[Report of the Medical Officer of Health for Woolwich].

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Metropolitan Borough of Woolwich.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR

WOOLWICH.

1912.

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The Pioneer Press (T.U. and 48 hours), 3, New Road.

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Public Health and Housing Committee:

His Worship the Mayor.

Alderman Henry Smith Syer (*Chairman*), 45, Plumstead Common Road, Plumstead.

Frederick Penny (*Vice-Chairman*), 8, Blendon Terrace, Plumstead.

Aldermen—

Joseph Pemberton Jackson, 2a, Wellington Street, Woolwich.

Alfred John Walklin, 17, Beechhill Road, Eltham.

Councillors—

Richard Marsh William Allen, 26, Wrottesley Road, Plumstead.

William Williams Bullworthy, 243b, Eglinton Road, Plumstead.

Leon Charles Chasteauneuf, 224, Burrage Road, Plumstead.

Henry Alfred Hart, 4, Chester Place, Plumstead.

Thomas Henry Hutchings, "Hammerwood," Shooters Hill.

William Marlow, 123, Park Road, Plumstead.

James Newman, 92, Rochdale Road, Plumstead.

Susannah Turnbull (Miss), 14, Plumstead Road, Plumstead.

Gertrude Elizabeth Walters (Miss), 73, Federation Road, Abbey Wood.

James Oates Widger, B.A., "Rosslyn," 108, Herbert Road, Plumstead.

Chief Sanitary Inspector:

Albert G. Duck (Cert. San. Inst.).

District Sanitary Inspectors:

John W. Rance (Cert. San. Inst.), Glyndon Ward.

William Little (Cert. San. Inst.), St. Nicholas Ward.

William Wood (Cert. San. Inst.), River Ward.

Alfred G. Potter (Cert. San. Inst.), Eltham Parish and St. George's Ward.

William Tedham (Cert. San. Inst.), Central and St. Margaret's Wards.

Thomas Powell (Cert. San. Inst.), Burrage and Herbert Wards.

Harry Shaw (Cert. San. Insp. Exam. Bd.), Dockyard and St. Mary's Wards.

Inspectors under Food and Drugs Act:

John W. Rance, Parishes of Woolwich and Plumstead.

Alfred G. Potter, Parish of Eltham.

Women Sanitary Inspectors:

Alice M. Middlebrooke
(Cert. San. Inst. and San. Insprs. Exmn. Board).

Marion FitzGerald
(Cert. San. Insprs. Exmn. Bd., and Sch. Hygiene (Univ. Coll.).

Chief Clerk:

Amyas Britter (Cert. R. San. Inst.)

Assistant Clerks:

Harry S. Smith. H. M. Collyer.

Boy Clerk: H. T. Prescott.

Mortuary Keeper:

Frank Leason.

Medical Officer of Health:

Sidney Davies, M.A., M.D. Oxon.; D.P.H. Camb.;
Fellow of the Incorporated Society of Medical Officers of Health (Vice-President, Metropolitan Branch), and Fellow of the Royal Sanitary Institute.

Summary of Statistics, 1912.

Area of Borough	8,276·6 Acres
Population—Census, 1911	121,376
do. estimated to middle of 1912 ...	123,311
Inhabited Houses—Census, 1911	21,463
Persons to an acre	14·7
Persons to a House—Census, 1911	5·65
Marriages	983
Births	2747
Birth Rate	22·3
Deaths	1420
Death Rate	11·5
Infantile Mortality	73 per 1,000 births

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PREFACE.

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

MR. MAYOR AND GENTLEMEN,

I have pleasure in presenting you with my Twelfth Annual Report on the Health of the Borough, which includes the Twenty-first Annual Report on the Health of Plumstead.

It is particularly satisfactory, after twenty-two years of public service, to be able to report that the Death Rate of the Borough has been reduced to two-thirds and the Infantile Death Rate to little more than one-half what it was when the Plumstead Vestry appointed me Medical Officer of Health of the larger part of the Borough.

The chief feature of the year was the inauguration of Sanatorium benefit under the Insurance Act; the work entailed by this part of the Act naturally fell to the Medical Officer of Health, and added vastly to his duties and responsibilities, although, so far, his work as Tuberculosis Officer has not been officially recognised.

I respectfully call your special attention to what is said in the Report as to the infant consultation and other work of the Women Inspectors, housing in North Woolwich, the Tuberculosis Dispensary, and public cleanliness.

I have to acknowledge with gratitude the patient attention you have given to the claims of the Public Health.

I am,

Mr. Mayor and Gentlemen,

Your obedient Servant,

SIDNEY DAVIES.

Twelfth Annual Report

ON THE

HEALTH OF THE METROPOLITAN BOROUGH OF WOOLWICH,

Year ending 31st December, 1912.

PART I.

STATISTICS.

1. *Population.* The basis of all statistics is the population, and the value of the birth and death rates depends on its being as nearly correct as possible.

The population of the Borough of Woolwich, as estimated at the Census of 1911, was 121,376. The increase since the previous Census was 4,198.

The population of the four registration districts at the last three Censuses was as follows :—

	Census, 1891.	Census, 1901.	Census, 1911.
Woolwich Parish	40,848	41,625	36,710
Plumstead Parish (West)	52,436	38,569	40,328
Do. (East)		29,758	30,888
Eltham Parish	5,710	7,226	13,450
	98,994	117,178	121,376

The population to the middle of 1912 is estimated as follows :—

Parish.	Census, 1911	Additional houses occupied between April, 1911, and July, 1912.	New houses, April 1st, 1911, to June 30th, 1912	Estimated number of persons to a house.	Estimated increase of population.	Estimated population to middle of 1912.
Woolwich	36,710	64	—	5	320	37,030
Plumstead (West)	40,328	123	—	5	615	40,943
Do. (East) .	30,888	66	14	5	400	31,288
Eltham	13,450	21	99	5	600	14,050
Total ..	121,376	274	113	5	1,935	123,311

The sex population at the two last Censuses was as follows :

	Males.	Females.
1911	61,271	60,105
1901	61,273	55,905

The increase of population is seen to be wholly among females. This is accounted for by the fact that in 1901 a number of single and married men were residing in lodgings in the Borough apart from their families, owing to the pressure of work in the Arsenal and lack of housing accommodation.

West Plumstead includes the Burrage, Herbert, Glyndon, and St. Margaret's Wards ; and East Plumstead the Central and St. Nicholas Wards.

2. The following table gives the population, number of houses, and persons to a house, of each Ward as found at the Censuses of 1901 and 1911 :—

Wards.	Census 1901. Population.	Census 1901. No. of Inhabited Houses.	Census 1901. Persons to a House.	Census 1911. Population.	Census 1911. No. of Inhabited Houses.	Census 1911. Persons to a House.
Dockyard ..	8712	1325	6.57	7199	1211	5·94
St. Mary's ..	7833	1126	6·93	6666	1003	6·64
River—North ..	2991	441	6·78	4409	585	7·54
Do. South ..	11405	1671	6·83	9353	1656	5·65
St. George's ..	10684	878	12·13	9083	860	10·56
Burrage.. ..	9837	1735	5·67	8887	1688	5·26
Glyndon ..	9810	1697	5·78	9501	1769	5·37
Herbert.. ..	9080	1612	5·63	8780	1739	5·05
St. Margaret's ..	9842	1638	6·00	13160	2578	5·10
Central	10118	1805	5·61	9083	1831	4·96
St. Nicholas ..	19640	2805	7·00	21805	3729	5·84
Eltham	7226	1353	5·34	13450	2814	4·77
The Borough ..	117178	18086	6·47	121376	21463	5·65

In the last three years unoccupied houses have been filling up, and there is now a decided difficulty in obtaining a small self-contained house in a sanitary condition.

3. The following table shows the number of new houses certified for water each year since the Census of 1911 :—

New Houses April 1st to June 30th, 1911 ..	34
Do. July 1st, 1911, to June 30th, 1912	93
New Houses 1911—1912 :	
Woolwich	—
West Plumstead	2
East do.	6
Eltham	85

Most of the new houses certified in 1912 were in Eltham Parish.

4. At the 1911 Census there were 1,296 unoccupied houses in the Borough, viz. : 450 in Woolwich, 387 in West Plumstead, 250 in East Plumstead, and 209 in Eltham.

At the 1901 Census there were 234 in the Borough, viz. : 46 in Woolwich, 86 in Plumstead, and 102 in Eltham.

In July, 1912, the Rate Collectors found 826 houses empty in the Borough, viz. : 326 in Woolwich, 217 in West Plumstead, 174 in East Plumstead, and 109 in Eltham. In April, 1911, the Rate Collectors found 390 houses empty in Woolwich, 340 in West Plumstead, 240 in East Plumstead, and 130 in Eltham.

BIRTHS.

5. The number of births was 2,747, viz. : 918 in Woolwich Parish, 894 in West Plumstead, 668 in East Plumstead, and 267 in Eltham (corrected for children born in the Infirmary, the Female Hospital and the Wood Street Home for Mothers and Babies, whose parents reside outside the Borough, and 11 births in outlying institutions added on) ; and the birth rate 22·3, compared with 23·2 in the previous year, and with 26·6, the average for the ten years 1902–11. The rate for the County of London was 24·7.

The birth-rate continues to fall, but is still nearly double the death-rate. As long as this ratio is maintained there need be no anxiety as to the increase of the population.

Notification of Births. 2,639 births were notified under the Notification of Births Act. This is at the rate of 96 per cent. of the registered births, compared with 83, 88, 93, and 91, per cent. in the four preceding years. 1,530 births were notified by midwives, 270 by the Home for Mothers and Babies and Military Families Hospitals, and 556 by medical practitioners. 64 still-births were notified.

The Notification of Births Act was adopted on March 1st, 1908. There were 108 births last year which were not notified. Two midwives were warned for neglect to notify.

99 per cent. of births were notified in Woolwich Parish, 95 per cent. in Plumstead Parish, and 88 per cent. in Eltham.

A card of instructions is sent to the mother of every child at once on notification, and the Lady Health Visitor visits in the course of the next week or two those mothers who are considered to most need instruction. With very few exceptions the advice is welcomed.

It was pointed out that the code of instructions differed from one issued by the London County Council, and on further inquiry it was found that very considerable divergencies existed in the directions for infant feeding and management used in the Metropolitan Boroughs. On the initiation of your Medical Officer of Health, the Metropolitan Branch of the Society of Medical Officers of Health, in consultation with the Society of Infant Consultations and the principal experts on the rearing of infants, have drawn up a code of instructions which it is hoped will be used in all the Metropolitan Boroughs.

All mothers are invited to bring their infants for weighing and advice at the Town Hall, where an Infant Consultation is held every Wednesday afternoon by the Lady Health Visitor and Medical Officer of Health. (See also Health Visitor's Report.)

6. The following table gives the birth-rate of the Borough during the years 1901–5, 1906-10, 1911, and 1912, and, for the purpose of comparison, the corresponding rates of the neighbouring Boroughs, London and England :—

BIRTH-RATE.

	1901–5.	1906–10.	1911.	1912.
Greenwich Borough	27·6	26·5	24·9	25·0
Lewisham	25·7	23·3	21·2	20·4
West Ham	33·1	31·4	29·9	29·6
East Ham	33·8		25·8	25·8
Erith	34·1		25·7	23·6
London	28.2	26·51	25·5	24·7
England and Wales	28·2	26·0	24·4	23·8
Woolwich Borough	**29·2**	**25·3**	**23·2**	**22·3**

7. The following table gives the birth-rate for the Borough and each registration district for the four past Quinquennia, and last two years. Correction has been made for births in the Infirmary, Female Hospital, the Wood Street Home for Mothers and Babies and outlying institutions, and the births distributed to the parishes to which they properly belong.

East Plumstead and Eltham had the lowest birth-rate of the four registration districts.

	1891-1895.	1896-1900.	1901-1905.	1906-1910.	1911.	1912.
Woolwich Borough	32·5	30·2	29·2	25·3	23·2	22·3
Woolwich Parish ..	31·1	30·1	29·0	27·9	27·1	24·8
Plumstead—						
West	33·3	31·0	30·1	24·7	20·6	21·9
East					23·4	21·3
Eltham Parish ..	22·8	20·6	24·0	21·6	18·5	19·0

8. *Illegitimate Births.* 46 of the births registered were illegitimate, giving a rate of 17 per 1,000 births, compared with 24, 20, 24, 19, and 13, in the five preceding years. The illegitimate birth-rate in London was 38 in 1911.

MARRIAGES.

9. There were 983 marriages. The marriage-rate was 16·0, compared with 15·0 and 16·4 in the two preceding years. In 1911 the marriage-rate in London was 17·8.

DEATHS.

10. Table I. gives the gross and net deaths and death rates in 1912, and each of the past 10 years, and shows how the net deaths are arrived at.

The net death-rates (which are the only ones referred to unless otherwise specified) are obtained by distribution of deaths in public institutions, deaths upon which inquests were

held, and certain other deaths, to their proper locality, according as they occur outside or inside the Borough. But in order to institute a fair comparison between one district and another, it is necessary to further correct the death-rate for sex and age distribution, for it is obvious that a population containing a large number of young persons between the ages of five and thirty, when the death-rate is very low, should have a lower death-rate than one containing an excess of aged persons. The factor for the correction of the Woolwich death-rate is 1·0690.

11. The net deaths were 1,420, and the net death-rate 11·5, compared with 11·4 and 12·8 in the two preceding years.

12. By multiplying by 1·0690, the factor for age distribution, we get the corrected death-rate, viz. : 12·3, which rate should be used in comparing Woolwich with other places in which the death-rate is similarly corrected. The following table shows the net and corrected death-rates of Woolwich, compared with London and the adjoining Boroughs :—

	Net.	Corrected.
England and Wales	13·3 ..	13·3
95 Great Towns	13·8 ..	14·6
London	13·6 ..	14·3
Greenwich	13·1 ..	13·4
Lewisham	10·5 ..	10·8
West Ham	14·2 ..	14·5
East Ham	10·6 ..	11·3
Erith	11·89 ..	—
**Woolwich	**11·5 ..	**12·3**

Four Metropolitan Boroughs had a lower death-rate than Woolwich, viz. :—Hampstead, Lewisham, Wandsworth and Stoke Newington.

13. The following table gives the average death-rate in each registration district of the Borough during the past five quinquennial periods and during 1911 and 1912.

In 1912 Woolwich Parish had the highest death-rate and Eltham Parish the lowest of the four districts. The greatest decrease has occurred in Woolwich and Eltham Parishes.

	1886-1890.	1891-1895.	1896-1900.	1901-1905.	1906-1910.	1911.	1912.
Woolwich Borough	—	17·2	16·9	13·9	12·5	12·8	11·5
Woolwich Parish* ..	20·4	19·3	20·1	16·5	14·8	15·6	13·2
Plumstead—							
West	16·4	16·0	15·1	12·9	12·0	13·4	11·5
East						11·4	11·0
Eltham Parish ..	—	13·0	14·6	10·2	10·1	8·3	8·4
London	20·0	19·8	18·5	16·1	14·9	15·0	13·6

* Three years—1888, 1889 and 1890.

14. The following table gives the numbers dying at various ages in the past ten years from all causes, and the deaths at all ages from certain diseases not hereafter referred to :—

DEATHS—1903 TO 1912.

Year.	Age Period.											
	Under 1	1–5	5–10	10–15	15–20	20–25	25–35	35–45	45–55	55–65	65–75	75 and over.
1903 ..	399	155	30	26	20	50	110	141	142	187	212	165
1904 ..	479	174	53	24	25	44	105	143	158	182	182	194
1905 ..	366	139	47	32	38	40	121	140	156	154	206	166
1906 ..	396	139	50	25	31	38	110	139	174	191	205	168
1907 ..	372	207	37	28	43	52	75	129	148	160	202	162
1908 ..	298	134	51	21	36	33	96	123	134	166	212	212
1909 ..	240	163	55	20	40	37	93	130	165	183	244	167
1910 ..	240	105	35	25	26	34	81	127	131	202	201	203
1911 ..	273	136	37	27	24	36	85	132	168	211	214	218
1912 ..	201	119	30	24	40	26	82	123	135	234	187	219

Deaths from	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Apoplexy and all other diseases of the heart and blood vessels	212	215	227	216	217	243	268	248	265	270
Nephritis and Bright's disease.. ..	38	35	46	52	49	42	50	43	43	57
Respiratory diseases—all forms (except Phthisis)	269	285	264	277	209	234	250	236	206	216

It is seen that the number of deaths at all age periods under 55 was much below the average of previous years, and at several age periods the lowest recorded. Over 75, on the other hand, the number of deaths was the highest recorded. The number of deaths also from nephritis (kidney diseases), apoplexy, and diseases of the heart and blood vessels, was the highest recorded, while those from respiratory diseases were below the average.

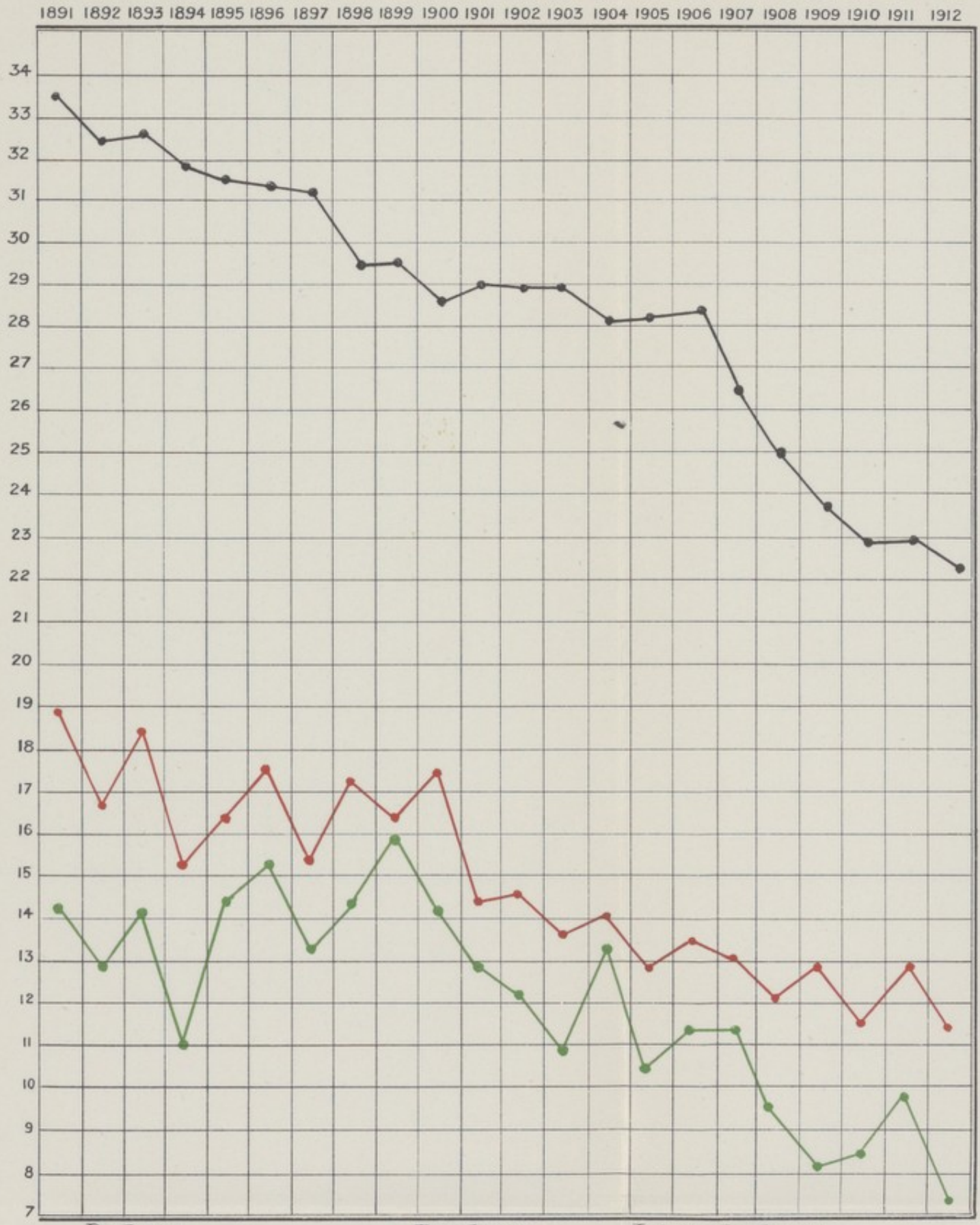
There has been a remarkable saving of life at ages under 55, and people are surviving to die in old age of diseases resulting from the wear and tear of life.

Table IV. shows the number of deaths in 1912, from 57 principal causes at various ages. Several alterations have been made in the table in order to include all the headings of the Table III. required by the Local Government Board

Appendicitis caused 18 deaths in 1912, compared with 3 and 8 in the two preceding years. Of the 18 deaths, 11 were males and 7 females ; 9 were between five and 20 years of age, and 9 over 20. There is a great increase in the number of deaths attributed to this disease, but it would be a mistake to think that actually more persons die of appendicitis than formerly. Illnesses formerly called peritonitis, enteritis, etc., are now called appendicitis, and as a fact there has been a marked reduction in the total deaths from inflammatory affections of the abdomen.

15. The chart on the opposite page shows graphically how the birth and death rates have varied in the past 21 years. It is seen that while the birth-rate has come down to 66 per cent. of what it formerly was, the death-rate has been reduced lower still, viz., to 61 per cent. of its figure in 1891.

Chart showing Death Rate and Birth Rate per 1000 population. and Infantile Death Rate per 1000 births 1891/1912.



16. The infantile death-rate has been reduced even more, viz., to 51 per cent., or roughly one-half, of what it was in 1891. These results have, it will be admitted, exceeded the expectations of the most sanguine sanitary reformers, and whatever objections may be made by the cautious and the economical in future, they cannot, in the face of such figures as the above, say that the deaths of the young are not to a large extent preventable. Fewer deaths mean less sickness; efficient sanitary administration causes the people to have life more abundantly.

INFANT MORTALITY.

17. The deaths under one year were 201, compared with 273 in 1911. The infant mortality (deaths under one year per 1,000 births) was 73, compared with 98 in 1911, and with 84 in 1910.

The following table gives the the infantile mortality in the Borough since 1901, compared with the neighbouring Boroughs, London and England :—

	1901–5.	1906–10.	1911.	1912.
Lewisham	112	92	104	70
Greenwich	107	112	129	84
West Ham	158	126	141	102
East Ham	131	106	119	71
Erith	112	80	70	69
London	10	114	128	90
95 Great Towns ..	—	127	140	101
England and Wales ..	135	115	130	93
Woolwich Borough ..	**119**	**97**	**98**	**73**

Four Metropolitan Boroughs had a lower infantile mortality than Woolwich, viz. :—Hampstead, Chelsea, Lewisham, and Stoke Newington.

18. The following table gives the infantile mortality during 1911 and 1912 and the five preceding quinquennia in the Borough and each registration district :—

	1886–1890	1891–1895	1896–1900	1901–1905	1906–1910	1911	1912
Woolwich Parish..	*151	157	170	134	109	110	94
Plumstead—							
West	121	120	132	113	91	104	53
East						82	81
Eltham	—	163	160	97	89	64	52
Woolwich Borough	—	**140**	**146**	**119**	**97**	**98**	**73**

* 1888, 1889 and 1890.

The infantile death-rate was the lowest yet recorded. The Eltham rate has not exceeded 70 since 1908. In 1911 Erith had the lowest infantile death-rate of any English town, viz. : 70.

19. Table IVA. gives full details as to the ages at death and causes of death of the 201 infants dying in 1912 under one year. It shows that 45 per cent. who died were under one month old, compared with 37 per cent. in the previous eight years. 52 deaths were from premature birth, compared with 61, 72, 41, 51, and 51, in the five preceding years. The number of deaths under one week in the past five years was 76, 55, 72, 62, and 61, respectively.

It is satisfactory to note that in the past four years the deaths from suffocation in bed have averaged only 4 a year, whereas in the four years 1904–7 they averaged 7.

The death-rate per 1,000 births from premature birth in Woolwich Borough was 18·9, compared with 14·0, 17·9 and 18·1, in the three preceding years. In London it was 18·5 in 1910.

There were 9 deaths of illegitimate infants. The death-rate of illegitimate infants under one year was 196 per 1,000 births, and that of legitimate children 71.

20. Compared with 1911, the past year had among infants fewer deaths from debility, meningitis, diarrhœa and enteritis, tuberculosis, congenital malformation, syphilis, convulsions and suffocation, and more from measles, whooping-cough, atelectasis, pneumonia and bronchitis. Deaths from overlying were 3, compared with 8, 5, 1, 5, and 5, in the previous five years.

21. *Still-Births.* 71 still-born children were buried in Woolwich and Plumstead Cemeteries, compared with 97, 93, 92, 92, and 74, in the five preceding years.

64 still-births were notified, compared with 54 and 68 in 1910 and 1911 respectively.

22. *Deaths between One and Five Years.* 68 deaths occurred between one and two years, and 51 between two and five. The corresponding figures in 1911 were 81 and 55 respectively. The prospect of life increases rapidly up to the age period 10 to 15, and then gradually falls to old age.

23. *Zymotic Death-Rate.* The number of deaths from scarlet fever, diphtheria, measles, whooping-cough, enteric

fever, and from diarrhœa and enteritis, under two years of age, was 95, and the death-rate per 1,000 population 0·77, compared with 1·27 in 1911.

The Zymotic death-rate has fallen steadily since 1901, and is now less than half what it was then.

24. *Inquests.* There were 105 inquests, compared with 141, 121, 128, 115, 105, 107, and 123, in the seven preceding years.

The following table gives particulars as to the cause of death :—

1.	Natural causes		57
2.	Alcoholism		2
3.	Accidental causes :		
	Burns and Scalds	1	
	Drowning	5	
	Falls	10	
	Fractures	4	
	Run over	5	
	Suffocation, overlying ..	3	
	Poison	1	
	Anæsthetics	—	
	Other accidental causes ..	6	
		—	35
4.	Homicidal causes :		
	Suicide	10	
	Murder and Manslaughter	1	
		—	11
			105

The "Accidental Causes" were 35, 49, 23, 42, and 44, in the five preceding years. The "Homicidal Causes" were 7, 15, 14, 6, and 11, in the same years.

25. *Deaths in Public Institutions.* Table I. shows the actual number of deaths occurring in public institutions in the Borough, viz. : 292, compared with 296, 289, 276, 272, and 326, in the five preceding years. These deaths nearly all occurred in the Poor Law Infirmary ; they were 20·6 per cent. of total deaths, compared with 19·4 and 18·8 in 1910–11. Table Ia. shows the institutions, inside and outside the Borough, receiving sick and infirm persons belonging to the Borough, and Table IV. shows the number of deaths from each disease occurring in public institutions. Over one-third of the total deaths occurred in the Infirmary or hospitals.

25a. *Poor Law Statistics.* The following figures from the "Abstract" published by the Guardians of the Woolwich Union have an interesting bearing on death and sickness statistics. They comprise the half-year ending Lady Day, 1911 :—

Average daily number of inmates in the Workhouse (including Receiving Home and Furze Lodge)	632
Do. patients in the Infirmary	274
Do. children in Cottage Homes	304
Number of vagrants relieved during the half-year	3,965

25b. *Notification and Admission to Hospital of Infectious Diseases.* Information as to the occurrence of disease is obtained partly by death returns, and partly by notifications of illness. The former are received from the Registrars of Births and Deaths ; the latter are made principally by medical practitioners, but also by school teachers, and very occasionally by other persons.

The following diseases were made compulsorily notifiable by the Public Health (London) Act :—Small-pox, cholera,

diphtheria, erysipelas, scarlet fever, typhus, typhoid or enteric fever, relapsing fever, continued fever and puerperal fever. Exposure of persons and articles infected with these diseases is penal, and disinfection can be enforced.

By order of the London County Council, approved by the Local Government Board, made under Section 56 of Public Health (London) Act, the following diseases have since been added to the list :—Polio-myelitis, cerebro-spinal fever, ophthalmia neonatorum, glanders, anthrax, and hydrophobia. In 1911 the Local Government Board made pulmonary tuberculosis notifiable by an order under Section 130, Public Health Act, 1875 (treatment and prevention of spread of cholera and any other epidemic, endemic, or infectious diseases), and under a similar order all forms of tuberculosis were made notifiable on February 1st, 1913. In the case of all these latter diseases the notification is for the information of the Health Department only ; exposure is not penal, nor disinfection compulsory. The object is to get such measures carried out voluntarily as the circumstances of the case demand.

The following notifiable diseases are *admitted* to the *Asylums Board Hospitals* :—Small-pox, scarlet fever, diphtheria, enteric fever, continued, typhus, and relapsing fevers, puerperal fever (under special conditions).

The following non-notifiable diseases are also admissible under special conditions :—Measles and whooping-cough. The special conditions are that pauper cases have the priority, and that the case is specially recommended by the Medical Officer of Health.

Your Council has also encouraged the voluntary notification of zymotic enteritis, or diarrhœa, by undertaking to pay the usual fees to medical men who notify such cases.

