[Report 1898] / Medical Officer of Health, Brighton County Borough.

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

Borough of Brighton.

ANNUAL REPORT

ON THE

HEALTH,

SANITARY CONDITION, &c.,

OF THE

BOROUGH OF BRIGHTON,

FOR THE YEAR 1898.

BY

ARTHUR NEWSHOLME, M.D., F.R.C.P. Lond.,

Medical Officer of Health.

A—STATISTICAL AND MEDICAL REPORT.

B.—REPORT OF SANITARY DEPARTMENT.

C.—REPORT ON MUNICIPAL HYGIENIC LABORATORY.

D.—REPORT ON BOROUGH SANATORIUM.

BRIGHTON:

KING, THORNE & STACE, PRINTERS, JUBILEE STREET.

1210—23/7/99.

BOROUGH OF BRIGHTON.

Sanitary Committee.

THE MAYOR (MR. ALDERMAN HAWKES, J.P.),
ALDERMAN SIR JOSEPH EWART, KNT., M.D., J.P.,
MR. COUNCILLOR BLAKER,
" " BROWN,
" " BUCKWELL,
" " BUTT-THOMPSON,
" " DEWE, J.P.,
" " HOLLIS, (Chairman),
" " HOLLOWAY,
" " McCLEAN,
" " SMITHERS,
" " SONE,
" " TITCOMB.

Town Clerk: MR. FRANCIS J. TILLSTONE.

Staff of the Health Department.

JOHN NORRISH (Certif. San. Institute), Assistant Inspector of Nuisances
JAMES A. CUCKNEY " " " " "
(Superintendent of Abattoir).
ERNEST E. MILLS " " " " "
Inspector under the Factory and Workshops Act and Shop Hours Act).
FREDERICK BRAYBON (Certif. San. Institute) " "
ARTHUR WARD " " " "
JOSEPH WEBB " "
JOHN SHARP " "
ALFRED WELLSTEAD " "
ERNEST FLINT (Certif. San. Institute), " "
BENJAMIN PACKHAM, Senior Clerk.
ALBERT WOOD, Junior Clerk.
FREDERICK SALVAGE, Disinfector.

House Physicians.

W. H. L. BARLOW, M.B., OXON., D.P.H., Aug., 1897-Feb., 1898.
CECIL REYNOLDS, M.B., OXON., D.P.H., March-Oct., 1898.
ARTHUR HUDSON, M.R.C.S., L.R.C.P., D.P.H., Nov., 1898-April, 1899.

Matron of Sanatorium: MISS RATCLIFF.

Chief Inspector of Nuisances.

JAMES SKINNER (Certif. San. Institute).

Medical Officer of Health: ARTHUR NEWSHOLME, M.D. Lond.

PREFACE.

TOWN HALL,

March 27th, 1899.

To the Sanitary Committee of the Brighton Town Council.

GENTLEMEN,—

I beg to present herewith my Annual Report for 1898.

Its contents do not require any prefatory comments; but I am anxious to draw attention to my remarks as to the Housing of the Working Classes, and as to the possibility of forming new insanitary houses and areas, unless additional measures are adopted.

The past year has been one of work under circumstances of great stress for every member of the staff, both of the Public Health Department and of the Sanatorium, who have been unsparing of their time and energy in coping with conditions of trial.

I beg also to express to you my grateful thanks for the uniform support you have given in carrying out my work.

I am, Gentlemen,

Your obedient Servant,

ARTHUR NEWSHOLME,

Medical Officer of Health

TABLE OF CONTENTS.

PAGE

A.—Vital Statistics.

Population 5
Births 5
Deaths in Wards 6
,, of visitors 9
,, in public institutions 10
,, distributed according to age ... 10
,, and Sickness according to season 11
,, chief causes of 11
,, from Zymotic Diseases 14
Notification of infectious diseases ... 14
Small-pox 16
Typhoid Fever 17
Diarrhœa 19
Diphtheria 22
Measles and Whooping Cough 22
Influenza 23
Tubercular Diseases 23
Syphilis 25
Alcoholism 26
Rheumatic Fever 26
Violence and Inquests 27

B.—Sanitary Work.

Inspections 29
Notices served 30
Public Abattoir 32

PAGE

Unsound Food 33
Private Slaughter Houses 34
Sale of Food and Drugs Act 35
Common Lodging Houses 36
Houses let in Lodgings 36
New Building Bye-Laws... 36
Factory and Workshops Act, ... 36
Housing of the Working Classes Act—
Part I. 38
Part II. 39
Part III. 41
Cost of Schemes under Part I. 39
Review of Schemes under Part I. ... 40
The Manufacture of New Slum Property 41

C.—Work of the Municipal Hygienic Laboratory.

D.—Work of the Borough Sanatorium.

Percentage of total Cases admitted to Sanatorium 52
Statement of Articles Disinfected ... 52
Cost of maintenance per head in Sanatorium 51
Relative results of Hospital and Home treatment 49

A.—VITAL STATISTICS.

POPULATION.

The population of the County Borough of Brighton at the middle of 1898 is estimated by the Registrar-General to be 122,430. This estimate is based on the assumption that the rate of increase during the decennium 1881-90, is being continued in the present decennium.

During 1898, 324 new dwelling-houses were passed by the Borough Surveyor's Department, as compared with 412 in 1897, and 397 in 1896. These were situate in the following Wards:—Kemp Town 19, Lewes Road 65, Pier 8, Queen's Park 11, Hanover 8, St. Nicholas 1, Regency 1, Pavilion 1, Preston 150, Preston Park 60.

In Table II. an estimate of the population in each ward is given, and on this estimate are based the death-rates in each Ward given in Table III. Such an estimate can necessarily only be approximately accurate, in view of the fact that 8 years have elapsed since the last census.

BIRTHS.

The total number of births registered in the Borough in the 52 weeks ending December 31st, 1898, was 3,035,—1,531 of boys and 1,504 of girls. This is equivalent to a birth-rate of 24·8 per 1,000 inhabitants. The birth-rate of the thirty-three great towns was 30·3 per 1,000, that of London being 29·5. Brighton had the lowest birth-rate among the great towns, with the exception of Huddersfield, Halifax, and Bradford. For a comparison of the birth-rate with that of previous years see Table I.

Of the births, 215 were of illegitimate children, forming 7·1 per cent. of the total births, as compared with 6.2 per cent. in the previous year. 79 births occurred in the Workhouse, of which 67 were of illegitimate children.

TABLE I.—*Comparison of Births and Deaths in Successive Years.*

Years.	Births.	Birth-Rate per 1,000 inhabitants.	Deaths from all Causes.	Death-Rate per 1,000 inhabitants.	Death-Rate from the seven chief Infectious Diseases per 1,000 inhabitants.	Death-Rate under one year of age per 1,000 births.
1882	3284	30·2	2372	21·8	4·40	187
1883	3236	29·6	2131	19·5	2·50	160
1884	3248	29·1	2064	18·8	1·77	162
1885	2981	26·9	1952	17·6	1·43	132
1886	2957	26·5	1986	17·8	1·97	160
1887	3038	27·0	1988	17·7	2·33	148
1888	2791	24·6	1928	17·0	1·42	149
1889	2964	26·0	1833	16·1	1·60	131
1890	2915	25·4	2232	19·1	2·57	164
1891	3031	26·2	2097	18·2	1·06	137
1892	2958	25·1	2232	18·9	2·09	151
1893	2981	25·3	2165	18·4	1·84	169
1894	3055	25·8	1943	16·4	1·20	137
1895	3057	25·6	2250	18·8	1·72	164
*1896	3025	25·1	1975	16·1	1·66	124
1897	2986	24·6	1823	15·0	1·54	144
1898	3035	24·8	2057	16·7	2·33	179

*53 weeks.

DEATHS.

During the year 1898, 2,057 deaths were registered as belonging to Brighton 1,041 of males and 1,016 of females. This shows an annual death-rate of 16·7 per 1,000 inhabitants, as compared with 15·0 in 1897, 16·1 in 1896, and 21·8 in 1882 (see Table I.).

The general course of the death-rate in three-yearly periods since 1875 when Preston was incorporated into the Municipal Borough, has been as follows:—

Average of three years.	*Death-rate from all causes.*
1876-77	20·5.
1878-80	20·3.
1881-83	20·2.
1884-86	18·0.
1887-89	16·9.
1890-92	18·7.
1893-95	17·9.
1896-98	15·9.

The death-rate in the last three years was considerably lower than at any preceding period, notwithstanding the continued presence of influenza, which has been a serious addition to our causes of mortality in recent years. It would have been much lower for 1896-8 had it not been for the severe epidemic of Measles in the early part of 1898, and the exceptional amount of summer Diarrhœa associated with the excessively hot and dry summer.

TABLE II.

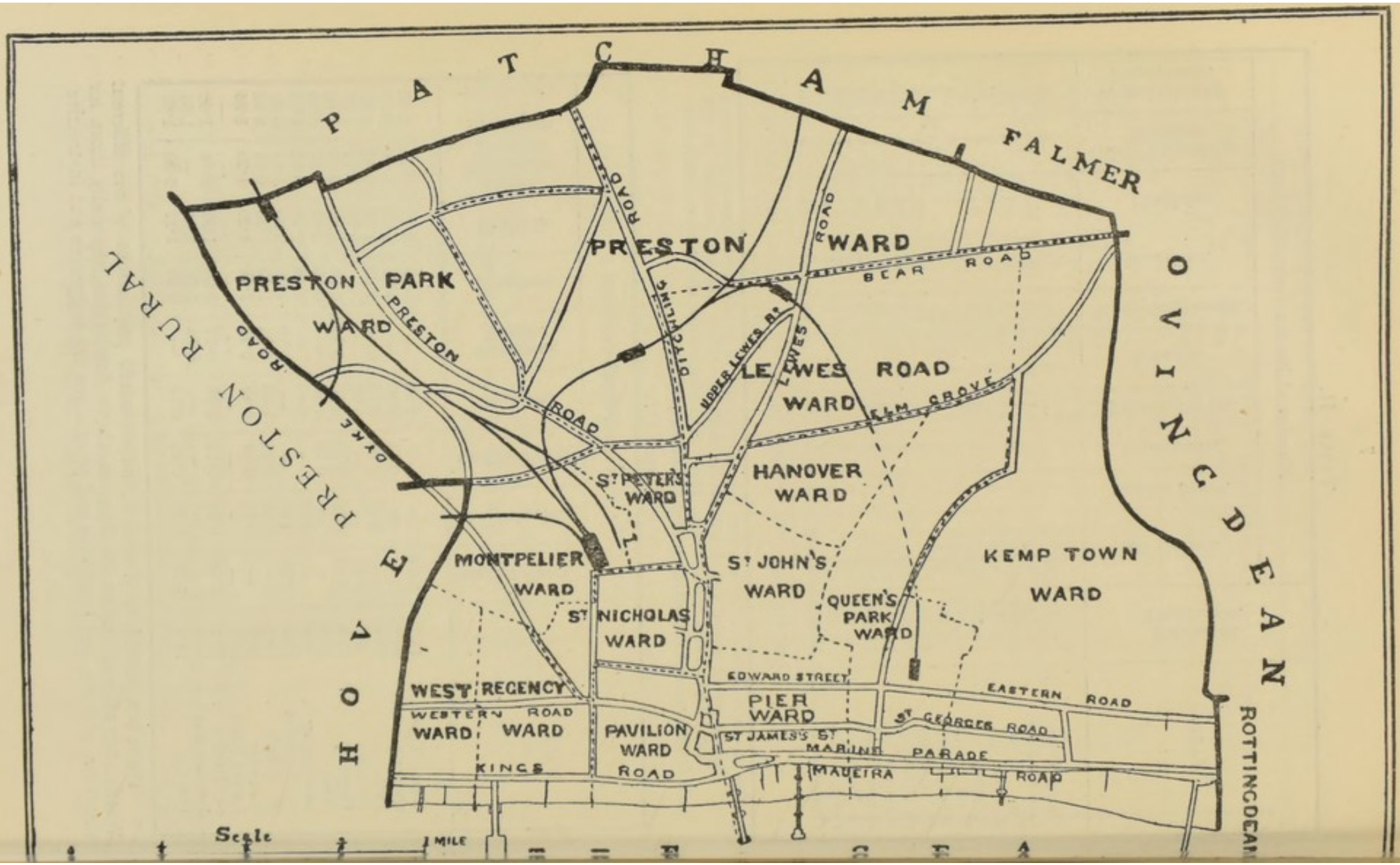
WARD.	Estimated Population.	Number of Deaths during 1898 from									
		All Causes.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping Cough.	Diarrhœa.	Phthisis.	Other Tubercular Diseases.	Bronchitis and Pneumonia.
Kemp Town ..	7,155	105 (1)	1	—	—	3	—	4	5	2	18
Queen's Park ...	7,194	147 (49)	—	—	1	3 (10)	(1)	12 (1)	13 (5)	9 (2)	18 (3)
Pier	11,906	248 (8)	—	2	1	7	5	19	21	6	35
Pavilion	5,316	49 (1)	1	—	—	2	—	—	4	2	7
Regency	8,292	127 (1)	1	2	6	5	1	2	11	2	15
West	5,272	57 (1)	—	—	1	1	—	1	1	4	5
Montpelier ...	6,065	57 (7)	—	1	—	(1)	—	3	6	2 (1)	8
St. Nicholas ...	10,706	170	1	4	—	6	1	10	22	11	15
St. John's	12,346	230	—	2	3	20	3	15	18	8	41
Hanover	10,910	211	—	4	2	9	5	20	19	7	23
Lewes Road ...	11,656	231 (1)	—	2	1	10	4	23	14	14	39
St. Peter's... ...	8,492	149	2	2	1	4	1	8	11	7	16
Preston Park ...	7,000	72	—	—	—	—	1	5	6	—	11
Preston	10,000	133 (4)	1	3	2	1	—	6	11	3	16
	122,310	1984 (73)	7	22	18	71 (11)	21 (1)	128 (1)	162 (5)	77 (3)	267 (3)

The numbers occurring in brackets relate to deaths in public institutions, the home addresses of whom could not be determined. They are not included in the Ward death-rates calculated in Table III., which shew the relative death-rates from the more important preventible causes of death.

