have been indefatigable in hunting up "contacts" and others for vaccination and re-vaccination; (3) the Medical Practitioners practising throughout Lambeth Borough, who have promptly notified to the Medical Officer of Health all Smallpox and doubtful cases.

Last, but not least, the highest praise is due to the Lambeth Borough Council, and more especially to the Sewers and Sanitary Committee, who have given me a free hand and adopted all my suggestions in dealing with the epidemic, with the result that the epidemic in Lambeth has been stamped out with the small number of 404 patients out of a population of over 300,000, and with a proportionately large saving to the ratepayers, who, had the epidemic been allowed to progress, and not been arrested by the stringent and energetic measures taken by the Lambeth Borough Council's officers, would have been put to a very serious and large expenditure, not to mention disorganization of trade, etc.

Under such conditions, my own work as Medical Officer, though throughout arduous and anxious, has been a pleasure.

JOSEPH PRIESTLEY,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
September, 1902.

TABLE III.

London: Small-pox Deaths in each Quarters, 1856-1902.

Years.	First.	Second.	Third.	Fourth.	TOTAL.
1856	194	146	108	74	522
1857	60	27	41	26	154
1858	41	34	54	118	247
1859	201	253	278	435	1156
1860	464	240	99	74	877
1861	73	52	44	46	215
1862	37	39	77	192	345
1863	422	788	512	290	2012
1864	161	116	145	120	537
1865	194	149	147	156	646
1866	245	396	390	357	1388
1867	526	387	232	187	1332
1868	280	187	70	69	606
1869	69	55	62	87	273
1870	99	118	157	584	958
1871	2400	3241	1255	980	7876
1872	831	582	237	131	1781
1873	46	37	15	17	115
1874	24	10	10	12	56
1875	37	17	15	6	75
1876	7	26	110	592	735
1877	1152	828	252	272	2544
1878	556	618	133	109	1416
1879	221	140	63	34	458
1880	122	144	49	160	475
1881	617	1018	461	275	2371
1882	212	128	53	38	431
1883	52	27	23	32	134
1884	60	293	196	364	913
1885	382	420	84	13	899
1886	9	12	2	1	26
1887	2	3	1	3	9
1888	4	1	2	2	9
1889	—	—	—	1	1
1890	1	2	1	—	4
1891	3	4	1	—	8
1892	7	24	6	4	41
1893	38	100	49	19	206
1894	7	34	43	5	89
1895	10	3	31	11	55
1896	5	3	1	—	9
1897	12	2	2	—	16
1898	—	—	—	1	1
1899	—	1	1	1	3
1900	1	2	—	1	4
1901	—	2	35	192	229
1902	734	506	73	1	1314

TABLE IV.

Shewing Total Number of London and Lambeth Smallpox Patients removed to the Asylums Board Hospitals since 1885 (the year when Smallpox patients were first removed out of London for isolation.

	LONDON.			LAMBETH.		
	Total cases notified.	Cases removed.	Deaths.	Total cases notified.	Cases removed.	Deaths.
1885	—	614	899	509	418	85
1886	—	99	26	7	7	3
1887	—	56	9	1	—	1
1888	—	62	9	1	1	—
1889	—	5	—	1	—	1
1890	61	22	4	15	8	—
1891	115	63	8	3	2	—
1892	423	325	41	22	19	1
1893	2814	2376	206	99	86	5
1894	1192	1117	89	26	18	1
1895	979	941	55	51	43	2
1896	225	190	9	16	14	2
1897	105	70	16	2	1	—
1898	35	5	1	—	—	—
1899	28	18	3	1	—	—
1890	89	66	4	—	—	—
1901	1702	1739	229	54	54	4
1902	7797	8332	1314	350	350*	60

* 2 patients died of malignant Smallpox before the arrival of the ambulances. The dead bodies were at once removed to Wanless Road Mortuary, and after disinfection buried from there.

TABLE V.

Cases notified as Smallpox in the Metropolitan Cities and Boroughs during 1901 and 1902; and sickness-rates for each year. The figures for each quarter, have been taken from the Quarterly Reports of the Registrar-General.

	1901.						1902.						1901-1902.	
	Quarters.				Year.	Rate.*	Quarters.				Year.	Rate.*	Total Cases.	Rate* mean.
	1	2	3	4			1	2	3	4				
WEST—														
Paddington	—	—	4	17	21	0·14	62	45	6	—	113	0·77	134	0·45
Kensington	1	—	4	10	15	0·08	43	47	9	—	99	0·55	114	0·32
Hammersmith	—	—	4	41	45	0·39	61	27	8	4	100	0·87	146	0·63
Fulham	1	—	—	15	16	0·11	54	31	6	3	94	0·66	110	0·38
Chelsea	—	—	2	3	5	0·06	20	18	1	—	39	0·52	44	0·29
Westminster	—	—	9	91	100	0·54	174	56	2	—	232	1·28	332	0·91
Totals	2	—	23	177	202	0·24	414	224	32	7	677	0·81	879	0·52
NORTH—														
St. Marylebone	—	2	41	36	79	0·59	111	39	3	1	154	1·16	233	0·87
Hampstead	1	—	3	3	7	0·08	10	10	—	—	20	0·23	27	0·15
St. Pancras	1	1	101	153	256	1·08	227	118	15	—	360	1·52	616	1·30
Islington	—	1	13	48	62	0·18	137	141	16	8	302	0·88	361	0·53
Stock Newington	—	—	7	12	19	0·36	38	11	2	—	51	0·98	71	0·67
Hackney	—	1	18	22	41	0·18	196	221	3	5	425	1·91	466	1·04
Totals	2	5	183	274	464	0·43	719	540	39	14	1312	1·23	1776	0·83
CENTRAL—														
Holborn	—	—	18	198	216	3·64	186	29	3	1	219	3·74	435	3·69
Finsbury	—	—	14	79	93	0·91	131	31	46	3	211	2·09	304	1·50
City of London	—	—	2	6	8	0·30	19	11	9	—	39	1·52	47	0·91
Totals	—	—	34	283	317	1·69	336	71	58	4	469	2·54	786	2·11
EAST—														
Shoreditch	—	—	2	16	18	0·15	313	118	7	4	442	3·74	460	1·94
Bethnal Green	—	1	3	28	32	0·24	276	199	39	1	515	3·96	547	2·10
Stepney	1	1	4	155	161	0·53	929	417	38	3	1387	4·61	1549	2·57
Poplar	1	—	2	68	71	0·42	332	282	15	1	630	3·71	700	2·06
Totals	2	2	11	267	282	0·39	1850	1016	99	9	2974	4·14	3256	2·26
SOUTH—														
Southwark	—	—	7	82	89	0·43	251	260	7	—	518	2·50	607	1·46
Bermondsey	—	—	—	107	107	0·81	101	107	15	1	224	1·72	331	1·26
Lambeth	—	—	3	48	51	0·16	189	151	23	—	363	1·18	414	0·67
Battersea	—	—	—	53	53	0·31	99	66	23	1	189	1·10	242	0·71
Wandsworth	1	—	8	23	32	0·13	70	54	7	—	131	0·54	163	0·33
Camberwell	—	—	—	54	54	0·20	147	190	17	2	356	1·35	410	0·77
Deptford	—	—	—	4	4	0·03	71	62	10	2	145	1·29	149	0·66
Greenwich	—	—	—	11	11	0·11	58	34	9	1	102	1·03	112	0·57
Lewisham	—	—	2	10	12	0·09	50	33	5	—	88	0·66	100	0·37
Woolwich	—	—	1	22	23	0·19	111	116	7	2	236	1·97	259	1·08
Totals	1	—	21	414	436	0·24	1147	1073	123	9	2352	1·32	2787	0·78
LONDON †	7	7	272	1415	1701	0·37	4466	2224	351	43	7784	1·69	9484	1·08

* Annual rates per 1,000 of estimated population.

† One case reported to the Port Sanitary Authority in 1901 and 14 in 1902 age not included in these totals.

TABLE VI.

Deaths from Small pox in the Metropolitan Cities and Boroughs during 1901 and 1902; and Death-rates for each year. Hospital Cases distributed. The figures for each quarter, except those for the fourth quarter of 1902, have been taken from the Quarterly Reports of the Registrar-General.

