

[Report 1900] / Medical Officer of Health, Cardiff County Borough & Port.

Contributors

Cardiff (Wales). County Borough Council.

Publication/Creation

1900

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ANNUAL REPORT

OF THE

ANNUAL REPORT

MEDICAL OFFICER OF HEALTH

OF THE

OF THE

MEDICAL OFFICER OF HEALTH

OF THE
FOR THE YEAR 1900.

COUNTY BOROUGH OF CARDIFF,

FOR THE YEAR 1900.

EDWARD WALFORD, M.D., D.P.H.,

D.P.H. CARDIFF, FELLOW OF THE SANITARY INSTITUTE,


MEDICAL OFFICER OF HEALTH.

Printed by Order of the Sanitary Authority.

CARDIFF:

LEAFOX BROTHERS, PRINTERS, 18 AND 19, WEST BOYS STREET, DOCKS.

1900



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ANNUAL REPORT

Health and Port Sanitary Committee.
OF THE

MEDICAL OFFICER OF HEALTH

OF THE

COUNCILLOR J. ANDREWS, J.P.
COUNTY BOROUGH OF CARDIFF,

FOR THE YEAR 1900.

EDWARD WALFORD, M.D., Durh.,
D.P.H. CAMB., FELLOW OF THE SANITARY INSTITUTE,
MEDICAL OFFICER OF HEALTH.

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1901.



ANNUAL REPORT
 OF THE
 MEDICAL OFFICER OF HEALTH
 OF THE
 COUNTY BOROUGH OF CARDIFF,
 FOR THE YEAR 1900.

HOWARD WATSON, M.D., 1900,
 M.B. (Edin.), M.B. (Lond.), F.R.C.S. (Edin.), F.R.C.S. (Lond.),
 Medical Officer of Health.

Printed by order of the Council.

Cardiff: Printed and Sold by the Council, 1900.

COUNTY BOROUGH OF CARDIFF.

CARDIFF URBAN SANITARY AUTHORITY.

Medical Officer of Health's Department

Health and Port Sanitary Committee.

Chief Inspector of Nuisances :

District Inspectors :

T. W. WARREN*

Mayor :

J. W. HOLDEN*

S. EVANS*

W. FISHER*

P. GLANVILLE*

COUNCILLOR T. ANDREWS, J.P.

Inspectors for Infectious Diseases :

GEO. THOMAS*

Chairman :

S. R. HENDERSON*

ALDERMAN T. WINDSOR JACOBS, J.P.

E. J. MANDERS*

ALDERMAN P. W. CAREY, J.P.

COUNCILLOR R. HUGHES, J.P.,

Deputy Chairman.

„ J. RAMSDALE, J.P.

„ HENRY WHITE, J.P.

„ SIR T. MOREL, Kt., J.P.

„ J. MUNN.

COUNCILLOR S. A. BRAIN, J.P.

„ W. S. CROSSMAN.

„ J. JENKINS, J.P.

„ LEWIS MORGAN.

„ W. H. ALLEN.

„ J. NORMAN.

Clerk :

A. R. BULLLEY.

Health and Port Sanitary Committee

Mayor

COUNCILOR T. ANDREWS, J.R.

Councilor

ALDERMAN T. WILSON JACOB, J.E.

COUNCILOR R. HUGHES, J.R.	ALDERMAN P. W. CANNY, J.R.
HENRY WHITE, J.P.	J. RAMSDALE, J.E.
J. MOXON	SA T. MOREL, JR., J.R.
W. S. GROSSMAN	COUNCILOR S. A. BRAIN, J.P.
LEWIS MORRIS	J. HENKINS, J.R.
J. KORMAN	W. H. ALLEN

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CARDIFF URBAN SANITARY AUTHORITY.

Medical Officer of Health's Department.

Medical Officer of Health :

EDWARD WALFORD, M.D., D.P.H.

Chief Inspector of Nuisances :

D. VAUGHAN.

District Inspectors :

T. W. WARREN*
S. EVANS*
F. GLOVER*

J. W. HOLDEN*
W. FISHER*

Inspectors for Infectious Diseases :

GEO. THOMAS*

S. R. HENDERSON*

Inspector of Lodging Houses :

E. J. MANDERS*

Inspector of Dairies, Cowsheds, and Milkshops, and under Sale of Food and Drugs Acts :

A. GREEN.

Inspector under Shop Hours Act and Inspector of Workshops :

J. ASHMAN.

Disinfector :

F. MALE.

Clerk :

A. R. BULLEY.

CARDIFF URBAN SANITARY AUTHORITY.

Medical Officer of Health's Department.

Medical Officer of Health:
EDWARD WALFORD, M.D., D.P.H.

Chief Inspector of Nuisances:
H. TAYLOR

Inspectors of Nuisances:
T. W. WARREN,
E. EVANS,
V. GLOVER,
J. W. HOLLIER,
W. STURGE

Inspectors for Infectious Diseases:
GEO. THOMAS,
H. B. HENDERSON

Inspector of Lying-in Homes:
E. J. MANNING

Inspector of Dairies, Grocers, and Millers, and other Acts of Food and Drugs Acts:
J. GREEN

Inspector under Glass House Act and Inspector of Hospitals:
J. ADAMS

Inspector:
F. MAIR

Chief:
A. B. BULLY

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Cardiff Urban Sanitary Authority.

TOWN HALL, CARDIFF,

June, 1901.

TO THE CHAIRMAN AND MEMBERS OF THE CARDIFF URBAN SANITARY
MUNICIPAL AUTHORITY.

GENTLEMEN,

I have the honour of submitting to you my Report for the year 1900, made in accordance with the Local Government Board's Order of March, 1891, which specifies the information to be contained in the Annual Reports of Medical Officers of Health.

A Memorandum issued by the Board's Medical Officer, dated December, 1900, directs that "the Report should be chiefly concerned with the conditions affecting health in the district and with the means for improving those conditions. It should contain an account, brought up to the end of the year under review, of the Sanitary circumstances of the district, and of any improvement or deterioration which may have occurred during the year in those circumstances. Care should be taken to report fully and explicitly on the influences affecting or threatening to affect injuriously the public health in the district, and on the action which has been taken, or which may still be needed, with a view to combat those influences. It is of especial importance that the Medical Officer of Health should record what action has been taken to remedy unhealthy conditions which have been reported by him in previous Annual Reports, or in special reports presented during the year under review, and that attention should be called afresh year by year to such as remain unremedied."

The Report will therefore contain information relating to the following subjects:—

- (1) Physical features, general character, meteorology and vital statistics of the district.
- (2) House Accommodation, especially for the working class: Its adequacy and fitness. Sufficiency of open space about houses, and cleanliness of surroundings.
- (3) Sewerage and Drainage: Its sufficiency in all parts of the district.
- (4) Removal and disposal of house refuse.
- (5) Water Supply of the District: Sufficiency, wholesomeness, and freedom from risks of pollution.
- (6) Places over which the Council have supervision, *e.g.*, Lodging-houses, Slaughter-houses, Bakehouses, Dairies, Cowsheds and Milkshops, Factories and Workshops, and offensive trades.
- (7) Nuisances: Proceedings for their abatement.
- (8) Methods of dealing with Infectious Diseases: Notification; Isolation Hospital accommodation and disinfection.

It will be observed that the Statistical Tables in the Appendix of the Report differ from those supplied in former years. Four tables have, at the suggestion of the Incorporated Society of Medical Officers of Health, been substituted for the Tables A and B previously in use.

Cardiff Urban Sanitary Authority.

FOUR HALL, CARDIFF.

Jan. 1901.

TO THE CHAIRMAN AND MEMBERS OF THE CARDIFF URBAN SANITARY AUTHORITY.

GENTLEMEN,

I have the honor of replying to your Report for the year 1900 made in accordance with the Local Government Board's Order of March 1891, which specifies the information to be contained in the Annual Report of Medical Officers of Health.

A Memorandum issued by the Board's Medical Officer dated December 1900 directs that "the Report should be chiefly concerned with the conditions affecting health in the district and with the means for improving those conditions. It should contain an account brought up to the end of the year under review, of the sanitary circumstances of the district, and of any improvement or deterioration which may have occurred during the year in those circumstances. Care should be taken to report fully and explicitly on the infectious affections, or threatening to affect injuriously the public health in the district, and on the action which has been taken, or which may still be needed, with a view to avert those infectious diseases. It is of especial importance that the Medical Officer of Health should record what action has been taken to remedy sanitary conditions which have been reported by him in previous Annual Reports, or in special reports presented during the year under review, and that accounts should be called thereon year by year so much as remain unexecuted."

The Report will therefore contain information relating to the following subjects:--

- (1) Physical features, general character, topography and vital statistics of the district.
- (2) House accommodation, especially for the working class; its adequacy and fitness. Sufficiency of open space about houses, and cleanliness of streets.
- (3) Sewerage and Drainage: Its sufficiency in all parts of the district.
- (4) Removal and disposal of refuse refuse.
- (5) Water supply of the District: Sufficiency, cleanliness, and freedom from rate of pollution.
- (6) Places over which the Council have jurisdiction, e.g. Public Houses, Streets, Parks, Markets, Cemeteries, and other places, and their condition, cleanliness, and other matters.
- (7) Nuisances: Proceedings for their abatement.
- (8) Methods of dealing with Infectious Diseases: Notification; Isolation Hospital accommodation and disinfection.

It will be observed that the Statistical Tables in the Appendix of the Report differ from those supplied in former years. Four tables have, at the suggestion of the Incorporated Society of Medical Officers of Health, been substituted for the Tables A and B previously in use.

The Municipal Borough of Cardiff originally comprised the Parishes of St. John the Baptist and St. Mary the Virgin. Under the provisions of the Cardiff Improvement Act of 1875, the boundary of the Borough was extended so as to include the Parish of Roath and that part of the Parish of Llandaf known as Canton.

By an order of the Privy Council, dated 21st October, 1890, the Borough was divided into ten Wards.

The following tables, taken from the Census Report of 1891, give the distribution of the population in the Municipal Wards and Civil Parishes:—

TABLE I.—Distribution of the population in the Municipal Wards of the Borough (Census 1891):—

MUNICIPAL BOROUGH OF CARDIFF.

Borough and Wards.	HOUSES.			POPULATION (CENSUS 1891).		
	Inhabited.	Uninhabited.	Building.	Persons.	Males.	Females.
Ward—Adamsdown ...	2,132	83	...	16,234	9,398	6,836
.. Canton ...	2,354	96	6	13,166	6,500	6,666
.. Cathays ...	2,408	25	12	14,523	7,404	7,119
.. Central ...	2,008	247	9	12,348	6,105	6,243
.. Grangetown ...	1,809	45	97	11,734	5,975	5,759
.. Park ...	2,587	110	109	14,289	6,754	7,535
.. Riverside ...	2,373	77	20	14,897	7,359	7,538
.. Roath ...	1,949	162	31	12,200	5,886	6,314
.. South ...	1,554	156	13	10,719	5,824	4,895
.. Splott ...	1,302	85	35	8,805	4,540	4,265
Total ...	20,476	1,086	332	128,915	65,745	63,170

According to the Census of April, 1891, the Population and the Number of Houses in each Parish were as follows:—

TABLE II.

Borough and Con- stituent Parishes.	HOUSES.			POPULATION, 1891.			Population, 1881.
	Inhabited.	Uninhabited.	Building.	Males.	Females.	Persons.	
Canton ...	5,484	180	85	16,425	16,380	32,805	14,797
Roath ...	6,552	367	175	19,884	19,773	39,657	23,096
St. John ...	4,386	218	29	13,060	14,098	27,158	16,614
St. Mary ...	4,054	321	43	16,376	12,919	29,295	28,254
County Borough of Cardiff ...	20,476	1,086	332	65,745	63,170	128,915	82,761

VITAL STATISTICS, 1900.

POPULATION.—The population of the Borough of Cardiff, as estimated by the Registrar-General on the basis of the Census enumeration, was for the middle of the year 1900, 194,247, and the birth and mortality rates given in this Report have been calculated on this estimate. As mentioned in previous Reports, the value of these rates becomes extremely uncertain towards the end of the period intervening between each Census enumeration.

The Municipal Borough of Cardiff originally comprised the Parishes of St. John the Baptist and St. Mary the Virgin. Under the provisions of the Cardiff Improvement Act of 1875 the boundary of the Borough was extended so as to include the Parishes of South and that part of the Parish of Llandaf known as Canton.

By an order of the Privy Council, dated 21st October, 1903, the Borough was divided into ten Wards.

The following tables, taken from the Census Report of 1901, give the distribution of the population in the Municipal Wards and Civil Parishes:—

TABLE I.—Distribution of the population in the Municipal Wards of the Borough (Census 1901).—

MUNICIPAL BOROUGH OF CARDIFF

Wards and Parishes	Males			Females			Total
	Number	Percentage	Rate	Number	Percentage	Rate	
Ward—Abertillery	2,102	6.9	18,944	2,300	7.3	21,244	
Canton	2,524	8.1	22,500	2,700	8.4	5,224	
Cardiff	2,400	7.7	21,500	2,600	8.1	5,000	
Central	2,000	6.4	18,000	2,100	6.5	4,100	
Greenway	1,800	5.8	16,500	1,900	5.9	3,700	
Leak	2,300	7.3	20,500	2,400	7.4	4,700	
Northside	2,500	7.9	22,500	2,600	8.0	5,100	
South	1,900	6.0	17,000	2,000	6.2	3,900	
South	1,500	4.7	13,500	1,600	4.9	3,100	
Spain	1,800	5.7	16,500	1,900	5.8	3,700	
Total	20,478		185,912	210,712		416,624	

According to the Census of April, 1901, the population and the number of houses in each Parish were as follows:—

TABLE II

Wards and Parishes	Males			Females			Total
	Number	Percentage	Rate	Number	Percentage	Rate	
Canton	2,524	8.1	18,944	2,700	8.4	5,224	
South	2,300	7.3	20,500	2,400	7.4	4,700	
St. John	2,000	6.4	18,000	2,100	6.5	4,100	
St. Mary	2,000	6.4	18,000	2,100	6.5	4,100	
County Borough of Cardiff	20,478		185,912	210,712		416,624	

VITAL STATISTICS 1901

POPULATION.—The population of the Borough of Cardiff as estimated by the Registrar-General on the basis of the Census enumeration, was for the middle of the year 1901 194,347, and the birth and mortality rates given in this report have been calculated on this estimate. As mentioned in previous reports, the rates of these vital statistics necessarily fluctuate towards the end of the period intervening between each Census enumeration.

The estimates of the population made annually by the Registrar-General since 1891 are based on the assumption that the increase has gone at exactly the same rate that it did during the intercensal period of 1881-1891. The birth-rates and death-rates calculated on these estimates are, therefore, only approximately correct, and any error which may exist is necessarily increased in proportion to the length of time which has elapsed since the last Census. It is possible to check the official estimate by methods which, although they do not give extremely accurate results, form sometimes useful guides. Thus, by multiplying the number of inhabited houses in the district by the average number of inmates in each house, an estimate of the population may be obtained. In this way the population of the Borough has been estimated annually for the sake of comparison with the Registrar-General's population, and with the following results :—

Year	1893	1894	1895	1896	1897	1898	1899	1900
Registrar-General's Estimate	142,435	148,890	155,637	162,690	170,063	177,770	185,826	194,247
Estimate Inhabited Houses	147,495	155,233	161,232	169,459	172,113	176,384	180,212	185,037

It would thus appear that during the first part of the intercensal period the Registrar-General's estimate was too low, and during the latter part too high. The extent of the influence of this difference in the population on the birth and death rates is, however, not very marked, and in any case would have little effect on the relative position of these rates amongst the other large towns subject to the same conditions. It must be remembered also that the average number of inmates, *i.e.* 6·29 in each house, as given in the census of 1891, is probably too high for the present time. Taking this average as 5·5; a fraction above the average number of persons per house in the whole of England and Wales, the population would work out at 158,158 for the year 1900.

At the time of the Census of 1881 the town was not divided into the ten wards which now comprise the Municipal Borough. No estimate of the population in these localities has been made by the Registrar-General since the census enumeration of 1891.

In these divisions, as in the new Registration Sub-districts, the death rates are calculated solely on populations obtained by means of the number of houses ascertained to be inhabited in June, 1900.

The density of population as measured by the number of persons per acre is given in the following table :—

TABLE III.
COUNTY BOROUGH OF CARDIFF.
DENSITY OF POPULATION.

Year.				Persons per Acre.
1890	...	...	...	15·9
1891	...	...	...	17·7
1892	...	...	...	18·5
1893	...	...	...	23·5
1894	...	...	...	24·6
1895	...	...	...	25·7
1896	...	...	...	26·8
1897	...	...	...	28·1
1898	...	...	...	29·3
1899	...	...	...	30·6
1900	...	...	...	32·0

The estimate of the population made annually by the Registrar-General since 1861 is based on the assumption that the increase has gone at exactly the same rate that it did during the interval period of 1851-1861. The birth-rate and death-rate calculated on these estimates are therefore only approximately correct, and any error which may exist is necessarily increased in proportion to the length of time which has elapsed since the last Census. It is possible to check the official estimate by methods which, although they do not give extremely accurate results, form sometimes useful guides. Thus by multiplying the number of inhabited houses in the district by the average number of persons in each house, an estimate of the population may be obtained. In this way the population of the Borough has been estimated annually for the sake of comparison with the Registrar-General's population, and with the following results:—

Year	Registrar-General's Estimate	Population Estimated from Inhabited Houses
1861	142,452	142,155
1871	150,790	150,597
1881	162,617	162,690
1891	170,000	170,000
1901	177,770	177,770
1911	188,800	188,800
1921	194,241	194,241

It would thus appear that during the last part of the interval period the Registrar-General's estimate was too low, and during the latter part too high. The extent of the influence of this difference in the population on the birth and death rates is however not very marked, and in any case would have the effect of the relative position of these rates amongst the other large towns subject to the same conditions. It may be estimated also that the average number of inmates, i.e. 0.95 in each house, as given in the Census of 1891, is probably too high for the present time. Taking this average as 0.94 a further check on the average number of persons per house in the whole of England and Wales, the population would work out at 150,155 for the year 1901.

At the time of the Census of 1901 the town was not divided into the ten wards which now comprise the Municipal Borough. The estimated population in these localities has been made by the Registrar-General from the census returns of 1901.

In those instances as in the case of population the Registrar-General's death rates are calculated solely on population obtained by means of the number of houses mentioned to be inhabited in June, 1901.

The density of population as measured by the number of persons per acre is given in the following table:—

TABLE III.
MUNICIPAL BOROUGH OF CARLEWY.
Density of Population.

Year	Persons per Acre
1900	24.8
1901	25.1
1902	25.4
1903	25.7
1904	26.0
1905	26.3
1906	26.6
1907	26.9
1908	27.2
1909	27.5
1910	27.8
1911	28.1
1912	28.4
1913	28.7
1914	29.0
1915	29.3
1916	29.6
1917	29.9
1918	30.2
1919	30.5
1920	30.8
1921	31.1

TABLE IV.
COUNTY BOROUGH OF CARDIFF, 1900.

DENSITY OF POPULATION.				HOUSES.			
WARD.	Area in Acres.	Population.	Persons per Acre.	INHABITED.	Vacant.	Building.	Total.
Central ...	473	12,661	26·7	2,013	404	5	2,422
South ...	519	11,743	22·6	1,867	122	2	1,991
Cathays ...	369	20,530	55·6	3,264	218	25	3,507
Park ...	533	25,757	48·3	4,095	170	1	4,266
Adamsdown ...	1,570	13,523	8·6	2,150	108	—	2,258
Riverside ...	313	19,209	61·3	3,054	116	19	3,189
Canton ...	449	23,700	52·7	3,768	301	33	4,102
Roath ...	766	15,775	20·5	2,508	145	59	2,712
Grangetown ...	1,905	20,612	10·8	3,277	219	2	3,498
Splott ...	1,454	17,360	11·9	2,760	95	49	2,904
Total U.S.D. Cardiff	*8,351	180,870	21·6	28,756	1,898	195	30,849

*Excluding 108 acres the area of the Bute Docks, and 37 acres the area of the land on the Flat Holm Island, making a total of 8,496 acres of which 2,600 consist of water and foreshore.

INSTITUTIONS (CENSUS 1891).

	POPULATION
Barracks ...	278
Workhouse ...	713
H.M. Prison ...	201
Nazareth House ...	130
Flat Holm Barracks ...	9
"Hamadryad" ...	56
"Havannah" ...	80
Infirmery ...	143
	<hr/>
	1,610
Sanatorium (estimated) ...	29
	<hr/>
	1,639

Inhabited houses:	28,756 × 6·29 =	180,875
Institutions ...	=	1,639
Floating population ...	=	2,523
		<hr/>
		185,037

Registrar-General's Estimate ... 194,247

* Census and Health taken from the Borough

TABLE V.—Births, Deaths, and Natural Increase of Population for Fifty-six years, 1845—1900.

Year.	Population.	Births.	Deaths.	Excess of Deaths over Births.	Excess of Births over Deaths.
1845	13,385	320	324	4	...
1846	14,212	381	321	...	60
1847	15,039	331	484	153	...
1848	15,866	428	579	151	...
1849	16,693	466	864	395	...
1850	17,520	504	485	...	19
1851	18,354	575	585	...	50
1852	19,724	696	620	...	76
1853	21,094	865	644	...	221
1854	22,464	950	925	...	25
1855	23,834	1,079	641	...	438
1856	25,204	1,227	772	...	455
1857	26,574	1,367	883	...	484
1858	27,944	1,356	753	...	603
1859	29,314	1,336	826	...	510
1860	30,684	1,346	662	...	584
1861	32,054	1,223	837	...	386
1862	32,804	1,267	695	...	373
1863	33,552	1,302	862	...	440
1864	34,300	1,369	932	...	467
1865	35,048	1,382	867	...	515
1866	35,796	1,331	882	...	449
1867	36,544	1,397	873	...	524
1868	37,292	1,387	843	...	544
1869	38,640	1,414	1,005	...	409
1870	38,788	1,406	903	...	503
1871	39,356	1,391	891	...	500
1872	40,284	1,358	916	...	442
1873	41,032	1,430	995	...	435
1874	41,780	1,550	885	...	665
* 1875	69,850	2,716	1,547	...	1,169
1876	72,438	2,707	1,455	...	1,252
1877	75,026	2,772	1,475	...	1,297
1878	77,614	2,795	1,468	...	1,327
1879	80,202	2,969	1,428	...	1,541
1880	82,790	2,893	1,634	...	1,295
1881	85,378	3,145	1,556	...	1,598
1882	88,603	3,399	1,724	...	1,675
1883	91,204	3,526	1,807	...	1,719
1884	93,468	3,920	2,250	...	1,670
1885	97,034	4,164	2,487	...	1,683
1886	100,736	4,270	2,269	...	2,001
1887	104,580	4,277	2,280	...	1,997
1888	108,570	4,409	2,212	...	2,197
1889	112,712	4,361	2,190	...	2,172
1890	117,012	4,600	2,469	...	2,131
1891	130,283	4,739	2,873	...	1,866
1892	136,181	4,776	2,560	...	2,216
1893	142,435	5,110	2,794	...	2,316
1894	148,890	5,100	2,415	...	2,685
1895	155,637	5,321	2,840	...	2,481
1896	162,690	5,591	2,795	...	2,796
1897	170,063	5,279	2,554	...	2,745
1898	177,770	5,520	2,627	...	2,893
1899	185,826	5,309	2,858	...	2,451
1900	194,247	5,798	2,667	...	3,131

* Canton and Roath taken into the Borough.

TABLE V.—Birth, Death, and Natural Increase of Population for Fifty-six years, 1844-1900

Year	Population	Births	Deaths	Balance of Increase or Decrease
1844	164,247	8,799	2,907	5,892
1845	166,808	8,880	2,880	6,000
1846	169,369	8,961	2,861	6,100
1847	171,930	9,042	2,842	6,200
1848	174,491	9,123	2,823	6,300
1849	177,052	9,204	2,804	6,400
1850	179,613	9,285	2,785	6,500
1851	182,174	9,366	2,766	6,600
1852	184,735	9,447	2,747	6,700
1853	187,296	9,528	2,728	6,800
1854	189,857	9,609	2,709	6,900
1855	192,418	9,690	2,690	7,000
1856	194,979	9,771	2,671	7,100
1857	197,540	9,852	2,652	7,200
1858	200,101	9,933	2,633	7,300
1859	202,662	10,014	2,614	7,400
1860	205,223	10,095	2,595	7,500
1861	207,784	10,176	2,576	7,600
1862	210,345	10,257	2,557	7,700
1863	212,906	10,338	2,538	7,800
1864	215,467	10,419	2,519	7,900
1865	218,028	10,500	2,500	8,000
1866	220,589	10,581	2,481	8,100
1867	223,150	10,662	2,462	8,200
1868	225,711	10,743	2,443	8,300
1869	228,272	10,824	2,424	8,400
1870	230,833	10,905	2,405	8,500
1871	233,394	10,986	2,386	8,600
1872	235,955	11,067	2,367	8,700
1873	238,516	11,148	2,348	8,800
1874	241,077	11,229	2,329	8,900
1875	243,638	11,310	2,310	9,000
1876	246,199	11,391	2,291	9,100
1877	248,760	11,472	2,272	9,200
1878	251,321	11,553	2,253	9,300
1879	253,882	11,634	2,234	9,400
1880	256,443	11,715	2,215	9,500
1881	259,004	11,796	2,196	9,600
1882	261,565	11,877	2,177	9,700
1883	264,126	11,958	2,158	9,800
1884	266,687	12,039	2,139	9,900
1885	269,248	12,120	2,120	10,000
1886	271,809	12,201	2,101	10,100
1887	274,370	12,282	2,082	10,200
1888	276,931	12,363	2,063	10,300
1889	279,492	12,444	2,044	10,400
1890	282,053	12,525	2,025	10,500
1891	284,614	12,606	2,006	10,600
1892	287,175	12,687	2,000	10,700
1893	289,736	12,768	1,980	10,800
1894	292,297	12,849	1,960	10,900
1895	294,858	12,930	1,940	11,000
1896	297,419	13,011	1,920	11,100
1897	299,980	13,092	1,900	11,200
1898	302,541	13,173	1,880	11,300
1899	305,102	13,254	1,860	11,400
1900	307,663	13,335	1,840	11,500

* Census and death rates into the foreign.

TABLE VI.

BOROUGH OF CARDIFF.

• Estimated Population at various groups of Ages, 1900.

Ages.	Persons.	Males.	Females.
All Ages	194,247	99,063	95,184
Under 5 years	26,020	13,129	12,891
5 and under 10	22,887	11,373	11,514
10 " " 15	20,362	10,105	10,257
15 " " 20	18,879	9,482	9,397
20 " " 25	20,070	10,038	10,032
25 " " 30	18,717	9,676	9,041
30 " " 35	15,707	8,401	7,306
35 " " 40	13,017	7,027	5,990
40 " " 45	10,437	5,620	4,817
45 " " 50	8,427	4,537	3,890
50 " " 55	6,541	3,349	3,192
55 " " 60	4,458	2,293	2,165
60 " " 65	3,832	1,825	2,007
65 " " 70	2,244	1,070	1,174
70 " " 75	1,491	651	840
75 " " 80	719	309	410
80 and upwards	439	178	261

TABLE VII.

MARRIAGES.—The number of Marriages registered during the year 1900 was 1,706, corresponding to a rate of 17.5 persons married per 1,000 persons living.

A return of the number of Marriages in the Borough of Cardiff, together with the rate of persons married per 1,000 of the population is given below :—

Year.	Number of Marriages.	Rate per 1,000 persons living.
1886	1,244	24.6
1887	1,322	25.2
1888	1,259	23.1
1889	1,431	25.3
1890	1,440	24.6
1891	1,651	17.6
1892	1,526	22.4
1893	1,447	20.3
1894	1,480	19.8
1895	1,271	16.3
1896	1,721	21.1
1897	1,687	19.8
1898	1,525	17.2
1899	1,719	18.5
1900	1,706	17.5

BIRTHS.—During the year 1900 the Births registered in the Borough were 5,198, of these 2,652 were males, and 2,546 females.

The number corresponded to an annual birth-rate of 26.7 per 1,000, compared with 28.5 the rate in 1899, and with 29.4 the average rate in the large towns.

TABLE VIII. gives the number of legitimate and illegitimate births, male and female, and the number of deaths amongst children under one year of age in each Ward :—

TABLE VI.

HOUGH BY DISTRICT

* Estimated population at census of 1901

Year	Male	Female	Total
1891	100,000	100,000	200,000
1892	102,000	102,000	204,000
1893	104,000	104,000	208,000
1894	106,000	106,000	212,000
1895	108,000	108,000	216,000
1896	110,000	110,000	220,000
1897	112,000	112,000	224,000
1898	114,000	114,000	228,000
1899	116,000	116,000	232,000
1900	118,000	118,000	236,000
1901	120,000	120,000	240,000

TABLE VII.

MANHATTAN.—The number of marriages registered during the year 1900 was 1,700 corresponding to a rate of 17.0 persons married per 1,000 persons living. A return of the number of marriages in the Borough of Oxford, together with the rate of persons married per 1,000 of the population is given below:—

Year	Number of Marriages	Rate per 1,000 Persons Living
1890	1,200	12.0
1891	1,250	12.5
1892	1,300	13.0
1893	1,350	13.5
1894	1,400	14.0
1895	1,450	14.5
1896	1,500	15.0
1897	1,550	15.5
1898	1,600	16.0
1899	1,650	16.5
1900	1,700	17.0

MINNERS.—During the year 1900 the births registered in the Borough were 2,100. These 2,100 were males and 2,100 females. The number was equal to an annual increase of 10 per cent amongst the rate is 19.0, and with 1901 the increase was in the rate was 20.0. TABLE VIII. gives the number of marriages and divorces in the Borough and the number of deaths amongst children under ten years of age in each year:—

TABLE VIII.

WARDS.			Legitimate.		Illegitimate.		Total.		TOTAL.	Deaths under One Year.
			M.	F.	M.	F.	M.	F.		
Central	Ward	...	126	110	4	4	130	114	244	52
South	"	...	133	114	...	2	133	116	249	39
Cathays	"	...	290	303	4	5	294	308	602	81
Park	"	...	313	310	6	5	319	315	634	65
Adamsdown	"	...	217	195	1	2	218	197	415	57
Riverside	"	...	183	181	3	2	186	183	369	49
Canton	"	...	361	386	6	6	367	392	759	88
Roath	"	...	216	185	2	6	218	191	409	75
Grangetown	"	...	409	413	6	11	415	424	839	134
Splott	"	...	327	280	5	3	332	283	615	74
Union Workhouse	"	...	9	9	31	14	40	23	63	16
TOTAL			2,584	2,486	68	60	2,652	2,546	5,198	730

TABLE IX.—Annual Birth-rate in Cardiff compared with that in the large towns during the ten years ending 1900.

33 LARGE TOWNS.	Annual Birth-rate per 1,000 living.									
	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
London	31.8	30.9	31.0	30.1	30.5	30.2	30.0	29.5	29.4	28.6
West Ham	...	37.0	35.6	34.0	34.3	32.6	32.2	30.6	29.7	28.6
Croydon	...	26.5	26.2	25.0	25.3	25.1	25.0	25.4	25.1	24.9
Brighton	26.3	25.5	25.4	25.8	25.6	24.7	24.7	24.8	24.9	23.6
Portsmouth	30.1	28.0	28.2	27.6	27.9	27.6	26.9	26.7	26.2	25.7
Plymouth	29.8	29.1	29.9	28.8	28.7	28.8	28.5	29.7	29.8	28.4
Bristol	30.4	29.6	30.4	28.2	28.9	27.6	27.8	28.6	29.2	27.8
Swansea	...	35.2	35.1	32.3	33.4	30.5	29.4	28.9	27.7	26.7
Wolverhampton	34.2	33.7	34.5	34.1	35.4	34.4	35.1	35.8	35.3	33.5
Birmingham	34.2	33.3	32.7	31.7	32.4	32.6	33.3	34.0	34.3	32.7
Norwich	31.9	30.5	30.9	29.8	31.8	30.8	30.5	29.9	29.1	28.4
Leicester	33.9	32.2	32.6	31.5	30.8	30.8	30.6	29.6	29.4	28.2
Nottingham	29.9	29.4	30.2	28.6	29.7	28.9	28.9	28.9	28.9	27.7
Derby	30.6	31.1	32.2	29.3	29.1	28.0	27.1	27.4	28.1	26.9
Birkenhead	33.0	33.4	33.1	30.6	30.7	31.7	31.6	30.4	29.9	29.0
Liverpool	34.6	34.7	36.0	35.4	36.9	34.9	35.3	35.2	35.6	36.0
Bolton	34.1	32.7	33.1	31.5	32.9	31.3	32.5	30.9	29.9	34.7
Manchester	34.1	33.7	33.6	32.0	33.7	33.0	33.2	32.7	32.6	32.3
Salford	36.4	35.9	34.7	34.3	35.9	34.9	35.1	34.7	33.9	33.1
Oldham	31.1	29.1	28.6	27.2	27.5	27.2	26.1	25.3	24.8	24.1
Burnley	...	34.2	33.9	32.2	32.1	31.0	29.8	27.1	25.3	25.3
Blackburn	33.9	31.9	30.9	28.8	30.6	27.7	27.7	27.1	27.0	25.1
Preston	36.0	34.3	35.1	32.1	33.4	32.6	31.9	31.0	30.1	29.0
Huddersfield	24.4	23.0	23.8	20.2	21.7	20.5	23.4	22.5	23.0	22.8
Halifax	26.2	25.9	24.6	23.1	23.4	24.3	22.5	22.9	23.1	23.1
Bradford	28.7	27.2	27.7	26.7	26.1	25.5	24.6	24.0	23.4	23.1
Leeds	34.1	33.5	32.4	32.2	31.6	30.7	31.6	31.2	30.6	30.4
Sheffield	36.6	35.3	34.8	33.4	34.9	34.0	34.4	33.9	34.6	34.2
Hull	34.6	35.0	34.2	32.4	34.2	31.9	33.3	33.4	34.3	32.9
Sunderland	37.8	37.1	35.6	35.1	35.1	34.2	34.6	35.4	35.7	35.8
Gateshead	...	35.3	36.5	34.2	34.6	35.8	35.8	35.5	36.6	36.3
Newcastle-on-Tyne	35.8	34.3	33.7	31.0	31.2	31.1	31.3	31.7	31.4	30.4
Cardiff	36.5	35.3	36.0	34.4	34.1	34.3	31.1	31.1	28.6	26.8
Large Towns	32.6	31.9	31.9	30.7	31.3	30.7	30.7	30.3	30.2	29.4

DEATHS.—During the year 1900, 2,667 deaths were registered, of these 1,370 were males and 1,297 were females. The deaths were equal to an annual death-rate of 13·7 per 1,000 persons living, as compared with 15·3, the rate in the preceding year, and with 17·6 the average rate in the ten years 1890-1899. The "natural increase" of the population, or the excess of births over deaths amounted 2,531. I have, therefore, again the satisfaction of recording an exceedingly low death-rate, the lowest on record since the returns were first published in 1845. The death-rate in Cardiff for the year 1900 was the lowest amongst the 33 large towns, including London, dealt with by the Registrar-General in his returns; and the actual number of deaths, notwithstanding the increase in the population, was less than in the preceding year. The rate of mortality in London during the year under notice was 18·8 per 1,000, while it averaged 20·0 in the 32 provincial towns, ranging from 13·7 in Cardiff, 14·6 in Croydon, 15·9 in West Ham, and 16·7 in Bristol, to 24·0 in Preston, 24·1 in Manchester, 25·1 in Salford, and 25·7 in Liverpool.

The number of deaths registered in Cardiff during the first quarter of the year at all ages and from all causes was 752, corresponding to an annual death-rate of 15·5 per 1,000 persons living as compared with 23·6, the rate in the 33 large towns, and with 17·2, the average rate in the first quarters of the five preceding years. The death-rates in the large towns ranged from 15·5 in Cardiff, 17·9 in West Ham and in Huddersfield, 18·5 in Swansea, and 18·6 Bristol, to 27·1 in Manchester, 29·8 in Salford, 31·4 in Liverpool, 31·6 in Wolverhampton, and 33·8 in Preston.

The deaths from the chief zymotic diseases during the first quarter were in Cardiff 100, corresponding to an annual death-rate of 2·06 per 1,000 persons living, as compared with 1·50, the rate in the first quarters of the five preceding years, and with 2·02, the average rate in the 33 large towns. Measles was the most prevalent and the most fatal of the zymotic diseases during the quarter, causing 57 deaths. Diphtheria caused 21 deaths, corresponding to a death-rate of 0·43 per 1,000, as compared with 0·42 per 1,000, the average rate in the 33 large towns.

During the second quarter of the year the total number of deaths registered was 719, corresponding to an annual death-rate of 14·8 per 1,000, as compared with 14·0, the average rate in the second quarter of the five preceding years, and with 18·7, the average rate in the large towns. The death-rates in the large towns in the second quarter of the year ranged from 13·8 in Birkenhead, 13·9 in Croydon, 14·2 in West Ham, 14·6 in Burnley, and 14·8 in Cardiff, to 22·6 in Plymouth, 23·0 in Wolverhampton, 23·6 in Salford, and 25·1 in Liverpool and in Manchester.

The deaths from the chief zymotic diseases during the second quarter were 141, corresponding to an annual rate of 2·90 per 1,000, as compared with 1·65, the rate in the second quarters of the five preceding years, and with 1·95, the average rate in the 33 large towns. In this quarter Measles was excessively prevalent and fatal, 96 deaths being registered from this disease. The mortality from Measles corresponded to an annual death-rate of 1·98 per 1,000. In the large towns the rate averaged 0·66 per 1,000.

During the third quarter of the year 611 deaths were registered, corresponding to an annual death-rate of 12·5 per 1,000, as compared with 18·6, the average rate in the large towns, and with 17·1, the average rate in the third quarters of the five preceding years. In the large towns the general death-rate in the third quarter ranged from 12·5 in Cardiff, 12·6 in Bradford, 13·2 in Halifax, and 13·3 in Croydon, to 22·3 in Manchester, 23·3 in Preston, 23·9 in Salford, 24·5 in Liverpool, and 24·7 in Sheffield.

The deaths from the chief zymotic diseases amounted to 112, corresponding to an annual death-rate of 2·51 per 1,000, as compared with 3·92, the average rate in the third quarters of the five preceding years. Nine deaths were registered from Measles, as compared with 96 in the previous quarter. Of the 112 deaths from zymotic diseases 62 were due to Diarrhœa, as compared with 150 in the third quarter of 1899. Of the 62 deaths from this disease 55 occurred amongst children under one year of age, and of these 40 per cent. were under three months of age.