TABLE III.

Ward.	Annual Death-rate from									
	All Causes.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping Cough.	Diarrhœa.	Phthisis.	Other Tubercular Diseases.	Bronchitis and Pneumonia.
Kemp Town ...	14·7	0·14	—	—	0·42	—	0·56	0·70	0·28	2·52
Queen's Park	20·4	—	—	0·14	0·42	—	1·68	1·82	1·26	2·52
Pier	20·8	—	0·17	0·08	0·56	0·40	1·52	1·68	0·48	2·80
Pavilion ...	9·2	0·18	—	—	0·36	—	—	0·72	0·36	1·26
Regency ...	15·4	0·12	0·24	0·72	0·60	0·12	0·24	1·32	0·24	1·80
West	10·8	—	—	0·19	0·19	—	0·19	0·19	0·76	0·95
Montpelier ...	9·4	—	0·16	—	—	—	0·48	0·96	0·32	1·28
St. Nicholas ...	15·8	0·10	0·40	—	—	0·10	1·00	2·20	1·10	0·80
St. John's ...	18·6	—	0·16	0·24	1·60	0·24	1·20	1·26	0·64	3·32
Hanover ...	19·3	—	0·17	0·09	0·88	0·34	1·98	1·20	1·20	3·35
Lewes Road ...	19·8	—	—	—	—	—	—	—	—	—
St. Peter's ...	17·2	0·24	0·24	0·12	0·48	0·12	0·96	1·32	0·84	1·92
Preston Park	10·3	—	—	—	—	0·14	0·70	0·84	—	1·54
Preston ...	13·3	0·10	0·30	0·20	0·10	—	0·60	1·10	0·30	1·60

There is a possibility of error in the estimated populations of the different Wards; but after allowance for this, the above death-rates, especially those for diarrhœa, phthisis, and bronchitis and pneumonia are suggestive and instructive.


PATCHAM
FALMER
ROTTINGDEAN
PRESTON RURAL
PRESTON PARK WARD
PRESTON WARD
LEWES ROAD WARD
HANOVER WARD
ST PETER'S WARD
MONTPELIER WARD
ST JOHN'S WARD
KEMP TOWN WARD
ST NICHOLAS WARD
QUEEN'S PARK WARD
WEST REGENCY WARD
WESTERN ROAD WARD
PAVILION WARD
PIER WARD
PRESTON ROAD
BEAR ROAD
LEWES ROAD
ELM GROVE
EDWARD STREET
EASTERN ROAD
ST GEORGES ROAD
ST JAMES'S ST
MARINE PARADE
MADEIRA ROAD
KINGS ROAD
Scale
1 MILE

DEATH OF VISITORS.

Of the total 2,101 deaths registered in Brighton during last year, 57 occurring in private houses, 43 in the County Hospital, and 1 in the Convalescent Home, Kemp Town, were stated to be of visitors. The return of deaths among visitors is incomplete, many of the deaths occurring amongst visitors not being marked as such. The County Hospital in particular draws a considerable number of patients from surrounding districts, as will be seen from the following table of deaths in that institution :—

	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Deaths of Inhabitants of Brighton	75	94	94	92	96	85	73
Deaths of persons from the rural districts of Sussex, &c.	23	19	21	24	25	31	27
Deaths of persons from Hove	4	6	12	11	11	10	7
Deaths of persons from London, &c.	2	2	2	3	4	7	8
Addresses not known ...	—	—	4	1	—	2	—
Death of person with no fixed abode	—	—	—	—	—	—	1
Total Deaths in the Sussex County Hospital	104	121	133	131	136	133	116

Thus, taking the average of seven years, 30·3 per cent. of the total deaths in the County Hospital were of non-residents.

Of the 29 deaths in the Children's Hospital during 1898, one came from each of the following places :—Bognor, Oxford, Hove, Southwick, Worthing, Littlehampton and London.

The Registrar-General now excludes from the Brighton returns the deaths occurring in the Female Convalescent Home, Marine Parade, in the Sussex County Hospital, and in the Borough Sanatorium respectively, of persons who had not resided in the Borough prior to their admission into the respective institutions ; and includes on the other hand the deaths of any Preston paupers which occur in the Steyning Union Workhouse. As shewn by the above table, 43 deaths of outsiders occurred at the County Hospital. The result of the correction carried to this extent is to reduce the total 2101 deaths by 44. No correction is made for the Children's Hospital and other institutions in the town ; and no account is taken of the much larger number of visitors who die in Brighton, but not in any public institution in it.

DEATHS IN PUBLIC INSTITUTIONS.

Of the total deaths, 237 occurred in the Workhouse, 74 in the Sussex County Hospital, 29 in the Children's Hospital, 33 in the Sanatorium, 2 in the Lying-In Hospital, 3 in the Barracks, 4 in the Shoreham Workhouse, 1 in St. Mary's Home, and 3 in the Throat and Ear Hospital.

DEATHS DISTRIBUTED ACCORDING TO AGE.

An accurate statement of the death-rate involves its statement in groups of ages for the persons living and dying at these ages. This is given for three years in the following table :—

TABLE IV.—*Death-rate per 1,000 living at each group of ages.*

Year	At all ages	Under 5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65-75	75 and upwards
1895	18·8	63·6	3·3	2·6	2·7	4·0	5·1	10·4	17·5	33·6	59·4	154·7
1896	16·1	51·2	3·7	1·3	3·3	3·9	5·3	11·8	16·3	25·2	52·0	137·0
1897	15·0	48·7	2·7	2·0	3·3	3·4	5·1	9·2	15.1	22·8	46·9	123·0
1898	16·7	62·3	2·6	2·1	3·4	3·4	5·1	10·0	17·2	24·4	48·9	120·0

It will be seen that the increased death-rate was almost solely under 5 years of age, with a slight increase also over 35 years of age.

Infantile Mortality.—The infantile mortality (under one year of age) is best stated in terms of the infantile population, that is, practically the annual number of births. Thus stated, during last year it was 179 per 1,000 births.

Mortality among Illegitimate Infants.—The total number of deaths under one year of age in 1897 was 544. Of this number 68 were illegitimate children. Stated in proportion to numbers living, the relative mortality among legitimate and illegitimate infants was as follows :—

	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Deaths of legitimate infants per 1,000 legitimate births	134	158	135	151	129	135	169
Deaths of illegitimate infants per 1,000 illegitimate births	360	319	173	358	233	265	316

Thus an illegitimate child born in Brighton during 1898 had about one-half the prospect of reaching the end of its first year of life which was enjoyed by a child born in wedlock.

DEATHS AND SICKNESS ACCORDING TO SEASON.

Table XI. shews the weekly deaths from the chief causes. In the following table the incidence of the notifiable infectious diseases is shewn according to the months of the year. The cases are classified according to the date of onset of each case.

TABLE IV.

	Small Pox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Enteric Fever.	Puerperal Fever.	Erysipelas.	Total.
January ...	0	28	36	8	2	9	83
February ...	0	24	37	12	1	9	83
March ...	0	39	24	6	1	10	80
April	0	33	13	6	1	7	60
May	0	29	19	4	0	12	64
June	0	19	11	8	1	9	48
July	0	17	8	10	0	8	44
August ...	0	27	17	12	0	7	62
September ...	0	23	9	24	2	4	62
October ...	0	40	45	17	0	10	112
November ...	0	48	60	6	0	5	119
December ...	0	43	101	17	1	9	171
Total	0	370	380	130	9	99	988

CHIEF CAUSES OF DEATH.

The chief causes of death, and the number of deaths from each disease or group of diseases, are tabulated in Table V. This table gives the relative incidence of different diseases, and the incidence of each disease in the two sexes and at different ages.

ZYMOTIC DISEASES.

The seven chief infectious diseases caused 284 deaths, as compared with 198 in the previous year, which is equivalent to an annual death-rate of 2·33 per 1,000 of population. A glance at Table I. shews how this stands in relation to preceding years.

The relative proportion borne by each zymotic disease is shewn in Table VI.

Table V.

Causes of Death in Brighton during the Year 1898.		Total Deaths.	SEX.			
			Male.	Female.	0—1	1—5
Small Pox		—	—	—	—	—
Measles		82	37	45	13	65
Whooping Cough		22	12	10	11	11
Enteric Fever		18	12	6	—	1
Diarrhœa		129	62	67	100	19
Diphtheria		22	11	11	2	13
Scarlet Fever		7	4	3	1	4
Puerperal Fever		1	—	1	—	—
Erysipelas		5	1	4	2	—
Other Zymotic Diseases		5	3	2	—	—
Influenza		33	14	19	3	—
Phthisis (Tubercular)		167	93	74	1	2
Tabes Mesenterica (Tubercular)		13	4	9	7	5
Brain Tubercle (Tubercular)		32	25	7	11	10
Other Tubercular Diseases (Tubercular)		35	17	18	7	8
Cancer Malignant Disease		114	40	74	—	3
Gout and Rheumatism		10	6	4	—	—
Other Constitutional Diseases		27	15	12	1	1
Parasitic Diseases		—	—	—	—	—
Dietic		16	7	9	—	—
Nervous Diseases, excluding Convulsions		139	62	77	7	4
Convulsions		36	20	16	30	5
Diseases of Organs of Special Sense		3	2	1	1	—
Circulatory		185	96	89	1	1
Respiratory		304	147	157	90	59
Digestive		157	84	73	57	15
Generative		11	1	10	—	1
Urinary		56	38	18	1	1
Locomotory		3	2	1	—	—
Integumentary		8	5	3	4	—
Lymphatic		1	—	1	—	—
Addison's Disease		1	1	—	—	—
Premature birth and low vitality		64	34	30	64	—
Congenital defects and malformations		34	25	9	34	—
Old age		161	71	90	—	—
Violence		59	37	22	15	2
Ill-defined		97	53	44	81	11
Totals		2057	1041	1016	544	241

TABLE V. *(contd.)*

AGES AT DEATH.									
5—10	10—15	15—20	20—25	25—35	35—45	45—55	55—65	65—75	75 and upwards
—	—	—	—	—	—	—	—	—	—
3	—	—	—	1	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1	2	3	4	6	1	—	—	—	—
—	—	—	—	—	—	2	—	3	5
5	1	—	1	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—
—	—	—	—	1	—	—	—	—	—
—	—	—	—	1	—	2	—	—	—
1	1	1	1	—	—	—	—	—	1
—	3	—	—	2	5	6	5	4	5
3	4	14	17	38	46	29	11	2	—
1	—	—	—	1	—	—	—	—	—
6	1	3	—	—	—	—	1	—	—
3	5	2	2	4	1	2	1	—	—
—	—	—	1	4	8	22	30	33	13
—	—	—	—	—	1	1	1	5	2
1	2	3	1	2	4	4	1	6	1
—	—	—	—	—	—	—	—	—	—
—	—	—	—	3	3	7	1	2	—
3	2	4	1	2	9	27	32	25	23
—	—	—	—	—	—	—	1	—	—
—	2	—	1	—	—	—	—	—	—
—	—	9	8	9	23	25	38	47	24
1	—	—	2	9	12	28	22	43	38
1	2	—	—	3	13	18	20	16	12
—	—	—	1	3	3	2	—	1	—
1	—	—	—	—	10	9	15	12	7
—	—	2	—	—	—	—	1	—	—
—	—	—	—	—	1	1	—	2	—
—	—	—	—	—	—	—	—	1	—
—	—	—	—	—	—	—	1	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	1	34	126
2	1	2	—	9	11	7	5	1	4
—	—	—	—	—	1	—	2	2	—
33	26	43	39	98	152	192	188	239	261

TABLE VI.

