



ANNUAL REPORT

ON THE

HEALTH

OF THE

County Borough of Cardiff,

FOR THE YEAR 1895,

BY

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

MEDICAL OFFICER OF HEALTH.

Printed by Order of the Sanitary Authority.

CARDIFF:

G. W. LENNOX, PRINTER, ATLAS CHAMBERS, JAMES STREET, DOCKS.

1896.

COUNTY BOROUGH OF CARDIFF.

Health and Port Sanitary Committee.

Mayor :

THE RIGHT HONOURABLE LORD WINDSOR.

Chairman :

ALDERMAN T. WINDSOR JACOBS, J.P.

ALDERMAN P. W. CAREY, J.P.

„ D. E. JONES, M.D., J.P.

COUNCILLOR RAMSDALE, J.P.

„ T. MOREL, J.P.

„ J. JENKINS, J.P.

„ W. H. ALLEN.

ALDERMAN T. REES, J.P.

COUNCILLOR ANDREWS.

„ HUGHES.
Deputy Chairman.

„ WARD.

„ CROSSMAN.

„ J. J. BUIST, M.B.

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 :

DISTRICT,	No.	1.—S. EVANS (Certif. Sanitary Institute).		
„	„	2.—A. P. PRESTON „	„	„
„	„	3.—F. GLOVER „	„	„
„	„	4.—T. W. WARREN „	„	„

Inspector for Infectious Diseases :

GEO. THOMAS (Certif. Sanitary Institute).

Inspector of Common Lodging Houses :

J. W. HOLDEN (Certif. Sanitary Institute).

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

PHILIP DAVID (Certif. Sanitary Institute).

Disinfecter :

J. BURKE (Certif. Sanitary Institute).

Inspector Shop Hours Act :

J. DAVIES.

Senior Clerk :

S. R. HENDERSON.

Junior Clerk :

W. H. DAVIES.

Cardiff Urban Sanitary Authority.

TOWN HALL,

CARDIFF, *May, 1896.*

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

GENTLEMEN,

I have the honour of submitting to you my Report for the year 1895, comprising, in accordance with the General Order of the Local Government Board dated March 23rd, 1891, a summary of the action taken during the year for preventing the spread of disease, and an account of the sanitary state of the district at the end of the year.

The Report will contain an account of the inquiries made as to conditions injurious to health existing in this district, and of the proceedings in which the Medical Officer of Health has taken part or advised under the Public Health Act, 1875, or under any other Act of Parliament relating to sanitary matters.

It will also contain an account of the supervision exercised by him or on his advice for sanitary purposes over places and houses that the Sanitary Authority have power to regulate with the nature and results of any proceedings which may have been taken in respect of the same during the year. The Report will contain the usual tabular statement and statistics relating to the mortality and sickness within the district classified according to diseases, ages, and Localities.

The present municipal area of the Borough of Cardiff comprises 8,409 acres, 108 of which are occupied by the waters of the docks.

Excluding the water area, the density of the population averages 18·7 per acre over the entire Urban District, varying from 7 persons per acre in the Grange-town Ward, to 54 in the Riverside Ward.

The following Tables contain extracts from the census reports for 1891, relating to the Borough of Cardiff.

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 ...	2,182	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	81	12,200	5,886	6,314
„ South ...	1,554	156	13	10,719	5,824	4,895
„ Splott ...	1,902	85	35	8,805	4,540	4,265
Total ...	20,476	1,086	382	128,915	65,745	63,170

The area of the Urban Sanitary District of Cardiff is as follows :

Parish of St. Mary	}	....	....	2,791 acres.
„ St. John				
„ Roath	....	....	3,348	„
„ Canton	....	....	2,270	„
Total	....	....	8,409	

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

TABLE II.

Borough and Constituent Parishes.	HOUSES.			POPULATION, 1891.			Population, 1881.
	Inhabited.	Uninhabited.	Building.	Males.	Females.	Persons.	
Canton ...	5,484	180	85	16,425	16,980	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	382	65,745	63,170	128,915	82,761

TABLE III. shows the conditions under which the inhabitants of the Borough are housed, giving the number of tenements and the number of persons occupying tenements with less than five rooms. A tenement is defined in the census instructions as “ Any house or part of a house separately occupied either by the owner or by a tenant.”

TABLE III.

Total Number of Tenements of the Borough of Cardiff. (Census 1891.)	No. of Tenements with	NO. OF OCCUPANTS OF TENEMENTS.											
		1	2	3	4	5	6	7	8	9	10	11	12 or more.
25,858	1 room 570	303	183	55	19	3	5	2	...	...	...	...	...
	2 rooms 3,576	482	1331	872	506	243	94	31	5	7	5	...	...
	3 rooms 1,943	45	408	404	345	286	230	128	56	28	7	4	2
	4 rooms 3,028	48	331	491	554	511	448	306	192	109	27	8	3

TABLE IV.—Condition as to marriage and ages of males and females in the Urban Sanitary District of Cardiff according to the census of 1891.

		ALL AGES.	UNDER 15 YEARS.	15—	20—	25—	35—	45—	55—	65 AND UPWARDS.
Unmarried	M.	41,001	22,968	6,266	5,336	4,267	1,312	496	234	122
	F.	36,628	23,005	6,051	4,071	2,338	632	281	165	85
Married	M.	22,982	...	27	1,308	7,575	6,792	4,348	2,105	827
	F.	22,672	...	185	2,558	8,237	6,018	3,582	1,586	506
Widowed	M.	1,762	...	...	18	155	289	390	394	516
	F.	3,870	...	...	29	274	522	837	1,018	1,190

The most important Sanitary Legislation during the past year was the Factory and Workshop Act, 1895.

THE FACTORY AND WORKSHOP ACT, 1895, (58 & 59 VICT. C. 37.)

This Act amends and extends the law relating to factories and workshops in many important ways, but only certain of its provisions affect urban authorities.

It came into operation on the 1st of January, 1896 (section 55), and is to be construed as one with the Factory and Workshops Acts, 1878 to 1891 (Section 56).

OVERCROWDING.

Section 91 of the Public Health Act, 1875, as amended by section 107 of the Factory and Workshop Act, 1878 (41 & 42 Vict. c. 16), provides that any workshop so overcrowded while work is carried on as to be dangerous or injurious to the health of those employed therein shall be deemed to be a nuisance liable to be dealt with summarily in manner provided by the Public Health Act. The application of this enactment will in future be subject to the provisions of section 1 of the new Act, which directs that a workshop shall, for the purpose of the law relating to public health, be deemed to be so overcrowded as to be dangerous or injurious to the health of the persons employed therein if the number of cubic feet of space in any room therein bears to the number of persons employed at once in the room a proportion less than 250, or, during any period of overtime, 400 cubic feet of space to every person. It is further provided by the same section that the Secretary of the State may, by order made in accordance with section 65 of the Act of 1878, modify this proportion for any period during which artificial light other than electric light is employed for illuminating purposes, and may by like order, as regards any particular manufacturing process or handicraft, substitute for the above figures any higher figures.

NOTICES BY INSPECTOR OF FACTORIES TO URBAN AUTHORITY.

Where it appears to an Inspector of Factories that any act, neglect, or default in relation to any drain, water-closet, earth-closet, privy, ashpit, water-supply, nuisances, or other matter in a factory or workshop is punishable or remediable under the law relating to public health, but not under the Factory and Workshop Act, 1878, the Inspector is required by section 4 of that Act, to give notice to the Urban Authority, and on such notice being given it is the duty of the Urban Authority to make such inquiry, and take such action as may be proper for the enforcement of the law. For the purposes of the section, the Inspector of Factories may take with him into the factory or workshop a medical officer of health, inspector of nuisances, or other officer of the Urban Authority. The application of this enactment was extended to workshops conducted on the system of not employing any child, young person, or woman therein, and also to laundries, by section 2 of the Factory and Workshop Act, 1891. Moreover, where an Inspector of Factories has given notice to the Urban Authority under section 4 of the Act of 1878, as amended, and proceedings are not taken *within a reasonable time* for punishing or remedying the act, neglect, or default referred to in the notice, the Inspector may, under section 2 of the Act of 1891, take the like proceedings for this purpose as the Urban Authority might have taken; and shall be entitled to recover from the Urban Authority all such expenses as he may incur and are not recovered from any other person, and have not been incurred in any unsuccessful proceedings.

By section 3 (1) of the Factory and Workshop Act, 1895, the Urban Authority are required to inform the Inspector of the proceedings taken in consequence of the notice given by him under section 4 of the Act of 1878.

For the words "within a reasonable time" in section 2 of the Act of 1891, italicised above, sub-section (2) of section 3 of the new Act substitutes the words "within one month." Any necessary proceedings under section 4 of the Act of 1878, as amended by the subsequent enactments should, therefore, be taken by the Urban Authority within one month from the receipt of a notice from the Inspector of Factories.

LAUNDRIES.

Laundries are brought within the general scope of the law relating to factories and workshops by section 22 of the new Act.

As regards sanitary provisions, safety, accidents, the affixing of notices and abstracts and the matters to be specified in such notices (so far as they apply to laundries), notice of occupation of a factory or workshop, powers of Inspectors, fines, and legal proceedings for any failure to comply with the provisions of the section, and education of children, the Factory Acts are to have effect as if every laundry in which steam, water, or other mechanical power is used in aid of the laundry process were a factory, and every other laundry were a workshop; and as if every occupier of a laundry were the occupier of a factory or of a workshop. (Sub-section (1) (iv).)

BAKEHOUSES.

Some important amendments in the provisions of the Factory Acts relating to bakehouses have been made by section 27 of the new Act.

Section 34 of the Act of 1878 provides that "where a bakehouse is situate in any city, town, or place containing, according to the last-published census for the time being, a population of more than 5,000 persons, all the inside walls of the rooms of such bakehouse, and all the ceilings or tops of such rooms (whether such walls, ceilings, or tops be plastered or not), and all the passages and staircases of such bakehouse shall either be painted with oil or varnished or be limewashed, or be partly painted or varnished and partly limewashed; where painted with oil or varnished, there shall be 3 coats of paint or varnish, and the paint or varnish shall be renewed once at least in every 7 years, and shall be washed with hot water and soap once at least in every 6 months; where limewashed the limewashing shall be renewed once at least in every 6 months."