TABLE II.—During the year 1900, 2,201 deaths were registered in Great Britain and 1,237 were registered in London. The deaths were equal to an annual death-rate of 17.7 per 1,000 persons living, as compared with 15.4, the rate in the preceding year, and with 17.2 the average rate in the ten years 1890-1899. The "average number" of the population in the same of deaths over deaths amounted 2,281. I have elsewhere given the details of the registration of deaths in Great Britain, the lowest on record since the return was first published in 1847. The death-rate in London for the year 1900 was the lowest since the 1840s, being only slightly higher than that of the preceding year, and the lowest since 1847. The rate of London, death by the Registrar-General in the preceding year was 17.7, which was not materially different from the rate in the preceding year. The rate of London during the year under notice was 17.7, which is slightly higher than the 81 provincial towns ranging from 15.7 in Cardiff, 15.8 in London, 16.7 in West-India, and 16.7 in Bristol, to 24.2 in Exeter, 24.1 in Manchester, 24.1 in Glasgow, and 24.1 in Liverpool.

The number of deaths registered in Great Britain during the first quarter of the year is 511, and from all causes was 752, corresponding to an annual death-rate of 15.5 per 1,000 persons living as compared with 15.4, the rate in the five preceding years, and with 17.2 the average rate in the first quarter of the five preceding years. The death-rate in the five preceding years from 1895 to 1899 in Great-Britain was as follows:—1895, 15.5; 1896, 15.5; 1897, 15.5; 1898, 15.5; 1899, 15.5. In London, 275 in Manchester, 275 in Liverpool, 275 in Glasgow, and 275 in Exeter.

The deaths from the chief zymotic diseases during the first quarter were 121, corresponding to an annual death-rate of 1.6 per 1,000 persons living, as compared with 1.5, the rate in the first quarter of the five preceding years, and with 1.7, the average rate in the five preceding years. The death-rate in the five preceding years was as follows:—1895, 1.5; 1896, 1.5; 1897, 1.5; 1898, 1.5; 1899, 1.5. In London, 121 in Manchester, 121 in Liverpool, 121 in Glasgow, and 121 in Exeter.

During the second quarter of the year the total number of deaths registered was 511, corresponding to an annual death-rate of 15.5 per 1,000 persons living, as compared with 15.4, the rate in the second quarter of the five preceding years, and with 17.2, the average rate in the five preceding years. The death-rate in the five preceding years was as follows:—1895, 15.4; 1896, 15.4; 1897, 15.4; 1898, 15.4; 1899, 15.4. In London, 155 in Manchester, 155 in Liverpool, 155 in Glasgow, and 155 in Exeter.

The deaths from the chief zymotic diseases during the second quarter were 111, corresponding to an annual rate of 1.5 per 1,000 persons living, as compared with 1.5, the rate in the second quarter of the five preceding years, and with 1.7, the average rate in the five preceding years. The mortality from measles corresponded to an annual death-rate of 1.5 per 1,000 persons living, as compared with 1.5, the rate in the five preceding years, and with 1.7, the average rate in the five preceding years. In the large towns the rate averaged 0.25 per 1,000.

During the third quarter of the year 611 deaths were registered, corresponding to an annual death-rate of 15.5 per 1,000 persons living, as compared with 15.4, the rate in the third quarter of the five preceding years, and with 17.2, the average rate in the five preceding years. The mortality from measles corresponded to an annual death-rate of 1.5 per 1,000 persons living, as compared with 1.5, the rate in the five preceding years, and with 1.7, the average rate in the five preceding years. In the large towns the rate averaged 0.25 per 1,000.

The deaths from the chief zymotic diseases registered in 1900, corresponding to an annual death-rate of 1.5 per 1,000 persons living, as compared with 1.5, the rate in the first quarter of the five preceding years. The deaths were registered from measles, as compared with 1.5, the rate in the first quarter of the five preceding years. Of the 111 deaths from zymotic diseases 57 were due to measles, as compared with 150 in the third quarter of 1899. Of the 57 deaths from measles 57 were due to measles, as compared with 150 in the first quarter of 1899, and of these 57 per cent were under five months of age.

In the fourth quarter of the year 585 deaths were registered from all causes, giving an annual death-rate of 12·2 per 1,000, as compared with 17·5, the rate in the 33 large towns, and with 15·8, the average rate in the five preceding fourth quarters. The death-rates in the large towns ranged from 12·1 per 1,000 in Cardiff, 12·3 in Croydon, 13·0 in Norwich, and 13·7 in West Ham, to 20·1 in Gateshead, 21·7 in Liverpool, 22·0 in Manchester, and 23·1 in Salford. The deaths from the principal zymotic diseases were 49 in number, equal to an annual rate of 1·00 per 1,000, as compared with 1·75, the rate in the fourth quarters of the five preceding years, and with 1·87, the rate in the 33 large towns.

The following Table gives a summary of the vital statistics in Cardiff during the years 1891-1900 :—

TABLE X.

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	Deaths under one year per 1,000 Births registered.
1891	4,739	36·5	2,873	22·0	2·1	153
1892	4,776	35·0	2,560	18·7	2·7	157
1893	5,110	36·0	2,790	19·6	2·8	171
1894	5,100	34·2	2,415	16·2	1·7	137
1895	5,321	34·1	2,840	18·2	2·0	178
1896	5,591	34·3	2,795	16·8	2·2	165
1897	5,279	31·1	2,534	14·9	2·1	151
1898	5,520	31·0	2,627	14·7	2·2	157
1899	5,309	28·5	2,857	15·3	2·0	184
1900	5,198	26·7	2,667	13·7	2·0	140

The table of mortality in the Appendix gives the causes of death of both sexes at certain age groups. From this it will be seen that out of a total of 2,667 deaths, 730 or 27·3 per cent. were amongst children under one year of age. The most fatal of the zymotic diseases at this age period was Diarrhœa, which caused 69 deaths out of a total of 81 at all ages. Measles was the disease next in order of fatality amongst children under one year of age, causing 43 deaths at this age period out of a total of 162 at all ages. The fatality from Diphtheria amounted to a total of 81 as compared with 61 in the year 1899.

The following tables shew the death-rates per 1,000 at age periods from all causes and from certain diseases.

TABLE XI.—Showing age, distribution of population, and the number of deaths, and the death-rates per 1,000 at age periods :—

Age Periods.	Estimated Population, 1900.	Number of Deaths.	Annual Death-rate per 1,000.
0—5	26,020	1,149	44·1
5—15	43,249	147	3·3
15—25	38,949	133	3·4
25—65	81,136	829	10·2
65 upwards	4,893	409	5·4

In the fourth quarter of the year 1901 deaths were registered from all causes among the general death rate of 17.2 per 1,000, as compared with 17.1 in the third quarter, and with 16.8 the average rate in the five preceding fourth quarters. The death rate in the towns ranged from 15.7 per 1,000 in Cambridge, 16.7 in Cambridge, 17.0 in Boston, and 17.1 in West Hill, to 20.1 in Haverhill, 21.7 in Lawrence, 22.0 in Methuen, and 22.1 in Lowell. The deaths from the principal zymotic diseases were 43 in number, equal to an annual rate of 1.00 per 1,000, as compared with 1.25 the rate in the fourth quarter of the first preceding year, and with 1.81 the rate in the 10 years prior.

The following Table gives a summary of the vital statistics in Cambridge during the years 1900-1901.

TABLE X.

Year	Births per 1,000	Deaths per 1,000	Total rate per 1,000	Rate of increase or decrease
1901	4,738	82.5	4,820.5	-0.1
1900	4,775	82.6	4,857.6	-0.2
1907	4,159	86.0	4,245.0	-0.8
1904	4,100	84.2	4,184.2	-1.7
1902	3,931	84.1	4,015.1	-2.0
1901	3,981	83.9	4,064.9	-2.2
1907	3,970	83.4	4,053.4	-2.3
1906	4,375	81.9	4,456.9	-2.4
1903	4,381	82.2	4,463.2	-2.5
1900	4,199	80.7	4,280.7	-2.6

The table of mortality in the Appendix gives the causes of death of both sexes as well as the groups. From this it will be seen that out of a total of 8,002 deaths, 151 or 1.89 per cent were among children under one year of age. The most fatal of the zymotic diseases in this period was Diphtheria, which caused 60 deaths, or a total of 0.75 of all ages. Measles was the disease next in order of fatality among children under one year of age, causing 22 deaths in this age period out of a total of 104 or all ages. The fatality from Diphtheria amounted to a total of 81 as compared with 81 in the year 1900.

The following table shows the distribution of age periods from all causes and from certain diseases.

TABLE XI.—Showing age distribution of population, and the number of deaths and the death rate per 1,000 in age periods.

Age Period	Population	Deaths	Rate per 1,000
0-4	25,000	1,000	4.00
5-14	40,000	1,200	3.00
15-24	30,000	1,000	3.33
25-34	25,000	1,000	4.00
35-44	20,000	1,000	5.00
45-54	15,000	1,000	6.67
55-64	10,000	1,000	10.00
65-74	5,000	1,000	20.00
75-84	2,000	1,000	50.00
85-94	1,000	1,000	100.00
95-104	500	1,000	200.00

TABLE XII.—Shewing death-rate per 1,000 at age periods from certain diseases:—

	0-5	5-15	15-25	25-65	65 upwards.	All Ages.
Measles ...	5.8	0.1	0.02	0.01	0.2	0.80
Scarlet Fever...	0.3	0.02	—	—	—	0.56
Diphtheria ...	2.0	0.6	0.2	—	—	0.41
Diarrhœa ...	2.8	0.2	—	0.03	0.6	0.41
Whooping Cough ...	1.3	0.06	—	—	—	0.25
Pneumonia ...	6.0	0.3	0.3	1.1	4.6	0.90
Bronchitis ...	2.4	—	0.02	0.7	1.0	1.54
Tuberculosis (all forms)	0.5	0.09	0.07	0.1	—	0.18

On referring to Table XXVIII., giving the mortality in the different divisions in the town, it will be seen that the general death-rates are all low, the highest being 14.7 per 1,000 in the Central Registration Sub-District, as compared with 12.8 in the East and with 11.9 the rate in the West Sub-District. The death-rates from the chief zymotic diseases did not vary much in the several districts, being 2.0 per 1,000 in the East Registration Sub-District, 1.8 per 1,000 in the Central District, and 1.7 in the West District.

The Infant mortality, as measured by the proportion of deaths under one year to 1,000 births registered, was highest in the Central Registration Sub-District, where it reached 151 as compared with 137 in the West, and with 129 in the East Sub-District.

The general death-rate in the different Municipal Wards ranged from 9.1 per 1,000 in the Riverside Ward to 16.3 in the Central Ward.

The death rate from the chief zymotic diseases ranged from 2.9 per 1,000 in the Splott Ward to 1.3 in the Riverside Ward.

Measles was the most fatal amongst the zymotic diseases throughout the town, causing the highest fatality in the East Sub-District and in the Splott Ward in that District. Altogether 162 deaths from Measles were registered in the Borough, giving a death-rate of 0.8 per 1,000, the rate ranging from 0.3 per 1,000 in the Riverside Ward, to 1.8 in the Splott Ward.

The influence of season and weather upon mortality and sickness is particularly felt in the case of elderly and of very young persons.

A cold and dry winter is usually accompanied by a high death-rate from diseases of the respiratory organs, and a hot summer by a high rate of mortality from Diarrhœal diseases.

During the past year the Meteorological Tables in the appendix to this Report show that the weather in the first quarter of the year was, during the month of January, cold and rather wet, with a prevailing east and south-east wind. February was cold, and during the latter part, wet. The prevailing wind was north-east. March was cold and dry, with a prevailing north-east wind. The mean temperature of the air during the quarter was 38.3° F., and was 2.6° below the mean reading for the corresponding quarter of the six preceding years. During this quarter the fatality from diseases of the respiratory organs and from Measles with pulmonary complications was excessive.

In the second quarter of the year during the month of April the weather was variable, the mean temperature being slightly below the average, with a south-west wind prevailing. During May the weather was cold and stormy. In June the mean temperature was also below the average, with a prevailing north-east wind. The mean temperature of the air during the second quarter was 50.7° F., and was 2.3° below the mean reading for the corresponding quarter of the six preceding years.

TABLE XII.—Showing death-rates per 1,000 in six periods from certain diseases.

	1-2	3-4	5-6	7-8	9-10	11-12
Tuberculosis (all forms)	0.1	0.09	0.07	0.05	0.04	0.03
Scarlet fever	2.1	—	0.02	—	—	—
Diphtheria	2.4	—	0.02	—	—	—
Whooping cough	1.9	0.00	—	—	—	—
Pneumonia	2.0	0.6	0.8	0.8	1.0	1.0
Measles	5.8	0.1	0.01	—	—	—

On referring to Table XXVIII, giving the mortality in the different divisions in the town, it will be seen that the Central health rates are the highest being 16.7 per 1,000 in the Central Registration Sub-District as compared with 12.0 in the East and with 11.4 in the West Sub-District. The death-rates from the chief zymotic diseases are not very much in the several districts, being 2.0 per 1,000 in the East Registration Sub-District, 1.8 per 1,000 in the Central District, and 1.7 in the West District.

The infant mortality, as measured by the proportion of deaths under one year to 1,000 births registered, was highest in the Central Registration Sub-District, where it reached 161 as compared with 131 in the West and with 121 in the East Sub-District.

The general death-rate in the different Municipal Wards ranged from 0.1 per 1,000 in the Riverside Ward to 15.0 in the Central Ward.

The death rate from the chief zymotic diseases ranged from 2.2 per 1,000 in the North Ward to 1.2 in the Riverside Ward.

Measles was the most fatal amongst the zymotic diseases throughout the town, reaching the highest fatality in the East Sub-District and in the North Ward in that District. Altogether 181 deaths from Measles were registered in the Borough, giving a death-rate of 0.3 per 1,000, the rate varying from 0.5 per 1,000 in the Riverside Ward, to 1.0 in the North Ward.

The influence of season and weather upon mortality and sickness is particularly felt in the case of infants and of very young persons.

A cold and dry winter is usually accompanied by a high death-rate from diseases of the respiratory organs, and a hot summer by a high rate of mortality from zymotic diseases.

During the past year the meteorological Tables in the appendix to this report show that the weather in the first quarter of the year was during the month of January, cold and rather wet, with a prevailing east and south-east wind. February was cold, and during the latter part, wet. The prevailing wind was north-east. March was cold and dry, with a prevailing north-east wind. The mean temperature of the air during the quarter was 50° F., and was 2° below the mean reading for the corresponding quarter of the six preceding years. During this quarter the fatality from diseases of the respiratory organs and from Measles with pulmonary complications was excessive.

In the second quarter of the year during the month of April the weather was variable, the mean temperature being slightly below the average with a south-west wind prevailing. During May the weather was cold and stormy. In June the mean temperature was also below the average, with a prevailing north-east wind. The mean temperature of the air during the second quarter was 50° F., and was 2° below the mean reading for the corresponding quarter of the six preceding years.

During the summer or third quarter of the year in the month of July the weather was hot, the mean temperature of the air being 73·8° F., as compared with 61·4° F., the average temperature in the corresponding month of the past six years.

The weather during August was rather wet and dull, with prevailing north-west winds. September was also comparatively cool, the mean temperature being about 7° below the average. The conditions during the third quarter, therefore, influenced favourably the mortality from Diarrhoeal diseases, which was considerably below the average in the five preceding summer quarters.

The weather during the fourth quarter was cold and wet, the temperature was slightly below the average in October and November, and rather above the average in December. The prevailing winds during October were north-west, and during November north-east. In December the rainfall was heavy, with a prevailing south-west wind, and with a mean temperature slightly above the average.

Year	Population	Deaths	Rate	Temp	Rainfall	Wind
1892	19,724	622	31·6	73·8	110	SW
1893	21,034	642	30·5	73·8	175	SW
1894	21,464	625	29·1	73·8	120	SW
1895	22,204	611	27·5	73·8	200	SW
1896	22,204	772	34·8	73·8	180	SW
1897	22,374	650	29·0	73·8	120	SW
1898	27,044	730	27·0	73·8	120	SW
1899	29,274	628	21·5	73·8	120	SW
1900	30,024	612	20·4	73·8	120	SW
1901	32,034	707	22·1	73·8	120	SW
1902	32,034	625	19·5	73·8	120	SW
1903	32,302	622	19·3	73·8	120	SW
1904	34,300	722	21·1	73·8	120	SW
1905	34,042	651	19·1	73·8	120	SW
1906	34,702	622	17·9	73·8	120	SW
1907	36,344	672	18·5	73·8	120	SW
1908	37,222	642	17·2	73·8	120	SW
1909	38,040	1,000	26·3	73·8	120	SW
1910	38,722	900	23·3	73·8	120	SW
1911	39,326	691	17·6	73·8	120	SW
1912	40,000	616	15·4	73·8	120	SW
1913	41,000	600	14·6	73·8	120	SW
1914	41,700	600	14·4	73·8	120	SW
1915	42,800	1,047	24·5	73·8	120	SW
1916	42,126	1,155	27·4	73·8	120	SW
1917	42,000	1,470	35·0	73·8	120	SW
1918	42,000	1,400	33·3	73·8	120	SW
1919	42,000	1,425	34·0	73·8	120	SW
1920	42,000	1,334	31·8	73·8	120	SW
1921	42,000	1,300	31·0	73·8	120	SW
1922	42,000	1,724	41·0	73·8	120	SW
1923	42,000	1,300	31·0	73·8	120	SW
1924	42,000	1,300	31·0	73·8	120	SW
1925	42,000	1,300	31·0	73·8	120	SW
1926	42,000	1,300	31·0	73·8	120	SW
1927	42,000	1,300	31·0	73·8	120	SW
1928	42,000	1,300	31·0	73·8	120	SW
1929	42,000	1,300	31·0	73·8	120	SW
1930	42,000	1,300	31·0	73·8	120	SW
1931	42,000	1,300	31·0	73·8	120	SW
1932	42,000	1,300	31·0	73·8	120	SW
1933	42,000	1,300	31·0	73·8	120	SW
1934	42,000	1,300	31·0	73·8	120	SW
1935	42,000	1,300	31·0	73·8	120	SW
1936	42,000	1,300	31·0	73·8	120	SW
1937	42,000	1,300	31·0	73·8	120	SW
1938	42,000	1,300	31·0	73·8	120	SW
1939	42,000	1,300	31·0	73·8	120	SW
1940	42,000	1,300	31·0	73·8	120	SW

During the summer or third quarter of the year in the month of July the weather was hot, the mean temperature of the air being 75° F., as compared with 61° F. the average temperature in the corresponding month of the past six years.

The weather during August was rather wet and dull, with prevailing north-west winds. September was also comparatively cool, the mean temperature being about 7° below the average. The conditions during the third quarter, however, indicated favorably the activity of the electrical element, which was considerably below the average in the first preceding summer quarter.

The weather during the fourth quarter was cold and wet, the temperature was slightly below the average in October and November, and rather above the average in December. The prevailing winds during October were north-west and during November north-east. In December the rainfall was heavy, with a prevailing north-west wind, and with a mean temperature slightly above the average.

TABLE XIII.—Gives the population of each year, the annual deaths from all causes from the seven chief zymotic diseases, and the death-rates from 1845 to 1900, inclusive, in the Borough of Cardiff:—

Year.	Population.	All Causes.			Seven Chief Zymotic Diseases.		
		No. of Deaths.	Death Rates per 1,000.	Mean of 10 years.	No. of Deaths.	Death Rates per 1,000.	Mean of 10 years.
1845	13,385	324	24.2	33.1	51	3.8	10.0
1846	14,212	321	22.6		50	3.5	
1847	15,039	484	32.2		133	8.8	
1848	15,856	579	36.5		186	11.7	
1849	16,693	864	51.7		483	28.9	
1850	17,520	485	27.7		116	6.6	
1851	18,354	525	28.6		81	4.4	
1852	19,724	620	31.4		175	8.8	
1853	21,094	644	30.5		129	6.1	
1854	22,464	925	40.1		353	15.7	
1855	23,834	641	26.9	665	2.7	7.4	
1856	25,204	772	30.6	136	5.3		
1857	26,574	883	33.2	234	8.8		
1858	27,944	753	26.9	128	4.5		
1859	29,314	826	28.1	212	7.2		
1860	30,684	662	21.5	95	3.0		
1861	32,054	837	26.1	100	3.1		
1862	32,804	695	21.2	132	4.0		
1863	33,552	862	25.7	268	7.0		
1864	34,300	932	27.1	250	7.3		
1865	35,048	867	24.7	161	4.5	3.9	
1866	35,796	882	24.6	192	5.3		
1867	36,544	873	23.8	116	3.1		
1868	37,292	843	22.6	109	2.9		
1869	38,040	1,005	26.4	156	4.1		
1870	38,788	903	23.2	133	3.4		
1871	39,356	891	22.5	158	3.9		
1872	40,284	916	22.7	234	5.8		
1873	41,032	995	24.2	103	2.5		
1874	41,780	885	21.2	154	3.6		
*1875	69,850	1,547	22.1	294	4.2	3.3	
1876	72,438	1,455	20.8	339	4.6		
1877	75,026	1,475	19.6	255	3.5		
1878	77,611	1,468	18.9	197	2.5		
1879	80,202	1,428	17.6	137	1.7		
1880	82,790	1,634	19.7	306	3.7		
1881	85,378	1,556	18.2	164	1.9		
1882	88,603	1,724	19.4	293	3.3		
1883	91,204	1,807	19.8	253	2.7		
1884	93,468	2,250	24.3	476	5.0		
1885	97,034	2,481	25.5	521	5.3	2.9	
1886	100,736	2,269	22.5	532	3.2		
1887	104,580	2,280	21.8	278	2.6		
1888	108,570	2,212	20.3	324	2.9		
1889	112,712	2,190	19.4	248	2.1		
1890	117,012	2,469	21.1	282	2.4		
1891	130,283	2,873	22.0	272	2.1		
1892	136,181	2,560	18.7	371	2.7		
1893	142,435	2,794	19.6	408	2.8		
1894	148,890	2,415	16.2	257	1.7		
1895	155,637	2,840	18.2	324	2.0		
1896	162,690	2,795	16.8	362	2.2		
1897	170,063	2,534	14.9	371	2.1		
1898	170,770	2,627	14.8	396	2.2		
1899	185,826	2,858	15.3	384	2.0		
1900	194,247	2,667	13.7	402	2.0		

* Canton and Roath taken into the Borough.

TABLE XIII.—Cases of typhoid fever, the population of each year, the annual death rate, the annual death rate from the seven chief zymotic diseases, and the death rate from 1885 to 1900 inclusive in the Borough of Cardiff.

Year	Population	Typhoid fever		Annual death rate		Annual death rate from the seven chief zymotic diseases
		No. of cases	No. of deaths	Per 1,000	Per 1,000	
1885	104,147	1,507	1,507	14.5	14.5	10.0
1886	102,000	1,400	1,400	13.7	13.7	9.5
1887	100,000	1,300	1,300	13.0	13.0	9.0
1888	98,000	1,200	1,200	12.2	12.2	8.5
1889	96,000	1,100	1,100	11.5	11.5	8.0
1890	94,000	1,000	1,000	10.6	10.6	7.5
1891	92,000	900	900	9.8	9.8	7.0
1892	90,000	800	800	9.0	9.0	6.5
1893	88,000	700	700	8.2	8.2	6.0
1894	86,000	600	600	7.4	7.4	5.5
1895	84,000	500	500	6.6	6.6	5.0
1896	82,000	400	400	5.8	5.8	4.5
1897	80,000	300	300	5.0	5.0	4.0
1898	78,000	200	200	4.2	4.2	3.5
1899	76,000	100	100	3.4	3.4	3.0
1900	74,000	50	50	1.7	1.7	2.5

* Cases and deaths from the Borough

TABLE XIV.—Annual Death-rate per 1,000 of the 33 large Towns in England and Wales for the 10 years 1891-1900 inclusive :—

33 LARGE TOWNS.	Annual Death-rate per 1,000 living.									
	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
London	21.4	20.6	21.3	17.8	19.8	18.6	18.2	18.7	19.8	18.8
West Ham	...	18.6	18.9	16.2	17.9	16.1	15.7	15.4	16.7	15.9
Croydon	...	15.8	16.3	13.2	14.5	14.2	13.1	13.9	15.0	14.6
Brighton	18.2	19.2	18.4	16.4	18.9	16.1	15.1	16.9	19.0	17.8
Portsmouth	19.0	18.5	18.2	15.2	17.8	16.6	16.2	16.3	19.7	17.3
Plymouth	22.5	18.8	21.2	18.3	20.1	19.6	19.0	19.5	21.7	20.8
Bristol	20.9	19.5	18.9	17.3	18.1	16.9	17.2	17.2	18.2	16.7
Swansea	...	20.4	19.6	17.0	18.3	16.8	15.8	18.6	18.1	17.1
Wolverhampton	24.2	21.5	23.3	20.7	24.4	20.0	22.5	21.3	21.8	22.5
Birmingham	22.2	20.4	22.2	18.6	20.3	20.8	21.6	20.0	23.8	21.5
Norwich	19.3	20.0	19.3	18.7	19.3	17.4	18.8	19.0	17.3	17.6
Leicester	21.7	18.2	20.0	14.7	17.2	16.7	17.7	16.9	17.7	17.4
Nottingham	19.9	18.7	18.5	17.2	19.0	17.5	18.8	17.7	20.0	19.1
Derby	19.1	19.3	18.2	15.0	16.7	15.7	16.0	16.8	16.9	17.5
Birkenhead	20.9	19.6	20.5	18.1	19.5	19.2	18.3	17.4	19.2	16.8
Liverpool	27.0	24.7	27.3	23.8	28.8	22.7	24.4	24.0	26.4	25.7
Bolton	21.9	22.8	24.1	18.8	24.0	20.7	22.0	19.4	19.9	19.5
Manchester	26.5	23.8	24.9	20.4	25.2	22.6	23.1	21.9	24.6	24.1
Salford	26.0	24.6	24.1	21.0	25.6	22.6	23.9	22.7	23.8	25.1
Oldham	25.7	22.0	21.0	18.6	22.0	20.3	19.2	17.6	20.5	19.6
Burnley	...	20.4	21.9	18.7	23.4	17.5	19.5	16.3	19.6	16.3
Blackburn	25.8	21.7	23.3	17.9	24.3	17.9	19.5	18.4	19.1	20.5
Preston	27.3	24.1	26.4	20.8	23.9	20.8	24.4	19.3	22.8	24.0
Huddersfield	23.0	18.1	17.2	15.8	16.9	16.5	16.4	15.9	16.2	16.8
Halifax	22.8	19.5	17.4	16.5	19.3	17.3	16.5	17.9	18.3	18.1
Bradford	22.2	18.0	21.0	17.0	19.9	16.5	17.5	17.6	18.4	16.4
Leeds	22.9	19.8	22.3	17.9	20.5	18.8	19.9	19.2	19.1	20.0
Sheffield	23.9	20.8	22.3	17.8	20.5	19.3	21.2	20.2	22.2	22.6
Hull	21.0	19.6	21.8	17.4	20.8	18.9	18.6	18.4	19.3	19.7
Sunderland	25.0	20.9	22.5	20.8	21.8	19.8	19.7	22.6	21.5	21.4
Gateshead	...	18.9	19.3	17.7	19.6	19.1	18.3	20.6	18.8	19.0
Newcastle-on-Tyne	23.8	19.7	21.0	18.3	20.5	18.5	19.1	21.4	20.6	19.5
Cardiff	22.0	18.8	19.6	16.2	18.2	16.8	14.9	14.7	15.4	13.7
Large Towns	22.5	20.7	21.6	18.1	20.7	18.9	19.1	19.0	20.2	19.5

INFANT MORTALITY.—The rate of infant mortality, as measured by the proportion of deaths of infants under one year of age to 1,000 births registered was 140, as compared with 184 in 1899, and with 164 the average in the ten years 1890-99. In the 33 large towns the rate of infant mortality in 1900 corresponded to 172 deaths of infants under one year of age per 1,000 births registered. In London the rate of infant mortality was equal to 160 per 1,000 births, while it averaged 180 in the 32 provincial towns, among which it ranged from 132 in Croydon, in Huddersfield and in Halifax, 133 in Bristol, and 140 in Cardiff and in Bradford, to 205 in Wolverhampton and in Burnley, 207 in Salford, 220 in Blackburn, and 236 in Preston. It may be said generally that the infantile mortality as expressed in the manner indicated is a more accurate test of the sanitary condition of a district than the general uncorrected death-rate which is recorded. It is not liable to the error of a calculation based on an uncertain estimate of population, and deals with well-ascertained facts. From Table XVI. it will be seen that infant mortality is largely influenced by the prevalence of epidemic diarrhoea, which is extremely fatal amongst young children in the summer and autumn, by diseases of the respiratory system, of the nervous system, and of the digestive organs. Much of this mortality is no doubt to be accounted for by insanitary surroundings and by the ignorance and want of proper care and

management on the part of mothers, and, therefore, to some extent to causes which are uncontrollable by Sanitary Authorities. Still, it may be safely assumed that an infant mortality exceeding that which prevails in the country generally is an indication of the bad sanitary condition of the district in which it occurs. It is satisfactory to find, therefore, that Cardiff maintains a good relative position in this respect amongst the large towns, and that it stands third in order from the town which has the lowest rate.

TABLE XV.—Infant Mortality in large towns.

Large Towns.	Deaths under one year to 1,000 Births registered.										
	10 years 1890-99	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
London...	160	154	155	164	143	166	161	158	167	167	160
West Ham	164	...	153	170	138	168	165	171	170	197	189
Croydon	137	...	123	155	121	134	150	134	150	154	132
Brighton	156	137	151	169	138	164	135	142	181	173	166
Portsmouth	158	139	156	164	131	175	154	168	156	197	155
Plymouth	172	178	137	169	169	178	178	183	170	190	175
Bristol ...	149	146	147	141	150	143	142	148	164	158	133
Swansea	165	...	175	170	163	178	161	139	184	166	175
Wolverhampton	191	190	172	208	166	218	184	217	200	184	206
Birmingham	186	171	166	192	163	183	197	214	191	191	199
Norwich	180	159	182	195	164	190	164	196	192	179	178
Leicester	197	214	196	220	162	203	187	205	191	195	175
Nottingham	179	169	167	170	174	190	168	205	178	210	196
Derby ...	156	142	173	156	123	161	151	167	169	162	174
Birkenhead	171	148	168	196	143	174	177	162	186	186	160
Liverpool	192	188	181	211	179	210	173	200	184	198	186
Bolton ...	180	165	180	199	162	212	168	186	168	181	171
Manchester	190	192	179	203	160	203	176	194	197	206	189
Salford ...	203	194	185	210	174	231	199	220	212	209	207
Oldham...	183	292	177	187	161	190	184	183	175	198	172
Burnley	212	...	192	223	170	242	170	219	195	269	205
Blackburn	201	204	198	241	169	236	171	207	206	189	220
Preston...	236	227	216	269	217	248	203	263	225	255	236
Huddersfield	156	185	150	141	160	158	166	130	153	152	132
Halifax ...	158	169	160	173	135	158	149	139	163	159	132
Bradford	174	181	155	197	145	203	143	178	185	181	141
Leeds ...	178	177	169	206	155	191	169	191	182	171	183
Sheffield	184	170	171	191	157	197	173	197	195	194	200
Hull ...	176	172	166	206	142	205	173	178	182	175	183
Sunderland	175	176	157	188	167	189	158	163	202	175	169
Gateshead	173	...	154	170	152	186	172	173	208	177	169
Newcastle-on-Tyne	174	174	151	174	157	186	165	177	190	193	170
Cardiff	164	153	163	179	141	179	165	150	158	184	141
Large Towns ...	172	167	164	181	152	182	167	176	178	181	172

TABLE XVI.

CAUSES OF DEATH.	Number of Deaths under 1 Year of Age.
Premature Birth	65
Congenital Defects	14
Diphtheria	5
Scarlet Fever	1
Measles	43
Whooping Cough	17
Diseases of Respiratory System	122
" Nervous System	80
" Digestive System	111
Diarrhœa	69
Tubercular Meningitis	18
Other Tubercular Diseases	5
Violence	9
Other Diseases	171

ZYMOTIC DISEASES.—The 2,667 deaths from all causes included 402 from the seven chief zymotic diseases. Of these

162 were attributed to Measles.

11	"	"	"	Scarlet Fever.
81	"	"	"	Diphtheria.
40	"	"	"	Whooping Cough.
25	"	"	"	Enteric Fever.
81	"	"	"	Diarrhœa.
2	"	"	"	Small Pox.

The 402 deaths from zymotic diseases were equivalent to an annual death-rate of 2·06 per 1,000, corresponding exactly with the rate in 1899. The deaths from the principal zymotic diseases in the 33 large towns were equal to an annual rate of 2·50 per 1,000. The rates in the large towns ranged from 1·32 in Halifax, 1·36 in Bradford, 1·38 in Newcastle, and 1·39 in Birkenhead, to 3·65 in Wolverhampton, 3·98 in Salford, 4·33 in Sheffield, and 4·37 in Preston.

SMALL-POX.—Two deaths from this disease were registered, and four cases were notified during the year—three in the first quarter and one in the second quarter. These cases were connected with those referred to in the Annual Report for this year to the Cardiff Port Sanitary Authority.

The first case, M. R., aged 41, a fireman from the s.s. "Wagner," lodging at 25, Evelyn Street, was removed to the Small-pox Hospital on the 9th March, having contracted Small-pox on board this steamer which came into the Bute Docks on February 23rd with a case of Small-pox on board. The patient had, with the rest of the crew, been re-vaccinated on that day, but had been exposed to the infection on board the vessel at least eight days before arriving in this port.

The second case was that of a servant at the Cardiff Hospital for Infectious Diseases. This servant had only been engaged since March 1st, and was the only person in the Hospital not protected by re-vaccination. The patient probably contracted the disease on the 7th of March, as the first symptoms were developed on the 21st. At the time there were two cases of Small-pox in the Small-pox Hospital adjoining the General Hospital for Infectious Diseases, the possibility of the infection having been transmitted in this case by aerial convection from the Small-pox Hospital must not be lost sight of; but a more likely source of infection may be found, in my opinion, in the Disinfecting Apparatus which is temporarily used for all classes of infection, and which is situated within the grounds of the General Hospital.

On the 28th March a case of Small-pox was notified in Coedcae Street, Mrs. J. The disease in this case was probably contracted from M. R., who was removed to Hospital on the 9th March.

The last case in connection with this limited outbreak was that of Mrs. R. T., living in Ferndale Street, who was attacked with Small-pox on the 7th April, and who was removed to the Hospital on the 9th. This person visited and nursed Mrs. J. before her removal to the Hospital on the 28th March, and contracted the disease from her. Sixteen persons known to have been exposed to the infection either by living in the infected houses or by having visited them, were re-vaccinated and entirely escaped an attack, whilst Mrs. R. T., the only person who was subsequently discovered to have visited Mrs. J., and who was not re-vaccinated, was attacked with confluent Small-pox and unfortunately died in the Hospital.

WHOOPIING COUGH.—This disease caused forty deaths as compared with 120 in the preceding year. The deaths registered corresponded to an annual death-rate of 0·25 per 1,000 as compared with 0·45, the average rate in the 33 large towns. The average annual death-rate from Whooping Cough in the ten years 1890—1899 was 0·45 in Cardiff and 0·49 in the large towns for the same period. Of the total number of deaths from Whooping Cough, 17 were amongst infants under one year of age and 37 amongst children under five.

MEASLES.—One hundred and sixty-two deaths were registered from Measles during the year, equivalent to an annual death-rate of 0·80 per 1,000 as compared with a rate of 0·06 in the preceding year, and with 0·34 the average rate in the ten years 1890—1899. The average annual death-rate from Measles in the 33 large towns was 0·43, ranging from 0·01 in Portsmouth to 1·07 in Preston. Of the 162 deaths 57 occurred during the first quarter, 96 during the second quarter, and the remaining nine during the third quarter of the year. 152 of the deaths, or 93·7 per cent. were amongst children under five years of age. The mortality was highest in the East Registration Sub-district, in which locality 48 per cent. of the deaths occurred. Measles therefore assumed epidemic proportions during the first and second quarters of the year, when it was found necessary to exclude from school attendance large numbers of scholars suffering from this disease, and also many children from infected households in the localities chiefly affected. In most cases the attendance at the infant department was alone interfered with. The control of school attendance during an epidemic has generally some effect in checking the spread of Measles. Unfortunately the nature of the disease and the enormous number of cases which occur at such times, within a comparatively short period render the usual means of dealing with epidemics of other diseases inapplicable. Taking the proportion of deaths to cases of Measles at 3 per cent., which is about the average, the 162 deaths would represent 5,400 cases.

Measles is not notifiable under the provisions of the Notification Act, and is moreover highly infectious in the earliest stage of the disease frequently before it is recognised. Children at school are, therefore, often exposed to the infection by contact with those who are suffering from the disease in its initial state. The Medical Officer of Health has means of discovering the prevalence of Measles in his district which, although they are not so efficient as compulsory notification, afford useful information—(1) The School Attendance Officers and the School Teachers send to him a weekly list of the absentees from school through illness; (2) The District Medical Officers of the Union also supply when required a list of new cases of infectious illness under their care; (3) The examination of the returns of deaths supplied weekly by the District Registrars.

From the above it may be inferred that should Measles be included amongst the list of notifiable diseases less influence would be exerted upon the spread of the disease than in the case of such diseases as Small-pox, Scarlet Fever, or Diphtheria, and a very considerable increase of expenditure would be incurred.

On the 28th March a case of Small-pox was notified in Coopers Street, No. 1. The disease in this case was probably contracted from M. T., who was removed to Hospital on the 9th March.

The last case in connection with this limited outbreak was that of Mrs. H. T., living in Temple Street, who was attacked with Small-pox on the 7th April, and who was removed to the Hospital on the 9th. This person visited and nursed Mrs. J. before her removal to the Hospital on the 28th March, and contracted the disease from her. It is probable that she has been exposed to the infection either by being in the isolated house or by having visited there, were re-examined and entirely escaped an attack, whilst Mrs. H. T., the only person who was subsequently discovered to have visited Mrs. J., and who was not re-examined, was attacked with confluent Small-pox and unfortunately died in the Hospital.