Year.	Population.	Annual Death-Rate per 100,000 of population from										
		All Causes.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever (chiefly Enteric).	Diarrhœa.	The Seven Chief Zymotic Diseases.	Phthisis.	Other Tubercular Diseases.
1869	87,659	2060	—	2	79	12	45	39	147	325	—	—
1870	88,878	2390	45	44	150	32	83	40	111	505	—	—
1871	90,345	2260	71	23	91	9	9	38	155	396	—	—
1872	91,684	2090	4	45	83	10	26	27	143	338	—	—
1873	93,041	1870	—	7	6	4	45	33	91	188	—	—
1874	95,297	2130	1	65	4	20	55	34	78	256	—	—
*1875	97,005	2250	—	2	21	8	89	26	104	249	—	—
1876	98,746	2000	1	57	68	9	13	14	76	238	—	—
1877	100,510	1910	10	2	27	5	52	18	80	194	233	—
1878	102,320	2160	—	22	8	4	80	16	107	236	225	—
1879	104,150	1930	—	25	13	3	52	10	42	146	214	—
1880	106,200	2000	—	22	77	3	41	21	127	290	192	—
1881	107,934	1910	8	21	68	6	30	42	48	263	183	—
1882	108,680	2180	4	143	83	7	115	25	61	438	209	—
1883	109,423	1960	—	51	11	6	57	25	96	246	192	—
1884	110,180	1870	1	7	27	14	33	14	80	178	195	—
1885	110,938	1760	1	31	6	16	41	16	32	142	191	—
1886	111,704	1780	—	10	12	19	60	12	84	197	195	—
1887	112,473	1770	—	64	9	27	28	12	95	233	178	—
1888	113,248	1700	—	3	8	21	43	13	54	142	153	65
1889	114,029	1610	—	40	10	9	24	16	56	160	178	67
1890	114,814	1910	—	53	10	12	89	11	82	257	192	86
1891	115,606	1820	—	24	1	10	18	11	41	105	143	81
1892	116,424	1890	—	99	7	19	19	7	58	209	141	79
1893	117,833	1840	—	11	9	30	47	13	74	183	168	88
1894	118,715	1640	—	30	3	22	12	9	44	120	152	87
1895	119,606	1880	—	21	4	15	34	12	86	172	167	74
1896	120,499	1610	—	45	5	16	26	11	61	165	150	66
1897	121,401	1501	—	14	10	10	21	17	91	163	142	47
1898	122,310	1674	—	7	6	18	18	15	105	233	136	65

* Preston added to the Borough in 1874.

THE NOTIFICATION OF INFECTIOUS DISEASES.

For a knowledge of the more important Infectious Diseases we are, since March 1st, 1891, no longer dependent solely on the uncertain and late information obtainable from the death-returns and from casual sources.

The more accurate and prompt returns furnished to me under the Infectious Diseases (Notification) Act show that the total number of *cases* of Infectious Diseases notified during 1898 was 988:—Diphtheria, 380; Scarlet Fever, 370; Enteric Fever, 129; Erysipelas, 88; Puerperal Fever, 9; Membranous Croup, 0; Small-pox, 0; Remittent Fever, 1.

The above is the number of supposed *cases* of infectious disease. Further observation in a certain proportion of these led to a revision of the diagnosis.

Three cases of Diphtheria, 7 of Enteric Fever, 4 of Erysipelas, and 4 of Scarlet Fever, were notified severally by two doctors, chiefly in connection with their removal to hospitals.

The total number of notifications (including 6 by myself) was 1006,

as compared with 700 in 1897. Of these, 200 occurred in public medical practice—the amount payable for the certificates being £10 0s.; while 800 occurred in private medical practice—the amount payable being £100.

The cost of administering the Infectious Diseases (Notification) Act in each complete year since its adoption in Brighton is as follows :—

Year.	Cost of Notification Fees Paid to Medical Practitioners per 1,000 of Population. s.	d.
1892	11	3
1893	17	3
1894	10	0
1895	10	1
1896	11	9
1897	12	0
1898	18	0

Table VII.

		Number of infectious cases per 100,000 of population.	Number of deaths per 100,000 of population.	Case-mortality Number of deaths per 100 cases notified.
Diphtheria and Croup ...	1892	94	19	20·2
	1893	157	30	18·4
	1894	104	22	21·1
	1895	171	15	8·8
	1896	141	16	10·9
	1897	154	10	6·5
	1898	311	18	5·8
Scarlet Fever	1892	321	7	2·1
	1893	406	9	2·2
	1894	185	3	1·6
	1895	163	4	2·5
	1896	206	5	2·3
	1897	269	10	3·7
	1898	302	6	2·0
Enteric and Continued Fever	1892	54	7	12·7
	1893	65	13	19·5
	1894	69	9	13·0
	1895	72	12	16·6
	1896	101	11	11·2
	1897	94	17	18·1
	1898	105	15	14·3
Erysipelas	1892	81	6	7·4
	1893	145	12	8·3
	1894	82	5	6·0
	1895	57	3	5·3
	1896	61	4	6·9
	1897	51	6	11·7
	1898	81	4	4·9
Puerperal Fever... ...	1892	4	5	125*
	1893	10	5	50
	1894	4	—	—
	1895	6	3	50
	1896	9	4	46
	1897	13	4	33
	1898	8	1	12·5

*Notification of cases evidently incomplete.

SMALL POX.

No deaths from or cases of Small Pox occurred in Brighton during 1898.

The new Vaccination Act came into operation during the year. The number of conscientious objectors to vaccination has happily been few in Brighton, but it remains to be seen whether the gigantic experiment now being made will be free from calamitous consequences. The present state of matters, at the least, renders it more important than ever to be in readiness for epidemic Small Pox, so far as efficient isolation accommodation is concerned. If the proportion of unvaccinated in the population increases, it is impossible to gauge how much hospital accommodation for Small Pox will be required in the event of an epidemic. In the past ten years we have always succeeded in preventing the spread of infection from every single case that has been imported into Brighton. In the not unlikely event of a first case being overlooked or wrongly diagnosed, we may not be so fortunate and successful in the future. What is required is a permanent building in some isolated spot, which could be used both for staff and patient, if only an accidentally imported case had to be dealt with, but with ample space for erecting temporary buildings in the event of a more serious outbreak.

ENTERIC OR TYPHOID FEVER.

During 1898, 129 cases were notified as Enteric Fever. Of these 16 subsequently proved to be suffering from other diseases than Enteric Fever. 14 patients arrived in Brighton while incubating the disease or during the attack, and 99 acquired the disease in Brighton. The 99 patients acquiring the disease in Brighton remain to be accounted for. The circumstances of each of these cases have, so far as was practicable, been carefully investigated. In a certain proportion of cases this was impossible, owing to the death of patients or their removal from Brighton.

The following table shows the history of cases of Enteric Fever in relation to the eating of shell-fish during the three weeks preceding the onset of the disease, since Midsummer, 1893 :—

TABLE VIII.

YEAR.	No. of cases subsequently found not to be Enteric Fever, or of which the nature was doubtful.	No. of cases of Enteric Fever, the infection of which was imported from other districts.	No. of cases apparently originating in the town in which :				Infection probably acquired in connection with the storing of shell fish.	Total cases of local origin.
			(*a*) it was stated that no oysters or other shell fish had been eaten.	(*b*) it was doubtful as to whether shell fish had been eaten.	(*c*) origin was directly ascribable to oysters.	(*d*) origin was directly ascribable to other shell fish.		
1893 (from Midsummer) ...	1	16	19	6	6*	—	—	31
1894	15	15	33	1	16	5	—	55
1895	12	19	37	—	7†	12	—	56
1896	7+3	18	61	2	22‡	8	1	94
1897	7+3	15	47	11	11†	16	3	88
1898	16	15	54	3	28§	13	—	98

* No secondary cases. † Including one secondary case.
‡ Including two secondary cases.
§ Including five secondary cases.

It will be observed that of the 98 cases originating in Brighton during 1898 it was stated in 54 cases that no shell fish had been eaten within the time above specified; in 3 other cases this point was doubtful, the patient's own statement

on the question not being obtainable; in 28 cases oysters, and in 13 cases mussels, in most instances proved to have been derived from a source grossly contaminated by sewage, had been eaten within three weeks of the date of onset of the disease.

Thus in 41·8 per cent. of the total cases of Typhoid Fever originating in Brighton during 1898, there was a high degree of probability that sewage-contaminated shell-fish were the cause of the attack. This percentage is higher than in preceding years, and it is a public misfortune that our efforts in obtaining control over the sale of these contaminated molluscs have hitherto been unavailing. It must not be supposed, however, that no good has been effected. Medical and public opinion have both been aroused, and there is reason to hope that some measures of partial protection will ere long be proposed by the Government.

Of the 54 cases of Typhoid Fever from the causation of which molluscs were excluded, eight occurred in connection with a small milk outbreak, which was happily discovered at an early date, and further trouble prevented. The details of this outbreak have been reported to the Sanitary Committee. Of the remaining 46 cases of local origin, some were due to personal infection, through neglected cases which were nursed at home, three in one family and two in a second. In three instances sorters of dirty linen in laundries were attacked, and there is the strongest reason for believing that they acquired the disease by handling such linen, which had been specifically contaminated. No cases of Typhoid Fever could be proved to exist in the houses from which the suspected linen came, but it is a well-known fact that mild cases of Typhoid Fever may remain unrecognised and yet be infective. No cases occurred among laundry-women who were engaged in washing, a point which illustrates the importance of keeping all infected or even dubious articles in a wet condition.

The remaining 40 cases of local origin were not traced to any common source of infection. It may be noted that in 56 per cent. of these cases defective drains were found, as compared with 43 per cent. in the cases probably caused by contaminated shell-fish. There is strong reason for thinking that the real source of many of the above cases remained undetected, owing to the difficulty of obtaining accurate histories.

SCARLET FEVER.

The proportion of cases and of deaths to population is given on page 15. The type of disease is now very mild, which greatly increases the difficulty of stamping it out. On several occasions during the year, small groups of cases have occurred, which have been traced to an unrecognised case which had not been isolated. As in other dry years, the amount of scarlet fever during 1898 was excessive.

DIARRHŒA.

The number of deaths from this cause was 2 in the first quarter of the year, 3 in the second quarter, 113 in the third quarter, and 11 in the fourth quarter of the year.

The proportion at different ages was as follows :—

TABLE IX.

Quarter of the year.	Aged in Months.								Aged in Years.		
	Under one month	1-2	2-3	3-4	4-5	5-6	6-9	9-12	1-2	2-3	All older ages.
1st	—	—	—	1	—	—	1	—	—	—	—
2nd	—	—	—	—	—	1	1	—	—	—	1
3rd	3	8	7	5	14	8	23	20	16	1	8
4th	—	—	—	2	1	2	1	2	2	—	1
	3	8	7	8	15	11	26	22	18	1	10

It will be seen that of the 129 total deaths from Diarrhœa, 100 occurred in infants under one year and 118 before the end of the second year of life, most of the remainder being in old people.

The association of the mortality with hot weather is well known. It can be studied in detail in Table X., where its association with meteorological conditions is shewn for each week in the year.

Table X.