By section 35 of the same Act it is provided that "where a bakehouse is situate in any city, town, or place containing, according to the last-published census for the time being, a population of more than 5,000 persons, a place on the same level with the bakehouse, and forming part of the same building, shall not be used as a sleeping place, unless it is constructed as follows (that is to say):

"Unless it is effectually separated from the bakehouse by a partition extending from the floor to the ceiling, and

"Unless there be an external glazed window of at least 9 superficial feet in area, of which at the least $4\frac{1}{2}$ superficial feet are made to open for ventilation.

"Any person who lets or occupies or continues to let or knowingly suffers to be occupied any place contrary to this section, shall be liable to a fine not exceeding, for the first offence, 20s., and for every subsequent offence £5.

These two sections are now applied to every bakehouse, and so much of them as limits the operation thereof to cities, towns, and places having a population of more than 5,000 persons is repealed. (Section 27 (1).)

Under section 15 of the Factory and Workshop Act, 1883 (46 & 47 Vict. c. 53) it is not lawful "to let or suffer to be occupied as a bakehouse, or to occupy as a bakehouse, any room or place which was not so let or occupied before the 1st day of June, 1883, unless the following regulations are complied with:

- "(i.) No water-closet, earth-closet, privy or ashpit shall be within or communicate directly with the "bakehouse:
- "(ii.) Any cistern for supplying water to the bakehouse shall be separate and distinct from any cistern for "supplying water to a water-closet:
- "(iii.) No drain or pipe for carrying off fecal or sewage matter shall have an opening within the bakehouse."

Any person who lets or suffers to be occupied, or who occupies any room or place as a bakehouse in contravention of the section is liable, on summary conviction, to a fine not exceeding 40s., and to a further fine of not exceeding 5s. for every day during which any room or place is so occupied after a conviction under the section.

The section is in future to apply to every room or place let or occupied as a bakehouse, without limitation as to when the letting or occupation commenced, the words, "which was not so let or occupied before the 1st day of June, 1883," in the section being repealed. (Section 27 (2).)

It will, under the operation of section 17 of the Act of 1883, as amended by section 36 of the Factory and Workshop Act, 1891, be the duty of the Urban Authorities to enforce the above-mentioned provisions as respects every retail bakehouse which is not a factory as defined by section 93 of the Act of 1878, and

for that purpose their Medical Officer of Health will have and exercise all such powers of entry, inspection, taking legal proceedings and otherwise, as an Inspector under the Factory and Workshop Act, 1878. In connection with the powers thus conferred on the Medical Officer of Health, the Board may refer to their observations in an earlier part of this circular with respect to similar powers which Urban Authorities will have as regards certain laundries.

Finally, with reference to bakehouses, sub-section (3) of section 27 of the new Act provides that a place under ground shall not be used as a bakehouse unless it was so used at the commencement of the Act (*i.e.*, on the 1st of January, 1896, and if any place is so used in contravention of the Act it shall be deemed to be a workshop not kept in conformity with the Act of 1878.

MAKING OF WEARING APPAREL IN PLACES WHERE THERE IS INFECTIOUS DISEASE.

Attention should be drawn to section 6 of the new Act, the object of which is to protect the general public from the danger of infection from clothes being made, cleaned, or repaired in dwelling-houses or building occupied therewith in which exist cases of scarlet fever or small-pox. The section provides that :
 " If any occupier of a factory or workshop or laundry or of any place from which any work is given out, or any contractor employed by any such occupier, causes or allows wearing apparel to be made, cleaned, or repaired in any dwelling-house or building occupied therewith, whilst any inmate of the dwelling-house is suffering from scarlet fever or small-pox, then, unless he proves that he was not aware of the existence of the illness in the dwelling-house, and could not reasonably have been expected to become aware of it, he shall be liable to a fine not exceeding £10."

SANITARY CONVENIENCES.

If section 22 of the Public Health Acts Amendment Act, 1890, which relates to the provision of sanitary conveniences for workshops and manufactories, is not in force in the Urban District, the provision of such conveniences will be regulated by section 35 of the new Act, which directs that in every place where section 22 of the Act of 1890 is not in force, every factory or workshop shall be provided with sufficient and suitable accommodation in the way of sanitary conveniences, having regard to the number of persons employed in or in attendance at the factory or workshop, and also where persons of both sexes are employed or intended to be employed, or in attendance, with proper separate accommodation for persons of each sex, and that a factory or workshop in which there is a contravention of the section shall be deemed not to be kept in conformity with the Act of 1878.

During the year the Medical Officer of Health submitted representations under Section 30 of the Housing of the Working Classes' Act, 1890, relating to the houses in Evans' Court (The Hayes), which were, in his opinion, in a state so dangerous to health as to be unfit for human habitation. An order was obtained for the closure and subsequent demolition of these buildings.

The following estimate of expenditure in the Medical Officer of Health's Department for the six months ending 31st March, 1896, was approved.

			£	s.	d.
Sanitary Expenses	...	...	930	0	0
Cardiff Sanatorium	...	...	943	5	6
Sale of Food and Drugs' Act	...	...	191	1	0
Shop Hours' Act	...	...	39	0	0
			<u>£2,103</u>	<u>6</u>	<u>6</u>

VITAL STATISTICS, 1895.

POPULATION.—The population of the Borough in the middle of the year 1895, as estimated by the Registrar General on the basis of the census enumeration, was 155,637, and the rates given in this report have been calculated on this basis.

It must be borne in mind however that although these rates are approximately correct, they are based upon estimates of the population between decennial censuses, and that any error which may exist is naturally increased in proportion to the length of time which has elapsed since the last census. The method adopted by the Registrar General of estimating the population of any given area is based on the assumption that the population has gone on increasing since the last census at exactly the same rate that it did between that and the previous census.

In a district like Cardiff in which the population is increasing with unusual rapidity, the estimate obtained in this way is probably too low. In this case the rates of mortality calculated on this estimate are necessarily higher than they would be if calculated on an actual enumeration of the population. The results obtained by this method may to some extent be checked by ascertaining the number of inhabited houses for the year, and then multiplying this by the average number of inhabitants in each house. In some cases this may give a more correct result than that obtained in the usual way, but for purposes of calculating rates of mortality it has the disadvantage that they cannot be so readily compared with former reports, or with those of other districts. (The population of the Urban Sanitary District of Cardiff calculated on this basis is estimated to be 161,232 persons.) The population in the Borough, together with the natural increase by excess of births over deaths in each year since 1846, is shown in Table IX.

BOROUGH OF CARDIFF.

TABLE V.—Estimated population to middle of 1895 at Age Periods.

AGE PERIODS.	MALES.	FEMALES.	TOTAL.
All Ages.	79,378	76,264	155,637
0—5	10,518	10,328	20,846
5—10	9,113	9,226	18,339
10—15	8,097	8,218	16,315
15—20	7,598	7,529	15,127
20—25	8,043	8,088	16,081
25—30	7,753	7,244	14,997
30—35	6,731	5,854	12,585
35—40	5,680	4,799	10,429
40—45	4,503	3,860	8,363
45—50	3,635	3,117	6,752
50—55	2,684	2,557	5,241
55—60	1,837	1,735	3,572
60—65	1,462	1,608	3,070
65—70	857	940	1,797
70—75	521	673	1,194
75—80	248	329	577
80 upwards	143	209	352

MARRIAGES.—The total number of marriages registered during the year 1895 was 1,271, corresponding to a rate of 16·3 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 in Cardiff and in England and Wales is given below.

Year.	No. of Marriages.	Rate per 1,000 Persons living.	
		CARDIFF.	ENGLAND AND WALES
1886	1244	24.6	14.2
1887	1322	25.2	14.4
1888	1259	23.1	14.4
1889	1431	25.3	15.0
1890	1440	24.6	15.5
1891	1651	17.6	15.6
1892	1526	22.4	15.4
1893	1447	20.3	14.7
1894	1480	19.8	15.1
1895	1271	16.3	Not yet published

BIRTHS.—During the year 1895, the births registered in the Borough were 5,321, of these 2,731 were males, and 2,590 females.

The number of births corresponded to an annual birth-rate of 34.3 per 1,000 compared with 31.3 the rate in the 33 large towns of England and Wales. The birth-rate in England has fallen continuously since its maximum (36.3) in 1876, to a minimum of 29.6 in 1894. In Cardiff it has also declined during the past ten years, although still considerably above the average in the large towns. During each of the years 1885-1889, the birth-rate in Cardiff was higher than that of any of the principal towns.

The influence of the birth-rate on the general death-rate is often misunderstood. It is sometimes assumed that, inasmuch as the rate of mortality of young children is higher than that of all others, except the very aged, the general death-rate will be raised by a high birth-rate, but if this high birth-rate be continued for a number of years, there will be in the population a large proportion of persons between ten and forty years of age, at which period a very low rate of mortality prevails. A continuously high birth-rate will therefore have a tendency to reduce the death-rate.

TABLE VI.—Gives the number of legitimate and illegitimate births, male and female, in each Ward, in Cardiff.

WARDS.		Legitimate.		Illegitimate.		Total.		TOTAL.
		M.	F.	M.	F.	M.	F.	
Central	Ward	150	135	5	3	155	138	293
South	"	133	138	2	...	135	138	273
Cathays	"	299	295	4	6	303	301	604
Park	"	352	276	...	1	352	277	629
Adamsdown	"	212	213	1	6	213	219	432
Riverside	"	259	235	27	28	286	263	549
Canton	"	318	312	6	4	324	316	640
Roath	"	269	268	4	7	273	275	548
Grangetown	"	382	376	4	11	386	387	773
Splot	"	294	275	10	1	304	276	580
Total	... ..	2,668	2,523	63	67	2,731	2,590	5,321

TABLE VII.—Annual birth-rate in Cardiff compared with that in the large towns during the ten years ending 1895.