WHOPPING COUGH.—This disease caused forty deaths as compared with 120 in the preceding year. The deaths registered corresponded to an annual death-rate of 0.57 per 1,000 as compared with 0.45, the average rate in the 25 large towns. The average annual death-rate from Whooping Cough in the ten years 1890-1899 was 0.19 in Cardiff and 0.25 in the large towns for the same period. Of the total number of deaths from Whooping Cough, 11 were amongst infants under one year of age and 29 amongst children under five.

MALARIA.—One hundred and eighty-two deaths were registered from Malaria during the year, equivalent to an annual death-rate of 0.90 per 1,000 as compared with a rate of 0.88 in the preceding year, and with 0.84 the average rate in the ten years 1890-1899. The average annual death-rate from Malaria in the 25 large towns was 0.12, ranging from 0.01 in Tottenham to 1.07 in Preston. Of the 182 deaths 27 occurred during the hot quarter, 68 during the second quarter, and the remaining nine during the third quarter of the year. 153 of the deaths, or 84.1 per cent, were amongst children under five years of age. The mortality was highest in the West Registration Sub-district, in which nearly 48 per cent of the deaths occurred. Malaria does not assume epidemic proportions during the hot and second quarters of the year, when it was found necessary to exclude from school attendance large numbers of children suffering from this disease, and also many children from isolated localities in the mountain districts. In most cases the attendance at the infant department was also interfered with. The control of school attendance during an epidemic has generally been effected in checking the spread of Malaria. Unfortunately the nature of the disease and the enormous number of cases which occur at times, within a comparatively short period render the usual means of dealing with epidemics of other diseases inapplicable. Taking the proportion of deaths to cases of Malaria as 5 per cent, which is about the average, the 182 deaths would represent 2,400 cases.

Malaria is not notifiable under the provisions of the Notification Act, and is moreover highly infectious in the earliest stage of the disease (especially before it is recognized). Children at school are therefore often exposed to the infection by contact with those who are suffering from the disease in its initial state. The Medical Officer of Health has means of discovering the prevalence of Malaria in his district which, although they are not so efficient as compulsory notification, afford useful information—(1) The School Attendance Officer and the School Teachers send to him a weekly list of the absences from school through illness; (2) The District Medical Officer of the Union also supply when required a list of new cases of infectious illness under their care; (3) The examination of the returns of deaths supplied weekly by the District Registrar.

From the above it may be inferred that Small Malaria is notifiable except in the case of such diseases as Small-pox, Scarlet Fever, or Typhoid, and a very considerable number of epidemics would be incurred.

SCARLET FEVER.—Eleven deaths were registered from this disease equivalent to an annual death-rate of 0·05 per 1,000. The Scarlet Fever death-rate averaged 0·13 per 1,000 in the 33 large towns, being considerably below the average in the ten preceeding years, ranging from 0·01 in Plymouth, 0·04 in Croydon, and 0·05 in West Ham; to 0·29 in Preston, 0·36 in Oldham, 0·45 in Salford, 0·48 in Burnley, and 0·61 in Blackburn.

The average annual death-rate from Scarlet Fever during the ten years 1890-1899 was 0·17 per 1,000 in Cardiff, and 0·21 in the large towns for the same period.

The total number of cases of Scarlet Fever notified within the Borough in each year since the adoption of the Infectious Diseases Notification Act, and the proportion of deaths to such cases were as follows :—

Year.	Cases Notified.	Deaths.	Mortality per cent. of Cases Notified.
1890	335	19	5·6
1891	685	35	5·0
1892	1,851	87	4·7
1893	816	39	4·7
1894	577	8	1·3
1895	484	8	1·6
1896	874	28	3·2
1897	758	17	2·2
1898	332	8	2·4
1899	184	3	1·6
1900	383	11	2·8

With respect to the season of the year, the relation of notifications and deaths was as follows :—

1899.	No. of Notifications.	No. of Deaths.	Mortality per cent.
First Quarter	79	4	5·0
Second Quarter	89	2	2·2
Third Quarter	80	1	1·2
Fourth Quarter	135	4	2·9

The local incidence of the disease in each quarter of the year, as shown by the notifications in the Registration sub-districts, was as follows :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.
West Cardiff	27	32	22	53	134
Central Cardiff	22	23	29	45	119
East Cardiff	30	34	29	37	130
Total	79	89	80	135	383

The following is the number of cases of Scarlet Fever notified since 1895, together with the proportion of such cases removed to hospital :—

Year	No. of Cases reported.	Proportion removed to Hospital.
1895	484	43 per cent.
1896	874	48 „
1897	758	50·7 „
1898	332	56 „
1899	184	66 „
1900	383	65·2 „

Two hundred and fifty, or 65·2 per cent. of the cases notified were removed to the Borough Hospital for Infectious Diseases.

REGISTRATION.—Howe deaths were registered from the district equivalent to an annual death-rate of 0.02 per 1,000. The average 1-year death rate was 0.12 per 1,000 in the 23 large towns being considerably below the average in the ten remaining towns, ranging from 0.01 in Elymouth, 0.01 in Grandon, and 0.02 in West Haven; to 0.22 in Trenton, 0.20 in Wilkeson, 0.12 in Oakland, 0.08 in Haverly, and 0.01 in Washington.

The average annual death-rate from heart disease during the years 1900-1909 was 1.17 per 1,000 in Grandon and 0.21 in the large towns for the same period.

The total number of cases of scarlet fever notified within the district in each year from the inception of the Infectious Diseases Act, and the proportion of deaths to each case were as follows:—

Year	Cases notified	Deaths	Proportion of deaths to each case
1900	573	10	0.017
1901	652	10	0.015
1902	1,201	17	0.014
1903	318	10	0.031
1904	177	4	0.023
1905	194	3	0.016
1906	172	10	0.058
1907	738	17	0.023
1908	232	4	0.017
1909	181	3	0.017
1910	288	11	0.038

With respect to the season of the year, the number of notifications and deaths were as follows:—

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Deaths
1900	175	10	10	10	10
1901	160	10	10	10	10
1902	300	10	10	10	10
1903	100	10	10	10	10

The local incidence of the disease in each quarter of the year is shown by the notifications in the Registration sub-district, was as follows:—

Year	West Cardiff	Central Cardiff	East Cardiff	Total
1900	27	23	24	74
1901	20	20	20	60
1902	43	43	43	129
1903	14	14	14	42
1904	14	14	14	42
1905	14	14	14	42
1906	14	14	14	42
1907	14	14	14	42
1908	14	14	14	42
1909	14	14	14	42
1910	14	14	14	42

The following is the number of cases of scarlet fever notified since 1907 together with the proportion of each case returned as hospital:—

Year	% of cases returned as hospital	Proportion returned as hospital
1900	50.2	0.502
1901	47.8	0.478
1902	50.7	0.507
1903	50	0.50
1904	50	0.50
1905	50	0.50
1906	50.2	0.502

Two hundred and fifty or 52.2 per cent of the cases notified were returned to the Hospital for Infectious Diseases.

From the above it will be seen that there was an increased prevalence of Scarlet Fever compared with the previous year, and that the prevalence of cases referred to the Hospital shows a steady increase since the opening of this institution in 1895. In addition to this may be mentioned in some quarters the extremely low case mortality of 2% per cent for the entire year of cases notified, and 1% per cent for the cases treated in the Hospital. The conditions in and surroundings of those treated at home amongst the poorer classes of the community, the want of proper care during convalescence, and largely responsible for the higher rate of fatality amongst such cases. It must not, however, be supposed that hospital isolation will completely eradicate such a disease as Scarlet Fever from large towns. The epidemic in places do not necessarily, warrant any such large, but it is obvious that the removal of a population district of so many centres of infection must necessarily diminish the amount of disease limiting the spread of infection likewise the removal of children to hospital for advantage from an educational point of view, as the attendance at school of children from infected houses is in each case only interfered with to a very slight extent and for a few days, even when the infected person is treated at home all children help to contract the disease prevented from attending school until the house is free from infection. This in the case of the Scarlet Fever, actually means a period of at least six weeks, and in the event of other cases arising during the convalescence of the first patient a still longer period.

The cases of Scarlet Fever were distributed amongst nearly over all parts of the town, and a tendency to increase in the west and central districts during the latter portion of the year. The preventive measures which have been carried out by the Sanitary Authority with a view to checking the spread of the disease were—(1) compulsory notification of cases; (2) isolation of school attendants; (3) regulation of milk supplies; (4) regulation of markets; (5) compulsory wearing of aprons; (6) hospital isolation; (7) disinfection carried out by the Sanitary Authority.

DIPHTHERIA.—Eighty-one deaths were registered from Diphtheria, as compared with 61 in 1895 and with 120 in 1896. The number of deaths was equivalent to an annual rate of 0.41 per 1,000. This rate has fluctuated considerably during recent years, reaching a maximum of 0.69 per 1,000 in 1892. In 1894 it declined to 0.40, and in 1895 to 0.30, being as low as 0.20 in 1896 to 0.21, and in 1897 to 0.21 a further decline taking place in 1898, on the rate was 0.28 per 1,000. In the year under consideration the Diphtheria death-rate in 33 large towns averaged 0.25 per 1,000, ranging from 0.09 in Huddersfield, 0.09 in Wakefield, 0.10 in Darby, 0.08 in Hull, and 0.09 in Huddersfield, to 0.23 in Leeds, 0.03 in Blackburn, 1.20 in Bradford, and 1.31 in Lancaster.

The average death-rate from Diphtheria in the ten years 1890-99 was 0.20 in Great Britain, and 0.22, the average rate in the large towns for the same period.

The following table shows the comparative mortality from Diphtheria in 1900 in various parts of the country, and particularly in large centres of population in South Wales.—

Death-rate from Diphtheria per 1,000 persons living in 1900.—

Part of Country	Death-rate per 1,000 persons living in 1900
England and Wales	0.20
London	0.21
23 Great Towns	0.25
37 other Large Towns	0.23
Barnes	0.28
Merthyr	0.23
Abertawe	1.40
Swansea	0.20
Cardiff	0.22

The number of cases of Diphtheria reported to the Sanitary Authority in 1900 amounted to 706. The proportion of deaths to such cases would, therefore, be 11·4 per cent.—an exceedingly low rate of mortality. This rate was reduced still further (to 8·1 per cent.) amongst the cases admitted into the Borough Hospital. 384 cases of Diphtheria were admitted to the Hospital during the year, being 54 per cent. of the cases notified, as compared with 23 per cent. in 1898, and 48 per cent. in 1899.

It is not easy to account for this low rate of fatality amongst the cases of Diphtheria occurring in the district. It can hardly be ascribed altogether to the increasing use of antitoxine as a remedy, although probably this may account for the slightly lower rate in the cases treated in the hospital as compared with those who remained in their homes. Probably no patients could be under more favourable conditions of treatment than those in the Hospitals of the Metropolitan Asylums Board, and yet we find from the reports of the Medical Superintendents of these Hospitals—that in the year 1895, out of 2,182 cases of diphtheria treated with antitoxine, 615 deaths occurred, giving a fatality of 28·1 per cent. at all ages, as compared with a fatality of 29·6 per cent. in 1894 before the antitoxine treatment was commenced. Again quoting from the Annual Report of the Medical Officer of Health for Huddersfield, for the year 1899, relating to Diphtheria, it is stated that in the years 1894 and 1895, before the use of antitoxine, the case mortality was 75 and 56 per cent. respectively. In 1896, when the use of antitoxine had just commenced, the case mortality was 60 per cent. In 1897, 1898 and 1899, when the antitoxine treatment had become general the case mortality was 37, 39 and 20 per cent. respectively. It would appear, therefore, that we have to deal with an unusually mild form of the disease in Cardiff. Diphtheria was somewhat evenly distributed throughout all parts of the town—the cases notified ranging from 1·9 per 1,000 persons living in the Riverside Ward to 5·9 per 1,000 in the Park Ward.

DIPHTHERIA, 1900.

WARD.	Cases reported. per 1,000.	Death-rate per 1,000.
Central	4·42	0·31
South	3·57	0·93
Cathays	5·65	0·09
Park... ..	5·97	0·11
Adamsdown	3·77	0·14
Riverside	1·92	0·10
Canton	2·23	—
Roath	4·43	0·18
Grangetown	2·86	2·28*
Splott	3·85	0·17

*Including deaths at Sanatorium.

DIPHTHERIA, 1900.

Age Periods of Reported Cases.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
Under three years	21	21	17	17	76
Three and under thirteen	96	94	143	134	467
Thirteen and under twenty-five	34	26	15	29	104
Twenty-five and upwards... ..	19	10	12	18	59
Total	170	151	187	198	706

DIPHThERIA, 1900.—AGE PERIODS OF REPORTED CASES IN VARIOUS WARDS.

WARD.	Total number of Cases of all Ages.	Under Three Years. Percentage.	Three and under Thirteen. Percentage.	Thirteen and under Twenty-five. Percentage.	Twenty-five and upwards. Percentage.
Central ...	51	5·8	58·8	21·5	13·7
South ...	150	12·6	81·3	2·6	3·0
Cathays ...	37	10·8	40·5	10·8	16·2
Park ...	67	7·4	52·2	25·3	14·9
Adamsdown ...	53	20·7	67·9	3·7	7·5
Riverside ...	46	13·0	58·6	10·8	17·3
Canton ...	56	10·7	62·5	21·4	3·5
Roath ...	59	6·7	64·4	18·6	10·1
Grangetown ...	117	15·3	63·2	11·1	13·6
Splott ...	70	22·8	58·5	12·8	5·7

From the enclosed tables it will be seen that the largest proportion of cases of diphtheria occurred amongst children between the ages of three and thirteen years. Of the entire number notified 467 or 66·1 per cent. were at these ages, whilst only 8·3 per cent. were amongst persons of twenty-five years of age and upwards.

Taking the attack rate or proportion of cases of diphtheria notified at certain ages to persons living at those ages for the year under consideration, this rate was in Cardiff 5·9 per 1,000 persons living under twenty-five years of age, against 0·6 per 1,000 living over that age. Diphtheria is therefore pre-eminently a disease of early life, it is moreover a much more fatal disease at this period. On referring to the table in the appendix of this Report, it will be found that all the deaths from diphtheria during this year occurred amongst persons under twenty-five years of age.

The age distribution of the cases reported varied considerably in the different Wards in the town. The proportion of cases at twenty-five years of age and upwards to the total number notified at all ages ranged from 3·0 per cent. in the South Ward, 3·5 in the Canton Ward, and 5·7 in Splott Ward; to 16·2 per cent. in the Cathays Ward, and 17·3 per cent. in the Riverside Ward, whereas the proportion of cases reported under three years of age ranged from 6·7 per cent. in the Roath Ward to 22·8 per cent. in the Splott Ward. At the ages between three and thirteen years the proportion ranged from 40·5 per cent. in the Cathays Ward to 81·3 in the South Ward. We find, therefore, that the mortality was comparatively high in the latter Ward.

Diphtheria being a highly infectious disease and a disease falling chiefly upon young persons, it is obvious that conditions leading to an increased aggregation of the population of a community and to an unduly large proportion of children at susceptible ages, would favour the spread of the disease, and it would seem almost as if there were a definite relation between rapidly increasing populations and epidemic diphtheria. This will become perhaps more apparent by a reference to the Annual Report of the Registrar-General for 1898, taken in conjunction with some remarks contained in the preliminary report of the Census of 1891. In the Registrar-General's report the following remarks by Dr. John Tatham occur under the heading "Diphtheria":—"Compared with the average in extra Metropolitan England, there were in 1898 17 counties which showed excessive Diphtheria mortality. Arranged in decreasing

DIPHTHERIA, 1900--Age Groups or Horizontal Cases in Various Wards

Ward	Total number of cases of all ages	Cases under 15 years Percentage	Cases under 10 years Percentage	Cases under 5 years Percentage
Central	81	28	58	51
1st	150	12	41	35
2nd	67	10	30	19
3rd	67	7	33	22
4th	53	20	37	47
5th	48	15	35	19
6th	56	10	32	21
7th	58	8	34	19
8th	117	15	43	44
9th	70	21	55	19

From the enclosed table it will be seen that the largest proportion of cases of diphtheria are among children between the ages of three and thirteen years. In the entire epidemic 487 or 68.1 per cent. were at these ages, whilst only 8.8 per cent. were amongst persons twenty-five years of age and upwards.

Taking the attack rate or proportion of cases of diphtheria notified as certain ages in one living at those ages for the year under consideration, the rate was in Central 4.2 per 10 persons living under twenty-five years of age against 0.8 per 1,000 living over that age. There is therefore very essentially a disease of early life. It is interesting to note that the rate at this period. On referring to the table in the appendix of this report, it will be found that all the deaths from diphtheria during the year occurred amongst persons under twenty-five years of age.

The age distribution of the cases reported varied considerably in the different wards in town. The proportion of cases at twenty-five years of age and upwards in the total number had as all ages ranged from 3.0 per cent. in the South Ward, 5.5 in the Green Ward, and in North Ward, to 16.0 per cent. in the Orange Ward, and 17.3 per cent. in the Riverside Ward, whereas the proportion of cases reported under three years of age ranged from 2.7 per cent. in the North Ward to 22.8 per cent. in the North Ward. At the ages between three and five years the proportion ranged from 4.0 per cent. in the Orange Ward to 21.7 in the West Ward. It will therefore be seen that the mortality was comparatively high in the latter Ward.

Diphtheria being a highly infectious disease and a disease falling chiefly upon young children it is obvious that conditions leading to an increased proportion of the population of a community and to an unduly large proportion of children are susceptible ages would favour the spread of the disease, and it would seem almost as if there were a definite relation between the increasing population and epidemic diphtheria. This will become perhaps more apparent by a reference to the Annual Report of the Registrar-General for 1900, cited in connection with some remarks contained in the preliminary report of the Census of 1901. In Registrar-General's report the following remarks by Dr. John Tatham occur under the heading "Diphtheria":—"Compared with the average in other Metropolitan districts, the 19 counties which showed excessive diphtheria mortality. Arranged in descending order of mortality, the counties were:—

order of fatality the nine counties with the highest rates stand as follows:—South Wales, Kent, Rutlandshire, Essex, London, Monmouthshire, Bedfordshire, Middlesex, and Staffordshire. In the census report the following statement occurs:—"Speaking generally, the counties in which the rates of increase in the population were highest were counties which are largely affected by the presence of London, namely, Essex, Surrey, and in a lesser degree Middlesex and Kent, or counties in which coal mining is the predominant industry, such as Glamorganshire, Monmouthshire, Durham, and Northumberland. . . . There was a decline in the population in no less than nine of the twelve Welsh counties, but, notwithstanding this, so great was the growth in Glamorganshire that the rate of increase for Wales as a whole was almost precisely the same as for England." The abnormally high death-rate from Diphtheria in recent years in South Wales was mainly in those districts in which the increase in the population was the greatest, namely, Cardiff, Rhondda, Merthyr Tydfil, Aberdare, and Swansea.

Taking these five districts as an aggregate, their Diphtheria death-rate in 1898 (the year in which Diphtheria was epidemic) was approximately 900 per million, the remainder of South Wales having experienced a rate almost identical with the average in England and Wales, namely, 240 per million.

The relation of Diphtheria to insanitary surroundings is by no means clear. The late Sir Richard Thorne believed that the influence of such conditions, although greatly exaggerated, was not to be ignored. During the past twenty years enormous sums of money have been spent in providing one of the purest Water Supplies in the Kingdom, in Sewage Works, in Isolation Hospital, and in Sanitary administration. All these things appear to have had a most favourable effect upon Enteric Fever and upon Scarlet Fever and other diseases, but to have done little towards the prevention of Diphtheria. I have been unable to trace any connection between defective house drainage and this disease; in many infected houses such defects existed, but not in any larger proportion than in those which were not infected. It seems probable, however, that foul emanations from sewer ventilators may produce in some persons inflammatory condition of the throat which renders them peculiarly susceptible to the infection of Diphtheria.

The well-known condition of the Western Sewer may, therefore, be responsible for the somewhat greater prevalence of Diphtheria, which has at times been noticeable in the districts through which this sewer runs. The Corporation are now applying to Parliament for powers to carry out Sewerage Works, comprising a new outfall sewer into the Bristol Channel, near Lavernock, which, when complete, will have the effect of relieving the congested condition of the sewers of the Western District.

ENTERIC FEVER.—Twenty-five deaths from Enteric Fever were registered during the year as compared with 19 in the previous year. The number of deaths was equivalent to an annual death-rate of 0·12 per 1,000 persons living, as compared with 0·10 the rate in 1899 and 1898. The death-rate from "fever," mainly Enteric, in the 33 large towns, was 0·20 per 1,000, and corresponded with the average rate in the ten preceding years 1890-1899. The average death-rate from Enteric Fever in Cardiff for the same period was 0·13 per 1,000.

For the year under notice the "fever" death-rate in the large towns ranged from 0·07 in Croydon, 0·08 in Gateshead and in Newcastle, and 0·09 in Brighton; to 0·37 in Sunderland, 0·39 in Preston, 0·45 in Wolverhampton, and 0·47 in Portsmouth.

Amongst the houses in which Enteric Fever occurred 29 were found to have defective sanitary arrangements; these were remedied without delay under the supervision of the Inspectors of Nuisances.

Of the 95 cases notified during the year five were imported into the town from outside the district, and 19 were secondary cases occurring in the same house.

The comparatively low mortality from this disease which this town has enjoyed during the past eight years is satisfactory evidence of the value of the improvements carried out by the Sanitary Authority since the passing of the Public Health Act, 1875.

Enteric Fever showed no undue incidence upon any particular part of the town, and there was no reason to suspect that any general insanitary condition was in any way responsible for the cases which occurred. Most of them appeared to be sporadic cases scattered indiscriminately over the different districts of the town. Advantage has been taken of the Public Health Laboratory by medical practitioners in cases of illness suspected to be enteric fever, and in many instances specimens of serum have been submitted to the test known as Widal's reaction. The results of these examinations are given in the Annual Report of the Bacteriologist incorporated in this report.

The number of cases of Enteric Fever notified within the Borough, and the mortality during each year, since the adoption of the Infectious Diseases Notification Act, is given below:—

Year.	Cases Notified.	No. of Deaths.	Percentage Mortality.
1890	152	23	15.1
1891	130	26	20.0
1892	118	24	20.3
1893	103	18	17.4
1894	62	7	11.2
1895	79	14	17.7
1896	74	13	17.5
1897	117	20	17.0
1898	80	17	21.2
1899	94	19	20.2
1900	95	25	26.3

Age incidence of the disease.

Age Periods.	Cases Reported.	Deaths.
0—5	8	2
5—15	33	7
15—25	25	4
25—65	28	12
65 upwards	1	0

Death-rates per 1,000 of the Population.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Small & Wages	0.18	0.18	0.18	0.18	0.18	0.22	0.18	0.17	0.17	0.21	0.18	0.20	0.20
Large Towns	0.20	0.20	0.20	0.20	0.18	0.24	0.19	0.20	0.19	0.18	0.20	0.22	0.20
All	0.20	0.20	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18

DIARRHOEA.—The deaths from Diarrhoea numbered 81 as compared with 100 in the same year, and with 140 in 1898. The mortality was equal to an annual rate of 0.41 per 1,000 against an average of 0.47 for the ten years 1899-1909. The average death-rate in the same years was 0.41 per 1,000 as compared with 0.56 the average rate in the years 1890-1900.

The lowest diarrhoeal death-rates in the large towns were 0.29 in Halifax, 0.29 in Bolton, 0.29 in Newcastle-upon-Tyne, and 0.42 in Cardiff. The highest rates were 1.44 in Liverpool, 1.51 in Sheffield, 1.57 in Preston, and 1.78 in Hull.

The comparatively low mortality from this disease which this town has enjoyed during the past eight years is satisfactory evidence of the value of the improvements carried out by the sanitary authority since the passing of the Public Health Act, 1875.

Insular Vague showed no undue incidence upon any particular part of the town, and there was no reason to suspect that any general insular condition was in any way responsible for the cases which occurred. Most of them appeared to be sporadic cases scattered haphazardly over the different districts of the town. Advantage has been taken of the Public Health Laboratory by medical practitioners in cases of illness supposed to be enteric fever, and many instances of cases have been submitted to the late known as *W. J. J.* The results of these examinations are given in the Annual Report of the Sanitary Authority for this year.

The number of cases of Enteric Fever notified within the borough, and the mortality during each year, since the adoption of the Sanitary Improvement Act is given below:-

Year.	Cases Reported.	Deaths.	Percentage Mortality.
1900	33	22	66.7
1901	32	19	59.4
1902	17	17	100.0
1903	17	17	100.0
1904	17	17	100.0
1905	17	17	100.0
1906	17	17	100.0
1907	17	17	100.0
1908	17	17	100.0
1909	17	17	100.0
1910	17	17	100.0

Age incidence of the disease.

Age Period.	Cases Reported.	Deaths.
0-5	0	0
5-10	0	0
10-15	0	0
15-20	0	0
20-25	0	0
25 upwards	1	0

The Seasonal Incidence of Typhoid Fever upon the various Wards in the Borough, and upon the Public Institutions, was as follows in 1900:—

WARD.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.	
	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.	Cases Notified.	Deaths.
Central ...	3	1	...	...	...	...	1	...
South ...	1	...	...	...	4	...	2	...
Cathays ...	4	...	...	...	1	...	1	...
Park ...	...	1	2	1	7	...	2	2
Adamsdown ...	...	...	9	1	...	...	1	...
Riverside ...	...	...	...	...	4	1	1	...
Canton ...	1	...	...	...	...	1	1	...
Roath ...	2	...	3	...	3	...	2	...
Grangetown ...	3	...	3	1	10	...	7	2
Sploot ...	...	...	2	...	4	1	5	...
Union Workhouse ...	...	...	2	...	1	1	1	...
Seamen's Hospital ...	...	...	...	...	...	...	...	...
Sanatorium ...	...	3	...	1	...	3	...	4
Infirmery ...	...	...	1	1	...	...	1	...
Totals ...	14	5	22	5	34	7	25	8

FEVER MORTALITY (including Typhus, Typhoid and Continued Fevers).—

Death-rates per 1,000 of the Population.

	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
England & Wales	0·18	0·18	0·18	0·18	0·15	0·22	0·16	0·17	0·17	0·61	0·18	0·20	—
33 Large Towns...	0·20	0·20	0·19	0·20	0·15	0·24	0·19	0·20	0·19	0·18	0·20	0·22	0·20
Cardiff ...	0·33	0·25	0·19	0·19	0·19	0·12	0·04	0·10	0·08	0·11	0·09	0·10	0·12

DIARRHOEA.—The deaths from Diarrhoea numbered 81 as compared with 169 in the previous year, and with 149 in 1898. The mortality was equal to an annual rate of 0·41 per 1,000, against an average of 0·87 for the ten years 1890-1899. The average death-rate in the 33 large towns was 0·94 per 1,000 as compared with 0·96 the average rate in the years 1890-1899.

The lowest diarrhoeal death-rates in the large towns were 0·23 in Halifax, 0·29 in Bradford, 0·37 in Newcastle-upon-Tyne, and 0·42 in Cardiff. The highest rates were 1·44 in Liverpool, 1·52 in Sheffield, 1·67 in Preston, and 1·68 in Hull.

The distribution of diarrhoeal mortality in Cardiff according to the season of the year and the various age periods were as follows :—

Deaths from Diarrhoea.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
Under one year	1	2	55	11	69
One and under five ... ..	...	...	4	1	5
Five and under fifteen ... ..	...	...	1	...	1
Fifteen and under twenty-five ... ..	...	...	...	...	...
Twenty-five and under sixty-five ... ..	...	...	1	2	3
Sixty-five years and upwards ... ..	...	...	1	2	3
Total	1	2	62	16	81

The relation between the temperature of the air, rainfall, and the diarrhoea mortality during the third quarters of the ten years 1891-1900 is shewn in the following table :—

3rd Quarters. Year.	Death-rate per 1,000.	Mean Temperature.	Rainfall.
1891	0·8	57·8	11·83-in.
1892	2·3	60·4	12·42 „
1893	2·5	61·8	8·96 „
1894	0·5	57·0	10·99 „
1895	2·5	59·5	9·96 „
1896	2·4	58·9	11·37 „
1897	2·6	59·3	14·30 „
1898	2·6	60·3	5·82 „
1899	3·2	63·3	5·37 „
1900	1·2	59·7	6·06 „

From the preceding table it will be seen that of the 81 deaths from diarrhoea during the year 62 occurred in the third quarter of the year, of which 55 took place amongst children under one year of age. Amongst those under one year 22 were under three months old, 11 were between the ages of three and six months, and 23 between the ages of six and twelve months. The mortality during the past summer and autumn was, therefore, below the average at this time of the year, owing doubtless to the comparatively cool weather. It will be seen from the Meteorological Tables that the mean temperature of the third quarter of the year was low. It must be mentioned also that during the year 94 deaths were registered from Gastritis and Enteritis, and that 60 of these occurred amongst children under one year of age mostly in the third quarter of the year. As pointed out in previous reports, many of the deaths of infants from Gastritis and Enteritis should more correctly be classed with diarrhoea and placed amongst the zymotic group instead of being classed as at present amongst affections of the digestive system. With the object of obtaining a more uniform system of death certificates in these cases, the Incorporated Society of Medical Officers of Health have drawn up the following memorandum on the subject, copies of which have been issued to all the medical practitioners in the district :—

The distribution of diarrhoeal mortality in Canada according to the season of the year at various age periods was as follows:—

Age Period	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Under one year	1	5	11	12
1 and under five	—	—	1	—
5 and under fifteen	—	—	—	—
15 and under twenty-five	—	—	—	—
25 and under fifty	—	—	—	—
50 and over	—	—	—	—
Total	1	5	12	12

The relation between the temperature of the air, rainfall, and the diarrhoeal mortality in the third quarter of the ten years 1887-1896 is shown in the following table:—

Year	Diarrhoeal Mortality per 1,000	Mean Temperature	Rainfall
1887	1.2	66.7	6.78
1888	2.1	66.9	11.07
1889	2.0	66.9	11.30
1890	2.2	66.9	9.90
1891	2.0	67.0	10.00
1892	2.2	67.0	9.00
1893	2.2	67.0	10.41
1894	2.2	67.0	11.00
1895	2.2	67.0	11.00
1896	2.2	67.0	11.00

From the preceding table it will be seen that of the 52 deaths from diarrhoea during the 3d quarter in the third quarter of the year of which 33 had place among 52 under one year of age. Amongst those under one year 22 were under three months, 1 were between the ages of three and six months, and 23 between the ages of six and 12 months. The mortality during the past summer and autumn was decidedly below the average at this time of the year, owing doubtless to the comparatively warm weather. It will be seen from the Meteorological Tables that the mean temperature of the third quarter of the year was 66.7, and that during the year 52 deaths were registered from diarrhoea. It must be mentioned also that during the year 52 deaths were registered from diarrhoea, and that 50 of them occurred amongst children under one year of age in the third quarter of the year. As pointed out in previous reports many of the deaths were from diarrhoea and enteritis should more correctly be placed with diarrhoea and enteritis amongst the group instead of being classed as separate causes of death. With the object of obtaining a more uniform system of death returns, the Incorporated Society of Medical Officers of Health have drawn up the following memorandum on the subject, copies of which have been issued to all the medical officers in the district:—

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH,
197, HIGH HOLBORN, LONDON, W.C.

MEMORANDUM ON CERTIFICATION OF "DIARRHŒA" DEATHS.

To Registered Medical Practitioners in England, Scotland, Ireland, and Wales.

Much confusion having arisen from the numerous synonyms, unauthorised by the Royal College of Physicians, which for some years past have been increasingly used in the certification of deaths from "diarrhœa"—the "epidemic diarrhœa" of the *Nomenclature of Diseases*—the Incorporated Society of Medical Officers of Health is desirous of calling the attention of all medical practitioners to a decision which has been arrived at by that College authorising the use of the term "epidemic enteritis" (or, if preferred by the practitioner, "zymotic enteritis") as a synonym for epidemic diarrhœa (*Nomenclature of Diseases*, p. 9, ed. 1896); and urging the entire disuse, as synonyms of epidemic diarrhœa in medical certificates of death, of such terms as "gastro-enteritis," "muco-enteritis," "gastric catarrh," etc.

The confusion arising from the present practice in certification so seriously vitiates the accuracy of all statistics with regard to this disease, which is recognised by the Royal College of Physicians to be a *general disease of specific character* in the same sense as enteric and other fevers, that this Society desires to strongly urge medical men to strictly adhere to these authoritative decisions which the College has now published.

In future the only authorised names to be used in certifying deaths from this disease are: *epidemic enteritis*, *zymotic enteritis*, or *epidemic diarrhœa*, and all other synonyms are to be entirely discarded.

The late Dr. Ballard showed that this *specific* disease occurs in persons of all ages, and that it may happen in other than epidemic seasons, under which circumstances the Society would suggest the advisability of the employment of the alternative term, *zymotic enteritis*.

JOHN C. McVAIL, M.D., *President*.

FRANCIS J. ALLAN, M.D., }
HENRY KENWOOD., M.B., } *Hon. Secretaries.*

November, 1900.

TUBERCULOSIS.—The precautionary measures, including the circulation of pamphlets and memoranda containing a short description of the methods of preventing the spread of Tuberculosis have been continued during the year. From the table in the appendix of this Report it will be noticed that no less than 212 deaths were registered from Phthisis alone, giving a death-rate of 1.09 per 1,000 of the population, and with the exception of that from Pneumonia, this was the highest rate of any single disease.

If the other forms of Tuberculosis be included, the deaths from these allied diseases amounted to 322, or 12 per cent. of the total deaths from all causes during the year. Disinfection was carried out by the officers of the Sanitary Authority, at the request of medical practitioners or relatives of the patient, in 84 cases.

These results cannot be regarded as altogether satisfactory, but it is hoped that with an improved system of notification, with further developments in our methods of disinfection, more advantage will be taken of the offers of assistance of the Sanitary Authority. Your Sanitary Committee has appointed Alderman T. W. Jacobs (Chairman), Councillors J. Jenkins, R. Hughes, and the Medical Officer of Health, to attend the British Congress on Tuberculosis, which will be held in London from Monday, July 22nd, to Friday, July 26th. Amongst the subjects which will be considered at the Congress are the following:—

The Incorporated Society of Medical Officers in Health,
125, New Street, London, W.1.

MEMORANDUM ON CERTAIN ASPECTS OF "EPIDEMIC" DISEASES

To His Majesty's Medical Officers in Health, Scotland, Ireland, and Wales

It is a matter of common knowledge that the numerous epidemics which have occurred in the United Kingdom since the outbreak of the influenza epidemic in 1918-19 have been generally regarded as "epidemic diseases" in the ordinary sense of the word. The term "epidemic disease" is, however, a term which has been used in the past to describe a disease which has been spread by the action of all medical practitioners to a disease which has been spread by the action of a few. The term "epidemic disease" is, therefore, a term which is used in a sense which is not strictly correct. It is, in fact, a term which is used in a sense which is not strictly correct. It is, in fact, a term which is used in a sense which is not strictly correct.

The conclusion arising from the present practice in relation to epidemic diseases is that the Society desires to strongly urge medical men to strictly adhere to the principles which the College has now laid down.

In future the only epidemic diseases to be dealt with in the reports of medical officers should be those which are of epidemic character, and all other epidemic diseases should be dealt with as ordinary diseases.

The late Dr. Ballard showed that the epidemic diseases which are of epidemic character are those which are of epidemic character, and all other epidemic diseases should be dealt with as ordinary diseases.

It is suggested that the employment of the term "epidemic disease" should be discontinued, and that the term "epidemic disease" should be used in a sense which is not strictly correct.

TUBERCULOSIS—The preliminary survey, including the results of the survey, is contained in a report which is being prepared by the Medical Officers in Health, and will be published in the near future. The report will be published in the near future.

If the other forms of tuberculosis be included, the results from these three diseases would be 22.72 per cent. of the total deaths from all causes during the year. The results from these three diseases would be 22.72 per cent. of the total deaths from all causes during the year.

These results cannot be regarded as altogether satisfactory, but it is hoped that with an increased system of notification, with further developments in our methods of diagnosis, and with the aid of the other officers of the Sanitary Authority, it will be possible to deal with these diseases more effectively. It is hoped that with an increased system of notification, with further developments in our methods of diagnosis, and with the aid of the other officers of the Sanitary Authority, it will be possible to deal with these diseases more effectively.

(1) The Notification of Tuberculosis; (2) The Influence of Housing and Aggregation; (3) The Influence of Cleanliness and Ventilation; (4) Control of Meat and Milk Supplies; (5) The Tuberculin Test; (6) The Provision of Sanatoria; (7) The Influence of Climate on the Treatment of Consumption; (8) Bacteriological Diagnosis.

PLAGUE.—On September 19th, 1900, the Local Government Board, by order, extended the provision of the Infectious Diseases Notification Act to the notification of every case of Plague occurring in the district of the Sanitary Authority.