1898. Week ending	Death-rate per 1,000 per annum.	Number of Deaths during the week from										Temperature of air during week.			Temperature of soil during week at a depth of four feet.		Wind. No. of days of								Rainfall.		No. of hours of bright sunshine.
		Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Influenza.	Bronchitis.	Pneumonia, including Broncho-Pneumonia.	Phthisis.	Highest.	Lowest.	Mean.	Highest.	Lowest.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	No. of days on which rain fell.	Amount collected in inches.	
Jan. 8...	16·6	2	—	—	1	1	1	1	3	5	3	51·8	34·2	46·0	46·8	46·2	—	—	—	1	1	1	3	—	1	3	0·37	14·17
,, 15...	18·8	5	—	—	—	—	—	—	4	3	3	49·0	31·0	42·9	47·0	46·6	3	—	1	—	—	—	—	—	3	—	—	4·41
,, 22...	18·3	4	—	—	—	—	—	—	4	2	7	54·0	33·8	45·4	46·6	46·2	1	—	—	—	—	3	—	—	3	2	0·04	7·83
,, 29...	22·6	2	1	—	1	—	—	2	4	3	2	50·0	35·0	44·6	47·0	46·6	1	—	—	—	2	1	1	1	1	—	—	4·33
Feb. 5...	17·1	5	—	—	—	—	—	—	6	6	1	53·8	31·8	45·7	46·8	46·8	3	—	—	—	—	—	3	1	—	6	0·57	18·66
,, 12...	24·3	6	—	1	4	1	—	—	7	4	4	52·0	34·4	44·5	46·8	45·6	—	—	—	—	—	3	2	1	1	3	0·10	27·17
,, 19...	16·6	5	—	—	—	—	—	4	7	3	1	54·6	30·0	45·3	46·2	45·8	—	2	—	—	—	2	1	2	—	3	0·43	18·42
,, 26...	15·3	4	—	—	—	—	1	4	6	3	3	51·0	27·2	39·0	46·2	45·2	2	2	—	—	—	1	1	—	1	4	0·24	27·00
Mar. 5...	23·4	2	—	—	1	1	—	3	5	5	4	50·6	32·0	41·8	45·0	45·0	2	1	—	—	—	—	4	—	—	4	0·40	33·00
,, 12...	20·0	6	—	—	—	1	—	2	5	2	4	47·4	33·0	40·4	45·0	44·0	—	6	—	1	—	—	—	—	—	2	0·06	20·93
,, 19...	20·5	8	—	—	—	—	—	2	5	3	3	55·0	28·2	45·1	44·6	44·0	—	—	—	—	—	2	3	—	2	3	0·15	13·51
,, 26...	24·7	4	2	—	1	—	—	2	6	4	5	51·8	30·0	40·4	45·8	44·8	—	5	—	—	—	1	—	1	—	4	0·36	27·75
April 2...	19·6	13	—	—	1	—	—	2	6	4	2	56·2	31·4	43·0	45·2	45·0	1	2	2	1	—	—	—	—	1	2	0·03	35·34
,, 9...	17·5	6	—	1	1	—	—	—	1	5	2	57·2	35·0	47·7	46·2	45·4	—	1	—	1	1	1	1	2	—	2	0·09	41·67
,, 16...	15·8	4	—	—	—	—	—	1	1	2	2	59·0	36·8	49·5	48·4	47·0	—	—	—	—	1	4	—	1	1	3	0·34	39·50
,, 23...	13·6	2	—	—	—	—	—	1	1	—	1	57·0	36·0	46·3	49·2	48·6	1	4	1	—	1	—	—	—	—	—	—	43·49
,, 30...	14·9	—	—	—	—	—	—	—	4	1	2	61·0	38·4	50·0	49·4	49·0	1	2	2	2	—	—	—	—	—	5	0·49	27·26
May 7...	14·9	1	—	—	1	—	—	—	1	1	3	64·4	43·4	54·1	50·4	49·6	1	—	2	—	1	1	1	1	—	5	0·86	37·24
,, 14...	10·2	—	—	1	2	—	—	—	2	1	2	62·6	37·0	52·6	51·4	50·6	—	—	—	—	—	—	5	1	1	7	1·50	33·84
,, 21...	10·7	—	—	—	—	—	—	1	—	—	1	58·4	36·8	50·0	52·0	51·6	3	4	—	—	—	—	—	—	—	4	0·60	29.41
,, 28...	11·1	—	—	—	—	—	—	—	2	1	3	70·0	42·8	56·7	53·2	52·0	1	5	—	1	—	—	—	—	—	2	0·05	35·01
June 4...	11·1	—	—	1	—	—	—	—	2	—	1	64·0	42·8	54·0	53·8	53·2	—	—	—	—	—	1	3	2	1	5	0·61	42·93
,, 11...	11·1	—	—	—	1	—	—	—	—	1	4	76·8	47·6	60·3	55·2	53·8	2	2	—	—	1	—	—	—	2	4	0·29	33·83
,, 18...	12·4	—	—	—	—	—	1	—	2	1	1	68·0	46·2	55·8	55·8	55·4	—	6	—	—	1	—	—	—	—	1	0·01	37·08
,, 25...	11·1	—	—	—	—	—	1	—	—	1	—	67·2	49·0	58·8	57·0	56·0	—	—	—	—	—	5	1	1	—	3	0·48	35·09

1898. Week ending	Death-rate per 1,000 per annum.	Number of Deaths during the week from										Temperature of air during week.			Temperature of soil during week at a depth of four feet.		Wind. No. of days of								Rainfall.		No. of hours of bright sunshine.
		Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Influenza.	Bronchitis.	Pneumonia, including Broncho-Pneumonia.	Phthisis.	Highest.	Lowest.	Mean.	Highest.	Lowest.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	No. of days on which rain fell.	Amount collected in inches.	
July 2...	11·1	—	—	—	—	—	1	1	2	—	4	73·4	50 0	59·8	57·4	57·0	2	—	—	—	1	2	—	2	—	4	0·23	45·09
,, 9 ..	10·3	—	—	1	—	—	—	—	1	1	3	77·4	47·0	61·3	58·2	57·6	2	1	—	—	—	1	1	2	—	—	—	51·92
,, 16...	11·5	—	—	—	—	—	1	—	2	2	3	76·2	46·8	61·2	58·8	58·4	2	—	—	1	—	2	—	2	—	1	0·02	56·42
,, 23...	15·3	—	—	—	—	—	2	—	1	3	5	76·2	47 2	63·5	60·0	59·0	1	1	1	—	—	3	1	—	—	2	0·18	42·42
,, 30...	11·9	—	—	—	1	—	1	—	3	—	4	73·6	50·4	62·5	60·0	60·0	1	—	—	—	—	1	2	1	2	1	0·06	32·57
Aug. 6...	10·2	—	—	—	—	—	—	—	1	1	3	73 0	46·0	62·2	60·2	60·0	—	—	—	—	—	5	2	—	—	2	0·23	51·15
,, 13..	17·1	—	—	—	1	2	8	—	2	2	3	76·8	49·8	61·5	60·6	60·0	1	2	1	—	1	2	—	—	—	2	0·57	39·67
,, 20...	16·6	—	—	2	—	1	7	—	2	1	7	82 4	58·0	71·0	61·8	60·0	1	5	—	—	—	1	—	—	—	1	0·04	67·34
,, 27...	17·5	—	—	—	1	—	13	—	1	2	1	85·0	50·4	66·1	62·4	62·0	2	1	1	—	1	2	—	—	—	1	0·13	37·00
Sept. 3...	22·2	—	1	—	1	—	15	—	2	1	6	73·0	44·4	61·1	62·2	61·8	1	—	—	—	—	—	4	1	1	2	0·14	61·66
,, 10...	27·7	—	1	—	1	—	22	—	4	1	3	81·4	58·2	69·4	62·0	61·8	—	2	2	—	—	—	—	1	2	—	—	60·66
,, 17...	26·9	—	—	—	—	1	16	—	1	1	4	77·2	51·0	65·4	62·6	62 2	1	—	—	3	—	1	1	1	—	2	0·05	56·83
,, 24 ..	24·3	—	—	1	1	1	15	1	1	—	5	72 8	43·4	60·4	62·4	61·8	1	2	—	—	—	2	1	—	1	1	0·17	41·17
Oct. 1...	22·6	—	—	—	—	—	13	—	4	1	3	66·0	39·8	55·5	61·8	60·2	—	4	1	—	—	1	—	1	—	3	0·80	40·01
,, 8..	14·9	—	—	—	—	1	2	—	2	1	3	69·8	46·0	58·9	60·0	59·0	—	4	3	—	—	—	—	—	—	—	—	29·33
,, 15...	10·2	—	—	—	—	—	2	—	5	1	2	60·8	41·8	52·1	59·0	57·4	2	1	—	2	—	—	1	—	1	3	0·15	12·00
,, 22...	14·9	—	1	—	—	1	3	—	3	2	3	62·8	46·0	56·6	57·0	57·0	—	1	—	1	—	5	—	—	—	7	1·91	5·83
,, 29...	14·5	1	—	—	—	—	2	—	2	—	3	63·2	49·0	57·7	57·0	57·0	—	—	—	—	1	2	3	1	—	4	1·38	16·67
Nov. 5...	20·0	—	—	—	—	—	1	1	5	2	3	59·0	38·2	51·8	57·0	55·8	—	—	—	—	—	4	2	1	—	5	0·66	28·50
,, 12...	19·2	—	—	2	—	—	—	1	1	6	6	60·2	40·0	57·5	55·8	54·8	—	1	2	2	—	—	1	—	1	1	0·06	28·67
,, 19...	14·5	—	—	—	1	—	1	—	3	2	4	58·0	39·0	50·0	54·4	53·8	—	2	—	—	—	—	—	—	5	2	0·03	19·42
,, 26...	21·3	—	—	1	—	1	—	1	6	2	3	53·0	30·6	45·9	53·6	52·0	2	—	—	1	2	—	—	—	2	7	2·05	7·84
Dec. 3..	20·5	—	—	3	—	1	—	—	1	2	2	54·0	30·0	44·7	51·6	50·0	1	1	—	—	—	1	2	1	1	5	0·76	8·50
,, 10...	20·0	2	—	1	1	—	—	2	6	3	2	56·6	40·2	50·7	51·0	50·0	—	—	—	—	1	2	1	3	—	5	0·68	7·17
,, 17...	14·1	—	—	1	—	1	—	—	1	—	5	55·0	36·0	48·1	51·0	50·6	1	—	—	—	1	1	2	2	—	5	0·20	5·75
,, 24...	18·8	—	—	4	—	3	—	1	4	1	4	54·0	33·0	43·2	50·4	49·2	2	—	—	1	2	—	—	1	1	1	0·08	26·75
,, 31...	18·8	—	1	2	—	1	—	—	2	3	8	54·0	28·2	44·9	49·2	48·0	1	—	—	—	2	3	1	—	—	4	1·62	11·74
		82	7	22	22	18	129	33	152	102	167	85·0	27·2	52·5	62·6	44·0	46	70	19	18	21	27	54	34	35	148	20·27	1579·95

DIPHTHERIA.

The proportion of cases and of deaths in population is given on page 15. There was unfortunately a considerable increase during 1898.

The number of cases each month is shewn on page 11. A portion of the increase was caused by the more accurate diagnosis now possible by bacteriological means. The disease was originally imported from neighbouring districts, attacking first three special schools. The suspicious absentees from these schools were visited, and several slight cases for which no doctor had been called in were detected by taking "swabs" from throats and examining them bacteriologically. It appeared that these measures had checked the disease, but shortly afterwards cases appeared in other schools, and on my recommendation the elementary schools in the Borough were all closed a week before the date for the commencement of the usual Christmas holidays. The disease since that date has steadily abated. The case-mortality, as will be seen from the table on page 15, was only 5·8 per cent. This may indicate a comparatively mild type of disease: and it is probable that bacteriological means of diagnosis have caused certain cases to be notified which in former years would have remained unnotified. The main cause of the low case-mortality is however, I think, the fact that antitoxic serum was administered in nearly every case, with striking success.

MEASLES.

Measles caused 82 deaths in 1898, as compared with 17 in 1897. Of the latter number 15 occurred in December, 1897. Of the deaths from Measles in 1898, 66 occurred in the first quarter of the year, 13 in the second, none in the third, and three in the fourth quarter of the year. It will be seen, therefore, that an epidemic of considerable magnitude occurred in December, 1897 to April, 1898. The course of this epidemic and full particulars concerning it are described in my Annual Report for 1897 and my Report for the first quarter of 1898. It caused a very remarkable mortality in the children's ward of the Workhouse Infirmary. It is unnecessary to repeat these details here; but the epidemic illustrates our partial inability to prevent the spread of this extremely infectious children's disease under present conditions.

WHOOPING COUGH.

This disease has caused only a small mortality in 1898 (see table VI. p. 14).

INFLUENZA.

Influenza is an intensely infectious disease. During 1898 the number of deaths ascribed to this disease was 33, being, with the exception of 1896 and 1897, the lowest since 1890, when, after many years' absence, Influenza began to bulk largely in the death-rate of England.

The number of deaths directly ascribed to Influenza in Brighton since it first appeared in our midst has been as follows :—

TABLE XI.

Year.	No. of Deaths ascribed to Influenza.					No. of Deaths from Diseases of the Respiratory Organs.
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total for Year.	
1889	—	—	—	—	—	291
1890	18	5	—	—	23	417
1891	37	27	7	—	71	381
1892	143	3	1	2	149	392
1893	8	8	6	11	33	343
1894	35	5	—	9	49	321
1895	82	17	1	7	107	411
1896	11	3	1	6	21	299
1897	10	6	5	3	24	245
1898	22	4	1	6	33	304

Besides the deaths returned as due to Influenza, a considerable number returned as chest ailments have Influenza for their primary cause.

DEATHS FROM TUBERCULAR DISEASES.

A special importance attaches to tubercular diseases, in view of the fact that they are due essentially to the entrance into the system of a special micro-organism, the tubercle-bacillus. The majority of those thus receiving infection are happily able to resist its development. In weaker persons, however, and particularly in those with a family predisposition to the disease, the reception of the infection is followed by the slow development of tuberculosis.

It will be seen from the following figures that some improvement in the mortality from Consumption has been secured :—

Mean Annual Death-Rate in Brighton from Phthisis (Consumption) and other Tubercular Diseases per 100,000 Persons in Groups of Years.

TABLE XII.