	1901.						1902.						1901-1902.	
	Quarters.				Year.	Rate.*	Quarters.				Year.	Rate.*	Total Deaths.	Rate* (mean).
	1	2	3	4			1	2	3	4				
WEST—														
Paddington	—	—	—	—	—	—	9	11	—	—	20	0·13	20	0·06
Kensington	—	—	—	1	1	0·01	6	5	—	—	11	0·06	12	0·03
Hammersmith	—	—	2	13	15	0·13	8	—	5	—	13	0·11	28	0·12
Fulham	—	—	—	3	3	0·02	8	4	1	—	13	0·09	16	0·05
Chelsea	—	—	—	1	1	0·01	1	5	1	—	7	0·09	8	0·05
Westminster	—	—	1	15	16	0·09	33	6	—	—	39	0·21	55	0·15
Totals	—	—	3	33	36	0·04	65	31	7	—	103	0·12	139	0·08
North—														
St. Marylebone	—	1	4	2	7	0·05	17	7	—	—	24	0·18	31	0·11
Hampstead	—	—	1	1	2	0·02	2	1	—	—	3	0·03	5	0·02
St. Pancras	—	—	20	21	41	0·17	41	31	9	—	81	0·34	122	0·25
Islington	—	—	2	6	8	0·02	17	30	7	—	54	0·16	62	0·09
Stoke Newington	—	—	1	2	3	0·06	5	3	—	—	8	0·15	11	0·10
Hackney	—	—	1	4	5	0·02	25	44	1	—	70	0·31	75	0·16
Totals	—	1	29	36	66	0·06	107	116	17	—	240	0·22	306	0·14
CENTRAL—														
Holborn	—	—	1	29	30	0·51	43	3	—	—	46	0·78	76	0·64
Finsbury	—	—	—	7	7	0·07	26	1	9	—	36	0·35	43	0·21
City of London	—	—	—	2	2	0·08	3	4	—	—	7	0·27	9	0·17
Totals	—	—	1	38	39	0·21	72	8	9	—	89	0·48	128	0·34
EAST—														
Shoreditch	—	—	—	5	5	0·04	61	14	1	—	76	0·64	81	0·34
Bethnal Green	—	1	—	1	2	0·02	33	27	4	—	64	0·49	66	0·25
Stepney	—	—	—	22	22	0·07	172	77	11	—	260	0·86	282	0·46
Poplar	—	—	—	10	10	0·06	50	40	3	—	93	0·54	103	0·30
Totals	—	1	—	38	39	0·06	316	158	19	—	493	0·63	532	0·37
SOUTH—														
Southwark	—	—	1	13	14	0·07	39	36	3	—	78	0·37	92	0·22
Bermondsey	—	—	—	14	14	0·11	7	22	2	—	31	0·23	45	0·17
Lambeth	—	—	1	3	4	0·01	35	23	2	—	60	0·19	64	0·10
Battersea	—	—	—	2	2	0·01	14	11	2	—	27	0·15	29	0·08
Wandsworth	—	—	—	3	3	0·01	16	7	2	—	25	0·10	28	0·05
Camberwell	—	—	—	7	7	0·03	17	42	3	1	63	0·23	70	0·13
Deptford	—	—	—	1	1	0·01	18	15	—	—	33	0·29	34	0·15
Greenwich	—	—	—	3	3	0·03	9	12	1	—	22	0·22	25	0·12
Lewisham	—	—	—	—	—	—	5	3	4	—	12	0·09	12	0·04
Woolwich	—	—	—	1	1	0·01	14	22	2	—	38	0·31	39	0·16
Totals	—	—	2	47	49	0·03	174	193	21	1	389	0·21	438	0·12
LONDON DEATHS	—	2	35	192	229	0·05	734	506	73	1	1314	0·28	1543	0·16
Do. Death-rates*	—	0·00	0·03	0·17	0·05	—	0·64	0·44	0·06	0·00	0·28	—	—	—

* Annual Rates per 1,000 of estimated population.

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Underground Bakehouses.

(*Special Report by the Medical Officer of Health*).

The new Factory and Workshop Act, 1901, which was passed on August 17th, 1901, and came into force on January 1st, 1902, lays down new and important conditions in respect of Underground Bakehouses, in London and elsewhere. The Section bearing upon this subject is 101, of which the first four Sub-sections are as follow:—

- (1). An Underground Bakehouse shall not be used as a Bakehouse unless it was so used at the passing of this Act [*i.e.*, the Factory and Workshop Act, 1901—August 17th, 1901].
- (2). Subject to the foregoing provision, after the 1st day of January, 1904, an Underground Bakehouse shall not be used unless certified by the District Council [*i.e.*, the Lambeth Borough Council, as far as Lambeth Borough is concerned] to be “suitable” for that purpose.
- (3). For the purpose of this Section, an Underground Bakehouse shall mean a bakehouse,* any baking-room of which is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room. The expression “baking-room” means any room used for baking, or for any process incidental thereto.
- (4). An Underground Bakehouse shall not be certified as “suitable” unless the District Council is satisfied that it is suitable as regards construction, light, ventilation, and in all other respects.

The rest of the Section states that, in the event of a District Council refusing a certificate, the occupier of the Underground Bakehouse may, within 21 days from the refusal, by complaint, apply to a Court of Summary Jurisdiction; and if it appear to the satisfaction of such Court that the Underground Bakehouse is suitable for use as regards construction, light, ventilation and in all other respects, the Court shall grant the necessary Certificate of suitability, and such certificate shall have effect as if granted by the District Council.

A Bakehouse, by Section 141 of the Public Health (London) Act, 1891, is any place in which are baked bread, biscuits, or confectionery, from the baking or selling of which a profit is derived.

Further, if structural alterations are required before the Certificate can be granted, and the occupier alleges that the whole, or part, of the expenses of such alterations ought to be borne by the owner, he (*i.e.*, the occupier) may, by complaint, apply to a Court of Summary Jurisdiction, and the expenses connected with such structural alterations may be apportioned by the Court in any way that the Court may think just and equitable, regard being had to the terms of any contract between the occupier and owner; or the Court may, at the request of the occupier, determine the lease. Such an arrangement appeals to common sense, as it would be unfair to saddle an occupier with the whole of the expenses of any structural alterations which might be found necessary and which would improve an owner's property, before a certificate of suitability could be granted.

It would appear from the working of Section 101 of the new Factory and Workshop Act, 1901, that the Legislature intends that all Underground Bakehouses that are not suitable for use as regards construction, light, ventilation, and *in all other respects*, shall be closed after January 1st, 1904, unless previously altered and improved so as to be certified as sanitarily suitable by a District Council; whilst Underground Bakehouses that were not in use (*i.e.*, were abandoned) on August 17th, 1901, shall never again be used as such. Many Underground Bakehouses have already been permanently closed as such by virtue of Section 27 (Sub-section 3) of the Factory and Workshop Act, 1895, which made it unlawful to use any place underground as a Bakehouse, unless it was so used, temporarily or otherwise, on January 1st, 1896. [*Vide* Schwertzerhof v. Wilkins, 1898, 1 Q.B. 640, where it was held that, under the 1895 Act, an Underground Bakehouse, temporarily unoccupied but not abandoned, was used as a Bakehouse at the commencement of such Act.] It is, consequently, illegal to build, or open as new, an Underground Bakehouse.

Section 27 of the 1895 Act, and Section 101 of the 1901 Act, clearly point to the final disuse, after January 1st, 1904, of *all* Underground Bakehouses, except such as can be, and are, certified by a District Council as suitable in construction, light, ventilation, and in all other respects.

It becomes, therefore, a serious matter to decide what standard of suitability shall be adopted so as to secure (if possible), on the one hand, sanitary Underground Bakehouses, wherein the employees can work underground without, or with a minimum amount of, injury to their healths, and wherein food can be pre-

pared without danger to the public health ; and to ensure, on the other hand, a minimum amount of injustice (if any at all) being done to the occupiers, and owners, of such Bakehouses. In proportion as a Bakehouse is underground, the difficulties, both structural and administrative, in securing therein proper ventilation, lighting, cleanliness, and freedom from nuisance, increase, so that the subject requires careful consideration. Structural alterations and amendments will have to be suggested and carried out, and it is clear that, in justice to the Trade, such suggestions must be of a practical nature, and must have reference to permanency, as the certificate once given is for all time, and will be of the nature of a permanent guarantee of the suitability of the particular Underground Bakehouse certified. It must be borne in mind that with such certificate, the occupier (and owner) of a certified Underground Bakehouse will be able to, metaphorically, "snap the fingers" at the Sanitary Authority, in whose district the particular bakehouse happens to be situated. It is to be regretted that the Act does not provide for such certificates being renewable at stated intervals.

Some sort of uniformity of action amongst Sanitary Authorities throughout the Country is highly desirable, though, on the other hand, a standard adopted in one district would not necessarily, in every respect, suit another. In the same way, a series of requirements drawn up by one Authority ought not to be assumed to be binding upon another Authority. Different Authorities may regard their statutory duties from different standpoints, and even Medical Officers of Health vary somewhat as to what they consider a fair sanitary standard. A sanitarily progressive town (*e.g.*, Manchester, Glasgow or Liverpool) ought not to be bound by a standard which might be adopted by less progressive places. Local conditions and local methods of administration must count for something, and local standards must be fixed. In other words, it will, in practice, be found that each Authority will have to act for itself, and its Underground Bakehouses be considered, and dealt with, on their individual merits.

There are, however, certain requirements common to *all* Underground Bakehouses, whether situated in the County of London or elsewhere,—requirements about which there can be no difference of opinion. These may be called "General Requirements," and should, in my opinion, be adopted by all Sanitary Authorities.

There are, in addition, other Requirements which may be called "Special," having reference to important structural alterations and amendments. These "Special Requirements" will naturally vary with different Underground Bakehouses, and can

only be dealt with locally by means of a separate specification in each individual case, such specification to be drawn up after an inspection and examination personally by the Medical Officer of Health. In regard to these "Special Requirements," a local standard of suitability must be adopted in each individual district by the Sanitary Authority concerned, and each Underground Bakehouse be treated on its merits.