Children absent from school on account of measles and whooping-cough are notified by the school teacher or attendance officer. Thus some form of notification is in existence for, altogether, 19 diseases.

SMALL-POX.

26. Three cases of small-pox were notified, and one died. The first case was a sailor who was shipwrecked and landed on the coast of North Africa near Tangier, where he spent one or two days. It was probably there where he contracted the disease. He sickened immediately on his return, and had a severe confluent attack, which, owing to its severity, was not diagnosed by the doctor who first saw him. On the sixth day of illness another doctor was called in, who asked me to see the case, and small-pox was diagnosed and the patient at once removed to the hospital. Nine persons were found to have been exposed to infection, two of whom had had small-pox, and five were protected by re-vaccination. The other two refused re-vaccination, and caught the disease in a mild form. They were kept under daily observation and removed to hospital on the occurrence of the first definite symptoms.

27. The number of cases of small-pox notified in London was 4.

CHICKEN-POX.

28. 385 cases of varicella were notificd by school teachers, compared with 243, 327, and 232, in the three preceding years. 83 were under five years, 283 between five and ten, and 19 over ten years.

MEASLES.

29. There were 30 deaths from measles, giving a rate of 0·24, compared with 0·43, 0·16, and 0·23, in the three preceding years. The rate in London County was 0·40, compared with 0·57 in 1911.

30. Of the 30 who died from measles, 29 were under five years of age ; 17 were males and 13 females.

31. 775 notifications were received from school teachers, compared with 1,453, 519, 768, 396, and 801, in the five preceding years. The mortality per cent. of notifications was 3·9, compared with 4·8, 1·9, 7·2, 5·3, and 3·5, in the five preceding years.

22 cases were removed to the Fever Hospital on the certificate of the Medical Officer of Health that hospital isolation was necessary.

32. The following table gives the number of deaths and death-rates from measles for the past two years and four preceding quinquennia in each parish, and the death-rate in London :—

Year.	Woolwich.		Plumstead.		Eltham.		The Borough.		London
	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	Rate.
1891–5	100	0·49	29	0·51	Not recorded		49	0·51	0·59
1896–1900	170	0·81	36	0·57	Not recorded		70	0·67	0·57
1901–5	45	0·22	15	0·22	1	0·13	26	0·21	0·44
1906–10	83	0·43	88	0·23	13	0·20	184	0·30	0·40
1911	7	0·19	17	0·24	4	0·30	28	0·23	0·57
1912	12	0·32	17	0·24	1	0·07	30	0·24	0·40

It appears from this table that whereas from 1891–1900 Woolwich had a somewhat higher measles mortality than London, since that date the measles death-rate in Woolwich has greatly diminished, and was in the last two years less than half that of London.

33. Owing to the prevalence of measles, all unprotected children below the age of five were excluded from 22 London County Council schools in the Borough at various dates, and for periods differing from two to eight weeks (usually four weeks). The Medical Officer of the L.C.C. closed, or excluded unprotected children from, numerous classes. In many cases this was done immediately on the occurrence of one case. The period of exclusion or closure was usually for a few days only, in some cases for two weeks.

Measles is usually a disease which runs its course in less than two weeks, and, in children over five, occasions usually only a moderate amount of discomfort ; but it often leaves behind it tuberculosis, inflammation of the eyes, and other diseases, especially if there has been neglect in treatment. In children under five, measles is much more serious, and has a higher death-rate than scarlet fever. It follows, then, that public health administration must aim at postponing the infection till after the age of five and at securing, as far as possible, the hygienic treatment of those who are attacked.

In order to postpone the infection, every effort is made to prevent children under five from attending school when measles is prevalent, and, to secure the latter object, instructions as to sanitary measures for dealing with measles are left at the home of all notified cases and, where possible, the Woman Inspector pays a visit to enforce personally the directions.

These measures have now been in force in Woolwich for more than 10 years, and have no doubt had a large share in the reduction of the measles death-rate, which in the last twelve years was only one-half what it was in the period 1890 to 1900.

WHOOPING-COUGH.

34. There were 28 deaths from whooping-cough, compared with 15, 25 and 6, in the three preceding years. The death-rate was 0·23, compared with 0·20 and 0·05 in the two preceding years, and 0·22 in the County of London.

The following table gives the deaths and death-rates per 1,000 population since the Borough was formed, compared with London. There has been a marked reduction in death-rate in recent years :

	Woolwich.		*London.*
	No.	Rate.	Rate.
1901–5 (averages)	34	0·28	0·35
1906–10 ,, ...	26	0·21	0·29
1911	6	0·05	0·23
1912	28	0·23	0·22

439 cases were notified by school teachers, compared with 361, 377, and 41, in the three previous years. 97 were under five years of age, 332 between five and ten, and 10 over ten.

An order was issued by the Local Government Board giving permission to the Asylums Board to admit to their hospitals children under 14 suffering from whooping-cough, on the recommendation of the Medical Officer of Health. No cases were admitted during the year.

Instructions printed on cards are left at houses where cases are notified by school teachers. The instructions were printed in the Annual Report for 1910.

It is satisfactory to notice a further great reduction in the mortality of this disease in the three years during which this practice has been in force.

SCARLET FEVER.

35. There were 467 cases of scarlet fever notified (deducting 7 cases of mistaken diagnosis), equivalent to a rate of 3·80 per 1,000 population, compared with 4·09 in 1911. This rate is the lowest since 1905.

36. The following table shows the case-rates of scarlet fever in the Borough and each registration district during the past twelve years, compared with London :—

	Average. 1901–5.	1906–10.	1911.	1912.
Borough	3·15	5·90	4·09	3·80
Woolwich Parish	2·99	5·66	2·89	2·41
Plumstead West	3·24	6·33	3·77	4·96
„ East			7·51	4·88
Eltham Parish..	3·21	4·94	2·09	2·64
London County	3·57	4·22	2·32	1·76

37. Table 3 gives the age distribution, the number in each parish, and the number removed to hospital. West Plumstead was most affected.

38. *Deaths.* There were 4 deaths, giving a death-rate of 0·03 per 1,000 population, compared with 0·02 in 1911, 0·09 in the five years 1906–10, and 0·19 in the ten years 1891–1900. The death-rate in London was 0·04, compared with 0·04 in 1911 and 0·10 in 1906–10. It appears, then, that although proportionately more cases are notified in Woolwich, the death-rate from this disease is lower than in London. The case mortality (or deaths per cent. of notifications) was 0·8, compared with 2·6 and 0·6 in the two preceding years.

It appears from the Annual Report of the Medical Officer of Health to the London County Council that in the five years 1905–9 only seven Metropolitan boroughs had a lower death-rate from scarlet fever than Woolwich.

39. *Hospital Isolation.* Of the 474 cases, 420 (or 88 per cent.) were removed to one of the Fever Hospitals, compared with 85, 86, 94, 90, and 80, per cent. in the five preceding years. 7 cases were reported, after observation at hospital, not to be scarlet fever.

The percentage of cases removed to hospital was again very high. A large proportion of notified cases are removed to hospital, not because they cannot be sufficiently isolated at home, but because the parents cannot afford the cost of medical attendance and nursing. Much might be saved to the rates if there was power to provide this at the public cost.

40. *Return Cases.* There were 37 cases (or 8 per cent. of notifications) in which infection was attributed to patients recently returned from hospital, compared with 30, 38, 58, 27, and 29, in the five preceding years. The interval between the return of the infecting case and commencement of illness varied from three to 27 days. Of the infecting cases, 10 had some form of rhinitis on or after their return, 2 otorrhœa, 1 sore throat, and 1 measles.

As a rule, the children returning from hospital are quite well at the moment of leaving, but in many cases develop some nasal discharge on arriving home, or within a few days. Illustrative cases of this were given in the 1908 Report.

The parents of all children with any discharge are recommended to obtain medical attendance, and the district nurse is

often requested to visit and syringe the ear or nose. Parents are always advised as to treatment, and children suspected to be infectious are kept at home and from association with other children.

The hospital superintendents forward the names of any children discharged while still suffering from rhinorrhœa.

41. *Home Isolation.* 25 certificates of efficient home isolation were given to enable men to continue their employment in the Arsenal, and so obviate unnecessary removal to hospital, compared with 11, 13, and 18, in the three preceding years.

In the Annual Report for 1911 a comparison was made between home and hospital isolation, showing that, whereas there were only 1·6 per cent. of failures in home isolation, there were 4·6 per cent. in hospital isolation. Failure means the occurrence of secondary cases attributed to the primary case.

42. *Other Sources of Infection.* In addition to return cases, a probable source of infection was found in 86 cases. In 36 cases infection was attributed to other inmates of the house. Some of these were never notified, and had no distinct symptoms of scarlet fever, but a history of sore throats made it probable that they had had a slight attack of this disease.

43. In 7 cases infection was attributed to friends and neighbours, in 32 cases to school attendance, in 5 to the Fever Hospital, and in 6 to other hospitals. In some of the latter cases the illness followed operations for adenoids.

Schools. No schools were specially affected.

44. The Annual Report for 1905 contained a special Report on a Statistical Investigation into School Incidence of Scarlet Fever and Diphtheria during the ten years 1896-1905.

45. Statistics were given in the Annual Report for 1908, as to the date of calling in medical attendance in scarlet fever. Some remarks were made in the same Report as to the high prevalence and comparatively low death-rates of scarlet fever and diphtheria in Woolwich.

In the 1910 Annual Report I described an investigation into the incubation period of scarlet fever. The result was to show :—(1) That the period of incubation varies from one day to six months ; (2) That it is barely the majority of the total cases in which incubation is under seven days ; (3) That in a considerable proportion of cases it is over four weeks ; and (4) That the days from the second to the fifth after exposure are those in which most secondary cases occur.

DIPHTHERIA.

46. 381 cases of diphtheria were notified (excluding 48 cases of mistaken diagnosis), compared with 240, 147, and 204, in the three preceding years. The case-rate (number of cases per 1,000 population), corrected for cases of mistaken diagnosis, was 3·09, compared with 1·88, 1·15, and 1·68, in the three preceding years, and 2·15—the average of the ten preceding years. 28 of the cases were bacteriological—*i.e.* had no symptoms.

47. There were 20 deaths, compared with 25, 5, and 11, in the three preceding years. The death-rate was 0·16,

compared with 0·09 in 1911 and with 0·14, the average of the five preceding years. The London death-rate was 0·10, compared with 0·14 in 1911, and 0·14 in the five preceding years.

If the diphtheria death-rate which prevailed from 1896–1900 had been in operation last year, there would have been 60 deaths from this disease last year, instead of 20, the actual number.

48. 162 cases were in Woolwich Parish, 155 in West Plumstead, 88 in East Plumstead, and 24 in Eltham. The following table shows the case-rate in each registration district (not corrected for mistaken diagnosis) in the past seven years, compared with London and the Borough :—

	1901–5.	1906–10.	1911.	1912.
Borough	1·71	2·20	1·68	3·09
Woolwich Parish ..	1·63	2·34	2·40	4·38
Plumstead Parish ..	1·87	2·40	W. 1·19 E. 2·33	3·79 2·81
Eltham Parish ..	1·62	2·22	2·30	1·71
London	1·90	1·63	1·64	1·57

49. 346 cases, or 81 per cent. of notifications, were removed to hospital, compared with 89, 89, 81, and 92, per cent. in the four preceding years. A certificate of efficient home isolation was given in 12 cases (30 in 1907, 7 in 1908, 1 in 1909, 1 in 1910, and 3 in 1911).

The case mortality was 5.2 per cent., compared with 6·3, 5·5, 10·4, 3·4, and 5·4, in the five preceding years.

In several cases there were no throat symptoms, but discharge or soreness of the nose. Such cases rarely have

medical attendance, and would escape detection if other cases in the family or school did not lead to a search for the source of infection. The search for, and detection of, these nasal cases is one of the most important duties of the Public Health Department.

In the second half of the year there was a widespread outbreak of a very mild form of this disease. At first the cases were specially associated with Wood Street and St. Mary's Schools, as in 1911, but later on the disease prevailed in all parts of Woolwich and Plumstead, and several cases occurred at Goldie Leigh. In addition to the notified cases (many of which never complained of illness), 66 cases (of which 37 occurred from August to December) were found to be carriers of the infection in their throat or nose without having any symptoms. 59 carrier cases with or without slight symptoms were discovered by your Medical Officer of Health from August to December. The usual active steps were taken—school absentees were visited and medical attention obtained; children in affected classes were medically and bacteriologically examined, as were also a large number of contacts and suspected cases, and all cases found to be infectious strictly isolated. Printed precautions against diphtheria were, as in 1911, distributed all over the Borough by the agency of school children (see Annual Report, 1911). The very mildness of the affection made it increasingly difficult to detect the cases, and so remove the sources of infection.

50. The following table gives details as to cases notified, cases bacteriologically examined, and deaths in each of the five later months of the year. The large number of cases with Klebs Loffler bacillus but no symptoms, and the small number with Hoffman's bacillus, is noteworthy.

Number of Contacts and Suspected Cases of Diphtheria Examined by the Medical Officer of Health, from August 1st, 1912, to December 31st, 1912:

Month, 1912.	Positive.		Negative.		Hoffmans		Total Number examined by M.O.H.	Total Number of Cases Notified.	Total Number of Deaths.
	Symptoms.	No Symptoms.	Symptoms.	No Symptoms.	Symptoms.	No Symptoms.			
August ..	2	6	2	15	1	2	28	16	2
September ..	1	3	5	12	3	5	29	43	3
October ..	1	1	10	38	—	—	50	40	2
November ..	2	13	3	22	3	7	50	55	4
December ..	6	24	4	15	—	—	49	89	1
	12	47	24	102	7	14	206	243	12

51. *Mistaken Diagnosis.* 48 cases, or 11 per cent. of notifications, were, after removal to hospital, stated to be not diphtheria. The percentage of the three preceding years was 10, 10, and 15, respectively.

52. *Source of Infection.* In 151 cases a probable source of infection was noted, viz.:—In 71, other inmates of the house were known or suspected to be the source; in 47, schools; 13, neighbours and friends; 9, return cases; 3, general hospitals; and in 9 the infection was due to the Fever Hospital. 5 of the return cases were due to one returned case: this was a boy who had sore nares-rhinorrhœa on discharge; a bacteriological examination showed the presence

of diphtheria bacilli. Another returned case was found to have Hoffman's bacillus.

53. *Bacteriological Diagnosis.* 1,231 (705 in 1911) swabs were sent to the Lister Institute to be examined for the presence of diphtheria bacillus. In 320 (92 in 1911) the true Klebs Loffler bacillus was found (in 1 of these Hoffman's bacillus co-existed with the Klebs Loffler bacillus); in 128 (101 in 1911) Hoffman's bacillus was found, and 783 were found free from either the Klebs Loffler bacillus or Hoffman's.

Of the 1,231 swabs examined, 406 were taken from school children by myself. Of these, 95 contained the true Klebs Loffler bacillus (so-called positive cases). Most of these were contacts seen about ten days after notification of a primary case for the purpose of preventing pupils returning to school in an infectious state. Others were examined with the object of finding possible sources of infection, *e.g.*, where the first case notified in a house was a child not attending school; others again were children suspected to have diphtheria by the School Teacher, the Attendance Officer or Sanitary Inspector. In most cases the bacillus had disappeared within two or three weeks, but in 4 children they were found for over a month, and in 1 case Klebs Loffler bacillus persisted for four months, when the child's tonsils were removed and the bacilli disappeared. The child's education was seriously interfered with. So far, no satisfactory means has been found of destroying the germs in carrier cases.

27 positive cases had symptoms of running or sore nose or sore throat; these were notified and sent to hospital or strictly isolated. Positive cases without any symptoms were excluded from school and from mixing with other children outside the house.

ENTERIC FEVER.

54. There were 19 cases of enteric fever, not including 1 case of mistaken diagnosis notified as enteric. The case-rate was 0·15, compared with 0·08, 0·06, and 0·10, in the three preceding years. For the ten years 1892–1901, the rate never fell below 0·41. The case-rate in London was 0·16. Out of 20 cases notified, 13 went to hospital.

55. There were 2 deaths from this disease, giving a death rate of 0·02. The death-rate in London was 0·03.

In the preceding five years the death-rate in Woolwich was 0.02, and in London 0·04.

56. The following are the cases notified in each parish during the past twelve years :—

	Average. 1901–5.	1906–10.	1911.	1912.
Woolwich	12·6	7·6	10	10
Plumstead	21·2	11·4	W. 3 E. 2	4 2
Eltham	8·6	2·8	1	4

57. 6 cases occurred in one family. The first was the mother, who was treated in a general hospital for pneumonia. On her return home her four children sickened one after another with enteric. The mother was consequently examined bacteriologically, and the typhoid bacilli found. She was accordingly notified and sent to the Fever Hospital, but was, in spite of protest, discharged while still excreting the disease germs. A week later the husband began with enteric. This woman was therefore responsible for infecting

the whole family. She has been specially warned as to steps she should take to avoid infecting other persons, and will be kept under observation. She is what is called a "carrier case," though fortunately discovered to be such at an early stage. 2 other cases were infected by a "carrier case" of long standing. She had been in India, where she had "fever" some two or three years ago. She was acting as child's nurse in Eltham, and the baby, age 10 months, sickened with enteric. No other source being discovered, the nurse's blood was examined, and was found to give a Widal reaction—proof that she had had enteric at some time. Her excretions were then examined, and typhoid bacilli found, showing that she was still infectious. Written instructions were given, which the Medical Officer of Health personally enforced by word of mouth to the girl and her father. She ceased to be a nurse, but went as a general servant in a place where the mistress prepared all the food. On close inquiry, it was found that on one occasion the mistress had cleansed a w.c. which the servant had fouled, and thus became infected. This girl has now left the district, but the Medical Officer of Health of her present residence has been notified.

Of the remaining cases, 1, a sailor on a ship from Buenos Ayres, was presumably infected by foul water taken on in the River Plate. 1 was probably infected by oysters, 2 by periwinkles, and 1 possibly by fried fish.

58. *Bacteriological Diagnosis.* 11 samples of blood were sent to the Lister Institute to be examined for Widal's reaction. A positive result was obtained in 5.

DIARRHŒA, OR ZYMOTIC ENTERITIS.

59. The deaths from diarrhœa and enteritis (all forms) under two years of age were 10, or 1·98 per 1,000 living under two. The rate for London was 12·29. The total number of deaths from these diseases at all ages was 15. Owing to change in nomenclature, the diarrhœa death-rate cannot be strictly compared with that of previous years, but the rate has probably never been so low before as it was last year.

Notification. Voluntary notification of zymotic enteritis commenced in Woolwich in 1905. The Council ordered its trial for one year, and then for three years. The results of four years' notifications were fully reported (see Council's Minutes, February 11th, 1909), and they were so satisfactory that it was resolved to continue the voluntary notification indefinitely, and, from and including 1909, to extend the period of notification to June and October, thus making the disease notifiable during five months, instead of three.

129 cases were notified in the past year. This is the lowest number notified in any year since notification commenced except in 1907, when 93 cases were notified. 9 cases were notified in June, 81 in July, 28 in August, 6 in September, and 5 in October.

The fatality (deaths under two years, from June to October, per 100 notified cases under two) was 3·6, compared with 6·7, 8·8, 14·6, and 13·8, in the four preceding years. As pointed out in previous Reports, the fatality has been highest when the prevalence was greatest, and *vice versa.*

60. The following tables give full particulars of the cases notified each year since notification commenced :—

NOTIFIED CASES OF ZYMOTIC ENTERITIS.

TABLE A.

Age and Sex.

NOTIFICATIONS.

Year.	Total.	M.	F.	Under 3 months.	3 to 6 months.	6 to 9 months.	9 to 12 months.	Tot. under 1 year.	1 to 2 years.	2 to 5 years.	Over 5 years.
1905	212	112	100	18	39	34	29	120	56	25	11
1906	366	187	179	31	52	52	59	194	99	39	34
1907	93	48	45	6	18	14	11	49	23	3	18
1908	173	96	77	11	28	25	27	91	55	12	15
1909	149	79	70	12	10	20	22	64	35	18	32
1910	102	54	48	5	10	12	13	40	31	17	14
1911	866	434	432	28	69	79	89	265	240	171	190
1912	129	61	68	4	4	16	6	30	26	22	51
Tot. 1905–1912	2090	1071	1019	115	230	252	256	853	565	307	365

TABLE B.

CLEANLINESS OF HOUSES.

Year.	Total houses of which information was obtained.	Clean.	Dirty.	Indifferent.
1905	205	166	39	—
1906	360	289	71	—
1907	93	53	13	27
1908	156	51	22	83
1909	145	89	11	45
1910	100	57	6	37
1911	697	520	24	153
1912	104	83	2	19
Tot. 1905–12	1860	1308	188	364

TABLE C.

DIET OF CASES UNDER 1 YEAR AT TIME OF NOTIFICATION.

	1905	1906	1907	1908	1909	1910	T't'ls 1905-1910	1911	1912
Breast only ..	15	12	4	9	4	5	49	24	3
Breast and other foods	10	28	9	10	15	6	78	43	7
Hand-fed only	92	150	37	59	42	28	408	179	17
No information	5	4	1	13	2	1	26	16	3
	122	194	51	91	63	40	561	262	30

TABLE D.

NUMBER OF CASES NOTIFIED EACH WEEK, WITH MEAN TEMPERATURE OF 3 FEET GROUND THERMOMETER DURING WEEK, JULY TO SEPTEMBER QUARTER.

Cases.

Year.	1st Week.	2nd Week.	3rd Week.	4th Week.	5th Week.	6th Week.	7th Week.	8th Week.	9th Week.	10th Week.	11th Week.	12th Week.	13th Week.
1905	3	3	10	8	24	34	27	36	30	12	11	9	4
1906	1	3	5	5	13	38	65	56	27	52	58	28	15
1907	2	1	0	5	2	7	5	7	17	10	8	12	17
1908	5	4	2	6	11	27	24	30	20	13	7	10	13
1909	—	4	1	2	4	7	14	24	23	18	11	7	8
1910	3	3	0	2	4	3	8	9	11	9	5	6	9
1911	—	—	7	18	57	82	189	207	156	48	57	17	10
1912	4	10	48	19	4	11	3	6	5	2	2	—	1
Total	18	28	73	65	119	209	335	375	289	164	159	89	77

Temperature.

1905	60·68	62·17	63·59	64·21	64·19	63·04	62·62	62·37	61·33	60·97	59·96	58·47	57·43
1906	59·16	60·68	61·29	62·26	63·25	64·00	63·80	62·80	63·08	63·83	62·89	60·80	59·24
1907	56·71	57·00	58·53	59·67	60·10	60·34	60·84	60·26	59·67	59·45	59·43	58·77	58·18
1908	61·34	60·97	60·47	62·15	62·65	62·18	61·26	60·88	59·51	58·02	57·11	57·86	58·21
1909	57·21	57·59	59·39	59·49	59·68	61·25	62·79	61·48	60·19	58·70	57·87	57·60	57·11
1910	58·21	57·99	58·82	59·06	60·12	60·48	61·13	61·26	60·59	59·68	58·71	58·01	57·35
1911	59·80	62·16	63·31	65·17	66·11	66·43	67·06	66·39	65·36	64·63	64·19	61·74	59·94
1912	59·73	60·75	63·65	62·22	63·09	61·57	60·48	60·22	59·74	59·08	58·01	57·38	56·20
Average	59·10	59·91	61·13	61·78	62·40	62·41	62·50	61·96	61·18	60·54	59·77	58·95	57·96

TABLE E.

DEATHS FROM DIARRHŒA AND ZYMOTIC ENTERITIS classified by Ages during the five months ending 31st October, 1905–1912.

Year.	*Under 1 Year.*				*Over 1 Year.*			
	1–3 Months.	3–6 Months	6–9 Months.	9–12 Months.	1–5 Years.	5–60 Years.	Over 60 Years.	Total for each Year.
1905	9	16	15	11	6	2	2	61
1906	9	17	25	14	9	1	6	81
1907	1	9	6	2	4	—	—	22
1908	6	9	9	7	6	—	1	38
1909	4	2	2	1	1	—	—	10
1910	2	3	1	1	1	1	—	9
1911	19	27	21	15	18	5	11	116
1912	—	2	1	—	—	—	—	3
						Total	1905–12 ..	340

NOTE.—In the above figures, "Enteritis" and "Gastro-Enteritis" are excluded up to and including 1910; after 1910 they are included.

TABLE F.

DIARRHŒA, INFANTILE MORTALITY, AND TEMPERATURE OF SUMMER QUARTER IN LONDON AND WOOLWICH.

		Average 1901–4	Average 1905-10	1911			1912
Annual Death Rate from Diarrhœa and Enteritis in summer quarter per 1,000 living.*	London ..	2·27	1·40	3·82	Annual Death Rate from Diarrhœa and Enteritis (under two years) per 1,000 births.	London ..	22·71
	Woolwich	2·30	0·97	2·87†		Woolwich	2·92
Max. weekly average Temperature of 3ft. ground thermometer in 13 weeks of summer quarter	—	62·72	62·61	67·06	Max. weekly average Temperature of 3ft. ground thermometer in 13 weeks of summer quarter	—	63·65
Average Temperature of 3ft. ground thermometer in summer quarter	—	60·84	60·30	64·01	Average Temperature of 3ft. ground thermometer in summer quarter	—	60·24

* In and after 1911 deaths under two years only are included.

† If deaths over two years were included, this figure would be 3·64, and the figure for London would also be increased.

TABLE G.

ZYMOTIC ENTERITIS AND METEOROLOGY

Summer Quarter.

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Number of cases notified ..	—	—	—	212	366	93	173	120	72	848	115
Number of Deaths (Diarrhœa)* ..	27	29	136	56	81	11	28	8	4	109	2
Mean Temperature of air ..	59·1	59·0	60·08	60·6	62·4	58·87	59·3	58·7	57·2	65·1	58·0
Mean Temperature 3ft. below ground	59·68	60·18	61·45	61·62	62·08	59·15	60·35	59·25	59·34	64·01	60·24
Mean Humidity	75	77	72	75	70	74·6	77	80	80	65	76
Number of days on which rain fell	—	46	34	33	26	32	38	46	37	22	39
Rainfall in inches	5·91	12·32	4·88	5·65	3·78	3·77	8·15	7·43	6·08	2·94	5·64
Number of hours bright sunshine	485	541	671	529	697	516	532	530	432	824	399

* Enteritis included in 1911.

Deaths. Table F shows the death-rate from diarrhœa in London and Woolwich in the summer quarter of the years 1901-12. Notification (adopted in Woolwich in 1905) has not been similarly carried out in any other London borough. Last year it was made compulsorily notifiable in Greenwich. The table indicates that whereas, before notification, Woolwich had a slightly higher diarrhœa mortality than London, since notification commenced the Woolwich death-rate has decreased to a marked extent, both absolutely and compared with London. The mild weather of August and September is no doubt the chief cause of the low diarrhœa mortality of last summer.

ERYSIPELAS.

61. There were 87 cases of erysipelas notified, compared with 103, 89, and 82, in the three preceding years. There were 3 deaths. The case-rate was 0·71, and the death-rate 0·02, compared with 0·01, 0·02, and 0·07, in the three preceding years. The London case-rate was 0·91. The London death-rate in 1911 was 0·04.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

62. In consequence of the serious epidemic of this disease in certain towns of Ireland and Scotland, cerebro-spinal meningitis was made, in 1907, a notifiable disease under the Public Health (London) Act, by the London County Council. 1 case was notified in the Borough in each of the two years 1907–8, but none in 1909. 1 case was notified in 1910, 1 in 1911, and 1 in 1912. This case was fatal.

ANTERIOR POLIO-MYELITIS.

63. This disease, commonly known as infantile paralysis, was made compulsorily notifiable by an Order of the London County Council under S. 55, Public Health (London) Act.

The Order came into force in September, 1911.

3 cases were notified in 1911, and 3 in 1912. There were no deaths.

The disease is believed to be due to the presence of a germ, and to be conveyed from one person to another by the nasal secretion. Treatment is important to prevent the contraction and wasting of the limbs which frequently ensues.

PUERPERAL FEVER.

64. There were 2 cases of puerperal fever notified, compared with 6, 6, 9, 7, and 16, in the five preceding years. There was 1 death. The case-rate per 1,000 births was 0·73, and the death-rate 0·36 per 1,000 population, and these rates were 0·02 and 0·01 respectively. The London case-rate and death-rate per 1,000 births in 1911 were 2·70 and 1·27 respectively. No lower rates have been recorded in Woolwich, but in 1903 the rates were the same.

In the ten years 1891–1900, the case-rate was 0·07, and the death-rate 0·03. In 1901–5 the case-rate was 0·06, and the death-rate 0·03, and in 1906–10 the case-rate was 0·05, and the death-rate 0·016. Thus in the past five years the death-rate has fallen to nearly one-half what it was in the previous quinquennium, and the case-rate has been reduced. The Midwives Act was passed in 1902, and the Home for Mothers and Babies was established in Woolwich in 1905.