	Phthisis.	Other Tubercular Diseases.
Ten years, 1861-70	295	98
Ten years, 1871-80	247	78
Three years, 1881-83	193	?
Three years, 1884-86	169	?
Four years, 1887-90	169	?
Three years, 1891-93	150	81
1894	152	87
1895	167	74
1896	150	66
1897	142	47
1898	136	65

During 1898 the deaths from Consumption numbered 167. In 129 of these it was found practicable to make inquiries into the history and environment of the deceased. There was clear evidence that in at least 19 out of the 129, or 14·8 per cent., the illness dated from some time precedent to the date of coming to live in Brighton. In not a few cases death occurred within a few weeks after the patient came to Brighton. Such sending patients to the seaside in the last stages of disease is to be deprecated from the standpoint both of the patient and the town.

Of the 19 cases in which a definite history was obtainable, three had lived less than 1 month in Brighton at the time of their decease; seven between 1 and 3 months; six between 3 and 6 months; two between 6 and 12 months. In the remaining case the symptoms dated from a period previous to settling in Brighton. It will be noted that this statement is necessarily incomplete. In 38 cases no inquiry was practicable, and there is reason to believe that the majority of these were temporary residents in the town.

In every house in which consumptive patients had died the sick-rooms were thoroughly cleansed and disinfected, and thus danger to the next occupants of the rooms avoided.

During 1898 I have made several special reports upon Tuberculosis which need not be now repeated. In May I summarised the report of the 2nd Royal Commission on Tuberculosis, shewing that we had locally, for some years, anticipated its main recommendations so far as meat inspection is concerned. The Council, on the recommendations of the Sanitary Committee, subsequently agreed to adopt a memorial to the President of the Local Government Board, requesting him to introduce a Bill into Parliament, at the earliest opportunity, to give effect to the recommendations of the Royal Commission, but making provision for the payment of compensation in respect of carcasses condemned on account of Tuberculosis, to the limited extent and for the limited period

suggested in the supplemental recommendations adopted by certain members of the Royal Commission.

In October it was decided to invite tenders for the supply of milk to the Borough Sanatorium under the following conditions :—

1. That the Contractor shall furnish to the Medical Officer of Health certificates from a qualified veterinary surgeon to the effect that
   (a) The cows from which the milk supply is obtained have been subjected to and failed to re-act to the Tuberculin test.
   (b) That all re-acting animals have been removed from the byres, and the latter cleansed and disinfected.
   (c) That all new cows purchased, from time to time during the period of the contract, have been similarly tested.
2. That the Contractor shall not supply milk from any other source than the one defined above, without the special permission of the Medical Officer of Health.

The Sanatorium is now being supplied with milk under the above conditions at 1s. 4d. per gallon. The Committee of the Children's Hospital have adopted similar measures. The County Hospital propose to do the same at the termination of their present contract; and the Board of Guardians are, I believe, taking steps in the same direction.

In the latter part of the year, a system of voluntary notification of cases of phthisis occurring in connection with the work of the County Hospital, Children's Hospital, Brighton Dispensary and the Poor Law Medical Offices, by the kind co-operation of the physicians attached to these institutions. This has been followed by measures of cleansing and disinfection in the houses concerned, and by the delivery of non-alarmist cards of precautions to be adopted. Further particulars are contained in my report for the last quarter of 1898, and in a special paper, *Public Health*, February, 1899.

OTHER PREVENTIBLE DISEASES.

A large number of deaths from other diseases than those previously considered are preventible, and will, with improvement in the standard of living and the avoidance of evil habits of life, steadily decline. Among these may be named a large share of the mortality from Bronchitis and Pneumonia, as well as of the three causes of death which will next be considered.

SYPHILIS.

During 1898 the deaths of five male and seven female infants under one year of age, and one between one and five years of age, were returned as due to this cause, also of one woman and one man. The death returns under this head are immensely understated, the prevalent immorality causing a great amount of this disease, which lurks in the system for years, and is probably, next to

alcoholism, the most fertile cause of ill-health and of death in our midst. Many diseases occurring under other heads, as diseases of the brain and spinal cord, and of various other organs, are really due either to alcoholism or syphilis, although these are not mentioned in the death certificates. Syphilis (great pox) is a contagious disease just as much as is small pox, though it is spread almost solely as the result of immorality. One of its most painful features is the transmission of the disease to the innocent offspring, as in the above seven fatal cases among infants. It can only be diminished by the active enforcement of all preventive measures against known immorality, and by the treatment and, where practicable, the segregation of men and women who have become infected. Such segregation is probably only practicable at present in the case of bodies of men, as in a regiment of soldiers.

ALCOHOLISM.

During 1898, 16 deaths were returned as caused by alcoholism or delirium tremens. Of these, eight were men and eight women, and only two were over 60 years of age. The deaths do not represent more than a very minute proportion of the mortality really caused by alcoholism. As a rule, the real cause is concealed behind such headings as disease of the brain or spinal cord, apoplexy, heart disease, liver disease, hœmatemesis (vomiting of blood), cirrhosis of liver, gout, Bright's disease, which, with many other diseases, are caused to a very large extent by chronic alcoholic excess.

Thirty-nine deaths (20 of men and 19 of women) were caused by cirrhosis of the liver, a disease which is almost solely produced by intemperance. Alcohol has been described by a well-known physician as the "genius of degeneration." There is no other agent so competent to hurry on the degenerative changes in the system associated with old age; in other words, *alcohol is one of the chief causes of premature old age.* It is not sufficiently recognised that these evil effects are very commonly produced by the systematic indulgence in an amount of alcoholic drinks that would by most be regarded as moderate; and that those who, while never becoming intoxicated, daily take a considerable amount of spirits (especially if taken apart from meals) are much more likely to suffer in health and prematurely break down than the labourer who may get drunk once a fortnight and be a teetotaller in the intervals.

RHEUMATIC FEVER.

During 1898, 3 deaths were caused by this important disease, as compared with 4 in 1897, 9 in 1896, 4 in 1895, 9 in 1894, and 6 in 1893. They represent but a small share of the mischief caused by this disease. The case mortality is low, but of those who survive, a large proportion go maimed by the heart disease which has supervened on the rheumatism.

DEATHS FROM VIOLENCE, &c.

One hundred and forty-four inquests were held. The verdicts returned may be classified as follows :—

NATURAL CAUSES...		86
SUICIDAL—		
Hanging	5	
Drowning	2	
Shooting	2	
Cutting throat	2	
Throwing himself from window	1	
	—	12
ACCIDENTAL—		
Inattention at Birth	2	
Suffocation whilst sleeping with parents	9	
Suffocation whilst attempting to swallow a piece of meat	1	
Swallowing boiling water	1	
Suffocated whilst being carried by Mother	1	
Suffocated in empty beer vat	1	
Crushed between the buffers of a railway truck	1	
Falls	8	
Burns and Scalds	7	
Drowning	4	
During administration of Anæsthetic ...	2	
Poisoning	1	
Overdose of laudanum	1	
Shock and congestion of the brain, result of attempting to hang himself, but without wilful intention of taking his life	1	
Knocked down by horse and cart ...	1	
Fracture of skull	1	
	—	42
OPEN VERDICT—		
Found drowned		4
		—
Total		144
		—

B.—SANITARY WORK OF THE YEAR.

SANITARY INSPECTIONS.

In the following tables, prepared by Mr. Skinner, the Chief Sanitary Inspector, the work of the Sanitary Department is stated, so far as it can be given in tabular form. It will be seen that 9,666 houses were visited in the course of house-to-house inspection, as compared with 8,434 in the previous year. This, however, does not represent the total number of houses visited during the year. Apart from house-to-house inspection, a large proportion of the time of the inspectors is occupied in attending to complaints received from householders in every part of the town. During last year 1,186 such complaints received attention, as compared with 1,196 in the previous year. In addition, 6,040 visits were made for purposes of investigation and disinfection after cases of infectious disease. In each of these cases it is the practice to take the opportunity of making a sanitary examination of the houses visited. 4,452 visits were made during the year to Slaughter-Houses, 63 to Cowsheds, 396 to Bakehouses, 1,600 to Dairies and Provision Shops. The Common Lodging-houses have received 88 visits. In 136 houses the soil-pipe has been tested by volatile tests; and 650 drains have been opened for examination. For particulars of the work see the table on the next page.

TABLE XIII.—*Inspections during 1898.*

	1st Qrtr.	2nd Qrtr.	3rd Qrtr.	4th Qrtr.	Totals for 1898.	Totals for 1897.
Number of Streets Inspected	94	96	63	51	304	272
,, Houses and other Premises Inspected...	2792	2556	2409	1909	9666	8434
Number of Complaints attended to	238	250	396	302	1186	1196
,, Visits to Slaughter Houses ...	1070	1041	1148	1193	4452	4362
,, Visits to Cowsheds	18	23	10	12	63	14
,, ,, Bakehouses	—	198	—	198	396	396
,, ,, Dairies and Provision Shops	291	287	545	477	1600	1061
Number of Day Visits to Common Lodging-Houses	21	16	16	12	65	59
Number of Night Visits to ditto	4	4	11	4	23	12
,, Visits in respect of Sickness ...	2602	287	1088	2063	6040	4781
,, Visits to Fumigate Rooms ...	165	137	140	252	694	488
,, Visits for Removal of Bedding ...	171	133	137	210	651	576
,, Drains tested by Volatile Test ...	45	27	43	21	136	185
,, Drains Opened for Examination...	152	113	163	222	650	557
Number of Smoke Observations	31	3	49	2	85	21
,, Visits for Sundry Purposes ...	2035	1017	2419	1174	6645	4522
,, Visits to look up Notices Served...	2069	2207	2116	1972	8364	9356
Number of Attendances at Police Court ...	3	2	21	8	34	19
,, Samples Collected for Analysis ...	24	—	54	5	83	55
,, Inspections of Stables	377	579	469	524	1949	730
,, Wastes of Water reported... ...	199	166	84	37	486	364
,, Letters sent to Schools and Public Library	1130	168	221	484	2003	887
Meteorological Observations taken	169	169	169	169	676	676
Visits to Schools	60	19	49	197	325	832
Number of Visits to Offensive Trades ...	—	—	3	—	3	25
,, Visits under Factory & Workshops and Shop Hours Act	628	918	675	427	2648	3260
Number of Visits for Contagious Diseases Animals Committee	29	12	—	—	41	136
Drains flushed	—	—	27	—	27	33
Circulars delivered	—	170	10000	—	10170	10000
Markets Committee, 1 Inspector	—	—	12 dys	—	12 dys	8 days
Notices served for Town Clerk...	34	—	—	—	34	—
Visits to Houses Let in Lodgings	—	—	—	79	79	—

The Sanitary Inspections enumerated in Table XIII. have been followed by the serving of the notices given in Tables XIV. and XV. A very large proportion of the work is done on the strength of verbal recommendations or preliminary "warning" notices.

TABLE XIV.—*Notices served on Owners during 1898.*

Nature of Notice.	Warning and Verbal Notices.			Final Notices.		Total Number of Notices on owners complied with.
	Number served.	Number complied with before service of final notice.	Number reported for final notice.	Number served.	Number complied with.	
To drain into sewer and fill up cesspools	15	2	13	18	18	20
To relay drain and fill up cesspools	3	1	2	2	2	3
To relay drain	401	280	121	121	118	398
To repair drain and soil pipe ...	161	100	61	74	72	171
To trap drain	217	150	67	58	58	208
To cleanse & whitewash rooms	224	122	102	116	113	235
To clear drain or soil pipe ...	150	48	102	75	75	123
To clear, repair or cleanse closet, or repair flushing apparatus or pan	748	418	330	324	315	733
To repave yard or scullery ...	322	175	147	149	141	316
To pave and drain stables ...	7	4	3	4	3	7
To abate other nuisances ...	1796	933	863	877	786	1719
To provide covered dust bins ...	950	513	437	473	436	949
To provide premises with a proper water supply	50	9	41	40	38	47
To cleanse premises and remove foul accumulations	9	7	2	2	2	9
To provide manure receptacles	64	25	39	41	37	62
To fill up underground manure pits	67	33	34	32	30	63
To provide W.C. accommodation	7	5	2	5	3	8
To lay on water to closet ...	29	12	17	22	19	31
To alter water pipes	6	6	0	1	1	7
To cause waste pipes to discharge into outer air	19	13	6	11	11	24
Totals	5245	2856	2389	2445	2278	5134

TABLE XV.—*Notices served on Occupiers during 1898.*

Nature of Notice.	Warning and Verbal Notices.			Final Notices.		Total number of notices on occupiers complied with.
	Number served.	Number complied with before service of final notice.	Number reported for final notice.	Number served.	Number complied with.	
To cleanse and white-wash rooms	30	21	9	12	12	33
To clear drain or soil pipe ...	16	13	3	10	10	23
To clear, repair or cleanse closet, or repair flushing apparatus or pan	242	173	69	72	72	245
To abate other nuisances ...	65	57	8	11	11	68
To discontinue keeping animals so as to be a nuisance	88	42	46	53	51	93
To abate overcrowding	101	59	42	52	51	110
To abate smoke nuisance ...	10	6	4	4	4	10
Cleanse and white-wash bake-houses	57	52	5	3	3	55
Cleanse and white-wash work-rooms	29	20	9	5	5	25
To discontinue to let or occupy cellar dwellings	13	13	—	—	—	13
Cleanse premises and remove all foul accumulations	278	155	123	138	138	293
Totals	929	611	318	360	357	968
Total of notices served on owners	5245	2856	2389	2445	2278	5134
Total notices served	6174	3467	2707	2805	2635	6102

The increased readiness with which notices are complied with has been continued during 1898, as evidenced by Table XVI.