With these preliminary remarks to show the important statutory duty devolving upon a Sanitary Authority in respect of Underground Bakehouses, I now propose to consider the matter from the point of view of Lambeth Borough, where there are 90* Underground Bakehouses, varying considerably, in their present conditions, as to suitability.

I have carefully considered the subject from the point of view of suggesting a local "Lambeth Standard," which may, in fairness to the Trade, and without prejudice to the health of the employees or to the Public Health, be adopted by the Lambeth Borough Council. To enable this to be done, I have myself personally visited, and carefully examined, the Underground Bakehouses situated within the Borough, and have tabulated the requirements in each individual case—requirements that, in my opinion, are absolutely necessary to be carried out before the Council would be justified in granting certificates, when applied for.

Dealing with the large number of 90 Underground Bakehouses, it will be readily conceded that many different and varied requirements will be needed, varying from slight and inexpensive alterations to serious and expensive ones. Let it be at once stated that the "General Requirements" mentioned below should be carried out, throughout the Borough of Lambeth, as may be found necessary, *i.e.*, where such have not been already carried out, wholly or in part. No general statement of "Special Requirements" which shall be applicable to *all* the Underground Bakehouses in Lambeth, is practicable. I have, therefore, carefully tabulated a specification for each individual Underground Bakehouse, and am prepared to give full details to any occupier or owner of any particular Underground Bakehouse as may be asked for. These "Special Requirements" should also be carried out, throughout the Borough, as may be found necessary.

It is unnecessary to lay before the Council in detail the "Special Requirements" which I have settled as, in my opinion, necessary in each individual case; but it may be stated in con-

* Sub-divided into Wards as follows:—Marsh 13, Bishop 16, Prince's 7, Vauxhall 6, Stockwell 11, Brixton 9, Herne Hill 9, Tulse Hill 10, Norwood 9.

nection therewith that such "Special Requirements" are entirely structural alterations, and have reference to necessary improvements dealing with (1) Ventilation, (2) Areas, (3) Means of Access to Bakehouse, and (4) Exclusion from the Bakehouse of foul air, dust, and dirt.

There is naturally much work and responsibility involved for your Medical Officer as your adviser, but from what I have seen in going round the Bakehouses, there ought to be little or no insurmountable opposition from the Trade, if only your Medical Officer receives, from the Committee and the Council, in respect of this matter of Underground Bakehouses, the same confidence and support which have been so readily given in all other matters.

The Council will have to certify in each case, but such certificate, in my opinion, should only be given by the Council after receiving a report from the Medical Officer of Health that such Underground Bakehouse is suitable as regards construction, light, ventilation, and in *all other respects*. Should a case arise in which the occupier (owner) refuses to carry out any of the Requirements (General or Special), suggested by your Medical Officer, or should it be necessary or advisable, on account of exceptional circumstances, to waive one or more of such requirements, wholly or in part, the matter might be discussed specially by the Public Health Committee, as a sort of Appeal Court, such Committee's decision to be final.

It may be mentioned that, with but few exceptions, and after certain alterations and improvements have been carried out to the satisfaction of the Council or of the Medical Officer, I shall be prepared to advise the Council to give certificates in respect of all the 90 Lambeth Underground Bakehouses. This condition of affairs should satisfy the Trade, who appear to think that all Underground Bakehouses are to be unconditionally closed after January 1st, 1904, whereas, in Lambeth at least, such Bakehouses, with few exceptions, will be allowed to remain, conditionally to certain requirements (set out as Suggested Requirements at the end of this Report) being satisfactorily fulfilled.

In no single instance can a certificate be given at once, *i.e.*, not until certain alterations have been previously carried out, but on the other hand, as already stated, with but few exceptions, all the Lambeth Underground Bakehouses can, in my opinion, be certified after certain specified requirements have been fulfilled.

In conclusion, I am satisfied, after carefully considering the subject and after personally inspecting all the Underground Bake-

houses situated within the Borough of Lambeth, that the method suggested in this Report is the most equitable one under the circumstances. It is important not to injure unjustly an established Trade, but, at the same time, due consideration must be given to the evident desire and instructions of the Legislature, as laid down in Factory and Workshop Acts, so as to secure such Underground Bakehouses as are at present, or will be after January 1st, 1904, in use, being sanitarily suitable, not only in construction, light, and ventilation, but also in *all other respects*. In this way, the health of the employees working in Underground Bakehouses will be safeguarded, as also that of the public who consume the bread and other articles that are made within such Underground Workrooms.

Once a Certificate is given, the particular Underground Bakehouse certified becomes suitable for all time, and its life is thereby prolonged indefinitely, except in so far as general statutory requirements applicable to (1) all Bakehouses (and mentioned in Sections 99-100 of the Factory and Workshop Act, 1901), and (2) Metropolitan Bakehouses (and mentioned in Sections 2 and 26 of the Public Health Act, 1891), are concerned. Bearing this fact in mind, I suggest the following form of application being used in all cases:—

UNDERGROUND BAKEHOUSES.

As required by Section 101 of the Factory and Workshop Act, 1901, I herewith beg to apply for a certificate in connection with the Underground Bakehouse, of which I am

{	owner	situated at
{	occupier	

I also hereby agree, on the receipt of such certificate, to see that all statutory requirements and administrative conditions mentioned in the various Acts are complied with, and that the Bakehouse itself is kept, at all times, whilst in use as a Bakehouse, in the same (or like) structural repair as it is at the time of the Certificate being granted.

Signed.....

Occupier or Owner.

Dated this *day of* *190* .

SUGGESTED REQUIREMENTS FOR UNDERGROUND BAKEHOUSES, SITUATED WITHIN THE BOROUGH OF LAMBETH.

The Requirements are Classified as—

- I. General (applicable to *all* Bakehouses in Lambeth Borough and elsewhere);
- II. Special (applicable to Lambeth Bakehouses).

I. GENERAL REQUIREMENTS.

(A). CONSTRUCTION.

- (1) Cubic capacity: A minimum of 1,500 cubic feet to be provided.
- (2) Height: A minimum of 7 ft. throughout, measured from the floor to the ceiling, to be provided (such height to be increased where the floor space exceeds 150 square feet).
- (3) Walls: To be rendered smooth, even, and impervious throughout, *e.g.*, with (*a*) suitable cement, (*b*) glazed bricks or tiles, or (*c*) other equally efficient material.

[Tiles are best for the portions of the wall or walls immediately adjacent to the ovens, cement being liable to crack or flake with the heat.]
- (4) Flooring: To be made of a smooth, even, and impervious material throughout, *e.g.*, with (*a*) a minimum of 4ins. of cement concrete (floated over smooth with cement), (*b*) tiles (or flags) on solid foundation and embedded in cement, or (*c*) some other equally efficient impervious paving.
- (5) Ceilings: To be properly ceiled with smooth, even, and impervious material, *e.g.*, with (*a*) granite plaster, (*b*) parian cement, (*c*) well-fitting match-boarding properly painted or varnished, or (*d*) some other equally efficient material.
- (6) Drains: To be constructed of gas- and water-tight pipes and joints when situated under the Bakehouse, and no gully to be within the Bakehouse, unless the drain connected therewith be made to discharge over, or into, a trapped gully outside.
- (7) Sinks: To be situated, as far as possible, outside the Bakehouse, and all sink-waste pipes to be undertrapped.

- (8) Water Supply: A tap or taps to be provided direct from the rising main for the supply of drinking water.

(B) LIGHT.

- (1) Windows: To be provided of a size (exclusive of sash-frames) in total area not less than one-tenth of the floor space, extending, as far as possible, above the level of the adjoining ground, and opening into (a) the external air, or (b) partly into the external air, and partly into an area, which is to be lined with white tiles or white glazed bricks, or fitted with suitable reflectors (or prisms), or rendered in cement and periodically lime-washed, so as to admit daylight to every part of the Bakehouse.
- (2) Artificial Lighting: Some form of incandescent light, or electric light, to be used, as far as practicable, instead of ordinary gas.

(C). VENTILATION.

- (1) Windows: To be constructed, where used for ventilating, so as to open (wholly or in part) inwards towards the Bakehouse, by means of hinges on the bottom (or other) rails, such openings to be provided with side dust-boards (or wings) so as to allow of fresh air entering in an upward direction (*i.e.*, without draught), and the hanging rails to be situated at such a height above the ground level (*e.g.*, *minimum 12 inches*) as to prevent the entrance, as far as possible, into the Bakehouse of street dust and dirt through such openings.

(D). ALL OTHER RESPECTS.

- (1) Troughs and other Furniture: To be fitted on strong castors (or wheels), or in some other equally efficient way, so as to be readily movable for cleansing purposes.
- (2) Receptacles for Refuse: To be provided for the storage of all refuse matters, and to be (a) properly covered, (b) of small size, and (c) emptied at least once in every 24 hours.
- (3) Flour Store: To be provided in a suitable room, elsewhere than in the Underground Bakehouse itself, except where the Underground Bakehouse has a large cubic capacity so that a portion of such Bakehouse can be divided, and partitioned, off for use as such.
- (4) General Statutory Requirements: To be carried out at all times.