INFLUENZA, BRONCHITIS, PNEUMONIA.

65. Influenza caused 25 deaths, compared with 30, 29, 36, 39, and 19, in the five preceding years. Bronchitis and pneumonia caused 208 deaths, compared with 298, 228, 245, 232, and 200, in the five preceding years. The deaths from these causes under five years were 70, compared with 86, 66, and 55, in the three preceding years.

TUBERCULOSIS.

66. *Deaths.* There were 165 deaths from tuberculous disease, giving a death-rate of 1·34, compared with 1·65, 1·80, 1·68, 1·46, and 1·65, in the five preceding years.

67. The following table gives the number of deaths from each of the various forms of tuberculosis in the past ten years, and also the deaths from simple meningitis :—

	Average. 1901–5.	1906–10.	1911.	1912.
Tuberculous Meningitis ..	20·0	22·8	20	23
Simple Meningitis	22·0	15·0	16	13
Tuberculosis of Intestines and Peritoneum ..	13·0	10·8	5	5
Tuberculosis (other forms)	20·8	22·2	29	16
Phthisis	192·0	151·4	146	124

68. The deaths from phthisis were 124, giving a death-rate of 1·01, compared with 1·25, 1·27, 1·22, 1·08, and 1·20, in the five preceding years. This rate is the lowest recorded. The reduction in the death-rate since 1901–5 represents a saving of 68 lives last year from consumption. The following table gives the death-rate from phthisis in each parish during

the quinquennia 1891–5, 1896–1900, 1901–5 and in 1906–10, 1911 and 1912, compared with London. The greatest reduction was in the Parish of Woolwich.

	1891-5.		1896-1900.		1901-5.		1906-10.		1911.		1912.	
	No.	Rate.	Aver. No. per year.	Rate.	Aver. No. per year.	Rate.	Aver. No. per year.	Rate.	No.	Rate.	No.	Rate.
Woolwich Parish ..	—	2·80	92	2·23	89	2·15	56	1·46	66	1·80	48	1·30
Plumstead {West / East}	—	1·78	92	1·42	97	1·34	87	1·20	W 41 / E 33	1·02 / 1·07	31 / 37	0·76 / 1·18
Eltham Parish ..	—	—	9	1·28	6	0·63	8	0·64	6	0·45	8	0·57
The Borough ..	—	—	193	1·74	192	1·56	151	1·22	146	1·20	124	1·01
LONDON	—	1·88	—	1·80	—	1·57	—	1·33	—	1·32	—	1·34

69. To judge of the decrease of tuberculosis, it is necessary to consider carefully the figures given above for the various forms of disease. It is seen that the number of cases of simple meningitis has considerably diminished, while that of tuberculous meningitis has increased. The number of the two together has diminished. There can be little doubt that cases which were formerly called simple meningitis are now certified as tuberculous meningitis, and that the latter has really decreased. The decrease of abdominal tuberculosis is steady and marked.

The real diminution of tuberculosis other than phthisis is no doubt greater than appears on the surface. The reduction of phthisis in recent years is very marked and satisfactory.

Deaths from acute and miliary tuberculosis are now classified with phthisis and pulmonary tuberculosis.

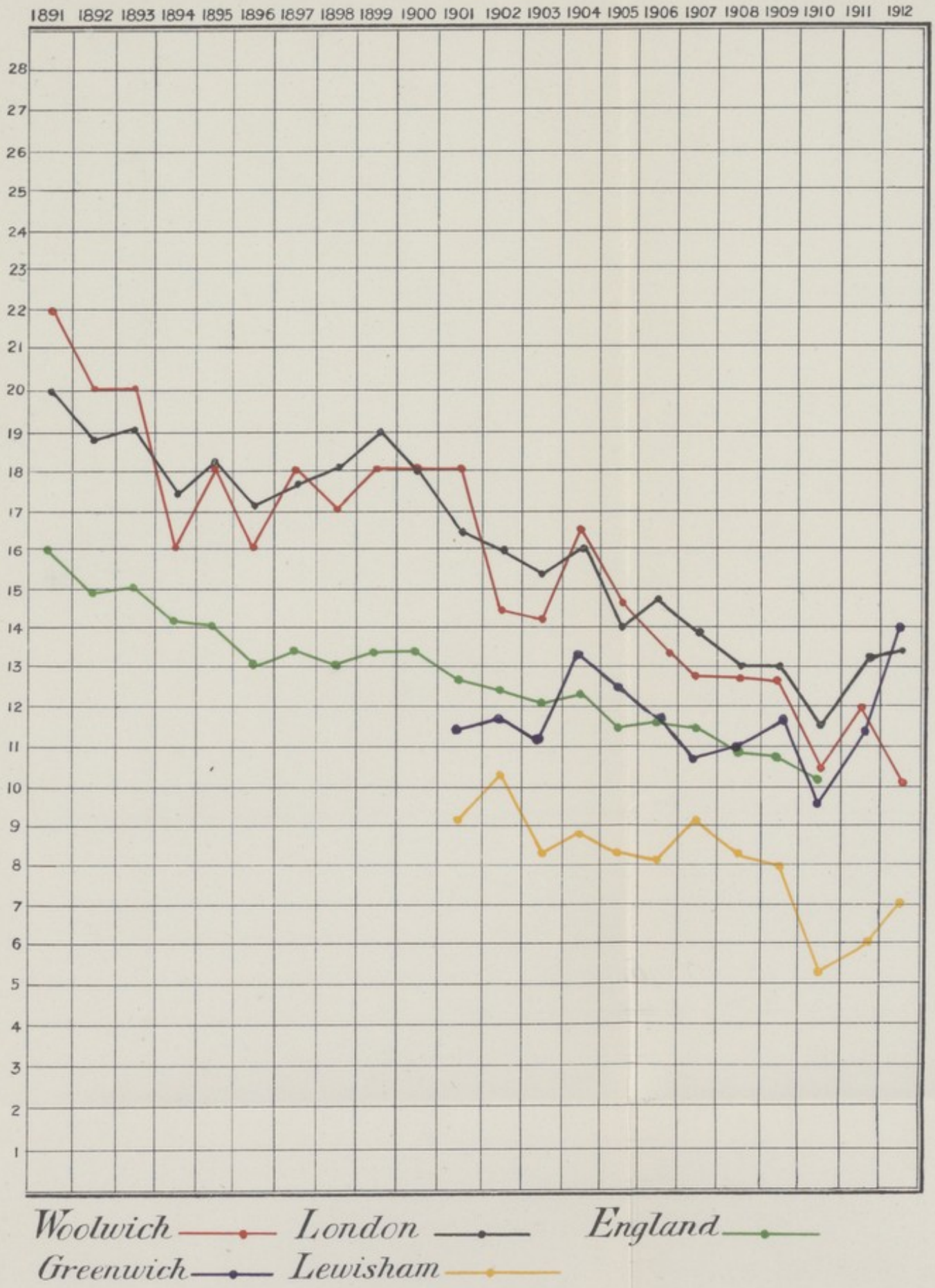
70. The chart on the opposite page shows the decline of phthisis in Woolwich, compared with Greenwich, Lewisham, London and England. Woolwich, which started the highest in 1891, has now a lower death-rate than Greenwich and London.

71. 88 of those who died from phthisis were males, and 36 females. The diminution of deaths has been greater among females than among males.

72. *Notifications.* Voluntary notification of phthisis has now been in force in the Borough for nine years. In 1909 notification of cases attended by Poor Law Medical Officers was made compulsory by an Order of the Local Government Board, made under Section 130, Public Health Act, 1875. This Section authorises the Local Government Board to make such regulations as they may see fit with the view to the treatment of persons affected with cholera or any other epidemic, endemic, or infectious disease, and preventing the spread of such diseases. The penalty for neglecting or refusing to obey any regulation made under this Section is £50.

Under the same Section, the Board, in the spring of the year, made it compulsory on the Medical Officers of all Public Hospitals and Public Dispensaries to notify cases of pulmonary tuberculosis attending such institutions, and in November, by further regulations, made the notification of this disease compulsory on all medical practitioners. The regulations also authorise local authorities to supply all such medical or other assistance, and all such facilities and articles, as may reasonably be required for the detection of

CHART SHOWING PHTHISIS DEATH RATE 1891/1912.



the disease, and for preventing the spread of infection, and removing conditions favourable to infection, and they may appoint such officers as may be necessary.

Under a further order all forms of tuberculosis were made notifiable in January, 1913.

689 cases were notified last year, compared with 154, 206 196, and 375, in the four preceding years. 30 of these were in the Woolwich and Eltham Poor Law Infirmaries ; 20 others were notified by the District Medical Officers of the Poor Law Union, 14 by the Medical Officers of the Royal Arsenal, 457 from hospitals and dispensaries, including 427 from the Woolwich Tuberculosis Dispensary, 10 by school doctors, and the remainder by private medical practitioners.

£53 14s. 9d. was paid during the year for the notification of phthisis.

Duration. Of the 689 cases notified during 1912, at least 69 have since died, and of 375 notified during 1911 at least 116 have since died (February, 1913).

73. The source of infection of the notified cases was probably as follows :—

Family or Personal—Father, 65 ; mother, 64 ; brother, 49 ; sister, 33 ; husband, 14 ; wife, 8 ; other members of family, 29 ; friends, lodgers, etc., 11	273
Workshop and Office	22
Public House	23
Navy and Army	2
Milk	4
Club	1
School	4
Undetermined	360

74. *Age Distribution.* The following table gives the age of notified cases :—

Under 1	1–2	2–3	3–4	4–5	5–15	15–25	25–45	45–65	65 & over
1	2	4	4	10	232	133	234	65	4

Sex—369 Males, 320 Females.

Duration of Illness before Notification :—

Under 1 year.	1–2.	2–3.	3–4.	4–5.	5 & over.
280	73	57	37	34	116

75. *Occupation.* Of the 598 cases from which information was obtained, the occupations were as follows :—

Outdoor—			
Official, Soldiers, etc.		16	
Mechanical		8	
Carmen and Costers		11	
Labourers, Porters—Dock and all others		42	
		—	77
Indoor—			
Clerks		19	
Mechanical		45	
Printers		3	
Bakehouses		1	
Laundry		—	
Domestic—Private	32	41	
Public-House	9		
Labourers		37	
School Children and Teachers ..		222	
Housewives		105	
All Others		48	
		—	521
			598

76. *Bacteriological Diagnosis.* Sputum from 151 cases of suspected phthisis was examined at the Lister Institute, and tubercle bacilli were found in 38 cases. The number of examinations for the five preceding years was 171, 175, 179, 210, and 191, respectively. In addition, the Medical Officer examined 628 specimens of sputum at the Tuberculosis Dispensary, which saved a considerable expense to the Borough Council.

77. In my Annual Report for 1904 some figures were given as to the "Public-house as a Source of Infection" and "Chronic Tuberculosis in Children" (see p. 50 of the Report).

78. Disinfection was performed by the Public Health Department at 194 premises, compared with 146, 166, and 152, in the three preceding years. Disinfection was performed after the death of the patient, and also after removal to hospital, sanatorium, or other occasion of the bedroom being vacated.

79. *Sanatorium Treatment.* Since the year 1904 the Council has had an arrangement with Dr. Carling, the Superintendent and late proprietor of the Maitland Cottage Sanatorium, Peppard, by which the Council maintains beds at the Sanatorium, paying a fixed inclusive charge of 30s. a week for each bed when occupied by an adult, 25s. for children, and 20s. a week when unoccupied. Dr. Carling, during the year 1909, made arrangements to vest the Sanatorium in trustees, and put it under control of a Management Committee appointed by the Governors, of which your Medical Officer of Health is a member.

For further particulars as to the constitution and regulations see page 842 of the Council's Minutes, 1909.

80. *Numbers Treated.* The Council now maintains 7 beds ; at present 5 are occupied by women, 1 by a man, and 1 by a child. Previously the majority of the beds were allotted to men, but since the establishment of the Tuberculosis Dispensary there has been a much greater demand for female beds, and since the provision of sanatorium treatment by the London Insurance Committee there has been less need to provide for insured men, who are now generally referred to the Insurance Committee.

The 7 beds were kept occupied, without more than two or three days' intermission, throughout the year. The male applicants numbered 45 (47 in 1911), and the female 31 (27 in 1911). 45 patients were admitted, compared with 41, 35 and 40, in the three preceding years. Of the 45 patients admitted, 27 were males and 18 females. Of those who left in 1912, 10 stayed for one month, 15 for two months, 11 for three, and 3 for five months. With few exceptions, these returned home in improved general health and with a decided increase in weight. Most showed very great improvement and were able to resume their ordinary duties.

80A. *Nature of Cases.* It would be a mistake to suppose that the majority of the cases sent were very early ones ; the contrary is nearer the truth. No case of course is sent which is likely to die at the Sanatorium, and acute cases, *i.e.*, those with temperatures over 100°, are not sent until the temperature has come down. But, of the 40 patients admitted in 1911, the disease affected both lungs in

22, and one lung in an advanced stage (consolidation) in 4 cases. Tubercle bacilli were found in 29 cases. As patients are only received for one month in the first instance there is advantage in sending somewhat advanced or chronic cases, who, though their lives may not be prolonged very much, will learn the open-air treatment, and thus lessen the danger of infecting others on return.

81. The following table, recommended by the Local Government Board, shows the condition in each subsequent year of the survivors from the cases treated in each year since patients were sent to Peppard. The difference between the sum of the numbers dead and the survivors, and the number discharged, in any year, shows the cases lost sight of.

Number of patients discharged in each year who were (*a*) alive but not well enough to work ; (*b*) at work, seeking work, or performing their ordinary duties, in January of each of the undermentioned years :—

Year.	Number Discharged.	Dead, Jan., 1913	1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.		1912.		1913.	
			a	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*
1903	1	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1904	11	8	—	—	2	6	1	5	1	5	1	5	2	4	1	4	2	2	2	—	1	—
1905	17	12	—	—	—	—	1	13	2	9	2	5	—	4	—	4	—	3	—	3	—	2
1906	29	14	—	—	—	—	—	—	5	24	2	20	5	15	1	14	—	14	1	12	—	9
1907	38	20	—	—	—	—	—	—	—	—	9	24	2	22	7	15	2	13	1	13	2	9
1908	31	15	—	—	—	—	—	—	—	—	—	—	6	21	6	17	4	12	2	10	1	10
1909	39	13	—	—	—	—	—	—	—	—	—	—	—	—	3	25	2	25	6	18	3	15
1910	32	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	25	7	18	4	16
1911	39	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	17	4	14
	237	107	1	—	3	6	2	18	8	38	14	54	15	66	18	79	14	94	33	91	15	75

The above table accounts for all patients who left the Sanatorium up to December 31st, 1911. Out of the 237 who have left over one year, 75 are now well and at work, 15 are unwell, 107 have died, and 40 have been lost sight of.

Some half-dozen of those recorded as at work are employed at the Sanatorium in various capacities, receiving board and a small wage. Of the 40 patients not accounted for, a large proportion have emigrated, and are believed to be well and at work in Canada, Australia, South Africa, etc.

82. The mortality of cases leaving in 1911 has been greater than in previous years. The warm summer of that year was prejudicial to consumptives, and this may partly account for the larger number of deaths. The patients were selected with the same care as is usually employed, and the cases which proved fatal mostly returned home decidedly improved in health. No doubt if they could have remained at hospital for one or two years, instead of two or three months, they would have done better ; but my experience does not lead me to think that a stay of four or five months has very great advantage over one of two or three, which is quite long enough for educational treatment. Satisfactory cures, too, are often obtained after two months' treatment.

Many cases have now been in regular work for five, six, and even seven years, after spending only two or three months at Peppard ; several mothers of families have continued for similar periods to look after their families and perform their household duties.

The fact that so many relapse as the years go on indicates that sanatorium treatment is desirable earlier, and that more

healthy occupations and conditions of life are required on return home. Suitable work, a guaranteed income, and the provision of a garden shelter, would probably improve the sanatorium results 50 per cent.

83. *The Economy of Sanatorium Treatment.* This subject was fully dealt with in my Annual Report for 1909.

84. *Shelters for Consumptives.* Although open-air treatment for consumption can best be carried out in the first instance at a Sanatorium, there are many cases for which it is desirable such treatment should be tried who cannot be admitted to any Sanatorium. These are sometimes too advanced for it to be wise to send them to a distance, but open-air treatment would certainly prolong their life, diminish infection, and in some cases sufficiently restore them as to enable a resumption of ordinary duties. Many cases, too, who have had temporary treatment at a Sanatorium find it difficult or impossible to continue the open-air treatment at home as is desirable. For such cases the plan of using an open-air shelter, erected in the garden, has been tried with success. The use of such shelters also prevents infection in the home.

In July, 1910, the Public Health Committee decided to obtain two shelters, to be lent to needy consumptives for use in their garden or back yard. After inspecting shelters used by Dr. Lyster, of Great Baddow, at that village with great success, a simple construction was devised by the Chief Sanitary Inspector which is easily transportable, will exclude wind and rain, is durable, and at the same time enables the patient to be always virtually in the open air. These

shelters can be closed by canvas or wooden shutters on each side, or can be entirely open above 2 feet 6 inches from the ground all round. Nine shelters of this type have been provided (two in 1912), and two cheaper shelters made in Street (Somerset), making a total of 11 now in use—eight by men and three by women. The cost of the Woolwich shelter is about £9, and the cost of the Street shelter £4.

These shelters were at first lent free, but it has been found more satisfactory to charge a small rent, varying from 1s. 6d. to 3d. a week, according to means. Only those who have no source of income are now exempted from payment. The weekly call to collect the rent insures that the shelter is being used. Shelters were lent to 16 persons last year, all being men. Five of these had the shelter free, one paid 1s. 6d., and the remainder 6d. a week. Two have been occupied by married women for over eighteen months.

The results have been eminently satisfactory. There is no doubt that several lives have been prolonged, including lives of wage-earners and mothers, which are so valuable to their children. In many cases, too, the shelters have been of the greatest value in enabling an advanced and infectious case to be isolated from other members of the family; without the shelter the patient would have had to occupy the same bedroom, if not the same bed, as other persons.

Three bedsteads with bedding are also lent to needy cases too poor to provide such.

84A. *Tuberculosis Dispensary.* A Dispensary for the treatment of tuberculosis was opened in September, 1911.

The following extracts are taken from the Annual Report of the Dispensary :—

" The Woolwich Tuberculosis Dispensary is one of a number of similar institutions founded under the auspices of the Central Fund for the Promotion of the Dispensary System for the Prevention of Consumption in London.

The Dispensary is conducted on the following lines :

(*a*) It shall employ one or more medical officers, who shall not only see patients at the Dispensary, but visit them in their homes.

(*b*) It shall employ a specially trained nurse, who shall care for the patients at the Dispensary and at their homes.

(*c*) It shall only treat cases of Tuberculosis.

(*d*) There shall be no letters of recommendation, and all treatment shall be free. Persons found able to pay for treatment shall be referred to private practitioners.

(*e*) Any person who is already under medical care shall be treated only after the consent of his medical attendant has been obtained.

The Woolwich Dispensary started at a conference called by the Public Health Committee of the Borough Council on March 21st, 1911. This was followed by a meeting held in the Town Hall on Friday, April 7th, when 30 people were present, representing various societies and public bodies.

A Provisional Committee was formed to start the work. This Committee consisted of the Mayor (Alderman S. H. Cuff), the Chairman of the Guardians (Alderman Syer), Councillor W. H. Dawson, the Rev. A. M. Pickering, Dr. Sidney Davies (Medical Officer of Health), Dr. J. S. Williamson, Miss H. E. Grinling, Messrs. G. Bishop, J.P., J. Houlihan, C. E. S. Phillips, E. Radford, R. G. Thomas, and the Rev. L. Jenkins Jones. The two latter were appointed Hon. Treasurer and Hon. Secretary respectively, and Mr. Dawson President of the Council, and Dr. Davies, Chairman of the Executive Committee.

It was decided to accept the offer of the Borough Council to let the old Milk Depot in Maxey Road, Plumstead, at a nominal rent, and to convert it, according to plans made by Mr. J. Rush Dixon (Borough Engineer), into premises suitable for a dispensary.

In June, Dr. Latimer J. Short was appointed Medical Officer of the Dispensary, to give his whole time to the duties and in September Miss Z. Longstaff was appointed Nurse.

Work on a small scale actually began on September 21st, 1911, and the formal opening of the Dispensary took place on October 5th at a large meeting presided over by the Mayor.

An appeal was made for funds to carry on the work, and the Central Fund promised to pay 75 per cent. of the expenses of the work.

The work grew at a rate very much greater than had been anticipated, and, in fact, before the Dispensary had been open one year no less than 2,000 persons were examined by the Doctor, nearly one-half of whom proved either tuberculous or ' suspect.'

So overwhelming did the work become that in June—only eight months from the start—it was recognised that there was more than Dr. Short could do. Accordingly, the Central Fund Committee was asked for further help. This help was generously given, and it became possible to appoint a second Doctor and a second Nurse. Dr. Jessie Campbell was appointed Assistant Medical Officer, and Miss Stevens, Second Nurse. It also became necessary to have a full-time Dispenser, and Staff-Sergeant Guthrie (late R.A.M.C.) was appointed.

At the end of September Dr. Short resigned, to the great regret of the Committee, on being appointed Tuberculosis Officer for Somersetshire. Dr. A. J. Williamson took his place temporarily ; recently this appointment has been made permanent.

It is important to point out that the function of the Dispensary as a preventive agent is not the least part of its utility. The examination of 'home contacts'—*i.e.* people living in the same house with definitely tuberculous patients—formed a very large part of the doctors' work ; 842 were examined for this reason, of whom no less than 291 were either affected or suspected of the disease. Of these, very many had the disease in such an early stage that a complete cure is very likely ; but for the Dispensary many of them might have developed the disease in a much more serious form as time went on.

The relations of the Dispensary with the local medical men have been very pleasant, and most of the latter have co-operated with the Dispensary in one way or another. Two members of the Executive Committee are appointed by the local Medical Society.

Dr. Short, the Medical Officer, reported as follows :

" In the twelve months, 2,074 new patients were examined, their subsequent attendances being 4,591, making a total of 6,665 consultations by the Medical Officers for the year.

Of the 2,074, 1013 were accepted for watching and further examination, and of these 884 were found to be either definitely tuberculous or so suspicious that their immediate treatment was essential.

Home Treatment.

Over 60 were so ill as to need treatment at home for more than one week at a time, some for the whole year, and many of these required daily visits. There are still 28 such cases under treatment.

Visits.

The Doctor paid 1,898 visits, and the Nurses 2,501, in the year.

Microscopy.

We also examined microscopically 628 specimens of sputum for tubercle bacilli.

Contacts.

The importance of this branch of the work may be imagined from the fact that it involved the minute examination of 842 patients in the year, and that 291 of them were found to be either definitely or probably tuberculous.

This systematic examination of all contacts of a known case is responsible for saving numbers of valuable lives,

for our figures indicate that the disease had been caught from another member of the family in no less than 63·5 per cent. of cases. In children (under 15) there was a definite history of tuberculosis in the family in 329 out of 448 cases, or 73·5 per cent.

TUBERCULIN.

Tuberculin has been used in about 10 per cent. of the cases treated, and always with good effect.

It would have been much more freely used if more cases could have been watched sufficiently closely. Sir R. W. Philip's method was followed, and no harm was observed from the cases being ambulant and mostly in regular work. By the help of St. Mary's Hospital a mixed vaccine was used with amazing results for an advanced and dangerous case, who has now been able to resume full work."

85. 21 Spitting-flasks were supplied at cost price, 6d., compared with 32, 23, 19, 25, and 20, in the previous five years.

HISTORY OF WOOLWICH TUBERCULOSIS ADMINISTRATION.

(1894—1911.)

The following table gives the dates of the chief steps taken by the Public Health Department in combating Tuberculosis :—

1894. Disinfectants supplied gratis by Plumstead Vestry for use in Consumption.

1896. Leaflet of Precautions printed by Plumstead Vestry and circulated through medical men, nurses, clergy, and District Visitors.

1898. The Medical Officer of Health, Plumstead, recommended Notification of Consumption.

1900. Notices printed and distributed at public-houses, workshops, etc., warning persons against spitting.

1901. Voluntary Notification of Consumption and Disinfection of infected rooms begun.

1902. Pocket spittoons supplied cost price (6d.).

1903. Borough Council commenced to maintain beds at Peppard Sanatorium.

Letters sent to public-house managers asking them to arrange for wet cleansing of floors, and avoid dry sweeping, which helps to cause the excessive mortality from Phthisis among public-house servants.

1906. Guardians commenced Open-air Treatment of Phthisis at Woolwich Infirmary.

1910. Open-air Shelters for night use of Consumptives in their own gardens, furnished on loan by the Borough Council.

1911. Woolwich Tuberculosis Dispensary started.

CANCER.

86. There were 119 deaths from cancer (malignant tumour), giving a death-rate of 0·97, compared with 0·83, 0·75, 0·93, 0·88, and 1·02, in the five preceding years. 63 of the deaths were in males, and 56 in females. 11 only of the deaths were in persons under 45. The highest mortality was in Woolwich Parish. The London death-rate was 1·05 in 1911. More than one-third of the deaths occurred in public institutions.

87. The following table shows the sex and region affected in all cases of malignant disease :—

CARCINOMA.

Seat of Primary Disease :	*Male.*	*Female.*
Head and face	1	1
Mouth, jaw, and tongue.. ..	6	1
Pharynx, œsophagus, larynx, and neck	13	1
Pleura, lung, mediastinum ..	1	1
Stomach and pylorus	10	5
Intestines (excluding rectum) ..	2	5
Peritoneum and omentum .	—	1
Rectum and anus..	10	6
Liver	7	8
Kidney and bladder	1	1
Genital organs	1	11
Breasts	—	11
Prostate and external urinary organs	1	—
Pancreas	2	1
Undefined	3	3
	58	56

SARCOMA.

	Male.
Lung	1
Limbs	1
Intestines	1
Vertebra	1
Undefined	1
	5

87A. The apparent increase of carcinoma in recent years makes it desirable to give special attention to the statistics of this disease. The deaths from carcinoma have been classified under the organs affected since 1903, and the following table shows the result for males and females separately :—

Carcinoma.

Males.

Seat of Primary Disease.	Aver. 1903–5.	Aver. 1906–10.	1911.	1912.
Head and face	1·7	1·2	3	1
Mouth, jaw, and tongue ..	4·0	4·8	5	6
Pharynx, œsophagus, larynx, and neck	5·0	8·6	11	13
Pleura, lung, mediastinum ..	0·3	0·4	—	1
Stomach and pylorus.. ..	5·3	10·4	8	10
Intestines (excluding rectum)	2·7	3·2	5	2
Rectum and anus	4·0	4·8	5	10
Peritoneum and omentum ..	0·7	—	—	—
Liver	8·0	6·4	8	7
Kidney and bladder	—	1·6	2	1
Genital organs	—	—	—	1
Prostate & external urinary..	2·7	0·8	2	1
Pancreas	0·3	1·4	4	2
Pelvis and groin	0·3	—	—	—
Undefined	0·3	2·2	6	3
	35·3	45·8	59	58

Females.

Seat of Primary Disease.	Aver. 1903–5.	Aver. 1906–10.	1911.	1912.
Head and face..	0·7	1·4	1	1
Mouth and tongue	1·7	0·6	—	1
Pharynx, œsophagus, larynx, and neck	1·7	1·4	2	1
Pleura, lung, mediastinum ..	0·7	0·6	1	1
Stomach and pylorus.. ..	5·7	7·6	7	5
Intestines (excluding rectum)	0·7	4·2	6	5
Rectum and anus	3·0	6·8	5	6
Liver	7·3	8·6	6	8
Peritoneum and omentum ..	0·3	0·4	1	1
Kidney and bladder	—	1·2	2	1
Genital organs..	16·0	13·6	15	11
Breasts	9·7	8·6	9	11
Limbs	—	0·4	—	—
Pancreas	—	0·2	1	1
Pelvis and groin	0·7	—	—	—
Undefined	0·7	1·6	1	3
	48·9	57·2	57	56

Last year had, with the exception of 1911, the highest recorded cancer death-rate, the increase being much greater in males than in females. There was some slight increase under most of the organs tabulated, but chiefly from carcinoma of the mouth, throat, and digestive organs.

On the whole, since 1903, the most notable increase has been in cancer of the digestive organs. Whether this increase is real or due to improved diagnosis it is impossible to say.

On the other hand, there has been a decrease of cancer in the female genital organs. This decrease may possibly be the result of more early detection of, and operation on, the disease owing to the advancement of surgery. Cancer of this part is more easily diagnosed than that of the stomach and intestines, and the fact that the former appears to have decreased, and the latter increased, strengthens the opinion that the apparent increase of cancer is largely due to improved diagnosis.

It is seen from these two tables that cancer affects the mouth, tongue, pharynx, œsophagus and larynx of men, much more than similar organs of females, and to a small extent men have more cancer of the stomach than women.