TABLE XVI.

Date of Annual Report.	Year under Report.	Percentage of notices not complied with at time of issue of Report.
March 23rd, 1889	1888	20 per cent.
February 13th, 1890	1889	14 ,,
March 31st, 1891	1890	4·3 ,,
March 16th, 1892	1891	3·2 ,,
April 21st, 1893	1892	1·3 ,,
April 13th, 1894	1893	0·8 ,,
April 15th, 1895	1894	1·3 ,,
June 20th, 1896	1895	0·0 ,,
April 12th, 1897	1896	0·4 ,,
March 14th, 1898	1897	0·8 ,,
March 27th, 1899	1898	1·8 ,,

Only five summonses were required during the year for non-compliance with notices to abate nuisances.

THE PUBLIC ABATTOIR.

1898 is the fourth complete year of working the Abattoir.

The following statement, supplied by Inspector Cuckney, the Superintendent of the Abattoir, gives the number of animals slaughtered in the public and private slaughter-houses at the Abattoir :—

Year.	In the Public Slaughter-Houses					In the Private Slaughter-Houses					Total.
	Beasts.	Calves.	Sheep.	Lambs.	Pigs.	Beasts.	Calves.	Sheep.	Lambs.	Pigs.	
1898	1008	503	4114	458	2645	6	11	229	31	3322	12650
1897	589	384	3077	224	2442	16	69	1145	158	3950	12054
1896	333	253	1549	201	4134	58	69	990	201	3391	11184
1895	89	95	694	113	4182	187	71	1231	329	—	6991

Unsound Food seized or surrendered during 1898.

Description.	No. of animals.	No. condemned by Magistrate.	No. destroyed by arrangement with owner.	Total weight in lbs.
A.—At the Abattoir—				
Bullocks (whole carcase) ...	5	—	5	3119
,, (part of carcase)...	55	—	55	905
Calves (whole carcase) ...	2	—	2	131
Sheep (whole carcase) ...	1	—	1	80
,, (part of carcase) ...	10	—	10	30
Pigs (whole carcase) ...	44	—	44	3510
,, (part of carcase) ...	479	—	479	6846
B.—In the Private Slaughter-houses and Shops—				
Bullocks (whole carcase) ...	11	—	11	6184
,, (part of carcase)...	395	12	385	5013
Sheep (whole carcase) ...	7	3	4	469
,, (part of carcase) ...	88	—	88	226
Pigs (whole carcase) ..	10	—	10	1203
,, (part of carcase) ...	23	—	23	194
,, (38 hams)	38	33	5	340
Rabbits	3	3	—	9
Totals...	1171	51	1120	28259

The total amount of meat destroyed in connection with private slaughter-houses and shops was 13,538 lbs., at the abattoir 14,421 lbs. Three summonses were issued during the year for the sale of unsound meat, the fines imposed being £5, 33s., and 33s. respectively.

In addition to the above, 54½ bushels of cherries, 1 bushel of pears, and 3 of plums were voluntarily surrendered.

The following butchers slaughter at the Public Abattoir :—

BUTCHERS ... ... Mr. Aylward, Lewes Road.
Mr. Bloomfield, Livingstone Street, Hove.
Mr. Dean, Lewes Road.
Mr. George, Islingword Road.
Mr. Florence, Western Road, Hove
Mr. Hucking, Western Road.
Mr. Hills, Southover Street.
Mr. H. Jones, Islingword Road.
The London and Provincial Meat Stores, Church Road Hove.
The Sussex Farmers' Meat Supply Association, Norfolk Square.
Mr. Sandalls, Lewes Road.
Mr. Seal, Preston Road.
Mr. Vigar, Southover Street.

BUTCHERS *(contd.)* Mr. Warren, Lewes Road.
†Mr. J. Pullen, 19 and 20, Kensington Gardens
†Mr. J. Sands, Sutherland Road.
†Mr. Gamage, Springfield Road.
†Mr. F. Rovey (Pork), 98, Upper Lewes Road
†Mr. Harrison (Pork), London Road.

† These have commenced to slaughter at the Abattoir during 1898.

PORK BUTCHERS ... Mr. Barton, Islingword Road.
Mr. Combridge, Western Road, Hove.
*Mr. Comber, Upper Lewes Road.
*Mr. Dawes, Upper Lewes Road.
*Mr. Pledge, Park Street.
Messrs. Skinner Bros., Trafalgar Street.

* These three butchers slaughter at the Abattoir for an aggregate of about 40 pork butchers.

Owing to a serious outbreak of Swine Fever within a radius of 4 miles of Brighton, the number of swine slaughtered at the Abattoir is smaller by 1,227 in 1898.

In April last the Corporation secured the concession from the Railway Company that they would accept cattle consigned to the Abattoir at Hollingdean Road, and would deliver them at the Abattoir accordingly. An intimation to this effect was sent to every butcher in the town. The concession has hitherto been only partially successful in practice, owing to difficulty in connection with the drovers who undertake, on behalf of a considerable number of butchers, to deliver cattle at various slaughter-houses in the town. What is required, more than anything else, is a more rigid enforcement of of the bye-laws as to driving cattle through the street.

PRIVATE SLAUGHTER HOUSES.

At present 39 are in active work in the town. Slaughter-house No. 15 in Vine Street has been purchased by the Corporation for the sum of £250.

Many of the slaughter-houses in the town are in crowded neighbourhoods where their continued existence is a source of serious nuisance and of actual danger to the health of the surrounding inhabitants. This nuisance is partly due to the condition of the premises, and partly to the carrying on of slaughtering and removal of offal and blood under unfavourable circumstances. Many of the slaughter-houses are in a dilapidated condition, with imperfect and insanitary paving, foul blood-pits and manure receptacles, badly ventilated and overcrowded lairs, and so on. These defects, or some of them, might be remedied by the serving of notices to carry out structural alterations. I have hitherto partially refrained from recommending many such notices in the hope

that the gradual purchase of the worst of these slaughter-houses might render this unnecessary; but it will be imperative to enforce extensive structural alterations in many instances ere long.

The most unfortunate aspect of the matter is, that even after all the alterations that can be enforced under the Public Health Act have been made, many, if not most of the private slaughter-houses in the town will still remain a source of serious nuisance. This cannot be avoided when an offensive trade like slaughtering, with its necessary concomitant of removal of putrefiable materials, is carried on among densely populated houses.

There is the further fact, from the standpoint of the meat-consuming public, that many of these private slaughter-houses are so circumscribed in area and so low-pitched that the dead meat has to be hung close to where slaughtering is going on. This cannot conduce to its wholesomeness.

SALE OF FOOD AND DRUGS ACT.

Number of samples collected during the year 1898	81
,, ,, adulterated during the year 1898 ...	8
,, prosecutions during the year 1898	3
,, convictions during the year 1898...	2
,, withdrawn during the year 1898	1

Aggregate amount of fines	£7	0 0
Analyst's fees recovered	0	10 0
	£7	10 0

Cost of samples	£9	0 2
Cost of analysis...	20	10 6
Inspector's salary	12	0 0
	33	10 8
Fines and Analyst's fees recovered ...	7	10 0
Cost of working the Act over and above the amount recovered in fines ...	£26	0 8

The samples collected were:—Milk, 62; condensed milk, 1; butter, 6; lard, 3; beer, 5; whiskey, 1; demerara sugar, 3.

Of the samples of milk, 8 were adulterated with added water, 20, 20, 18, 18, 8, 5, 5, 5 per cent., respectively.

The remaining samples were all genuine.

COMMON LODGING HOUSES.

Four are at present registered, having accommodation for 167 lodgers. One of these (accommodating seven men) is in the Spa Street area. The bye-laws have been carried out strictly during the past year.

HOUSES LET IN LODGINGS.

Bye laws for houses of a rateable value not exceeding £26, and having three families in them if the landlord lives in the house, or two if the landlord does not live in the house, were confirmed by the Local Government Board on 13th July, 1898, and 56 such houses are now on the register. Considerable work has been involved in measuring up the rooms in these houses, but, as in future we shall be in a position to regulate the exact number of persons for each house, and ensure the carrying out of this regulation by means of evening visits, a great evil will be prevented in houses over which hitherto no effective control could be exercised.

NEW BUILDING BYE-LAWS.

On the 20th October, 1896, new building bye-laws for certain purposes were confirmed by the Local Government Board.

Section 3 requires that the mould shall be removed, and a layer six inches thick of good cement or lime concrete rammed solid, or asphalte, be placed over the whole surface of the site of every new domestic building, unless the subsoil is solid chalk or coombe rock, when a covering with similar materials four inches thick only shall be required. This will effect a most important sanitary improvement in new houses.

FACTORY AND WORKSHOPS ACTS AND SHOP HOURS ACT.

During 1898 2,643 visits had been made; 1,117 of these being inspections, the remainder being for the purpose of serving Notices and affixing forms and the looking up of Notices served.

396 inspections were of Bakehouses.

44	,,	,,	Factories.
128	,,	,,	Workshops employing protected persons.
132	,,	,,	Adult Male Workshops.
204	,,	,,	Domestic Workshops and outworkers.
213	,,	,,	Premises coming under the Shop Hours Act.

During the year 192 workrooms have been measured up in accordance with Section 1 of the Factory and Workshop Act, 1895, making a total of 724 since the passing of the Act. This requires that there shall be 250 feet of cubic space for each person in a workshop during the day, and 400 feet for each person during overtime. The Act also requires that a notice shall be kept exhibited in each room, stating the number of persons who may be employed. These notices are supplied by us on cards, which can be conveniently hung.

The following defects have been found in the course of Inspector Mills' inspections during the year. Notices to remedy these defects have been well complied with, at the present time none being outstanding :—

Workshops requiring cleansing or whitewashing	59
,, damp	3
,, overcrowded	22
,, without proper ventilation	15
,, without closet accommodation	4
,, without sufficient closet accommodation	2
,, without separate closet accommodation for sexes ...	4
Bakehouses requiring cleansing or whitewashing...	103
Closets with flushing apparatus defective...	31
,, defective	22
Closet pans foul	46
Closets unventilated	9
,, without water supply	4
,, choked	5
Drinking water cistern foul	3
Drains defective	22
Drained into cesspools	3
Drains ventilators defective	6
,, choked	6
,, untrapped	9
,, traps choked and foul	8
,, ,, in bakehouse	4
Soil pipes defective	1
Paving of yards or laundries defective	30
Without proper dust bin	39
Waste pipes defective	8
Animals kept in dirty condition	9
Sinks leaky	10
Yards dirty	15
Foul accumulations on premises	26
Roof and rain water pipes defective	7
Houses without proper water supply	6
Urinals and lavatories foul and defective...	18
*Lead workers' workshops without washing conveniences ...	6
Unventilated staircase	2
Water-closets opening into workroom	2
Encroachment on air space	3
	565

* Circulars left in each case.

During the year H.M. Inspector of Factories has made complaint to me in respect of sanitary defects in 22 workshops and 4 factories. These have all been attended to, and reports made in accordance with the Act to H.M. Inspector. Mr. Pearson, the Inspector for this district, and Inspector Mills have also from time to time exchanged lists of Factories and Workshops inspected during the year, this being very useful in preventing overlapping.

No complaints have been made during the year in relation to the Shop Hours Act, and since the Amendment Act of 1895 there has been no difficulty in getting the notices exhibited.

HOUSING OF THE WORKING CLASSES ACT—PART I.

On March 1st, I officially represented that the houses in Egremont Street and Spa Street (east side) and the parts of Edward Street and Carlton Hill abutting on these streets comprised an insanitary area, which could only be properly dealt with under Part I of the above Act. It is unnecessary to repeat here the precise details which accompanied my representation. The following summary will suffice. The death-rate in the area in the six years 1891-97 averaged 33·5 as compared with 17·3 in the rest of the Borough, the death-rate from Diarrhœa 4·34 as compared with 0·68, from Phthisis 1·86 against 1·53, other Tubercular Diseases 1·24 against 0·73, from Bronchitis and Pneumonia 6·81 against 2·38. After making free allowance for the excess of children in the area, and for the excessive mortality caused by the habits (neglect, ignorance, drunkenness) of a considerable proportion of the inhabitants of the area, it was clear that the condition and arrangement of the houses in the area was responsible for a very large share of the excessive mortality in them.