33 LARGE TOWNS.	Annual Birth-rate per 1,000 living.									
	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
London	32·3	31·6	30·7	30·3	29·1	31·8	30·9	31·0	30·1	30·5
West Ham	...	...	...	...	...	...	37·0	35·6	34·0	34·3
Croydon	...	...	...	...	...	...	26·5	26·2	25·0	25·3
Brighton	25·4	25·7	23·3	24·4	23·2	26·3	25·5	25·4	25·8	25·6
Portsmouth	36·2	36·8	35·8	35·1	33·6	30·1	28·0	28·2	27·6	27·9
Plymouth	31·6	31·5	31·7	31·9	31·2	29·8	29·1	29·9	28·8	28·7
Bristol	30·5	29·7	29·3	29·2	28·1	30·4	29·6	30·4	28·2	28·9
Swansea	...	...	...	...	...	...	35·2	35·1	32·3	33·4
Wolverhampton	35·1	33·2	32·9	32·4	32·3	34·2	33·7	34·5	34·1	35·4
Birmingham	33·0	31·7	30·7	30·9	30·1	34·2	33·3	32·7	31·7	32·4
Norwich	34·7	33·9	34·6	33·8	33·0	31·9	30·5	30·9	29·8	31·8
Leicester	34·9	32·8	32·7	31·7	30·5	33·9	32·2	32·6	31·5	30·8
Nottingham	35·7	33·2	29·9	28·0	24·9	29·9	29·4	30·2	28·6	29·7
Derby	33·2	30·0	29·4	28·5	26·9	30·6	31·1	32·2	29·3	29·1
Birkenhead	33·7	32·4	30·7	31·2	31·4	33·0	33·4	33·1	30·6	30·7
Liverpool	33·5	31·1	29·7	29·2	28·8	34·6	34·7	36·0	35·4	36·9
Bolton	34·1	32·5	32·7	32·8	31·4	34·1	32·7	33·1	31·5	32·9
Manchester	36·2	35·8	35·3	35·3	34·9	34·1	33·7	33·6	32·0	33·7
Salford	34·3	31·9	31·6	29·9	28·8	36·4	35·9	34·7	34·3	35·9
Oldham	32·5	31·8	30·1	28·4	27·0	31·1	29·1	28·6	27·2	27·5
Burnley	...	...	...	...	...	...	34·2	33·9	32·2	32·1
Blackburn	34·7	35·7	34·1	34·3	32·5	33·9	31·9	30·9	28·8	30·6
Preston	39·4	38·4	37·5	38·1	36·1	36·0	34·3	35·1	32·1	33·4
Huddersfield	27·0	27·7	24·6	24·5	22·6	24·4	23·0	23·8	20·2	21·7
Halifax	28·8	28·4	28·5	28·0	27·9	26·2	25·9	24·6	23·1	23·4
Bradford	28·7	27·7	27·4	26·7	25·6	28·7	27·2	27·7	26·7	26·1
Leeds	33·8	33·3	32·6	32·8	33·4	34·1	33·5	32·4	32·2	31·6
Sheffield	34·1	32·9	30·7	33·2	32·4	36·6	35·3	34·8	33·4	34·9
Hull	33·5	32·8	31·1	32·6	31·3	34·6	35·0	34·2	32·4	34·2
Sunderland	36·3	34·6	34·7	36·0	35·5	37·8	37·1	35·6	35·1	35·1
Gateshead	...	...	...	...	...	...	35·3	6·5	34·2	34·6
Newcastle-on-Tyne	39·4	39·1	37·9	38·2	39·8	35·8	34·3	3·7	31·0	31·2
Cardiff	42·3	40·8	40·6	38·6	39·3	36·5	35·3	6·0	34·4	34·1
33 Large Towns	...	...	...	...	...	...	31·9	31·9	30·7	31·3

DEATHS.—During the year 2,840 deaths were registered in the Borough of Cardiff, of these 1,530 were males and 1,310 were females.

The deaths were equal to 18·2 per 1,000 of the population as compared with 20·2 the average rate in the ten preceding years, and with 20·7 the rate in the thirty-three large towns for 1895.

The male death-rate was 19·3, and the female 17·1 per 1,000 of the sexual divisions of the population. According to the returns of the Registrar General, the death-rate in England and Wales was 18·7 per 1,000 of the population, which shows an increase of 2·1 per 1,000 on the low rate in the previous year, but was 0·2 below the average of the ten years 1885-94.

In the large towns the death-rate ranged from 28·8 in Liverpool, 25·6 in Salford, 25·2 in Manchester, and 24·4 in Wolverhampton, to 16·9 in Huddersfield, 16·7 in Derby, and 14·5 in Croydon.

The following is an analysis of the births and deaths registered in Cardiff during the year 1895.

Total Births	...	...	...	...	...	5,321
Rate per 1,000 per annum	...	...	...	...	...	84·1
Total Deaths	...	...	...	...	...	2,840
Rate per 1,000 per annum	...	...	...	...	...	18·2
Rate of mortality from Zymotic Diseases	...	...	...	...	...	2·0
Died under one year old	...	...	...	...	...	951
Aged 60 and upwards	...	...	...	...	...	528
Of Small-Pox	...	...	...	...	...	—
Measles	...	...	...	...	...	45
Whooping Cough	...	...	...	...	...	53
Diphtheria	...	...	...	...	...	46
Scarlet Fever	...	...	...	...	...	8
Enteric Fever	...	...	...	...	...	14
Typhus Fever	...	...	...	...	...	—
Influenza	...	...	...	...	...	46
Diarrhœa and Dysentery	...	...	...	...	...	158
Violence	...	...	...	...	...	115
Other Causes	...	...	...	...	...	618
Inquest Cases	...	...	...	...	...	218
In Public Institutions—						
Cardiff Infirmary	...	...	...	...	...	26
Hamadryad Hospital Ship	...	...	...	...	...	2
Sanitary Authority's Fever Hospitals	...	...	...	...	...	8
Cardiff Workhouse	...	...	...	...	...	52

The number of deaths registered in Cardiff during the first quarter of the year, at all ages and from all causes, was 877; of these 462 were males and 415 females.

The 877 deaths corresponded to an annual death-rate of 22·6 per 1,000 living, as compared with 21·7 the average rate in the first quarters of the five preceding years, and with 25·2 the rate in 33 large towns.

The deaths from the chief Zymotic diseases during the first quarter were 38, and were equal to an annual death-rate of 0·97 per 1,000 living, as compared with 2·01 the average rate in the first quarter of the five preceding years, and with 1·6 the average rate in the 33 large towns. Whooping Cough and Diphtheria were the most fatal of the Zymotic diseases. During this quarter thirteen deaths were registered from Whooping Cough, corresponding to an annual death-rate of 0·38 per 1,000, as compared with 0·18 in the previous quarter, and with 0·63 the average rate in the five preceding first quarters.

Eleven deaths were registered from Diphtheria, and were equal to a death-rate of 0·28 per 1,000, as compared with 0·37 the average rate in the five preceding first quarters.

The death-rate from the chief Zymotic diseases varied during the quarter, from 0·7 per 1,000 in Leicester and in Huddersfield, 1·0 in Swansea and Bradford, to 2·6 in Gateshead, and 2·7 Bolton.

During the second quarter the number of deaths registered was 593, of these 323 were males, and 270 females. The deaths corresponded to an annual death-rate of 15·2 per 1,000, as compared with 18·4 the average rate in the second quarters of the five preceding years and with 17·8 the rate in the large towns. The lowest rates in the large towns were 12·4 in Croydon, 14·4 in Portsmouth, 15·1 in Leicester, and 15·2 in Cardiff.

Twenty deaths were registered from the chief Zymotic diseases, corresponding to an annual death-rate of 1·80 per 1,000, as compared with 2·22 the average rate in the second quarters of the five preceding years, and with 2·44 the average rate in the 33 large towns. The rate varied from 0·56 in Halifax to 3·56 in Bolton. Measles was the most fatal amongst the Zymotic diseases, the number of deaths increasing from 1 during the first quarter, to 30 in the second quarter of the year.

The number of deaths registered during the third quarter of the year was 689, of these 383 were males, and 306 females. The 689 deaths corresponded to an annual death-rate of 17·7 per 1,000 living, as compared with 17·5 the average rate in the third quarters of the five preceding years, and with 20·2 in the 33 large towns. The rates in these towns varying from 12·8 in Croydon, to 28·2 in Liverpool.

The 689 deaths from all causes included 138 from the chief Zymotic diseases, corresponding to an annual death-rate of 3·55 per 1,000, being 0·29 above the average in the third quarters of the five preceding years, and 1·42 below the average rate in the 33 large towns in the corresponding quarter of the year. The Zymotic rate ranged from 1·76 per 1,000 in Plymouth, to 8·66 in Hull.

In the fourth quarter of the year the number of deaths registered from all causes was 681, of these 363 were males, and 318 females.

The deaths were equal to an annual rate of 17·5 per 1,000 as compared with 21·0 the average rate in the fourth quarter of the five preceding years, and with 19·4 the rate in the 33 large towns. The death-rates in these towns ranged from 12·3 in Croydon, to 29·9 in Blackburn.

The deaths from the chief Zymotic diseases numbered 78 in the fourth quarter, corresponding to an annual rate of 2·0 per 1,000 living, as compared with 2·48 the average rate in the fourth quarters of the five preceding years, and with 3·05 the average rate in the 33 large towns. The highest Zymotic death-rate in these towns was 10·91 in Blackburn, and the lowest 0·80 in Croydon.

The following Table gives a summary of the Vital Statistics in Cardiff during the years 1886-1895.

TABLE VIII.

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.
1886	4,270	42·3	2,269	22·5	3·2	168
1887	4,277	40·8	2,280	21·8	2·6	172
1888	4,409	40·6	2,212	20·3	2·9	143
1889	4,361	38·6	2,190	19·4	2·1	156
1890	4,600	39·3	2,469	21·1	2·4	165
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

TABLE IX.—Births, Deaths, and Natural Increase of Population for Fifty-one years, 1845—1895.

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	39,494	1,391	891	...	500
1872	62,086	1,358	916	...	442
1873	64,674	1,430	995	...	435
1874	67,262	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	88,608	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	2,373	...	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	2,340	...	2,481

TABLE X.—Showing age distribution of population, number of deaths, and death-rates at age periods.