In connection with a case of Plague which occurred in this neighbourhood, and which was dealt with by your Sanitary Authority, I submitted the following report:—

“On October 2nd, a case of Plague was admitted into the Temporary Wards of the Borough Hospital for Infectious Diseases from the Llandaff and Dinas Powis Rural District under the following circumstances:—Dr. Pritchard, the Medical Officer of Health for this district, informed me that his attention had been called by a notification from Dr. J. Evans, of Canton, to a Sailor living in 53, Glamorgan Street, who was supposed to be suffering from Typhoid Fever. The history of the case and the appearance of the patient suggested to him that the disease from which the man was suffering might be Plague, and he asked me to see the case with him. As in these cases a bacteriological examination is very desirable, I requested Dr. W. G. Savage, the Bacteriologist of our Public Health Laboratory, to meet us at the house, and, after a consultation, which took place about 4 o'clock in the afternoon of the 2nd inst., we considered that a provisional diagnosis of Bubonic Plague was justified, and that immediate steps for isolating the patient should be taken. As by a resolution of your Committee patients suffering from infectious diseases in the Llandaff District are admitted into the Borough Hospital, this man was at once removed there, and placed under the care of Dr. Fitzgerald, the acting Medical Superintendent. The following history was obtained from the wife of the patient, and from another sailor on the same vessel:—The s.s. “Southgarth” left Rosario about August 20th, calling at St. Vincent, arrived at King's Lynn, Norfolk, on September 12th, discharged a cargo of maize and proceeded to South Shields on the 21st, arriving at that port on the 22nd September. During the voyage three or four of the firemen were taken ill, but apparently the illness from which they suffered was not considered to be at all serious, and was attributed to the high temperature which was experienced shortly after leaving Rosario. On the day after the vessel arrived at King's Lynn, the Third Engineer was taken seriously ill and removed to a Hospital on shore. The Medical Officer of Health of this place believed that the man was suffering from Typhoid Fever, but as yet no further particulars of this case have come to hand. On the 21st September, W. G., the Donkeyman, was taken ill, and on the 24th he proceeded to North Shields and Newcastle, and from thence to his home in Glamorgan Street, Llandaff, where he arrived on the morning of the 27th. In the afternoon of that day Dr. J. Evans was called to see him, and he attended him until the time of his removal to the Hospital on October 2nd. It is right to state that in the early stage of Plague the symptoms closely resemble those of Typhoid Fever, and that at this period the two diseases are frequently indistinguishable. The promptitude with which Dr. Pritchard acted upon his suspicions as to the nature of the disease will doubtless be the means of removing any anxiety as to the spread of infection. On the admission of the patient into the Hospital it was obvious that there was little chance of his recovery, and he died on the morning of the 4th October. In the interests of Public Health, I considered that it was desirable that the remains of the deceased should be cremated, and the consent of the wife having been obtained, the body was removed to the Flat Holm Island, and, after a post-mortem examination, was cremated on the 5th inst., under my superintendence, by Mr. Knight, the Engineer, at the Sanatorium. Dr. Williams, Medical Officer of the Glamorgan County Council, Dr. W. G. Savage, and Dr. Fitzgerald were also present. I may add that the dangerous and unpleasant duty of making a post-mortem examination in this case devolved upon Drs. Fitzgerald and Savage. The remains of the deceased, consisting of ashes, were placed in a suitable urn, and will be handed over to the widow, who will have them conveyed to the Cemetery in order that the burial service may be performed. I herewith append the Clinical Notes of this case

supplied by the Acting Medical Superintendent of the Hospital and the result of the post-mortem examination, together with the results of the bacteriological examination, and I have to acknowledge the very great advantage which was obtained on this occasion by the examination made in our Public Health Laboratory. The first clue to the nature of the disease was Dr. Savage's preliminary Report presented to me at 10.30 a.m., on October 3rd, in which he states that the bacteriological evidence points very strongly in favour of the case being Plague. This opinion he completely confirmed by further experiments. At the request of the Medical Officer of the Local Government Board, after the post-mortem examination had been made, I forwarded some material to Dr. Klein, of St. Bartholomew's Hospital, the Bacteriologist to the Board, and at 1.30 p.m. on the 6th October received a telegram from the Medical Officer that Dr. Klein's examination confirmed the diagnosis of Plague. Immediately after the reception of the patient into the Borough Hospital I sent a telegram to the Medical Officer of Health of South Shields informing him of the circumstances, and received a reply to the effect that on the arrival of the vessel at that port the Captain reported that there had been no illness on board during the voyage, and that all the crew were well. I found on inquiry that some of the crew of the s.s. "Southgarth" had come to Cardiff from South Shields by train. At the present time two only are staying in this neighbourhood; they have both been examined by me, and found in good health. As these men have not been in contact with the man who suffered from Plague since he left the vessel on September 24th, there is no chance of any spread of infection from this source, as the usual incubation period of the disease is from two to eight days, and the extreme limit is stated to be ten days. Although I find on enquiry that no persons resident within the Borough have visited the infected house, I am making an inspection of the localities abutting upon this part of the Rural District in view of the possibility of any spread of the disease. I should add that as up to the present those who have been in close contact with the infected person are still in good health, there is good ground for hoping that those also who have been less closely associated have escaped all danger of infection, and that no further spread of the disease will occur."

Name	Age	Sex	Occupation	Address	Notes
John Thomas	35	M	Labourer	10, The Green, Cardiff	
Mary Thomas	32	F	Wife	10, The Green, Cardiff	
William Thomas	15	M	Labourer	10, The Green, Cardiff	
Elizabeth Thomas	12	F	Wife	10, The Green, Cardiff	
James Thomas	10	M	Labourer	10, The Green, Cardiff	
Ann Thomas	8	F	Wife	10, The Green, Cardiff	
Robert Thomas	6	M	Labourer	10, The Green, Cardiff	
Isabella Thomas	4	F	Wife	10, The Green, Cardiff	
Thomas Thomas	3	M	Labourer	10, The Green, Cardiff	
Margaret Thomas	2	F	Wife	10, The Green, Cardiff	

ed by the Acting Medical Superintendent of the Hospital and the result of the post-mortem
 action, together with the results of the bacteriological examination, and I have to witness
 the very great advantage which was obtained on this occasion by the examination made in
 this Health Laboratory. The first case in the series of the disease was the case of
 which Report presented to me at 10:30 a.m. on October 2nd, in which he states that the
 biological evidence points very strongly in favour of the case being Typhoid. This opinion
 is completely confirmed by further examination. At the request of the Medical
 Officer of the Local Government Hospital, after the post-mortem examination had been made, I
 had some material to Dr. Khan, of St. Bartholomew's Hospital, the bacteriologist to the
 Hospital, and at 1:30 p.m. on the 6th October received a telegram from the Medical Officer that
 his examination confirmed the diagnosis of Typhoid. Immediately after the receipt of
 this into the Hospital I sent a telegram to the Medical Officer of Health of
 British Borneo of the circumstances, and received a reply to the effect that on the
 1st of the vessel at that port the Captain reported that there had been no illness on board
 the voyage, and that all the crew were well. I found on inquiry that some of the crew of
 the "Southgate" had come to British Borneo by train. At the present time
 they are staying in this neighbourhood; they have both been examined by me and found in
 health. As these men have not been in contact with the man who suffered from Typhoid
 he left the vessel on September 25th, there is no chance of any spread of infection from
 on board, as the usual incubation period of the disease is from two to eight days, and the
 point is stated to be ten days. Although I had on inquiry that no persons resident
 in the Borneo have visited the infected vessel, I am making an inspection of the localities
 upon this part of the Borneo District in view of the possibility of any spread of the
 disease. I should add that as up to the present there has been no close contact with the
 infected person are still in good health, there is good ground for hoping that those who have
 been closely associated have escaped all danger of infection, and that no further spread of
 disease will occur.

TABLE XVII.—33 Towns.—Death-rates per 1,000 living from All Causes, and from the Principal Zymotic Diseases, and Infant Mortality, in the Ten Years 1890-99, and in 1900. Compiled from the Registrar-General's Annual Summary.

CITIES AND BOROUGH.	All Causes.		Small-pox.		Measles.		Scarlet Fever.		Diphtheria.		Whooping Cough.		Fever.		Diarrhoea.		Deaths under one year to 1,000 Births.	
	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.	Ten years 1890-99.	1900.
33 Towns ...	20.3	19.5	0.01	0.00	0.58	0.43	0.21	0.13	0.33	0.35	0.49	0.45	0.20	0.20	0.96	0.94	172	172
London ...	19.8	18.8	0.01	0.00	0.62	0.42	0.20	0.08	0.49	0.34	0.53	0.48	0.15	0.17	0.74	0.78	160	160
West Ham ...	17.8	15.9	0.05	—	0.68	0.48	0.18	0.05	0.51	0.50	0.51	0.59	0.22	0.18	0.89	1.30	164	189
Croydon ...	14.7	14.6	0.00	—	0.84	0.15	0.06	0.04	0.29	0.18	0.38	0.44	0.09	0.07	0.59	0.56	137	132
Brighton ...	17.7	17.8	—	—	0.37	0.43	0.06	0.10	0.20	0.58	0.30	0.28	0.09	0.09	0.81	0.76	156	166
Portsmouth ...	17.5	17.3	0.00	—	0.49	0.01	0.11	0.06	0.23	0.53	0.31	0.46	0.25	0.47	0.95	0.85	155	155
Plymouth ...	20.2	20.8	0.01	—	0.55	0.93	0.16	0.01	0.13	0.11	0.45	0.12	0.13	0.21	0.78	0.97	172	175
Bristol ...	18.4	16.7	0.02	—	0.46	0.62	0.13	0.12	0.14	0.31	0.46	0.17	0.11	0.13	0.63	0.53	149	133
Cardiff ...	17.6	13.8	0.00	0.01	0.34	0.84	0.17	0.06	0.40	0.42	0.45	0.21	0.13	0.12	0.87	0.42	164	141
Swansea ...	18.9	17.1	0.00	—	0.54	0.64	0.29	0.07	0.33	0.58	0.46	0.15	0.17	0.15	0.42	0.58	165	175
Wolverhampton ...	22.1	22.5	0.01	0.01	0.86	0.82	0.25	0.09	0.85	0.10	0.37	0.79	0.27	0.45	1.37	1.39	191	206
Birmingham ...	20.9	21.5	0.05	—	0.49	0.25	0.20	0.19	0.24	0.14	0.51	0.58	0.18	0.85	1.23	1.21	186	199
Norwich ...	18.9	17.6	—	—	0.38	0.01	0.11	—	0.21	0.10	0.42	0.59	0.26	1.00	1.26	1.80	178	178
Leicester ...	18.1	17.4	0.01	—	0.43	0.23	0.23	0.18	0.27	1.51	0.86	0.21	0.18	0.12	1.52	1.34	197	175
Nottingham ...	18.7	19.1	0.00	—	0.41	0.18	0.20	0.22	0.08	0.12	0.37	0.42	0.59	0.33	1.11	1.08	179	196
Derby ...	17.3	17.5	0.02	—	0.89	0.90	0.13	0.20	0.11	0.06	0.86	0.48	0.19	0.19	0.76	0.47	156	174
Birkenhead ...	19.4	16.8	0.00	—	0.52	0.09	0.15	0.03	0.23	0.09	0.47	0.24	0.32	0.14	0.83	0.80	171	160
Liverpool ...	25.7	25.7	0.01	0.03	0.63	0.23	0.40	0.17	0.20	0.26	0.59	0.84	0.34	0.21	1.32	1.44	192	186
Bolton ...	22.0	19.5	0.01	—	0.70	0.23	0.24	0.12	0.10	0.12	0.58	0.53	0.30	0.27	1.88	1.15	180	171
Manchester ...	24.3	24.1	0.01	—	0.81	0.47	0.28	0.19	0.21	0.18	0.56	0.68	0.34	0.14	1.29	1.39	190	189
Salford ...	24.2	25.1	0.01	0.00	0.95	0.56	0.37	0.45	0.34	0.41	0.71	0.84	0.38	0.31	1.54	1.41	203	207
Oldham ...	21.1	19.6	0.09	0.02	0.66	0.71	0.21	0.36	0.15	0.13	0.45	0.58	0.15	0.11	0.70	0.53	188	172
Barnley ...	20.2	16.3	0.01	—	0.47	0.14	0.25	0.48	0.26	0.19	0.40	0.36	0.25	0.14	1.34	1.22	212	205
Blackburn ...	21.2	20.5	0.01	0.01	0.76	0.57	0.11	0.61	0.12	0.65	0.41	0.45	0.26	0.22	1.31	1.01	220	220
Preston ...	23.7	24.0	0.00	—	0.72	1.07	0.18	0.29	0.12	0.38	0.44	0.57	0.31	0.39	2.11	1.67	236	236
Huddersfield ...	17.6	16.8	0.00	—	0.83	0.55	0.19	0.16	0.12	0.02	0.36	0.18	0.14	0.18	0.41	0.43	156	132
Halifax ...	18.8	18.1	0.06	—	0.37	0.50	0.16	0.17	0.15	0.13	0.29	0.07	0.17	0.22	0.32	0.23	158	132
Bradford ...	19.1	16.4	0.07	—	0.42	0.39	0.25	0.25	0.08	0.11	0.38	0.09	0.16	0.23	0.91	0.29	174	141
Leeds ...	20.3	20.0	0.01	0.00	0.49	0.58	0.18	0.12	0.23	0.59	0.40	0.38	0.21	0.20	1.09	1.05	178	183
Sheffield ...	21.4	22.6	0.00	—	0.58	0.55	0.28	0.17	0.29	1.26	0.50	0.55	0.25	0.28	1.35	1.52	184	200
Hull ...	19.7	19.7	0.07	0.03	0.45	0.58	0.17	0.16	0.12	0.08	0.38	0.31	0.24	0.21	1.45	1.68	176	183
Sunderland ...	21.9	21.4	0.01	—	0.56	0.59	0.21	0.27	0.07	0.15	0.46	0.20	0.52	0.37	1.23	0.94	175	169
Gateshead ...	19.7	19.0	0.01	—	0.55	0.14	0.21	0.07	0.13	0.05	0.52	0.56	0.22	0.08	1.07	0.85	173	169
Newcastle ...	20.6	19.5	0.00	—	0.53	0.39	0.13	0.07	0.18	0.14	0.48	0.33	0.16	0.08	0.73	0.37	174	170

TABLE XVIII.

Death-rate per 1,000 from all causes and from zymotic diseases in Cardiff and in 33 large towns :—

	Ten Years—1890-99.		Year 1900.	
	Cardiff.	33 Large Towns.	Cardiff.	33 Large Towns.
All Causes	17·6	20·3	13·7	19·5
Small Pox	0·00	0·01	0·01	0·00
Measles	0·34	0·58	0·80	0·43
Scarlet Fever	0·17	0·21	0·06	0·13
Diphtheria	0·40	0·33	0·41	0·35
Whooping Cough	0·45	0·49	0·25	0·45
*Fever	0·17	0·20	0·12	0·20
Diarrhoea	0·87	0·96	0·41	0·94

* Chiefly Typhoid, but including Typhus and simple or ill-defined continued fevers.

TABLE XIX.

Cases of Infectious Diseases notified in the Cardiff Urban Sanitary District since the adoption of the Infectious Disease Notification Act, 1899 :—

	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
Small Pox	—	9	5	4	10	1	45	7	—	—	4
Diphtheria	63	67	155	462	326	229	296	512	940	628	706
Croup	9	3	9	17	17	19	10	4	20	12	8
Scarlet Fever	335	685	1,851	816	577	484	874	758	332	184	383
Enteric Fever	152	130	118	105	62	79	74	117	80	94	95
Typhus Fever	—	—	—	41	1	—	1	—	—	—	4
Erysipelas	45	52	95	152	135	132	134	163	133	176	106
Puerperal Fever	4	10	12	24	19	17	21	12	18	13	15
Total	608	956	2,245	1,621	1,147	961	1,455	1,573	1,523	1,107	1,321

TABLE XVIII.

Rate per 1,000 from all causes and from typhoid disease in Dublin and in 50

Year 1899		The Year—1899-20	
50 Years	Quota	50 Years	Quota
19.5	18.7	20.7	17.8
0.00	0.01	0.01	0.00
0.42	0.20	0.28	0.24
0.13	0.08	0.21	0.17
0.23	0.41	0.23	0.40
0.42	0.22	0.19	0.42
0.20	0.12	0.20	0.17
0.24	0.41	0.04	0.67

* Quota typical, not including typhoid cases as in Ireland and other towns.

TABLE XIX.

Sum of Intoxicant Diseases notified in the Dublin Urban Sanitary District since the Intoxicant Diseases Notification Act, 1892.

1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890
4	—	—	7	43	1	10	4	3	9	—
700	628	640	512	528	520	520	463	524	57	63
5	12	20	1	10	10	17	17	9	2	9
363	362	362	363	371	404	377	370	369	369	369
22	61	60	117	74	79	82	108	118	120	122
1	—	—	—	1	—	1	41	—	—	—
100	170	129	160	124	182	150	152	92	81	48
12	13	12	12	21	17	19	24	12	10	4
1,221	1,107	1,222	1,272	1,422	901	1,147	1,021	1,222	922	922

TABLE XX.—Analysis of Deaths in the Municipal Borough of Cardiff in the Registration Sub-districts, and in each Ward in the Borough during the Year, 1900.

LOCALITIES.	Population, 1900.	Area in Acres.	Persons per Acre.	Total Births.	Birth-rate.	Total Deaths.	Death-rate.	Deaths under One Year per 1,000 Births Registered.	Seven Chief Zymotic Diseases.		Principal Zymotic Diseases.												Phthisis.		Diseases of Respiratory Organs.						
									Deaths.	Death-rate.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Typhoid Fever.	Typhus Fever.	Diarrhoea.	Typhoid Fever.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.				
Borough of Cardiff	194,247	8,351*	32	5,198	26.7	2,667	13.7	140	2.06	2	0.1	162	0.8	11	0.5	81	0.4	40	0.2	25	0.1	...	...	81	0.4	110	0.5	212	1.09	502	2.5
Canton Ward	28,700	449	52	759	32.0	264	11.1	116	3.4	...	...	15	0.6	7	0.3	...	...	7	0.3	1	0.04	...	...	11	0.4	6	0.2	18	0.7	55	2.3
Riverside Ward	19,209	313	61	369	11.0	175	9.1	132	2.6	...	...	6	0.3	7	0.3	...	...	7	0.3	1	0.0	...	...	10	0.5	9	0.5	16	0.8	36	1.8
Grangetown Ward	20,612	1,905	10	839	40.7	321	15.5	153	2.6	...	...	14	0.6	1	0.04	...	...	1	0.04	3	0.1	...	...	21	1.0	13	0.6	14	0.6	69	3.3
West Cardiff	63,521	2,667	23	1,967	30.9	760	11.9	137	1.7	...	...	35	0.5	2	0.08	...	...	15	0.2	5	0.04	...	...	42	0.6	28	0.4	48	0.7	100	2.4
South Ward	11,743	519	22	249	21.1	185	15.7	156	2.2	...	...	12	1.0	2	0.1	...	...	2	0.1	...	...	...	...	1	0.08	3	0.2	17	1.4	34	2.9
Central Ward	12,661	473	27	244	19.2	207	16.3	211	2.2	...	...	9	0.7	...	...	...	...	...	...	1	0.08	...	...	8	0.6	18	1.4	18	1.4	38	3.0
Cathays Ward	20,530	369	55	602	29.3	231	11.3	134	3.1	...	...	13	0.6	...	...	...	...	9	0.4	...	...	...	...	7	0.3	10	0.6	14	0.6	39	1.9
Adamsdown	13,523	1,570	8	415	30.6	214	15.7	137	2.0	...	...	13	0.9	...	...	...	...	5	0.3	1	0.05	...	...	7	0.5	7	0.5	16	1.1	43	3.1
Central Cardiff	58,457	2,931	19	1,510	25.5	837	14.7	151	1.8	...	...	47	0.8	...	...	...	...	16	0.2	2	0.03	...	...	23	0.3	38	0.6	65	1.1	154	2.7
Splott Ward	17,360	1,454	11	614	35.3	256	14.7	120	2.9	...	...	32	1.8	2	0.1	...	...	4	0.2	1	0.06	...	...	8	0.4	14	0.8	17	0.9	59	3.3
Roath Ward	15,775	766	20	409	25.9	229	14.5	188	2.9	...	...	20	1.2	...	...	...	...	3	0.1	...	...	...	...	3	0.1	13	0.8	16	1.0	53	3.3
Park Ward	25,757	533	48	635	24.6	270	10.5	102	1.5	...	...	26	1.0	...	...	...	...	2	0.05	4	0.1	...	...	4	0.1	12	0.4	25	0.9	47	1.8
East Cardiff	58,892	2,753	21	1,658	28.1	755	12.8	129	2.0	...	...	78	1.3	2	0.08	...	...	9	0.1	5	0.2	...	...	15	0.2	39	0.6	58	0.9	159	2.8
Infectious Diseases Hospital	...	...	...	...	...	58	...	...	...	2	...	2	...	7	...	34	...	...	...	11	...	...	...	...	...	...	...	...	...	1	...
Union Workhouse	...	...	...	63	...	187	...	253	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	4	...	39	...	24	...
Infirmary	...	...	...	...	...	68	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	1	...	2	...	4	...
Seamen's Hospital	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

The population in the above Table is, in the case of the Borough, that given by the Registrar-General, as the estimate to the middle of the Year, 1900. The populations of the Registration Sub-districts and Wards are estimated on the basis of the number of inhabited houses, allowing an average of 6.25 persons to each house.

* Excluding 104 acres, the area of the Bute Docks, and 37 acres the area of the land on the Flat Holm Island, making a total of 8,496 acres, of which 2,600 consist of water and foreshore.

TABLE XXI.—Shows the number of Infectious Diseases reported in the Cardiff Urban Sanitary District under the Notification Act, and Deaths during each quarter in the year 1900.

	Small Pox.		Cholera.		Diphtheria.		Croup.		Erysipelas.		Scarlet Fever.		Typhoid fever.		Typhus Fever.		Puerperal Fever.		Relapsing Fever.		Continued Fever.			
	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.	Deaths.	Cases Reported.		
First Quarter ..	1	3	—	—	21	170	2	3	1	36	4	79	5	14	—	—	—	—	—	—	—	—	1	
Second " ..	1	1	—	—	25	151	1	2	1	25	2	89	5	22	—	1	3	1	3	—	—	—	1	
Third " ..	—	—	—	—	21	187	2	3	—	18	1	80	7	30	—	2	3	—	—	—	—	—	—	3
Fourth " ..	—	—	—	—	14	198	—	—	—	27	4	135	8	25	—	—	3	5	—	—	—	—	—	—
• Year 1900 ..	2	4	—	—	81	706	5	8	2	106	11	383	25	91	—	3	4	15	—	—	—	—	—	5

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

1901 year only in response from general interest list

TABLE XXX

TABLE XXII.

ANNUAL RATES OF MORTALITY FROM ALL CAUSES AND FROM SEVERAL CLASSES OF DISEASES
PER 1,000 PERSONS LIVING IN CARDIFF AND IN ENGLAND AND WALES.

Year.	All Causes.		Zymotic Diseases.		Constitutional Diseases.		Developmental Diseases.		Local Diseases.	
	Cardiff.	England and Wales.	Cardiff.	England and Wales.	Cardiff.	England and Wales.	Cardiff.	England and Wales.	Cardiff.	England and Wales.
1888	20·3	18·11	2·9	2·13	3·30	3·16	2·94	1·56	9·27	9·64
1889	19·4	18·22	2·1	2·45	3·69	3·22	1·44	1·55	9·16	9·39
1890	21·1	19·54	2·4	2·53	3·49	3·37	1·69	1·61	10·10	10·36
1891	22·0	20·21	2·1	2·70	3·64	3·33	1·36	1·69	11·39	10·80
1892	18·7	18·98	2·7	2·78	3·51	3·16	1·24	1·62	7·79	9·80
1893	19·6	19·17	2·8	3·16	3·47	3·21	1·25	1·59	8·26	9·53
1894	16·2	16·59	1·7	2·25	3·14	3·01	1·20	1·46	7·28	8·42
1895	18·2	18·72	2·0	2·82	3·14	3·16	1·25	1·67	8·42	9·43
1896	16·8	17·10	2·2	2·54	2·62	3·00	1·18	1·53	8·43	8·53
1897	14·9	17·43	2·1	2·59	2·72	3·06	1·04	1·61	6·73	8·65
1898	14·8	17·58	2·2	2·76	2·63	3·06	1·11	1·62	6·53	8·65
1899	15·3	18·4	2·0	2·81	2·45	3·10	1·16	1·70	7·20	9·18
1900	13·7	Not yet published.	2·0	Not yet published.	2·23	Not yet published.	1·04	Not yet published.	6·63	Not yet published.

TABULI XXII.

OF MORTALITY FROM ALL CAUSES AND FROM SEVERAL CLASSES OF DISEASES
 IN 1,000 PERSONS DURING THE YEAR ENDING IN ENGLAND AND WALES.

Year	England and Wales		Males		Females		Local Diseases
	Rate	Number	Rate	Number	Rate	Number	
1877	20.0	100,000	19.6	100,000	20.4	100,000	
1878	20.0	100,000	19.6	100,000	20.4	100,000	
1879	20.0	100,000	19.6	100,000	20.4	100,000	
1880	20.0	100,000	19.6	100,000	20.4	100,000	
1881	20.0	100,000	19.6	100,000	20.4	100,000	
1882	20.0	100,000	19.6	100,000	20.4	100,000	
1883	20.0	100,000	19.6	100,000	20.4	100,000	
1884	20.0	100,000	19.6	100,000	20.4	100,000	
1885	20.0	100,000	19.6	100,000	20.4	100,000	
1886	20.0	100,000	19.6	100,000	20.4	100,000	
1887	20.0	100,000	19.6	100,000	20.4	100,000	
1888	20.0	100,000	19.6	100,000	20.4	100,000	
1889	20.0	100,000	19.6	100,000	20.4	100,000	
1890	20.0	100,000	19.6	100,000	20.4	100,000	
1891	20.0	100,000	19.6	100,000	20.4	100,000	
1892	20.0	100,000	19.6	100,000	20.4	100,000	
1893	20.0	100,000	19.6	100,000	20.4	100,000	
1894	20.0	100,000	19.6	100,000	20.4	100,000	
1895	20.0	100,000	19.6	100,000	20.4	100,000	
1896	20.0	100,000	19.6	100,000	20.4	100,000	
1897	20.0	100,000	19.6	100,000	20.4	100,000	
1898	20.0	100,000	19.6	100,000	20.4	100,000	
1899	20.0	100,000	19.6	100,000	20.4	100,000	
1900	20.0	100,000	19.6	100,000	20.4	100,000	

TABLE XXIII.—The following Tables show the Distribution of Mortality from the Chief Zymotic Diseases, from Phthisis, from Diseases of the Respiratory Organs, and from other causes, in each Street in the Borough during the year 1900:—

CENTRAL WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Bridge Street and Little Bridge Street	1	4	4	9
Blackweir Terrace	1	...	...	...	1	2
Bute Street and Terrace	1	...	3	6	10
Carpenters' Arms Court	1	1
Clytha Place	1	...	...	...	...	...	...	1
Canal Street ... (Cab)	1	...	...	2	3
Caroline Street	1	1
Colam Road and Place	1	...	6	7
Charles Street	5	5
Drane's Court	1	...	...	...	1
David Street	3	4	7
Estobbfod Street	1	1	2	4
East Terrace	2	1	3	6
Edwards Street, Terrace, and Place	...	1	...	...	...	...	...	...	2	5	8
Ebenezer Street	...	1	...	...	...	...	...	...	1	1	3
Frederick Street	1	...	5	6
French Cottages	1	...	2	3
Gough Street	1	1
Guildford Crescent	1	1
Havelock Street	1	1	4	6
Houffray Street	2	2
Glasorgan Canal	2	2
Hill's Terrace and Street	...	1	...	1	...	...	...	1	1	3	7
Haves	2	2	4
Jenkins Court	2	2
Love Lane	1	...	...	...	...	...	...	...	2	3
Little Frederick Street	...	1	...	...	...	...	...	...	1	4	6
Millicent Street	1	...	1	6	8
Mill Lane	1	1
Matthews Court	1	1
Marlborough Terrace	1	1
Mary Ann Street	2	4	1	7
North Edward Street	1	1
Nazareth House	1	4	2	12	19
North Road	1	...	...	1	...	1	3	6
Old Barracks	1	...	...	...	1
Park Place	1	...	...	...	...	...	...	...	2	3
Park Street	1	...	...	...	...	...	...	...	3	4
Pembroke Terrace	1	1
Queen Street...	1	...	...	1
Quay Street	1	1
Raven Street	1	2	3
Roberts Court	1	...	1
Row's Square	1	1
Ruperra Street	3	3
Rodney Street	1	...	1	...	2
Richmond Terrace	1	1	2
Railway Terrace	1	1
Scott Street	2	3	5
St. Mary Street	1	1
Station Terrace	1	1
Spring Garden Court	1	1
Trolegar Street	1	1	...	2
Vachell's Terrace	...	1	...	...	...	...	...	...	...	1	2
Union Street	...	1	...	...	...	...	...	...	3	6	10
Wood Street	1	...	...	...	...	1	2	4
Total...	...	9	...	4	...	1	8	17	39	129	207

CATHAY WARD.

SOUTH WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Ftithia.	Respiratory Diseases.	Other Causes.	Total.
Angelina Street	1	1
Alice Street	1	...	1	...	...	...	...	...	2	4
Adelaide Street and Place	1	...	...	...	1	...	4	6
Bute Street and Place	1	...	...	2	5	10	18
Crichton Street and Place	2	...	...	...	2	1	2	7
Christina Street	1	1	7	9
Clarence Place and Embankment	3	3
Crawshay Street	1	2	3
Canal Parade	1	1
Dudley Street and Place	1	...	1	...	...	...	1	1	3	7
Eleanor Street	1	...	...	...	...	...	1	...	2	4
Evelyn Street	1	...	...	...	...	4	2	7
East Wharf	1	1
Francis Street	1	...	...	..	1
Glamorgan Canal	7	7
George Street	1	4	5
Harrowby Street	1	...	1	...	...	...	...	...	2	4
Hodges Row	1	1
Hodges Court	1	1
Herbert Street	2	1	3	6
Harpur Street	1	...	...	1
Hunter Street	1	...	...	...	...	...	..	2	2	5
Hamadryad Hospital	2	2
James Street	2	...	...	...	...	...	...	...	..	2
John Street	2	2
Louisa Street	5	5
Loudoun Square	1	...	...	...	...	...	2	...	3	6
Mount Stuart Square	1	...	...	...	...	2	2	5
Margaret Street	1	...	1	...	...	...	...	1	...	3
Maria Street	1	1	1	3
North Church Street	1	1
Nelson Street	1	...	2	3
Penarth Road and Terrace	1	2	3
Percy Street	1	..	1
Peel Street	1	...	...	...	...	...	2	1	...	4
Patrick Street	1	1
Pomeroy Street	1	...	6	7
Pier Head	2	2
South Church Street	2	...	2
South William Street	1	..	1	...	..	...	..	1	5	8
Sophia Street	1	...	...	...	...	1	5	7
Stuart Street	1	...	...	...	...	...	...	3	2	6
Timber Float	1	1
Tresillian Terrace	1	...	...	...	2	2	5
River Taff	2	2
Windsor Esplanade	1	1	2
West Church Street	1	1	2
Total	12	...	11	2	...	1	18	35	108	187

CATHAYS WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Allen's Bank, Road, and Crescent	1	...	...	2	3
Alexander Street	1	...	...	...	...	...	1	2
Barracks	3	2	5
Bruce Street	...	1	...	...	...	...	...	...	...	1	2
Cairns Street...	...	3	...	...	...	...	...	1	1	9	14
Coburn Street	1	2	8	11
Clan Terrace...	3	3
Cruys Road	1	2	3	6
Cathays Terrace	...	1	...	1	...	...	1	...	4	11	18
Cranbrook Street	2	1	3	6
Catherine Street	3	3
Clytha Place...	1	...	...	...	...	...	1
Dalton Street	1	...	1
Dogfield Street	1	...	...	4	5
Daniel Street	5	5
Darran Street	2	2
Floa Street	1	1	4	7	13
Fitzroy Street	1	1	2
Florentia Street	...	1	...	...	...	...	...	...	...	3	4
Glynrhondda Street	1	1
Hirwain Street	...	2	...	...	...	...	...	...	2	2	6
Harriet Street and Place...	5	5
Llantrisant Street	1	4	5
Letty Street	...	1	...	...	...	...	...	...	1	1	3
Llanwit Street	1	1
Lucas Street...	1	1
Munny Street	...	1	...	...	...	...	...	...	...	3	4
Mouthensser Road	1	1
Manor Street	1	1
Miskin Street	1	...	...	...	1	2	4
Maletant Street	1	...	1	2	1	3	8
Mundy Place...	2	2
May Street	...	1	...	...	1	...	...	1	1	5	9
Merthyr Street	1	...	...	...	...	1	2
Norman Street	1	1
Rhymney Terrace	1	1
Richards Street	1	...	...	...	2	3	6
Ruthin Gardens	1	1
Robert Street	1	...	1	4	6
Spencer Street	1	...	3	4
Senghennydd Road and Place	1	...	...	1
Salisbury Road	3	5	8
Thesiger Street	1	1	1	3
Treoky Street	...	1	...	...	...	...	...	...	...	...	1
Treherbert Street	1	2	3
Tewkesbury Street and Place	1	2	6	9
T. V. Railway	1	1
Woodville Road	1	...	...	...	2	9	12
Whitchurch Place	1	...	1	2
Whitchurch Road	1	...	...	...	...	2	3
Wyverne Road	...	1	...	...	1	...	1	...	1	6	10
Total...	...	13	...	2	9	...	7	14	39	147	231

PARK WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Alfred Street...	...	1	...	...	...	...	...	...	...	3	4
Albany Road...	2	2
Arran Street...	...	1	...	...	...	...	...	...	1	4	6
Angus Street...	1	4	5
Arabella Street	...	2	...	...	...	...	1	...	3	6	12
Braeval Street	1	1
Bangor Street	1	2	3
Byron Street...	...	1	...	...	...	...	...	...	...	2	3
Bedford Street and Place...	...	4	...	...	...	...	...	2	...	3	9
Castle Road	1	...	...	...	...	...	...	...	7	8
Cab	1	1
Cowper Street	1	1
Clive Place	1	...	1
Cyfarthfa Street	...	1	...	1	1	...	...	...	1	5	9
Crwys Road and Place	1	...	...	1	...	2
Convent	1	1	...	2
Donald Street	2	8	10
Dalcross Street	...	1	...	...	...	...	...	...	...	...	1
Daviot Street	...	1	...	...	...	...	...	...	...	2	3
Diana Street...	...	2	...	...	...	...	...	...	2	8	12
Elm Street	1	1	...	2
Glenroy Street	1	1	1	...	1	2	5	11
Gordon Road	2	4	6
Inverness Place	...	1	...	...	...	...	...	2	2	7	12
Kincraig Street	1	...	1	2
Keppoch Street	...	1	...	...	...	1	...	1	4	3	10
Lily Street	2	...	2	4
Lochaber Street	1	1
Montgomery Street	...	1	...	...	...	1	...	...	...	1	3
Moy Road	1	...	...	...	...	1	2	2	4	10
Milton Street	...	1	...	...	...	...	2	1	1	7	12
Mackintosh Place	...	1	...	...	...	...	...	2	1	11	15
Northcote Street	4	4
Newport Road	1	...	3	4
Oxford Street	1	2	3
Parade	1	...	...	1
Penywain Place	1	...	...	1
Penylan	1	1
Plasnewydd Place and Road	...	1	...	...	...	...	...	1	1	3	6
Russell Street	...	1	...	...	...	...	...	...	2	2	5
Rose Street	1	2	3
Richmond Road and Crescent	1	9	10
St. Peter Street	4	4
Strathnairn Street	4	2	6
Shakespeare Street	2	4	6
Treharris Street	...	3	...	...	...	...	...	1	2	5	11
Tavistock Street	1	1
Talworth Street	1	3	4
Upper Kincaig Street	1	1	1	3
Vere Street	1	...	...	...	1	...	1	3
Violet Row	1	...	1	2
Wellfield Road and Place	2	2
The Walk	1	...	1	2
West Grove	1	1
Wordsworth Avenue	1	1
Woodland Place	1	1
Total...	...	26	...	3	2	4	4	25	47	159	270

ADAMSDOWN WARD.

NAME OF STREET.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Augusta Street	1	...	...	...	...	...	...	1	3	5
Ascog Street	1	...	1	2
Adams Street	1	...	...	1	...	...	...	3	10	15
Adamsdown Square and Place	1	2	3
Buzzard Street	1	1	3	1	6
Cycle Street	1	...	...	...	...	...	...	...	2	3
Comet Street	1	2	3
Clyde Street	2	1	3
Cumnock Place and Terrace	1	1
Clifton Street	3	3
Cumrae Street and Place	1	...	...	...	...	...	...	1	...	2
Constellation Street	1	2	5	8
Channel Dry Dock	1	1
Copper Street	1	...	...	1	...	1	3
Davis Street	1	...	...	...	4	2	7
Eclipse Street	2	...	...	...	2	4	8
Ellen Street	2	2
Gaol Lane	1	...	...	...	...	...	...	...	...	1
Galston Street and Place	1	...	1
Garth Street and Court	2	1	1	4
Gold Street	1	1
Gwendoline Street	2	2
Godfrey Street	1	...	1
Inchmarnock Street	1	...	...	...	1
Ivor Street	1	1
Iron Street	2	...	...	...	...	...	...	...	...	2
Infirmary	2	...	1	...	2	4	59	68
Kite Street	1	...	...	...	...	1
Kerryroy Street	2	2
Kilcattan Street	1	1	2
Longcross Street	2	2
Lead Street	1	2	3
Meteor Street	1	...	2	3
Metal Street	2	1	3
Moon Street	2	2	4
Moir Street, Place and Terrace	2	...	1	...	...	...	...	...	2	5
Morgan Street	1	...	...	...	...	...	...	1	1	3
North William Street	1	2	2	5
North Luton Street and Place	1	1	2
Newport Road	7	7
Orbit Street	1	...	3	4
Pellet Street	1	...	...	3	4
Planet Street	1	...	...	...	...	...	...	...	3	4
Prince Leopold Street	1	2	3
Pendoylan Street	1	...	...	...	...	...	1	1	3	6
Roland Street	1	...	...	...	...	...	1	1	2	5
Roth Dock	1	7	8
Rhymney Railway	1	1
South Luton Place	3	3
St. George's Channel	1	1
Sandon Place and Street	1	2	...	6	9
Silver Street	1	1
System Street	1	...	2	5	8
Taff Street	1	...	2	3
Tin Street	2	2
Tyodall Street	1	2	4	7
Victoria Street	1	...	...	1	...	...	1	3
Windsor Road	1	1	...	1	3
West Dock	6	6
Zinc Street	2	...	2
Total	13	...	4	5	2	7	18	47	186	282

RIVERSIDE WARD.