The houses in the area had a rental in most instances of from 2s. 6d. to 5s. a week. Of the total 105 houses in the two main streets of the area, 47 had only one bedroom. Of the total 182 bedrooms in the area, 7 measured under 300, 17 between 300 and 400, 17 between 400 and 500, 18 between 500 and 600, and 57 between 600 and 700 cubic feet. The width of the frontage of the frontage of the houses in Spa Street and Egremont was very limited: 10 to 11 ft. in 13, 11 to 12 ft. in 49, 12 to 13 ft. in 25, 13 to 14 ft. in 10, and 14 to 15 ft. in 4. The backyards in the majority of houses did not measure 50 square feet; in many houses considerably less.

To make an efficient scheme it was thought desirable to include the west side of Spa Street, thus bringing up the total number of houses within the scheme to 171.

HOUSING OF THE WORKING CLASSES ACT—PART II.

Official representations have been made by me under Part II. of the above Act during 1896, that the following premises are in a state so dangerous to health as to be unfit for human habitation :—

Situation of Premises.	No. of Houses.	Legal Proceedings taken.	Result.
Essex Place ...	2	—	Houses closed and sold to Corporation for demolition.
Nelson Place ...	6	—	Houses put into thorough repair.
Spa Street... ..	11	—	These houses have since been reported under Part I., and form part of a condemned area.
Little Russell St....	8	—	Under consideration.
Claremont Row ...	2	2	Houses put into thorough repair.
West Street Court	6	—	House closed voluntarily.
Gio'ster Passage ...	2	—	Houses put into thorough repair.
Nelson Row ...	1	—	House put into thorough repair.
High Street ...	1	—	House closed voluntarily.
Centurion Road ...	1	—	House being put into repair.
New Dorset Street	2	—	Houses being put into repair.

Three summonses were issued during the year under this Act.

No. 90 Spa Street.—A closing order was made, and a resolution as to its demolition subsequently passed by the Council.

No. 71B High Street.—A summons was taken out for letting a house after a closing order had been made. It was adjourned, and the house having been vacated and the costs paid, the summons was withdrawn.

Nos. 14 and 15 Claremont Row.—An application for a closing order was made. The summons was adjourned and extensive repairs carried out, after which the summons was withdrawn on payment of costs.

COST OF PRECEDING SCHEMES UNDER PART I.

The present seems an opportune occasion for summarising the cost which the Council has hitherto incurred in carrying out the two preceding schemes under Part I. The following tabular statement is based on figures furnished by the Borough Accountant.

Certain small sums are still outstanding, but the following amounts may be taken as practically complete.

	Total Gross Cost.	Amount received for Re-sale of Land and Materials, and for Rent.	Nett Cost.
	£	£	£
Little St. James's Street Area ...	17,388	5,005	12,383
Cumberland Place Area	49,992	16,038	33,954
Ewart Street Site, in connection with Cumberland Place Area...	4,000	4,000	*Nil.*

In the following Table are given certain other facts respecting the above two and the Spa Street Area :—

	Little St. James's Street Area.	Cumberland Place Area.	Spa Street Area.
Number of Persons Displaced ...	329	1,104	725
Number of Persons Re-housed ...	150	1,113	—
Area in Square Yards	7,223	14,927	11,436
Date Scheme was passed by Council	Sept. 26th, 1889	Oct. 30th, 1890	Oct. 20th, 1898
Approximate Nett Cost of Scheme	£12,383	£33,954	?
Cost per Person Displaced ...	£37 12s. 9d.	£30 15s.	?
Cost per Square Yard of Area ...	£1 14s. 3d.	£2 5s. 6d.	?

It will be remembered that no persons of the artizan classes were rehoused on the Little St. James' Street site, and that the Ewart Street site was purchased for £4000, and re-sold for the same sum to persons subject to conditions as to building houses suitable for the artizan classes.

The cost of the Spa Street area ought to be on a much lower scale than that of the two preceding areas, in view of the fact that the houses are leasehold, near the end of the 99 years' tenancy, and are most of them extremely dilapidated. Had it been practicable, it would have been desirable to add a relative statement of the rateable value of the two areas before clearance and in their present condition.

REVIEW OF ACTION UNDER PARTS I. AND II. OF THE HOUSING OF THE WORKING CLASSES ACT.

In the eight complete years since the passing of this Act, 215 houses have been represented as unfit for human habitation under Part II., not including certain houses which have been subsequently included in the Spa Street area under Part I. A certain number of these houses have remained closed or been

converted into stores, &c., while others have been demolished. About 150 have been put in thorough repair.

Allowing 6 persons per house, 900 persons have been thus re-housed; and when this total is added to the population of the three areas under Part I., it will be seen that when the Spa Street area has been dealt with, 2,888 will have been re-housed in satisfactory houses, or 1 in 42 of the total population of Brighton, a not unsatisfactory record of work for the Sanitary Committee and Council.

PART III.—HOUSING OF THE WORKING CLASSES ACT.

In the Jubilee year, 1897, two gifts of land were made to the Council by Sir John Blaker (two acres) and Messrs. Friend & Abbey (about four acres) for the purpose of erecting artizans' dwellings under Part III. of the above Act. This marks a new departure on the part of the Council, it having been decided to build and retain the houses in the possession of the Council. Delays have occurred in securing suitable plans and in securing the endorsement by the Local Government Board of the details of the schemes of the Council, but plans have now been passed and cottages will this year be erected on portions of each of the sites. The Council find themselves in a difficulty in building decent houses which can be let at a rental within the reach of the labourer earning 20s. to 25s. a week, who more especially needs such houses as the Council propose to build. One of the conditions rendering it extremely difficult for the Council to let the houses for a low rental is the fact that the capital sum invested in the houses can only be borrowed for a term of 30 years.

THE MANUFACTURE OF NEW SLUM PROPERTY.

The cost of removing insanitary areas is so great that it appears hardly necessary to emphasize the importance of not allowing any such new insanitary areas to grow up in our midst. If this could be prevented, we might reasonably hope in a few years to have a clean sheet. How do matters actually stand? Two factors are chiefly concerned: (1) the structural condition of houses built in recent years, and (2) their environment as to freedom of access of light and air. On the first score, so far as stability of structure is concerned, new houses are generally more fragile than old, and will reach the decrepitude and decay, which attack houses as much as men, sooner than would have happened with more substantial erections. In one particular neighbourhood there are houses built within the last 20 years which cannot much longer escape condemnation. This need cause no alarm, as no expense will be incurred by the ratepayers. These houses are in fairly wide streets with abundant air space in the rear; and, when the time comes, all that will be required will be to represent them under Part II. of the Housing of the Working Classes Act, and secure the carrying out of complete structural repairs by the owners.

So far, then, as structural defects are concerned, the outlook is good. It is very much less satisfactory so far as encroachments on light and air space are concerned. Nothing has come more clearly into prominence in recent years than the close association between closely crowded houses with imperfect air space in their rear and an excessive amount of consumption and other tubercular diseases, as well as of other diseases which do not bulk so largely in our death returns.

This point can be studied in detail in Table III., on page 7. It is one of such grave importance that I reproduce some of the more salient features of this table in the following summary for the four wards which have the greatest density of population, along with the greatest mortality from consumption.

I have taken the density of population and the death rate of Preston Park Ward as *unity*, and represented the four other wards as multiples of this, for equal populations.

Ward.	Density of Population.	Mortality from Consumption.
Preston Park	1	1
Pier	9½	2
St. Nicholas	10	2⅝
St. John	10	1½
St. Peter	11	1½

It would be easy to extend statistics like the above, and it is abundantly clear that the excessive prevalence of consumption and other infective diseases is in a very large measure favoured, if not actually caused, by the unfavourable conditions as to air space and ventilation under which a considerable proportion of the population are obliged to live.

In the older parts of the town, backyards are daily being partially or entirely covered over, and the houses connected with them thus rendered less fit for human habitation. A house through which free ventilation, back and front, is impracticable is rendered by that fact alone unfit for habitation. Even in newer parts of the town the same process is going on ; and it is to be feared that unless greater vigilance be exercised, or unless the present state of the law be altered, new insanitary areas will be manufactured, which in time to come will entail in their removal a serious drain on the Municipal purse.

In a few of these cases I have represented houses in which such obstructive out-buildings had been erected as unfit for human habitation (Part 2, Housing

of the Working Classes Act) and have secured their removal. This course is not always practicable. The main difficulty is in connection with the present state of the law.

In accordance with the building bye-laws, a certain amount of free air space must be allowed at the rear of every dwelling-house. If, however, a person erects a building in his back-yard encroaching on this air-space, and the encroachment is not discovered within six months (or under certain exceptional conditions within twelve months) from the time of its erection, the encroaching building cannot be compulsorily removed.

It may be said that the new erections ought to be discovered by the Buildings Inspector before the expiration of the legal limit of time. This could easily be done if the obstructive erections faced into the street. They are, however, nearly always at the rear of houses, and a considerable increase of the Surveyor's staff would be required to ensure their detection in time. There is the further difficulty in cases actually found of proving that the erections have been made within the last six months, the onus of this appearing to rest on the Local Authority. Every effort has been made for several years past to supply the Borough Surveyor with additional information from my own department on this point. During 1898, fifteen such cases were reported by the Sanitary Inspectors to the Borough Surveyor.

Possibly some further co-ordination might be secured between the Inspectors of different departments of the Corporation, by means of which the Borough Surveyor would be enabled to receive early intimation and subsequently act promptly in a larger proportion of these extremely important cases. The Waterworks Inspectors have always to inspect back-yards in their systematic visits, and it would be easy to arrange for a note to be made of any recently-erected shed, &c., which was encroaching on the backyard. A similar co-operation has been arranged between the Sanitary and Waterworks Inspectors. During 1898, the Sanitary Inspectors have communicated with the Waterworks Engineer as to 486 wastes of water which they had found in the course of their house-to-house visits; and 61 nuisances, such as choked drains, broken closet pans, &c., have been reported by the Waterworks Inspectors to Mr. Skinner, Chief Sanitary Inspector. Some arrangement like the above might bring more cases of encroachment on air space to the notice of the Borough Surveyor.

I do not, however, expect that it will be practicable entirely to prevent this manufacture of insanitary houses and areas, without some alteration in the law which will enable the Local Authority to insist on the removal of any building added to an already existing building which has been erected without prior approval of plans by them, whatever may be the interval before this encroachment on air space is discovered.

C.

REPORT ON THE WORK ON THE MUNICIPAL HYGIENIC LABORATORY.

This new department of the work of the Public Health Department came into active work in October, 1897. It has proved itself so valuable that the work has grown to an altogether unexpected extent. In a considerable number of other large towns and districts, arrangements for bacteriological diagnosis have been made, or are in course of being made, the work being done in nearly every instance by skilled persons outside the Medical Officer of Health's department.

The number of examinations made in the bacteriological section since Nov. 6th, 1897, has been as follows :—

	Widal's Test for Typhoid Fever.	Bacteriological Diagnosis of		Other Diseases.
		Diphtheria.	Tuberculosis.	
Nov. 6th, 1897 to March 31st, 1898	74	213	10	2
April, 1898	1	6		—
May, ,, ...	10	3		—
June, ,, ...	10	2		—
July, ,, ...	16	8		—
Aug., ,, ...	5	5	11	—
Sept., ,, ...	16	15		—
Oct., ,, ...	13	34		—
Nov., ,, ...	5	71		—
Dec., ,, ...	14	57		—
Total	164	414	21	2
Grand Total ...	601			

From the beginning of the present year (to Feb 10th), 152 further specimens have been examined which will be reported upon hereafter.

Diagnosis of Diphtheria.—A previous report has been made on the work up to the end of March. Of the total 201 specimens examined between the end of March, 1898, and the end of the same year, 133 were from outside patients, and 68 from patients in the Sanatorium. Of the former specimens nine were derived from patients outside Brighton. Of the outside specimens, the result

was negative in 60 instances. These were cases in which the suspicion was entertained that diphtheria was present, and considerable expenditure in hospital isolation was avoided by the negative result thus obtained.

The same remark applies to the negative results obtained in connection with cases in the Sanatorium wards. In a certain number of slight cases the absence of the Klebs-Lœffler bacillus was proved at an early date, and patients were able to be discharged, whom otherwise it would have been necessary to keep for three to four weeks. These cases greatly overbalance the few in which the persistence of the Klebs-Loeffler bacillus has necessitated keeping diphtheria patients in the Sanatorium for an unusually prolonged period. The longest period during which it has been found necessary on this account to continue isolation of a diphtheria patient has during the last year been about six weeks.

The bacteriological diagnosis of diphtheria has also proved of great value in relation to a certain proportion of scarlet fever patients. Several of these were admitted as being mixed scarlet fever and diphtheria, and clinically they bore out this diagnosis. On bacteriological examination it was found, however, that the membranous exudation on the throat did not contain the Klebs-Lœffler bacillus, and consequently these patients, who, under the conditions of diagnosis practicable before bacteriological diagnosis became available, would have had to be separately treated and isolated at considerable expense, were able to be treated without risk among the other scarlatinal patients. In a few other instances, there was true mixed infection, and the bacteriological examination gave the information which secured the necessary isolation without delay.