Age periods.	Estimated Population 1895.	Number of Deaths.	Annual Death-rate per 1,000.
0—5	20,846	1,290	61·8
5—10	18,389	52	2·83
10—15	16,315	42	2·57
15—20	15,127	59	3·90
20—25	16,081	78	4·85
25—30	14,997	97	6·46
30—35	12,585	105	8·34
35—40	10,429	134	11·7
40—45	8,363	98	11·7
45—50	6,752	119	17·6
50—55	5,241	121	23·0
55—60	3,572	133	37·3
60—65	3,070	137	44·6
65—70	1,797	112	62·6
70—75	1,194	120	100·5
75—80	577	80	138·6
80—upwards	352	63	178·9

TABLE XI—Annual Death-rate per 1,000 of 33 large Towns in England and Wales for the 10 years, 1886—1895 inclusive.

33 LARGE TOWNS.	Annual Death-rate per 1,000 living.									
	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
London ...	19·9	19·6	18·5	17·4	20·3	21·4	20·6	21·3	17·8	19·8
West Ham ...	...	...	...	...	...	...	18·6	18·9	16·2	17·9
Croydon ...	...	...	...	...	...	...	15·8	16·3	13·2	14·5
Brighton ...	17·1	16·9	16·1	15·1	17·8	18·2	19·2	18·4	16·4	18·9
Portsmouth ...	23·9	19·5	18·7	18·1	19·6	19·0	18·5	18·2	15·2	17·8
Plymouth ...	23·5	22·7	22·3	25·2	22·4	22·5	18·8	21·2	18·3	20·1
Bristol ...	19·3	20·4	16·9	17·6	19·2	20·9	19·5	18·9	17·3	18·1
Swansea ...	...	...	...	...	...	...	20·4	19·6	17·0	18·3
Wolverhampton ...	22·2	21·7	20·7	20·6	21·8	24·2	21·5	23·3	20·7	24·4
Birmingham ...	19·9	19·7	17·8	18·7	20·7	22·2	20·4	22·2	18·6	20·3
Norwich ...	23·3	20·4	20·2	18·3	21·1	19·3	20·0	19·3	18·7	19·3
Leicester ...	19·6	19·0	18·3	16·9	17·9	21·7	18·2	20·0	14·7	17·2
Nottingham ...	20·4	18·7	17·3	17·0	16·5	19·9	18·7	18·5	17·2	19·0
Derby ...	18·2	17·1	16·3	16·3	18·5	19·1	19·3	18·2	15·0	16·7
Birkenhead ...	19·1	21·0	17·8	17·8	19·7	20·9	19·6	20·5	18·1	19·5
Liverpool ...	23·8	23·7	20·3	21·5	23·6	27·0	24·7	27·3	23·8	28·8
Bolton ...	23·1	21·3	21·6	22·0	25·8	21·9	22·8	24·1	18·8	24·0
Manchester ...	26·3	28·7	26·1	26·7	30·6	26·5	23·8	24·9	20·4	25·2
Salford ...	22·1	22·2	21·1	20·4	22·4	26·0	24·6	24·1	21·0	25·6
Oldham ...	22·8	23·8	20·3	20·4	21·2	25·7	22·0	21·0	18·6	22·0
Burnley ...	...	...	...	...	...	...	20·4	21·9	18·7	23·4
Blackburn ...	25·5	25·5	23·9	25·4	23·5	25·8	21·7	23·3	17·9	24·3
Preston ...	28·9	27·9	23·9	30·0	27·4	27·3	24·1	26·4	20·8	23·9
Huddersfield ...	19·6	23·0	18·5	18·8	19·0	23·0	18·1	17·2	15·8	16·9
Halifax ...	22·7	21·0	19·1	21·5	22·5	22·8	19·5	17·4	16·5	19·3
Bradford ...	19·2	19·9	17·1	19·1	20·4	22·2	18·0	21·0	17·0	19·9
Leeds ...	21·9	21·1	20·6	22·0	22·6	22·9	19·8	22·3	17·9	20·5
Sheffield ...	19·8	21·6	20·5	20·8	24·9	23·9	20·8	22·3	17·8	20·5
Hull ...	18·8	19·3	16·4	20·2	19·2	21·0	19·6	21·8	17·4	20·8
Sunderland ...	19·5	19·7	18·1	22·8	22·7	25·0	20·9	22·5	20·8	21·8
Gateshead ...	...	...	...	...	...	...	18·9	19·3	17·7	19·6
Newcastle-on-Tyne ...	22·2	25·3	20·5	25·1	25·9	23·8	19·7	21·0	18·3	20·5
Cardiff ...	22·6	21·9	20·3	19·4	21·1	22·0	18·8	19·6	16·2	18·2
33 Large Towns ...	...	...	...	...	...	...	20·7	21·6	18·1	20·7

CORRECTED DEATH-RATE.—TABLE XII. which is taken from the Annual Summary of the Registrar General for the year 1894, gives the recorded and corrected death-rates in the large towns. In comparing the death-rates of different towns it must be borne in mind that if this comparison be based simply on general death-rates it may lead to erroneous conclusions as towns differ from each other, often considerably, in respect of the age distribution of their populations.

In order therefore to make a more correct comparison of the mortality of different towns, it is necessary to know the difference that exists between them in respect of age and sex distribution (the male death-rate being usually higher than the female death-rate). The Registrar General has given "factors" for the large towns based upon the age and sex distribution, as ascertained by the census. In order to obtain the corrected death-rate in each town, he multiplies the recorded death-rate by this factor, the effect of which is to neutralize the disparity and to give rates that would have been recorded in the several towns had their populations been identical, so far as age and sex distribution is concerned with the population of England and Wales.

TABLE XII.—Recorded and Corrected Death-rates per 1,000 persons living in thirty-three Great Towns in 1895.

Towns, in the order of their Corrected Death-rates.	Standard Death-rate.*	Factor for Correction for Sex and Age Distribution.†	Recorded Death-rate, 1895.	Corrected Death-rate, 1895.‡	Comparative Mortality Figure, 1895.§
England and Wales ...	19.15	1.0000	18.71	18.71	1000
England and Wales, less the 33 large Towns ...	19.45	0.9845	17.68	17.41	931
33 Towns ...	17.71	1.0813	20.65	22.33	1193
Croydon ...	18.37	1.0424	14.47	15.08	806
Portsmouth ...	18.78	1.0224	17.83	18.23	974
Derby ...	17.86	1.1031	16.70	18.42	985
Norwich ...	19.99	0.9579	19.34	18.53	990
Leicester ...	17.64	1.0855	17.24	18.71	1000
Bristol ...	18.33	1.0447	18.06	18.87	1009
Brighton ...	18.94	1.0110	18.88	19.09	1020
West Ham ...	17.75	1.0788	17.87	19.28	1030
Plymouth ...	19.70	1.9720	20.11	19.55	1045
Huddersfield ...	16.47	1.1627	16.88	19.63	1049
Swansea ...	17.53	1.0924	18.27	19.96	1067
Cardiff ...	17.16	1.1159	18.21	20.32	1086
Nottingham ...	17.81	1.0752	19.02	20.45	1093
Gateshead ...	17.83	1.0740	19.58	21.03	1124
London ...	17.97	1.0656	19.85	21.15	1130
Birkenhead ...	17.42	1.0993	19.53	21.47	1148
Halifax ...	17.20	1.1133	19.29	21.48	1148
Hull ...	18.23	1.0504	20.84	21.89	1170
Newcastle ...	17.58	1.0892	20.48	22.31	1192
Birmingham ...	17.33	1.1050	20.28	22.41	1198
Leeds ...	17.28	1.1032	20.49	22.71	1214
Bradford ...	16.73	1.1446	19.85	22.72	1214
Sheffield ...	17.22	1.1120	20.46	22.75	1216
Sunderland ...	18.25	1.0493	21.79	22.89	1222
Oldham ...	16.72	1.1453	21.97	25.16	1345
Wolverhampton ...	18.30	1.0464	24.38	25.51	1363
Preston ...	17.42	1.0993	23.89	26.26	1404
Burnley ...	16.67	1.1487	23.33	26.86	1436
Bolton ...	16.90	1.1331	23.96		
Blackburn ...	17.05	1.1231	24.30	27.29	1459
Manchester ...	16.90	1.331	25.23	28.59	1528
Salford ...	17.03	1.244	25.65	28.84	1541
Liverpool ...	17.26	1.1094	28.79	31.94	1707

* The Standard Death-rate signifies the death-rate at all ages calculated on the hypothesis that the rates at each of twelve age-periods in each town were the same as in England and Wales during the ten years 1881-90, the Death-rate at all ages in England and Wales during that period having been 19.15 per 1,000.

† The Factor for Correction is the figure by which the Recorded Death-rate should be multiplied in order to correct for variations of sex and age distribution.

‡ The Corrected Death-rate is the Recorded Death-rate multiplied by the Factor for Correction.

§ The Comparative Mortality Figure represents the Corrected Death-rate in each town compared with the Recorded Death-rate at all ages in England and Wales in 1894, taken as 1,000.

TABLE XIII.—Birth-rate and Analysis of the Zymotic Death-rate in thirty-three of the largest English towns for the year ending December 31st, 1895. Compiled from the Registrar General's Returns.