NAME OF STREET.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Ann Street	1	...	...	...	1	1	3
Berthwin Street	1	...	1
Beauchamp Street	1	...	1	2
Brook Street	1	3	4
Blackstone Street	1	1
Cowbridge Road	2	2	3	7
Cmaddock Street	1	...	...	...	...	4	2	7
Clare Road and Gardens	1	2	3
Lower and Cathedral Road	...	1	...	...	...	...	...	...	1	8	10
Dyfrig Street	1	1
Despenser Street and Gardens	1	1
Dogo Street	1	2	3
Eldon Road	1	...	3	5	9
Fitzhammon Embankment	1	...	...	1
Gloucester Street	2	1	...	3
Green Street	1	...	1	...	...	...	2
Halket Street	3	2	...	1	6
Hamilton Street	1	2	3
King's Road	1	...	1	...	1	1	4	4	12
Kyvellog Street	1	1
Lewis Street	2	2
Mortimer Road	1	1
Mansfield Street	1	1	...	1	3
Mark Street	1	...	3	4
North Morgan Street	2	2
Neville Street and Place...	1	1	2
Pontcanna Terrace	3	3
Plantagenet Street	1	1	...	1	...	6	9
Picton Place	1	1
Pitman Street	1	1
Plasturton Avenue and Place	5	5
Plasturton Gardens	1	1
Ryder Street	3	3
Rawden Place	3	3
Smeaton Street	1	1
Severn Road	...	1	...	...	2	...	...	...	2	5	10
Sneyd Street	1	1
South Morgan Street	1	...	...	...	...	...	1
Stephenson Street	1	...	...	...	...	...	...	1
Trevethick Street	1	...	...	1	2
Tello Street	2	2
Telford Street	2	1	3
Tudor Road	...	1	...	...	...	...	...	...	2	3	6
Union Workhouse	1	1	39	24	122	187
Wellington Street	...	1	...	...	...	...	1	2	3	5	12
Wyndham Crescent	1	2	2	3	8
Wyndham Road	1	...	1
Wyndham Street and Place	...	1	...	...	...	...	...	...	1	3	5
Wells Street	1	1	2
Total	...	6	...	2	7	2	11	55	60	219	362

CANTON WARD—Continued.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Tintern Street	1	1
Theobald Road	1	3	4
Turner Road	1	1
Westmoreland Street	1	...	...	...	...	...	...	2	3
Turberville Place	1	1
Wells Street	1	...	...	...	...	...	...	1	2
Wellington Street	1	2	3
Westbury Terrace	1	1
William Street
Total	15	...	...	7	1	11	18	55	157	264

ROATH WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Agate Street	2	2
Arthur Street	3	3
Albany Road	1	...	1
Bradley Street	1	2	1	4
Bertram Street	1	6	5	12
Blanche Street	1	2	...	3
Beresford Road	1	...	1	2
Broadway	1	...	1	1	3	12	18
Balaclava Road	1	...	1
Connaught Road	1	1	2
Crofts Street	1	...	...	...	...	...	1	6	8
Cecil Street and Crescent	1	4	4	9
Clifton Street	1	...	...	...	...	...	1	...	2
Cottrell Road	1	1	1	3	6
Claude Road and Place	1	1	2	3	7
Deri Farm	1	1
Diamond Street	1	1	...	...	...	1	6	9
Emerald Street	5	...	...	...	...	...	2	11	18
Elm Street	1	2	3
Fort Street	1	...	...	1
Fox Street	1	...	1
Harold Street	1	...	...	...	...	1	2	4
Helen Street	1	...	1	...	...	...	2	9	13
Marlborough Road	1	...	1
Nora Street	1	...	...	...	...	...	2	11	14
Newport Road	1	...	5	6
Lily Street	1	1
Oakfield Street	1	1
Partridge Road	2	2
Pearl Street, Place, and Crescent	4	...	1	...	...	1	6	10	22
Penylan Road	1	1
Ruby Street	1	1	5	3	10
Richards Terrace	1	...	2	3
Sapphire Street	4	4
Spring Gardens Place and Terrace	2	...	...	...	...	...	2	4	8
Stacey Road	1	1	5	7
Theodora Street	2	...	...	...	...	2	1	4	9
Topaz Street	3	...	...	...	...	...	2	4	9
Wellfield Place	1	1
Total	20	...	3	3	...	4	16	53	130	229

GRANGETOWN WARD.

NAME OF STREET.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phtthisis.	Respiratory Diseases.	Other Causes.	Total.
Andrews' Terrace	1	1
Allerton Street	1	1	2
Amherst Street	1	...	...	3	4
Broomfield Street	2	1	3
Blasencylach Street	1	...	1
Bradford Street	3	3
Bishop Street	2	2
Bromsgrove Street	...	2	...	...	...	...	...	...	1	1	4
Corporation Road	...	1	...	1	...	...	...	...	1	8	11
Clive Street	1	1	...	...	1	...	2	10	15
Cambridge Street	2	2
Compton Street	2	2
Clarence Road	1	1
Cornwall Road	3	2	5
Clare Road	...	1	...	...	...	...	...	3	...	9	13
Coolcæ Street	1	1	1	3
Clydach Street	1	...	...	...	...	...	1	2
Cymer Street	1	...	...	...	...	...	...	...	1
Court Road	2	...	...	1	1	4	4	12
Chester Street and Place...	4	4
Dorset Street and Place	2	...	5	3	10
Deron Street and Place	1	...	...	...	...	2	2	5
Durham Street	1	...	...	1	...	...	2	4
Ely Harbour	1	...	1
Earl Street	...	1	...	...	...	...	...	...	1	2	4
Franklin Street	2	2
Ferry Road	2	2
Forrest Street	2	2
Ferndale Street	1	1	...	...	...	...	2	4
Grange Gardens	1	1
Holmesdale Street and Terrace	...	1	...	...	...	...	1	...	2	7	11
Hewell Street	...	1	...	...	...	...	2	...	1	1	5
Hereford Street	...	1	...	...	...	...	1	1	1	6	10
Kent Street	...	1	...	1	...	...	1	...	2	6	11
Knole Street	1	...	5	4	10
Llanmaes Street	...	1	...	...	...	...	...	1	4	4	10
Ludlow Street	1	1
Monmouth Street	1	...	...	1	2	4
Madras Street	1	3	4
Newport Street	1	1
North Street	1	...	...	...	1
North Clive Street	...	1	...	...	...	...	1	...	1	6	9
Oakley street	1	4	7	12
Penberd Street	...	1	...	1	...	...	...	1	3	4	10
Pentre Street	1	1
Penarth Road	1	...	4	13	18
Pentrelane Street	...	1	...	1	...	...	...	...	1	2	5
Paget Street	1	...	...	...	1	3	4	9
Redlaver Street	2	2
Rookwood Street	1	1	1	2	5
Rutland Street	1	...	...	...	...	1	2	4
River Taff	1	1
Sevenoaks Street	3	3
St. Fagans Street	1	3	4
Somerset Street	...	1	...	...	...	1	...	...	...	2	4
Stoughton Street	1	...	...	1	...	...	...	4	6
Saltmead Road	4	4	8
Stockland Street	1	1	3	4	9
Sanatorium	...	2	2	7	34	...	11	...	1	1	58
Sea View	1	...	...	...	1
Tynant Street	1	...	...	...	1
Thomas Street	1	2	...	5	8
Taff Embankment	1	1
Wedmore Road	1	...	1	2	4
Warwick Street	2	2
Total	2	16	10	47	1	14	21	14	70	184	379

SPLOTT WARD.

NAME OF STREET.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Aberdovey Street	...	1	1	...	...	...	...	...	...	2	4
Adeline Street	2	...	2	5	9
Aberystwith Street	...	1	...	...	...	...	...	1	3	3	8
Burnaby Street	3	3
Bridgend Street	...	6	...	1	...	...	...	...	3	3	13
Cam-ron Street	1	3	4
Coveny Street	...	1	...	...	...	...	...	1	1	2	5
Caerphilly Street	1	...	...	3	4
Cornelia Street	1	1	...	4	1	7
Carlisle Street	...	4	...	1	...	...	...	1	3	10	19
Elaine Street	1	1
Enid Street	1	2	3
Eyre Street	1	2	3
Eagle Paint Works	1	1
Habershon Street and Place	...	2	...	1	...	...	...	1	2	6	12
Gwendoline Street	...	1	...	1	1	...	...	...	...	1	4
Howard Street and Place	1	1	1	3
Hinton Street	1	1
Janet Street	2	9	11
Layard Street	1	3	4
Llanelly Street	...	1	...	...	...	...	...	...	1	5	7
Moorland Road	...	1	...	...	...	...	...	1	4	3	6
Malt House	1	1
Marion Street	3	2	5
Milford Street	...	1	...	...	1	...	...	...	...	5	7
Menelaus Street	...	1	1	...	...	...	...	...	1	...	3
Ordell Street	...	1	...	...	...	...	1	3	1	2	8
Portmanmoor Road	...	1	...	1	1	...	1	2	2	10	18
Pontypridd Street	1	1	...	2
Railway Street	...	6	...	...	1	...	2	1	11	11	32
Swinton Street	3	3
Sanquahar Street	...	1	...	...	...	...	...	...	1	2	4
Seymour Street	2	6	8
SploTT Road	1	3	...	4
Singleton Road	...	1	...	...	...	...	...	1	...	5	7
Swansea Street and Terrace	3	4	7
Tenby Street	...	1	...	...	...	...	...	...	1	6	8
Walker Road	1	2	2	5
Wimborne Street	...	1	...	...	...	...	...	...	1	1	3
Wilson Street	1	...	1	2
Total	...	32	2	5	4	1	8	17	59	181	259

CARDIFF SANATORIUM.

REPORT FOR THE YEAR 1900.			MALES.		FEMALES.		TOTALS.
			Under 5 Years.	Over 5 Years.	Under 5 Years.	Over 5 Years.	
I.—Remaining in Hospital on 31st December, 1899:—							
Scarlet Fever	...	...	2	8	4	14	28
Enteric Fever	...	...	...	6	...	4	10
Diphtheria	...	...	10	16	7	14	47
Total	...	...	12	30	11	32	85
II.—Admitted during the year ending 31st December, 1900:—							
Scarlet Fever	...	...	35	75	47	93	250
Enteric Fever	...	...	2	37	3	20	62
Diphtheria	...	...	54	121	66	143	384
Small-Pox	..	...	...	6	...	3	9
Measles	...	...	...	2	...	2	4
Typhus Fever	...	...	...	4	...	...	4
Plague	...	...	...	1	...	...	1
Other Diseases	...	...	...	1	...	...	1
Total	...	...	91	247	116	261	715
Total under treatment in 1900	...	...	103	277	127	293	800
III.—Of the above there were Discharged							
<i>(a) Recovered:—</i>							
Scarlet Fever	...	...	28	67	35	77	207
Enteric Fever	...	...	2	31	3	18	54
Diphtheria	...	...	46	119	54	122	341
Small-Pox	...	...	...	4	...	2	6
Measles	...	...	...	2	...	2	4
Typhus Fever	...	...	...	4	...	...	4
Plague	...	...	...	...	...	...	...
Other Diseases	...	...	...	...	...	...	...
Total	...	...	76	227	92	221	616
<i>(b) Died:—</i>							
Scarlet Fever	...	...	3	...	2	...	5
Enteric Fever	...	...	...	10	...	5	15
Diphtheria	...	...	11	5	10	9	35
Small-Pox	...	...	...	2	...	1	3
Measles	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...
Plague	...	...	...	1	...	...	1
Other Diseases	...	...	...	...	...	...	...
Total	...	...	14	18	12	15	59
IV.—Remaining in Hospital on 31st December, 1900:—							
Scarlet Fever	...	...	6	16	14	30	66
Enteric Fever	...	...	...	2	...	1	3
Diphtheria	...	...	7	13	9	26	55
Other Diseases	...	...	...	1	...	...	1
Total	...	...	13	32	23	57	125
Total under treatment in 1900	...	...	103	277	127	293	800

CARDIUM BAMBAYANUM

Year	Females		Males		Total	
	1900-1909	1910-1919	1900-1909	1910-1919	1900-1909	1910-1919
Admitted to Hospital on this Disease						
1919	1	1	1	1	2	2
1918	1	1	1	1	2	2
1917	1	1	1	1	2	2
1916	1	1	1	1	2	2
1915	1	1	1	1	2	2
1914	1	1	1	1	2	2
1913	1	1	1	1	2	2
1912	1	1	1	1	2	2
1911	1	1	1	1	2	2
1910	1	1	1	1	2	2
1909	1	1	1	1	2	2
1908	1	1	1	1	2	2
1907	1	1	1	1	2	2
1906	1	1	1	1	2	2
1905	1	1	1	1	2	2
1904	1	1	1	1	2	2
1903	1	1	1	1	2	2
1902	1	1	1	1	2	2
1901	1	1	1	1	2	2
1900	1	1	1	1	2	2
Total	19	19	19	19	38	38
Died						
1919	1	1	1	1	2	2
1918	1	1	1	1	2	2
1917	1	1	1	1	2	2
1916	1	1	1	1	2	2
1915	1	1	1	1	2	2
1914	1	1	1	1	2	2
1913	1	1	1	1	2	2
1912	1	1	1	1	2	2
1911	1	1	1	1	2	2
1910	1	1	1	1	2	2
1909	1	1	1	1	2	2
1908	1	1	1	1	2	2
1907	1	1	1	1	2	2
1906	1	1	1	1	2	2
1905	1	1	1	1	2	2
1904	1	1	1	1	2	2
1903	1	1	1	1	2	2
1902	1	1	1	1	2	2
1901	1	1	1	1	2	2
1900	1	1	1	1	2	2
Total	19	19	19	19	38	38
Admitted to Hospital on this Disease						
1919	1	1	1	1	2	2
1918	1	1	1	1	2	2
1917	1	1	1	1	2	2
1916	1	1	1	1	2	2
1915	1	1	1	1	2	2
1914	1	1	1	1	2	2
1913	1	1	1	1	2	2
1912	1	1	1	1	2	2
1911	1	1	1	1	2	2
1910	1	1	1	1	2	2
1909	1	1	1	1	2	2
1908	1	1	1	1	2	2
1907	1	1	1	1	2	2
1906	1	1	1	1	2	2
1905	1	1	1	1	2	2
1904	1	1	1	1	2	2
1903	1	1	1	1	2	2
1902	1	1	1	1	2	2
1901	1	1	1	1	2	2
1900	1	1	1	1	2	2
Total	19	19	19	19	38	38
Died						
1919	1	1	1	1	2	2
1918	1	1	1	1	2	2
1917	1	1	1	1	2	2
1916	1	1	1	1	2	2
1915	1	1	1	1	2	2
1914	1	1	1	1	2	2
1913	1	1	1	1	2	2
1912	1	1	1	1	2	2
1911	1	1	1	1	2	2
1910	1	1	1	1	2	2
1909	1	1	1	1	2	2
1908	1	1	1	1	2	2
1907	1	1	1	1	2	2
1906	1	1	1	1	2	2
1905	1	1	1	1	2	2
1904	1	1	1	1	2	2
1903	1	1	1	1	2	2
1902	1	1	1	1	2	2
1901	1	1	1	1	2	2
1900	1	1	1	1	2	2
Total	19	19	19	19	38	38

Mortality per cent. under treatment :—

Scarlet Fever	...	...	1·8%
Enteric Fever	...	...	20·8
Diphtheria	...	...	8·1
Small-Pox	...	...	33·3
Measles	...	...	...
Typhus Fever	...	...	...
Plague	...	...	100
Other Diseases	...	...	...

B. W. BROAD, M.B.,

Medical Superintendent.

WATER SUPPLY.—To the excellent supply of pure water which is provided for the inhabitants of this district may be attributed in some measure the satisfactory state of the public health, more particularly the comparative immunity of the town from Enteric Fever, a disease at all times closely associated with impure water. From a public health point of view, therefore, one of the most important undertakings of the Sanitary Authority has been the construction of the new Waterworks, by which an ample supply of a pure soft water is obtained from the Taff Fawr Watershed of the Brecon Beacons.

This extensive gathering ground, situated to the north of the South Wales Coalfield on the old Red Sandstone formation, forms the highest ground in South Wales, the summits of the Beacons rising to 2,910 feet above the sea, and upon which the average rainfall is 70 inches per annum.

I am indebted to Mr. C. H. Priestley, M.I.C.E., the Engineer of the Cardiff Waterworks, for the following information relating to these works :—

The Cardiff Corporation Act of 1884 gave the Corporation power to impound and utilise the water flowing from the watershed of 10,400 acres, and authorised the construction of three Storage Reservoirs, with a total capacity of 1,220 million gallons, and three balancing Reservoirs at Cefn, Blackbrook, and Rhubina respectively, on the line of conduit, and a high level service Reservoir and Filter Beds at Rhubina for the supply by gravitation of the high level districts.

Also an Aqueduct or conduit connecting the storage reservoirs and passing down the Valley of the Taff through Merthyr Tydfil, Pontypridd, Taff's Well and Tongwynlais to Rhubina, and from there to the two storage reservoirs at Lisvane and Llanishen, about eight miles from Cardiff, a total distance of about 35 miles.

After the passing of the Act these works were immediately proceeded with, and it was found that No. 1 reservoir could be advantageously enlarged, so that the total storage has been considerably increased.

At the same time a new reservoir was constructed at Llanishen and completed in 1886, giving an additional storage capacity of some 317 million gallons. This reservoir immediately adjoins the Lisvane reservoir previously built by the Company which owned the Water Works previous to their purchase by the Corporation in 1879. The construction of the Llanishen Reservoir necessitated the removal of the old filters which occupied a site in the middle of the new reservoir. Land was procured near an estate known as the "Heath" about two miles from the centre of Cardiff, and three filter beds were built of sufficient capacity to filter 1,000,000 gallons each per 24 hours, allowing 2·78 gallons per superficial foot of filtering area per hour. A covered service reservoir was also constructed here with a capacity of 1,300,000 gallons. These filters becoming inadequate to the requirements of the town, three additional filter beds were constructed of similar capacity, and these are now working to their full efficient delivery, and it will soon be necessary to enlarge the service reservoir and construct more filters. The filtering material is composed of shingle, gravel and sand, most of it coming from Bideford.

The first storage reservoir connected with the new works, and known as the Cantreff Reservoir (No. 2 Reservoir), was commenced in March, 1886, and opened for use in September, 1892.

The embankment of the reservoir is 1,080 feet above Ordnance datum, and the 4,000 acres of watershed above the reservoir (chiefly mountain pasture) rises to a height of 2,910 feet above Ordnance datum at the Brecon Beacons.

The capacity of the reservoir when full is 322 million gallons. Simultaneously with the building of the Cantreff reservoir the aqueduct and balancing reservoirs were constructed. The aqueduct consists of a line of iron pipes 29-in. and 24-in. diameter. The balancing reservoirs were constructed at Cefn, Blackbrook and Rhubina, each with a capacity of just over half a million gallons.

The covered service reservoir which receives the water after filtration at Rhubina supplies the high level district of Llandaff and Whitchurch, Llanishen, &c.

The supply of Penarth being pumped from Cogan. This pumping station is about to be extended and a new service reservoir will be constructed at Leckwith for supplying the high level district of Penarth.

Immediately after the completion of the Cantreff Reservoir the Beacons Reservoir (No. 1 Reservoir) was proceeded with and completed in September, 1897. Powers were obtained in 1894 for enlarging the original capacity of this reservoir to 345 million gallons with a water area of 51 acres.

The Corporation have Parliamentary powers to construct another storage reservoir in the Taff Fawr Valley (No. 3 Reservoir). This will be the largest of the series, and will have a capacity of 670 million gallons, giving another three million gallons per day for the use of the town, making a total supply of 10,500,000 gallons per day, or sufficient for a population of 420,000 at 25 gallons per head. In addition to the Taff Fawr sources of supply the Cardiff Corporation have power to abstract three million gallons of water per day from the River Ely, as well as to take the water from the drainage area of 2,200 acres at Lisvane and Llanishen, all of which water is suitable for trade and sanitary purposes and might be made use of by means of duplicate mains.

It is evident from the above description of the works by the Engineer that Cardiff will have an ample supply of excellent water for many years to come.

As usual with surface waters from the Old Red Sand Stone the water is soft, containing about four degrees of hardness, and is sometimes peaty and turbid before filtration. It does not, as is frequently the case with soft surface waters, appear to have any solvent action upon lead, and no cases of lead poisoning have been brought to my notice as due to this cause. The water, however, has a corroding action upon iron main and service pipes, producing in these obstructive deposits of oxide of iron.

Considerable difficulty arises from the deficient protecting power of the Angus Smith's varnish which lines the interior of the pipes. The efficient filtration of this water is obviously a matter of the first importance as so many outbreaks of disease have been recorded which have originated from a neglect of this precaution. Recent bacteriological investigations have demonstrated the extreme importance of efficient filtration, and although probably much remains to be discovered before the results of bacteriologists can be implicitly accepted, they nevertheless afford the safest guide which we possess of the quality of drinking water. To secure efficient filtration Professor Koch considers that the place of filtration should not exceed 100 m.m. per hour (or about 2,000,000 gallons per acre daily). This conclusion was based upon experiments during the outbreak of Cholera at Hamburg and Altona, when it was found that by keeping the pace of filtration below 2,000,000 gallons per acre daily the bacteria in each c.c. of the filtered water at Altona remained below 100—20 to 30 being the average. Koch states that in January, 1892, the number of micro-organisms suddenly increased to from 1,000 to 2,000 per c.c., and that

The first storage reservoir connected with the new works and known as the Central Reservoir (No. 2 Reservoir), was commenced in March, 1902, and opened for use in September, 1903.

The enlargement of the reservoir to 1,500 feet above Johnston station and the filling of the reservoir above the reservoir capacity treatment plant to a height of 1,115 feet was completed at the Johnston Reservoir.

The capacity of the reservoir when full is 525 million gallons. Simultaneously with the filling of the Central Reservoir the adjacent and balancing reservoir was constructed. This reservoir consists of a line of iron pipes 24-in. and 24-in. diameter. The balancing reservoir is constructed at Oak, Blackstone and Koubier, each with a capacity of just over half a million gallons.

The covered service reservoir which receives the water after filtration at Johnston carries the high level content of Johnston and Whitcomb, Johnston, etc.

The supply of water being pumped from Japan. The pumping station is also to be extended and a new service reservoir will be constructed at Johnston for supplying the high level content of Johnston.

Immediately after the completion of the Central Reservoir the Johnston Reservoir (No. 1 Reservoir) was provided with and completed in September, 1902. It was then enlarged to 1,115 feet for enlarging the original capacity of the reservoir to 525 million gallons with a water level of 21 feet.

The Corporation have furthermore provided to construct another storage reservoir in the Fair Valley (No. 3 Reservoir). This will be the largest of the works and will have a capacity of 870 million gallons. It will be situated three miles from Johnston and will have a total capacity of 10,000,000 gallons per day, or sufficient for a population of 1,000 at 25 gallons per head. In addition to the Fair Valley reservoir the Corporation have power to abstract from Johnston Reservoir of water per day from the Johnston Reservoir to take the water from the drainage area of 7,500 acres at Johnston and Johnston. It is water is suitable for trade and sanitary purposes and might be made use of by means of a water main.

It is evident from the above description of the works by the Johnston Reservoir will be an ample supply of excellent water for many years to come.

As used with surface water from the Old Bed Pond above the water is soft, containing no iron, and is sometimes hard and turbid below Johnston. It was found that the case with soft surface water, appears to have very solvent action upon lead and zinc of lead poisoning have been brought to my notice in this case. The water, which has a corrosive action upon iron pipes and service pipes, including in these instances zinc of oxide of iron.

Considerable difficulty arises from the definite poisoning power of the Japan Reservoir, and when from the interior of the pipes. The different situation of the water is observed, a lot of the first experience as so many outbreaks of disease mentioned recorded which have taken from a height of low penetration. Lowest bacteriological investigations have indicated the extreme impurities of soft water. And although probably much water is consumed below it a number of investigations can be rapidly completed, they are not in the water which we possess of the quality of drinking water. The severe outbreak from Johnston Reservoir which the place of Johnston should not exceed 100 miles per day about 2,000,000 gallons per day. This condition was found upon examination of the outbreak of Cholera at Hamburg and Altona, when it was found that the water of Johnston below 2,000,000 gallons per day daily the bacteria in each cubic centimetre of water remained below 100-20 to 30 being the average. It was stated that in January, 1900 the number of micro-organisms which increased to from 1,000 to 2,000 per c.c., and that

in February an outbreak of Typhoid Fever occurred. In January and February, 1893, the epidemic of Cholera which occurred in Altona was preceded by a large increase in the number of bacteria in the filtered water. Realising the importance of a bacteriological investigation of the water supply, your Waterworks Committee, acting under the able guidance of its Chairman, Alderman D. Jones, resolved that a systematic periodical bacterial examination should be made in addition to the ordinary chemical examination. This has been regularly carried out since April, 1900, at monthly intervals by Dr. Savage, at the Public Health Laboratory.

Samples from the Beacons, Cantreff, Lisvane, Llanishen and Rhubina Reservoirs, and from the Heath Filters were examined bacteriologically in April, May, June, August and October, and chemically in April, July and December. The water from the Beacons and Cantreff Reservoirs were also examined both chemically and bacteriologically in September.

A summary of the results of these examinations is given below. They indicate freedom from contamination, and a fairly constant composition, and a condition of still greater purity in the filtered samples:—

SUMMARY OF CHEMICAL ANALYSIS OF CARDIFF WATERS.

From where Sample obtained.	Date of Analysis.	Total Solids.	Free Ammonia.	Albuminoid Ammonia.	Chlorine.	Nitrogen as Nitrates.	Total Hardness.
		In parts per 100,000.					
1900.							
Heath Filter ...	April ...	9.3	0.002	0.008	0.8	Nil.	3.5
" " ...	July ...	9.4	0.005	0.013	0.1	"	4.3
" " ...	December ...	7.5	0.0018	0.006	0.8	"	4.3
Rhubina Reservoir	April ...	7.4	0.003	0.008	0.7	"	2.8
" " "	July ...	7.25	0.006	0.015	1.0	"	4.3
" " "	December ...	6.8	0.002	0.0096	0.75	"	3.7
Llanishen Reservoir	April ...	6.6	0.009	0.017	0.8	"	2.3
" " "	July ...	6.7	0.004	0.009	1.0	"	3.8
" " "	December ...	6.6	0.0024	0.01	0.75	"	4.1
Lisvane Reservoir	April ...	6.5	0.003	0.011	0.8	"	2.3
" " "	July ...	7.2	0.0046	0.01	1.0	"	4.1
" " "	December ...	6.7	0.002	0.012	0.8	"	4.3
Cantreff Reservoir	April ...	5.8	0.008	0.015	0.8	"	2.0
" " "	July ...	6.0	0.005	0.012	1.0	"	3.2
" " "	September ...	6.9	0.002	0.01	0.8	"	2.6
" " "	December ...	5.8	0.002	0.009	0.7	"	2.4
Beacons Reservoir	April ...	6.3	0.004	0.012	0.8	"	2.3
" " "	July ...	4.8	0.008	0.014	1.0	"	3.5
" " "	September ...	6.8	0.002	0.012	0.8	"	2.7
" " "	December ...	4.9	0.004	0.01	0.7	"	2.3

RESULT OF BACTERIOLOGICAL EXAMINATIONS.

Date, 1900.	Number of Organisms developing per cubic centimetre at											
	20°	37°	20°	37°	20°	37°	20°	37°	20°	37°	20°	37°
	Beacons.		Cantreff.		Lisvane.		Llanishen.		Rhubina.		Heath.	
April ...	134	34	121	42	380	20	310	14	283	11	345	16
May ...	648	34	426	45	434	46	342	13	295	5	360	26
June ...	328	74	143	28	380	11	298	20	210	9	242	12
August ...	202	402	280	253	136	8	110	10	48	2	83	53
September ...	172	54	155	26	—	—	—	—	—	—	—	—
October ...	58	9	118	25	212	8	111	6	97	14	70	12

MEAT INSPECTION AND FOOD SUPPLY.—Your Committee have always realized the importance of an efficient system of food inspection, and further developments in the administration of this work have taken place from year to year.

In 1896, it was decided to supplement the inspection which was then being carried out by the Inspector of Nuisances by the appointment of a Veterinary Surgeon to act as Meat Inspector, and in May, 1897, Mr. C. Moir, M.R.C.V.S., was appointed, whose duties were defined by a Resolution of the Sanitary Authority, as follows:—

1. "The Inspector of Meat shall visit the Roath and Canton Slaughterhouses of the Corporation at least once daily between the hours of 7 a.m. and 6 p.m. in the winter months, and between the hours of 5 a.m. and 10 p.m. in the summer months, and at such other stated times as the Medical Officer of Health may request him in writing, for the performance of the duties herein specified, and shall also visit any other buildings which are kept or used for the sale of Butchers' Meat within the Borough aforesaid.

2. He shall carefully inspect all cattle, sheep, or other animals, and all carcasses which he may find in the above-mentioned slaughterhouses or other buildings, and shall immediately report to the Medical Officer of Health as to the condition of any animal or carcase which he may consider diseased, in order that the Medical Officer of Health may examine the same and decide whether the meat of such carcase is fit or unfit for human food.

3. He shall examine, at least once in every fortnight, each and every cowshed within the Borough aforesaid, and report to the Medical Officer of Health all cases of diseased cows he may find therein, in order that necessary steps may be taken to prevent the distribution of milk which would be likely to cause disease.

4. He shall act, when required, with the Medical Officer of Health in all cases where it is necessary to visit any dairy within or without the Borough aforesaid, under the following powers contained in Sec. 4 of the Infectious Diseases (Prevention) Act, *i.e.*:—

"In case the Medical Officer of Health is in possession of evidence that any person
 "in the district is suffering from infectious disease attributable to milk supplied
 "within the district from any dairy situate within or without the district, or
 "that the consumption of milk from such dairy is likely to cause infectious
 "disease to any person residing in the district, such Medical Officer shall, if
 "authorised in that behalf by an order of a justice having jurisdiction in the
 "place where such dairy is situate, have power to inspect such dairy, and if
 "accompanied by a Veterinary Inspector, or some other proper qualified
 "Veterinary Surgeon, to inspect the animals therein, and, if on such
 "inspection the Medical Officer shall be of opinion that infectious disease is
 "caused from consumption of the milk supplied therefrom, he shall report
 "thereon to the Local Authority, and his report shall be accompanied by any
 "report furnished to him by the said Veterinary Inspector, or Veterinary
 "Surgeon, and the Local Authority may thereupon give notice to the dairy-
 "man to appear before them within such time not less than 24 hours as may
 "be specified in the notice, to show cause why an order should not be made
 "requiring him not to supply any milk therefrom within the district, until
 "such order has been withdrawn by the Local Authority."

5. He shall in all matters act under and carry out the instructions of the Health and Port Sanitary Committee, to whom he shall be directly responsible for the due performance of all duties appertaining to his appointment, or in relation thereto.

6. He shall execute any other duties from time to time in connection with his appointment as Meat Inspector, which may be required of him by the Health and Port Sanitary Committee, or the Medical Officer of Health, without extra remuneration.

MEAT INSPECTION AND FOOD SUPPLY - Your Committee has always realized the importance of an efficient system of food inspection and further developments in the organization of this work have taken place from year to year.

In 1928 it was decided to supplement the inspection which was then being carried out by the Inspector of Fisheries by the appointment of a Veterinary Surgeon to act as Meat Inspector and in May, 1927, Mr. M. H. V. was appointed with duties which were defined by the Commission of the Sanitary Authority as follows:-

1. The Inspector of Meat shall visit the hotels and public refreshment houses of the district at least once daily between the hours of 1 a.m. and 6 p.m. in the winter months, between the hours of 2 a.m. and 10 p.m. in the summer months, and he shall attend to the Medical Officer of Health any request for an analysis for the purpose of the law as herein specified, and shall also visit any other buildings which may be used for the sale of meat within the borough.

2. He shall carefully inspect all cattle, sheep, or other animals, and all carcasses which may find in the above-mentioned establishments or other buildings, and shall immediately report to the Medical Officer of Health as to the condition of any animal or carcass which he may find, in order that the Medical Officer of Health may determine the same and whether the meat of such carcass is fit or unfit for human food.

3. He shall examine, at least once in every month, and may examine more often, all the premises used for the sale of meat, and report to the Medical Officer of Health as to the condition of such premises, and shall also report to the Medical Officer of Health as to the condition of any premises which he may find to be unfit for human food.

4. He shall act, when required, with the Medical Officer of Health in all cases where it is necessary to visit any dairy within or without the borough, and shall also act as a member of the Sanitary Committee of the Borough Council.

"In case the Medical Officer of Health is in possession of evidence that any person is in the district who is suffering from infectious diseases, he shall immediately report to the Medical Officer of Health as to the name of such person, and the address of such person, and shall also report to the Medical Officer of Health as to the condition of such person, and shall also report to the Medical Officer of Health as to the condition of any premises which he may find to be unfit for human food."

5. He shall in all matters act under and carry out the instructions of the Health and Sanitary Committee, to whom he shall be directly responsible for the due performance of all his duties, and shall also be directly responsible for the due performance of all his duties in connection with the Meat and Food Inspection Act, 1927.

6. He shall exercise any other duties from time to time in connection with his duties as Meat Inspector, which may be assigned to him by the Health and Food Inspector, or the Medical Officer of Health, without extra remuneration.

7. He shall be paid a salary of £140 per annum as Inspector of Meat, payable quarterly. The appointment shall be determined by one calendar month's notice.

8. He shall reside within the Borough of Cardiff.

9. He shall report to the Health and Port Sanitary Committee every fortnight and annually as to the works performed by him as Inspector of Meat.

The duties and salary in connection with the above appointment are in addition to the duties of his appointment under the Cardiff Corporation as Veterinary Inspector, under the Diseases of Animals Act, at a salary of £100 per annum, and also in addition to his duties as Veterinary Surgeon to the Health Department of the Cardiff Corporation at a salary of £60 per annum.

It is understood and agreed that he shall devote the whole of his time to the service of the Cardiff Corporation, in order to satisfactorily discharge the duties of his several appointments under the Cardiff Corporation."

During the year under consideration, I reported that the inspection of butchers' shops and provision stores could, with advantage, be carried out to a greater extent, and with a slight administrative change in the Health Department, and your Committee agreed to the appointment of a special Inspector having experience as a butcher and meat salesman. Inspector Macgregor was thereupon appointed for this purpose. At the same time by an arrangement between the Health Committee and the Property and Markets Committee, Mr. N. Rees the Superintendent of the Roath Abattoirs, and three of his Assistants were appointed Inspectors under the provisions of the Towns Improvement Clauses Act, to assist in the inspection of meat at the Public Abattoirs. Your Committee has thus a staff of one Veterinary Surgeon, and five special Inspectors engaged in the inspection of meat and provisions, besides the Medical Officers of Health, and Inspector of Nuisances, who have statutory duties in this respect. Further, the Cardiff Port Sanitary Authority appointed the Chief Port Inspector Mr. D. Jenkins, Inspector under the Contagious Diseases (Animals) Acts, to carry out the orders of the Board of Agriculture made under those Acts in connection with cattle and carcasses on board ships, landed and slaughtered at the Foreign Animals Wharf at the Docks. Your Committee also had under consideration the question of a more stringent examination of carcasses and meat brought into the Borough from outside districts. The question, which is one of considerable difficulty, can only be solved by the establishment of Meat Stations, or places of inspection through which all such meat must pass before being supplied to the consumer. At present no power exists for establishing any such system, and in all probability it would be necessary to obtain this power by the insertion of a clause in a Local Act of Parliament based on the recommendation of the Royal Commission on Tuberculosis.

The following are the drafts of clauses which have been submitted to your Committee for this purpose:—"The Cardiff Urban Sanitary Authority may require that all meat slaughtered elsewhere than in a public slaughter-house, and brought into their district for sale, and passed as sound be stamped," and "the Authority may require that all meat slaughtered elsewhere than in a public slaughter-house, and brought into their district for sale be taken to a place or places appointed by the Cardiff Corporation, when such meat may be inspected, and that the Corporation be empowered to make a charge to cover the reasonable expenses attendant on such inspection."

The following table gives the amount of meat in pounds, found by the Medical Officer of Health to be unfit for food, and destroyed either with the consent or by an order of a Magistrate, in each year during the period 1891-1900:—

Year.				Meat.
1891	...	...	...	2,065 lbs.
1892	...	...	...	1,326 "
1893	...	...	...	6,214 "
1894	...	...	...	3,209 "

Year.				Meat.
1895	...	...	...	4,523 lbs.
1896	...	...	...	3,896 ..
1897	...	...	...	10,824 ..
1898	...	...	...	9,929 ..
1899	...	...	...	14,205 ..
1900	...	...	...	21,217 ..

During the year 1900, the number of animals slaughtered in the Public Slaughter-houses in the Borough, was as follows:—

		Roath Abattoir.	Canton Abattoir.
Beasts	...	5,629	699
Sheep	...	47,849	5,460
Calves	...	3,820	992
Pigs	...	26,582	3,632
		<u>83,880</u>	<u>10,783</u>

UNSOOUND MEAT SEIZED OR SURRENDERED DURING THE YEAR, 1900.

Place of Seizure.	Number of Animals.	Number condemned by Magistrate.	Number destroyed by arrangement with Owner.	Total Weight in Lbs.
Roath Slaughter-house ...	30	2	28	13,495
Canton Slaughter-house ...	1	—	1	840
Great Western Railway Station ...	2	—	2	90
Wharf, Roath Basin ...	1	—	1	1,400
Total ..	34	2	32	15,825

OTHER ARTICLES OF FOOD SEIZED OR SURRENDERED DURING THE YEAR, 1900.

Place of Seizure.	Description of Articles seized.	Condemned by Magistrate.	Destroyed by arrangement with Owner.	Total Weight in Lbs.
Great Western Railway Station ...	70 Rabbits ...	—	1	156
Great Western Railway Station ...	30 Boxes Mackerel ...	—	1	2,520
Stores, Canal Wharf ...	17 Bags Gooseberries	—	1	1,904
Christina Street ...	28 Pieces of Bacon ...	1	—	196
Shop ...	11 Pieces of Beef ...	1	—	56
Warehouse, Tredegar Street ...	Box of Hams ...	—	1	560
Total ...		2	4	5,392

Year	...	...	...	...
1920	...	...	...	...
1921	...	...	...	...
1922	...	...	...	...
1923	...	...	...	...
1924	...	...	...	...
1925	...	...	...	...
1926	...	...	...	...
1927	...	...	...	...
1928	...	...	...	...
1929	...	...	...	...
1930	...	...	...	...

During the year 1930, the number of animals slaughtered in the Territory was as follows:—

Kind of animal	Number	Value
Horses
Swine
Cattle
Sheep
Total

UNBOUND MEAT SEED OR SUBSEQUENT DURING THE YEAR 1930

Name of person	Quantity of seed or subsequent	Value	Weight in lbs
...
...
...
...
Total

OTHER ARTICLES OF FOOD SEED OR SUBSEQUENT DURING THE YEAR 1930

Name of person	Quantity of articles of food seed or subsequent	Value	Weight in lbs
...
...
...
...
...
Total

PUBLIC HEALTH LABORATORY.—The Laboratory is under the control of a Joint Committee consisting of members of the Health Committee of the Cardiff Corporation and of members of the Sanitary Committee of the Glamorgan County Council, together with representatives of the Technical Instruction Committees of the Corporation and County Council. Professors C. M. Thompson and F. A. Dixon representing the University College of South Wales and Monmouthshire act upon the committee in a consultative capacity, as the Laboratory is utilized for the instruction of Students and Medical Practitioners in the Public Health Department of the Medical Faculty of the College. The Medical Officers of Health of the County of Glamorgan and of the County Borough of Cardiff, respectively, are the Directors of the Laboratory.