II. SPECIAL REQUIREMENTS.

These "Special Requirements" are in addition to the "General Requirements" already mentioned, and are best given in the form of a separate specification for each individual Bakehouse situated within the Borough of Lambeth—such specifications having been drawn up after careful inspection and examination in each case. In drawing up these "Special Requirements," the following important sanitary considerations have been kept in view, and, where practicable, adhered to:—

(A). VENTILATION.

This is the greatest difficulty to be dealt with in connection with Underground Bakehouses, of which the positions naturally render any ventilation scheme extremely difficult to carry out successfully in practice. The ventilation must be efficient and carried out so as not only to admit fresh air, but also to prevent, as far as possible, the entrance into the Bakehouses of street dust and dirt, which may cause injury to health amongst not only the employees, but also the people eating the bread, confectionery, etc., made therein. When the means of ventilating by windows, mentioned amongst "General Requirements," is insufficient and requires supplementing, provision must be made for permanent outlets and inlets (other than the window or windows), communicating with the external air, and the latter (inlets) at a sufficient height above the street, or ground, level, to ensure the introduction into the Bakehouse of clean air. Thus an inlet, or inlets may be provided (*e.g.*, in the form of an inverted Tobin, Sherringham's valve communicating with an air-brick, stallboard grating, or otherwise)—the furnace (oven) flue acting as the outlet; or where no oven exists, or the extraction power of the furnace flue is insufficient, or unavailable, both outlets and inlets may, in some cases, become necessary, the former (outlets) placed over the oven so as to ensure ready extraction of foul air by the heat, and the latter (inlets) so situated that the entering air is taken from a pure and uncontaminated source (*e.g.*, mouth of inlet to be not less than 4 feet above level of ground). In all cases the air must enter without draught, and, in some cases, to ensure this, the air may be required to be warmed previous to entering the Bakehouse.

Finally, arrangements may have to be made to supplement, as may be found necessary, ineffective or insufficient natural ventilation by artificial or mechanical ventilation (*e.g.*, fans, etc.), though this latter method will not be found necessary, or advisable, except in very few instances.

(B). AREAS.

Lighting and ventilation become easier where areas are provided. Existing box areas may have to be enlarged, or new ones provided as may be necessary, whilst all such box areas ought to be lined with white tiles or bricks, or fitted with reflectors or prismatic lights, and other areas, which extend down to the level of the Bakehouse floor, to be periodically lime-washed. All box areas should be closed at the top by means of prismatic pavement lights. At present, open gratings are provided, which render such box areas simply catch-pits and receptacles for street dust, dirt, and other filth, which sooner or later find their way into the Bakehouses themselves. Such a condition of things must be prohibited.

(C). MEANS OF ACCESS TO BAKEHOUSE.

Suitable and safe means of access to an Underground Bakehouse (other than by ladders) must be provided in the form of convenient, well-lighted stairs, with external entrance if practicable—entrances by trap-door from the shop being in all cases prohibited.

(D). EXCLUSION OF FOUL AIR, DUST AND DIRT.

The importance of this condition cannot be over-estimated from a point of view of health, and has been dealt with already under various headings. In this connection, it may be added that there should be no direct communication between the Bakehouse and any coal or other cellar, room, unpaved yard, area, etc., which may be a nuisance, or cause contamination by the entrance of foul air, dust or dirt into the Bakehouse. Under this heading, too, it is clear that Underground Bakehouses subject to flooding from drains or sewers must, on no account, be certified, until such tendency to flooding has been remedied.

J. PRIESTLEY, M.D.,

Medical Officer of Health.

October, 1902.

Manchester Sanitary Congress.

(*Special Report by the Medical Officer of Health*).

Presented to the Council on Oct. 30th, 1902.

To the Mayor, Aldermen and Councillors of the
Borough of Lambeth.

GENTLEMEN,

As your appointed delegates, we attended the Nineteenth Congress of the Sanitary Institute, which was held at Manchester under the Presidency of the Right Hon. Earl Egerton of Tatton, from September 9th to 13th. Over 2,000 delegates were present, representing learned Societies and Sanitary Authorities, whilst the French Republic was represented by Professors Nocard and Martin.

The Congress was divided into three Sections, viz. :—

1. Sanitary Science and Preventive Medicine.
2. Engineering and Architecture.
3. Physics, Chemistry and Biology.

In addition, several Conferences were held amongst (1) Medical Officers of Health, (2) Municipal Representatives, (3) Sanitary Inspectors, (4) Engineers, (5) Ladies interested in Domestic Hygiene, (6) Persons interested in the Hygiene of School Life, (7) Veterinary Inspectors, and (8) Port Sanitary Authorities.

It was impossible to attend all the meetings, and we therefore decided to put in an appearance at the most important ones, which dealt with the chief Sanitary problems of the day.

Many and various were the subjects brought forward and discussed, and amongst these may be mentioned the following :—

(a). *The Dust Problem and Smoke Prevention.*

The importance of dust as a factor in the causation of ill-health and actual disease was emphasised, and its power of travelling was brought clearly before the members of the Congress, when it was stated that the large amount of dust belched forth from La Souffrière and Mont Pélée was being probably added at the time of the Congress to the smoke of Manchester. Dust must be collected and removed, and that led to the recognised need for Municipal cleanliness (in its widest sense), *e.g.*, the laying out of roads with hard and practically impermeable paving in thickly populated districts instead of with defective stone and ordinary macadam; the hosing down with water of all crowded courts and

alleys, small streets, etc., so as to lay the dust and in part remove it into the sewers; the previous wetting of roads and streets before the brooms are applied thereto; the need for wet dusting (*i.e.*, dusting with a damp cloth) in private houses, public institutions, etc. Collected dust should be burnt.

The importance of the Smoke Problem and its Prevention came up on many occasions before the Congress. This was only natural, as Manchester is a great offender, and sufferer, in connection with smoke, which is dust from the burning of coal. The difficulties surrounding the question were mentioned, and the part played by the domestic chimney, as opposed to the factory chimney emphasised. A somewhat theoretical suggestion was seriously put forward by Dr. W. H. Shaw to the effect that smoke should be treated as sewage of the air. Municipal chimneys should be erected (into which the flues of several neighbouring houses could be taken), and the smoke collected and treated electrically or otherwise, so as to cause the soot to deposit, and be finally delivered in a purified state into the outside air. Dr. Shaw being Clerk of the Weather, stated that in this way black fogs would be done away with, but not white ones—fogs being due to the condensation of watery vapour round particles of dust (not necessarily smoke). Mr. Peter Spence, of Manchester, made a somewhat similar suggestion of Municipal chimneys many years ago, but nothing was done in the matter at that time, and it will be interesting to see if anything will be done in these days of progress and advancement.

(b). *Tuberculosis and Consumption.*

As a pioneer town in connection with the prevention of Consumption, your delegates expected to hear something new at Manchester, but in this were disappointed. The impracticable *compulsory* notification of tuberculosis was suggested by several, but the general feeling of the Congress was that the time was not yet ripe for such a measure, and that a *voluntary* system (such as Lambeth possesses) was all that was as present required, and might be expected to produce great good. Manchester's methods of dealing with consumption by voluntary notification, bacteriological examinations, disinfection, education by the distribution of pamphlets, general improvement of the dwellings of the poor, etc., are the methods at present in use in Lambeth Borough. The Anti-Spitting Crusade is making some (but not much) progress, though the need for such a crusade is shewn by the fact that men suffer from tuberculosis more than women, due to the spitting habit in workrooms, bars of public-houses, smoking carriages, etc. Tuberculosis is undoubtedly a curable disease, and

the open-air treatment for consumptives was much lauded, emphasis being laid upon the kind of building needed, its position to prevailing winds, importance of securing a site with as much sunlight and fresh air as possible, etc., etc. It was pointed out, however, that few (very few) of those who undergo the open-air treatment, and are, apparently, cured, are able afterwards to return to their usual employment, and it was suggested that agricultural colonies might, with advantage, be started in the country districts. Such colonies should be self-supporting.

The statement of Professor Koch, made at the Tuberculosis Congress last year, to the effect that bovine and human tuberculosis were different diseases, and not inter-communicable, came in for a large share of adverse criticism, more especially by Prof. Nocard, who would appear to have come over from Paris for that sole object. According to Prof. Nocard, who, by the way, is a great authority, the statement made by Prof. Koch is untrue. A Royal Commission in England is at present investigating the matter, and will, doubtless, give a definite and decided opinion on the subject shortly.

(c). *Housing of the Working Classes.*

Nothing new was suggested. The practical difficulties in connection with the subject were again put forward, and the usual suggestions offered, viz., removal of work-places and work-people to the country districts, together with (concurrent) improved, quick, and cheap means of transit; extension of the period for repayment of loan for erecting model dwellings, and lessening of the rate of interest for borrowed moneys; less stringent building bye-laws; provision for the needs of the very poor by Municipal common lodging-houses; etc., etc.

(d). *Sewage Disposal.*

What Manchester is doing in respect of Sewage Disposal was much in evidence, and the general feeling amongst the experts and others was to the effect that the bacteriological methods by septic tanks or open-air settling tanks, followed by double filtration (1) over and through bacteriological filters of coke breeze, etc., and (2) over land, give the best results; and that, as a corollary, the days of chemical treatment (precipitation) are numbered. Trade waste requires special attention in connection with sewage treatment, and its proper disposal in manufacturing towns is an important consideration.