Name of Town.	Population.	Annual Rates per 1,000 persons living.										Deaths under 1 year to 1,000 Births.
		Birth-rate.	Death-rate.	Principal Zymotic Diseases	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	
London ...	4,392,346	30.5	19.8	2.64	0.01	0.60	0.19	0.53	0.34	0.14	0.83	166
West Ham ...	249,473	34.3	17.9	3.24	0.04	0.91	0.18	0.77	0.23	0.26	0.85	168
Croydon ...	114,923	25.3	14.5	1.32	...	0.17	0.04	0.19	0.24	0.12	0.56	134
Brighton ...	119,604	25.6	18.9	1.75	...	0.22	0.01	0.15	0.35	0.12	0.87	164
Portsmouth ...	174,751	27.9	17.8	2.13	...	0.22	0.04	0.11	0.36	0.20	1.20	175
Plymouth ...	89,096	28.7	20.1	1.92	...	0.87	0.02	0.11	0.32	0.08	0.52	178
Bristol ...	228,139	28.9	18.1	1.30	...	0.04	0.07	0.15	0.20	0.09	0.75	143
Cardiff ...	155,637	34.3	18.2	2.43	...	0.30	0.05	0.36	0.34	0.10	1.28	179
Swansea ...	97,008	33.4	18.3	1.68	...	0.48	0.05	0.12	0.21	0.21	0.61	178
Wolverhampton ...	85,780	35.4	24.4	4.23	...	0.48	0.39	0.98	0.62	0.20	1.56	218
Birmingham ...	496,751	32.4	20.3	2.67	0.02	0.27	0.26	0.37	0.35	0.16	1.24	183
Norwich ...	107,127	31.8	19.3	2.72	...	0.25	0.09	0.18	0.50	0.24	1.46	190
Leicester ...	193,839	30.8	17.2	2.98	...	0.17	0.08	0.18	0.44	0.20	1.91	203
Nottingham ...	226,658	29.7	19.0	2.23	...	0.00	0.23	0.04	0.14	0.24	1.58	190
Derby ...	100,272	29.1	16.7	1.95	0.08	0.07	0.08	0.06	0.21	0.18	1.27	161
Birkenhead ...	107,469	30.7	19.5	2.35	...	0.03	0.15	0.42	0.38	0.39	0.98	174
Liverpool ...	503,967	36.9	28.8	4.01	0.03	0.71	0.29	0.24	0.74	0.37	1.63	210
Bolton ...	119,337	32.9	24.0	4.45	0.01	1.04	0.19	0.13	0.56	0.45	2.07	212
Manchester ...	524,865	33.7	25.2	3.73	0.00	0.97	0.32	0.21	0.48	0.19	1.56	203
Salford ...	208,253	35.9	25.6	4.96	...	1.03	0.47	0.30	0.64	0.42	2.10	231
Oldham ...	141,079	27.5	22.0	2.79	0.16	0.70	0.11	0.18	0.38	0.18	1.08	190
Burnley ...	99,591	32.1	23.4	3.88	...	0.25	0.22	0.43	0.54	0.30	2.14	242
Blackburn ...	127,615	30.6	24.3	5.63	...	2.54	0.06	0.07	0.59	0.23	2.14	236
Preston ...	112,638	33.4	23.9	3.77	0.01	0.42	0.04	0.07	0.45	0.20	2.58	248
Huddersfield ...	99,482	21.7	16.9	1.20	...	0.12	0.19	0.15	0.20	0.06	0.48	158
Halifax ...	93,813	23.4	19.3	1.30	...	0.10	0.05	0.15	0.25	0.17	0.58	158
Bradford ...	226,384	26.1	19.9	2.51	...	0.08	0.11	0.09	0.47	0.18	1.58	203
Leeds ...	395,546	31.6	20.5	2.69	...	0.34	0.13	0.16	0.28	0.21	1.57	191
Sheffield ...	342,768	34.9	20.5	3.17	...	0.55	0.10	0.15	0.21	0.28	1.88	197
Hull ...	216,722	34.2	20.8	3.32	...	0.09	0.18	0.17	0.20	0.22	2.46	205
Sunderland ...	137,705	35.1	21.8	3.50	...	0.07	0.08	0.06	0.46	0.96	1.87	189
Gateshead ...	95,871	34.6	19.6	2.63	...	0.29	0.15	0.20	0.65	0.16	1.18	186
Newcastle-on-Tyne	207,021	31.2	20.5	2.52	...	0.68	0.11	0.25	0.29	0.23	0.96	186

TABLE XIV.—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 1895 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	13,885	324	24.2	32.7	51	3.8	9.8
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	16,698	864	51.7		463	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	41.1		353	15.7	
1855	23,834	641	26.9	665	2.7		
1856	25,204	772	30.6	186	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	5.4	
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		
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	3.9	
1870	38,788	908	23.2	133	3.4		
1871	59,494	891	22.5	158	3.9		
1872	62,086	916	22.7	234	5.8		
1873	64,674	995	24.2	103	2.5		
1874	67,262	885	21.2	154	3.6		
1875	69,850	1,547	22.1	294	4.2		
1876	72,438	1,455	20.8	339	4.6		
1877	75,026	1,475	19.6	255	3.5		
1878	77,614	1,468	18.9	197	2.5		
1879	80,202	1,428	17.6	137	1.7	3.3	
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		
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	2.7	
1890	117,012	2,469	21.1	232	2.4		
1891	130,233	2,373	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	2,340	18.2	324	2.0		

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 179, as compared with 141 in 1894 and 179 in 1893. In England and Wales the rate of mortality among infants under one year of age to 1,000 registered births was 161, the mean proportion in the ten years 1885-94 having been 146. In

large urban districts the rate of infant mortality is, of course, higher than in the whole country. In the 33 large towns the average rate during 1895 was 182, ranging from 134 in Croydon, 143 in Bristol, and 158 in Huddersfield and Halifax, to 236 in Blackburn, 242 in Burnley, and 248 in Preston.

The year 1894 was an exceptional year with respect to infant mortality. In England and Wales it was with one exception lower than in any of the previous ten years. In 1893 it was unusually high. But it need hardly be stated that no safe conclusion can be drawn as to increase or decrease in the mean death-rate of infants from the statistics of one year. It is only from the average of successive groups of years that this can be done. In England and Wales infant mortality, measured by the proportion of deaths under one year to 1,000 births registered, was equal to 154 in the ten years 1861-70. In the ten years, 1871-80, it fell to 149, and in the ten years, 1881-90, it still further declined to 142.

The proportion of deaths under one year of age to 1,000 births in Cardiff as compared with the average in the large towns is given in the following Table.

TEN YEARS.		CARDIFF.		LARGE TOWNS.
1881-90	...	165	...	162
YEAR.				
1891	...	153	...	167
1892	...	168	...	164
1893	...	179	...	181
1894	...	141	...	152
1895	...	179	...	182

From Table XV. it will be seen that out of a total of 951, 62 are ascribed to premature birth, 190 to Diseases of the Respiratory Organs, 100 to Diseases of the Nervous System, and 132 to Diarrhœa.

The figures in Table XVI. showing the infant mortality in large towns are as regards Cardiff comparatively satisfactory. During the past few years this mortality has generally been below the average in these towns. This one might expect, as one of the most important factors in infant mortality does not exist to any extent in this district, namely:—the employment of young married females in factories, and the consequent neglect of their infants.

It has been demonstrated by Dr. George Reid and others that a high death-rate amongst infants may generally be found in those large towns where the employment of married women in factories prevails. Some of the causes of infant mortality are, however, common to every locality, and are to some extent preventable. The conditions which are uncontrollable and which considerably influence the rate of infant mortality are those connected with climate, especially the temperature of the air and soil; the greatest danger is from heat and not from cold.

It is found that the period of maximum mortality amongst infants is from the fourth week in July to the second week in August, when the deaths are 75 per cent. above the annual mean, this excess being due to the prevalence of Diarrhœal diseases. Undoubtedly cold has also an injurious effect on infant life, young children being, of course, much more susceptible to the influence of cold than adults. This is

seen by the large number of deaths due to Diseases of Respiratory Organs, and to the diseases in which respiratory complications are met, such as Whooping Cough and Measles. The increase in the infant mortality in Cardiff during the year 1895 was largely influenced by the prevalence of epidemic, diarrhœa in the summer and autumn, and to a lesser degree by Whooping Cough and Measles during the colder months of the year. The influence of the temperature of the air and soil on the diarrhœal mortality is shewn in a Table in another part of this Report, in which it is seen that the high mortality (2·5 per 1,000) during the warm and dry summers of 1893 and 1895, contrasts strikingly with the low mortality (0·5) in the comparatively cool and wet summer of 1894.

The first years of life have by far the greatest mortality from Diarrhœa. According to the last published Annual Report of the Registrar-General, 84 per cent. of the deaths from Diarrhœa in England and Wales were at ages under two years.

Unfortunately, at present Whooping Cough and Measles are generally regarded as slight ailments, and very little attempt is made by parents to prevent the spread of these diseases, either by isolation or disinfection. Medical advice is frequently not obtained, and the Sanitary Authority only becomes acquainted with the prevalence of these diseases by the record of the deaths or by means of ordinary inspection of the district. With regard to Infantile Diarrhœa, although a high temperature of the air and soil appears to be intimately associated with its prevalence and fatality, it has been shewn that there are other influences at work, some of which may, to a certain extent, be controlled by sanitary administration. Dr. Ballard of the Local Government Board, after most searching investigations and accurate observations, presented a report to the Board, and based upon his observations the following "provisional hypothesis":—

"That the essential cause of Diarrhœa resides ordinarily in the superficial layers of the earth, where it is intimately associated with the life processes of some micro-organism. That the vital manifestations of such organism are dependent on conditions of season and the presence of dead organic matter, which is its pabulum. That such organism is capable of getting abroad from its primary habitat the earth, and having become air-borne, obtains opportunity for fastening on dead organic material (especially food whether inside or outside the body). That from food and from organic matter in certain soils, it can manufacture a virulent chemical poison which is the material cause of Epidemic Diarrhœa."

The ordinary insanitary conditions met with in large communities have a tendency, therefore, to increase diarrhœal mortality. Amongst these may be mentioned—overcrowding, want of ventilation, want of cleanliness, foul air from cess-pools, sewers, or filth accumulations, impure drinking water, and, above all, maternal ignorance, or neglect and improper food. (It has been shewn frequently that breast-fed infants suffer in a very slight degree from Diarrhœa.)

The means, therefore, which may be adopted with a view of minimizing infant mortality consist in removing, as far as possible, the lamentable ignorance as regards infant feeding from amongst the poorer classes and in the abatement of

insanitary conditions of residence. The striking reduction which has already taken place during the past years in the general death-rate is certainly due to the improved sanitary condition of the district, and a continued reduction may be anticipated by further improvements in the same direction. Amongst the municipal improvements which you have now under consideration, and which in the interests of the Public Health require to be dealt with, are :—

- (1). The adoption of some better method of the disposal of house and trade refuse.
- (2). The alteration of the Sewer Outfall of the Western District.
- (3). The adoption and enforcement of new Building Bye-laws.

(1.) The present method of disposing of house refuse consists in discharging the contents of the scavenging carts on the various tips or waste tracts of low-lying land.