In another group of cases, several patients were sent to the Sanatorium with supposed diphtheria, there being a membranous exudation on the throat. A suspicious rash was found on admission or shortly afterwards, the patients were isolated, and the absence of the Klebs-Lœffler bacillus having been demonstrated, they were drafted into the scarlet fever ward.

In my first report on the bacteriological diagnosis of diphtheria (first quarterly report for 1898), I stated that "the failure to find the Klebs-Loeffler bacillus does not prove that the case is not diphtheria." This statement, in the light of further experience, requires modification. With the exception of cases in which the absence of growth on blood-serum is due to the previous application of antiseptics to the throat or to the swab having been imperfectly taken, I am confident that a negative result of bacteriological diagnosis may be nearly always accepted as indicating that the case is not one of diphtheria.

Diagnosis of Typhoid Fever.—Since the end of March, 94 specimens of blood have been examined, nine of these being derived from patients outside Brighton. Of the remainder, 62 were from patients in Brighton and 23 from

patients in the Sanatorium. In a little less than half the cases the reaction showed a negative result.

The method of performing the test has been considerably improved, the blood being taken in a small pipette instead of being dried on a glass slide. By this means exact dilutions of 1 in 10 and 1 in 100 with "typhoid bouillon" can be ensured, and the accuracy of the test is enhanced.

The test has proved satisfactory in nearly every instance. One exceptional patient did not give the Widal reaction on two occasions, although she had a well-marked attack of typhoid fever. In two other instances the certificates were erroneous, owing, I believe, to a temporary fault in the bouillon. Notwithstanding these exceptional instances, the test has proved itself a most valuable addition to our means for early diagnosis of typhoid fever, which is important not only as securing early isolation of such cases, but in improving the patient's prospect of recovery.

Diagnosis of Phthisis.—Eleven specimens of sputa of consumptive patients have been examined. It is hoped that in connection with our attempts at voluntary notification of phthisis, freer use will be made of this means of determining the nature of doubtful chest ailments.

D.

THE WORK OF THE BOROUGH SANATORIUM

The new portion of the Sanatorium (Administrative Building, Scarlet Fever Pavilion, Isolation Pavilion, New Disinfecting Station, Discharge Lodge and Porter's Lodge) was formally opened by the Mayor, Alderman Sir John Blaker, on October 27th, 1898. It is not necessary to recapitulate here the account of the new hospital which was given in a special pamphlet, of which copies can be still obtained on applying at my office.

The following table gives a summary as to patients treated in the Borough Sanatorium during 1898 :—

Number of Patients during 1898.

Disease.	Remaining in the Hospital on Dec. 31st, 1897.	Admitted during 1898.	Total number treated during 1898.	Number discharged during 1898.	Number who have died in the Hospital during 1898.	Remaining under treatment on Dec. 31st, 1898.
Scarlet Fever...	32	306	338	286	5	47
Enteric Fever...	9	85	91	74	10	7
Measles ...	—	2	3	3	—	—
Diphtheria ...	4	223	227	168	16	43
Small Pox ...	—	—	—	—	—	—
Other Diseases	—	3	3	1	2	—
Totals ...	43	619	662	532	33	97

In addition to the above, the following members of the staff were ill during 1898 :—One nurse (typhoid fever), one porter (scarlet fever), one nurse (scarlet fever), one ward maid (scarlet fever), and one ward maid (diphtheria). All these recovered, except the typhoid patient.

In the following table the number of admissions for each disease, for each year since the opening of the Sanotorium, is compared :—

Disease.	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Scarlet Fever ...	88	56	157	73	102	147	106	297	162	114	276	352	227	151	204	265
Diphtheria ...	1	...	2	3	3	11	10	5	5	12	43	33	54	90	59	103
Convalescent Diphtheria ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	5
Typhoid Fever ...	5	27	17	12	12	16	48	61	5	4	26	14	11	11	40	74
Measles	2	9	3	2	4	11	6	83	9	16	1	4	1	15	10	2
Rötheln (German Measles) ...	1	1	...	...	...	...	...	...	...	...	...	1	1	...	..	..
Small Pox ...	16	...	2	1	5	...	...	1	...	...	...	9	3	5	4	...
Erysipelas ..	1	...	...	...	...	...	...	...	...	...	...	2	...	1	2	...
Whooping Cough	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken Pox ...	...	...	...	1	...	...	1	...	...	...	...	1	1	1	...	...
Other Diseases ...	...	...	...	...	..	...	1	...	3	6	6	3	4	3	6	2
Quarantine ...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	6	...
Totals ...	114	98	181	92	126	185	172	447	184	152	352	419	302	284	350	451

The number of staff during the year varied from 50 to 44. The greatest number of patients at any time was 120, the smallest number 41.

Nature of Cases and Results of Treatment.—Of the total 619 patients admitted duriug 1898, 306 were suffering from Scarlet Fever, 223 from Diphtheria, 88 from Enteric Fever, 2 from Measles. The 3 under the heading "other diseases" were admitted as doubtful Enteric Fever and one from Specific Diarrhœa.

The results of treatment for several years are shown in the following table :—

Disease.	Mortality per 100 cases of each Disease under treatment.								
	1890	1891	1892	1893	1894	1895	1896	1897	1898
Scarlet Fever	3·6 (204)	3·3 (148)	2·8 (284)	2·5 (415)	1·2 (279)	2·7 (163)	2·1 (199)	3·7 (268)	2·0 (306)
Enteric Fever... ...	28·5 (10)	0 (5)	14·8 (28)	18·2 (14)	14·3 (17)	20·0 (12)	12·7 (39)	19·2 (73)	12·9 (85)
Diphtheria	60·0 (5)	8·8 (12)	14·3 (44)	3·3 (33)	17·6 (56)	7·6 (96)	7·8 (71)	5·6 (107)	7·8 (204)
Measles	0 (9)	0 (16)	0 (1)	0 (4)	0 (1)	0 (15)	10·0 (10)	0 (0)	0 (2)
Small Pox	—	—	—	0 (9)	0 (3)	0 (5)	0 (4)	0 (0)	0 (0)

Note.—The small figures show the total number under treatment for each disease. It is important to have regard to them, as percentages based on small numbers are relatively less trustworthy.

* The case mortality (fatality) is calculated by dividing the deaths multiplied by 100, by half the sum of the admissions, discharges and deaths for the year.

The results of treatment as shown in the above table were extremely good. The scarlatinal fatality has become phenomenally low, and the typhoid fatality is much below the average. Perhaps the most satisfactory feature of the above table is the great reduction in the fatality from diphtheria. This disease, when it is treated by antitoxin at an early stage, is deprived of its virulence, and recovery can confidently be expected. Unfortunately, in many instances, the nature of the disease is not recognised, and the treatment has been dangerously delayed.

The fatality of cases of Scarlet Fever treated in the Sanatorium was 2·0 per cent., that of cases treated at home, 3·1 per cent.; the fatality of cases of Diphtheria treated in the Sanatorium, 7·8 per cent., of cases treated at home 3·8 per cent. A large proportion of the latter were cases unrecognizable clinically, which were diagnosed by bacteriological examination.

The following table gives the number of patients for whom payment was claimed, the amount claimed in each case, and the amount already paid :—

By whom Payable.	Number of Patients.	Amount Payable.
		£ s. d.
Brighton Board of Guardians... ...	4	6 5 3
Private Patients	...	56 1 6
Disinfection, and hire of van for Patients not removed to Sanatorium	...	10 8 10
		£72 17 5

In 1897 the amount payable for patients was £124 1s. 10d.; in 1896 it was £154 10s. 8d.; in 1895, £243 8s. 6d.; in 1894 it was £277 5s. 9¼d.; in 1893 it was £303 17s. 0½d.; in 1892 it was £260 18s. 7d.; and in 1891 it was £181 11s. 2½d. At the end of 1891 it was decided to abolish all payments for patients in the general wards, except for parochial patients, for whom the Board of Guardians pay 7s. 6d. per week for children under 10, and 15s. for others. The amount received under this head may now be expected to increase considerably, as excellent accommodation for paying patients in separate rooms is provided.

The items in the following statement have been furnished by Mr. Stevens, the Borough Accountant :—

Expenditure at Sanatorium.

	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and Wages—									
Medical Officer	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	177 6 0	150 0 0	150 0 0
Matron and Steward	134 16 4	59 19 3	64 11 6	59 19 3	59 19 3	76 17 6	79 19 0	79 19 0	79 19 0
Nurses, Porters and Servants ...	339 12 6	326 18 9	422 12 10	435 9 2	421 6 8	416 14 7	431 7 2	499 19 5	610 19 6
Groceries, Provisions, &c.	674 6 10	616 14 11	886 5 5	1092 17 6	821 10 4	713 6 10	730 13 9	941 6 2	1140 9 5
Medical Sundries and Disinfectants ...	25 4 9	14 9 5	52 11 1	52 2 4	42 10 10	36 19 4	42 0 11	75 17 8	133 1 1
Drapery Goods (including Uniforms) ...	37 15 11	43 3 6	70 2 6	48 8 4	67 15 6	59 14 7	84 19 4	102 13 7	204 0 4
Lighting and Heating	242 3 3	228 15 1	300 8 9	339 14 4	323 19 5	401 8 3	254 15 7	296 19 2	434 1 4
Rates and Taxes (including Water Rate)	35 6 4	35 5 0	37 5 0	37 5 0	38 10 0	41 1 8	44 1 8	43 1 8	49 1 8
Fire and Boiler Insurance	16 11 6	18 13 2	17 11 6	17 11 6	17 11 6	17 11 6	17 11 6	17 11 6	18 4 6
Printing, Stationery and Advertising ...	27 19 11	15 3 11	15 16 3	12 9 7	15 1 1	14 5 10	11 18 9	10 14 8	36 5 8
Hose, Hydrants and Fitting	—	41 0 0	—	—	—	—	—	—	—
Repairs, &c.	138 4 1	100 6 1	140 17 0	70 10 0	59 1 11	16 14 0	9 7 0	27 6 6	210 8 5*
Miscellaneous...	44 8 8	51 0 4	85 11 2	126 2 4	127 9 3	94 14 10	77 5 7	96 18 2	132 12 3
Fees to Surgeons	2 2 0	8 8 0	6 6 0	2 2 0	—	15 2 9	10 10 0	4 4 0	8 13 0
Hire of Institution Nurses...	20 0 0	3 4 6	—	37 1 1	15 7 6	8 15 9	45 2 6	28 13 9	43 12 3
Gardener, Garden, Sundries and Manure	—	—	40 14 10	44 10 10	94 18 0	112 1 1	123 11 5	113 9 4	216 3 2*
Total Expenditure in the Year ...	1888 12 1	1713 1 11	2290 13 10	2526 3 3	2255 1 3	2175 8 6	2140 10 2	2449 6 8	3467 11 7
No. of Patients in the Year	152	184	352	419	302	284	350	451	619
Total No. of Weeks spent by above Patients in the Sanatorium	1170	1095	2164	3031	2119	1517	1887	2498	3260
Total Cost per week for each Patient, including all the Working Expenses	s. d. 34 6	s. d. 29 3	s. d. 21 2	s. d. 16 8	s. d. 21 3	s. d. 28 8	s. d. 22 8	s. d. 19 9	s. d. 21 3

*Under these two heads certain items occur which would more appropriately appear as building expenses of the new Sanatorium. If these two be assumed to be the same as in 1897, the cost per head per week becomes 19s. 6d.

Percentage of Patients admitted to the Sanatorium.—The proportion between the total number of infectious cases and cases removed to the Sanatorium in successive years is shown in the following table :—

Year.	Percentage of Total Cases removed to the Sanatorium of		
	Scarlet Fever.	Diphtheria.	Typhoid Fever.
1894	82·2	43·5	13·2
1895	77·4	44·1	12·6
1896	82·6	35·9	60·7
1897	81·6	55·7	65·5
1898	82·7	57·9	68·5

It is plain that while the proportion of scarlatinal patients removed to the Sanatorium to total scarlatinal patients has now become stationary, the proportion of diphtheria and still more of typhoid patients has enormously increased, the Sanatorium being almost solely used for the treatment of these cases, except such as are treated at home.

The following is a statement of the disinfecting work carried out during 1897 :—

464	Mattresses
305	Palliasses
378	Beds
1,335	Pillows and Bolsters
1,414	Blankets
512	Sheets and Counterpanes
897	Dresses and Coats
1,936	Other Articles of Wearing Apparel
463	Carpets
1,372	Other Articles
33	Boxes, &c., of Wearing Apparel (Articles not classified), and a large number of minor articles

Number of Journeys with Ambulance to Sanatorium ...	571
,, ,, ,, ,, Hospitals ...	13
,, ,, ,, Van to Sanatorium with Infected Articles	432
,, ,, ,, Van from Sanatorium to return Disinfected Articles ...	353
	1369

The work of disinfecting, although carried on at the Borough Sanatorium, may be regarded as a separate Department. It completely occupies the time of one disinfector, and occasionally of two.