Causes of Cancer. Owing to the apparent increase of this painful disease, much interest has been aroused in the attempts to discover its cause. So far no great addition to our knowledge on the subject has been made. It has been long known that the disease is frequently a result of local irritation, as in the case of irritated sores producing cancer of the skin, chimney-sweeps' cancer, and smokers' cancer of the lip and tongue. Apart from the irritation of a pipe, smoke

has been alleged to be the cause of cancer, as also alcoholic liquors, tea, excessive food and meat ; and constipation has been suggested as a cause of cancer of the bowels. I have personally investigated the habits of persons suffering and dying from cancer during the past twelve months, with a view to seeing what amount of truth is contained in these allegations. The inquiries sought to elicit habits of five to ten years' duration before death, so as to ensure that they had not been caused or modified by the illness which was the cause of death. The following are the results, so far as they affect the deaths occurring last year :—

79 cases were inquired into, viz. : 46 men and 33 women ; 8 of these were under 50 years of age, 26 between 50 and 60, 26 between 60 and 70, and 19 over 70.

As regards alcohol and smoke, it was possible in most cases to learn to some extent the amount consumed by the patient, and an arbitrary standard was taken as the limit of moderation consistent with health, viz. : the daily consumption of 1½ pints of beer or its equivalent, an ounce of spirits being considered equivalent to ½ pint of beer. The standard for smoke was taken as 2oz. of tobacco per week. Persons consuming more than these quantities have been classed as excessive drinkers or smokers.

With regard to tea, food and meat, it was only possible to accept the opinion of the person giving the information as to whether the patient used these articles in excess or otherwise.

As regards the action of the bowels, the cases were divided into those who had a daily action and those whose bowels did not act as often as once in a day.

17 of the patients were stated to be excessive users of alcohol, 5 took the standard quantity, and 46 below the standard. There were thus 25 per cent. of excessive alcohol drinkers.

29 smoked excessively, 1 consumed an average quantity, and 41 below the average, giving 41 per cent. of ex cessive smokers.

20 were excessive tea drinkers, 32 moderate, and 13 small tea drinkers, giving 31 per cent. of excessive tea drinkers.

29 were large eaters, 31 moderate, and 12 small eaters, giving 40 per cent. large eaters.

25 were large meat eaters, 25 moderate, and 18 small meat eaters, giving 37 per cent. of large meat eaters.

39 had a daily action of the bowels, 3 were doubtful, and 15 suffered from constipation, giving 68 per cent. of persons with a regular action.

These figures are, of course, valueless for statistical purposes, unless compared with persons under similar circumstances who did not die of cancer. So far it has been found difficult to obtain particulars of a sufficient number of persons to make a satisfactory comparison, but inquiries were made as to 31 persons dying from other causes than cancer at ages over 50, or still alive at advanced ages. 21 of these were men and 10 women. Only 1 was under 60, and 19 were over 70.

5 took alcohol excessively, 1 took the standard quantity, and 25 below the standard, giving 16 per cent. of excessive drinkers.

6 smoked excessively, and 26 were non-smokers, or small smokers, giving 19 per cent. excessive smokers.

7 took tea excessively, 17 were moderate tea drinkers, and 5 were small tea drinkers, giving 24 per cent. excessive tea drinkers.

16 were large eaters, 13 moderate, and 2 small eaters, giving 52 per cent. large eaters.

9 were large meat eaters, 13 moderate, and 7 small meat eaters, giving 31 per cent. large meat eaters.

24 had a regular daily action of the bowels, 2 were doubtful, and 1 suffered from constipation, giving 89 per cent. persons with a regular action.

It will be seen that comparing persons who suffer from cancer with those living at advanced ages or who died at equally advanced ages from other causes, the great differences are as to habits with respect to alcohol, smoke, and the action of the bowels, but specially with regard to smoking—the percentage of large smokers among those dying from cancer being more than twice as high as among the other persons. These differences are still more marked with respect to alcohol and smoking if only those who died from cancer of the mouth and throat are considered. Of 10 persons dying from cancer of the lips, tonsils, fauces and larynx, jaws and cervical glands, 5 took alcohol excessively, 1 an average quantity, and 4 less than the average, while 9 smoked excessively and 1 moderately.

As regards cancer of the bowels, out of 19 persons dying from cancer of the intestines, cæcum and rectum, only 9 had

a regular daily action, and 10 had constipation. It would appear then that, as far as the figures go, the inquiry indicates what is already known to many persons that the excessive use of alcohol and tobacco predisposes to cancer, and especially cancer of the mouth and throat, and constipation predisposes to cancer of the bowels.

The inquiries will be continued with a view to obtaining statistics based on larger numbers.

ALCOHOLISM.

88. There were 5 deaths from alcoholism, and 14 from cirrhosis of the liver, making a total of 19 deaths probably due to alcohol, compared with 18, 21, 20, 23, and 26, in the five preceding years. In addition to these, there were 395 deaths from diseases of the brain and nervous system (excluding meningitis) heart, blood vessels, and kidneys, of which a large proportion was certainly caused directly or indirectly by alcohol. The deaths from these causes in the five preceding years were 327, 346, 335, 343 and 377, respectively. The increase last year was chiefly in deaths from diseases of the kidneys.

It is unsatisfactory to find that the deaths due to alcoholism do not show as steady a diminution in Woolwich as in the rest of England.

89. The death-rate from alcoholism and cirrhosis of the liver was 0·15 in the Borough, and in 1910, 0·13 in England and Wales.

SYPHILIS.

90. There were 3 deaths from syphilis, compared with 9, 7, 10, 7, and 6, in the five preceding years. All of these occurred in public institutions. All were males. One was an infant under two years. There were, in addition, 30 deaths from general paralysis, tabes dorsalis (locomotor-ataxy) and aneurism, diseases which are considered to be usually due to syphilis, compared with 25 in 1911. These figures are far from representing the total mortality caused by this disease.

OPHTHALMIA NEONATORUM

(*Inflammation of the Eyes of the New-Born*).

91. This disease was made compulsorily notifiable by an Order of the London County Council, dated March, 1911, which came into force on March 13th. The Order is under Section 55, Public Health (London) Act. No other Section of the Act is applied, so there is no requirement to disinfect or penalty for exposure, the main object of notification being to secure effective treatment of the infant affected. Most cases notified are the infants of women attended in their confinement by midwives who are inspected by the County Council. The Borough Council Health Visitor also inspects in all cases, and reports whether proper treatment is being carried out. The Guardians have indicated their willingness to facilitate immediate removal to the Infirmary when satisfactory home treatment was impracticable. 20 cases were notified, of which 1 was removed with the mother to the Infirmary, and 3 were treated as hospital out-patients. The others were all reported to be receiving effectual treatment at home. The district nurses visited 2. In 4 cases the ophthalmia was clearly due to venereal disease in the parents.

METEOROLOGY.

(*See Table* 8.)

92. The temperature in the Winter quarter of the year was high ; 11 weeks had an average temperature above the normal, and 2 below. The Spring quarter had a temperature somewhat above the average, but the Summer quarter was exceptionally cool and wet ; it had 10 weeks below the average, and only 3 above ; its average temperature was 58·0°F., which is 2·1 deg. below the average. In the Autumn quarter the temperature was above the average in 8 weeks, below in 5.

The lowest temperature, 19·1°F., occurred in the week ending February 3rd, and the highest, 90·0°F., occurred in the second week of July.

The rainfall was 24·98in., about the average ; most rain, 8·32in., fell in the Autumn quarter. The Summer quarter had 5·64in. of rain, most of which fell in August.

The largest number of deaths in one week (43) took place in the same week as the lowest temperature occurred, viz., the first week of February. The smallest number of deaths (15) was in the third week of August.

(*See also under Diarrhœa.*)

PART II.

ADMINISTRATION.

WATER SUPPLY.

1. The supply is now constant throughout the Borough. A water tower was constructed in 1911 which enabled all houses on Shooters Hill to have a constant supply.

Plumstead Well. In previous years I have repeatedly called attention to the unsatisfactory condition of the water supplied by the Plumstead Well.

From the Annual Report of the Water Examiner on the Metropolitan Water Supply for the year ending March 31st, 1912, it appears that 81 samples were taken of the Plumstead Well in the year for chemical analysis. The ammoniacal nitrogen averaged ·0000, the albuminoid nitrogen ·0017, the chlorine 5.66, the total hardness 38.25, and the temporary hardness 15.12. In all these particulars the Plumstead Well compared unfavourably with the other Kent Wells, the chlorine and hardness far exceeding that of all the other deep wells. The results of last year differ little from those of preceding recent years. The chlorine found in 1912 was slightly lower than the amount reported in 1907, when it was 6·07, but the hardness was higher than ever, and much in excess of all the other Kent wells.

For bacteriological examination 114 samples were taken, and an average of 9.0 microbes per cub. centim. were found present. This was slightly above the average for the whole of the Kent Wells, but compares favourably with the number of microbes present in 1907, viz., 14·3.

The excess of chlorine and of hardness are the worst features of the Plumstead water, and call for further investigation and explanation on the part of the Water Board. Apart from the liability to dangerous pollution suggested by the high percentage of chlorine, the excess of hardness is a tax on the consumers in the respect of necessitating the use of an extra amount of soap and labour for washing purposes, and extra expense and labour from the furring of kettles, boilers, etc.

It is satisfactory to know that this water is being kept under careful observation, and that so far Dr. Houston considers there is no evidence of any undesirable pollution.

Houses with Water-Supply Outside the House. At a recent meeting of the Committee I was requested to report as to houses in the Borough, the water-supply of which is situated outside the house. I reported as follows and have also included houses without a separate water-supply. " Without a detailed examination of the whole of the houses in the Borough it is not possible to say exactly how many houses are unprovided with a supply inside the house, but the Sanitary Inspectors know pretty well where these houses are situated, and from the information I have obtained from them I find that there is a total of 85 houses in which there is not a separate supply of water inside the house, in the sense that the occupiers must go outside the house in order to obtain water.

In 34 houses the water-supply is situated in a scullery or wash-house situated in the yard at a short distance from the house.

29 houses have no separate supply.

33 have a supply outside the house and situated in the open.

In one case—Harrington Buildings—five houses depend upon a water-supply situated in a wash-house at one end of the cottages. These cottages have been twice under the consideration of the Health Committee. Previously they were dependent on one tap in a yard at one end of the row. By the action of the Committee a good supply of water with sink and a copper was provided at the other end, but since that, without my knowledge, the original tap has been removed. I consider the supply of water is again insufficient and recommend that action be taken to improve the water-supply of these houses.

The Public Health (London) Act does not specifically require a separate water-supply, nor a supply inside the house, but it requires a proper and sufficient supply of water. Apparently it is left for a magistrate to determine what is a proper and sufficient supply. A new house cannot be occupied unless certified by the Sanitary Authority to have a proper and sufficient supply. It may be taken that all houses built since the passing of the Act are provided with a separate supply inside the house. With the exception of Harrington Buildings, most of the houses without a separate supply have a supply of water for every two houses, and the supply is usually situated in a yard just outside the houses.

Where the water-supply is in a wash-house or scullery there is generally a proper sink provided, but where it is in an open yard there is no sink, but usually a gully underneath.

Apart from Harrington Buildings, I think it would be difficult to prove a nuisance from want of a supply of water at any of the 29 houses with no separate supply.

The following is a list of the houses with no separate supply :

20, 21, 22, The Avenue, Sandy Hill Road ;
1, 2, 3, Thomas's Cottages, Princes Road ;
4, 5, 6, 7, 8, Thomas's Cottages, Princes Road ;
2, 3, 4, 5, 6, Harrington-buildings, Chapel Street ;
5, 6, 7, 8, Railway Cottages, Samuel Street ;
4, 5, 6, 7, Limbrey's Buildings, Station Road ;
2, 3, 4, 5, 6, 7, Thrift Cottages, Henry Street.

In the following the supply is outside the house and is situated in the open :—

3, 4, 5, 6, 7, 8, 9, Kates Place, N. Woolwich ;
25, 26, 27, 28, The Slade ;
No. 1 Hut, Harrow Manorway ;
The Cot, Harrow Manorway ;
The Cottage, Harrow Manorway ;
No. 21 Hut, Harrow Manorway ;
No. 22 Hut, Harrow Manorway ;
1, 3, 5, 7, Barnfield Road ;
55, Artillery Place ;
10, Sims Buildings, Station Road ;
1–8, Coopers Place, Eltham ;
14 and 15, Brentwood Cottages, Eltham ;
2, Lorne Terrace, Eltham.

2. *Water supply in tenement-houses.* An additional tap and sink were supplied on at least one upper floor of 18 tenement-houses, under the Public Health (London) Act, Sec. 48, previously to the coming into force of the London County Council (General Powers) Act, 1907, by which a suitable water supply can be required on each separately occupied floor of a tenement-house. Under this Act an additional supply was required and provided at 25 houses in 1908, 30 houses in 1909, 3 in 1910, 2 in 1911, and 6 last year. 26 of these houses were in the Dockyard and St. Mary's Wards, 13 in River Ward, 24 in St. George's Ward, and 2 in Eltham. There were three prosecutions in 1909, which were recorded in full in the Annual Report for that year.

3. Defective and foul storage cisterns were found and remedied at 55 houses, compared with 35, 51, and 34, in the three preceding years. At 29 houses the supply was found insufficient or temporarily cut off, and the necessary steps taken for obtaining a proper supply.

FOOD AND DRUGS ACT.

4. 490 samples were submitted to the Public Analyst, and 13, or 2·7 per cent., were found to be adulterated, compared with 4·3, 2·5, 3·4, 3·3, and 4·6, in the five preceding years, and 8·5 in the Metropolis in 1910. The very small percentage of adulterations in the past five years is noteworthy.

45 of the samples taken were informal. 2 of these were found to be adulterated.

5. Proceedings were taken in 8 cases, and convictions were obtained in all.

6. A total of £35 2s. 6d. was imposed in fines, and £6 8s. 6d. in costs.

7. 318 of the samples were fresh milk. 11 of these, or 3.5 per cent. were adulterated, compared with 4.8, 1·7, 3·7, 4·8, and 7·2 in the five preceding years.

40 samples were bought as butter, and all were found to be genuine. 10 samples of coffee were taken, and 2 contained 52 and 56 per cent. respectively of chicory. The first of these was an informal sample; the second was purchased from the same vendor; proceedings were taken, and a fine of 20s. imposed.

Table 18 shows the other 122 articles analysed. Not one of these was found to be adulterated.

During the past five years, 7 samples of coffee out of 69 taken have been found adulterated, and one of cocoa, out of 61. But no adulteration was discovered in 26 samples of vinegar, 25 of flour, 13 of sugar and sweets, 70 tea, 44 mustard, 36 jams, 17 condensed milk, and 96 drugs, nor in any one of the smaller number of several other articles, other than milk and butter, taken for analysis. From the Local Government Board Annual Report for 1910 it appears that in that year the adulteration of samples taken in the Metropolis was about 9 per cent. for tea, 7 per cent. for coffee, 19 per cent. for cocoa, 13 per cent. for mustard, nil for flour, 10 per cent. for confectionery and jams, and 4 per cent. for drugs. As regards all the above articles except coffee, Woolwich shows less adulteration than the rest of London.

8. Of the 11 adulterated milk samples for which proceedings were taken the adulteration varied from 10·3 to 17·0 per cent. of added water, and from 5·3 to 14·6 per cent. deficiency in fat.

The fines varied from 10s. to £20. The latter fine was in the case of a vendor in North Woolwich who carried a can of water in his cart.

9. *Sampling.* Of the 318 milk samples, 89 were taken on Sundays or Bank Holidays ; 2 of these were found adulterated. In the past three years 3·3 per cent. of samples taken on Sunday were found adulterated, and in the preceding four years 5 per cent.

31 samples were taken on arrival at railway stations, none of which were found adulterated.

Informal Samples. By the request of the Public Health Committee, I reported as follows with respect to the practice of informal sampling :—" When a sample is bought with a view to proceedings under the Sale of Food and Drugs Act, it must be divided into three parts—one to be handed to the vendor, one for the analyst, and one to be kept for future reference. Thus the Public Analyst only obtains one-third of the amount bought. The Analyst usually requires a considerable amount of the article purchased for the sake of making a complete analysis. It therefore follows that for proceedings to follow the taking of a sample a considerable amount of the article in question must be bought. As the Food and Drugs Inspector is well known in the locality, it is the usual practice to purchase samples by means of an an agent, male or female. Adulteration takes place most

with articles sold to the poor, and the poor, of necessity, buy their food in very small quantities; it follows that a tradesman will suspect a poor person who asks for a larger amount of an article than usual. In order, therefore, to discover in the first instance whether a suspected vendor is selling an adulterated article, it is wise to instruct the agent to obtain a very small quantity of the suspected article, such as the poor people in the neighbourhood would be likely to ask for. If this is not divided, it is sufficient to make an analysis, and, if the analysis proves adulteration, it is then necessary to obtain a formal sample, and sometimes it is necessary, before doing so, for the agent to increase the purchases gradually until a sufficient amount is bought to enable the necessary division to be made and the purchase to be completed according to the requirements of the Act.

The Local Government Board has repeatedly recommended that a larger number of samples should be taken informally. The following extracts are taken from the last Annual Report of the Board :—

> 'We have referred in recent Reports to the practice of taking samples without observing the various formalities required by the Acts. Informal sampling is employed by local authorities to discover, without arousing the suspicions of traders, where adulteration is being practised, and to take appropriate steps afterwards to obtain formal samples with a view to the exposure and punishment of offenders. Of 103,221 samples taken for analysis during 1911, at least 19,000 were taken informally. The authorities in the Metropolis took only 7·1 per cent. of their samples informally, but 23 per cent. were thus taken in the remainder of the country. In 172 of the 233 districts samples are taken informally.

In many districts the larger proportion of samples are taken informally, and evidence is accumulating that this form of sampling, when judiciously carried out, is by far the best method for the detection of offenders. The analyst for the City of Rochester writes : " The contrast between the quality of the [milk] samples collected in the ordinary formal manner and those without formalities is very startling, and seems to show that concealed milk adulteration is still rampant." In one district the butter samples taken informally were for the most part purchased from dealers against whom there had been previous convictions. Of the 119 informal samples tested, as many as 31 (or 26 per cent.) were found to be adulterated.

Informal sampling is particularly useful to inspectors who desire to detect tradesmen in a small way of business who may be practising adulteration. The agent may, as ordinary customers do, purchase goods by the half or quarter ounce, or in halfpenny-worths ; but when the inspector proceeds to procure a formal sample he must ask for a much larger quantity, so that when, in compliance with the provisions of the Acts, he divides the sample into three parts, and one part is sent to the Analyst, there may be sufficient of the article to enable a proper analysis to be made. It is often found that the demand for larger portions of an article than are customarily sold at such shops puts the trader on his guard, and that nothing but genuine articles can be obtained."

10. A record is kept of all analyses of milk made by the Public Analyst. The average percentage of fat in unadulterated samples has been found to be the same each year, viz., 3·6, and of non-fatty solids 8·8.

FOOD INSPECTION.

11. The inspection of meat and other food received the usual attention. Inspector Tedham made special inspections of the slaughter-houses.

There was no seizure, but 59 surrenders.

Of the surrenders, 8 were tuberculous meat, and 29 livers or other organs affected with parasitic disease. A full list is given in Table XIX.

DAIRIES, COWSHEDS, AND MILKSHOPS.

12. On January 1st, 1912, there were 129 milkshops on the register; 11 were added, and 23 removed, during the year, leaving a total of 117 on the register at the close of 1912. There were 189 inspections made, and 12 notices served. There were no prosecutions.

Owing to the steps taken by the Health Department requiring persons not to sell milk in unsuitable general shops, the number of milkshops was reduced from 196 to 117 in the eight years 1905-12.

As it was found that several persons were selling milk without being registered, an advertisement was issued in the local newspapers in April, 1909, calling attention to the illegality of selling milk without being registered.

An abstract of regulations was drawn up and printed in the Annual Report for 1910. This is left at every milkshop.

13. Under the London County Council (General Powers) Act, 1908, the Council has power to refuse to register, and

to remove from the register, shops which are unsuitable for the sale of milk. During 1912 one application was refused. The usual requirements of the Health Department for securing the purity of milk are roughly as follows :—

The premises must be either :—

(*a*) Used solely for the sale of milk and dairy produce.

(*b*) Confectioners' shops or restaurants.

(*c*) General shops which are of exceptional cleanliness, and in which the variety of articles sold is strictly limited, and no objectionable articles, as oil, coal greengrocery, etc., are kept. These are only allowed to sell milk when a milk business has already been previously carried on, or where there is no other milk shop near.

Where the premises are not confined to the sale of dairy produce, it is usual to require the milk bowl to be kept in a glass case, covered in on all sides, and with a swinging door. In other cases a permanent cover to the milk bowl alone is required.

14. One cowshed was closed, leaving 16 on the register. There were 64 inspections, and 7 notices were served for dirty conditions, etc.

The condition of the cowsheds in several cases leaves much to be desired, but as the case reported in my last Annual Report (p. 84) shows, it has not been found practical under the present state of the law to obtain more satisfactory attention to cowshed hygiene.

SLAUGHTER-HOUSES.

15. There are 12 slaughter-houses on the Register as in 1911. 49 inspections were made, and 3 notices served and complied with.

NUISANCES (See Table XVA.).

16. 361 complaints of sanitary defects were received and investigated, compared with 497, 398, and 400, in the three preceding years.

29 complaints of non-removal of dust were made and attended to, compared with 28, 26, and 20, in the three preceding years. 4 of the dust complaints came from Woolwich Parish, 17 from Plumstead, and 8 from Eltham.

The dust in Woolwich is collected by your Council's employees, but that in Plumstead and Eltham by two different contractors.

17. *Drains and Water-closets.* 16 defective combined drains were investigated and reported on by the Chief Sanitary Inspector, compared with 22, 7, and 27, in the three preceding years. These drains affected 108 houses.

399 private drains, found choked and defective, were examined, cleared, and re-laid, compared with 440, 411, and 319, in the three preceding years. The largest number—97—was found in River Ward.

890 water-closets and w.c. cisterns were repaired, compared with 992, 963, and 734, in the three preceding years. 238 foul w.c. pans were cleansed by tenants, compared with 197, 312, and 279, in the three preceding years.

18 *Supervision of Drainage.* In the Annual Report for 1908, full particulars were given as to the respective responsibility for supervision of reconstructed drains of the Public Health and Works Departments.

19. *Public-house Urinals.* The urinals attached to public-houses, and accessible to the public, have been regularly inspected during the year, 442 inspections being made. Regular cleansing has been required.

20. *House Inspection.* 5,830 houses were inspected, house to house, compared with 5,512, 6,626, and 5,892, in the three preceding years ; 6,678 were inspected *re* infectious diseases and complaints, compared with 7,377, 6,026, and 6,546. In addition to these, 516 inspections of registered houses were made.

21. Table XVI. shows the streets inspected, and the number of houses found defective in each.

At 2,206 houses, interiors were cleansed, or defective roofs repaired, compared with 1,957, 2,064, and 2,137, in the three preceding years. 571 houses with damp walls were remedied, compared with 450, 523, and 600, in the three preceding years.

Improved ventilation was provided in 62 houses, compared with 120, 101, and 94, in the three preceding years.

525 new dust pails were supplied, compared with 681, 585, and 516, in the three preceding years.

22. *Medical Officer's Special Inspections.* These amounted to a total of 659. 19 inspections were made of cowsheds and milkshops, 48 of bakehouses, 16 of workshops and

factories, 26 of the houses registered under the by-laws, and other tenement houses. 291 inspections were on account of tuberculosis, 24 diphtheria, 17 scarlet fever, and 24 small-pox. Many of these visits were made by request of the medical attendants for the purpose of diagnosing doubtful cases of infectious disease. Only three cases of small-pox occurred, but these necessitated 24 visits for diagnosis of doubtful cases, and observation of contacts. Other visits *re* infectious disease were made at the request of school teachers and others. Special inspections were made of Horn Park sheds, Delvan Street, Morris Street, Francis Street, Salutation Alley, and Mabyn Road.

One case of food poisoning was inquired into, but the circumstances were reported too late to allow of any bacteriological investigation being made. A man and his daughter had diarrhœa and colic, 24 and 72 hours, respectively, after eating some pork-pie. The pie was eaten as soon as bought, and appeared good. The other inmates who kept well eat no pie.

23. *Overcrowding.* 91 cases of overcrowding were found and remedied, compared with 97, 78, and 97, in the three preceding years, or 1·6 per cent. of house-to-house inspections.

24. *Smoke Nuisance.* 80 observations *re* smoke nuisance were made, and 14 nuisances of black smoke observed. The nuisances were abated on service of notices. There was no prosecution. Considerable nuisance occurred from smoke at the Plumstead Baths. The notice of the Baths Committee was called to it.

Four complaints of smoke nuisance were received from outside bodies, viz., 3 from the L.C.C., and 1 from the Coal

Smoke Abatement Society. These related to two firms in North Woolwich, and two in Plumstead.

In 1901, eight firms were prosecuted for smoke nuisance, in 1902, five firms, and in 1903 and 1908, one firm each. There were convictions against all the firms but one, and fines varying from £1 to £10 were imposed. The proceedings were taken under Section 24 (a), "a furnace which does not, as far as practicable, consume the smoke." The nuisance has been decidedly less since the prosecutions.

25. *Defective Light.* At 44 houses new windows were supplied or existing ones enlarged, or other work done to improve the lighting by daylight.

26. In my 1909 Report, particulars were given as to "Dark rooms in houses and failure of the Building Act," and the steps taken by the Borough Council and London County Council in the matter referred to.

27. *Verminous Rooms.* 214 verminous rooms were cleansed under the London County Council (General Powers) Act, 1904, or were dealt with as dirty rooms under the Nuisance Section of the Public Health (London) Act, compared with 183, 159, 143, and 248, in the four preceding years.

DUST REMOVAL.

28. In Woolwich Parish 5,866 loads of house, and 178 loads of trade refuse were removed by direct labour, and destroyed at the Woolwich destructor. In the three preceding years 5,951, 6,912, and 5,769 loads, respectively, were removed.

In Plumstead, 17,415 loads, weighing 14,263 tons were removed by the contractors, Messrs. Tuff & Hoar, and destroyed at the Plumstead destructor. £2,826 15s. was paid for collection, compared with £2,847 14s. 1d. in 1911.

In Eltham, the sum of £891 14s. 3d., compared with £866 18s. 8d. in 1911, was paid to the contractor, Mr. Tucker, for removal of dust. As mentioned above the largest proportion of complaints as to non-removal of dust came from this parish.

TRADE REFUSE.

29. During the past year there have been 6,337 (7,094 in 1911) receptacles of offensive trade refuse removed. There are now 47 (48 in 1911) tradesmen on the books from whom offensive trade refuse is removed. There was no complaint of nuisance arising from collection. Chloride of lime is used as a deodorant.

The charge made for inoffensive refuse is 1s. 6d. per load, and 2d. per bushel, and for offensive refuse at the rate of 3d. a receptacle, charged per quarter in advance on the amount collected in the previous quarter.

HOUSING OF THE WORKING CLASSES ACT.

30. Considerable action has been taken under Section 17 of the Housing, Town Planning, etc., Act, and so far no difficulties have arisen in putting this section into force, and no hardships appear to have arisen. Owners have always been given an opportunity of stating their cases to the Public Health Committee before a Closing Order has been made. No action has been taken, however, under Section 15 which authorises the Sanitary Authority to require the landlord to execute such works as are necessary to make a house

in all respects reasonably fit for human habitation, and, failing action on the part of the landlord, to themselves do the work required. This section might be used to enforce the repair of a wash-house copper, or of a garden fence, the condition of which did not bring the premises under Section 2 of the Public Health (London) Act.

The following table shows the action taken :—

Number of houses inspected *re* Housing and Town Planning Act	48
Dwelling houses considered on inspection in a state so dangerous or injurious to health as to be unfit for human habitation	9
Number of representations made to Borough Council with a view to the making of closing orders..	9
Number of closing orders made	5
Number of dwelling houses remedied without making closing order	4
Number of dwelling houses put into fit state for human habitation after making closing order..	nil

The following are the houses referred to in the above table :—

1, New Street,
155, Herbert Road,
2, Fore House, High Street,
84, Herbert Road,
1, Sidney House, High Street,
2, Sidney House, High Street,
2, George Street,
196, Kingsman Street,
2, Albert House, High Street.

Nos. 1 and 2, Sidney House, and No. 2, Fore House, were underground rooms, and were closed under Section 17 (7), Housing, Town Planning, &c., Act, the rest being dealt with under Section 17 (2).

Closing orders were also made on :—

1, New Street,
196, Kingsman Street.

Of the other houses represented, No. 155, Herbert Road, was dealt with under the Public Health (London) Act, and at 84, Herbert Road, and 2, Albert House, the work required by the Committee was done without proceedings being taken.

At 2, Albert House (underground rooms), the site was concreted, the lighting improved, and the interior thoroughly renovated, and the house is now occupied, but it was impossible to make it comply strictly with the regulations under Section 17 (7). The interior of 2, George Street was renovated, but no radical improvement made in its lighting and ventilation.