(e). *Need for Education in Sanitary Matters.*

At the Congress the importance of educating the people, more especially the young population, in sanitary matters was insisted

upon, not forgetting the necessity for teaching the teachers of schools the simple laws of health and domestic hygiene. Lady Sanitary Inspectors and Health Visitors were spoken highly of in the Conference of Ladies interested in Hygiene, amongst whom your appointed delegates, with one or two other males, ventured, but from amongst whom your delegates quickly departed, on hearing two ladies discuss somewhat vehemently the short-comings of the text-books on "Domestic Hygiene," including cooking (written, of course, by males), and on being told by another lady that boys might, with advantage, be trained to household duties (scrubbing, etc.), their work in that respect being better than that of girls. Your delegates thought it best to beat a hasty retreat.

The degeneracy of town populations points to the necessity of physical education for the rising generations, whilst it was suggested that children under five years of age should be altogether excluded from schools, which are a source of danger to the health of such young children, *e.g.*, through infectious diseases, overworking or forcing of the brain, and general aggregation in classes. The proper sanitation and planning of schools were insisted upon, as also special classes for children who are unfortunately defective in mind or body.

(f). *Health Exhibition.*

In our opinion, the Health Exhibition of apparatuses and appliances relating to health, was the most useful part of the Congress, and we consequently spent several hours in going over all the newest appliances and inventions. Simplification and automatic action appear to be the aims of all practical workers in connection with new appliances. This was especially noticeable in the case of the many different alternating gears for filters in connection with water and sewage, etc.

We noted that silver medals had been awarded to (1) Messrs. Defries & Co. for their Equifex Disinfecting (Saturated Steam) Machines, two of which the Borough Council of Lambeth now possess; and (2) the Horsfall Destructor Company, for their different Destructor plants now established throughout the country, including the newest direct tipping Destructor (with improvements suggested by the Lambeth Medical Officer) recently built for the Westminster City Council, and fixed in Commercial Road, Lambeth.

It is impossible to mention all the various exhibits (disinfectants, sanitary fittings, etc.), but we were much struck with an appliance shewn by the Kitchen Bath Fitment Company, by which a hot bath can be readily supplied to every working-man,

even in a small cottage. The appliance consists of a combination of bath, sink, and wash-boiler. There is a long sink with corrugated wash-board at one end and a gas-heated wash-boiler at the other. Beneath the sink is a kind of cupboard, in which there is a cheap Japanned iron roll-edged bath, the end drawing out into the room and the foot being under the boiler, which is provided with a tap. The idea struck us as an excellent and much needed one.

Messrs. Doulton & Jennings, as Lambeth representatives of Sanitary Engineers, shewed excellent specimens of different sanitary appliances.

There can be but little doubt that much good work is accomplished at these Congresses, more especially in private conversations with the officers and members of other Sanitary Districts, as well as at the public discussions that take place at the conclusion of the papers. The goal towards which all Congress work is directed is the provision of pure air, pure water, pure soil, pure food, and well-arranged and healthy dwellings, so as to secure sound minds in sound bodies.

We thank the Council for having appointed us as the Lambeth Delegates.

We are, Mr. Mayor and Gentlemen,

Yours faithfully,

H. G. TURNER,
*Vice-Chairman Sewers and
Sanitary Committee.*

JOSEPH PRIESTLEY,
Medical Officer of Health.

October, 1902.

Midwives Act, 1902.

(Special Report by the Medical Officer of Health).

The London County Council is the Authority for carrying out the duties imposed by the Act; but, by Section 9, power is given to the London County Council to delegate all, or some, of such duties to the Metropolitan Borough Councils. The chief object to be attained by the Act is the securing, within the different Metropolitan Boroughs, of proper attention for women during their lying-in periods, and the prevention of the recurrence of blood-poisoning, or, as it is called, puerperal fever, which is a notifiable infectious disease. The Metropolitan Borough Councils, and not the London County Council, except in default of a Borough Council, are the Sanitary Authorities for the carrying out of the duties connected with the notification and prevention of all infectious diseases; and it is to the Borough Councils, and not to the London County Council, that infectious diseases are required to be notified by Statute. It is clear, therefore, that the duties arising out of the Midwives Act, 1902, should be carried out by the Metropolitan Borough Councils, and not by the London County Council, if the maximum of efficiency of administration is to be secured.

I advise the General Purposes Committee to recommend the Council to support the City of Westminster, and to express an opinion that, should the London County Council decide to delegate, without restrictions or conditions, their powers, the Lambeth Borough Council will be prepared to carry out the Act as regards Lambeth Borough—the costs of so doing (or the greater portion of such costs) to be refunded to the Borough Council by the London County Council, as provided in Section 9.

JOSEPH PRIESTLEY,

Medical Officer of Health.

November 29th, 1902.

The Council decided, on December 11th, 1902, "That in the opinion of the Lambeth Borough Council it is expedient that the powers and duties of the Midwives Act, 1902, should be exercised in Lambeth by the Lambeth Borough Council"; and an intimation to this effect was made to the London County Council.

Two Thousand Bacteriological Examinations made during 1899-1902.

(*Special Report by the Medical Officer of Health*).

Since the opening of the Lambeth Laboratory at Wanless Road in January, 1899, up to the end of 1902, the large number of 2037 bacteriological examinations have been made in connection with suspected cases of Consumption, Diphtheria, Typhoid, and other diseases. The specimens examined consisted of (1) Throat Membranes and other discharges; (2) Sputa; (3) Blood; (4) Ice Creams; (5) Urine; (6) Liver; and (7) Ulcer of Face; and the details may be tabulated as follows:—

	Bacilli found or re-action obtained.		TOTAL.
	YES.	NO.	
Throat Membranes	262	810	1072
Sputa	233	332	565
Blood	193	192	385
Ice Creams	3	3	6
Urine	4	3	7
Liver ... ..	...	1	1
Ulcer of Face ... ..	...	1	1
	695	1342	2037

Diphtheria.

1072 samples of throat membranes and discharges from doubtful Diphtheria cases have been examined, and in 262 (*i.e.*, 24.4 per cent.) the true Klebs-Löffler (Diphtheria) bacilli were obtained. In this way, on the one hand, patients suffering from *true* Diphtheria have been properly isolated in Hospital or at home, and the necessary precautions taken to prevent the extension of the disease; whilst, on the other hand, patients not

suffering from *true* Diphtheria, have not been sent to Hospital, and, thereby, have avoided the danger (an actual one at times) of contracting the real disease whilst there.

Again, there are infectious sore throats, other than Diphtheritic, and by means of bacteriological examinations, such are found to be associated at times with the pseudo-bacilli of Hoffman. These pseudo cases can be thus discovered and isolated, and the disease thereby prevented from spreading from person to person. A notable example of this occurred in connection with a large school in the Borough, where there was a serious outbreak of pseudo-Diphtheria, 38 cases in all, out of a total of 137 scholars. By means of bacteriological examinations, the cases (some exceedingly mild) were discovered and isolated, and the outbreak stamped out in consequence. The relationship (if any) between pseudo-bacilli and the Klebs-Löffler bacilli is not yet settled; but that throats, which shew, on examination, the presence of pseudo-bacilli, are infectious, cannot admit of doubt in view of this School outbreak. Consequently, in Lambeth, the usual precautions (notification, isolation, disinfection, etc.) are taken, but the patients are not removed to Hospital, where they might be placed in a ward containing pure (*true*) Diphtheria cases. Separate wards for pseudo-Diphtheria patients might, with advantage, be provided by the Metropolitan Asylums Board.

Taking the whole 1072 doubtful Diphtheria specimens, the results of the examinations shew that in 177 (*i.e.*, 16.5 per cent.) the Klebs-Löffler bacilli were found in pure cultivation (*i.e.*, without admixture with other bacilli); in the 82 (*i.e.*, 7.6 per cent.) the Klebs-Löffler bacilli were found combined with other well-known ordinary bacilli, *e.g.*, Staphylococci, Streptococci, Torulæ, Oidia and Micrococci; and in 3 cases (*i.e.*, 2.8 per cent.), Klebs-Löffler bacilli and Pseudo-bacilli were found together.

In 810 (*i.e.*, 75.6 per cent.) of the total number of throat samples examined (1072), the Klebs-Löffler bacilli were not isolated, but other bacilli were as follows:—Staphylococci, 333; Streptococci, 78; Staphylococci and Streptococci, 67; Staphylococci or Streptococci combined with others, 14; Pseudo-bacilli (pure cultivation), 7; Pseudo-bacilli and others, 253; and Others (Micrococci, Torulæ, Oidia and Smegma), 58.

Tuberculosis.

565 samples of sputa from doubtful Tuberculosis cases have been examined, and in 233 (*i.e.* 41.2 per cent.) the bacilli, which cause the disease, were discovered. The importance of early

diagnosis in cases of Consumption is now acknowledged, as in the early stages of this disease, the open-air treatment offers hopes of good results; whilst the advantage of being able to assure patients, or their friends, that the disease suspected is merely (for instance) bronchitis or pneumonia, and not Consumption, goes without saying. In connection with the Voluntary Notification of Consumption, which now is in force in the Borough of Lambeth, the bacteriological examinations of sputa become essential, and the numbers of such examinations have, consequently, considerably increased recently.