The work, which commenced in January, 1900, on the appointment of W. G. Savage, M.D., B.Sc., as Bacteriologist, rapidly increased, and an Assistant, Mr. J. H. Sugden, B.Sc., A.I.C., was appointed in August.

The investigations carried out have been of extreme importance and utility, and comprise a systematic Chemical and Bacteriological Examination of the Public Water Supplies in the County and Borough of various foods and of the Milk supplies of the district. The work in connection with Infectious Disease has been of great practical value, more particularly that relating to some cases of plague and suspected plague.

The bacteriological examination of Pathological specimens, of carcases of animals diseased or suspected to be diseased and seized at the Public Slaughter-houses and Markets, also formed an important part of the Laboratory work. Much has also been done on behalf of the Cardiff Hospital for Infectious Diseases in connection with the diagnosis and the determination of the duration of infection. A detailed account of all the work is given in the following Annual Report presented by Dr. Savage to the Joint Committee.

To the Chairman and Members of the Laboratory Joint Committee.

GENTLEMEN,

I have the honour of submitting to you my First Annual Report on the work done at the Cardiff and County Public Health Laboratory for the year 1900.

The figures given and results obtained are based on the entries in the books of the Laboratory, which are arranged so as to keep accurate records of all work done.

The Laboratory consists of a bacteriological department of two rooms, a chemical laboratory, a small photographic developing room, a combined museum and lecture room, offices for Directors and Bacteriologists, and a specially fitted up room for the few animals required. I had the honour to be appointed your Bacteriologist in November, 1899, beginning my duties December 18th, 1899, and at once commenced, in conjunction with the Directors, completing the equipment of the existing Laboratory.

The Laboratory is now well equipped in its several departments, and during the whole of 1900 continuous work has been carried on. Owing to the rapid increase of the work done, I was unable to cope with it unaided, and on the recommendation of the Directors, you appointed Mr. J. H. Sugden, B.Sc. A.I.C., Assistant to the Bacteriologist. Mr. Sugden commenced his duties August 13th, 1900.

At the meeting of the Laboratory Joint Committee, held September 7th, 1900, an extended scale of fees was authorised. This scale of fees, together with further information in regard to the resources of the Laboratory, and the nature and scope of the classes, has been sent to all medical men in Cardiff and the Administrative County of Glamorgan.

The work done consists of the examination of specimens sent in by medical men, for which fees are charged, and of work sent in by the Medical Officer of Health for Cardiff, and the Medical Officer of Health to the Glamorgan County Council, the two Directors of the Laboratory.

PUBLIC HEALTH LABORATORY—The Laboratory is under the control of a Joint Committee consisting of members of the Health Committee of the County Council and members of the Sanitary Committee of the County Council. The members of the Sanitary Committee of the County Council are the representatives of the Technical Institute of the County Council and County Council. Professors G. M. Thompson and N. A. Jones representing the University College of South Wales and Monmouthshire set upon the committee in a representative capacity as the Laboratory. The committee is a representative body in the Public Health Department of the Medical Officer of Health. The Medical Officer of Health of the County of Glamorgan and of the County Council respectively, are the Director of the Laboratory.

The work, which commenced in January, 1900, on the appointment of W. G. Baynes, B.Sc., as Bacteriologist, rapidly increased, and on November, 1901, Mr. J. H. Baynes, B.Sc., A.I.C., was appointed as Assistant.

The investigations carried out have been of extensive importance and utility, and have included a systematic Chemical and Bacteriological Examination of the Public Water Supplies in County and Borough of various kinds and of the Milk supplies of the district. The work is conducted with Industry and Diligence, and has been of great practical value, particularly in relation to some cases of plague and typhoid fever.

The bacteriological examination of pathological specimens, of various kinds, is carried out in accordance with the Public Health Act, 1875, and the Public Health Act, 1890. The Laboratory is also engaged in the examination of the Public Health Act, 1875, and the Public Health Act, 1890. A detailed account of all the work is given in the Laboratory Report presented by Dr. Baynes to the Joint Committee.

To the Chairman and Members of the Laboratory Joint Committee.

GENTLEMEN,

I have the honor of submitting to you my First Annual Report on the work done in the Public Health Laboratory for the year 1900.

The figures given and results obtained are based on the entries in the books of the Laboratory, which are arranged so as to keep accurate records of all work done.

The Laboratory consists of a bacteriological department of two rooms, a chemical laboratory, a small photographic developing room, a combined museum and lecture room, office, and a specially fitted up room for the use of the microscope. The Laboratory was founded in 1880, and at once commenced in connection with the University, comprising the equipment of the existing Laboratory.

The Laboratory is now well equipped in the several departments, and during the year 1900 numerous cases have been carried on. Owing to the rapid increase of the work done, I was unable to cope with it myself, and on the recommendation of the Council, you suggested Mr. J. H. Baynes, B.Sc., A.I.C., Assistant to the Bacteriologist. Mr. Baynes was appointed in August 1900.

At the meeting of the Laboratory Joint Committee, held September 19, 1900, an extended scale of fees was authorized. This scale of fees together with further information, regard to the resources of the Laboratory, and the nature and scope of the classes, has been sent to all medical men in Cardiff and the Administrative County of Glamorgan.

The work done consists of the examination of specimens sent in for medical purposes, which has been arranged, and of work sent in by the Medical Officer of Health for Cardiff and the Medical Officer of Health to the Glamorgan County Council, the two Directors of the Laboratory.

The work done during 1900 can be seen from the table given below :—

TABLE I.

Specimens and Samples examined during 1900.

Suspected Diphtheria	243
Suspected Typhoid Fever (Serum-diagnosis)	73
Sputum for Tubercle Bacilli	86
Suspected Gonococcus infection	9
Examination for special organisms :— (of Anthrax, 1; Tetanus, 1; Ringworm, 3; Plague, 3)	8
Pathological examination of growths	10
Examination of Urine	18
Examination of Milk for Pathogenic organisms	12
Diseased Meat	18
Vomit, Blood, Pus, &c.	8
Poisons in Food (Arsenic in Glucose)	4
Drinking Water—Bacteriological examination	119
" Chemical Analysis	198
Sewage and sewage effluents	11
Total	817

It will be noticed that, apart from water samples, the specimens received were mainly in connection with the diagnosis of Diphtheria and Typhoid Fever, and the examination of Sputum for the Tubercle Bacillus. In Table II., the results obtained for these examinations are briefly stated :—

TABLE II.

Nature of Examination.	Number of Positive Results.	Number of Negative Results.	Total.
Suspected Diphtheria	72	171	243
" Typhoid Fever	35	38	73
Sputum for Tubercle Bacilli	36	50	86

It is satisfactory to note that the facilities offered by the Laboratory for the accurate diagnosis of disease, and as an aid to its prevention, are being steadily appreciated, as is shown by the progressive increase in the work done. This can be readily seen from Table III., which tabulates the work done at the Laboratory during each month of 1900.

TABLE III.

Work done for each Month of 1900. The work is arranged under two headings,—Waters examined, and Specimens, the latter including all other examinations.

Month.	Waters Examined.	Specimens.	Total.
January	7	13	20
February	9	33	42
March	3	30	33
April... ..	15	33	48
May	24	38	62
June	17	34	51
July	48	16	64
August	50	37	87
September	40	55	95
October	34	68	102
November	33	84	117
December	37	59	96
The Year 1900	317	500	817

The work done during 1900 can be seen from the table given below—

TABLE I

Specimens and Reports Examined during 1900.

104	Specimens of Typhoid fever
103	Specimens of Typhoid fever (Typhoid bacillus)
102	Specimens of Typhoid fever (Typhoid bacillus)
101	Specimens of Typhoid fever (Typhoid bacillus)
100	Specimens of Typhoid fever (Typhoid bacillus)
99	Specimens of Typhoid fever (Typhoid bacillus)
98	Specimens of Typhoid fever (Typhoid bacillus)
97	Specimens of Typhoid fever (Typhoid bacillus)
96	Specimens of Typhoid fever (Typhoid bacillus)
95	Specimens of Typhoid fever (Typhoid bacillus)
94	Specimens of Typhoid fever (Typhoid bacillus)
93	Specimens of Typhoid fever (Typhoid bacillus)
92	Specimens of Typhoid fever (Typhoid bacillus)
91	Specimens of Typhoid fever (Typhoid bacillus)
90	Specimens of Typhoid fever (Typhoid bacillus)
89	Specimens of Typhoid fever (Typhoid bacillus)
88	Specimens of Typhoid fever (Typhoid bacillus)
87	Specimens of Typhoid fever (Typhoid bacillus)
86	Specimens of Typhoid fever (Typhoid bacillus)
85	Specimens of Typhoid fever (Typhoid bacillus)
84	Specimens of Typhoid fever (Typhoid bacillus)
83	Specimens of Typhoid fever (Typhoid bacillus)
82	Specimens of Typhoid fever (Typhoid bacillus)
81	Specimens of Typhoid fever (Typhoid bacillus)
80	Specimens of Typhoid fever (Typhoid bacillus)
79	Specimens of Typhoid fever (Typhoid bacillus)
78	Specimens of Typhoid fever (Typhoid bacillus)
77	Specimens of Typhoid fever (Typhoid bacillus)
76	Specimens of Typhoid fever (Typhoid bacillus)
75	Specimens of Typhoid fever (Typhoid bacillus)
74	Specimens of Typhoid fever (Typhoid bacillus)
73	Specimens of Typhoid fever (Typhoid bacillus)
72	Specimens of Typhoid fever (Typhoid bacillus)
71	Specimens of Typhoid fever (Typhoid bacillus)
70	Specimens of Typhoid fever (Typhoid bacillus)
69	Specimens of Typhoid fever (Typhoid bacillus)
68	Specimens of Typhoid fever (Typhoid bacillus)
67	Specimens of Typhoid fever (Typhoid bacillus)
66	Specimens of Typhoid fever (Typhoid bacillus)
65	Specimens of Typhoid fever (Typhoid bacillus)
64	Specimens of Typhoid fever (Typhoid bacillus)
63	Specimens of Typhoid fever (Typhoid bacillus)
62	Specimens of Typhoid fever (Typhoid bacillus)
61	Specimens of Typhoid fever (Typhoid bacillus)
60	Specimens of Typhoid fever (Typhoid bacillus)
59	Specimens of Typhoid fever (Typhoid bacillus)
58	Specimens of Typhoid fever (Typhoid bacillus)
57	Specimens of Typhoid fever (Typhoid bacillus)
56	Specimens of Typhoid fever (Typhoid bacillus)
55	Specimens of Typhoid fever (Typhoid bacillus)
54	Specimens of Typhoid fever (Typhoid bacillus)
53	Specimens of Typhoid fever (Typhoid bacillus)
52	Specimens of Typhoid fever (Typhoid bacillus)
51	Specimens of Typhoid fever (Typhoid bacillus)
50	Specimens of Typhoid fever (Typhoid bacillus)
49	Specimens of Typhoid fever (Typhoid bacillus)
48	Specimens of Typhoid fever (Typhoid bacillus)
47	Specimens of Typhoid fever (Typhoid bacillus)
46	Specimens of Typhoid fever (Typhoid bacillus)
45	Specimens of Typhoid fever (Typhoid bacillus)
44	Specimens of Typhoid fever (Typhoid bacillus)
43	Specimens of Typhoid fever (Typhoid bacillus)
42	Specimens of Typhoid fever (Typhoid bacillus)
41	Specimens of Typhoid fever (Typhoid bacillus)
40	Specimens of Typhoid fever (Typhoid bacillus)
39	Specimens of Typhoid fever (Typhoid bacillus)
38	Specimens of Typhoid fever (Typhoid bacillus)
37	Specimens of Typhoid fever (Typhoid bacillus)
36	Specimens of Typhoid fever (Typhoid bacillus)
35	Specimens of Typhoid fever (Typhoid bacillus)
34	Specimens of Typhoid fever (Typhoid bacillus)
33	Specimens of Typhoid fever (Typhoid bacillus)
32	Specimens of Typhoid fever (Typhoid bacillus)
31	Specimens of Typhoid fever (Typhoid bacillus)
30	Specimens of Typhoid fever (Typhoid bacillus)
29	Specimens of Typhoid fever (Typhoid bacillus)
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27	Specimens of Typhoid fever (Typhoid bacillus)
26	Specimens of Typhoid fever (Typhoid bacillus)
25	Specimens of Typhoid fever (Typhoid bacillus)
24	Specimens of Typhoid fever (Typhoid bacillus)
23	Specimens of Typhoid fever (Typhoid bacillus)
22	Specimens of Typhoid fever (Typhoid bacillus)
21	Specimens of Typhoid fever (Typhoid bacillus)
20	Specimens of Typhoid fever (Typhoid bacillus)
19	Specimens of Typhoid fever (Typhoid bacillus)
18	Specimens of Typhoid fever (Typhoid bacillus)
17	Specimens of Typhoid fever (Typhoid bacillus)
16	Specimens of Typhoid fever (Typhoid bacillus)
15	Specimens of Typhoid fever (Typhoid bacillus)
14	Specimens of Typhoid fever (Typhoid bacillus)
13	Specimens of Typhoid fever (Typhoid bacillus)
12	Specimens of Typhoid fever (Typhoid bacillus)
11	Specimens of Typhoid fever (Typhoid bacillus)
10	Specimens of Typhoid fever (Typhoid bacillus)
9	Specimens of Typhoid fever (Typhoid bacillus)
8	Specimens of Typhoid fever (Typhoid bacillus)
7	Specimens of Typhoid fever (Typhoid bacillus)
6	Specimens of Typhoid fever (Typhoid bacillus)
5	Specimens of Typhoid fever (Typhoid bacillus)
4	Specimens of Typhoid fever (Typhoid bacillus)
3	Specimens of Typhoid fever (Typhoid bacillus)
2	Specimens of Typhoid fever (Typhoid bacillus)
1	Specimens of Typhoid fever (Typhoid bacillus)
0	Specimens of Typhoid fever (Typhoid bacillus)
Total	1000

It will be noticed that about half the specimens examined were sent to the laboratory for examination, and the remainder to the hospital for the purpose of diagnosis. In Table II, the results obtained for these examinations are given.

TABLE II

Name of Examination	Number of Specimens Examined	Number of Positive Results
Specimens of Typhoid fever	1000	72
Specimens of Typhoid fever (Typhoid bacillus)	73	32
Specimens of Typhoid fever (Typhoid bacillus)	27	40

It is satisfactory to note that the facilities offered by the laboratory for the purpose of diagnosis, and so on to the government, are being steadily improved, and that the work done during 1900 has been very satisfactory. The results obtained for these examinations are given in Table III.

TABLE III

Work done for each month of 1900. The work done is given in the following table, and specimens, the table including all other examinations.

Month	Number of Specimens Examined	Number of Positive Results
Jan.	100	7
Feb.	100	8
Mar.	100	10
Apr.	100	11
May	100	12
Jun.	100	13
Jul.	100	14
Aug.	100	15
Sep.	100	16
Oct.	100	17
Nov.	100	18
Dec.	100	19
Total	1000	197

The University College of South Wales and Monmouthshire has organised a Public Health Department in connection with the Laboratory, and during 1900 a number of classes have been held. These, together with the number of students who have attended them, are shown in Table IV.

TABLE IV.

Classes held in 1900 :—

Nature of Class.	When held.	Lecturer or Teacher.	No. of Students.
Chemistry—Laboratory Instruction & Lectures	January to March ...	Dr. Savage.	4
Bacteriology—Lectures and Practical Class...	April to June ...	Dr. Savage.	7
Practical Out-door Sanitary Work	Six Months' course	{ Dr. Williams } and { Dr. Walford. }	4
Chemistry—Laboratory Instruction & Lectures	October to December	Dr. Savage.	5
Lectures to Sanitary Inspectors—Part A ...	January & February	Dr. Savage.	8
“ “ “ “ B ...	February to May ...	{ Dr. Williams } { Dr. Walford. }	7
“ “ “ “ A ...	October & November	Dr. Savage.	9
“ “ “ “ B ...	Nov., Dec., & in 1901	{ Dr. Williams } { Dr. Walford. }	22

Among other features of interest in regard to the work done during 1900, the following may be mentioned :—

1.—THE EXAMINATION OF WATER SUPPLIES. The facilities for contamination of drinking water and the frequency of the occurrence has repeatedly been pointed out by those responsible, but it has only been possible to take steps to practically carry out the very important and necessary work of its systematic examination, now that a properly equipped laboratory is at the disposal of the Authorities.

The examination of water supplies can be considered under two classes.

The first class includes the examination of local sources of water supply, such as wells and springs. These are too numerous to examine systematically at regular intervals, but many have been examined every quarter. In this way a large number of polluted waters have been detected and in many cases the wells have been closed.

Under the second class are included the main water supplies for large towns and districts. It is now widely accepted that all public supplies should be systematically examined at frequent intervals in order to see if unsuspected contamination is present, and in this way to guard against infection and the widespread distribution of dangerous diseases such as Typhoid Fever.

This very important measure is as far as possible carried out, and arrangements are made to examine all the larger water supplies in the administrative County systematically, every quarter, both chemically and bacteriologically.

The Cardiff water supplies have been examined every month since April, 1900.

A considerable number of drinking waters from ships have also been examined.

2.—EXAMINATION OF SEWAGE AND SEWAGE EFFLUENTS. Work in this direction was only commenced towards the end of the year, but it is hoped that it will be possible to largely extend this work, it being very important to have reliable estimations in regard to the extent of purification obtained by the different processes in use in the area served by the Laboratory.

The University College of South Wales and Monmouthshire has organized a Public Health Department in connection with the Laboratory, and during 1900 a number of classes have been held. These, together with the number of students who have attended them, are given in Table IV.

TABLE IV.

Classes held in 1900.

No. of Students	Lecturer or Teacher	When held	Notes to Class
4	Dr. Savage	January to March	Chemistry—Laboratory Instruction
7	Dr. Savage	April to June	Microbiology—Lectures and Practical Class
4	Dr. Williams and Dr. Woodhead	Six Months' course	Medical Out-door Sanitary Work
4	Dr. Savage	October to December	Chemistry—Laboratory Instruction
4	Dr. Savage	January & February	Notes to Sanitary Inspectors—Part A
7	Dr. Williams, Dr. Woodhead, and Dr. Savage	February to May	" " " " " " " "
9	Dr. Savage and Dr. Williams	October & November	" " " " " " " "
22	Dr. Woodhead and Dr. Savage	Nov., Dec., & in 1900	" " " " " " " "

Among other details of interest in regard to the work done during 1900, the following may be mentioned:—

1.—THE EXAMINATION OF WATER SUPPLIES. The duties in connection with drinking water and the purity of the mains has repeatedly been pointed out by the responsible, but it has only been possible to take steps to practically carry out the very important and necessary work of its systematic examination, now that a properly equipped laboratory is at the disposal of the authorities.

The examination of water supplies can be mentioned under two classes.

The first class includes the examination of local sources of water supply, such as wells and springs. These are so numerous in certain districts as to require attention, but many have been examined every year. In this way a large number of polluted waters have been detected and in many cases the wells have been closed.

Under the second class are included the main water supplies for large towns and districts. It is now widely recognized that all public supplies should be systematically examined. A frequent mistake is made in not inspecting the main water supply, and in this way to guard against infection and the widespread distribution of dangerous diseases, such as typhoid fever.

This very important measure is as far as possible carried out, and arrangements are made to examine all the larger water supplies in the administrative County systematically, every winter, both chemically and bacteriologically.

The Cardiff water supplies have been examined every month since April, 1900.

A considerable number of drinking waters from other parts have also been examined.

2.—EXAMINATION OF BAKERS AND BREWERIES. Work in this direction was only commenced towards the end of the year, but it is hoped that it will be possible to largely extend this work, it being very important to have reliable estimates in regard to the extent of infection obtained by the different processes in use in the grain raised by the Laboratory.

3.—EXAMINATION OF FOOD. The importance of purity and freedom from dangerous disease germs of the common articles of food need not be insisted upon; it is therefore satisfactory to note that a considerable number of examinations of this kind have been made. Thus a number of specimens of infected or diseased meat from the Cardiff Slaughter-houses have been examined, and also samples of milk from various districts for noxious disease germs.

As an example illustrating the importance of such examinations, it may be mentioned that in a sample of milk received July 18th, from the Neath Rural District Council, very large numbers of a frequently dangerous organism, the *Bacillus Coli communis*, were found, and in an actively virulent condition. These were again found three weeks later, but in fewer numbers, and the milk was not allowed to be used until further examinations were satisfactory.

4.—SPECIMENS SENT IN BY MEDICAL MEN. An important feature of the work done has been the examination of specimens sent in by medical men from Cardiff and the administrative County. They have mainly consisted of specimens of suspected Diphtheria, Typhoid Fever or Tuberculosis, though a considerable number of other specimens have been examined. The very considerable number of specimens received (*e.g.*, 243 suspected Diphtheria) shows how extensively the facilities offered are appreciated, and the importance to the community at large of a greater precision in diagnosis can hardly be over-estimated. Many slight and otherwise unrecognised cases, of say Diphtheria, are cleared up by bacteriological examination and possible centres for the spread of disease are thus removed.

Every effort is made to give a prompt bacteriological report, and for Diphtheria, where promptitude is so especially important, for specimens received by 5.0 p.m. at the Laboratory, reports are sent off by 11.0 a.m. the following morning (except under exceptional circumstances).

5.—SPECIAL INVESTIGATIONS IN THREATENED EPIDEMICS. Epidemics are liable to break out at any time, and to check them in their early stages promptitude is essential, and in this connection as well as for purposes of general diagnosis, bacteriological investigation is often of the greatest service.

During 1900 a very important threatened epidemic has been the *Plague*, and Cardiff as a large and important port, has offered exceptional facilities for its introduction.

During the year three suspected cases have been bacteriologically investigated. The first case occurred in June. The patient was a sailor who was notified to the Medical Officer of Health of Cardiff, as a suspected case of *Plague*. Bacteriological investigations showed conclusively that it was not a case of *Plague*.

The second suspected case occurred in September, the patient being a sailor from Rosario, who travelled to Cardiff by rail from South Shields. He rapidly became ill, and presenting suspicious symptoms, was notified by his Medical attendant as a possible case of *Plague*. Material was obtained for bacteriological examination on October 2nd, and in less than 24 hours I was enabled to give a bacteriological report pointing strongly to the case being one of *Plague*. This was subsequently completely confirmed in the Laboratory.

The third case was a patient in the Penybont District. He was examined November 23rd, and here the bacteriological evidence showed conclusively that it was not a case of *Plague*.

As indicated above, the work of the Laboratory has very largely increased and extended. There are still, however, numerous directions in which its practical utility can be extended—for example, in the increased investigation of food stuffs, such as infected milk and meat, and in more accurate diagnosis of mild cases of Diphtheria in schools, and so possibly preventing their temporary closure, and it is hoped that in future years more work will be done in these and other equally important directions.

I remain, Gentlemen,

Your obedient Servant,

February 16th, 1901.

WILLIAM G. SAVAGE.

3-Examination of Milk. The importance of giving and receiving milk
was shown in the various articles of food and in the various
laboratory tests that a considerable number of specimens of milk had been
and a number of specimens of fat and of dissolved solids from the same
examined, and the samples of milk from various sources for various purposes.

As an example illustrating the importance of milk in various
as in a sample of milk received July 1911, from the Dairy, London, England, very
number of a frequently dangerous organism, the bacillus (the organism, sometimes, and from
very varied conditions. These were again found from various other milk in the region,
of the milk was not allowed to be used until further examination was necessary.

4-Examination of Milk in Various States. An important feature of the work done
has been the examination of specimens sent to be tested from various parts of the
country. They have mainly consisted of specimens of specimens of specimens, typical of
specimens, though a considerable number of other specimens have been examined. The very
number of specimens received (e.g., 215 specimens of specimens) have been extensively
examined and the specimens in the laboratory in order to give a
vision in diagnosis can hardly be overestimated. Just as the specimens are
of the specimens, are checked up by bacteriological examination and found to
a great of diseases are thus removed.

Very great care is taken to give a general bacteriological report, and for the specimens
importance is so especially important for specimens received by the Dairy at the
from an out of 11.0 a.m. on the following morning with complete examination.

5-General Investigations in Various States. The specimens are sent to
not only as any time, and to check them in their own right, specimens in general, and to
in connection as well as for purposes of general diagnosis, bacteriological investigations, and
the greatest service.

During 1909 a very important specimen of specimens from the Dairy, and Dairy, in
large and important part, has been examined bacteriologically for various purposes.

During the year three important cases have been bacteriologically investigated. The
of one occurred in London. The patient was a sailor who was admitted to the Medical Officer of
with of Cardiff, as a suspected case of Typhoid. Bacteriological investigations showed
conclusively that it was not a case of Typhoid.

The second important case occurred in Hampshire. The patient being a sailor from
was also admitted to the Dairy by the Dairy, Southampton. The report from the Dairy
showing typhoid symptoms, was notified by the Medical Officer as a possible case of
Typhoid. Material was obtained for bacteriological examination and it was found that
showing I was enabled to give a bacteriological report which was of the same nature as
above. This was subsequently completely confirmed in the laboratory.

The third case was a patient in the Province of Ontario. It was confirmed by
the Dairy and the bacteriological evidence showed conclusively that it was not a case of Typhoid.

As indicated above, the work of the Laboratory has very largely consisted in
laboratory. These are all, however, numerous diseases in which the bacteriological work can be
shown—for example, in the increased investigation of food stuffs, and in various other
and in some general diagnosis of milk cases of specimens in connection with the Dairy,
showing their temporary character, and it is hoped that in future years more work will be done
these and other equally important diseases.

I remain, Dear Sir,
Your obedient servant,
WILLIAM D. BAYLIS
February 1912, 1911.

SANITARY CONDITION OF THE DISTRICT AND SUMMARY OF WORK
PERFORMED BY THE OFFICERS OF THE
MEDICAL OFFICER OF HEALTH'S DEPARTMENT.

The systematic house to house inspection of the district was continued throughout the year. The following tables show the nature of the work carried out by the various Inspectors, acting under the supervision of Mr. D. Vaughan.

In each case where a nuisance is recorded, notices were served and instructions given to the owner or occupier of the premises to remedy the defects, and this was effected under the direction of the District Inspector. The erection of new houses, together with the construction of their drainage, is entirely under the control of the Borough Engineer and the officers of his department, who are ever ready to render any advice or assistance to your Health Department. All new dwellings are now constructed subject to the new Building Bye-laws, which came into force on the 21st March, 1900. These Bye-laws are in many respects an improvement on the old Regulations, and give the Local Authority more complete control over the sanitary arrangements of new houses. Since the adoption of these Bye-laws no house will be constructed without an efficient flushing cistern to each water-closet, and further, the 98th Bye-law provides that—"the occupier of any premises in or for which any water-closet is for the time being provided, shall cause such water-closet to be at all times properly supplied with a sufficient quantity of water for proper flushing thereof."

This section is retrospective in its action, and includes premises constructed before the adoption of the Bye-laws—a matter of extreme importance, as it was shown in a previous report that an exceedingly large number of houses have been built without any flushing cisterns attached to their water-closets. Moreover, provision is made for the disconnection of house drains from the main sewers, by means of traps and ventilation, on a definite plan set out in the Bye-laws on the lines of the model Bye-laws of the Local Government Board, and in accordance with modern ideas.

For the purposes of inspection, the Borough is divided into five districts as follows:—

		Estimated Population.	Name of District Inspector.
District No. 1 comprising	Canton Ward Riverside Ward	42,909	T. W. WARREN, Certifi. San. Inst.
	} containing an area of 762 acres		
" No. 2 "	Adamsdown Ward Splott Ward	30,883	W. FISHER, Certifi. San. Inst.
	} containing an area of 3,024 acres		
" No. 3 "	Roath Ward Park Ward	41,532	F. GLOVER, Certifi. San. Inst.
	} containing an area of 1,299 acres		
" No. 4 "	Central Ward Cathays Ward	33,191	S. EVANS, Certifi. San. Inst.
	} containing an area of 842 acres		
" No. 5 "	South Ward Grangetown Ward	32,355	J. W. HOLDEN, Certifi. San. Inst.
	} containing an area of 2,424 acres		

In addition to the District Inspectors there are also others as follows:—Two Inspectors for Infectious Diseases, one for Lodging Houses, one Inspector of Dairies, Cowsheds, and Milkshops (who also acts as Inspector under the Sale of Food and Drugs Act), one Inspector of Workshops, six Inspectors of Meat, one of whom is a Veterinary Surgeon. The general house inspection of the district is carried out by the Chief Inspector and the five District Inspectors, and I cannot speak too highly of the manner in which he and his assistants have performed their difficult duties.

As mentioned in previous reports there are no large insanitary areas in Cardiff which could conveniently be dealt with for the purposes of an Improvement Scheme under Part I. of the Housing of the Working Classes Act, 1890, but a considerable amount of Property has been

Sanitary Condition of the District and Summary of Work
Reported by the Officers of the
Medical Officer of Health's Department

The systematic work to have inspection of the district was continued throughout the year. The following tables show the nature of the work carried out by the various inspectors under the supervision of Mr. B. Vaughan.

In each case where a nuisance is reported, notice was served and inspection given to the owner or occupier of the premises to remedy the defect, and this was effected under the action of the District Inspector. The creation of new houses, together with the construction of their drainage, is entirely under the control of the Borough Engineer and the officers of his department, who are ever ready to tender any advice or assistance to your Health Department. New dwellings are now constructed subject to the new Building Bye-laws, which came into force on the 1st March, 1900. These Bye-laws are in many respects an improvement on the Regulations and give the Local Authority more complete control over the sanitary arrangements of new houses. Since the adoption of these Bye-laws no house will be constructed without an efficient drainage system to each water-closet, and further, the Water By-law provides that the occupier of any premises in or for which any water-closet is for the time being erected, shall cause such water-closet to be at all times properly supplied with a sufficient quantity of water for proper flushing thereof.

This section is retrospective in its action, and includes premises constructed before the adoption of the Bye-laws—a matter of extreme importance, as it was shown in a previous report that an exceedingly large number of houses have been built without any flushing system attached to their water-closets. Moreover, provision is made for the discontinuation of drains from the main sewer, by means of traps and ventilation, on a definite plan set out in the laws on the lines of the model Bye-laws of the Local Government Board, and in accordance with modern ideas.

For the purpose of inspection, the Borough is divided into five districts as follows—

No.	Ward	Containing an area of	Estimated Population	Inspector
No. 1	Central Ward	containing an area of 100 acres	45,000	T. W. Williams
No. 2	North Ward	containing an area of 2,500 acres	20,000	W. Williams
No. 3	East Ward	containing an area of 1,500 acres	45,000	H. Green
No. 4	Central Ward	containing an area of 800 acres	32,000	E. Price
No. 5	South Ward	containing an area of 2,500 acres	22,000	A. W. Thomas

In addition to the District Inspectors there are also others as follows—The Inspectors of Nuisances, one for Lodging Houses, one Inspector of Public Conveniences, and one Inspector under the Acts of Food and Drugs Act, one Inspector of Pigs, six Inspectors of Meat, one of whom is a Veterinary Surgeon. The general supervision of the district is carried out by the Chief Inspector and the District Inspectors cannot spend too highly of the manner in which he and his assistants have performed their duties.

As mentioned in previous reports there are no large tenement houses in Cardiff which conveniently be dealt with for the purpose of an improvement scheme under Part I of the Working Classes Act, 1869, but a considerable amount of property has been

dealt with under Part II. of the Act, and Closing Orders have been obtained against owners of a large number of houses which were for many reasons unfit for habitation. Amongst the dwellings which have been permanently closed either by a Closing Order or by the voluntary action of the owner may be mentioned :—Mill Lane Court, 34 houses in Stanley Street, 12 houses in Leckwith Road, Kettle Court, Evans Court, Union Buildings, Sandon Court, Dalton Court, Gainers Court, Rising Sun Court, Jones' Court (Womanby Street), The Tunnel (Queen Street), Temperance Terrace (Working Street), Queen's Place, and Mason's Arms Court. During the year under consideration, by resolution of the Health Committee, I presented a detailed report upon the sanitary condition of the remainder of the Courts in Cardiff, including such houses as might be dealt with singly by Closing Orders. The report referred to 134 houses, containing an aggregate of 331 rooms and a total population at the time of inspection amounting to 395 persons. As, however, this report was not adopted and acted upon until the following year, an account of the proceedings taken in each case will be given in the next Annual Report. From the inspection of the Courts, and from the general inspection of the district, it does not appear that overcrowding in houses exists to any extent, or at any rate to the extent in which action can be taken by the Sanitary Authority. It is usual to estimate the density of populations in large towns upon the average number of persons living on an acre of ground, and from the foregoing Tables in this Report it will be seen that in Cardiff this amounts to 32 persons per acre as compared with 33·8 the average density in the 33 large towns of England and Wales.

These densities are calculated on the Registrar General's Estimates of the population, and are therefore in the case of Cardiff too high. A better method of detecting overcrowding and of more importance in relation to health is a statement of the number of persons living in each occupied room in any given district or locality. In the Census Report of 1891 it is proposed to take as a standard of overcrowding, tenements which have more than two occupants per room. With the object of ascertaining if this condition existed to any extent within the Borough I caused a special inspection of certain districts to be made, and by this means ascertained the average number of inmates per room in these districts. The results of this inspection are given in the following Table, and from the summary it will be seen that the average of two per room is in a very few instances exceeded.

Out of a total of 1,790 houses examined for the purpose of this inquiry, I found only 24, or 1·3 per cent., with a higher average than two occupants per room, whilst only 623 or 35 per cent. contained more than an average of one occupant per room, and this in districts where, if it existed at all, overcrowding might be expected to exist.

HOUSE INSPECTION TABLE.

CENTRAL WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Love Lane ...	1	5	2	...	1
" " ...	1	6	1	..	1
" " ...	30	4	1	2	21
" " ...	8	2	1	2	4
Daniel Street ...	2	7	1	...	...
" " ...	3	6	1	...	1
" " ...	4	6	2	...	1
" " ...	9	5	1	...	5
" " ...	2	5	2	...	2
" " ...	5	4	1	...	1
" " ...	2	4	2	...	1
Giles' Court ...	4	4	1	...	2
Rodney Street ...	2	7	2	...	2
" " ...	3	6	1	...	1
" " ...	8	6	2	...	3
" " ...	1	5	1	...	...
" " ...	1	5	2	...	1
" " ...	2	4	2	...	1
Tredegar Street... ..	2	7	1	...	2
" " ...	2	7	2	...	...
" " ...	17	6	1	...	8
" " ...	2	6	2	...	1
" " ...	6	5	1	...	1
" " ...	1	5	2	...	...
" " ...	3	4	1	1	2
" " ...	2	4	2	2	2
Edwards Terrace ...	1	11	1	...	...
" " ...	1	9	1	...	...
" " ...	2	8	1	...	...
" " ...	13	7	1	...	...
" " ...	11	6	1	...	...
Pembroke Terrace ...	3	12	1	...	...
" " ...	9	11	1	...	...
" " ...	1	11	3	...	...
" " ...	1	10	1	...	...
" " ...	4	9	1	...	...
" " ...	1	9	2	...	...
Millicent Street ...	1	12	1	...	1
" " ...	1	11	1	...	...
" " ...	1	10	1	...	...
" " ...	2	9	1	...	1
" " ...	2	7	1	...	...
" " ...	1	7	2	...	...
" " ...	5	6	1	...	...
" " ...	12	5	1	...	6
" " ...	1	5	2	...	...
" " ...	11	4	1	...	4
" " ...	1	4	2	...	...
" " ...	9	3	1	1	6
" " ...	1	3	2	...	...
Bryant Court ...	2	2	1	...	...
Gulliver's Court ...	2	3	1	...	...
Evans' Court ...	1	4	1	...	...
" " ...	1	3	1	...	1
Jenkins' Court ...	5	2	1	1	2
Matthews' Court ...	6	2	1	...	...
Ruperra Street ...	5	6	1	...	2
" " ...	4	6	2	...	2
" " ...	1	5	1	...	...
" " ...	2	5	2	...	2
" " ...	1	3	1	...	...