The following closing orders on premises were determined during the year 1912, the necessary work having been done :—

Nos. 5 and 9, Godfrey Street,
Nos. 10-16, Kates Place.

NORTH WOOLWICH—VITAL STATISTICS.

In the 1909 Report statistics were given as to the health of persons living in new and old houses in North Woolwich, and reasons were adduced for believing that the better health of the inhabitants of the newer houses was due to these having concreted sites, instead of being unprotected from earth damp like the older houses.

In previous years I have reported on the very unsatisfactory state of North Woolwich as regards its vital statistics. There was formerly an excessively high birth-rate, death-rate, infantile death-rate and diarrhœa death-rate. I attributed these high death-rates largely to the fact of the high level of the ground water, the want of protection of many houses from ground exhalations, and the unsatisfactory state of the sewers and drains which formerly existed.

During the last few years several of these conditions have greatly improved. A new L.C.C. sewer was laid at a lower depth about 1902. A large number of the house drains have been relaid, and wherever damp walls or floors were found, notices have been served and steps taken to have the sites concreted and damp-courses provided. In order to test whether these improvements have favourably affected the health of North Woolwich, I have calculated some vital statistics for the years 1910 and 1911, and the results are appended. It appears that there has been a most marked reduction in the death-rate and infantile death-rate, as also in the birth-rate. In 1902-3 both these death-rates were considerably higher than that of the Borough. In 1910-11 it is seen that the general death-rate, the phthisis death-rate, and the tuberculosis death-rate are lower than in the Borough, and that all the death-rates, with the exception of the diarrhœa death-rates, are much lower than they were in 1902-3. 1911 was a year in which the conditions which produce a high diarrhœa death-rate were worse than in the last 50 years, and the fact that the diarrhœa death-rate was not more in 1910-11 than in 1902-3, as was to be expected from the hot summer of 1911, is further proof of the great improvement in the sanitary condition of this district.

Statistics.

Population—Census 1911—4,409

	1910–11.	1902–3.	Borough. 1910–11.
Births notified (87 and 106)	193	—	—
Deaths	96	—	—
Do. under 1 year	23	—	—
Do. from Phthisis (6) and other Tuberculous Diseases (4) ..	10	—	—
Do. Diarrhœa and Enteritis ..	7	—	—
Phthisis Death Rate	0·7	1·15	1·2
Birth Rate	24·0	39·8	23·2
Death Rate	10·9	16·6	12·1
Tuberculosis Death Rate	1·1	—	1·5
Diarrhœa and Enteritis per 1,000 Births	36*	36*	28*
Infantile Death Rate	108	153	91

* Under 2 years.

NORTH WOOLWICH DOCK EXTENSION— DEMOLITION AND DISPLACEMENT.

Notice has been received from Sir John Bethell, M.P., of the intended demolition of houses in North Woolwich, the sites of which are required by the Port of London Authority for the extension of the South Albert Dock. It is proposed to demolish 55 houses. 12 of these are situated in Drew Road, 17 in Rhea Street, 15 in Winifred Street, and 11 in Auberon Street. I have obtained particulars of the population of the houses and find that they are occupied by persons of the working-class and contain 380 persons. The houses have mostly been recently erected (within 12 years), and are in good sanitary condition.

Under the Housing of the Working Classes Act, 1903, where, under powers given by any Local Act or Provisional Order, land is acquired, by any authority or persons, on

which are situated working-men's dwellings, such dwellings shall not be entered on until the Local Government Board have either approved of a housing scheme or have decided that such scheme is not necessary. The housing scheme must make provision for the accommodation of such number of persons as is in the opinion of the Local Government Board required, but not exceeding the aggregate number of persons displaced. The Local Government Board may require that the new dwellings shall be completed and fit for occupation before possession is taken of the dwellings it is proposed to demolish.

I am informed that there are no unoccupied dwellings fit for human habitation in North Woolwich, and that there are very few indeed in South Woolwich within an easy distance of the Free Ferry. There is as a fact very great demand for houses in this district, and even empty houses in the other parts of the Borough are very quickly being filled up. A certain number of houses in the River Ward have been closed under the Housing, Town Planning, &c., Act, by the Borough Council. A number of houses have recently been closed and will be demolished by the County Council for the purpose of widening High Street. The number of houses is slowly but continually diminishing in the business parts of Woolwich, owing to the replacement of dwelling-houses by business houses, places of amusement, &c., *e.g.*, two or three houses will shortly be demolished in Beresford Street for the sake of a new Kinematograph Theatre. In addition to this the construction of the new dock will employ a large number of workmen. I believe it is the intention of the Port Authority to make temporary provision for the housing of these, but it is to be expected that such provision will not

meet the housing requirements of the whole of the persons who will be attracted to North Woolwich by the Dock construction.

It appears to me, therefore, that having regard to all the circumstances, it is decidedly necessary that the Port Authority should re-house the persons displaced by the proposed demolitions, and that a considerable part, if not the whole, of such re-housing should take place before the old houses are demolished.

The new houses should be in North Woolwich, or as near to it as possible, for it is to be presumed that the majority of workers living in the houses to be demolished do so in order to be near their work, and cannot conveniently live much farther away.

Twice within recent years the Borough Council have consented not to press for re-housing of persons displaced under similar circumstances, and I have agreed that there was no necessity for such re-housing, as there were at that time, and in the near neighbourhood, a large number of unoccupied houses. The condition of things now is quite different, and the hardship on many workers will certainly be very great if no new provision of houses is made.

31. *Council's Houses.* All the Council's 25 houses in North Woolwich were occupied throughout the year, with the exception of four; one was vacant for two weeks, and three for one week. The number of persons housed is about 130, or 5 to a house. For particulars as to rent and cubic space of these houses see Annual Report, 1904, page 70.

Of the Council's 9 houses in Gossage, Park, and Parkdale Roads, which are under the care of the Health Committee, 6 were occupied throughout the year; Nos. 5, 7, and 9, Gossage Road were empty for periods of 3, 2, and 2 weeks, respectively.

On June 5th, 1911, Nos. 15, 17, and 19, Gossage Road, were taken over by the Libraries Committee.

HOUSES REGISTERED UNDER THE BY-LAWS.

32. *Existing By-laws and History of Proposed New By-laws.* Woolwich is in an anomalous position as regards by-laws for houses let in lodgings. One of the first requirements made of Metropolitan Borough Councils after their establishment under the Local Government Act, was the preparation of a code of by-laws for each Borough. On the Woolwich Borough Council acute differences existed as to the form such by-laws should take, and the matter was under discussion for several years. Twice a draft code was submitted to the Local Government Board, but on each occasion the Board required certain alterations, and no final agreement between the Board and the Council was arrived at. The matter has now been in abeyance for several years. Meanwhile three different sets of by-laws are in existence, viz., one in each parish. Those in Woolwich and Plumstead parishes are much alike, but those in Eltham only permit such houses to be registered as have a rent below a certain limit. The limit is such as to render the by-laws nugatory, and no houses have ever been registered in Eltham. The Woolwich and Plumstead by-laws are found useful for dealing with dirty tenants. Owing, however, to the "landlord" being made responsible for structural and other matters not under the control of the tenant, and owing to a legal decision having established that "the

landlord " of the house, in which the rooms are sub-let by the tenant who took the house in the first place, is not the owner, but the sub-letting tenant, all the sections dealing with structural defects are in abeyance, as it is useless serving a notice on a weekly tenant for repairs which would entail considerable expense. One of the items required by the by-laws is an annual cleansing, by lime-whiting, or otherwise, by the landlord, of all surfaces. It is useless expecting a tenant to do this, and the by-laws are in this respect not enforced.

At the commencement of the year 429 houses were on the register; 8 were newly registered, and 5 taken off the register, leaving 432 on the register at the close of the year, compared with 332, 359, 395, 409, and 432, in each of the five preceding years. These figures seem to indicate that the limit of houses considered by the Committee as likely to be improved by registration has been almost arrived at.

33. These houses were inspected, some quarterly, others half-yearly, or yearly. 516 inspections were made in all, and 241 notices were served.

The registered houses were under the care of Inspector Shaw, Miss Middlebrooke being unable to spare time from her other duties.

The houses were situated as follows :—

River Ward, North	34
River Ward, South	111
St. Mary's	37
Dockyard	69
St. George's	54

Herbert	3
Burrage	21
St. Margaret's	16
Central	3
Glyndon	18
St. Nicholas	66

The following are the particulars of the inspections made :

Houses Let in Lodgings.

Total number on Register..	432
Number of Inspections	516
,, Defaults found..	360
,, Found satisfactory	156
,, Notices served	241
,, Nuisances, defects and offences against the by-laws, dealt with and remedied ..	638
,, Cases of overcrowding remedied by redistribution without notice	11
,, Houses measured	8

Notices.

On Owners for Cleansing (under P.H.L. Act)	147
,, Tenants for Cleansing (under by-laws)	67
,, Landlords for Overcrowding	11
,, Tenants for Overcrowding	15
,, Landlords and Tenants for other defects	151
,, Landlord and Tenants for Verminous Rooms ..	45
Verbal Notices on Tenants for Cleansing—carried out	108

INHABITED HOUSE DUTY.

34. No application was received for a certificate under the Inland Revenue Act.

COMMON LODGING-HOUSES.

35. There are 19 common lodging-houses in the Borough. 17 for men and 2 for women. Total accommodation for 585 persons is available. The following is the list :—

Common Lodging-House.	Accommodation.		
	Men.	*Women.*	*Total.*
60 Beresford Street	58	—	58
5 High Street..	40	—	40
50 do.	22	—	22
56 do.	14	—	14
57 do.	18	—	18
76 & 77 do.	—	25	25
81 & 82 do.	—	19	19
93 do.	30	—	30
102 do.	22	—	22
1 Ropeyard Rails	14	—	14
2 do.	17	—	17
4 do.	15	—	15
7 do.	23	—	23
9 do.	32	—	32
10 do.	51	—	51
10A & 11 do.	62	—	62
21 & 21A do.	42	—	42
4 Warren Lane	31	—	31
12 & 13 do.	50	—	50
Totals	541	44	585

UNDERGROUND ROOMS.

36. Seven underground rooms, separately occupied, were found not in accordance with the Public Health (London) Act. Four were in St. Mary's and Dockyard Wards, two in Burrage, and 1 in St. Nicholas Wards. The service of notices led to cessation of occupation.

FACTORIES, WORKSHOPS, AND WORKPLACES.

37. There were, at the close of the year, 191 (199 in 1911) workshops and workplaces on the register. 928 inspections were made, and 81 notices served and complied with. 67 inspections of factories were made regarding sanitary accommodation, and 20 notices served and complied with. 529 inspections of homeworkers' premises were made and 18 notices sent and attended to.

Miss Middlebrooke devoted a large amount of her time to the inspection of workshops, factories, and houses where women are employed ; 31 new workrooms were measured up and put on the register.

38. A special report on Homework was presented to your Council on October 31st, 1906, and printed in the Annual Report of that year.

BAKEHOUSES.

39. The number of factory bakehouses is 10, and of workshop bakehouses in use is 42, 15 of the latter being underground. 1 bakehouse was discontinued. They were all inspected twice. I inspected most of them personally, and found them generally satisfactory. 10 certified underground bakehouses are not in use.

ICE-CREAM SHOPS.

40. Eighty-nine ice-cream shops were on the register at the close of the year, compared with 98, 86, and 89, in the three previous years. 11 were added and 11 removed during the year. There were 142 inspections made, and 5 notices served. Regulations, embodying the provisions for ice-cream shops contained in the London County Council (General

Powers) Act, are distributed at every shop on the register. The shops are inspected in April, June, and August, by Inspector Powell.

DISINFECTION.

41. The mode of disinfection, cost of appliances, staff, etc., were fully described in my Annual Report, 1903, pages 73-76. Rooms at 1,195 houses were disinfected, compared with 987, 964, and 1,093, in the three preceding years. The disinfecting apparatus was used 1,195 times for 40,591 articles.

358 books from the Free Libraries and Public Schools were disinfected.

The sum of £6 7s. 1d. was received for disinfection of rooms in special cases, on request of the occupier.

A large quantity of horsehair was disinfected for the Army Ordnance Store Department, for the sum of £15 8s. 6d.

Disinfectants are supplied by the Department for disinfecting infected soiled linen, infected stools, sputa in phthisis, for personal use in infectious disease, and for use by the Contractor in dust receptacles. They are dispensed at the Maxey Road Depot, the Sun Street Mortuary (105 persons supplied), 14, Barge House Road, North Woolwich (20 persons supplied), and at 144a, High Street, Eltham (78 persons supplied). The cost of disinfectants used by the Department in 1912 was £42 16s. 3d.

The disinfectants used were Corrosive Sublimate ; Sulphur and Formalin tablets (for fumigation) ; Formaldehyde (for spraying and disinfecting books, and for use in the Mortuary) ; Cyllin (for sputa in phthisis) ; Permanganate of Potash ; Jeyes' Corporation Fluid (for dust-pails) ; and Chloride of Lime (for offal tins).

HEALTH SHELTER.

42. The Health Shelter was not used during the year. It was used twice in 1906, once in 1908, and not at all in 1903, 1904, 1905, 1907, 1909, and 1910. In view of the small use to which it is put, the upper of the two flats was let in 1908, and has been occupied since on a weekly tenancy.

THE MORTUARIES.

43. The Sun Street Mortuary was used for 143 bodies, compared with 146, 136, and 189, in the three preceding years. 118 were deposited for inquest, and 25 for custody. 72 post-mortem examinations were made. 4 bodies were deposited in the infectious mortuary, compared with 1 in each of the three preceding years.

The Eltham Mortuary was used for 5 bodies, all for custody, compared with 1 in 1908, 1 in 1909, 3 in 1910, and 3 in 1911.

CEMETERIES.

44. The two Borough Cemeteries were well maintained as usual. 540 bodies were buried in the Woolwich Cemetery, compared with 613, 669, and 679, in the three previous years. There were 602 interments in the Plumstead Cemetery, compared with 732, 696, and 690, in the three previous years. 60 burials took place in Plumstead Churchyard, compared with 22, 59, 51, and 47, in the four preceding years.

There has been an increase in burials in the Churchyard during the past four years. It is much to be desired in the interests of public health and social amenity that interments in this burial ground, which is now surrounded by houses, should cease.

Cemetery Accommodation for Eltham. In 1910 I reported that there was burial accommodation for Eltham parish for five years only, and recommended the provision of a small Cemetery with a Crematorium. I also recommended that the Council should endeavour to further any project by which the means of communication with the Woolwich Cemetery might be improved.

CLEANSING OF VERMINOUS PERSONS.

45. The station for cleansing verminous persons was opened in November, 1906. During 1912 it was used by 430 persons, compared with 257, 262, 408, 590, and 509, in the five previous years. The users were 92 adults (viz., 2 females and 90 males) and 338 children (viz., 178 females and 160 males).

3,376 articles were disinfected, and the disinfector was used 430 times. The adults came mainly from common lodging-houses, and the children were mostly sent from County Council Schools.

An agreement was entered into with the London County Council, dated August 21st, 1911, to allow the London County Council to use the Borough Council Cleansing Station for cleansing school children. The Station is reserved for school children on Tuesday and Friday, between 9 a.m. and 4 p.m., girls being cleansed between 9 and 1, and boys in the afternoon. The Borough Council must properly cleanse the children and their clothes to the reasonable satisfaction of the London County Council, the children cleansed not to exceed 10 in one day or 20 in one week.

The London County Council pays to the Borough Council 2s. for each child cleansed, such sum to include all attendances made by the child in one month when repeated baths

are necessary. The Borough Council for this purpose has engaged a female attendant (Mrs. Lewis) for the two days, Tuesday and Friday, at a payment of 3s. 6d. per day.

The cleansing of children is supervised by a school nurse.

The Station was found inadequate for its purpose, especially as regards water-closet accommodation. It was extended during the year by the provision of another bath, and two closets, according to plans prepared by the Borough Engineer.

A box of stavesacre ointment is supplied to each bather with instructions for its use. The names and addresses of bathers are entered in a book, and the Lady Inspector calls at the homes and arranges for necessary disinfection and cleansing of verminous bedding and rooms.

45A. *Public Baths, Lavatories, and Cleanliness.* During the year ending March 31st, 1912, there were 100,005 private baths taken at the Borough Council's Public Establishments in Woolwich and Plumstead. It is satisfactory to find that the report for 1912 showed a considerable increase on that for previous years. The figures, however, are equivalent to less than one bath a year per head of population, or to about one bath per week for 2,000 persons. No doubt a large proportion of the population have a weekly bath at home, but, considering that there are no baths fixed in at least three-fourths of the houses, it seems probable that the majority of persons in the Borough do not have a bath as often as is desirable for health.

Second-class private baths can be obtained for 2d.

This is not a high price, but, in view of the fact that it is to the interest of the public that every member of the community should be personally clean, it seems desirable that the prices should be still further reduced. Private spray baths could probably be supplied so that baths could be obtained at ½d. per head (exclusive of towel),without involving any considerable charge on the rates. Spray baths provide the quickest means of cleansing.

It cannot be too much insisted on that a dirty person is a danger to the public health. This is especially the case with respect to dirty hands. A person who has had enteric fever may, through failure to wash his hands when decency requires, infect the public food supply. The greatest cleanliness should be practised by all persons engaged in selling milk, meat, bread, fruit, &c. For this purpose public lavatories are important, but the charge made is prohibitive to the persons who it is of prime importance should make use of the lavatories. The public lavatories in the Borough were used last year for washing hands 7,526 times, compared with 7,946 times in 1911. If only those employed in Beresford Square washed their hands once a day while employed, this figure would be more than doubled. One penny is charged for washing, and ½d. for towel. It would, in my opinion, conduce to the public health if the charge for washing was reduced to ½d., or ¼d. This charge would probably not lead to any increased net cost. Paper towels might be supplied for ¼d.

TENTS, VANS, AND SHEDS.

46. During the year, 34 tents, vans, and sheds, were inspected (35 in 1911), and three notices served.

NOTICES AND PROSECUTIONS.

47. 3,398 written intimation notices, and 592 statutory notices were served. 51 of the latter, not having been complied with in the time specified, were referred to the Town Clerk, who, before taking proceedings, wrote a warning letter in each case. Finally 5 defaulters were summoned at the Police Court. The results are given in Table XVII.

BACTERIOLOGICAL EXAMINATION.

48. 1,393 bacteriological examinations were made for the Public Health Department by the Lister Institute, viz. :— 1,231 for diphtheria, 151 for phthisis, and 11 for enteric fever. The total cost was £205 19s. 8d., compared with £142 9s. 0d. in 1911.

INFANT CONSULTATION.

49. Since the closure of the Milk Depot, a Consultation for mothers and infants has been held every Wednesday afternoon in a room at the Town Hall. Mothers bring their infants for advice and weighing between 2.30 and 4.0 p.m. Miss FitzGerald and the Medical Officer of Health are in attendance during that time. The Consultation was much better attended last year than ever before, 863 infants being seen, compared with 460 who attended in 1911. Further particulars are given in Miss FitzGerald's Report.

WOMEN SANITARY INSPECTORS' WORK.

50. There are two Women Sanitary Inspectors, one of whom, Miss FitzGerald, is specially a Health Visitor.

Miss Middlebrooke originally inspected houses registered under the by-laws, workshops where women are employed,

restaurants, and eating-houses, *re* kitchens, &c., public lavatories, houses where certain infectious diseases (*e.g.*, measles) occurred, and houses reported as being verminous or in a dirty condition. During recent years special efforts have been made by the school authority to deal with verminous children, and for these efforts to be successful it has been necessary to inspect the homes of such children, and arrange for the cleansing of those found to be verminous. This work naturally fell on Miss Middlebrooke, and has grown to such an extent as to take up the greater part of her time. Consequently she was unable to attend to houses registered under the by-laws nor to measles cases, and it was necessary to leave this work to a male inspector.

I have shown above that the by-laws mainly deal with the habits of tenants, especially the housewife's habits, and can consequently be more effectively enforced by a woman who understands women's work and difficulties.

Miss FitzGerald's duties comprise advising mothers as to the care of infants, and the prevention of infant mortality, visiting houses where phthisis exists, and notified cases of certain infectious diseases as enteritis and ophthalmia neonatorum. Miss FitzGerald has never been able to do as much of this work as was desirable, and has been obliged especially to neglect the visiting of cases of infectious disease. The visiting of such cases necessarily nursed at home, as phthisis, measles, enteritis, etc., is work which cannot be properly performed by male inspectors. There is, therefore, very great need of an additional woman inspector for registered houses, infectious disease, and other work done by female inspectors.

The following is a summary of Miss Middlebrooke's work for the twelve months :—

Women's Lavatories at Railway Stations, &c.

Number of Inspections	56
,, Found defective and dirty	7

Restaurants and Eating-Houses.

Number of Inspections	92
,, Defects and dirty conditions found and remedied	17

Factories and Workshops.

Number of Inspections of Factories and Workshops ..	218
,, Notices served	16
,, New workrooms measured	31

Homeworkers' Premises.

Number of Inspections	529
,, Cases referred to District Inspectors ..	18

Miscellaneous.

Total number of houses visited *re* Phthisis, Measles, Scabies, Whooping-cough, and Zymotic Enteritis ..	86
Visits paid for various causes, complaints, etc... ..	410
,, ,, Verminous and dirty houses and bedding	923
Re-visits—estimated	1000
Cases where bedding was found to be in a dirty and verminous condition, and cleansed	320
Total number of cases referred to District Inspectors ..	165
,, Dustbins—notices served	32
,, Accumulations of refuse removed	15
,, Early morning inspections	7
,, Overcrowding—cases found and abated	37
Notices served on tenants *re* dirty conditions	225
Notices served on landlords and tenants—various ..	130

51. Miss Middlebrooke reports as follows :—

The nature of the work for 1912 was similar to that of the previous year, except in the increased number of outworkers and verminous cases visited, and also the number of specially dirty cases which were complained of and dealt with. A great many of the latter were old men and women in receipt of either Poor Law relief or Old Age pensions. Preferring their freedom to the Workhouse, they are often too infirm to keep their rooms and persons clean, especially when friendless, and consequently dependent on strangers for help. The weekly income is perhaps only barely sufficient for rent and food, and provides very little margin to pay for the services of anyone to clean for them.

The following are typical instances :—

(1) Mrs. M. in receipt of small income, occupied one room. So helpless that she could not wash herself and had not combed her hair for some weeks. The fireplace smoked (because the chimney required sweeping) and made everything black in the room, walls and ceiling included. A cupboard was kept for the exclusive use of four cats, who were not allowed outside. No dishes were washed after meal times, but were deposited on the floor. The bed was never made, nor the window opened. The landlady complained that she would have cleaned the room but that Mrs. M. was always abusive when an attempt was made to do so. As the old lady was in a pitiable condition and totally friendless, and her room so filthy, it was decided that she should be removed to the Workhouse Infirmary, where she would be properly cared for. This was done and the room thoroughly cleansed and disinfected afterwards.

(2) Mr. S., an old pensioner, kept his room so dirty that the nuisance was complained of by neighbours. Windows tightly closed and all chinks stuffed with newspapers, blind always kept down, fireplace closed up, and room heated by oil stove. Mr. S. was so much afraid of the cold and damp that he never indulged in a wash, but rubbed himself with mustard oil, and kept his ears and nostrils packed with pieces of newspaper. The bed and room were extremely filthy and had a fœtid smell. Written notices were served, and the nuisance was abated, the room and bedding being thoroughly cleansed.

(3) Mrs. C., in receipt of small income, lived alone in one back room. I found her lying in a very emaciated and collapsed condition, suffering from what was afterwards notified as phthisis. No doctor in attendance. The bedding was covered with lice and filth. There was dried expectoration on the floor at the bedside. The room was very dirty, window closed, and quantities of dirty clothing and stale food about. An order was obtained and patient removed to the Infirmary, the day after my visit. The bedding and room were afterwards thoroughly disinfected and cleansed.

It will be noted that 923 visits were paid to homes reported to be verminous or dirty. Of these 37 were found to be overcrowded, 130 had dirty bedding, 91 had filthy bedding, and 320 had verminous bedding; in 225 cases the rooms were exceedingly dirty. All these cases were dealt with either by written or verbal notice and were revisited until improvement was effected. In those cases where verminous bedding was found, the occupier was given the choice between providing new bedding or its enforced disinfection. When it is pointed out that a truss of good clean straw may be obtained

for 1s. 3d., sufficient to fill a tick made of 4 yards of strong double width hessian at 6¾d. per yard, the whole only costing 3s. 6d., it is generally easy to persuade the tenant to destroy the old beds and get new.

Verminous feather beds, and the purchase of second-hand infested bedding are two great sources of trouble. Persuasion to substitute something else will seldom avail in the case of the cherished feather beds, which are veritable breeding grounds for vermin, and so disinfection has to be resorted to.

In many of the persistently verminous homes there has been a marvellous improvement since the substitution of straw beds for old flock or feather beds.

52. The following is Miss FitzGerald's report :—

SUMMARY OF INSPECTIONS.

Visits to houses after notifications of births	1475
Re-visits	303
Visits *re* infant death	38
Zymotic Enteritis cases investigated	120
Re-visits	27
Visits to cases of Phthisis	122
Ophthalmia Neonatorum	36
Ophthalmia (reported by Schools)	102
Special visits	120
Infants weighed at Consultation	863
Health Lectures given	3
Visits *re* verminous conditions	18
Reported to District Inspectors :—	
Structural defects	5
Dirty interior walls	7
Other defects	10
Overcrowding	3

The chief point of interest in the record of the work of 1912 is the great increase in the number of mothers who make use of the Infant Consultation, which is held at the Town Hall every Wednesday afternoon, and at which the Medical Officer of Health and myself are present. The total number of attendances for last year is 863 as compared with 460 in 1911. This is most satisfactory, for it proves that the women really value this institution, and are glad to come at regular intervals to have their babies weighed and be advised as to the best method of feeding and rearing them. The majority of the mothers attend very regularly. A promise is always extracted from them on their first appearance at the Consultation that they will attend regularly ; the Consultation is not intended for the casual weighing of abnormally large babies to gratify their mothers' pride.

The Consultation serves also a very useful purpose enabling one to test the latest theories in infant hygiene. For example, it has been the custom on the Continent to feed infants at much longer intervals than has been the practice in England. Recently, English specialists in infant hygiene have also recommended the longer intervals. During the past year this method has been adopted with infants attending the Consultation, with marked benefit, particularly in cases of vomiting and indigestion.

The summer of 1912 being very wet, there were very few cases of zymotic enteritis notified, and I was able, consequently, to devote more time to the routine visiting of new-born infants. All the same the number visited (1,475) is only three-fifths of the total number notified, and of the two-fifths which did not receive visits, it is probable that quite half

ought to have been visited had there been time to do so. In spite of the very satisfactory decrease in the infant mortality rate, one comes across yet many examples of the persistence of the old errors in infant feeding and rearing. Long tube bottles are not yet extinct, and the pernicious "comforter" will need to be waged war with for a long time to come.

I paid 102 visits in respect of an epidemic of ophthalmia which occurred in one school in the Borough. The cases were notified by the teachers. The method adopted was to secure tickets for admission to the Medical Treatment Centre in Rectory Place. Fortunately these were forthcoming through the Care Committee Organiser for all those cases which needed them, and these were the majority, for the school in question is in a very poor district, and only very few of the children affected were taken to private doctors or hospital. These cases involved a great deal of work. It was first of all necessary to visit the home on receiving the notification from the school, and persuade the parents to apply for cards for the Medical Treatment Centre. It was in most cases necessary to visit again in order to impress upon the mother that she must go on the day and at the hour stated on the card. Finally, it was necessary to visit again, and see that she was carrying out any home treatment that was ordered. On the occasion of all three visits one, of course, urged precautions as to the use of towels, etc.; not with any great success, however, in homes which could only boast of a single towel for common use, and where 3 and 4 children slept in bed.

National Health Week was observed in the Borough from April 26th to May 4th. In my opinion this movement, which aims to concentrate public opinion upon matters relating to health and the individual responsibility involved, is of great

assistance to those objects which are served by health visiting. Numerous lectures on the hygiene of the home, the prevention of consumption, and other health subjects, were given at various centres in the Borough, and evolved much interest.

I have also to report that as a delegate of the Borough Council I attended the Congress of the Sanitary Institute, held at York, and contributed a paper on the "Home Treatment of Tuberculosis."

PUBLIC AMBULANCE.

53. The Public Ambulance, for accidents and non-infectious illness, was used 127 times, compared with 122, 143, 123, and 147, in the four preceding years. The following were the journeys made :—

To Guy's Hospital..	23
Cottage Hospitals	33
Seamen's and Miller Hospitals	18
King's Hospital	5
London Hospital	5
Charing Cross Hospital	5
Union Infirmary	7
Other hospitals	3
Private houses..	26
Asylums	2

Particulars of this ambulance were given in my Annual Report, 1903, page 78. Sutton Messent, Esq., 234, Burrage Road, is acting as Hon. Secretary for the Ambulance.