In two samples, the *Pneumococci Friedlanderi* were isolated.

Typhoid Fever.

385 samples of blood from suspected Typhoid cases have been examined, and in 193 (*i.e.*, 50.1 per cent.) the characteristic reaction of Widal has been obtained, thereby settling the diagnosis and enabling the necessary precautions to be taken. Many doubtful cases have been discovered in this way, more especially in connection with a local outbreak of Typhoid in 1900, due to infected mangles.

A high dilution of the suspected blood-serum (one-sixtieth to one-hundredth) is used, so that, where the reaction is well-marked and definite, the diagnosis is certain. When, however, the reaction is slight, or but feebly marked, too much reliance must not be placed on it as a certain diagnostic aid, at least in the absence of some definite well-known *clinical* symptoms. A low dilution of the suspected serum (one-tenth) is, in the Lambeth experience, untrustworthy. The reaction depends on the fact that the specific (Eberth-Gaffky) bacilli of Typhoid Fever lose their power of movement and become collected into clumps (or agglutinated, as it is called), in fluids containing the specific anti-toxin of the disease, and this anti-toxin is developed naturally in the blood of all patients suffering from Typhoid, very shortly after the invasion of the disease, specially marked after the 9th to 12th day (not before), and lasting (slightly) some (even considerable) time after convalescence.

Other Examinations.

15 other samples were submitted as follow:—Urine (for tubercle, gonococci, casts, etc.), 7; Ice Creams (for tubercle, typhoid, etc.), 6; Liver (for hydatids), 1; Ulcer of Face (for anthrax), 1.

In 3 of the samples of Urine, Casts, Streptococci and Staphylococci were discovered; in the sample of Liver, Hydatids were found; whilst in 3 of the samples of Ice Cream, *Bacilli Coli Communis* were isolated. In the remaining 8 samples, the results of the examinations were negative.

The need for bacteriological laboratories in large centres of population is now acknowledged, and the value of the one in Lambeth Borough (for the sole use of the Borough) cannot be over-estimated. By means of bacteriological examinations made therein, doubtful diagnoses have been settled, and the necessary preventive measures taken, as required, where the disease has proved to be of an infectious nature. Where the result of the examinations has shown the suspected disease not to be of an infectious nature, expense has been saved in connection with hospital treatment and disinfection.

Bacteriological examination is only an *aid* to diagnosis, but gives great assistance to a Medical Officer in connection with the carrying out of his duties, and to a Medical Practitioner in making certain the diagnosis in doubtful infectious cases.

One reason for the success of the Lambeth Bacteriological Laboratory is the great use that is being made of it by the Lambeth Medical Practitioners, by whom its institution by the late Vestry in 1899 has been much appreciated, and to whom it has proved of the greatest value.

JOSEPH PRIESTLEY,

Medical Officer of Health.

January, 1903.

Ice Creams, etc.

(*Special Report by the Medical Officer of Health*).

The London County Council (General Powers) Act, 1902, came into force on November 1st last, and deals, *inter alia*, with ice-creams, or other similar commodities. Powers are given to the several Metropolitan Borough Councils to deal with the preparation and sale of ice-creams, and other similar commodities, throughout their respective Boroughs. The ingredients used in the making of Ice-cream are themselves fit for consumption, but during process of manufacture may become contaminated by the germs of infectious or other diseases, and in that way readily convey infection, or cause illness.

The common way of making Ice-cream is to boil together milk, starch (generally cornflour), sugar and fruit essence. The mixture is allowed to cool naturally, and is afterwards frozen, and then sold in the usual way in the streets as hokey-pokey, etc. The cooling process may (often does) take place under insanitary conditions, *e.g.*, in an over-crowded living-room, a dirty backyard, or even in close proximity to a w.c.; and in this way the mixture may become contaminated in such a way as to give rise to disease (infectious, ptomaine poisoning, etc.) in those who may partake of it. Lambeth has been, in the past, free from any outbreak of disease traced to Ice-creams, but despite this immunity, legislation was wanted, and the Borough Council of Lambeth did not oppose the London County Council's Bill (as far as Ice-creams were concerned) when it was before Parliament, more especially as the powers sought were for the Local Authorities and not for the London County Council itself.

It may be that Lambeth's immunity is to be explained by the fact that the kind of trade in Ice-creams liable to cause trouble from a health point of view is the "street" trade, generally in the hands of Italians, whose ideas of personal (and domestic) cleanliness are not exactly in accord with those of Lambeth. In this respect, Lambeth is not much troubled—the Boroughs of Holborn, Finsbury, St. Pancras, and Islington being those chiefly concerned. The Sections of the London County Council (General Powers) Act, 1902, Part viii., are as follow, and came into operation on November 1st, 1902:—

Any person, being a manufacturer of, or merchant or dealer in, Ice-creams or other similar commodity, who, within the County—

(a) Causes or permits Ice-creams, or any similar commodity, to be manufactured, sold, or stored in any cellar, shed, or room, in which there is any inlet or opening to a drain, or which is used as a living room or sleeping room ;

(b) In the manufacture, sale or storage of any such commodity, does any act or thing likely to expose such commodity to infection or contamination, or omits to take any proper precaution for the due protection of such commodity from infection or contamination ; or

(c) Omits, on the outbreak of any infectious disease amongst the persons employed in his business, or living or working in, on, or about the premises in, or on, any part of which any such commodity as aforesaid is manufactured, sold, or stored, to give notice thereof forthwith to the Medical Officer of the Sanitary District in which such business is carried on, or such premises are situate—

shall be liable for every such offence, on conviction in a Court of Summary Jurisdiction, to a penalty not exceeding Forty Shillings.

The above provisions apply to all persons being manufacturers of, or merchants, or dealers in, Ice-creams, or other similar commodity.

Special provisions are made with respect to street sellers of the dainty, as follows :—

Every itinerant vendor of any such commodity as aforesaid shall, if not himself the manufacturer thereof, exhibit in a legible manner, on a conspicuous part of his barrow, a notice stating the name and address of the person from whom he obtains such commodity, and if such vendor is himself the manufacturer of such commodity, he shall in the same manner exhibit his own name and address. Every such itinerant vendor who shall fail to comply with the provisions of this Section, shall be liable for each offence, on conviction as aforesaid, to a penalty not exceeding Forty Shillings.

Proceedings for the recovery of the penalties shall be instituted by the Sanitary Authority for the district in which the offence was committed, or of the District to the Medical Officer of which such notification as aforesaid ought to have been made, or in which such itinerant vendor as aforesaid shall offer any such commodity, as aforesaid, for sale, as the case may be.

* It will be noted that there is no Clause dealing with registration of vendors—an important principle, but one rejected by Parliament on the ground that such registration would apply to numerous confectioners, hotels, restaurants, etc., where, as a rule, the conditions under which the Ice-creams are made are better.

Six samples of Ice-creams—3 from itinerant vendors and 3 from shops—were taken by me, and submitted to bacteriological examination at the Laboratory, Wanless Road. In three instances (all street trade) *bacilli coli communis* were obtained, pointing to insanitary conditions under which Ice-creams had been made—these particular bacilli living in the intestinal canals of man, or other animals. There was no suspicion of illness from the consumption of such ices, which were found to be made in districts outside Lambeth, so that no action was taken. In the other three instances (taken from shops) no such bacilli were found.

JOSEPH PRIESTLEY,

Medical Officer of Health.

January 12th, 1903.

Report on Kitchens of Restaurants, Hotels, Coffee and Tea Rooms, Dining and Supper Rooms, Stewed Eel Shops, etc.

(Special Report by the Medical Officer of Health.)

The case of *Bennett v. Harding* (1900, 2 Q.B. 397) affords a first attempt at a legal definition of the term "workplace," not hitherto defined in any Factory and Workshop (or other) Acts. Justices Grantham and Channell held, on Appeal, that the word "workplace" should include any "place where work is done permanently, and where people assemble together to do work permanently of some kind or other." By this decision, the powers of a Sanitary Authority in respect to workshops and workplaces, as laid down in the Public Health and Factory and Workshop Acts, are considerably extended, and it becomes clear that the kitchens of all restaurants, hotels, coffee and tea rooms, dining and supper rooms, stewed eel shops, etc., naturally come within the definition as now given to "workplaces." It had long been felt that such places would be found, on inspection, to be sanitarily unsatisfactory, so as to require systematic and frequent inspection, and supervision—at least, in the majority of cases.

Considering the large number of persons whose business compels them to have the greater part of their food in public restaurants and eating houses, it is of the greatest importance that precautions should be taken to ensure the food being stored, or prepared, therein at all times under wholesome and sanitary conditions. This can only be secured by constant and careful inspections of the kitchens (and other places) wherein such food is stored or prepared, and the powers necessary to accomplish this are given in the Public Health Act (Sections 2 and 47) and Factory and Workshops Act (Section 2), and are, to all intents and purposes, sufficient, though, perhaps, on one or two minor points, improvements might be made, and greater powers given, by future legislation.