The depositing of large quantities of offensive and decomposing organic filth on the surface of land within the Borough, and in some cases near habitations, is certainly an objectionable proceeding, and not free from danger to the public health. If these tips could be at once placed under cultivation and turned into allotment garden plots, the difficult problem of the disposal of house refuse in a suitable way would be solved in a satisfactory and economical manner.

This plan has been carried out to some extent and with good results, but legal difficulties seem to stand in the way of any considerable extension of this system. With regard to the tips at present in use a nuisance is frequently caused, especially during warm and wet weather. The question of the erection of "Destructors" has been before your Health Committee on several occasions, and they will doubtless shortly make some recommendation to you upon the subject.

(2.) With regard to the sewers on the Western side of the River Taff, they discharge into an outfall sewer at the mouth of the river, which is tide-locked for some hours during the day. The sewage, therefore, is at times retained or driven back within the low level sewers, sewer gas is displaced and escapes at the various ventilators and outlets in a concentrated condition, or is forced through traps into houses. These conditions are of course aggravated by the accumulation of storm water in times of heavy rainfall and during unusually high tides. Unfortunately, the clauses in the Cardiff Corporation Bill, 1894, which contained a scheme for the alteration of the Western sewers were thrown out in Committee. The necessity for carrying out this or some other scheme having the same object has become still more urgent since that date owing to the great increase in the number of houses in this part of the town.

(3.) The building bye-laws at present in force in the Cardiff Urban District were adopted by the several districts of Cardiff, Roath and Canton before their incorporation within the Borough of Cardiff and before the passing of the Public Health Act, 1875. Although these bye-laws seem to give wide discretionary power to the Sanitary Authority with respect to the approval of the mode of drainage to be carried out on premises, they contain no special directions for the guidance of the builder, as to the manner in which the house drains shall be

TABLE XVI.—Infant mortality in Cardiff as compared with that of the large towns in England and Wales.

LARGE TOWNS.	Deaths under one year to 1,000 Births registered.					
	Ten Years, 1881-1890.	1891	1892	1893	1894	1895
London	152	154	155	164	148	166
West Ham ... ..	...	...	153	170	188	168
Croydon ... ..	...	...	123	155	121	184
Brighton	146	137	151	169	138	164
Portsmouth	138	139	156	164	131	175
Plymouth	159	178	137	169	169	178
Bristol	141	146	147	141	150	143
Swansea ... ..	...	...	175	170	163	178
Wolverhampton	166	190	172	208	166	218
Birmingham	167	171	166	198	163	183
Norwich	155	159	182	195	164	190
Leicester	202	214	196	220	162	203
Nottingham	171	169	167	170	174	190
Derby	145	142	173	156	123	161
Birkenhead	149	148	168	196	143	174
Liverpool	183	188	181	211	179	210
Bolton	175	165	180	199	162	212
Manchester	179	192	179	203	160	203
Salford	183	194	185	210	174	231
Oldham	171	292	177	187	161	190
Burnley ... ..	...	...	192	223	170	242
Blackburn	191	204	198	241	169	236
Preston	222	227	216	269	217	248
Huddersfield	169	185	150	141	160	158
Halifax	161	169	160	173	135	158
Bradford	165	181	155	197	145	203
Leeds	173	177	169	206	155	191
Sheffield	171	170	171	191	157	197
Hull	159	172	166	206	142	205
Sunderland	158	176	157	188	167	189
Gateshead ... ..	...	...	154	170	152	186
Newcastle-on-Tyne	163	174	151	174	157	186
Cardiff	165	153	163	179	141	179
Large Towns	162	167	164	181	152	182

ZYMOTIC DISEASES.—The 2,840 deaths from all causes included :—

45	Attributed to Measles	53	Attributed to Whooping Cough
8	„ Scarlatina	14	„ Enteric Fever
46	„ Diphtheria	158	„ Diarrhœa

The 324 deaths ascribed to these diseases corresponded to an annual death-rate of 2·0 per 1,000 persons living, as compared with 1·7 the rate in 1894, and with 2·4 the average rate in the 10 years 1886-1895 inclusive. The death-rate from these diseases in the 33 large towns of England and Wales in 1895 was 2·8, ranging from 1·2 in Huddersfield, 1·3 in Halifax, 1·3 in Bristol and in Croydon, to 4·0 in Liverpool, 4·2 in Wolverhampton, 4·4 in Bolton, and 4·9 in Salford.

The number of cases of infectious disease notified during the year was 961 as compared with 1,147 in the year 1894, and with 1,621 in 1893.

The total amount paid by the Sanitary Authority for notifications received from Medical Practitioners under the provisions of the Infectious Disease Notification Act was :—

TABLE XVII.—Death-rate per 1,000 living from all causes and from the Principal Zymotic Diseases in the 10 years 1885-94 and in 1895 in Cardiff and in the 33 large towns of England and Wales.

	Ten Years, 1885-1894.		Year 1895.	
	Cardiff.	33 Large Towns.	Cardiff.	33 Large Towns.
All Causes	20·2	20·9	18·2	20·7
Small-pox	0·02	0·05	0·00	0·01
Measles	0·61	0·62	0·28	0·53
Scarlet Fever	0·23	0·28	0·05	0·18
Diphtheria	0·25	0·25	0·29	0·35
Whooping Cough	0·55	0·57	0·84	0·87
*Fever	0·26	0·21	0·10	0·20
Diarrhœa	0·85	0·83	1·01	1·20

* Includes Enteric, Typhus, and Simple or Ill-defined continued Fever.

TABLE XVIII shows the number of cases of Infectious Disease which came to the knowledge of the Medical Officer of Health during the years 1888-1894.

Previous to the year 1888 no record was kept of the number of cases which occurred in the Borough, owing probably to the absence of any systematic method of notifying the occurrence of diseases of this class to the Sanitary Authority. In the year 1888 a system of voluntary notification was adopted and a fee of 2/6 paid in the case of each notice received from medical practitioners. The results of this system are given below. In January, 1890, the Infectious Disease Notification Act of 1889 was adopted. By this Act a complete return is obtained of certain diseases, namely: Small-pox, Cholera, Diphtheria, Membranous Croup, Erysipelas, Scarlet Fever, Enteric Fever, Typhus Fever, and Puerperal Fever.

TABLE XVIII.

	1888	1889	1890	1891	1892	1893	1894	1895
Small-pox	9	...	...	9	5	4	10	1
Diphtheria ... ..	...	42	63	67	155	462	326	229
Croup ... ..	...	...	9	3	9	17	17	19
Scarlet Fever	151	166	335	685	1851	816	577	484
Enteric Fever	114	132	152	130	118	105	62	79
Typhus Fever ... ..	...	...	...	...	...	41	1	...
Erysipelas ... ..	...	...	45	52	95	152	135	132
Puerperal Fever ... ..	...	...	4	10	12	24	19	17
Total	274	340	608	956	2245	1621	1147	961

The method adopted in connection with this notification, and with a view of checking the spread of disease is as follows:—An Inspector is appointed who devotes his whole time to carrying out the instructions of the Medical Officer of Health for dealing with infectious diseases. He is, however, assisted in times of epidemics by the District Inspectors. On the receipt of each notification the premises are visited with as little delay as possible, and enquiries are made respecting the history of the case, and the necessary steps are taken for limiting the spread of the disease. In each case report sheets are filled up, of which the subjoined are samples:—

SMALL POX.

Dates of enquiry	Date and address of any recent case in neighbourhood.
Notified by	Has there been any communication with an infected house, if so, when and where?
Name, age, and occupation of patient	Has patient had Small-pox before; when?
Residence	What evidence of vaccination or re-vaccination?
Date of first symptoms	The washing and mangling, where and by whom done?
Where was patient on the 12th, 13th, 14th, 15th, or 16th day before the appearance of rash?	Remarks, and probable origin of disease.

ENTERIC OR TYPHOID FEVER.

Dates of enquiry	Whence is the supply of water derived?
Notified by	Whence is the supply of milk derived?
Name, age, and occupation of patient	The washing and mangling, where and by whom done?
Residence	Name and residence of any visitor from where disease exists.
Date of first symptoms	Sanitary condition of dwelling and immediate neighbourhood, probable origin of disease.
Date and address of any recent case in same street	

SCARLET FEVER.

Dates of enquiry	Date and address of any recent case in same street
Notified by	The washing and mangling, where and by whom done?
Name, age, and occupation of patient	Whence is the supply of milk?
Residence	Any books from Free Library?
Date of first symptoms	Are parents in receipt of parish relief?
Has child within one week been to school, church, or other assembly, or visited any infected house; if so, when and where?	Sanitary condition of dwelling, remarks and probable origin of disease?

From these sheets the most important particulars are copied into a register, each particular disease having its own book. From this register it is easy at a glance to ascertain any factor common to several cases, and to trace the relation of the disease to the particular locality in which it occurs.

Printed instructions in the following form are left at the infected houses:—

PRECAUTIONS TO BE OBSERVED IN CASES OF INFECTIOUS DISEASE.

The expression "Infectious Disease" means any one of the following diseases:—Small Pox, Scarlet Fever, Typhoid Fever, Typhus Fever, Measles, and Diphtheria.

1. Where Scarlet Fever, Diphtheria, or Small-pox exists in a house, no child should attend school from the house for a period of at least six weeks after the occurrence of the last case, and in the case of Measles the period should not be less than three or four weeks.