An ambulance for non-infectious illness can now be obtained from the ambulance station of the Asylums Board on payment of 5s., but in spite of this there seems little diminution in the use of the Woolwich Ambulance.

STAFF.

54. Two members of the staff are to be congratulated on distinctions conferred on them.

Miss FitzGerald was elected a member of the Executive Committee of the National Association for the Prevention of Infant Mortality, and Mr. Shaw received the Diploma of the Sanitary Inspectors' Association Examining Board.

I have gratefully to acknowledge the devoted and able assistance of Chief Inspector Duck, and the other members of the Public Health Staff, who have conscientiously worked for the improvement of the public health and the diminution of sickness and physical inefficiency.

TABLE I.

Borough of Woolwich.

Vital Statistics of the whole District during 1912 *and previous Years.*

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.	Net Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births Regist'd.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1902	122505	3730	29·9	466	124	1678	13·7	278	43	208	1843	14·7
1903	123172	3691	30·0	399	106	1511	12·3	272	41	175	1637	13·3
1904	125791	3531	28·1	479	132	1636	13·0	261	40	169	1765	14·0
1905	125885	3549	28·2	366	103	1463	—	313	50	192	1605	12·7
1906	123644	3524	28·5	396	111	1530	—	293	48	183	1666	13·5
1907	123644	3295	26·5	372	111	1479	—	296	50	184	1613	13·0
1908	123644	3082	24·9	298	95	1374	—	333	60	170	1487	12·0
1909	123644	2937	23·8	240	82	1415	—	323	51	223	1585	12·8
1910	123644	2844	23·0	241	84	1296	—	314	42	156	1410	11·4
1911	121376	2814	23·2	273	98	1402	—	327	53	212	1561	12·8
Aver. for Years 1902–11	123695	3300	26·6	353	105	1478	—	301	48	187	1617	13·0
1912	123311	2747	22·3	201	73	1249	—	297	42	196	1420	11·5

* Rates in Columns 4, 8 and 13 calculated per 1,000 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 district or division. The Deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number 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 purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Area of District in acres (exclusive of area covered by water)	8239·7	Total Population at all Ages	121,376
		Number of Inhabited Houses	21,463
		Average Number of Persons per House . .	5·6

At Census of 1911.

TABLE Ia.

I. Institutions within the District receiving Sick and Infirm Persons from outside the District.	II. Institutions outside the District receiving Sick and Infirm Persons from the District.
Woolwich Union Infirmary	Lewisham Infirmary
Royal Arsenal Hospital	Herbert Hospital
Auxiliary Hospital	Blackheath Cottage Hospital
Woolwich and Plumstead Cottage Hospital	Seamen's Hospital
Eltham Cottage Hospital	Brook do.
Home for Mothers and Babies	Park do.
	Gore Farm do.
	Guy's do.
	King's College Hospital
	London do.
	St. Bartholomew's do.
	Charing Cross do.
	Westminster do.
	St. Thomas's do.
	East London do.
	Poplar do.
	St. Peter's do.
	St. John's Hospital, Lewisham
	Children's Hospital
	West London do.
	Fulham Road Consumption Hospital
	Victoria Park Consumption Hospital
	Peppard and other Sanatoria
	Ear and Nose Hospital
	Brompton do.
	Bethnal Green do.
	City Road Chest do.
	Mount Vernon do.
	Miller do.
	Cane Hill Asylum
	Dartford Heath Asylum
	Colney Hatch do.
	Claybury do.
	Tooting Bec do.
	Darenth do.
	Caterham do.
	Stone do.
	Banstead do.
	Horton do.
	Hostel of God do.

TABLE II.

Vital Statistics of Separate Localities—1910, 1911, 1912.

Increase of Population since 1911 Census, estimated by Number of New Houses Occupied and Number of Persons to a House in each Parish.

	1910.				1911.				1912.			
	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population Census, 1911.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.
Woolwich	38991	979	494	87	36710	994	581	110	37030	914	487	86
West Plumstead	40907	881	486	70	40328	831	533	86	40943	890	459	47
East Plumstead	34500	711	320	64	30888	722	335	59	31288	665	344	54
Eltham	14050	273	111	19	13450	249	112	16	14050	267	113	14

TABLE III.

CASES OF INFECTIOUS DISEASES NOTIFIED UNDER S. 55, P.H.L.A., DURING THE YEAR 1912.

Notifiable Diseases.	Cases Notified in whole District.							Total Cases Notified in each Locality.				Cases of Mistaken Diagnosis included in the preceding figures.	Cases removed to Hospital.
	All Ages.	Age—Periods.						Woolwich.	Plumst'd		Eltham.		
		Under 1	1—5	5—15	15—25	25—65	65 and Upwards		E.	W.			
Small-pox	3	—	—	—	—	3	—	3	—	—	—	—	3
Scarlet Fever	474	4	96	315	38	21	—	89	147	201	37	7	420
Diphtheria	429	5	93	270	32	29	—	162	88	155	24	48	346
Membranous Croup ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid or Enteric Fever	20	1	—	5	4	10	—	10	2	4	4	1	13
Erysipelas	87	1	7	9	8	57	5	26	21	31	9	—	1
Puerperal Fever ..	2	—	—	—	—	2	—	—	—	2	—	—	—
Cerebro-Spinal Fever ..	1	—	—	1	—	—	—	—	—	1	—	—	—
Ant. Polio-Myelitis ..	3	—	2	—	—	1	—	1	1	1	—	—	—
Ophthalmia Neonatorum	20	20	—	—	—	—	—	4	8	6	2	—	—
Total ..	1039	31	198	600	82	123	5	295	267	401	76	56	783

TABLE IV.—Causes of, and Ages at, Death during the Year 1912.

Disease.	Deaths in or belonging to whole District at subjoined Ages.																	Woolwich.	Plumst'd		Eltham.	Residents in Outlying Institutions.	Public Institutions in Borough. Residents and Non-Residents.
	All Ages.	Male.	Female.	Under 1.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	Over 85.		West.	East.			
Small-pox	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	1	—
Measles	30	17	13	5	9	15	1	—	—	—	—	—	—	—	—	—	—	12	7	10	1	2	—
Scarlet Fever	4	1	3	1	—	3	—	—	—	—	—	—	—	—	—	—	—	—	1	3	—	4	—
Epidemic Influenza	25	8	17	2	—	—	—	—	—	1	—	1	3	4	5	5	4	3	10	9	3	1	—
Whooping Cough	28	15	13	10	13	4	1	—	—	—	—	—	—	—	—	—	—	5	11	12	—	—	—
Diphtheria and Membranous Croup	20	9	11	1	3	8	5	2	—	—	—	—	1	—	—	—	—	8	8	3	1	17	—
Enteric Fever	2	1	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	2	—	—	—	1	1
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa	6	5	1	4	—	—	—	—	—	—	—	—	—	—	1	1	—	6	—	—	—	—	3
Enteritis	9	6	3	6	—	—	—	—	—	—	—	2	—	1	—	—	—	4	3	2	—	2	1
Acute Anterior Polio-Myelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-Spinal Fever	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—
Other Continued Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	3	3	—	—	—	—	1	—	—	—	—	—	—	1	1	—	—	2	1	—	—	—	2
Puerperal Fever	1	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1
Other Septic Diseases	7	4	3	—	—	—	—	—	1	—	2	1	1	1	1	—	—	2	3	2	—	4	2
Syphilis	3	3	—	—	1	—	—	—	—	—	—	2	—	—	—	—	—	1	2	—	—	2	1
Rheumatic Fever	4	1	3	—	—	—	—	—	—	—	1	2	—	—	1	—	—	—	3	1	—	—	1
Gout	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intermittent Fever and Malarial Cachexia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of Meninges	23	15	8	5	5	4	5	2	2	—	—	—	—	—	—	—	—	10	8	4	1	4	5
Tuberculosis of Lungs (Phthisis)	124	88	36	1	2	1	—	2	15	12	33	26	18	12	2	—	—	48	31	37	8	14	42
Tuberculosis of Intestines & Peritoneum	5	3	2	1	1	2	—	—	—	—	—	1	—	—	—	—	—	1	1	2	1	—	2
Other forms of Tuberculosis	16	10	6	—	3	—	1	3	4	1	4	—	—	—	—	—	—	7	5	4	—	7	3
Alcoholism	5	2	3	—	—	—	—	—	—	—	1	2	—	1	1	—	—	2	2	1	—	—	3
Cancer	119	63	56	—	—	—	—	—	—	1	4	6	23	47	20	18	—	32	38	32	17	25	31
Diabetes	7	2	5	—	—	—	—	1	—	—	—	1	1	3	1	—	—	—	4	2	1	—	—
Congenital Debility and Malformation (including Premature Birth)	81	49	32	80	—	1	—	—	—	—	—	—	—	—	—	—	—	28	20	21	12	1	14
Old Age	84	33	51	—	—	—	—	—	—	—	—	—	—	1	18	44	21	29	32	15	8	8	36
Meningitis	13	5	8	5	2	1	3	1	1	—	—	—	—	—	—	—	—	7	2	4	—	1	—
Inflammation and Softening of Brain	9	6	3	—	—	—	—	—	—	—	—	—	1	3	3	2	—	3	2	4	—	3	2
Epilepsy	3	2	1	—	—	—	—	—	—	1	—	—	—	1	—	—	1	1	—	2	—	1	2
General Paralysis	16	11	5	—	—	—	—	—	—	—	3	8	3	2	—	—	—	6	5	5	—	14	—
Tabes Dorsalis and Locomotor Ataxia	5	4	1	—	—	—	—	—	—	—	—	—	2	3	—	—	—	1	—	2	2	2	1
Peripheral Neuritis	4	—	4	—	—	—	—	—	—	—	—	—	2	1	1	—	—	1	1	2	—	—	3
Other Diseases of Brain and Nervous System	31	14	17	8	3	1	—	—	1	—	1	4	4	4	2	2	1	13	8	7	3	5	8
Organic Diseases of the Heart	147	79	68	—	—	—	1	3	6	2	7	15	18	39	32	23	1	54	54	28	11	12	19
Cerebral Hæmorrhage, Embolism and Thrombosis	63	27	36	—	—	—	—	—	—	1	1	3	7	19	19	11	2	18	27	13	5	2	15
Apoplexy and Hemiplegia	14	9	5	—	—	—	—	—	—	—	—	1	1	2	3	5	2	7	4	—	3	—	1
Aneurism	9	8	1	—	—	—	—	—	—	—	—	3	3	2	—	1	—	3	2	3	1	2	—
Other Diseases of Blood Vessels & Heart	37	21	16	—	—	—	—	1	—	—	—	3	4	14	10	4	1	7	20	5	5	14	2
Bronchitis	112	54	58	21	5	2	—	—	—	1	—	1	4	17	20	32	9	40	38	25	9	3	21
Lobular (Broncho) Pneumonia	44	23	21	16	13	5	—	—	—	—	—	1	1	1	3	2	2	19	16	7	2	4	1
Pneumonia	52	40	12	4	3	1	4	—	1	—	5	3	7	15	6	2	1	19	15	14	4	4	11
Other Diseases of Respiratory System	8	4	4	—	1	1	—	1	—	—	—	—	1	2	2	—	—	1	3	3	1	2	1
Diseases of Stomach	11	4	7	—	—	—	—	—	—	—	3	4	1	2	—	—	1	7	3	1	—	2	—
Appendicitis and Typhlitis	18	11	7	—	—	—	2	2	5	2	1	3	2	—	—	1	—	7	4	7	—	10	7
Obstruction of Intestines	12	4	8	—	—	—	—	—	—	—	—	1	2	3	3	3	—	1	7	3	1	4	3
Cirrhosis of Liver	14	7	7	—	—	—	—	—	—	—	1	3	4	3	3	—	—	4	4	5	1	1	6
Other Diseases of the Digestive System	10	5	5	—	—	1	—	—	—	—	—	2	1	5	—	1	—	1	6	2	1	4	1
Nephritis and Bright's Disease	57	37	20	—	—	—	—	1	1	1	3	7	10	11	18	3	2	14	25	12	6	9	12
Tumours and other Affections of Female Genital Organs	3	—	3	—	—	—	—	—	1	—	—	1	1	—	—	—	—	—	1	2	—	1	1
Accidents and Diseases of Pregnancy Parturition	3	—	3	—	—	—	—	—	—	—	1	2	—	—	—	—	—	—	3	—	—	—	2
Violence	36	22	14	6	1	—	1	2	1	2	4	4	—	4	3	5	3	21	8	5	2	5	13
Suicide	10	8	2	—	—	—	—	—	—	—	3	4	—	2	1	—	—	5	1	—	4	—	1
Ill-defined Diseases or Unknown	31	14	17	21	1	—	1	—	—	1	—	2	1	—	2	1	1	13	8	7	3	4	1
Other Defined Diseases	40	28	12	4	2	1	3	2	1	—	3	3	7	8	5	1	—	11	13	15	1	11	10
Total	1420	787	633	201	68	51	30	24	40	26	82	123	135	234	187	167	52	488	471	343	118	214	292

TABLE IVA.

INFANT MORTALITY DURING THE YEAR 1912.

Net Deaths from stated Causes at various Ages under 1 Year of Age.

Cause of Death.	Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under 1 Year.
Small-pox	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	1	—	4	5
Scarlet Fever	—	—	—	—	—	—	—	1	—	1
Whooping-Cough	—	—	1	—	1	3	1	3	2	10
Diphtheria and Croup	—	—	—	—	—	—	—	—	1	1
Erysipelas	—	—	—	—	—	—	—	—	—	—
Tuberculous Meningitis	—	—	—	—	—	—	1	3	1	5
Abdominal Tuberculosis (*b*)	—	—	—	—	—	—	—	—	1	1
Other Tuberculous Diseases	—	—	—	—	—	—	—	1	—	1
Meningitis (*not Tuberculous*)	—	—	—	1	1	—	—	2	2	5
Convulsions	2	1	—	—	3	1	—	3	1	8
Laryngitis	—	—	—	—	—	—	—	—	—	—
Bronchitis	—	—	1	—	1	8	6	5	1	21
Pneumonia (all forms)	—	—	—	—	—	6	2	6	6	20
Diarrhœa	—	—	—	—	—	—	3	1	—	4
Enteritis	—	—	—	—	—	1	3	2	—	6
Gastritis	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	—	—	—	—	—
Rickets	—	—	—	—	—	—	—	—	1	1
Suffocation—overlying	3	—	—	—	3	—	—	—	—	3
Injury at Birth	2	—	—	—	2	—	—	—	—	2
Atelectasis	9	2	—	—	11	2	—	—	—	13
Congenital Malformations (*c*)	4	1	—	—	5	—	—	—	—	5
Premature Birth	37	3	3	4	47	4	—	1	—	52
Atrophy, Debility and Marasmus	2	—	4	2	8	12	4	2	—	26
Other Causes	2	2	1	3	8	1	—	1	1	11
Totals	61	9	10	10	90	38	21	31	21	201

Net Births in the Year { Legitimate, 2701. Illegitimate, 46.

Net Deaths in the Year of { Legitimate Infants, 192. Illegitimate Infants, 9.

TABLE V.

RATES PER 1,000 POPULATION, ESTIMATED TO THE MIDDLE OF THE YEAR.

Year.	Small-pox.		Cholera.		Erysipelas.		Diphtheria and Membranous Croup.		Scarlet Fever.		Typhus Fever.		Enteric and Continued Fevers.		Relapsing Fever.		Puerperal Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1891	0·01	—	—	—	0·58	0·05	0·51	0·08	1·52	0·04	0·01	—	0·37	0·06	—	—	0·15	0·03
1892	0·04	—	—	—	1·00	0·07	1·30	0·41	9·40	0·33	—	—	0·41	0·13	—	—	0·09	0·02
1893	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1894	0·35	0·03	—	—	0·96	0·04	1·70	0·56	7·80	0·42	—	—	0·47	0·11	—	—	0·04	0·03
1895	0·19	0·01	—	—	0·93	0·02	2·00	0·47	5·50	0·20	—	—	2·50	0·38	—	—	0·08	0·03
1896	0·03	—	—	—	1·03	0·04	2·80	0·87	5·00	0·24	—	—	0·62	0·07	—	—	0·03	0·01
1897	0·01	—	0·03	—	0·83	0·04	2·60	0·58	6·00	0·12	—	—	0·45	0·05	—	—	0·04	0·02
1898	—	—	0·02	—	0·86	0·02	2·20	0·31	5·70	0·16	—	—	0·52	0·11	—	—	0·09	0·08
1899	—	—	—	—	0·83	0·06	3·00	0·36	6·80	6·09	—	—	0·52	0·09	—	—	0·09	0·07
1900	0·01	—	—	—	0·91	0·05	3·10	0·27	3·90	0·09	—	—	0·59	0·10	—	—	0·06	0·01
1901	0·18	—	—	—	0·61	Nil	1·80	0·16	2·60	0·04	—	—	0·58	0·11	—	—	0·06	0·02
1902	1·82	0·30	—	—	0·78	0·01	1·87	0·18	2·14	0·06	—	—	0·40	0·10	—	—	0·09	0·05
1903	0·05	—	—	—	0·47	Nil	1·51	0·11	3·16	0·03	—	—	0·34	0·05	—	—	0·02	0·01
1904	0·05	—	—	—	0·59	0·03	1·30	0·23	3·75	0·13	—	—	0·19	0·05	—	—	0·04	0·02
1905	0·04	—	—	—	0·66	0·04	2·08	0·14	4·08	0·08	—	—	0·17	0·06	—	—	0·10	0·05
1906	—	—	—	—	0·76	0·02	3·13	0·17	4·27	0·04	—	—	0·22	0·06	—	—	0·06	0·02
1907	—	—	—	—	0·85	0·04	2·22	0·12	8·27	0·11	—	—	0·16	0·03	—	—	0·04	0·01
1908	—	—	—	—	0·70	0·05	2·93	0·16	4·82	0·07	—	—	0·10	0·02	—	—	0·04	0·02
1909	—	—	—	—	0·80	0·01	1·94	0·20	8·04	0·15	—	—	0·08	0·02	—	—	0·07	0·01
1910	—	—	—	—	0·70	0·02	1·19	0·04	4·09	0·10	—	—	0·08	0·01	—	—	0·06	0·02
1911	—	—	—	—	0·68	0·07	1·68	0·09	4·09	0·02	—	—	0·10	Nil	—	—	0·13	0·02
1912	0·02	0·01	—	—	0·71	0·02	3·09	0·16	3·80	0·03	—	—	0·15	0·02	—	—	0·02	0·01

NOTE.—Data for 1893 could not be obtained.

TABLE VI.

LONDON and the METROPOLITAN BOROUGHS.—BIRTHS and DEATHS of PERSONS belonging to LONDON and the METROPOLITAN BOROUGHS during the 52 Weeks of 1912.*

BOROUGHS.	Population estimated to the Middle of 1912.	Births.	DEATHS FROM									Deaths under 1 Year of Age.
			All Causes.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Diarrhœa & Enteritis (under 2 Years).	Phthisis.	
COUNTY OF LONDON ..	4,519,754	110,353	61,100	117	1	1799	159	970	452	1371	6069	10,056
West.												
Paddington	142,362	3021	1751	1	—	31	3	20	6	43	124	296
Kensington	171,746	3326	2226	4	—	27	5	24	6	37	183	303
Hammersmith	122,750	2880	1606	4	—	29	4	17	13	29	165	259
Fulham	155,402	4213	1985	8	—	65	6	45	15	33	209	396
Chelsea	65,397	1229	949	1	—	22	2	14	5	8	85	84
City of Westminster ..	157,248	2348	1942	4	—	37	4	16	11	38	183	197
North.												
St. Marylebone	116,155	2243	1602	5	—	40	11	19	8	26	146	209
Hampstead	85,966	1281	842	1	—	11	1	4	17	1	55	79
St. Pancras	216,145	5367	3148	3	—	95	5	44	25	37	341	472
Islington	326,398	8213	4662	8	—	151	9	57	39	90	441	712
Stoke Newington	50,581	1033	611	—	—	5	—	3	—	3	44	74
Hackney	222,986	5266	2691	3	—	19	8	33	12	60	303	421
Central.												
Holborn	48,026	902	733	1	—	25	—	7	7	8	99	72
Finsbury	86,130	2575	1612	1	—	129	5	29	13	44	165	294
City of London	18,695	185	251	—	—	2	—	1	1	4	37	15
East.												
Shoreditch	110,430	3562	1997	4	—	116	5	47	19	94	231	439
Bethnal Green	127,985	3902	1954	3	—	91	2	32	12	48	216	375
Stepney	277,315	8533	4211	9	—	170	13	96	26	153	465	897
Poplar	161,597	5045	2635	7	—	112	3	64	17	68	243	541
South.												
Southwark	190,017	5587	3164	4	—	139	6	49	27	104	354	587
Bermondsey	125,260	3872	2098	5	—	102	8	36	16	67	218	431
Lambeth	297,550	6952	3950	13	—	97	9	55	29	98	406	601
Battersea	167,589	4258	2042	2	—	55	6	40	15	50	195	358
Wandsworth	321,881	6757	3265	8	—	50	11	61	19	73	297	513
Camberwell	261,591	6422	3362	6	—	81	8	51	21	65	339	535
Deptford	109,377	2896	1432	2	—	28	6	25	11	29	147	259
Greenwich	95,994	2391	1254	2	—	28	9	30	15	25	135	201
Lewisham	165,249	3356	1714	6	—	11	6	24	27	26	115	236
Woolwich	**121,932**	**2738**	**1411**	**2**	**1**	**31**	**4**	**27**	**20**	**10**	**128**	**200**

* For the purpose of this Table, the Births registered in London have been corrected by distributing those which occurred in the principal institutions receiving maternity cases to the Boroughs in which the mothers resided. In 1,252 cases the residence was outside the County of London, and these cases have been excluded. On the other hand, 44 births that occurred outside the County have been included. With regard to the Deaths of London residents, all transferable deaths (*i.e.*, those of persons who, having a fixed or usual residence in England and Wales, die in a district other than that in which they resided) occurring in Greater London and in certain Metropolitan institutions outside Greater London, have been distributed to the Metropolitan Borough to which the deceased belonged. Of the Deaths registered in London, the previous residence was outside the County in 3,092 cases, while, on the other hand, the Deaths of 2,719 London residents occurred in the Outer Ring or in Metropolitan institutions outside Greater London.

TABLE VIa.

LONDON and the METROPOLITAN BOROUGHS.—BIRTH-RATES and DEATH-RATES of PERSONS belonging to LONDON and the METROPOLITAN BOROUGHS during the 52 Weeks of 1912.

BOROUGHS.	PER 1,000 PERSONS LIVING.										RATE PER 1,000 BIRTHS.	
		Deaths from										
		All Causes.										
	Births.	Crude.	*Corrected**	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever	Whooping Cough.	Diphtheria.	Phthisis.	Diarrhœa and Enteritis (under 2 Years).	Total Deaths under 1 Year.
COUNTY OF LONDON ..	24·5	13·6	*13·6*	0·03	0·00	0·40	0·04	0·22	0·10	1·35	12·42	91
West.												
Paddington	21·3	12·3	*12·3*	0·01	—	0·22	0·02	0·14	0·04	0·87	14·23	98
Kensington	19·4	13·0	*12·9*	0·02	—	0·16	0·03	0·14	0·04	1·07	11·12	91
Hammersmith	23·5	13·1	*13·0*	0·03	—	0·24	0·03	0·14	0·11	1·35	10·07	90
Fulham	27·2	12·8	*13·2*	0·05	—	0·42	0·04	0·29	0·10	1·35	7·83	94
Chelsea	18·8	14·6	*13·8*	0·02	—	0·34	0·03	0·21	0·08	1·30	6·51	68
City of Westminster ..	15·0	12·4	*13·0*	0·03	—	0·24	0·03	0·10	0·07	1·17	16·18	84
North.												
St. Marylebone ..	19·4	13·8	*14·1*	0·04	—	0·35	0·09	0·16	0·07	1·26	11·59	93
Hampstead	14·9	9·8	*10·4*	0·01	—	0·13	0·01	0·05	0·20	0·64	0·78	62
St. Pancras	24·9	14·6	*14·6*	0·01	—	0·44	0·02	0·20	0·12	1·58	6·89	88
Islington	25·2	14·3	*14·0*	0·02	—	0·46	0·03	0·18	0·12	1·35	10·96	87
Stoke Newington ..	20·5	12·1	*11·5*	—	—	0·10	—	0·06	—	0·87	2·90	72
Hackney	23·7	12·1	*12·2*	0·01	—	0·09	0·04	0·15	0·05	1·36	11·39	80
Central.												
Holborn	18·8	15·3	*15·4*	0·02	—	0·52	—	0·15	0·15	2·07	8·87	80
Finsbury	30·0	18·8	*18·6*	0·01	—	1·50	0·06	0·34	0·15	1·92	17·09	114
City of London ..	9·9	13·5	*14·0*	—	—	0·11	—	0·05	0·05	1·98	21·62	81
East.												
Shoreditch	32·3	18·1	*18·7*	0·04	—	1·05	0·05	0·43	0·17	2·10	26·39	123
Bethnal Green	30·6	15·3	*15·9*	0·02	—	0·71	0·02	0·25	0·09	1·69	12·30	96
Stepney	30·9	15·2	*15·9*	0·03	—	0·61	0·05	0·35	0·09	1·68	17·93	105
Poplar	31·3	16·4	*16·2*	0·04	—	0·69	0·02	0·40	0·11	1·51	13·48	107
South.												
Southwark	29·5	16·7	*16·8*	0·02	—	0·73	0·03	0·26	0·14	1·87	18·61	105
Bermondsey	31·0	16·8	*16·8*	0·04	—	0·82	0·06	0·29	0·13	1·75	17·30	111
Lambeth	23·4	13·3	*13·0*	0·04	—	0·33	0·03	0·19	0·10	1·37	14·10	86
Battersea	25·5	12·2	*12·3*	0·01	—	0·33	0·04	0·24	0·09	1·17	11·74	84
Wandsworth	21·0	10·2	*10·2*	0·02	—	0·16	0·03	0·19	0·06	0·93	10·80	76
Camberwell	24·6	12·9	*12·7*	0·02	—	0·31	0·03	0·20	0·08	1·30	10·12	83
Deptford	26·6	13·1	*13·0*	0·02	—	0·26	0·06	0·23	0·10	1·35	10·01	89
Greenwich	25·0	13·1	*12·9*	0 02	—	0 29	0 09	0 31	0 16	1·41	10·46	84
Lewisham	20·4	10·4	*10·2*	0·04	—	0·07	0·04	0·15	0·16	0·70	7·75	70
Woolwich	**22·5**	**11·6**	11·9	**0·02**	**0·01**	**0·25**	**0·03**	**0·22**	**0·16**	**1·05**	**3·65**	**73**

* The corrected Death Rates represent the Crude Death Rates multiplied by the respective Factors for Correction for differences of sex and age constitution of Population in 1911 as compared with that of England and Wales in 1901.

TABLE VII.

LONDON and the METROPOLITAN BOROUGHS.—DEATH-RATES per 1,000 Persons living and INFANTILE MORTALITY of Persons belonging to London and the Metropolitan Boroughs in the Five Years 1907–11, and in 1912.