CENTRAL WARD—Continued.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Station Terrace ...	3	7	1	...	...
" " ...	2	7	2	...	1
" " ...	4	6	1	...	1
" " ...	1	6	2	...	...
" " ...	1	4	1	...	...
Honfray Street...	2	7	1	1	1
" " ...	1	6	1	...	1
" " ...	6	5	1	1	4
" " ...	9	4	1	4	4
East Terrace ...	3	8	1	...	3
" " ...	5	7	1	...	2
" " ...	3	7	2	...	1
" " ...	5	6	1	...	1
" " ...	1	5	1	...	...
" " ...	1	4	1	...	1
Little Frederick Street	1	6	3	...	...
" " "	1	6	2	...	1
" " "	1	5	1	...	...
" " "	7	4	1	...	3
" " "	6	4	2	...	4
" " "	1	8	1	...	...
" " "	1	7	3	...	...
" " "	1	6	1	...	1
" " "	5	4	1	...	1
" " "	3	2	1	1	1
Total ...	322	506	116	16	102

SOUTH WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Christina Street...	32	7	1	...	7
" " ...	2	7	3	...	0
" " ...	14	7	2	...	7
" " ...	4	6	1	...	1
" " ...	2	6	2	...	1
Angelina Street...	3	9	2	...	1
" " ...	5	7	1	...	1
" " ...	3	7	2	...	2
" " ...	11	6	1	...	3
" " ...	7	6	2	...	4
Maria Street ...	1	10	1	...	0
" " ...	2	7	3	...	1
" " ...	15	7	2	...	5
" " ...	10	7	1	...	0
Total...	111	99	24	...	33

CATHAYS WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Cairns Street ...	67	6	1	1	25
" " ...	34	6	2	1	23
" " ...	11	4	1	...	4
Total ...	112	16	4	2	52

PARK WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Milton Street ...	1	8	1	...	1
" " ...	18	6	1	...	8
" " ...	3	6	2	...	2
" " ...	26	4	1	...	15
" " ...	2	4	2	..	2
Total ...	50	28	7	...	28

ADAMSDOWN WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Duffryn Street ...	1	7	4	...	1
" " ...	1	6	1	...	1
" " ...	5	6	2	...	2
" " ...	4	5	1	...	1
" " ...	1	4	1	...	...
Taff Street ...	1	5	2	...	1
" " ...	9	4	1	...	3
" " ...	8	4	2	...	2
" " ...	1	2	1	...	...
Cycle Street ...	1	6	1	...	...
" " ...	28	4	1	...	13
Platinum Street ...	16	4	1	1	5
" " ...	1	4	2	...	1
Constellation Street ...	32	7	1	...	11
" " ...	9	7	2	...	4
" " ...	1	8	2	...	...
" " ...	23	6	1	...	8
" " ...	9	6	2	...	6
" " ...	1	6	3	...	...
Windsor Road ...	1	16	1	...	...
" " ...	4	8	1	...	1
" " ...	3	8	3	...	2
" " ...	2	8	2	...	1
" " ...	8	7	1	...	4
" " ...	3	7	2	...	3
" " ...	5	6	1	...	1
" " ...	1	6	2	...	0
Total ...	179	167	44	1	71

SPLOTT WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Janet Street ...	17	6	1	...	7
" " "	46	6	2	1	36
Total ...	63	12	3	1	43

RIVERSIDE WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Gloucester Street ...	29	6	1	...	5
" " "	3	6	2	...	...
" " "	6	7	1	...	...
" " "	4	7	2	...	1
" " "	1	10	1	...	...
Brasel Street ...	7	6	1	...	3
" " "	1	6	2	...	...
Postcanna Terrace ...	5	5	1	...	...
" " "	4	6	1	...	...
" " "	2	6	2	...	1
Stephenson Street ...	13	6	1	...	1
" " "	4	6	2	...	3
Mortimer Road ...	16	4	1	...	4
" " "	30	6	1	...	5
" " "	1	7	1	...	...
Telford Street ...	20	6	1	...	4
" " "	4	6	2	...	2
Rennie Street ...	1	4	1	...	...
" " "	19	6	1	...	3
" " "	9	6	2	...	2
Trevethick Street ...	13	6	1	...	1
" " "	4	6	2	...	3
Severn Road ...	1	6	1	...	...
" " "	34	7	1	...	5
" " "	7	7	2	...	3
Green Street ...	1	3	1	...	...
" " "	1	5	1	...	...
" " "	2	6	1	...	1
" " "	12	7	1	...	...
" " "	10	7	2	...	4
" " "	1	8	2	...	...
Heath Street ...	1	8	1	...	...
" " "	8	6	1	...	...
" " "	2	5	1	...	...
Brook Street ...	1	9	1	...	...
" " "	19	8	1	...	...
" " "	5	8	2	...	...
" " "	13	7	1	...	2
" " "	1	7	2	...	1
Mark Street ...	16	8	1	...	1
" " "	6	8	2	...	1
" " "	6	7	1	...	1
" " "	4	7	2	...	3
Cradlock Street ...	2	9	1	...	...
" " "	1	7	1	...	...
" " "	92	6	1	...	16
" " "	26	6	2	...	22
Total ...	468	306	63	...	98

SUMMARY CANTON WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Pontcauna Place ...	12	6	1	...	2
" " ...	4	6	2	...	1
" " ...	1	5	1	...	...
William Street ...	3	6	1	...	...
" " ...	2	6	2	...	...
Gray Street ...	31	6	1	...	5
" " ...	1	6	2	...	...
" " ...	16	5	1	...	2
Gladstone Crescent ...	1	7	1	...	1
" " ...	7	6	1	...	...
" " ...	2	6	2	...	2
" " ...	7	4	1	...	...
Total... ..	87	69	16	...	13

HOUSE INSPECTION GRANGETOWN WARD. YEAR 1890.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Saltmead Road ...	25	6	1	...	8
" " ...	15	6	2	1	11
Total... ..	40	12	3	1	19

ROATH WARD.

NAME OF STREET.	Number of Houses.	Number of Rooms per House.	Number of Tenements per House.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Nora Street ...	37	6	1	1	9
" " ...	6	6	2	...	4
" " ...	21	4	1	...	14
" " ...	1	4	2	...	1
Helen Street ...	42	6	1	...	9
" " ...	18	6	2	...	16
" " ...	14	4	1	...	9
" " ...	1	4	2	...	0
Agate Street ...	9	6	1	...	5
" " ...	8	6	2	...	6
Topaz Street ...	25	6	1	...	5
" " ...	5	6	2	...	3
" " ...	130	6	1	1	41
" " ...	51	6	2	1	42
Total	368	76	21	3	164

SUMMARY OF FOREGOING TABLES.

WARDS.					Number of Houses.	Number of Houses with more than average of two occupants per room.	Number of Houses with more than average of one occupant per room.
Central ...	...	...	...	...	322	16	102
South ...	...	...	...	...	111	...	33
Cathays ...	...	...	...	...	112	2	52
Park ...	...	...	...	...	50	...	28
Adamsdown ...	...	...	...	...	179	1	71
Riverside ...	...	...	...	...	458	...	98
Canton ...	...	...	...	...	87	...	13
Roath ...	...	...	...	...	368	3	164
Grangetown ...	...	...	...	...	40	1	19
Splott ...	...	...	...	...	63	1	43
Grand Total ...	...	...	...	...	1,790	24	623

HOUSE INSPECTION FOR THE YEAR 1900.

CENTRAL WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with water.	Dampness of Premises.	Other Nuisances.
North Road ...	49	7	1	8	29	4	56	...	38	26	22	8
Junkers Place ...	3	1	...	...	...	...	3	...	3	3	...	1
Rowlands Buildings ...	4	...	...	...	...	...	3	...	3	3	...	...
Clytha Place ...	27	3	...	1	...	...	27	...	22	21	19	...
Blackweir Terrace... ..	30	3	2	2	...	...	30	...	23	7	3	3
Bate Terrace ...	31	...	1	...	...	...	32	...	28	2	...	9
Giles Court ...	4	1	...	...	...	...	4	...	4	4	...	...
David Street ...	31	3	1	1	...	...	30	...	30	27	9	10
Mary Ann Street ...	50	4	...	4	2	...	43	...	43	36	6	14
Stanley Street ...	7	...	...	...	...	...	7	...	6	7	...	2
Love Lane ...	46	1	2	2	...	...	39	...	39	39	6	10
Millicent Street ...	81	1	2	2	...	...	69	...	55	38	4	10
East Terrace ...	21	2	1	...	1	...	21	...	21	19	2	7
Little Frederick Street ...	35	2	1	4	2	...	30	...	29	26	5	9
Ruperra Street ...	16	...	...	1	...	...	16	...	16	16	1	3
Rodney Street ...	18	...	...	1	...	...	18	...	18	17	...	...
Tredegar Street ...	47	2	1	2	...	...	46	...	43	46	1	8
Charlotte Street ...	5	...	...	...	...	...	4	...	4	...	...	...
Houfray Street ...	25	2	...	3	2	...	24	...	24	9	6	6
Charles Street ...	71	9	1	8	20	4	111	...	4	5	4	6
Charles Street Lane ...	2	1	...	...	1	...	1	...	...	...	...	...
Old Barracks ...	4	1	...	...	2	...	4	...	3	1	...	...
Pembroke Terrace... ..	20	10	2	4	14	2	39	...	18	...	...	...
Edwards Terrace ...	29	5	2	3	12	...	57	...	21	18	3	...

SOUTH WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scully Sinks connected direct with drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Crichton Street ...	34	...	...	3	3	...	29	...	29	29	...	6
Crichton Place ...	14	...	2	3	3	...	14	...	14	14	...	7
North Church Street ...	28	1	...	9	4	...	25	...	19	21	...	2
South Church Street ...	17	...	...	...	...	...	16	...	11	11	...	2
Maria Street ...	43	...	...	7	...	...	32	...	30	24	...	11
Sophia Street ...	50	...	...	8	...	...	38	...	38	38	8	16
Christina Street ...	59	...	...	8	6	...	52	...	47	43	8	19
Angelina Street ...	45	...	1	1	4	...	36	...	36	36	16	19
Nelson Street ...	18	...	...	1	...	...	16	...	16	16	2	6
Frances Street ...	26	...	...	1	...	...	24	...	24	24	9	11

CATHAYS WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scully Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Miskin Street ...	47	9	1	4	14	1	62	...	47	40	1	...
Cranbrook Street ...	48	14	1	2	15	...	48	...	48	32	10	4
Fitzroy Street ...	18	...	...	...	...	...	18	...	18	18	6	5
Thesiger Street ...	67	3	1	6	3	...	70	1	69	68	12	14
Coburn Street ...	109	19	...	2	18	...	111	...	108	107	4	31
Cairns Street ...	198	7	4	6	2	...	198	...	198	198	59	77

PARK WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scully Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Glenroy Street ...	65	...	...	2	...	...	65	...	65	47	6	34
Kincraig Street ...	43	...	...	...	...	...	69	...	43	13	17	1
Plasnewydd Place ...	18	...	...	...	...	...	18	...	18	9	...	...
Upper Kincraig Street ...	76	...	...	...	12	...	76	...	76	74	14	8
Strathnairn Street... ..	150	1	...	1	...	...	150	...	150	86	22	30
Milton Street ...	65	1	1	5	...	...	65	...	65	65	6	15

SOUTH WARD

NAME OF STREET	Length in feet	Width in feet	Area in square feet	Frontage in feet	Depth in feet	Frontage in feet	Depth in feet
1st Street	100	10	1000	100	10	100	10
2nd Street	100	10	1000	100	10	100	10
3rd Street	100	10	1000	100	10	100	10
4th Street	100	10	1000	100	10	100	10
5th Street	100	10	1000	100	10	100	10
6th Street	100	10	1000	100	10	100	10
7th Street	100	10	1000	100	10	100	10
8th Street	100	10	1000	100	10	100	10
9th Street	100	10	1000	100	10	100	10
10th Street	100	10	1000	100	10	100	10

CENTRAL WARD

NAME OF STREET	Length in feet	Width in feet	Area in square feet	Frontage in feet	Depth in feet	Frontage in feet	Depth in feet
11th Street	100	10	1000	100	10	100	10
12th Street	100	10	1000	100	10	100	10
13th Street	100	10	1000	100	10	100	10
14th Street	100	10	1000	100	10	100	10
15th Street	100	10	1000	100	10	100	10
16th Street	100	10	1000	100	10	100	10
17th Street	100	10	1000	100	10	100	10
18th Street	100	10	1000	100	10	100	10
19th Street	100	10	1000	100	10	100	10
20th Street	100	10	1000	100	10	100	10

NORTH WARD

NAME OF STREET	Length in feet	Width in feet	Area in square feet	Frontage in feet	Depth in feet	Frontage in feet	Depth in feet
21st Street	100	10	1000	100	10	100	10
22nd Street	100	10	1000	100	10	100	10
23rd Street	100	10	1000	100	10	100	10
24th Street	100	10	1000	100	10	100	10
25th Street	100	10	1000	100	10	100	10
26th Street	100	10	1000	100	10	100	10
27th Street	100	10	1000	100	10	100	10
28th Street	100	10	1000	100	10	100	10
29th Street	100	10	1000	100	10	100	10
30th Street	100	10	1000	100	10	100	10

ADAMSDOWN WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with Drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Garth Street	20	...	1	...	...	...	18	...	18	18	...	14
Garth Court	5	...	...	...	...	...	5	...	5	...	...	...
Deus Court	4	...	...	...	1	...	4	...	4	4	...	4
Taff Street	20	1	...	...	1	...	20	...	20	20	...	7
Duffryn Street	21	...	2	...	...	...	21	...	21	21	...	9
Windsor Road	30	2	...	1	...	...	31	...	30	26	...	11
Platinum Street	16	2	...	...	...	...	16	...	16	16	...	14
Constellation Street	80	...	1	...	2	...	80	...	80	78	...	31
Tin Street	22	1	...	...	...	...	22	...	22	22	...	8
Cycle Street	29	1	1	...	1	...	29	...	29	29	...	14

RIVERSIDE WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Wyndham Street	69	13	2	27	32	...	69	...	69	60	12	14
Wyndham Place	19	...	...	2	5	...	19	...	17	17	...	...
Lewis Street	31	6	...	12	14	...	31	...	31	31	10	13
Blackstone Street	21	2	...	2	...	...	21	...	21	21	8	7
Heath Street	8	2	...	6	...	...	8	...	6	7	...	2
SVERN ROAD	24	9	2	8	9	...	24	...	12	21	...	8
Brook Street	45	...	...	...	2	...	46	...	45	27	...	...
Green Street	28	...	...	...	...	...	27	...	28	27	...	...
Mark Street	33	...	...	...	...	...	33	...	33	33	...	...
Halket Street	45	10	2	16	20	...	45	...	45	43	...	30
Pontcanna Terrace	12	...	1	...	1	...	12	...	12	12	1	...
William Street	7	...	...	...	...	...	8	...	6	6	...	...
Gloucester Street	46	1	1	3	3	...	46	...	46	44	10	7
Bonel Street	8	...	...	...	...	...	9	...	8	7	2	3
Stephenson Street	18	...	...	...	...	...	18	...	18	...	...	...
Telford Street	26	4	...	3	1	...	26	...	26	26	10	12
Mansfield Street	14	1	...	...	...	...	14	...	14	4	2	2
Smeaton Street	33	5	...	2	...	...	33	...	33	22	6	10

WAKKANAI WARD

Year	Male	Female	Total	Rate per 1,000
1911	1,100	1,000	2,100	100
1912	1,150	1,050	2,200	100
1913	1,200	1,100	2,300	100
1914	1,250	1,150	2,400	100
1915	1,300	1,200	2,500	100
1916	1,350	1,250	2,600	100
1917	1,400	1,300	2,700	100
1918	1,450	1,350	2,800	100
1919	1,500	1,400	2,900	100
1920	1,550	1,450	3,000	100
1921	1,600	1,500	3,100	100
1922	1,650	1,550	3,200	100
1923	1,700	1,600	3,300	100
1924	1,750	1,650	3,400	100
1925	1,800	1,700	3,500	100
1926	1,850	1,750	3,600	100
1927	1,900	1,800	3,700	100
1928	1,950	1,850	3,800	100
1929	2,000	1,900	3,900	100
1930	2,050	1,950	4,000	100

RIVERSIDE WARD

Year	Male	Female	Total	Rate per 1,000
1911	1,100	1,000	2,100	100
1912	1,150	1,050	2,200	100
1913	1,200	1,100	2,300	100
1914	1,250	1,150	2,400	100
1915	1,300	1,200	2,500	100
1916	1,350	1,250	2,600	100
1917	1,400	1,300	2,700	100
1918	1,450	1,350	2,800	100
1919	1,500	1,400	2,900	100
1920	1,550	1,450	3,000	100
1921	1,600	1,500	3,100	100
1922	1,650	1,550	3,200	100
1923	1,700	1,600	3,300	100
1924	1,750	1,650	3,400	100
1925	1,800	1,700	3,500	100
1926	1,850	1,750	3,600	100
1927	1,900	1,800	3,700	100
1928	1,950	1,850	3,800	100
1929	2,000	1,900	3,900	100
1930	2,050	1,950	4,000	100

CANTON WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with water.	Dampness of Premises.	Other Nuisances.
Leekwith Road ...	69	2	...	11	20	...	71	...	63	63	7	12
Philip Street ...	6	...	...	...	2	...	6	...	4	4	...	...
Delta Street ...	4	...	...	...	...	...	4	...	4	...	4	...
Atlas Road ...	45	7	...	12	13	...	45	...	45	21	...	...
Basset Street ...	7	...	...	...	...	...	7	...	7	...	...	...
Thurston Street ...	10	...	...	...	...	...	10	...	10	...	...	...
Rolls Street ...	22	5	...	5	8	...	22	...	22	22	6	7
Severn Road ...	31	6	...	8	12	...	31	...	31	28	...	3
Gray Street ...	59	...	1	2	1	...	59	...	59	39	...	3
Pontcanna Place ...	23	4	2	6	5	...	23	...	23	23	5	6
Gladstone Crescent ...	17	...	...	...	...	...	17	...	17	17	...	3
Mortimer Road ...	51	7	...	7	6	...	51	...	51	50	6	8

ROATH WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with Drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Sapphire Street ...	54	21	...	20	27	...	75	...	75	72	12	15
Emerald Street ...	59	20	...	9	13	...	59	...	58	58	16	17
Ruby Street ...	57	3	...	2	1	...	57	...	57	57	3	13
Topaz Street ...	61	2	3	1	...	...	61	...	61	61	1	2
Agate Street ...	18	2	...	1	1	1	19	...	16	15	2	2
Diamond Street ...	70	9	...	7	5	...	70	...	70	70	10	12
Nora Street ...	74	4	1	4	1	...	74	...	74	74	10	13
Helen Street ...	80	9	6	14	2	...	80	...	80	80	15	20
Pearl Street ...	193	14	4	13	3	...	193	...	193	190	32	57

GRANGETOWN WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with Drains.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Dorset Street ...	44	1	...	2	...	...	42	...	42	36	...	20
Chester Street ...	34	6	4	4	8	...	34	...	17	34	...	45
Durham Street ...	30	...	...	...	4	...	30	...	6	15	...	9
Chester Place ...	10	...	...	...	...	...	9	...	...	4	1	2
Bromsgrove Street ...	33	...	...	12	9	...	32	...	32	32	...	12
Hewell Street ...	69	4	2	11	4	1	67	...	65	65	7	33
Saltmead Road ...	105	...	...	5	1	...	80	...	79	79	3	11

SPLOTT WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Scullery Sinks connected direct with Drain.	Number of Water Closets	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Llanelly Street ...	59	1	1	...	...	...	59	...	59	57	...	75
Pentypriid Street ...	70	...	1	...	...	...	70	...	70	58	...	60
Wimborne Street ...	72	2	...	1	...	...	72	...	72	72	...	63
Teuby Street ...	67	...	1	...	...	...	67	...	67	67	...	45
Milford Street ...	61	...	1	...	...	...	61	...	61	60	...	51
Aberystwyth Street ...	49	...	...	...	...	...	46	...	46	46	...	32
Janet Street ...	72	2	3	...	12	...	71	...	71	70	...	57
Adeline Street ...	83	2	...	...	1	1	80	...	80	80	...	59
Aberlovey Street ...	35	...	...	...	...	...	35	...	35	12	...	21

INSPECTION OF FACTORIES AND WORKSHOPS.

UNDER THE FACTORY AND WORKSHOP ACTS, 1878—95, AND THE SHOP HOURS ACT, 1892.

During the year a large number of workshops have been inspected. The results of these inspections are given in the annexed Tables:—

Nature of Workshops Inspected.	Number on Register.	Number of Inspections.
Tailors ...	148	407
Dressmakers ...	172	220
Milliners ...	49	78
Bakers ...	170	668
Upholsterers and Cabinet Makers	26	29
Bootmakers ...	59	103
Printers and Bookbinders ...	8	31
Carpenters and Joiners ...	23	119
Wheelwrights and Smiths ...	18	94
Laundries ...	14	30
Domestic Machine Manufacturers	4	6
Tobacco Manufacturers ...	4	2
Furriers ...	1	2
Packers ...	15	35
Jewellers ...	5	25
Leather Workers ...	12	5
Box and Paper Bag Makers	8	19
Sail and Oilskin Manufacturers	5	12
Basket Makers ...	1	1
Jam and Biscuit Works ...	2	2
Iron and Brass Founders ...	6	24
Blind Makers ...	3	—
Plaster Moulders ...	2	3
Tar Distillers and Paint Works	3	6
Cycle Repairers ...	10	10
Mat Makers ...	1	2
Pianoforte and Organ Manufacturers	4	1
Pipe Manufacturers ...	1	6

SHOP HOURS ACT.

NATURE OF SHOPS INSPECTED.	Number of Inspections.	Employing Young Persons.	Employing Females.	Seats Provided.
Drapers	236	192	200	183
Bootmakers	121	101	72	60
Confectioners	96	39	74	71
Furniture Dealers	13	11	5	4
Public Houses	151	12	96	93
Fancy Dealers	42	27	31	21
Grocers	202	161	4	4
Tobacconists and Hairdressers	163	122	46	45
Ironmongers	55	36	...	...
Outfitter	73	43	1	1
Dyers' Agents	4	3	4	4
Fruiterer and Florists	62	29	20	18
China Dealers... ..	12	5	3	3
Butchers	158	131	...	...
Chemists	32	22	5	3
Stationer and Newsagents	75	63	38	35
Restaurants	58	21	43	41
Seedsman	2	...	...	...
Cycle Dealers... ..	2	...	...	...
Jewellers	19	13	4	3
India Rubber Dealers	3	3	1	1
Domestic Machine Dealers	2	1	2	2
Umbrella Dealers	2	2	1	1
Hosiery	4	2	...	...
Shops since provided with seats	1587	1039	650	593
				57
				650

Proceedings taken—2 Tobacconists—1 fined 1/- and costs.

1 withdrawn.

1 Hairdresser— Fined 5/- and costs.

INSPECTION OF COMMON LODGING HOUSES.—These houses are regulated by the provisions of the Public Health Act, 1875. Section 77 requires all Common Lodging Houses to be registered, and Section 80 empowers the Sanitary Authority to make Bye-Laws.

- (1) For fixing and from time to time varying the number of lodgers who may be received into a Common Lodging House, and for the separation of the sexes therein.
- (2) For promoting cleanliness and ventilation in such houses.
- (3) For the giving of notices and the taking precautions in the case of any infectious diseases; and
- (4) Generally for the well ordering of such houses.

In the year 1891, your authority adopted Bye-laws which correspond closely with the "Model Bye-laws" of the Local Government Board.

COMMON LODGING HOUSES.

Total number on register	32
Registered rooms	138
Number of persons certified to accommodate	459
Day inspections	539

STOP SMOKING ACT.

Year	Number of Licenses	Number of Licenses	Number of Licenses	Number of Licenses
1951	100	100	100	100
1952	100	100	100	100
1953	100	100	100	100
1954	100	100	100	100
1955	100	100	100	100
1956	100	100	100	100
1957	100	100	100	100
1958	100	100	100	100
1959	100	100	100	100
1960	100	100	100	100
1961	100	100	100	100
1962	100	100	100	100
1963	100	100	100	100
1964	100	100	100	100
1965	100	100	100	100
1966	100	100	100	100
1967	100	100	100	100
1968	100	100	100	100
1969	100	100	100	100
1970	100	100	100	100
1971	100	100	100	100
1972	100	100	100	100
1973	100	100	100	100
1974	100	100	100	100
1975	100	100	100	100
1976	100	100	100	100
1977	100	100	100	100
1978	100	100	100	100
1979	100	100	100	100
1980	100	100	100	100
1981	100	100	100	100
1982	100	100	100	100
1983	100	100	100	100
1984	100	100	100	100
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1986	100	100	100	100
1987	100	100	100	100
1988	100	100	100	100
1989	100	100	100	100
1990	100	100	100	100
1991	100	100	100	100
1992	100	100	100	100
1993	100	100	100	100
1994	100	100	100	100
1995	100	100	100	100
1996	100	100	100	100
1997	100	100	100	100
1998	100	100	100	100
1999	100	100	100	100
2000	100	100	100	100
2001	100	100	100	100
2002	100	100	100	100
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2004	100	100	100	100
2005	100	100	100	100
2006	100	100	100	100
2007	100	100	100	100
2008	100	100	100	100
2009	100	100	100	100
2010	100	100	100	100
2011	100	100	100	100
2012	100	100	100	100
2013	100	100	100	100
2014	100	100	100	100
2015	100	100	100	100
2016	100	100	100	100
2017	100	100	100	100
2018	100	100	100	100
2019	100	100	100	100
2020	100	100	100	100
2021	100	100	100	100
2022	100	100	100	100
2023	100	100	100	100
2024	100	100	100	100
2025	100	100	100	100
2026	100	100	100	100
2027	100	100	100	100
2028	100	100	100	100
2029	100	100	100	100
2030	100	100	100	100

Proceedings under the Act—1951-1952 and 1953-1954

1. Licenses—1951-1952 and 1953-1954

2. Licenses—1955-1956 and 1957-1958

3. Licenses—1959-1960 and 1961-1962

4. Licenses—1963-1964 and 1965-1966

5. Licenses—1967-1968 and 1969-1970

6. Licenses—1971-1972 and 1973-1974

7. Licenses—1975-1976 and 1977-1978

8. Licenses—1979-1980 and 1981-1982

9. Licenses—1983-1984 and 1985-1986

10. Licenses—1987-1988 and 1989-1990

11. Licenses—1991-1992 and 1993-1994

12. Licenses—1995-1996 and 1997-1998

13. Licenses—1999-2000 and 2001-2002

14. Licenses—2003-2004 and 2005-2006

15. Licenses—2007-2008 and 2009-2010

16. Licenses—2011-2012 and 2013-2014

17. Licenses—2015-2016 and 2017-2018

18. Licenses—2019-2020 and 2021-2022

19. Licenses—2023-2024 and 2025-2026

20. Licenses—2027-2028 and 2029-2030

COMMON LOBBING HOURS

Year	Number of Licenses	Number of Licenses	Number of Licenses	Number of Licenses
1951	100	100	100	100
1952	100	100	100	100
1953	100	100	100	100
1954	100	100	100	100
1955	100	100	100	100
1956	100	100	100	100
1957	100	100	100	100
1958	100	100	100	100
1959	100	100	100	100
1960	100	100	100	100
1961	100	100	100	100
1962	100	100	100	100
1963	100	100	100	100
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2017	100	100	100	100
2018	100	100	100	100
2019	100	100	100	100
2020	100	100	100	100
2021	100	100	100	100
2022	100	100	100	100
2023	100	100	100	100
2024	100	100	100	100
2025	100	100	100	100
2026	100	100	100	100
2027	100	100	100	100
2028	100	100	100	100
2029	100	100	100	100
2030	100	100	100	100

COMMON LODGING HOUSES—Continued.

Night Inspections	...	...	...	...	94
W.Cs. cleansed and repaired	...	...	...	...	82
„ supplied with water	...	...	...	...	5
Additional W.C. accommodation provided	...	...	...	...	—
Drains trapped and repaired	...	...	...	...	20
Soil pipes ventilated	...	...	...	...	—
Special ventilation provided to rooms	...	...	...	...	32
Lime-washed	...	...	...	...	116
Overcrowded	...	...	...	...	1
Yards paved	...	...	...	...	26
Accumulations removed	...	...	...	...	72
Infectious disease discovered	...	...	...	...	1
Registered	...	...	...	...	—

SEAMEN'S LODGING HOUSES.

Total number of applications	...	...	...	...	373
„ „ Refused	...	...	...	...	55
„ „ Relinquished	...	...	...	...	208
„ „ persons licensed	...	...	...	...	110
„ „ houses, the occupiers of which have been licensed	...	...	...	...	111
Maximum number of lodgers authorised to be received in the above	...	...	...	...	1270
Number of day inspections	...	...	...	...	2324
„ night „	...	...	...	...	232
Number of houses in which sanitary improvements have been effected	...	...	...	...	279

NATURE OF SANITARY DEFECTS:—

Defective water-closets	...	...	...	...	85
Insufficient W.C. accommodation	...	...	...	...	—
Defective drains	...	...	...	...	47
Defective paving in yards	...	...	...	...	79
Defective bedroom ventilation	...	...	...	...	100
Stables without manure pits	...	...	...	...	—
Houses with walls and roofs out of repair	...	...	...	...	112
Infectious disease discovered	...	...	...	...	4
Lime-washed	...	...	...	...	262
Legal proceedings taken	...	...	...	...	5

In conclusion, I have the pleasure of reporting that your Inspectors of Houses have carried out their work in a satisfactory manner, and that they have, as usual, paid the greatest attention to their varied and important duties.

I have the honour to be, Gentlemen,

Your obedient servant,

EDWARD WALFORD, M.D.,

Medical Officer of Health.

COMMON LIVING HOUSES—Continued

10	...	...	...	Night inspections
10	...	...	...	W.C. cleaned and repaired
5	...	...	...	supplied with water
...	...	...	...	Additional W.C. accommodations provided
20	...	...	...	Drains trapped and repaired
...	...	...	...	Bed sides ventilated
10	...	...	...	Special ventilation provided in rooms
110	...	...	...	Lime-washed
1	...	...	...	Overcrowded
30	...	...	...	Yards paved
70	...	...	...	Accumulations removed
1	...	...	...	Infectious disease discovered
...	...	...	...	Registers

SHAMERS' LIVING HOUSES

170	...	...	...	Total number of applications
27	...	...	...	Refused
100	...	...	...	Refragated
110	...	...	...	Persons licensed
111	...	...	...	houses the number of which have been licensed
1270	...	...	...	Maximum number of persons authorized to be received in the houses
1014	...	...	...	Number of day inspections
200	...	...	...	night
200	...	...	...	Number of houses in which sanitary improvements have been effected

NATURE OF SANITARY DEFECTS—

10	...	...	...	Defective water-closets
...	...	...	...	Insufficient W.C. accommodation
47	...	...	...	Defective drains
70	...	...	...	Defective paving in yards
100	...	...	...	Defective bedroom ventilation
...	...	...	...	Flashes without return pipe
110	...	...	...	Houses with wells and cisterns out of repair
1	...	...	...	Infectious disease discovered
200	...	...	...	Lime-washed
1	...	...	...	Legal proceedings taken

SALE OF FOOD AND DRUGS ACT.

The following articles were analysed during the year by Mr. Thomas Hughes, F.I.C., F.C.S., Borough Analyst:—

Samples obtained.	Number of Samples.	Number of Genuine Samples.	Number of Samples Adulterated.	Fines.
Milk	404	381	23	£1 and costs; £1 and costs; £2 and costs; £3 and costs £10 and costs; £2 and costs; £2 and costs; £1 and costs £1 and costs; 1s. and costs; £1 and costs; £1 and costs £2 and costs; 5s. and costs; 1s. and costs; £4 and costs £4 and costs; £4 and costs; £4 and costs; £2 and costs £15 and costs; £15 and costs; 1 case withdrawn
Butter	39	39	...	
Bread	3	3	...	
Pepper	24	24	...	
Coffee	24	24	...	
Flour	27	27	...	
Margarine	15	15	...	
Lard	12	12	...	
Demerara Sugar	12	12	...	
Cheese... ..	12	12	...	
Baking Powder	12	12	...	
Beer	12	12	...	
Tea	6	6	...	
Sweets... ..	4	4	...	
Golden Syrup	4	4	...	
Total	610	587	23	

MAGISTERIAL PROCEEDINGS.

	Number of Cases.	Fines. £ s. d.
Proceedings under Sale of Food and Drugs Act ...	23	75 7 0
Proceedings under Seamen's Bye-laws' ...	7	60 0 0
Proceedings under Common Lodging Houses ...	—	—
Proceedings under Cowsheds and Milkshops Order ...	—	—
Proceedings under Houses of the Working Classes Act ...	8	—
Proceedings under Shop Hours Act ...	3	0 6 0
Proceedings under Factories and Workshops Act ...	2	2 0 0
Proceedings under Public Health Act ...	1	5 0 0
	<u>44</u>	<u>£142 13 0</u>

In conclusion, I have the pleasure of reporting that your Inspectors of Nuisances have carried out their work in a satisfactory manner, and that they have, as usual, paid the greatest attention to their varied and important duties.

I have the honour to be, Gentlemen,

Your obedient Servant,

EDWARD WALFORD, M.D.,

MEDICAL OFFICER OF HEALTH.

Report of Mr. D. VAUGHAN, Chief Inspector of Nuisances, and Inspector
of Canal Boats, for the year 1900.

NUISANCES :—							
Nuisances Inspected	...	...	...	...	...	...	3,790
Notices issued	...	...	...	...	...	...	3,238
Nuisances abated without legal proceedings	...	...	...	...	...	...	3,237
" " with	...	...	...	...	...	...	1
Animals kept so as to be a nuisance	...	...	...	...	...	...	47
Injurious and foul accumulations	...	...	...	...	...	...	414
Nuisances from Smoke	...	...	...	...	...	...	3
Stagnant water under floors of houses	...	...	...	...	...	...	1
Houses unfit for human habitation	...	...	...	...	...	...	8
Defective drainage	...	...	...	...	...	...	1,108
Drains unstopped and cleansed	...	...	...	...	...	...	297
" tapped and repaired	...	...	...	...	...	...	120
" tested	...	...	...	...	...	...	769
" found defective	...	...	...	...	...	...	317
Foul and offensive W.Cs. cleansed	...	...	...	...	...	...	160
Defective apparatus to water-closets repaired	...	...	...	...	...	...	36
Water laid on to water closets	...	...	...	...	...	...	5
" " urinals	...	...	...	...	...	...	1
" " dwelling houses	...	...	...	...	...	...	28
Insufficient ventilation	...	...	...	...	...	...	3
Overcrowding notices	...	...	...	...	...	...	1
Dilapidated houses repaired	...	...	...	...	...	...	869
Dirty houses and workshops cleansed and lime-washed	...	...	...	...	...	...	121
Additional W.C. accommodation provided	...	...	...	...	...	...	6
Urinals erected	...	...	...	...	...	...	2
DISINFECTION :—							
Houses disinfected	...	...	...	...	...	...	1,058
Articles of bedding and clothing disinfected	...	...	...	...	...	...	17,968
" " " destroyed	...	...	...	...	...	...	50
OFFENSIVE TRADES :—							
Premises visited...	...	...	...	...	...	...	845
SLAUGHTER HOUSES AND MARKETS :—							
Visits paid to slaughter houses	...	...	...	...	...	...	155
" " markets	...	...	...	...	...	...	200
Articles destroyed unfit for food—Beef, 15,868 lbs.; Fruit, 1,904 lbs.; Pork, 1,183 lbs.; Veal, 260 lbs.; Game, 164 lbs.; Mutton, 230 lbs.; Fish, 2,520 lbs.; Bacon, 96 lbs.; Ham, 560 lbs.	...	...	...	...	...	...	1,561
Butchers' and Provision Shops inspected	...	...	...	...	...	...	1,561
COWSHEDS, MILKSHOPS AND DAIRIES :—							
Number of Cowkeepers on register	...	...	...	...	...	...	26
" Milksellers	...	...	...	...	...	...	565
						Total	591
Number of Cowkeepers registered during the year	...	...	...	...	...	...	—
" Milksellers	...	...	...	...	...	...	95
						Total	95

Number of visits paid to cowsheds	...	...	...	...	...	380
" " " milkshops	...	...	...	...	...	688
Notices served	...	...	...	...	...	33
						1101

COWSHEDS, MILKSHOPS, AND DAIRIES.

PARTICULARS OF INSPECTION.						COWSHEDS.	MILKSHOPS.
Total number inspected	...	...	...	...	...	380	688
Found in good condition	...	...	...	...	...	194	661
Impure water supply	...	...	...	...	...	—	—
Water closets, sinks, or drains defective	...	...	...	...	...	1	4
Receptacles for manure erected	...	...	...	...	...	—	—
Yards badly paved and accumulations of rubbish	...	...	...	...	...	4	17
Dairies or milkshops used for purposes incompatible with proper preservation of milk	...	...	...	...	...	—	—
Infectious disease amongst persons employed	...	...	...	...	...	—	5
Cowsheds with defective lighting, cleansing, ventilation of air space, and lime washing	...	...	...	...	...	5	—
Cowsheds overcrowded	...	...	...	...	...	—	—

CANAL BOATS.

Number of Boats on Register	...	...	...	...	36
" Inspections	...	...	...	...	87
" boats found in good condition	...	...	...	...	69
" " with wrong register numbers	...	...	...	...	4
" " registered	...	...	...	...	—
" " found with defective ventilators	...	...	...	...	8
Certificates cancelled	...	...	...	...	4
Water vessels defective	...	...	...	...	—
Notices served and complied with	...	...	...	...	12
Cabins leaking	...	...	...	...	1

of visits paid to cowsheds
 ..
 ..
 ..
 ..

GOWSHEDS, MILKSHEDS AND DAIRY

Number	Quantity	Particulars or Remarks
... overcrowded
... not washing
... with defective lighting, cleaning, ventilation of air space, and
... the disease amongst persons employed
... action of milk
... or milksheds used for purposes incompatible with proper practice
... daily cared and accommodations of milch cows
... sites for persons working
... cows, sties, or drains defective
... water supply
... in good condition
... proper inspected

CANAL WATER

Number of boats on register	...	...	...
...	...	...	... boats lacking
...	...	...	... houses served and supplied with
...	...	...	... water vessels defective
...	...	...	... certificates cancelled
...	...	...	... found with defective ventilation
...	...	...	... registered
...	...	...	... with wrong register numbers
...	...	...	... boats found in good condition
...	...	...	... inspections

APPENDIX.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1900.

MONTH.	Attached Thermometer.	Barometer. Inches.	TEMPERATURE IN SHADE.						HYGROMETER.			RAINFALL.				DEATH RATE. Per 1,000.		
			Maximum.	Minimum.	Mean of Maximum.	Mean of Minimum.	Mean of Month.	Earth.		Dry Bulb Mean.	Wet Bulb Mean.	Relative Humidity.	Amount in Inches.	Greatest Fall in 24 hours.	Date of Greatest Fall.	Days on which 0.01 or more rain fell.	All Causes.	Seven Chief Zymotic Diseases.
								1 foot mean.	4 feet mean.									
January ...	50	29.902	51.0	22.0	46.4	35.1	36.5	45.0	43.5	43.0	41.3	89	5.81	1.26	6th	23	14.1	1.6
February ...	56	29.607	56.8	12.0	44.0	35.6	39.8	37.2	40.9	37.7	35.5	81	6.40	.99	18th	20	15.0	1.7
March ...	56	29.968	56.0	18.0	45.2	31.4	38.3	36.5	43.3	39.1	36.5	79	1.06	.33	21st	6	17.1	2.8
April ...	60	29.980	71.0	24.0	55.8	37.5	46.6	46.4	45.2	48.2	44.5	74	1.62	.42	3rd	12	20.3	4.7
May ...	58	29.924	65.8	34.5	58.7	42.2	50.4	52.7	50.0	52.9	48.7	72	1.89	.37	21st	13	13.1	2.2
June ...	68	30.088	75.8	39.8	61.9	48.7	55.3	57.1	52.5	59.1	54.7	74	1.73	.27	14th	14	11.4	1.8
July ...	69	29.990	86.8	40.0	73.8	54.0	63.9	65.2	57.1	66.4	60.5	89	.68	.27	27th	8	12.7	2.2
August ...	66	29.942	73.0	51.0	66.7	52.9	59.8	61.3	59.0	60.7	60.3	98	4.06	.88	9th	14	11.7	1.7
September ...	61	30.104	74.0	34.0	74.0	56.0	55.5	59.1	58.4	58.7	54.2	74	1.32	.50	26th	10	13.5	2.8
October ...	59	29.981	70.0	31.0	58.6	49.0	49.1	54.5	56.5	62.0	58.0	87	5.79	1.06	29th	21	12.1	1.2
November ...	59	29.203	63.0	26.0	52.4	36.7	41.5	49.4	53.8	45.7	42.3	77	4.99	.71	24th	22	11.7	0.7
December ...	66	29.882	57.0	26.0	49.4	37.1	43.2	45.2	47.8	44.9	43.6	90	6.55	1.06	30th	26	12.3	0.9

Mean Temperature of Each Month in the Year, as compared with that of the previous Five Years.