2. The patient should be isolated by being placed, if possible, in a well ventilated room at the top of the house ; all carpets, curtains, and unnecessary furniture should be removed from the room.
3. A sheet should be hung up outside the door of the sick room, and kept wet with a solution of carbolic acid, $\frac{1}{2}$ -pint to a gallon of water, or with some other recognised disinfectant.
4. All bed and body linen, as soon as removed from the sick person, and before being taken from the sick room, should be first put into a solution of carbolic acid of the above-named strength, or into some other disinfectant, remaining there for an hour, and afterwards boiled in water.
5. All discharges from the patient, especially if the disease be Small-pox, Scarlet Fever, or Typhoid Fever, should be received into vessels containing some suitable disinfectant, and should be removed from the sick room and be disposed of without delay.
6. If the disease is Small-pox, any unvaccinated infant in the house should at once be vaccinated, and all adults or young persons over twelve years of age should be re-vaccinated.
7. The patient cannot be pronounced absolutely free from conveying infection until all peeling has entirely ceased in Scarlet Fever, and until the crusts and scales have been removed in Small-pox, and the whole of the body has been well bathed. In all cases of infectious disease the patient should have one or more warm baths before putting on clean clothes.
8. The sick room should not be visited by any but those in attendance on the patient, as the clothing of visitors is very liable to convey infection.
9. In case of death, the body should be completely enveloped in a sheet steeped in a strong solution of carbolic acid (1 pint to a gallon of water), placed in a coffin, with a pound or two of carbolic acid powder sprinkled over it, fastened down and buried without delay.
10. On the termination of a case, the sick room, the clothing, and everything with which the patient has come in contact, must be thoroughly disinfected ; notice should be sent to the Medical Officer of Health, who will send an Inspector to superintend the process of disinfection.
11. Infected clothing, bedding, and other articles must be given to the Inspector, who will cause them to be removed to the public disinfecting apparatus, where they will be disinfected free of charge, after which they should be thoroughly washed at home. Infected clothing should not on any account, or under any pretence whatever, be sent to the laundress ; and if clothes are received to wash, they should not be received until the house is pronounced free from infection.
12. Books obtained from the Free Library should be returned to the Inspector of Nuisances, at the Town Hall.

Your attention is particularly directed to the following provisions of the Public Health Act, and of the Infectious Disease (Prevention) Act, so far as they relate to the prevention of the spread of Infectious Diseases:—

Any person who :—

1. While suffering from any dangerous infectious disease, wilfully exposes himself without proper precaution against spreading the said disorder in any street, public place, or vehicle, or enters any public conveyance without previously notifying to the driver that he is so suffering.
2. Being in charge of any person so suffering, or exposes such sufferer, or
3. Gives, lends, sells, or transmits, or exposes without previous disinfection any bedding, clothing, rags, or other things which have been exposed to infection, shall be liable to a penalty not exceeding Five Pounds.

Every person who shall cease to occupy any house, room, or part of a house in which any person has, within six weeks previously, been suffering from any infectious disease without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected to the satisfaction of a registered medical practitioner, as testified by a certificate signed by him, or without first giving to

the owner of such house, room, or part of a house, notice of the previous existence of such a disease, and every person ceasing to occupy any house, room, or part of a house, and who on being questioned by the owner thereof, or by any person negotiating for the hire of such house, room, or part of a house, as to the fact of there having within six weeks previously been therein any person suffering from any infectious disease, knowingly makes a false answer to such question, shall be liable to a penalty not exceeding Ten Pounds.

Any person who shall knowingly cast, or cause, or permit to be cast into any ash-pit, ash-tub, or other receptacle for the deposit of refuse, any infectious rubbish without previous disinfection, shall be guilty of an offence under this Act.

Any Local Authority or the Medical Officer of any Local Authority generally empowered by the Authority in that behalf, may, by notice in writing require the owner of any bedding, clothing, or other articles which have been exposed to the infection of any infectious disease, to cause the same to be delivered over to an Officer of the Local Authority for removal for the purpose of disinfection, and any person who fails to comply with such a requirement, shall be liable to a penalty not exceeding Ten Pounds.

In the case of children attending school, the head master or mistress receives from the Medical Officer of Health a notice of the existence of Infectious Disease, in families attending the particular school; in this way an effectual check is put upon the attendance at school of children from infected houses.

The notice is as follows:—

SANITARY AUTHORITY,

TOWN HALL, CARDIFF,

.....189

SIR,

I have to inform you that.....residing at..... is now suffering from an Infectious disease, and that no child from this house should be allowed to return to School without producing to you a Certificate, signed by the MEDICAL OFFICER OF HEALTH, stating that the infectious premises, &c., have been disinfected by the SANITARY AUTHORITY.

Yours faithfully,

EDWARD WALFORD, M.D.,

Medical Officer of Health.

To the Head Master.....School.

On the completion of the case, either by recovery or death, disinfection of the premises takes place, and this is effected by the Officers of your Authority, after which process the following Certificate is given:—

CARDIFF URBAN SANITARY AUTHORITY.

Medical Officer of Health's Department.

TOWN HALL, CARDIFF,

.....189

I hereby certify that the premises at No.....have been disinfected, and that children from this house may be allowed to return to school.

EDWARD WALFORD, M.D.,

Medical Officer of Health.

In the case of adults employed in places of business, or in workshops, etc., a similar process is gone through, notices in these cases being sent to the employer and to the infected house.

TABLE XIX.—STATISTICS OF WARDS.

WARDS.	Population, 1895.	Area in Acres.	Persons per Acre.	Total Deaths.	Death-rate per 1,000.	Seven Chief Zymotic Diseases.		Small-pox.		Measles.		Scarlatina.		Diphtheria.		Whooping Cough.		Typhoid Fever.		Typhus Fever.		Diarrhoea.		Phthisis.		Diseases of Respiratory Organs.		Tuberculosis.	
						Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.
Central ...	13,183	473 27	192	14.610	0.7	...	2	0.15	...	1	0.07	...	...	...	...	...	...	...	...	...	...	7	0.53	15	1.14	84	2.58	3	0.22
South ...	10,170	519 19	249	24.419	1.8	...	3	0.29	1	0.09	...	2	0.19	4	0.38	...	...	...	...	...	...	13	1.23	23	2.26	57	5.60	2	0.19
Cathays	16,171	869 43	274	16.950	3.0	...	7	0.43	...	6	0.37	17	1.05	1	0.06	...	...	...	...	...	...	19	1.17	12	0.74	64	3.95	4	0.24
Park ...	22,008	533 41	262	11.936	1.6	...	2	0.09	1	0.04	6	0.27	12	0.54	...	...	...	...	...	...	...	15	0.68	28	1.27	54	2.45	2	0.09
Adamsdown	20,907	1,678 12	405	19.325	1.1	...	8	0.38	1	0.04	2	0.09	6	0.28	...	...	...	...	...	...	...	8	0.38	25	1.19	71	3.39	5	0.23
Riverside	17,926	313 57	478	26.633	1.8	...	2	0.11	1	0.05	6	0.33	5	0.27	3	0.11	...	...	...	...	...	16	0.89	69	3.78	84	4.68	9	0.50
Canton ...	16,964	449 37	218	12.835	2.0	...	4	0.23	1	0.05	2	0.11	5	0.29	...	...	...	...	...	...	...	19	1.12	22	1.30	40	2.35	3	0.17
Roath ...	14,278	766 18	238	16.138	2.6	...	4	0.28	...	...	9	0.63	1	0.07	...	...	...	...	...	...	...	24	1.68	18	1.25	49	3.42	3	0.21
Grange-town	16,689	1,905 8	319	10.947	2.8	...	7	0.41	3	0.17	10	0.59	2	0.11	4	0.23	...	...	...	...	...	21	1.25	26	1.55	42	2.51	2	0.11
Sploott ...	12,976	1,454 8	210	16.131	2.3	...	6	0.46	...	...	4	0.31	3	0.23	2	0.15	...	...	...	...	...	16	1.23	4	0.31	42	3.23	1	0.07

TABLE XX.—Shows the number of Infectious Diseases reported under the Notification Act, and the Deaths during each quarter in the year 1895.

	Small Pox.		Cholera.		Diphtheria.		Croup.		Erysipelas.		Scarlet Fever.		Typhoid Fever.		Typhus Fever.		Puerceral 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	11	56	8	3	3	8	36	1	110	3	18	...	...	5	...	...	...	...	...	1
Second "	14	62	6	9	8	31	2	85	1	8	...	...	4	...	...	...	...	...	...	1
Third "	12	50	3	4	1	33	...	126	5	27	...	...	5	1	...	...	...	...	...	1
Fourth "	...	1	9	61	8	3	2	32	5	163	5	26	...	...	3	...	...	...	...	...	...	2
Year 1895	...	1	46	229	25	19	9	132	8	484	14	79	...	...	17	1	...	...	...	...	...	5

TABLE XXI.—MORTALITY FROM PRINCIPAL ZYMOTIC DISEASES.

YEAR.	Mean of Six years 1878-1888.		Mean of Six years 1884-1889.		1890		1891		1892		1893		1894		1895	
	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate	Deaths.	Death-rate
Estimated Population according to Registrar General.	84,728	102,850	117,012	130,288	136,181	142,346	148,890	155,687								
Seven Chief Zymotic Diseases.																
Small Pox ...	1-0	0-011	4-8	0-048	...	...	1	0-007	...	...	1	0-006	...	...	...	...
Measles ...	20-6	0-243	84-8	0-841	65	0-555	58	0-425	97	0-681	11	0-073	45	0-289	...	...
Scarlatina ...	35-3	0-410	36-2	0-369	19	0-162	87	0-688	89	0-273	8	0-53	8	0-051	...	...
Diphtheria ...	15-3	0-180	20-7	0-208	15	0-128	36	0-264	98	0-653	59	0-396	46	0-295	...	...
Whooping Cough ...	55-1	0-650	62-5	0-559	38	0-324	46	0-387	41	0-288	123	0-826	58	0-340	...	...
Fever (Enteric) ...	24-3	0-286	38-2	0-373	23	0-196	26	0-199	18	0-126	7	0-047	14	0-080	...	...
Diarrhoea ...	73-1	0-859	114-5	1-134	122	1-042	117	0-859	131	0-920	45	0-302	158	1-014	...	...
TOTAL ...	221-7	2-639	363-2	3-598	282	2-410	273	2-095	371	2-720	419	2-943	254	1-706	824	2-081

WHOOPING COUGH.—Fifty-three deaths were registered from Whooping Cough during the year, as compared with 123 in 1894. The deaths corresponded to an annual death-rate of 0·34 per 1,000 persons living, as compared with 0·37 the rate in the 33 large towns. The average annual death-rate from Whooping Cough in the ten years 1885-94 was 0·57 per 1,000 of the population in the large towns and 0·55 per 1,000 in Cardiff for the same period. Of the total number of deaths from this disease during the year, 51 were amongst children under 5 years of age. The deaths in the four successive quarters were as follows:—13, 8, 8, and 24, giving death-rates of 0·33, 0·18, 0·18, and 0·61 per 1,000 in the several quarters. In the 33 large towns dealt with by the Registrar General the mortality ranged from 0·74 per 1,000 in Liverpool, 0·65 in Gateshead, 0·64 in Salford, and 0·62 in Wolverhampton, to 0·20 in Bristol, Huddersfield and Hull, and 0·14 in Nottingham.