BOROUGHS.	All Causes.		Enteric Fever.		Small-pox.		Measles.		Scarlet Fever.		Whooping-Cough.		Diphtheria.		Phthisis.		Per 1,000 Births.			
																	Diarrhœa and Enteritis (under 2 Years.)		Total Deaths under under 1 Year.	
	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.	1907–1911.	1912.
County of London ..	**14·7**	**13·6**	**0·04**	**0·03**	**0·00**	**0·00**	**0·45**	**0·40**	**0·09**	**0·04**	**0·28**	**0·22**	**0·14**	**0·10**	**1·37**	**1·35**		**12·42**	**114**	**91**
Paddington	13·4	12·3	0·03	0·01	—	—	0·32	0·22	0·07	0·02	0·24	0·14	0·09	0·04	1·10	0·87		14·23	107	98
Kensington	13·7	13·0	0·03	0·02	—	—	0·31	0·16	0·03	0·03	0·25	0·14	0·12	0·04	0·98	1·07		11·12	120	91
Hammersmith ..	14·6	13·1	0·04	0·03	—	—	0·43	0·24	0·07	0·03	0·27	0·14	0·17	0·11	1·21	1·35		10·07	120	90
Fulham	14·1	12·8	0·04	0·05	—	—	0·46	0·42	0·08	0·04	0·33	0·29	0·20	0·10	1·32	1·35		7·83	116	94
Chelsea	15·6	14·6	0·03	0·02	—	—	0·37	0·34	0·05	0·03	0·22	0·21	0·13	0·08	1·47	1·30		6·51	109	68
City of Westminster	12·8	12·4	0·04	0·03	0·00	—	0·13	0·24	0·05	0·03	0·12	0·10	0·09	0·07	1·28	1·17		16·18	97	84
St. Marylebone ..	14·8	13·8	0·03	0·04	—	—	0·28	0·35	0·09	0·09	0·26	0·16	0·09	0·07	1·35	1·26		11·59	103	93
Hampstead	9·7	9·8	0·04	0·01	—	—	0·14	0·13	0·04	0·01	0·12	0·05	0·09	0·20	0·71	0·64		0·78	70	62
St. Pancras ..	15·5	14·6	0·03	0·01	—	—	0·44	0·44	0·09	0·02	0·30	0·20	0·12	0·12	1·61	1·58		6·89	106	88
Islington	14·6	14·3	0·04	0·02	—	—	0·43	0·46	0·07	0·03	0·28	0·18	0·13	0·12	1·29	1·35		10·96	108	87
Stoke Newington ..	12·4	12·1	0·04	—	—	—	0·26	0·10	0·09	—	0·25	0·06	0·06	—	1·02	0·87		2·90	87	72
Hackney	13·8	12·1	0·05	0·01	—	—	0·37	0·09	0·09	0·04	0·26	0·15	0·13	0·05	1·28	1·36		11·39	109	80
Holborn	16·6	15·3	0·06	0·02	—	—	0·26	0·52	0·06	—	0·27	0·15	0·10	0·15	2·24	2·07		8·87	113	80
Finsbury	19·6	18·8	0·06	0·01	—	—	0·72	1·50	0·11	0·06	0·42	0·34	0·19	0·15	2·14	1·92		17·09	134	114
City of London ..	15·3	13·5	0·05	—	—	—	0·10	0·11	0·03	—	0·14	0·05	0·07	0·05	1·66	1·98		21·62	98	81
Shoreditch	19·0	18·1	0·06	0·04	—	—	0·91	1·05	0·13	0·05	0·49	0·43	0·17	0·17	1·86	2·10		26·39	149	123
Bethnal Green ..	17·3	15·3	0·07	0·02	—	—	0·69	0·71	0·19	0·02	0·35	0·25	0·16	0·09	1·65	1·69		12·30	134	96
Stepney	16·9	15·2	0·04	0·03	0·01	—	0·75	0·61	0·13	0·05	0·33	0·35	0·19	0·09	1·69	1·68		17·93	125	105
Poplar	17·2	16·4	0·08	0·04	0·00	—	0·74	0·69	0·15	0·02	0·45	0·40	0·20	0·11	1·38	1·51		13·48	130	107
Southwark	18·2	16·7	0·04	0·02	—	—	0·68	0·73	0·09	0·03	0·34	0·26	0·17	0·14	1·95	1·87		18·61	130	105
Bermondsey ..	18·4	16·8	0·05	0·04	—	—	0·88	0·82	0·15	0·06	0·35	0·29	0·13	0·13	1·83	1·75		17·30	137	111
Lambeth	14·8	13·3	0·04	0·04	—	—	0·37	0·33	0·09	0·03	0·25	0·19	0·15	0·10	1·48	1·37		14·10	110	86
Battersea	13·8	12·2	0·03	0·01	—	—	0·47	0·33	0·07	0·04	0·31	0·24	0·14	0·09	1·30	1·17		11·74	109	84
Wandsworth ..	11·6	10·2	0·03	0·02	—	—	0·33	0·16	0·06	0·03	0·26	0·19	0·10	0·06	0·92	0·93		10·80	97	76
Camberwell ..	14·1	12·9	0·03	0·02	—	—	0·40	0·31	0·07	0·03	0·26	0·20	0·13	0·08	1·28	1·30		10·12	104	83
Deptford	15·1	13·1	0·05	0·02	—	—	0·51	0·26	0·08	0·06	0·35	0·23	0·14	0·10	1·32	1·35		10·01	119	89
Greenwich	14·2	13·1	0·05	0·02	—	—	0·42	0·29	0·06	0·09	0·31	0·31	0·14	0·16	1·18	1·41		10·46	111	84
Lewisham	11·0	10·4	0·02	0·04	—	—	0·13	0·07	0·07	0·04	0·19	0·15	0·17	0·16	0·78	0·70		7·75	87	70
Woolwich	**12·7**	**11·6**	**0·02**	**0·02**	—	**0·01**	**0·31**	**0·25**	**0·09**	**0·03**	**0·19**	**0·22**	**0·13**	**0·16**	**1·29**	**1·05**		**3·65**	**94**	**73**

The average mortality under this heading cannot be stated.

TABLE VIII.

METEOROLOGY and REGISTERED DEATHS from all Causes and from certain Prevalent Diseases of the Year 1912.

WEEK. Date of Ending. 1912.	TEMPERATURE OF THE AIR. Highest during Week.	Lowest during Week.	Mean Temperature.	Average Temperature 3ft. below ground.	Mean Humidity, Complete Saturation, = 100.	No. of Days on which Rain fell.	Rainfall in Inches.	DEATHS CORRECTED FOR PUBLIC INSTITUTIONS. Under 2. Diarrhœa & Enteritis	Bronchitis and Pneumonia	All Causes.
Jan. 6	51·3	37·1	45·7+	46·64	90	4	0·76	1	4	30
13	51·0	29·1	41·9+	45·84	91	4	0·45	—	5	35
20	48·4	31·4	40·2+	45·24	94	5	0·93	—	3	29
27	48·0	28·4	38·9—	44·44	92	4	0·88	1	5	34
Feb. 3	39·0	19·1	30·0—	42·34	69	2	0.02	—	7	43
10	53·0	20·2	39·5+	40·41	86	5	0·52	1	12	42
17	58·0	38·1	45·5+	42·39	86	5	0·44	—	8	42
24	55·3	32·1	47·4+	44·17	88	6	0·65	—	5	25
Mar. 2	59·5	35·2	49·8+	45·80	81	5	0·52	1	2	29
9	54·1	34·0	44·6+	46·08	80	6	0·79	—	3	19
16	60·6	33·5	45·1+	45·41	91	3	0·19	—	3	22
23	55·1	31·3	42·7+	45·53	89	7	1·08	—	6	27
30	61·9	38·2	51·0+	46·38	73	1	0·05	—	3	38
1st Quarter ..	61·9	19·1	43·3 { 11+ / 2— }	44·67	85	57	7·28	4	66	415
April 6	67·7	32·5	48·0+	46·75	78	2	0·07	—	3	28
13	64·2	32·4	45·6—	47·72	67	1	0·02	—	6	30
20	69·9	33·1	50·0+	47·60	67	—	0·00	—	5	49
27	71·3	37·2	52·6+	49·16	65	—	0·00	—	5	24
May 4	70·7	36·1	50·1+	50·11	71	3	0·21	—	6	33
11	82·6	50·3	59·7+	51·90	75	2	0·06	1	7	26
18	72·0	43·2	55·2+	54·41	69	3	0·69	—	6	26
25	72·0	38·6	54·1—	54·87	75	3	0·19	1	3	26
June 1	77·0	36·1	57·0+	55·31	68	1	0·17	—	2	24
8	69·5	41·5	54·2—	56·17	81	6	0·99	—	2	25
15	71·0	44·5	58·1—	56·73	72	5	0·39	—	2	24
22	84·3	48·2	61·7+	58·11	69	2	0·65	—	5	32
29	75·8	50·9	60·2—	59·95	73	5	0·30	—	—	25
2nd Quarter ..	84·3	32·4	54·3 { 8+ / 5— }	52·98	72	33	3·74	2	52	372
July 6	74·0	51·1	58·7—	59·73	80	4	0·36	—	5	24
13	90·0	49·6	67·0+	60·75	70	3	0·20	—	2	30
20	88·1	48·1	65·8+	63·65	69	1	0·04	—	1	17
27	81·6	49·2	64·8+	63·22	72	3	0·16	—	1	22
Aug. 3	72·0	42·2	57·8—	63·09	76	5	0·54	—	—	21
10	73·0	47·6	57·6—	61·57	81	6	1·26	1	1	21
17	70·1	44·1	56·2—	60·48	77	4	0·23	—	5	22
24	70·0	47·1	57·2—	60·22	83	7	1·27	—	1	15
31	70·1	42·1	56·9—	59·74	80	2	1·33	1	1	20
Sept. 7	69·1	42·2	54·8—	59·08	75	2	0·21	—	3	18
14	67·0	43·2	52·4—	58·01	80	1	0·02	—	—	21
21	63·1	41·1	53·6—	57·38	80	—	0·00	—	—	23
28	64·0	37·2	51·5—	56·20	72	1	0·02	—	4	21
3rd Quarter ..	90·0	37·2	58·0 { 10— / 3+ }	60·24	76	39	5·64	2	24	275
Oct. 5	63·9	29·9	48·8—	55·11	83	4	2·30	—	2	23
12	63·0	29·4	46·0—	52·62	86	—	0·00	—	4	21
19	65·7	34·3	49·8+	51·93	84	4	0·13	—	5	21
26	59·0	33·0	45·4—	51·35	87	5	0·88	—	1	31
Nov. 2	60·3	32·1	49·1+	51·17	80	4	0·55	1	—	16
9	56·5	28·7	47·2+	49·54	90	1	0·18	—	2	21
16	50·9	36·4	43·3—	49·31	83	5	0·17	—	3	32
23	55·8	34·2	46·2+	48·30	85	4	0·31	1	4	29
30	52·9	29·3	40·4—	48·04	84	4	1·06	—	8	28
Dec. 7	52·1	26·2	42·4+	45·70	89	4	0·31	—	4	28
14	56·5	40·2	49·0+	46·58	87	5	0·62	—	7	29
21	55·0	34·4	44·4+	47·11	85	4	0·59	1	4	28
28	56·3	38·2	48·1+	46·85	88	6	1·22	—	5	35
4th Quarter ..	65·7	26·2	46·1 { 8+ / 5— }	49·58	85	50	8·32	3	49	342
YEAR ..	90·0	19·1	50·4 { 37+ / 15— }	51·87	79	179	24·98	11	191	1404

TABLE IX.

WEEKLY AVERAGES.

Period.	Temperature of the Air.			Temperature 3 feet below ground.	Mean Humidity: Complete Saturation = 100.	Number of days on which rain fell in each week.	Average Weekly Rainfall in inches.	Deaths corrected for Public Institutions.		
	Average of Weekly Maxima.	Average of Weekly Minima.	Average of Weekly Means.					Diarrhœa.	Bronchitis and Pneumonia.	All Causes.
1st Quarter ..	53·5	31·4	43·3	44·67	85	4·4	0·56	0·31	5	32
2nd Quarter ..	72·9	40·4	54·3	52·98	72	2·5	0·29	0·15	4	29
3rd Quarter ..	73·2	45·0	58·0	60·24	76	3·0	0·43	0·15	2	21
4th Quarter ..	57·5	32·8	46·1	49·58	85	3·8	0·64	0·23	4	26

TABLE X.

Summary of Statistics for the First Quarter, ending March 30th, 1912, corrected for Public Institutions :—

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 population.

Population, Estimated to Middle of 1912.	Births.		Deaths under 1 year.		Deaths at all ages— Gross.	Deaths in Public Institutions.	Deaths of Non residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages, corrected for Public Institutions.	
	No.	Rate.	No.	Rate per 1,000 Births Registered.					No.	Rate.
121,787	687	22·6	58	84	371	89	8	52	415	13·6

B. Birth and Death Rates for each Parish.

WOOLWICH.				PLUMSTEAD.				ELTHAM.			
Population, Estimated to Middle of 1912.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Population, Estimated to Middle of 1912.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Population, Estimated to Middle of 1912.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
36,727	25·7	15·2	89	W. 40,332 E. 30,891	22·3 21·4	14·6 12·2	58 127	13,837	17·6	9·8	49

Cause of Death.	Total.	Average for last 5 years.	Cause of Death.	Total.	Average for last 5 years.
Small-pox	1	—	Rheumatic Fever	—	2·8
Measles	5	21·4	Tubercle of Lung	35	56·8
Scarlet Fever	1	3·2	Other Tuberculous Diseases ..	12	
Influenza	10	15·6	Alcoholism and Cirr. of Liver ..	4	5
Whooping Cough	6	6·8	Cancer and Sarcoma	24	27
Diphtheria and Mem. Croup ..	4	5·6	Bronchitis	46	66·4
Enteric Fever	—	0·8	Broncho-Pneumonia	17	41·6
Diarrhœa and Enteritis	4	2·8	Pneumonia	17	
Erysipelas	1	1·6	Violence	10	9
Puerperal Fever	1	0·4	Suicide	4	2·2

TABLE XI.

Summary of Statistics for the Second Quarter, ending June 29th, 1912, corrected for Public Institutions :—

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 population.

	Births.		Deaths under 1 year.		Deaths at all ages— Gross.	Deaths in Public Institutions.	Deaths of Non-residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages, corrected for Public Institutions.	
Estimated Population.	No.	Rate.	No.	Rate per 1,000 Births Registered.	No.				No.	Rate.
121,853	713	23·4	60	84	337	85	17	52	372	12·2

B. Birth and Death Rates for each Parish.

WOOLWICH.				PLUMSTEAD.				ELTHAM.			
Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
36,710	26·7	13·1	102	W. 40,328 E. 30,888	22·1 22·7	11·1 14·6	63 103	13,927	20·1	8·0	43

C. Deaths from Certain Causes in whole Borough.

Cause of Death.	Total.	Average for last 5 years.	Cause of Death.	Total.	Average for last 5 years.
Small-pox	—	—	Rheumatic Fever	2	1·4
Measles	22	10·0	Tubercle of Lung	34	54·6
Scarlet Fever	2	3·2	Other Tuberculous Diseases	11	
Influenza	1	6·8	Alcoholism and Cirr. of Liver	7	6·4
Whooping Cough	17	5·4	Cancer	32	21·4
Diphtheria and Mem. Croup	2	4·6	Bronchitis	25	19·0
Enteric Fever	1	0·4	Broncho-Pneumonia	13	
Diarrhœa and Enteritis	2	2·2	Pneumonia	14	23·0
Erysipelas	—	1·0	Violence	5	9·4
Puerperal Fever	—	0·6	Suicide	2	3·8

TABLE XII.

Summary of Statistics for the Third Quarter, ending September 28th, 1912, corrected for Public Institutions :—

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 population.

Estimated Population.	Births.		Deaths under 1 year.		Deaths at all ages— Gross.	Deaths in Public Institutions.	Deaths of Non-residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages, corrected for Public Institutions.	
	No.	Rate.	No.	Rate per 1,000 Births Registered.	No.				No.	Rate.
121,853	666	21·9	35	53	239	50	9	44	274	9·0

B. Birth and Death Rates for each Parish.

WOOLWICH.				PLUMSTEAD.				ELTHAM.			
Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
36,710	22·8	11·9	96	W. 40,328 E. 30,888	21·5 21·9	8·6 7·1	32 24	13,927	20·4	6 6	56

C. Deaths from Certain Causes in whole Borough.

Cause of Death.	Total.	Average for last 5 years.	Cause of Death.	Total.	Average for last 5 years.
Small-pox	—	—	Rheumatic Fever	—	1·2
Measles	1	3·6	Tubercle of Lung	19	43·0
Scarlet Fever	1	2·2	Other Tuberculous Diseases	13	
Influenza	4	0·8	Alcoholism and Cirr. of Liver	8	4·4
Whooping Cough	4	5·0	Cancer and Sarcoma	31	29·8
Diphtheria and Mem. Croup	6	0·6	Bronchitis	11	10·8
Enteric Fever	—	0·6	Broncho-Pneumonia	8	11·2
Diarrhœa and Enteritis	2	52·0	Pneumonia	5	
Erysipelas	1	0·6	Violence	8	8·8
Puerperal Fever	—	0·4	Suicide	3	3·8

TABLE XIII.

Summary of Statistics for the Fourth Quarter, ending December 28th, 1912, corrected for Public Institutions :—

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 population.

Estimated Population.	Births.		Deaths under 1 year.		Deaths at all ages—Gross.	Deaths in Public Institutions.	Deaths of Non-residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages, corrected for Public Institutions.	
	No.	Rate.	No.	Rate per 1,000 Births Registered.	No.				No.	Rate.
123,311	670	21·7	43	64	302	73	8	48	342	11·1

B. Birth and Death Rates for each Parish.

WOOLWICH.				PLUMSTEAD.				ELTHAM.			
Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.	Estimated Population.	Birth Rate.	Death Rate.	Deaths under 1 year per 1,000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
37,030	24·2	12·7	76	W. 40,943 E. 31,288	22·0 19·9	11·0 10·5	53 64	14,050	18·5	8.0	61

C. Deaths from Certain Causes in whole Borough.

Cause of Death.	Total.	Average for last 5 years.	Cause of Death.	Total.	Average for last 5 years.
Small-pox	—	—	Rheumatic Fever	2	1·6
Measles	3	2·2	Tubercle of Lung	33	50·6
Scarlet Fever	—	2·8	Other Tuberculous Diseases	8	
Influenza	10	6·8	Alcoholism and Cirr. of Liver	4	8·0
Whooping Cough	—	5·8	Cancer	30	31·2
Diphtheria and Mem. Croup	7	3·8	Bronchitis	30	41·6
Enteric Fever	1	0·2	Broncho-Pneumonia	6	
Diarrhœa and Enteritis	3	11·2	Pneumonia	13	24·6
Erysipelas	1	1·8	Violence	7	7·6
Puerperal Fever	—	0·4	Suicide	1	1·0

TABLE XIV.

Weekly Deaths from various causes for the whole Borough, 1912, corrected for Public Institutions.

Week ending	Small-pox.	Measles.	Scarlet Fever.	Epidemic Influenza.	Whooping Cough.	Diphtheria and Mem. Croup.	Enteric Fever.	Diarrhœa (under 2 years).	Enteritis (under 2 years).	Erysipelas.	Puerperal Fever.	Rheumatic Fever.	Tubercle of Lung & Acute Tuberculosis.	Other Tuberculous Diseases.	Alcoholism and Cirrhosis of Liver, and Per. Neuritis.	Cancer and Sarcoma.	Bronchitis.	Broncho-Pneumonia.	Pneumonia.	Violence.	Suicide.
Jan. 6	—	—	—	2	1	—	—	—	1	1	—	—	1	—	—	1	3	4	1	—	—
13	—	—	—	1	—	—	—	—	—	—	—	—	6	2	1	2	4	1	1	—	—
20	1	—	—	—	—	—	—	—	—	—	—	—	3	—	—	2	3	—	—	—	1
27	—	1	1	1	—	—	—	—	1	—	—	—	4	1	—	2	5	—	—	2	—
Feb. 3	—	—	—	—	—	—	—	—	—	—	—	—	6	1	—	1	5	2	2	—	—
10	—	1	—	3	1	—	—	1	—	—	—	—	3	1	—	2	10	2	2	—	—
17	—	—	—	2	1	—	—	—	—	—	1	—	2	1	1	—	7	2	1	1	2
24	—	—	—	—	1	—	—	—	—	—	—	—	1	—	1	1	3	3	2	1	—
Mar. 2	—	—	—	1	1	1	—	1	—	—	—	—	3	—	—	3	1	—	1	1	—
9	—	—	—	—	1	1	—	—	—	—	—	—	2	—	—	—	—	—	3	1	—
16	—	1	—	—	—	—	—	—	—	—	—	—	1	2	1	2	2	1	—	1	—
23	—	1	—	—	—	2	—	—	—	—	—	—	—	1	—	—	2	1	3	2	—
30	—	1	—	—	—	—	—	—	—	—	—	—	3	3	—	8	1	1	1	1	1
1st Qtr.	1	5	1	10	6	4	—	2	2	1	1	—	35	12	4	24	46	17	17	10	4
April 6	—	2	—	—	1	—	—	—	—	—	—	—	4	—	1	1	2	1	—	2	1
13	—	2	1	—	—	—	—	—	—	—	—	—	3	1	—	2	3	1	2	—	—
20	—	1	—	—	2	—	—	—	—	—	—	—	7	1	1	5	1	3	1	—	—
27	—	2	—	—	4	—	—	—	—	—	—	—	1	—	—	1	2	1	2	—	—
May 4	—	1	—	—	4	—	—	—	—	—	—	—	5	—	—	1	3	1	2	—	—
11	—	3	—	—	—	—	1	—	1	—	—	—	4	1	—	—	2	2	3	—	—
18	—	2	—	—	1	—	—	—	—	—	—	—	1	1	—	2	1	1	4	1	—
25	—	2	—	—	2	—	—	—	1	—	—	—	1	2	1	—	1	2	—	—	1
June 1	—	—	—	—	1	—	—	—	—	—	—	2	—	—	2	6	2	—	—	—	—
8	—	4	—	—	—	1	—	—	—	—	—	—	3	2	—	4	1	1	—	2	—
15	—	1	—	1	2	—	—	—	—	—	—	—	3	—	—	2	2	—	—	—	—
22	—	1	—	—	—	1	—	—	—	—	—	—	—	2	2	4	5	—	—	—	—
29	—	1	1	—	—	—	—	—	—	—	—	—	2	1	—	4	—	—	—	—	—
2nd Qtr.	—	22	2	1	17	2	1	—	2	—	—	2	34	11	7	32	25	13	14	5	2
July 6	—	—	1	—	1	—	—	—	—	—	—	—	2	1	1	3	2	3	—	—	—
13	—	—	—	—	—	1	—	—	—	—	—	—	2	2	—	3	2	—	—	1	1
20	—	—	—	—	—	—	—	—	—	1	—	—	—	3	1	2	1	—	—	1	—
27	—	—	—	1	—	—	—	—	—	—	—	—	—	2	—	4	—	1	—	—	—
Aug. 3	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	2	—	—	—	3	—
10	—	—	—	1	—	1	—	—	1	—	—	—	2	—	1	2	—	1	—	1	—
17	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	3	2	—	—	—
24	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2	3	—	—	1	—	—
31	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	4	—	1	—	—	1
Sept. 7	—	1	—	1	—	—	—	—	—	—	—	—	2	—	—	1	1	—	2	—	—
14	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	4	—	—	—	1	—
21	—	—	—	—	1	2	—	—	—	—	—	—	3	2	1	3	—	—	—	1	1
28	—	—	—	—	1	1	—	—	—	—	—	—	2	—	—	—	2	—	2	—	—
3rd Qtr.	—	1	1	4	4	6	—	1	1	1	—	—	19	13	8	31	11	8	5	8	3
Oct. 5	—	1	—	—	—	—	—	—	—	—	—	1	5	1	—	1	1	—	1	—	—
12	—	—	—	2	—	—	—	—	—	—	—	—	4	—	—	2	—	2	2	1	—
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	—	1	—	1
26	—	—	—	—	—	2	—	—	—	—	—	—	2	—	1	2	1	—	—	2	—
Nov. 2	—	—	—	—	—	2	—	—	1	1	—	—	—	—	—	1	—	—	—	1	—
9	—	—	—	—	—	—	—	—	—	—	—	—	3	2	—	4	1	1	—	—	—
16	—	1	—	1	—	—	—	—	—	—	—	—	5	1	—	4	1	—	2	—	—
23	—	—	—	1	—	—	1	1	—	—	—	—	2	—	—	3	2	—	2	1	—
30	—	—	—	—	—	2	—	—	—	—	—	—	1	1	2	3	6	1	1	1	—
Dec. 7	—	—	—	—	—	—	—	—	—	—	—	—	2	1	1	3	3	—	1	—	—
14	—	—	—	1	—	—	—	—	—	—	—	1	1	1	—	1	4	2	1	—	—
21	—	1	—	2	—	—	—	—	1	—	—	—	5	1	—	1	3	—	1	—	—
28	—	—	—	3	—	1	—	—	—	—	—	—	3	—	—	4	4	—	1	1	—
4th Qtr.	—	3	—	10	—	7	1	1	2	1	—	2	33	8	4	30	30	6	13	7	1
Total for Year	1	31	4	25	27	19	2	4	7	3	1	4	121	44	23	117	112	44	49	30	10

TABLE XVa.

Summary of Nuisances Abated, Notices Served, and General Work of Public Health Department, 1912.

	St. Mary's and Dockyard.	River.	Burrage and Herbert.	Central and St. Margaret's.	St. Nicholas.	Glyndon.	Eltham.	St. George's.	Total.
PREMISES INSPECTED.									
No. of Houses inspected, house to house	758	1020	769	1018	853	736	256	420	5830
„ Re-inspections after service of Notice (estimated)	1735	1815	1954	1905	1710	1123	719	750	11711
„ Houses and premises specially inspected, including infectious diseases and complaints	1090	861	1225	1061	1043	497	523	378	6678
„ Houses where drains have been tested by smoke test	28	28	53	43	16	9	17	6	200
„ Houses where drains have been tested by water test	24	15	43	5	2	16	8	5	118
„ New Houses inspected for Water Certificates	0	4	1	2	17	0	62	0	86
NUISANCES ABATED—DRAINS.									
Waste-pipe from baths, lavatories, and wash-house sinks, repaired or disconnected	15	30	16	9	51	19	10	25	175
Choked and defective drains	49	97	77	31	59	26	41	19	399
Defective traps	7	7	14	4	7	12	8	4	63
Defective and unventilated soil pipes	0	1	20	6	0	2	3	3	35
W.C.'s.									
W.C.'s repaired, new traps or pans provided	40	78	57	17	35	75	31	40	373
Water supply apparatus repaired or renewed	84	73	50	52	121	61	40	36	517
Foul pans cleansed	39	21	24	61	24	20	26	23	238
Additional W.C.'s provided to Factories and Workshops, etc.	0	0	0	0	0	0	0	0	0
Ditto dwelling houses	0	0	0	0	0	0	0	0	0
PREMISES.									
Underground rooms not in accordance with Act	4	6	2	0	1	0	0	0	13
Interiors cleansed and defective roofs repaired	322	412	296	165	301	216	195	299	2206
Damp walls remedied	65	147	74	43	118	33	39	52	571
Paving in yards and wash-houses repaired	57	62	43	18	61	23	25	42	331
Improved ventilation provided	6	26	4	8	1	7	2	8	62
Wash-houses without sink and outlets for waste water	0	0	13	2	0	0	0	0	15
Defective guttering and rain-water pipes	49	25	28	47	68	30	26	38	311
Dustbins supplied	70	115	80	48	78	38	37	49	525
Dung pits provided	0	0	5	0	1	0	0	0	6
Cases of overcrowding remedied	19	11	12	12	26	0	2	9	91
Deficient light—windows supplied, or enlarged, or other works	13	3	14	0	2	5	0	7	44
Dampness in premises from defective water pipes	25	20	15	14	8	0	9	6	97
ANIMALS.									
Animals (including pigs) kept in such a state as to be a nuisance	5	0	3	1	2	4	4	2	21
Accumulations of manure removed	32	13	15	6	5	5	18	8	102
WATER.									
Defective and foul cisterns used for dietary purposes	0	0	2	4	43	0	6	0	55
Defective and foul rain-water tanks remedied	3	0	2	0	0	0	2	0	7
Insufficient supply, and water cut off by Water Board	0	4	5	2	3	2	7	6	29
Additional water supply for two or more families	4	0	0	0	0	0	1	1	6
MISCELLANEOUS.									
No. of observations made of chimneys in connection with smoke nuisances	11	13	3	0	48	0	2	3	80
No. of smoke nuisances observed	0	0	0	0	13	0	0	1	14
Tents, Vans, etc., inspected	0	0	0	2	1	0	31	0	34
Notices served with respect to tents and vans	0	0	0	0	0	0	4	0	4
Inspection of Urinals accessible to the public	87	17	73	82	36	68	48	31	442
Verminous rooms cleansed	41	99	10	7	19	21	3	14	214
Intimation notices served	647	644	528	245	552	288	198	296	3398
Statutory „ „	105	37	138	40	168	41	35	28	592

TABLE XVb.

Summary of Work of Chief Inspector.

Premises Inspected	1315
New Buildings Inspected	29
Defective Combined Drains Investigated and Reported on ..	16
Number of Houses referred to in such Combined Drains ..	108
Cow-house and Slaughter-house Inspections	36
Complaints Investigated	129
Attendances at Police Courts	9

Miscellaneous, Including Work of Chief Inspector, District Inspectors, and Clerks.

Number of Cases of Inattention to Notices reported to Town Clerk for proceedings	51
Summonses at Police Courts for ditto	5
Bake-houses Inspected and Cleansed twice during the year ..	51
Number of Houses Disinfected after Infectious Disease ..	2095
Letters written	4187
Notifications received	2917
Certificates issued after Disinfection	1156
„ of Infectious Disease forwarded to Schools ..	1739
Complaints of Sanitary Defects	361
„ of Non-removal of Dust, viz. :—	
Woolwich	4
Plumstead	17
Eltham	8

TABLE XVc.

Factories, Workshops, Laundries, Workplaces, and Home-workers' Premises.

1.—*Inspection.*

(Including Inspections made by Sanitary Inspectors.)