Месяц.	1891	1892	1893	1894	1895	Mean of 5 years	1896	1897	1898	1899	1900
January ...	35°8	36°2	36°8	39°4	35°5	36°3	41°6	35°9	44°0	42°2	36°5
February ...	41°6	38°6	42°2	43°0	29°3	38°9	40°8	43°5	41°3	41°3	39°8
March ...	40°8	35°9	47°1	44°4	41°6	41°9	45°9	44°6	41°1	42°1	38°3
April ...	45°5	43°2	53°0	47°0	47°9	47°3	48°0	46°3	46°6	47°2	46°6
May ...	50°9	50°7	57°3	49°7	54°4	52°6	52°9	49°1	49°9	52°0	50°4
June ...	60°2	54°5	62°4	57°1	58°5	58°5	61°4	59°5	55°9	59°8	55°3
July ...	60°2	64°1	63°6	60°3	60°0	61°6	61°4	62°7	60°6	63°8	63°9
August ...	56°4	61°3	64°8	57°5	59°0	59°8	58°6	60°9	61°5	68°3	59°8
September ...	57°0	56°0	57°1	53°2	59°7	56°6	56°8	54°4	58°8	57°8	55°5
October ...	48°8	42°9	51°0	50°3	46°7	47°9	46°2	51°2	52°7	48°9	49°1
November ...	41°7	43°8	43°2	47°2	47°2	44°6	39°9	46°1	45°7	47°0	44°5
December ...	40°4	35°8	42°1	41°8	40°0	40°0	40°0	42°5	46°7	37°3	43°5

The following Table illustrates the Daily Direction of Wind throughout the Year 1900.

Direction of Wind.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year 1900	
N.	1	...	4	...	...	...	...	3	...	1	4	13	
N.E.	7	15	15	8	9	17	2	7	8	4	10	2	104
N.W.	6	5	9	5	4	1	4	9	7	14	6	2	72
S.	2	3	1	...	...	1	7	
S.E.	5	4	2	8	6	4	3	8	1	3	5	2	46
S.W.	11	3	1	14	12	4	13	3	8	9	5	18	101
E.	1	...	...	...	4	...	...	1	1	2	1	11	
W.	1	...	...	...	7	1	1	...	1	1	12	

The following Table illustrates the Daily Direction of Wind throughout the Year 1891

Year	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
Jan	10	12	15	18	20	22	25	28	30	32	35
Feb	11	13	16	19	21	23	26	29	31	33	36
Mar	12	14	17	20	22	24	27	30	32	34	37
Apr	13	15	18	21	23	25	28	31	33	35	38
May	14	16	19	22	24	26	29	32	34	36	39
Jun	15	17	20	23	25	27	30	33	35	37	40
Jul	16	18	21	24	26	28	31	34	36	38	41
Aug	17	19	22	25	27	29	32	35	37	39	42
Sep	18	20	23	26	28	30	33	36	38	40	43
Oct	19	21	24	27	29	31	34	37	39	41	44
Nov	20	22	25	28	30	32	35	38	40	42	45
Dec	21	23	26	29	31	33	36	39	41	43	46

The following Table illustrates the Daily Direction of Wind throughout the Year 1892

Year	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
Jan	11	13	16	19	21	23	26	29	31	34
Feb	12	14	17	20	22	24	27	30	32	35
Mar	13	15	18	21	23	25	28	31	33	36
Apr	14	16	19	22	24	26	29	32	34	37
May	15	17	20	23	25	27	30	33	35	38
Jun	16	18	21	24	26	28	31	34	36	39
Jul	17	19	22	25	27	29	32	35	37	40
Aug	18	20	23	26	28	30	33	36	38	41
Sep	19	21	24	27	29	31	34	37	39	42
Oct	20	22	25	28	30	32	35	38	40	43
Nov	21	23	26	29	31	33	36	39	41	44
Dec	22	24	27	30	32	34	37	40	42	45

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-FIVE YEARS, 1876-1900.

YEAR.	JANUARY.				FEBRUARY.				MARCH.			
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	12	0.68	2nd	5.33	22	0.90	14th	3.92	22	0.54	9th
1877	5.77	27	0.72	3rd	2.79	20	0.42	11th	2.66	21	0.55	23rd
1878	1.73	17	0.36	27th	3.07	16	0.87	27th	1.25	8	0.40	28th
1879	5.95	10	1.30	1st	5.95	23	0.86	20th	1.14	14	0.32	23rd
1880	0.87	11	0.42	13th	3.88	22	1.06	18th	1.90	12	0.75	2nd
1881	0.92	12	0.23	26th	4.81	15	1.12	9th	3.88	16	0.68	3rd
1882	3.19	13	0.82	2nd	2.56	15	0.60	28th	2.26	19	0.32	1st
1883	5.75	25	1.11	24th	3.73	20	0.65	10th	0.60	10	0.12	19th
1884	6.03	21	0.99	31st	4.40	22	1.35	17th	3.39	16	1.27	3rd
1885	3.71	20	0.58	9th	3.65	22	0.67	26th	1.87	16	0.53	29th
1886	5.03	23	0.91	30th	1.32	11	0.62	28th	3.97	13	0.68	20th
1887	2.76	15	0.73	7th	1.45	6	0.73	3rd	3.21	10	1.16	15th
1888	1.70	12	0.49	1st	1.07	9	1.09	2nd	4.62	15	0.76	24th
1889	1.58	10	0.58	9th	2.00	16	0.64	10th	3.89	16	1.17	8th
1890	5.21	24	0.61	26th	0.55	7	0.22	19th	1.52	14	0.28	24th
1891	3.58	13	1.26	23rd	0.05	2	0.03	2nd	1.76	16	0.31	15th
1892	2.10	15	0.70	16th	2.38	19	0.58	20th	1.18	6	0.48	15th
1893	2.38	19	0.94	12th	6.04	22	0.95	25th	0.31	6	0.14	2nd
1894	3.20	23	0.44	19th	3.68	20	0.78	17th	3.37	13	0.82	1st
1895	3.88	20	0.71	19th	0.17	4	0.08	24th	3.92	21	0.85	27th
1896	0.64	6	0.40	24th	1.39	9	0.80	13th	4.47	24	0.54	7th
1897	3.78	17	0.50	31st	5.73	21	0.70	4th	6.29	19	0.90	21st
1898	1.96	10	0.48	10th	1.71	17	0.22	18th	1.12	9	0.33	6th
1899	5.50	20	1.03	20th	3.89	13	0.79	4th	1.39	6	0.88	25th
1900	5.81	23	1.26	6th	6.40	20	0.99	18th	1.06	6	0.33	21st

Year	MAY				JUNE				JULY				AUGUST			
	Produce quantity produced in picks in	MS week days apply 60% to picks in	to 24 hours to 24 hours to 24 hours to 24 hours	to 24 hours to 24 hours to 24 hours to 24 hours	Produce quantity produced in picks in	MS week days apply 60% to picks in	to 24 hours to 24 hours to 24 hours to 24 hours	to 24 hours to 24 hours to 24 hours to 24 hours	Produce quantity produced in picks in	MS week days apply 60% to picks in	to 24 hours to 24 hours to 24 hours to 24 hours	to 24 hours to 24 hours to 24 hours to 24 hours	Produce quantity produced in picks in	MS week days apply 60% to picks in	to 24 hours to 24 hours to 24 hours to 24 hours	to 24 hours to 24 hours to 24 hours to 24 hours
1900	2.01	20	1.22	977	0.45	24	0.28	1807	1.09	8	0.32	3198				
1901	2.09	29	1.45	2079	0.58	12	0.38	745	1.24	8	0.39	2257				
1902	2.20	30	0.95	1657	1.11	14	0.75	1807	1.15	8	0.37	307				
1903	2.12	11	0.95	2116	0.27	27	0.25	497	0.42	10	0.30	3202				
1904	0.64	2	0.00	3107	1.20	0	0.00	1307	0.45	23	0.31	307				
1905	1.00	29	0.31	1477	0.75	4	0.09	5507	0.25	21	0.22	2207				
1906	0.20	22	0.13	1217	0.08	29	0.24	1207	0.32	19	0.26	197				
1907	0.20	11	0.07	1307	0.41	22	0.20	2007	0.21	8	0.19	307				
1908	1.10	12	0.20	1807	0.28	11	0.16	2007	1.10	8	0.31	1507				
1909	0.28	11	1.20	2307	0.07	7	0.05	207	1.18	19	0.31	1007				
1910	0.27	27	0.11	2077	0.25	1	0.23	1607	1.23	14	0.22	2007				
1911	1.00	16	0.20	107	0.25	11	0.27	2007	0.19	19	0.15	307				
1912	1.10	19	0.18	14	1.01	0	1.05	2007	0.45	19	0.28	1007				
1913	0.18	29	0.17	147	1.17	0	0.37	307	0.21	10	0.10	1007				
1914	0.00	29	0.27	2107	1.28	11	0.25	2007	0.11	12	0.22	2007				
1915	0.11	20	0.70	807	0.20	25	0.41	2007	1.01	10	0.27	2007				
1916	0.00	27	0.01	1107	0.97	29	1.22	1107	0.00	10	1.21	2007				
1917	0.27	22	1.11	2007	0.27	23	0.29	1007	0.00	10	0.13	1007				
1918	0.10	12	0.52	2007	0.20	19	0.20	2007	0.20	10	0.25	1007				
1919	0.01	16	0.22	2007	0.21	12	1.21	807	0.25	10	0.00	2007				
1920	0.01	17	0.23	1007	0.26	23	1.02	1007	1.40	12	0.12	2007				
1921	0.27	10	1.20	1007	0.27	22	0.21	2007	1.14	14	0.24	2007				
1922	1.42	11	0.28	2107	0.21	14	0.21	2107	1.22	0	0.40	2007				
1923	0.11	12	0.15	2007	0.15	20	0.15	1107	0.00	21	0.22	2007				
1924	1.41	13	0.04	2007	0.20	23	0.20	1107	0.23	23	0.21	2007				

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-FIVE YEARS, 1876-1900.

YEAR.	APRIL.				MAY.				JUNE.			
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	17	0.38	28th	0.23	4	0.12	24th	1.91	9	0.52	15th
1877	2.90	20	0.52	20th	2.47	14	0.99	16th	1.48	12	0.41	1st
1878	4.10	21	0.75	9th	4.32	24	0.71	16th	3.68	15	1.65	16th
1879	2.64	17	0.73	19th	2.85	15	0.88	29th	6.48	23	1.64	30th
1880	1.98	13	0.40	5th	1.45	11	0.46	26th	2.38	19	0.53	17th
1881	1.44	7	0.60	13th	2.62	10	1.73	17th	3.59	18	0.63	16th
1882	5.68	20	0.60	12th	2.72	13	0.59	22nd	4.28	20	0.82	5th
1883	0.67	7	0.28	26th	1.90	12	0.70	11th	1.81	17	1.16	27th
1884	1.56	11	0.43	3rd	2.37	14	0.50	2nd	1.92	9	1.11	28th
1885	2.52	16	0.67	1st	3.86	27	0.71	19th	2.61	13	1.04	23rd
1886	2.98	15	0.73	7th	6.38	19	1.52	31st	0.70	7	0.28	1st
1887	1.63	10	0.45	26th	1.94	14	0.63	19th	0.60	4	0.51	2nd
1888	1.48	13	0.30	17th	1.69	8	0.40	17th	3.69	17	0.74	17th
1889	3.54	18	0.71	30th	2.51	16	0.38	31st	0.58	6	0.41	1st
1890	1.80	14	0.34	5th	1.99	13	0.66	9th	2.46	17	0.40	10th
1891	2.02	11	0.40	2nd	3.41	17	0.75	21st	2.47	12	1.30	24th
1892	1.27	9	0.43	20th	1.35	11	0.66	27th	1.93	10	0.61	28th
1893	0.29	5	0.16	1st	2.80	12	0.72	19th	0.67	9	0.23	22nd
1894	2.05	15	0.41	23rd	2.18	15	0.50	15th	2.43	16	0.64	3rd
1895	2.08	12	0.55	24th	0.50	3	0.41	31st	1.15	9	0.32	30th
1896	2.83	14	0.80	15th	0.22	3	0.14	13th	2.48	11	1.00	7th
1897	8.18	20	0.90	13th	2.29	8	0.50	29th	5.02	11	0.90	8th
1898	1.40	10	0.28	11th	4.80	20	0.80	11th	5.06	14	0.90	4th
1899	4.34	18	0.92	20th	2.49	12	0.78	19th	1.17	5	0.45	30th
1900	1.62	12	0.42	3rd	1.89	13	0.37	21st	1.73	14	0.27	14th

No.	Name	1931			1932			1933			Total	Average	No. of years	No. of years
		Yield	Area	Per cent	Yield	Area	Per cent	Yield	Area	Per cent				
1000		1.00	100	100	1.00	100	100	1.00	100	100	100	100	100	
1001		1.01	101	101	1.02	102	102	1.03	103	103	103	103	103	
1002		1.02	102	102	1.04	104	104	1.06	106	106	106	106	106	
1003		1.03	103	103	1.05	105	105	1.08	108	108	108	108	108	
1004		1.04	104	104	1.07	107	107	1.10	110	110	110	110	110	
1005		1.05	105	105	1.09	109	109	1.12	112	112	112	112	112	
1006		1.06	106	106	1.11	111	111	1.14	114	114	114	114	114	
1007		1.07	107	107	1.13	113	113	1.16	116	116	116	116	116	
1008		1.08	108	108	1.15	115	115	1.18	118	118	118	118	118	
1009		1.09	109	109	1.17	117	117	1.20	120	120	120	120	120	
1010		1.10	110	110	1.19	119	119	1.22	122	122	122	122	122	
1011		1.11	111	111	1.21	121	121	1.24	124	124	124	124	124	
1012		1.12	112	112	1.23	123	123	1.26	126	126	126	126	126	
1013		1.13	113	113	1.25	125	125	1.28	128	128	128	128	128	
1014		1.14	114	114	1.27	127	127	1.30	130	130	130	130	130	
1015		1.15	115	115	1.29	129	129	1.32	132	132	132	132	132	
1016		1.16	116	116	1.31	131	131	1.34	134	134	134	134	134	
1017		1.17	117	117	1.33	133	133	1.36	136	136	136	136	136	
1018		1.18	118	118	1.35	135	135	1.38	138	138	138	138	138	
1019		1.19	119	119	1.37	137	137	1.40	140	140	140	140	140	
1020		1.20	120	120	1.39	139	139	1.42	142	142	142	142	142	
1021		1.21	121	121	1.41	141	141	1.44	144	144	144	144	144	
1022		1.22	122	122	1.43	143	143	1.46	146	146	146	146	146	
1023		1.23	123	123	1.45	145	145	1.48	148	148	148	148	148	
1024		1.24	124	124	1.47	147	147	1.50	150	150	150	150	150	
1025		1.25	125	125	1.49	149	149	1.52	152	152	152	152	152	
1026		1.26	126	126	1.51	151	151	1.54	154	154	154	154	154	
1027		1.27	127	127	1.53	153	153	1.56	156	156	156	156	156	
1028		1.28	128	128	1.55	155	155	1.58	158	158	158	158	158	
1029		1.29	129	129	1.57	157	157	1.60	160	160	160	160	160	
1030		1.30	130	130	1.59	159	159	1.62	162	162	162	162	162	
1031		1.31	131	131	1.61	161	161	1.64	164	164	164	164	164	
1032		1.32	132	132	1.63	163	163	1.66	166	166	166	166	166	
1033		1.33	133	133	1.65	165	165	1.68	168	168	168	168	168	
1034		1.34	134	134	1.67	167	167	1.70	170	170	170	170	170	
1035		1.35	135	135	1.69	169	169	1.72	172	172	172	172	172	
1036		1.36	136	136	1.71	171	171	1.74	174	174	174	174	174	
1037		1.37	137	137	1.73	173	173	1.76	176	176	176	176	176	
1038		1.38	138	138	1.75	175	175	1.78	178	178	178	178	178	
1039		1.39	139	139	1.77	177	177	1.80	180	180	180	180	180	
1040		1.40	140	140	1.79	179	179	1.82	182	182	182	182	182	
1041		1.41	141	141	1.81	181	181	1.84	184	184	184	184	184	
1042		1.42	142	142	1.83	183	183	1.86	186	186	186	186	186	
1043		1.43	143	143	1.85	185	185	1.88	188	188	188	188	188	
1044		1.44	144	144	1.87	187	187	1.90	190	190	190	190	190	
1045		1.45	145	145	1.89	189	189	1.92	192	192	192	192	192	
1046		1.46	146	146	1.91	191	191	1.94	194	194	194	194	194	
1047		1.47	147	147	1.93	193	193	1.96	196	196	196	196	196	
1048		1.48	148	148	1.95	195	195	1.98	198	198	198	198	198	
1049		1.49	149	149	1.97	197	197	2.00	200	200	200	200	200	
1050		1.50	150	150	2.01	201	201	2.02	202	202	202	202	202	

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-FIVE YEARS, 1876—1900.

YEAR.	JULY.				AUGUST.				SEPTEMBER.			
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	10	0.41	6th	6.06	27	2.72	19th	7.08	19	1.28	30th
1877	4.94	18	1.27	14th	5.70	21	1.42	27th	3.25	8	1.39	27th
1878	2.01	9	0.78	23rd	10.82	24	3.64	15th	3.21	9	1.28	22nd
1879	4.00	21	0.81	19th	8.12	22	1.34	27th	4.85	17	0.69	7th
1880	6.64	28	0.95	17th	0.77	7	0.27	2nd	3.67	15	0.77	17th
1881	2.62	15	0.77	30th	6.94	20	1.45	22nd	2.09	13	0.48	22nd
1882	5.77	24	0.84	6th	6.75	16	1.14	22nd	3.94	17	0.79	28th
1883	3.56	21	0.82	20th	2.09	16	0.73	8th	6.14	19	1.53	23rd
1884	4.05	20	0.94	23rd	2.21	9	0.84	31st	1.96	15	0.64	21st
1885	0.72	6	0.31	18th	2.74	12	1.07	6th	6.51	23	1.76	10th
1886	4.85	17	0.71	29th	1.68	9	0.44	9th	4.08	14	0.75	4th
1887	1.51	18	0.85	26th	2.88	11	1.02	16th	4.07	17	1.24	1st
1888	6.83	25	1.16	7th	3.50	17	0.74	29th	1.21	8	0.52	27th
1889	3.85	12	1.16	9th	3.90	15	0.65	2nd	2.09	9	1.53	23rd
1890	3.57	19	0.73	17th	3.95	20	0.95	9th	1.57	11	0.50	17th
1891	2.21	17	0.86	2nd	7.19	22	1.10	26th	2.43	19	0.51	3rd
1892	3.83	9	1.50	12th	4.64	16	1.62	27th	3.95	14	1.38	29th
1893	3.88	17	0.80	10th	3.05	14	0.52	20th	2.03	15	0.89	28th
1894	4.22	20	0.97	24th	4.55	18	1.55	25th	2.22	10	0.80	22nd
1895	4.71	15	0.94	23rd	4.08	17	1.19	12th	1.17	10	0.40	6th
1896	1.14	8	0.35	24th	2.89	15	0.84	19th	7.34	23	1.10	17th
1897	2.51	8	0.80	6th	5.42	16	1.30	30th	6.37	13	1.38	29th
1898	0.40	2	0.20	1st	3.48	10	0.67	6th	1.94	4	1.38	29th
1899	0.32	6	0.09	1st	1.74	7	0.56	29th	2.59	13	0.74	26th
1900	0.68	8	0.27	27th	4.06	14	0.88	9th	1.32	10	0.50	26th

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-FIVE YEARS, 1876—1900.

YEAR.	OCTOBER.				NOVEMBER.				DECEMBER.				YEAR.
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	
1876	3.84	17	0.62	16th	5.27	18	0.75	12th	7.13	23	0.80	17th	46.62
1877	4.89	16	1.15	24th	6.54	25	1.06	24th	3.40	25	0.88	28th	46.79
1878	5.76	18	1.09	23rd	5.76	13	0.84	9th	2.70	10	0.75	28th	45.71
1879	1.51	12	0.35	19th	0.43	8	0.18	20th	2.11	9	0.79	31st	44.79
1880	4.94	15	1.45	25th	3.67	15	0.90	15th	6.70	20	1.09	14th	38.85
1881	3.23	13	0.72	22nd	4.98	23	0.65	26th	4.50	15	1.77	7th	41.62
1882	8.33	23	1.64	23rd	6.26	21	0.90	7th	4.86	25	0.73	31st	56.60
1883	4.23	17	0.61	15th	6.38	24	0.80	21st	1.92	17	0.57	10th	38.78
1884	1.01	17	0.35	8th	2.12	16	0.47	30th	5.87	20	0.68	5th	36.89
1885	5.59	22	1.60	22nd	5.47	16	1.11	27th	1.74	17	0.05	5th	40.99
1886	5.09	21	0.87	15th	5.39	21	1.03	5th	6.64	21	1.33	26th	48.11
1887	2.80	13	1.14	29th	3.48	21	0.69	3rd	3.46	20	0.75	12th	29.79
1888	1.74	11	0.52	28th	7.04	26	1.13	12th	3.61	16	0.88	27th	38.18
1889	3.77	25	0.48	8th	1.87	12	0.75	24th	2.40	14	0.80	21st	31.38
1890	1.92	16	0.41	7th	3.89	20	0.67	6th	0.80	4	0.33	18th	29.23
1891	7.12	22	1.32	18th	3.91	15	0.74	28th	6.19	19	0.78	30th	42.34
1892	2.64	15	0.51	27th	3.25	18	0.66	4th	2.23	12	0.62	1st	22.63
1893	5.98	21	1.29	4th	2.30	13	0.58	1st	4.18	19	0.94	12th	33.91
1894	4.91	14	1.05	24th	4.72	20	0.83	13th	3.66	20	0.51	17th	41.19
1895	3.67	15	0.94	3rd	4.21	23	0.60	5th	3.45	31	0.48	17th	32.64
1896	4.65	19	0.74	5th	0.96	5	0.60	15th	6.41	22	0.72	4th	35.42
1897	3.32	7	0.90	2nd	1.82	7	0.63	27th	6.06	18	1.19	7th	56.80
1898	7.30	18	1.13	17th	7.46	16	1.39	23rd	5.44	17	1.03	6th	42.07
1899	2.34	12	0.60	27th	3.29	11	0.95	9th	3.69	19	0.86	28th	32.75
1900	5.79	21	1.06	29th	4.99	22	0.71	24th	6.55	26	1.06	30th	41.90

LOCAL GOVERNMENT BOARD TABLE.

TABLE I.

FOR WHOLE DISTRICT.

Year.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS IN PUBLIC INSTITUTIONS.	DEATHS AT ALL AGES. NETT.	
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.		Number.	Rate.*
1890	117,012	4,600	39.3	771	167	327	2,469	21.1
1891	130,283	4,737	36.5	725	153	390	2,871	22.1
1892	136,181	4,789	35.0	782	163	311	2,559	18.8
1893	142,435	5,121	36.0	918	179	332	2,796	19.7
1894	148,890	5,103	34.2	722	141	263	2,408	16.2
1895	155,637	5,321	34.1	951	179	342	2,826	18.2
1896	162,690	5,591	34.3	923	165	364	2,784	16.8
1897	170,063	5,279	31.1	796	151	303	2,534	14.9
1898	177,770	5,520	31.0	870	158	312	2,627	14.7
1899	185,826	5,309	28.5	976	184	321	2,857	15.3
Averages for years 1890-1899	152,678	5,137	34.0	843	164	326	2,673	17.7
1900	194,247	5,198	26.7	730	140	316	2,667	13.7

* Rates calculated per 1,000 of estimated population.

	At Census of 1891.
Total population at all ages	128,915
Number of inhabited houses	20,476
Average number of persons per house	6.29
Area of District in acres (exclusive of area covered by water and foreshore)	8,351

LOCAL GOVERNMENT BOARD TABLE

TABLE A

FOR WHOLE DISTRICT

Year	Population estimated as of 1st Jan	Deaths		Total no. of cases of cholera		Deaths to the date of report
		Male	Female	Male	Female	
1888	182,828	4,198	387	130	140	187
1889	182,878	2,187	240	62	101	174
1890	182,828	2,308	209	104	114	184
1891	182,828	2,321	241	179	142	191
1892	182,828	2,108	242	133	141	184
1893	182,828	2,181	250	128	135	183
1894	182,828	4,780	350	163	141	194
1895	182,828	4,737	362	122	120	192
1896	182,828	1,860	209	77	107	184

* Total estimated for 1897 is 182,828

Area of District in acres (exclusive of area covered by water and forests)	...
Average number of persons per house	...
Number of inhabited houses	...
Total population at all ages	...

LOCAL GOVERNMENT BOARD TABLE.
TABLE II.

YEAR.	BOROUGH.				WEST CARDIFF.			CENTRAL CARDIFF.			EAST CARDIFF.		
	Population est- mated to middle of each Year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.
1890 ...	117,012	4,600	2,469	771	...	...	...	...	...	...	...	...	...
1891 ...	130,283	4,737	2,871	725	...	...	...	...	...	...	...	...	...
1892 ...	136,181	4,789	2,559	782	...	...	...	...	...	...	...	...	...
1893 ...	142,435	5,121	2,796	918	...	...	...	...	...	...	...	...	...
1894 ...	148,890	5,103	2,408	722	...	...	...	...	...	...	...	...	...
1895 ...	155,037	5,321	2,826	951	...	...	...	...	...	...	...	...	...
1896 ...	162,690	5,591	2,784	923	...	...	...	...	...	...	...	...	...
1897 ...	170,063	5,279	2,534	796	...	...	...	...	...	...	...	...	...
1898 ...	177,770	5,520	2,627	870	2,089	989	303	1,610	924	279	1,821	714	288
1899 ...	185,826	5,309	2,857	976	1,943	1,096	361	1,617	1,009	308	1,749	753	307
Averages of Years 1890 to 1899...	152,678	5,137	2,673	843	...	...	...	...	...	...	...	...	...
1900 ...	194,247	5,198	2,667	730	...	...	...	...	...	...	...	...	...

Cardiff was divided into Sub-Districts, 1897.

LOCAL GOVERNMENT BOARD TABLE.

TABLE III.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1900.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.					No. of CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.				
	At all Ages.	At Ages—Years.						Central Cardiff.	West Cardiff.	East Cardiff.	Infrmary.	Union.	Central Cardiff.	West Cardiff.	East Cardiff.	Infrmary.	Union.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.										
Small-pox ...	4	...	...	1	3	...	1	3	...	...	...	2	2	...	...	...
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria ...	706	7	189	371	78	60	1	219	195	1	...	174	108	97	1	...	
Membranous Croup ...	8	1	7	...	...	...	...	3	4	...	...	...	...	...	...	...
Erysipelas ...	106	...	7	13	9	65	12	37	29	5	4	...	...	...	...	...
Scarlet Fever ...	383	4	115	223	26	15	...	119	134	1	...	66	80	81	1	...	
Typhus Fever ...	4	...	...	...	3	1	...	4	...	...	...	4	...	...	...	...
Enteric Fever ...	95	...	8	33	25	28	1	36	30	2	4	20	11	14	...	...
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	5	...	1	1	1	2	...	2	3	...	...	...	...	1	...	...
Puerperal Fever ...	15	...	...	...	2	13	...	4	3	8	...	...	...	...	...	...
Plague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	1,326	12	327	641	145	187	14	487	431	391	9	266	201	193	2	...	

LOCAL GOVERNMENT BOARD TABLE.

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1900.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN LOCALITIES (AT ALL AGES).			DEATHS IN PUBLIC INSTITUTIONS.
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Central Cardiff.	West Cardiff.	East Cardiff.	
Small-pox ...	2	...	...	...	...	2	...	...	2	...	2
Measles ...	162	43	109	8	1	1	...	47	37	78	2
Scarlet fever ...	11	1	9	1	...	...	...	...	9	2	7
Whooping-cough ...	40	17	20	3	...	...	...	15	16	9	...
Diphtheria and membranous croup ...	81	5	48	27	1	...	...	21	49	11	36
Croup ...	5	1	4	...	...	...	...	...	1	4	...
Fever (Enteric) ...	25	...	2	7	4	12	...	3	17	5	13
Epidemic influenza ...	32	2	...	3	2	19	6	10	10	12	...
Diarrhoea ...	81	69	5	1	...	3	3	23	43	15	1
Enteritis ...	56	40	8	2	1	2	3	20	19	17	...
Puerperal fever ...	4	...	...	...	2	2	...	1	2	1	...
Erysipelas ...	2	...	...	...	...	1	1	1	1	...	1
Other septic diseases ...	5	2	1	1	...	1	...	1	1	3	...
Phthisis ...	212	5	5	15	44	137	6	67	87	58	41
Other tubercular diseases											
Cancer, malignant disease ...	35	5	8	4	3	15	...	13	9	13	2
Bronchitis ...	79	...	...	2	2	48	27	21	29	29	10
Pneumonia ...	176	47	17	...	1	59	52	57	57	62	11
Pleurisy ...	301	73	85	13	13	94	23	88	112	101	18
Other diseases of Respiratory organs ...	13	...	1	1	...	6	5	5	5	3	...
Alcoholism	8	1	1	...	...	4	2	3	2	3	...
Cirrhosis of liver	27	1	1	...	...	24	1	6	13	8	3
Venereal diseases	5	3	...	...	...	2	...	2	2	1	1
Premature birth	65	65	...	...	...	...	...	21	24	20	...
Diseases and accidents of parturition	25	...	...	...	9	16	...	5	14	6	2
Heart diseases	175	7	8	4	14	101	46	64	66	45	10
Accidents ...	89	4	11	12	11	42	9	63	16	10	17
Suicides ...	11	...	...	1	2	8	...	4	4	3	5
All other causes	940	339	81	42	23	230	225	236	358	236	183
All causes	2,667	730	419	147	133	829	409	907	1,005	755	315



Microradiology Observations taken at the University of

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Chart showing the influence of temperature on the Diarrhoea death-rate in Cardiff, during the Summer quarters of the Years 1872—1900.

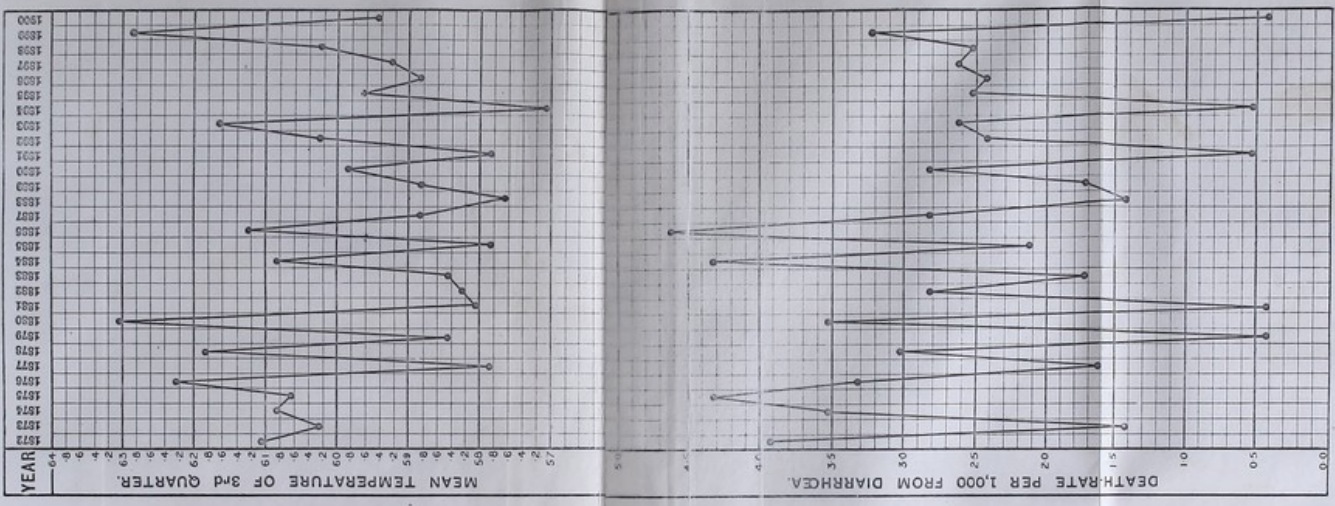
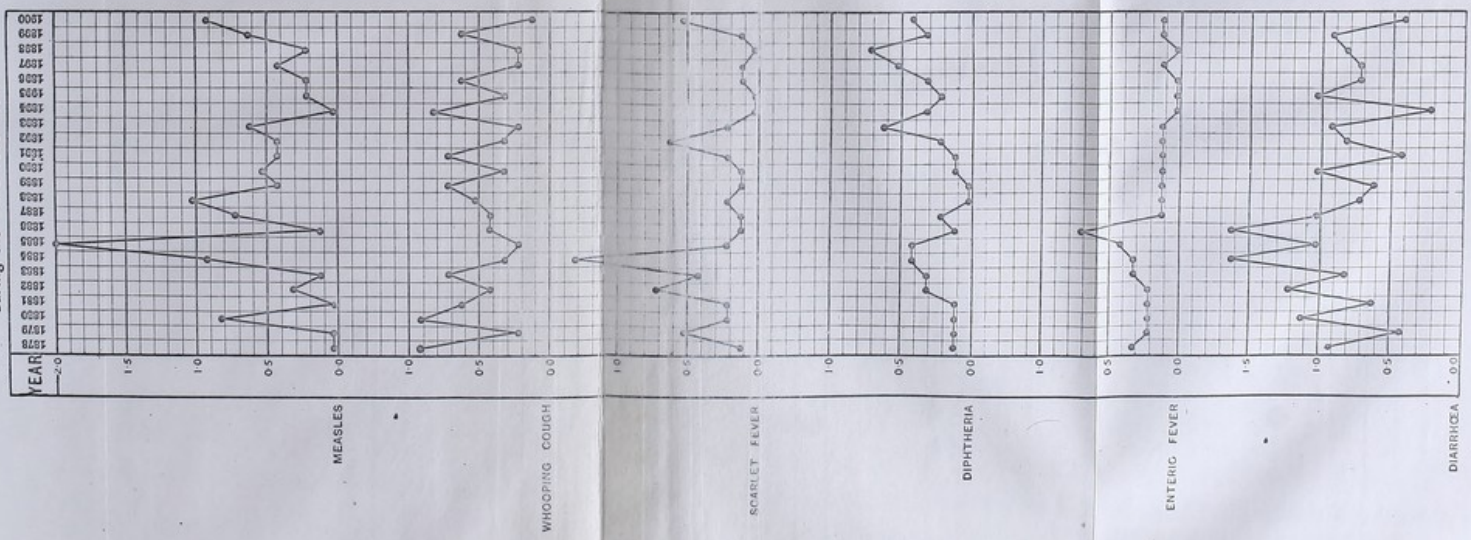
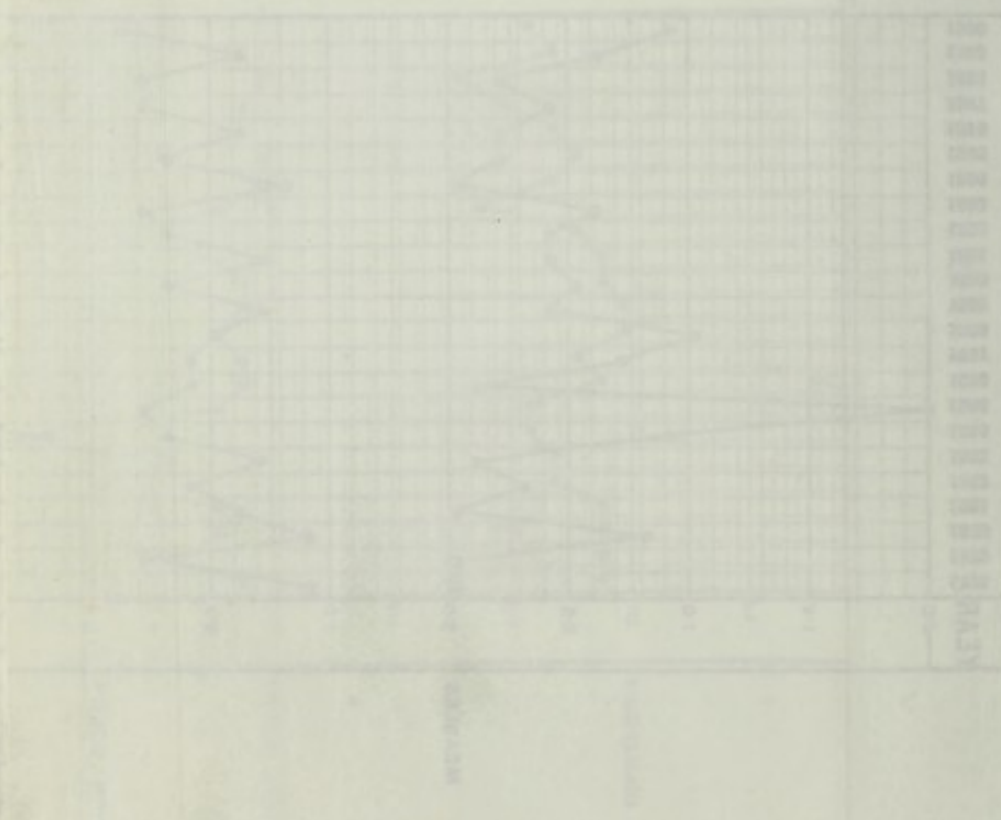


Chart Showing death-rate per 1,000 of the population from Zymotic Diseases during the Years 1878—1900.





1891—1900
 The District of Columbia
 and the Territory of Alaska



1891—1900
 The District of Columbia
 and the Territory of Alaska

Deaths from All Causes, and the Seven Chief Zymotic Diseases.