This special inspectorial work naturally falls to the duties of a Female Inspector, and I arranged for Miss Gamble to make an inspection of all such (known) places within the Borough of Lambeth, with a view

to a Register being compiled, and the places afterwards kept under careful and constant supervision. The end justifies the means, and I now present to the Council this Report on the sanitary conditions, etc., of the kitchens of Restaurants, Hotels, Coffee and Tea Rooms, Dining and Supper Rooms, Stewed Eel Shops, etc., throughout the Borough of Lambeth. Up to the date of this Report, 225 such places have been discovered and inspected, and may be grouped under the titles and descriptions given on the fronts of the shops or premises, remembering that the places are practically all the same, viz., dining rooms or restaurants. Thus:—

Restaurants	...	...	...	...	...	...	...	22
Hotels	...	...	...	...	...	...	...	6
Coffee and Tea Rooms	...	...	...	...	...	...	...	24
{ Dining Rooms	...	...	...	...	...	...	...	89
{ Coffee and Dining Rooms	...	...	...	...	...	...	...	63
\ Supper Room	...	...	...	...	...	...	...	1
Stewed Eel Shops	...	...	...	...	...	...	...	13
Refreshment Rooms	...	...	...	...	...	...	...	5
Ham and Beef Shops	...	...	...	...	...	...	...	2
								—
						Total	...	225

[N.B.—Five only are licensed for the sale of intoxicating liquors.]

Dividing into Wards, it is found that these workplaces are distributed throughout the Borough as follow:—

Marsh	...	...	...	...	...	...	...	59
Bishop's	...	...	...	...	...	...	...	32
Prince's	...	...	...	...	...	...	...	27
Vauxhall	...	...	...	...	...	...	...	22
								—
						Inner Wards	...	140
								—
Brixton	...	...	...	...	...	...	...	29
Stockwell	...	...	...	...	...	...	...	15
Herne Hill	...	...	...	...	...	...	...	16
Tulse Hill	...	...	...	...	...	...	...	8
Norwood	...	...	...	...	...	...	...	17
								—
						Outer Wards	...	85
								—
						Total in Borough of Lambeth	...	225

General Conditions.—Overcrowding.....Cleanliness.....Lighting.....
 DampnessVentilation..... Accumulations..... Yard..... Floor.....
 Premises.....Defects found (if any).....Notices served (dates).....

Further Remarks (if any).....Plan of Kitchen, showing cubic capacity.

It will be noted that a plan has been drawn up in each case, with measurements showing the cubic capacity of each Kitchen, so that the work represented is considerable, and has taken up a large amount of the Female Inspector's time. The work has been well done, as shewn by this report, and with tact, as shewn by the entire absence of complaints received in connection therewith. The drains have been tested with chemicals, in each case by the Male Inspectors of the different districts concerned, and 67 of the Kitchens, in connection with which it was found necessary to carry out drainage work (40 with defective drains, and 27 with other sanitary defects), have been consequently transferred to the Male Inspectors.

The results may be tabulated under the various headings given in the report-form, as follow:—

I. *Situations of Kitchens.*

(a) Basement (underground)	68
(b) Ground Floor	152
(c) First Floor	5
	225
	225

II. *Construction of Kitchens.*

The floors were found to be made of wood (147), concrete (54), stone (21), and brick (3), and in a large number of cases (100), covered with linoleum or oil cloth; whilst the walls were made of brick (216), wood (3), and plaster (6).

III. *Methods used in Cooking.*

The methods used in Cooking were as follow (two or more methods being in some cases used in the same kitchen):—

Gas Stoves 150—Ranges 178—Boilers 83—Steamers, 5—Oil Stoves 0—Electric Stoves 0.

It will be noted that Electric Stoves and Oil Stoves are conspicuous by their absence.

With a view to securing uniformity of inspection and registration, I drew up the following report-form for the guidance of the Inspector:—

Full Address of Premises.....Licensed?.....Nature of Work carried on.....Situation of Kitchen.....Owner (Name and Address).....Occupier (Name).....General state of Kitchen.....

Workers.—Kitchen.....Restaurant.....Dining Room.....Tea Room.....Bar.....etc.....

Water Closets.—Males' (Nature, Situation, Number, By whom used, *e.g.*, Customers or Employees).....Females' (Nature, Situation, Number, By whom used, *e.g.*, Customers or Employees).....General Condition...

Lavatory Basins.—Males' (Nature, Situation, Number, By whom used, *e.g.*, Customers or Employees).....Females' (Nature, Situation, Number, by whom used, *e.g.*, Customers or Employees).....General condition...

Sinks (in Kitchen).—Number.....Kind.....Are Waste Pipes disconnected?.....Undertrapped?.....

Ventilation.—Number of Windows.....Other means (gas burners, etc.)

Water Supply.—Main.....Storage Tanks.....Situation of Tanks.....Accessible.....Covered.....Is all drinking water separate?.....

Lighting.—How lighted (by day, by night).....No. of gas lights.....Otherwise.....

Floor of Kitchen.—Material.....If Covered, how.....State as to Cleanliness.....Dampness.....

Condition of Walls and Ceilings.—Impervious or not.....Material.....State as to Cleanliness.....Dampness.....

Condition of Utensils.—Clean or not.....

Receptacles for Refuse.—No. and kind.....Defective or not.....Full or not.....

How is Cooking done?—Ranges.....Oil Stoves.....Boilers.....Electric Stoves.....Gas Stoves.....etc.....

Acommodation for Hanging Clothes (if any).- -.....

Drainage.—Result of Testing of Drains.....Other Defects found (if any).....Are drains ventilated?.....Accessible?.....Do drains pass under Kitchen?.....

IV. *Numbers of Workers.*

					M.	F.
(a) Kitchens	...	...	...	...	134	283
(b) Restaurants	...	...	...	...	18	17
(c) Hotels	...	...	...	...	1	11
(d) Dining Rooms	...	...	...	...	118	133
(e) Elsewhere	...	...	...	...	5	15
Total	...				276	459

It is seen that 735 persons (276 males and 459 females) were, at the time of inspection, engaged at work in the Kitchens, Dining Rooms, Restaurants, Tea Rooms, Shops, etc.; and of these, 417 were engaged in Kitchens alone (134 males and 283 females). 165 females were employed *alone*, and 22 men *alone*; and 548 men and women together.

V. *Ventilation and Lighting.*

In the majority of cases the ventilation is by means of windows which are made to open; and in the case of underground kitchens generally, by means of windows or ventilators (gratings) situated in the shop fronts. The general method of lighting is by ordinary gas jets, which might, with advantage, especially in the underground kitchens, be converted into incandescent light. In 15 (*i.e.*, 6.7 per cent.) the ventilation was found to be inefficient or bad, and in 4 (*i.e.*, 1.8 per cent.) the lighting unsatisfactory.

VI. *Water Supply.*

With 3 exceptions, the water supply is provided direct from the Main. Defective taps were found in 3 (*i.e.*, 1.3 per cent.). Where storage tanks were provided (129), such tanks were accessible in 123 (*i.e.*, 95.4 per cent.), and covered in 113 (*i.e.*, 87.6 per cent.), cases.

VII. *W.C. Accommodation.*

In 222 instances (*i.e.*, 98.7 per cent.) w.c. accommodation had been provided—29 for males, 24 for females, and 169 for both males and females. The situations of the w.c.'s are 113 outside, 85 inside, 24 both outside and inside. Special extra provision was found to have been made for customers in 30.

VIII. *Lavatory Accommodation.*

In only 25 instances (*i.e.*, 11.1 per cent.) was lavatory accommodation found to have been provided for the use of the employees or the customers—40 basins in all, situated *outside* in 22, and *inside* in 3, cases.

IX. *Receptacles for Refuse.*

Receptacles for refuse were, with 39 exceptions, found to have been provided.

X. *Accommodation for Clothes.*

In 13 instances (*i.e.* 5.8 per cent.) accommodation was found to have been provided for the use of the employees (to hang their outer garments in, *e.g.*, when wet).

So much for the general particulars as to the construction, positions, cooking arrangements, ventilation and lighting, water supplies, etc., of the Kitchens inspected, and as to the numbers of workers found employed therein—such being matters of interest merely.

I now have to deal with the more important consideration of the insanitary defects found, and for the discovery, and remedying, of which the special inspections of these particular workplaces have been carried out.

XI. *Sanitary Defects Found.*

Speaking generally, the state of the Kitchen was found to be satisfactory, at the time of inspection, in 194 (*i.e.*, 86.2 per cent.), and unsatisfactory in 31 (*i.e.*, 13.8 per cent.). In only 6 cases (*i.e.*, 2.7 per cent.) were the utensils in use in the kitchen found to be dirty.

The defects which have been found, and in connection with which remedial measures have been taken (notices served, etc.), may be detailed as below—it being worthy of note that in no single instance has it been found necessary to resort to a Magistrate for an Order for the compulsory remedying of any insanitary condition discovered:—

(a) *Drains.*

The drains have been tested in each case, and 40 (*i.e.*, 17.8 per cent.) have been thereby proved to be defective—no results being obtained from the tests in the other 185 (*i.e.* 82.2 per cent.).