Premises.	Number of	
	Inspections.	Written Notices.
Factories .. .. (Including Factory Laundries)	67	20
Workshops .. .. .. (Including Workshop Laundries)	241	26
Workplaces	91	17
Homeworkers' Premises	529	18
Total ..	928	81

2.—*Defects Found.*

Description.	Number of Defects	
	Found.	Remedied.
Nuisances under Public Health Act :		
Want of Cleanliness	53	53
Want of Ventilation ..	9	9
Overcrowding .. .	3	3
Want of Drainage of Floors	3	3
Other Nuisances	19	19
Sanitary Accommodation — insufficient—unsuitable or defective	20	20
Sanitary Accommodation — not separate for sexes	4	4
Total ..	111	111

TABLE XVc.—*continued.*

3.—*Other Matters.*

Class.		No.
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		4
Action taken in matters remediable under the Public Health Acts, but not under the Factory Act (S. 5)	Notified by H.M. Inspector ..	2
	Reports (of action taken) sent to H.M. Inspectors ..	2
Underground Bakehouses (S. 101) :—		
In use during 1903		24
Certificates granted	in 1903	24
	in 1904–1905	0
	in 1906	1
	in 1907–1908–1909	0
	in 1910	1
	in 1911–1912	0
In use during 1912		15
Workshops on the Register (S. 131) at end of 1912 :—		
Workshop Laundries		16
,, Bakehouses		42
Other Workshops		175
Total number of Workshops on Register		233

TABLE XVc.—*continued.*

4.—*Home Work.*

Nature of Work.	Out-Workers' Lists, Section 107.								Number of Inspections of Outworkers' Premises.	Outwork in Unwholesome Premises, Section 108.			Outwork in Infected Premises, Sections 109, 110.		
	Lists received from Employers.				Number of Addresses of Outworkers received from other Councils.	Number of Addresses of Outworkers forwarded to other Councils.	Prosecutions.								
	Twice in the Year.		Once in the Year.												
	Lists.	Outworkers.	Lists.	Outworkers.			Failing to keep or permit inspection of Lists.	Failing to send Lists.		Instances.	Notices Served.	Prosecutions.	Instances.	Orders Made (Sec. 109).	Prosecutions (Secs. 109, 110.)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Wearing Apparel	44	233	7	24	107	34	—	—	96	13	13	—	—	—	—
Lace	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—
Artificial Flowers	—	—	—	—	2	1	—	—	1	—	—	—	—	—	—
Tennis Balls, etc.	6	727	—	—	—	110	—	—	429	5	5	—	—	—	—
Fancy Boxes ..	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—
Brushes ..	—	—	—	—	4	2	—	—	2	—	—	—	—	—	—

TABLE XVd.

Proceedings during 1912.

Premises.	Number of Places.				Number of Inspections, 1912.	Number of Notices, 1912.	Number of Prosecutions, 1912.
	On Register at end of 1911.	Added in 1912.	Removed in 1912.	On Register at end of 1912.			
Milk Premises ..	129	11	23	117	189	12	0
Cowsheds	16	0	0	16	64	7	0
Slaughterhouses ..	12	0	0	12	49	3	0
Ice Cream Premises	89	11	11	89	142	5	0
Registered Houses Let in Lodgings	429	8	5	432	516	241	0

Overcrowding, 1912—
Number of Dwelling Rooms overcrowded 91
Number remedied 91

Underground Rooms—
Illegal occupation dealt with during year 13
Number of rooms closed 13

Insanitary Houses—
Number closed under the Housing, Town Planning, Etc., Act 2

Number of Prosecutions under By-Laws under Public Health Act, 1891—
With respect to water-closets, earth-closets, etc. .. 0
With respect to sufficiency of water supply to water-closets 0
With respect to drainage, etc. (Metropolis Management Act, Sec. 202) 0

Mortuaries—
Total number of Bodies removed 143
Total number of Infectious Bodies removed 4

Inspection of premises where Food is prepared for sale 92

Number of Public Sanitary Conveniences removed or altered .. 0

Number of fixed ashpits removed 0

TABLE XVI.
DETAILS OF HOUSE-TO-HOUSE INSPECTIONS.

Name of Street.	Number of Houses Inspected.	Number of Defects Found.
RIVER WARD.		
Beresford Street	22	10
Creton Street	21	10
Myrtle Street	11	3
Gough Street	28	14
Sandy Hill Road	13	8
Brookhill Road..	20	11
Clara Place	9	7
Monk Street	12	10
Union Street	14	5
Salutation Alley	4	4
Globe Lane	13	6
Collingwood Street	12	8
Meeting House Lane	15	5
Nelson Street	7	3
Rodney Street	9	4
New Street	8	8
Cock Yard	3	1
St. Mary Street	7	5
Charles Street	30	14
Rope Yard Rails	18	12
Kingsman Street	17	5
Warren Lane	17	7
Eleanor Road	39	11
Elizabeth Street	57	19
Parsons Hill	7	3
Powis Street	117	40
Taylor's Buildings	5	3
New Road	33	3
Spray Street	5	2
Anglesea Avenue	9	5
Wilmount Street	38	11
Taylor Street	18	6
Glasshouse Yard	5	2
Nile Cottages	5	5
Walpole Place	25	8
High Street	58	29
Albert Road	112	60
Winifred Street..	78	30
Auberon Street..	45	13
Rhea Street	85	15
Dock Street	27	12
Barge House Road	34	27
Mary Ann Street	7	2
	1119	466
		41% Defects.

TABLE XVI.—*continued.*
Details of House-to-House Inspections.

Name of Street.	Number of Houses Inspected.	Number of Defects Found.
St. MARY'S WARD.		
Morris Street	32	23
Morris Place	6	6
Trinity Street	28	15
Selina Place	12	8
Mulgrave Place..	6	2
Borgard Road	16	8
Prospect Row	44	29
Sarah Place	6	2
Harrington's Buildings ..	5	0
Railway Cottages	4	4
Church Street	73	25
Hulk Cottages	4	4
George Street	27	12
Albion Road	57	27
Woolwich Road	13	5
St. Mary's Street	76	29
Kidd Street	81	22
Bowater Road	9	7
Belford Grove	24	5
Kingsman Street	137	62
Lower Harden Street	24	7
Upper Harden Street	16	7
Prospect Place	57	25
	757	334
		44% Defects.
ST. GEORGE'S WARD.		
Brookhill Road..	63	30
Delvan Street	15	7
Fenwick Street	58	34
Engineer Road..	32	15
Jackson Street	60	42
James Street (part of)	11	5
Keemor Street (part of) ..	8	5
Manor Street	38	30
Milward Street	53	32
Nightingale Place (part of) ..	8	4
Ordnance Road..	62	37
Sandy Hill Road	12	4
	420	245
		58·6% Defects.

TABLE XVI.—*continued.*
Details of House-to-House Inspections.

Name of Street.	Number of Houses Inspected.	Number of Defects Found.
ELTHAM WARD.		
Blanmerle Road	61	26
Cooper's Place	8	6
Foots Cray Road	45	29
Frith's Buildings	16	11
Hainault Street..	6	3
High Street	7	3
Gaitskill Road	25	12
Kirk's Yard	6	3
Lannoy Road	28	18
Novar Road	17	10
Reventlow Road (part of) ..	4	4
Victoria Cottages, Green Lane	28	16
Pottery Cottages, Bexley Road	5	5
	256	146
		57% Defects.
BURRAGE & HERBERT WARDS.		
Bloomfield Road	94	40
Cambridge Place	8	4
St. James' Place	64	29
Vambery Road..	31	7
Eton Road	29	12
Helen Street	12	7
Barnfield Place..	8	6
Barnfield Road..	64	36
Princes Road	91	52
Thomas Cottages	8	3
Brookhill Road..	6	4
Portland Place	16	10
May Place	4	1
Graydon Street..	15	6
Crescent Road	130	56
Willenhall Road	26	13
Isla Road	35	11
Plumstead Road	57	26
Plumstead Common Road ..	21	8
	719	331
		46% Defects.

TABLE XVI.—*continued.*
Details of House-to-House Inspections.

Name of Street.	Number of Houses Inspected.	Number of Defects Found.
GLYNDON WARD.		
Railway Place	17	6
Walmer Road	62	31
Ann Street	162	73
Hudson Road	31	6
Raglan Road	35	6
Lenton Street	19	11
Villas Road	118	45
Pattison Road	85	31
Station Road	103	24
Brewery Road	44	4
Vicarage Road	50	14
	726	251
		34·6% Defects.
ST. NICHOLAS WARD.		
Reidhaven Road	68	35
St. Nicholas Road	29	8
Church Manorway	15	5
Camrose Street	28	14
Woodhurst Road	33	16
Brookdene Road	35	30
Bateson Street	12	6
Barth Road	83	52
Ceres Road	96	23
Balgowan Street	27	22
Hylton Street	36	30
Manton Road	4	3
Purrett Road	86	31
Saunders Road..	39	13
Speranza Street..	45	21
Marmadon Road	130	68
White Hart Road	20	7
Kentmere Road	41	20
Kashgar Road (part of) ..	26	9
	853	413
		48·4% Defects.

TABLE XVI.—*continued.*

Details of House-to-House Inspection.

Name of Street.	Number of Houses Inspected.	Number of Defects Found.
ST. MARGARET'S & CENTRAL WARDS.		
Kirkham Street	38	29
Mineral Street	61	14
Piedmont Road..	84	21
Park Road	50	9
Ancona Road	45	6
Fairlight Terrace	15	5
Alexandra Terrace	12	2
Barden Street	15	4
Melling Street	33	10
Malton Street	44	8
Tuscan Road	32	6
Hector Street	31	7
Brewery Road	90	16
Lakedale Road	100	31
Coupland Terrace	40	15
Hudson Road	81	26
Leghorn Road	37	2
Hargor Road	61	27
Raglan Road	37	15
Garland Street	56	29
Pendrell Street	38	16
Orchard Road	18	3
	1018	301
		29·5% Defects.

TABLE XVII.

PROSECUTIONS UNDER THE PUBLIC HEALTH AND LONDON COUNTY COUNCIL (GENERAL POWERS) ACTS.

No.	Date of Hearing.	Offence.	Situation.	Result.
1	1912. June 13	Obstructing Female Inspector in execution of duty	7, Mabyn Road ..	Fine 20s. and 4s. costs, or 7 days.
2	Dec. 19	Dirty Conditions	5, Coopers Place, Eltham	Order to abate in 14 days (4s. costs)
3	Do.	do. do.	7, do. do.	do. do.
4	Do.	Defective House Roof	8, do. do.	do. do.
5	Do.	Dirty Conditions	8, do. do.	do. do.

TABLE XVIII.

Summary of Articles Analysed under the Sale of Food and Drugs Act, during the Year ending December 31st, 1912.

Article.	Number Analysed.	Number Adulterated.
Milk	318	11
Butter	40	0
Vinegar	10	0
Coffee	10	2
Jam	9	0
Potted Meat	3	0
Soup	1	0
Mustard	9	0
Drugs	29	0
Tea	8	0
Rice	6	0
Cocoa	12	0
Potted Fish	5	0
Sugar	3	0
Flour	6	0
Lard	8	0
Olive Oil	2	0
Pepper	4	0
Green Peas	1	0
Sausages	6	0
	490	13

TABLE XVIIIa.

PROSECUTIONS UNDER FOOD AND DRUGS ACT DURING THE YEAR 1912.

No.	Article.	Nature of Offence.	Name and Address of Vendor.	Result of Proceedings.
1	Milk ..	10·3% added water ..	A. P. Godden, 229, High Street, Plumstead	Fined £10 and 23s. costs
2	Coffee ..	56·45% of chicory ..	E. J. Tucker, 82, Brookhill Road, Woolwich	Fined 20s. and 4s. costs
3	Milk ..	26·6% deficient in fat ..	C. Voice, 102, Ann Street, Plumstead	Fined 10s. and 12s. 6d. costs
4	Milk ..	10·36% added water ..	E. A. & L. King, 4, Spray Street, Woolwich	Fined 2s. 6d. and 12s. 6d. costs
5	Milk .. (Separated)	17% added water ..	H. Hoar, 16, Lenton Street, Plumstead	Fined 20s. and 12s. 6d. costs
6	Milk ..	5·33% deficient in fat ..	J. H. Harrington, 26, Prospect Row, Woolwich	Fined 10s. and 12s. 6d. costs
7	Milk ..	16·1% added water ..	G. Brown, 9, Elizabeth Street, North Woolwich	Fined £20 and £2 2s. costs
8	Milk ..	14·6% deficient in fat ..	G. E. Poulter, 52, Whitworth Road, Plumstead	Fined 40s. and 22s. costs.

TABLE XIX.

FOOD SEIZED OR SURRENDERED BY OWNERS AS UNFIT FOR CONSUMPTION.

Articles.	Quantity.	Date.		Reason.
Pig's Pluck	1 ..	Jan. 4	Surrendered	Inflammation
Ox Liver	1 ..	,, 17	,,	Flukey
,, Lungs	1 ..	,, 23	,,	Echinococci
,, Liver	1 ..	,, 31	,,	Flukey
Pig's Pluck	1 ..	Feb. 5	,,	Inflammation
Ox Lungs	1 ..	,, 7	,,	Tuberculous
Herrings	3 barrels	,, 10	,,	Unsound
Ox Livers	2 ..	,, 14	,,	Flukey
Do.	1 ..	,, 14	,,	Do.
Do.	1 ..	,, 21	,,	do.
Do.	1 ..	Mar. 6	,,	do.
Plain Greens	3 bags ..	,, 14	,,	Unsound
Ox Liver	1 ..	,, 19	,,	Flukey
Fish	1 box ..	,, 21	,,	Unsound
Winkles	10 galls.	,, 31	,,	do.
Cods' Roes	2 boxes	April 3	,,	do.
Calf's Pluck	1 ..	,, 2	,,	Tuberculous
Ox Liver	1 ..	,, 3	,,	Flukey
Coal Fish	1 trunk ..	,, 4	,,	Unsound
Ox Liver	1 ..	,, 10	,,	Flukey
Carcase of Pig	1 ..	,, 16	,,	Smothered
Ox Liver	1 ..	May 8	,,	Flukey
Kippers	3 boxes	,, 29	,,	Unsound
Ox Liver	1 ..	,, 29	,,	Flukey
Carcase of Pig and Offal ..	1 ..	,, 30	,,	Tuberculous
Sheep's Liver	1 ..	June 5	,,	Cirrhosis
Ox Liver	1 ..	,, 10	,,	Flukey
Ox Lungs	1 ..	,, 14	,,	Tuberculous
Pig's Pluck	1 ..	,, 14	,,	do.
Do.	1 ..	,, 27	,,	Inflammation
Condensed Milk	3 tins ..	July 11	,,	Blown and Bad
Herrings	1 box ..	,, 22	,,	Unsound
Sheep's Cauls	Parts of	Aug. 26	,,	Cysticercus tenuicollis
Ox Liver	1 ..	,, 28	,,	Flukey
Do.	1 ..	Sept. 3	,,	do.
Do.	1 ..	,, 4	,,	Abscesses
Ox Lungs	2½ pair ..	,, 5	,,	Tuberculous
Ox Livers	2 ..	,, 16	,,	Flukey
Pig's Lungs	1 ..	,, 19	,,	Pneumonia
Ox Lungs	1 ..	,, 19	,,	Echinococci
Ox Liver	1 ..	,, 25	,,	Tumour
Ox Lungs	1 ..	,, 30	,,	Echinococci
Sheep's Liver and Lungs ..	1 ..	Oct. 1	,,	Strongyli

TABLE XIX.—*continued.*

FOOD SEIZED OR SURRENDERED BY OWNERS AS UNFIT FOR CONSUMPTION.

Articles.	Quantity.	Date.		Reason.
Ox Liver	1 ..	Oct. 12	Surrendered	Abscesses
Ox Livers	2 ..	,, 15	,,	Flukey
Sheep's Cauls	Parts of 3	,, 15	,,	Cysticercus tenuicollis
Ox Liver	1 ..	,, 16	,,	Flukey
Do.	1 ..	,, 24	,,	do.
Sheep's Pluck	1 ..	,, 24	,,	Strongyli
Haddocks	1 trunk ..	,, 29	,,	Unsound
Do.	1 ,,	Nov. 2	,,	do.
Ox Lungs	1 ..	,, 5	,,	Tuberculous
Carcase and Offal of Pig ..	15 stone	,, 11	,,	do.
Ox Liver	1 ..	,, 25	,,	Flukey.
Do.	1 ..	Dec. 4	,,	Abscesses
Sheep's Pluck	1 ..	,, 11	,,	Strongyli
Sheep's Lungs	1 ..	,, 16	,,	Inflammation
Sheep's Pluck	1 ..	,, 18	,,	Strongyli
Ox Liver	1 ..	,, 19	,,	Flukey

SUMMARY.

Articles.	Quantity.	Reason.
Pig's Pluck	4	4 Inflammation
Carcase of Pig	3	20 Flukey
Pig's Lungs	1	3 Echinococcus
Ox Livers	27	8 Tuberculous
Ox Lungs	9	1 Smothered
Calf's Pluck	1	1 Cirrhosis
Sheep's Liver	2	2 Cysticercus tenuicollis
Sheep's Lungs	2	3 Abscesses
Sheep's Cauls	2	1 Pneumonia
Sheep's Pluck	3	1 Tumour
		4 Strongyli
Condensed Milk	3 tins	Blown and Bad
Plain Greens	3 bags	Unsound
Fish	9 lots	do.

TABLE XX.

List of Level Bakehouses.

Name.	Address.
Chadwell Bros. ..	60, Plumstead Common Road
C. Pullen	105, do. do.
C. Cheesman	126, High Street, Plumstead
J. E. Porter	1, Riverdale Road, do.
F. Bohmer	307, High Street, do.
A. E. Paine	14, Gunning Street, do.
A. Jewiss	68, Glyndon Road, do.
C. Letchford	109, Plumstead Road, do.
J. Clark	152, do. do.
P. H. Mack	111, High Street, Woolwich
A. Bradshaw	3, Green's End, do.
E. Erdman	184, Elizabeth Street, North Woolwich
C. Haas	122, Albert Road, do.
H. Meyer	33, Samuel Street, Woolwich
Mrs. Dennis	90, Brookhill Road, do.
W. Jones	36, Chapel Street, do.
J. B. Fyson	94, High Street, Eltham
H. Westbrook	114, do. do.
F. Cook	142 do. do.
F. J. Cook	5, The Parade, New Eltham
F. A. Finch	13 do. do.
W. Millar	6, Well Hall Parade, Eltham
R. Moakes	53, Cordite Street, Plumstead
C. Tucker	53, Lakedale Road, do.
G. H. Porter	29, Charles Street, Woolwich
E. Dalton and F. Mendham	4, Plumstead Road, do.
R. Tsinn	100, High Street, Woolwich

TABLE XXa.

List of Certified Underground Bakehouses.

Name.	Address.
—— (unoccupied) ..	33, Eglinton Road, Plumstead
Merrit & Co.	50, Herbert Road, do.
—— (unoccupied) ..	14, Westdale Road, do.
A. B. Adams	223, High Street, do.
J. Werner	1, Park Road, do.
—— (unoccupied) ..	58, Pattison Road, do.
F. Cox	46, Hudson Road, do.
—— (unoccupied) ..	14, Conway Road, do.
—— (unoccupied) ..	30, Burrage Road, do.
G. Scott	16, Armstrong Place, do.
Virgoe & Sons	13, Eton Road, do.
J. Colver	57, Plumstead Road, do.
R. C. Davis	2, Crescent Road, do.
A. E. Sims	24, St. James's Place, do.
—— (unoccupied) ..	165, Sandy Hill Road, do.
—— (unoccupied) ..	57, Burrage Road, do.
—— (unoccupied) ..	16, Woolwich Common, Woolwich
H. Adams	31, Beresford Street, do.
F. Wilkening	72, Henry Street, do.
W. C. Clothier	51, Albion Road, do.
—— (unoccupied) ..	23, George Street, do.
—— (unoccupied) ..	21, Albion Road, do.
—— (unoccupied) ..	32, Church Street, do.
Mrs. Attenborough	60, Sand Street, do.
T. Tucker	81 & 82, Brookhill Road, do.
—— (unoccupied) ..	8, Hill Street, do.
J. Fletcher	15, New Road, do.

TABLE XXb.

List of Factory Bakehouses.

Name.	Address.
J. Fletcher	57, Burrage Road, Plumstead
(Unoccupied)	92, Plumstead Road, Plumstead
T. Newman	94, Wellington Street, Woolwich
Royal Arsenal Co-operative Society	127 to 153, Powis Street, Woolwich
Alderton, Ltd.	Malton Street, Plumstead
Mackintosh Bros. ..	Warwick Terrace, Plumstead Common
J. Werner	1, Park Road, Plumstead
A. Chapman	2, High Street, Plumstead
Virgoe & Sons	13, Eton Road, Plumstead
Alderton, Ltd.	81, Park Road, Plumstead

TABLE XXI.

List of Slaughterhouses.

No.	Name of Owner.	Situation.
1	Frederick Hedges ..	168, High Street, Eltham
2	Joseph John Leech ..	78, Frederick Place, Plumstead
3	H. Reed & Co., Ltd. ..	25, Parry Place, Plumstead
4	Do. ..	6, High Street, Plumstead
5	Hedley Vicars	41, Church Street, Woolwich
6	William Francis Bartlett..	14, Church Street, Woolwich
7	Henry Reed	Love Lane (near Wellington Street), Woolwich
8	James & George Mitchell..	25, Hare Street, Woolwich
9	Hedley Vicars	30, Hare Street, Woolwich
10	H. Reed & Co., Ltd. ..	38, Plumstead Common Road, Plumstead
11	Henry Fretter	33, Herbert Road, Plumstead
12	Royal Arsenal Co-operative Society	Bostall Farm, Plumstead

TABLE XXII.

List of Cowhouses.

No.	Name of Owner.	Situation.
1	John B. Stocker ..	Cold Harbour Farm, Chislehurst
2	Alfred Low	Park Farm, Eltham
3	W. F. Corp	Lyme Farm, Eltham
4	Charles Unfreville Fisher and William F. Fisher, Crescent Farm, Sidcup	Belmont Park Farm, Eltham
5	John Grace	Pippinhall Farm, Eltham
6	William Ridewood ..	Chapel Farm, Eltham
7	George Keen	Clay Farm, New Eltham
8	Maurice Bayley.. ..	Middle Park Farm, Eltham
9	Harry Furber	Southend Farm, Eltham
10	Charles William Killick ..	52, St. James' Place, Plumstead
11	Do.	13, Princes Road, Plumstead
12	Henry Woolsey.. ..	50, Francis Street, Plumstead
13	William Ridewood ..	3, Ripon Road, Plumstead
14	F. G. Cock	13, Raglan Road, Plumstead
15	Ethelbert Hiscock ..	1, Griffin Road, Plumstead
16	Jas. Buckingham ..	Rear of 14, 15 & 16, Pellipar Road, Woolwich

TABLE XXIII.

List of Milk Sellers.

No.	Name.	Address.
1	Perrett, H. N.	2, The Parade, New Eltham
2	Webb, F. W.	58, Brewery Road
3	Carr, E.	46, Kingsman Street
4	Finnimore, J. A.	83, Park Road
5	Palmer, M. A.	127, Plumstead Road
6	Digby, W. J.	82, Plumstead Road
7	Squirrell, J.	57, Church Street
8	Jeal, W. H.	139, Plumstead Road
9	Cock, G.	13, Raglan Road
10	Royal Arsenal Co-op. Society ..	Lakedale Road
11	Do. do.	15, Brewery Road
12	Do. do.	143, Powis Street
13	Do. do.	Herbert Road
14	Do. do.	147 & 151, Powis Street
15	Fletcher, J.	92, Plumstead Road
16	Woolsey, H.	50, Francis Street
17	Howe, J. R.	82, High Street, Eltham
18	Hawkins, Ellen M.	2, St. Nicholas Road
19	Furber, Harry	Southend Farm, Eltham
20	Large, Daniel J.	6, Herbert Road
21	Hiscock, E.	14, Blenheim Terrace
22	Dalton, R. G.	55, Eglinton Road
23	Butter Bros.	49, Woolwich Common
24	Do.	10, Jackson Street
25	Ward, S.	1, Nightingale Vale
26	Webb, Y.	10, Beresford Square
27	Dennis, Ellen	90, Brookhill Road
28	Bayley, M.	Middle Park Farm, Eltham
29	Godden, A. A.	229, High Street, Plumstead
30	Corp, W. F.	Lyme Farm, Eltham
31	Pearce, R. A.	175, Plumstead Common Road
32	Christmas, Hannah	18, Well Hall Parade, Eltham
33	Dodson, W.	138, Plumstead Common Road
34	Dolphin, T. G.	89, Maxey Road
35	Tyler, C. W.	142, High Street, Woolwich
36	Clements, E. J.	2, Cross Street
37	Bohmer, H.	307, High Street, Plumstead
38	Couzens, Jessie	10, Chapel Street
39	Stevens, F...	100, Roydene Road
40	Ridewood, F.	116, High Street, Eltham
41	Rose, J.	64, Hargor Road
42	Stevens, H.	27, Church Street
43	Needham, Elizabeth	94, High Street, Woolwich
44	Webb, F. W., & Co.	16, Lakedale Road

TABLE XXIII.—*continued.*

No.	Name.	Article.
45	Finch, G. A.	13, The Parade, New Eltham
46	Davis, D. H.	170, Albert Road
47	Smith, Elizabeth	12, The Broadway, Eltham
48	Bennett, Rose	22, Glyndon Road
49	Williams, Ellen	12, Thomas Street, Woolwich
50	Bartrum, A.	167, Kingsman Street
51	Jones, D.	65, Maxey Road
52	Jaques, H.	56, Anglesea Road
53	Killick, C. W.	52, St. James' Place
54	Parkes, J.	Fountain Stores, The Slade
55	Lamb, Annie	29, Admaston Road
56	Jones, E. C.	6, Samuel Street
57	Harrington, J.	26, Prospect Row
58	Cole, E. J...	18, Camrose Street
59	Finnimore, W. J.	21, Walpole Place
60	Lyons, J., & Co., Ltd. ..	99, Powis Street
61	McGee, Jane	42, Mulgrave Place
62	Attenborough, Caroline ..	18, Prospect Place
63	Marsh, C.	"Ashurst," Shrewsbury Lane
64	Palmer, Annie	127, Plumstead Road
65	Mumford, Kate F.	22, Cross Street
66	Holmes, Blanche	43, Bostall Hill
67	Wainwright, Rose Mary ..	36A, Mulgrave Place
68	Gill, Emily A.	398, High Street, Plumstead
69	Brinkworth, W. J.	82, Purrett Road
70	Palmer, P.	82, Purrett Road
71	Espline, G...	48, High Street, Woolwich
72	R.A. Co-operative Society ..	"The Links," Plumstead Common Road
73	Jones, W. H.	39, Beresford Street
74	Holdway, Georgina H. ..	45, Bostall Hill
75	Buck, E. V.	52, Raglan Road
76	Challis, P. W.	4, High Street, Woolwich
77	Gee, A. J.	147, Plumstead Road
78	Joy, W. G.	36, Thomas Street
79	Crayfourd, J. E.	40, Orchard Road
80	Leaver, E. A.	25, Garland Street
81	Buckingham, J.	16, Pellipar Road
82	Corp, W. F.	3, Wellington Street
83	Flint, Emma	124, Maxey Road
84	Gittings, W. J.	"Cold Blow," Plumstead Common
85	Curtis, Stephen	181, Abbey Wood Road
86	Grace, James	18, The Broadway, Eltham

TABLE XXIII.—*continued.*

No.	Name.	Address.
87	Cornwall, J.	14, Frances Street
88	Sheldon, W.	101, Sand Street
89	King, E. A. L.	4, Spray Street
90	Adams, H.	31, Beresford Street
91	Higgins, E. M.	136, Macoma Road
92	Muir, W. C.	28, Conway Road
93	Handsley Ltd.	68½, Bloomfield Road
94	Townsend, Rose E. ..	104, Brookhill Road
95	Fuller, R. E., & Co. ..	Southwood Road, Eltham
96	Voice, C.	102, Ann Street, Plumstead
97	Trodd, W. J.	19, Green's End, Woolwich
98	Bunn, W. C.	13, Hinstock Road, Plumstead
99	Collins, G.	2B, New Road, Woolwich
100	Williamsons Ltd.	66, Powis Street, Woolwich
101	Willis, Jessie	2, Ritter Street, Woolwich
102	Fairbrother & Co.	94,Wellington Street,Woolwich
103	Hill, G. M.	30, High Street, Eltham
104	Hilder, E.	102, Ann Street, Plumstead
105	Couzens, J.	46, Church Street, Woolwich
106	Phillips, Sophia	141, Albert Road, North Woolwich
107	Warhaft, Violet	107, Pattison Road, Plumstead

TABLE XXIV.

List of Applicants Registered as Purveyors of Milk during 1912.

No.	Name.	Address.
108	Virgoe & Sons	13, Eton Road
109	Adams, E. J.	1, Shooters Hill Gardens
110	Kirby, F.	168, Kingsman Street
111	Adams, H.	56, Artillery Place
112	Charles, H.	15A, Sand Street
113	Look, A. G.	Southwood Road
114	Hoar, H.	40, Saunders Road
115	Cook, M.	25, Plum Lane
116	Brown, F. N.	18, Oliver Street
117	Wilkinson, A. J.	52, Whitworth Road