As far as could be found, the drains pass under the Kitchens in 91 (*i.e.*, 40.5 per cent.). In 71 (*i.e.*, 31.6 per cent.), the drains were found to be unventilated, but this condition can hardly be regarded as a nuisance.

Defective stack-pipes were found in 7 (*i.e.*, 1.8 per cent.), defective air-inlets in 4 (*i.e.*, 4 per cent.), and defective gullies in 2 (*i.e.*, 1 per cent.).

(b) *Sanitary Conveniences.*

In 23 (*i.e.*, 10.2 per cent.) the w.c.'s were found to be defective, and in 4 (*i.e.*, 1.8 per cent.) stopped up and choked; whilst in 3 (*i.e.*, 1.3 per cent.) there was no w.c. accommodation provided, though in none of these 3 instances was it considered necessary to take action in regard thereto, considering the special circumstances of the cases.

The w.c. pans were found dirty in 25 (*i.e.*, 11.1 per cent.), and the w.c. flushing tank defective in 39 (*i.e.*, 17.3 per cent.). In 10 (*i.e.*, 4.4 per cent.) the w.c. was badly ventilated, and in 1 (*i.e.*, 0.4 per cent.) the w.c. was ventilating into the kitchen. The positions of the w.c.'s have been noted in each case, and such positions entered in the Register. The soil pipe was defective in 9 (*i.e.*, 4 per cent.).

Inspections under this heading of Sanitary Conveniences includes those provided (*a*) for the female employees, and (*b*) for the female customers, and the condition in which such conveniences were found was such as to shew the importance (and need) of this particular work being carried out—work that can only be satisfactorily done by a female Inspector.

5 (*i.e.*, 2.2 per cent.) sink wastes were found defective; 23 (*i.e.*, 10.2 per cent.) untrapped, or connected direct to the drain; 1 (*i.e.*, 0.4 per cent.) foul; and 79 (*i.e.*, 35.1 per cent.) not undertrapped.

In 39 (*i.e.*, 17.3 per cent.) there were no dust-bins, and in 35 (*i.e.*, 15.6 per cent.), the dust-bins were defective.

(c) *General Condition of Kitchens and Premises.*

With regard to general cleanliness, the following particulars are tabulated:—

Dirty Premises	...	...	...	21 (<i>i.e.</i> , 9.3 per cent.)
Dirty Kitchens	...	...	...	11 (<i>i.e.</i> , 4.9 per cent.)
Dirty Ceilings	...	...	...	61 (<i>i.e.</i> , 37.1 per cent.)
Dirty Walls	...	...	...	60 (<i>i.e.</i> , 26.7 per cent.)
Dirty Floors	...	...	...	20 (<i>i.e.</i> , 8.9 per cent.)
Dirty Yards	...	...	...	6 (<i>i.e.</i> , 2.7 per cent.)
Dirty Sculleries	...	...	...	1 (<i>i.e.</i> , 0.4 per cent.)
Dirty w.c.'s	...	...	...	2 (<i>i.e.</i> , 1 per cent.)
Dirty Staircases	...	...	...	1 (<i>i.e.</i> , 0.4 per cent.)
Dirty Utensils	...	...	...	6 (<i>i.e.</i> , 2.7 per cent.)

Accumulations were found in 40 (*i.e.*, 1.8 per cent.), viz., in yards 30, in kitchens 8, and in areas 2; whilst in 1 (*i.e.*, 0.4 per cent.) animals were found to be improperly kept in a yard so as to be a nuisance.

In 9 (*i.e.*, 4 per cent.) the premises generally were dilapidated, in 8 (*i.e.*, 3.6 per cent.) the kitchen floors, in 15 (*i.e.*, 6.7 per cent.) the yard paving, in 1 (*i.e.*, 0.4 per cent.) the kitchen walls, and in 1 (*i.e.*, 0.4 per cent.) the kitchen ceiling.

Dampness was discovered as follows:—

Yards 4 (*i.e.*, 1.8 per cent.), scullery 1 (*i.e.*, 0.4 per cent.)
walls (kitchen) 2 (*i.e.*, 1 per cent.), passage 1 (*i.e.* 0.4 per cent.), w.c. 3 (*i.e.*, 1.3 per cent.)

(d) *Overcrowding.*

In no single instance was overcrowding found.

A perusal of this Report will satisfy the members of the Council that the inspection and sanitary supervision of these kitchens was wanted, and must result in improved conditions under which foodstuffs are prepared, and cooked, for consumption, with a consequent lessening, or preventing, of a distinct danger to the public health within the Borough of Lambeth. The sanitary defects found (including out-of-date appliances, etc.) have been, or are in course of being, remedied; and in the case of each kitchen one or more re-inspections have already been made by the Inspector.

The kitchens of restaurants, dining rooms, etc., within the Borough are now in a satisfactory sanitary condition.

The greater part of the work represented in this Report was done last year (1902), but the results were not tabulated until the Work-places had been re-inspected.

JOSEPH PRIESTLEY.

March 9th, 1903.

TABLE A.
Censal Returns, 1901.
 Overcrowding in Tenements in Lambeth Borough.

	Rooms in Tenement.	Tenements of less than five rooms.	Persons per Tenement.						
			1	2	3	4	5	6	7
Lambeth.	1	10058	4550	3250	1456	587	155	41	12
Total Tenements—70887 ...	2	12311	1204	3554	2869	2141	1364	699	322
Tenements of less than five rooms—44495 ...	3	12120	483	2684	2809	2191	1598	1126	682
	4	10006	162	1332	1842	1853	1630	1207	893

	Rooms in Tenement.	Tenements of less than five rooms.	Persons per Tenement.						
			8	9	10	11	12 or more	Total Persons	Per Cent. of Pop.
Lambeth.	1	10058	3	3	1	—	—	18932	6.2
Total Tenements—70887	2	12311	116	30	9	2	1	40073	13.1
Tenements of less than five rooms—44495 ...	3	12120	330	144	51	17	5	47255	15.5
	4	10006	569	300	150	51	17	46924	15.4

N.B.—Average persons per family = 4.3.

Taking any number more than two per tenement as (rough) evidence of overcrowding; overcrowding existed in Lambeth Borough on March 31st, 1901, to the extent of 61.3 per cent. of the total tenements of less than 5 rooms.

TABLE B.
Censal Returns.

Showing the disposal of Families or separate Occupiers in Tenements of over and under five rooms in the Metropolitan Boroughs.

Name of District.	Out of every 100 Total Families or separate Occupiers, the Number occupying Tenements of fewer than 5 rooms was	Out of every 100 Total Families or separate Occupiers, the following number Occupied Tenements of				Total number of persons living in one-roomed Tenements.	Percentage of Population living in one-roomed Tenements	Percentage of Domestic indoor Servants to Families or separate Occupiers
		1 room	2 rooms	3 rooms	4 rooms			
City of London ...	61.95	15	20	17	10	1,421	5.27	37.6
Battersea ...	61.8	9	15	20	18	6,342	3.75	13.1
Bermondsey ...	75.8	15	24	20	17	8,706	6.65	6.6
Bethnal Green ...	84.1	19	26	24	15	12,755	9.83	5.8
Camberwell ...	56.0	9	14	17	16	8,856	3.41	15.3
Chelsea ...	69.1	21	21	17	10	6,609	8.95	55.2
Deptford ...	56.69	8	13	16	20	4,080	3.70	15.4
Finsbury ...	85.13	26	33	17	9	14,416	14.20	8.2
Fulham ...	67.4	8	14	25	21	4,426	3.22	18.6
Greenwich ...	55.2	7	13	15	20	2,392	2.49	24.5
Hackney ...	59.6	10	15	19	16	8,943	4.07	17.9
Hammersmith ...	60.0	10	17	19	14	4,942	4.40	19.3
Hampstead ...	42.2	6	14	14	8	1,819	2.21	81.4
Holborn ...	78.1	27	28	16	7	8,502	14.31	22.3
Islington ...	70.5	16	24	18	13	25,988	7.75	15.5
Kensington ...	55.01	15	20	12	8	11,334	6.41	80.0
Lambeth ...	62.7	14	17	17	15	18,932	6.26	18.1
Lewisham ...	30.9	4	6	9	12	1,488	1.16	36.2
Paddington ...	64.8	15	20	20	10	9,233	6.41	50.2
Poplar ...	73.2	11	18	23	21	8,274	4.90	8.1
St. Marylebone ...	72.5	26	26	13	8	16,408	12.31	51.4
St. Pancras ...	78.9	24	29	16	10	27,464	11.67	16.9
Shoreditch ...	84.8	25	28	19	13	15,053	12.68	5.7
Southwark ...	82.8	21	26	21	15	20,151	9.77	7.8
Stepney ...	80.4	22	26	20	13	34,519	11.56	8.8
Stoke Newington	49.1	8	13	16	12	1,456	2.84	27.8
Wandsworth ...	42.3	4	7	15	16	3,217	1.38	35.2
Westminster ...	64.5	18	23	15	8	14,008	7.65	65.8
Woolwich ...	57	7	14	17	19	3,092	2.63	14.4

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