MEASLES.—Forty-five deaths were registered from Measles during the year 1895, as compared with 11 in the year 1894, and 97 in the year 1893. The deaths corresponded to an annual death-rate of 0·28 per 1,000 persons living, as compared with 0·53 the death-rate in the 33 large towns of England and Wales. The average annual death-rate from Measles in the 10 years 1885-94 was 0·62 per 1,000 of the population in these large towns and 0·61 per 1,000 in Cardiff for the same period. All the deaths from Measles which occurred in the Borough during the year 1895, were, with one exception amongst children under 5 years of age, and the fatality was practically confined to the second and third quarters of the year in which periods all the deaths took place with the exception of one in the first quarter and one in the fourth quarter of the year. In the large towns the mortality from Measles ranged from 2·54 per 1,000 in Blackburn, 1·03 in Salford, 1·04 in Bolton, to 0·03 in Birkenhead and 0·04 in Bristol.

At present Measles is not one of the diseases included amongst those to which compulsory notification refers, so that it is impossible to form an accurate estimate of the number of persons attacked with the disease during the year. Taking the proportion of deaths to cases at 2 per cent. which is about the average, the number would be 2,250. The information therefore which we receive relating to Measles is imperfect and derived chiefly (1) from the death returns (2) from voluntary notification by medical practitioners or householders (3) from the Public Elementary Schools as to absentees. Unfortunately even if our system of obtaining information were more perfect the preventive measures which we could take would be much less likely to be successful than in the case of Scarlet Fever. The infection in Measles commences before the rash appears and therefore generally before the disease is recognized and before any means of isolating the patient are taken. The length of the incubation period (a fortnight) also adds to the difficulty of dealing with the disease as well as the general tendency amongst the public to regard it as a disease of little consequence and to neglect precautions and to dispense with medical attendance. Perhaps the most effectual means of dealing with an epidemic of Measles which a Sanitary Authority can adopt is to avail itself of the co-operation of the School Authorities through the regulations prescribed by the Education Code, which obliges the Managers of a Public Elementary School to comply with any notice of the Sanitary Authority requiring them for a specified time, with a view of preventing the spread of disease, either to close the school or to exclude any scholars from attendance.

The closure of schools is a very grave step for a Sanitary Authority to take, and it is pointed out by the Local Government Board that it is a measure that seldom ought to be enforced unless there is a clear prospect of preventing the propagation of disease.

It was not thought advisable to take this extreme measure during the year, but in many instances the exclusion from schools of scholars was enforced. Considering the difficulties of carrying out effectual preventive measures in the case of Measles it is not surprising to find that it has not shared in the reduction of mortality which has taken place in such a marked manner in the case of other Zymotic diseases. This is seen in the following table which gives the mortality of Measles as compared with that of Scarlet Fever in England and Wales in decennial periods since 1861.

Annual mortality per million persons living :—

YEAR.	MEASLES.	SCARLET FEVER.
1861-70	448	971
1871-80	379	719
1881-90	441	388

SCARLET FEVER.—Eight deaths were registered from Scarlet Fever during 1895, this number corresponding exactly with the deaths in 1894. The deaths were equivalent to a death-rate of 0·05 per 1,000 of the population, as compared with 0·18, the average rate in the 33 large towns.

The average annual death-rate from Scarlet Fever in the 10 years 1885-94, was 0·28 per 1,000 of the population in these large towns and 0·23 per 1,000 in Cardiff for the same period. The death-rate from Scarlet Fever in the large towns ranged from 0·02 in Plymouth and 0·04 in Croydon, Brighton, Portsmouth and Preston, to 0·29 in Liverpool, 0·32 in Manchester, 0·39 in Wolverhampton, and 0·47 in Salford.

The total number of cases notified within the Borough and the deaths registered since the adoption of the Infectious Disease Notification Act were as follows :—

YEAR.	CASES NOTIFIED.		DEATHS.	PER CENT. MORTALITY	
1890	...	385	...	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

During the year 206 cases were removed to the Sanatorium, being 43 per cent. of the cases notified, as compared with 13 per cent. in 1892, 22 per cent. in 1893, and 31 per cent. in 1894.

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

				NO. OF NOTIFICATIONS.		NO. OF DEATHS.
First Quarter	...	...	...	110	...	1
Second „	...	...	...	85	...	2
Third „	...	...	...	126	...	0
Fourth „	...	...	...	168	...	5

In the first quarter of the year the chief incidence of the disease fell upon the Grangetown, Park, and Riverside Wards, the cases reported being 23, 22, and 21 respectively. In the second quarter the Park and the Roath Wards were chiefly affected. In the third quarter the numbers reported ranged from 26 in the Park Ward, 19 in the Canton and Splott Wards respectively, and 17 in the Cathays Ward, to 5 in the Adamsdown and 3 in the Central Ward. In the fourth quarter the number of cases reported varied from 26 in the Park and Riverside Wards respectively to 4 in the Adamsdown and 1 in the Central Ward. It is satisfactory to notice the decrease in the number of cases of Scarlet Fever reported since the opening of the Sanatorium in the Autumn of 1892.

Since that date the proportion of cases isolated in the hospital has gradually increased, whilst the number of cases reported in each year has sensibly diminished.

DIPHTHERIA.—Forty-six deaths were registered from Diphtheria, compared with fifty-nine in 1894, and with ninety-three in 1893.

The number of deaths was equivalent to an annual death-rate of 0·29 per 1,000 of the population, as compared with 0·35 the average rate in the 33 large towns. The lowest Diphtheria rates were 0·04 in Nottingham, 0·06 in Derby and in Sunderland, and 0·07 in Blackburn and in Preston; the highest rates were 0·42 in Birkenhead, 0·43 in Burnley, 0·53 in London, 0·77 in West Ham, and 0·98 in Wolverhampton.

The average annual death-rate from Diphtheria in the ten years 1885-94, was 0·25 per 1,000 in the large towns, and 0·25 in Cardiff for the same period. The number of cases of Diphtheria reported to the Sanitary Authority in 1895, was 229. The case mortality, or the proportion of deaths to cases notified, was equal to 20·0 per cent.

The seasonal incidence of the disease is shown as follows:—

		CASES NOTIFIED.			DEATHS.		CASE MORTALITY PER CENT.
First Quarter, 1895	...	56	...	11	...	19·6	
Second „ „	...	62	...	14	...	22·5	
Third „ „	...	50	...	12	...	24·0	
Fourth „ „	...	61	...	9	...	14·7	

The local incidence is shown in the following Table which gives the proportion of cases of Diphtheria reported in each Ward, and the mortality per 1,000 of the Ward population.

WARDS.			Cases reported per 1,000.	Death-rate per 1,000.
Central	Ward ...	...	0·88	0·07
South	„ ...	...	0·09	0·00
Cathays	„ ...	...	1·11	0·37
Park	„ ...	...	1·94	0·27
Adamsdown	„ ...	...	0·76	0·09
Riverside	„ ...	...	1·17	0·33
Canton	„ ...	...	0·54	0·11
Roath	„ ...	...	1·61	0·63
Grangetown	„ ...	...	1·62	0·59
Splott	„ ...	...	4·70	0·31

TABLE XXII.—The following table shows the age periods of the cases reported:—

CASES OF DIPHTHERIA REPORTED DURING THE YEAR 1895.

AGE PERIODS.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Year.
Under 3 years ...	8	9	4	6	27
Three and under 13	32	36	27	39	134
Thirteen and under 25	9	8	8	12	37
Twenty-five and upwards	7	9	11	4	31
Total ...	56	62	50	61	229

The age incidence varied considerably in the different Wards, as will be seen by the following table:—

TABLE XXIII.—Percentage of cases at age periods to cases reported in each Ward:—

WARD.	Total No. 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 ...	11	9·0	72·7	9·0	9·0
South ...	1	100·0	...	...	...
Cathays ...	18	16·6	66·2	5·5	11·1
Park ...	43	6·9	62·7	23·2	6·9
Adamsdown ...	16	12·5	43·7	25·0	18·7
Riverside ...	20	5·0	65·0	20·0	10·0
Canton ...	9	11·1	55·5	...	33·3
Roath ...	24	25·0	62·5	4·1	8·8
Grangetown ...	27	25·9	51·8	11·1	11·1
Splott ...	60	3·3	55·0	25·0	16·6

Diphtheria, although relatively more prevalent in rural than in urban districts, has of late years shown a tendency to increase in large cities and towns. In Cardiff, however, the notified cases which in 1893 rose to the high figure of 462, declined to 326 in 1894, and to 229 in 1895. Some difference of opinion exists amongst authorities as to the nature and extent of the influence exerted by insanitary surroundings on the development and spread of Diphtheria. It is probable that this influence has been exaggerated, and that owing to the extreme infectiousness of the disease, the most active agent in its spread is the aggregation of children in the well-filled public elementary schools at ages when they are peculiarly liable to contract this disorder. From the above tables it will be seen that nearly Sixty per cent. of the cases notified were between the age of three and thirteen years (the school ages), although the age incidence varied considerably in the different wards. For instance, in the Splott Ward forty-one per cent. of the cases occurred amongst persons over thirteen years of age, but amongst these no deaths occurred. The disease was evidently of a very mild type in this Ward, as although the number of cases reported was in proportion to the population more than twice as high as in any other Ward, the mortality was exceedingly low, the proportion of deaths to cases notified being only 6·6 per cent., as compared with 20·0 per cent. the case mortality in the entire urban district.

TYPHOID OR ENTERIC FEVER.—Fourteen deaths were registered from this disease during the year 1895, as compared with seven in 1894. The number of deaths was equivalent to a death-rate of 0·08 per 1,000 of the population as compared with 0·20 the rate in the 33 large towns.

The average annual death-rate from Fever in the 10 years 1885-94, was 0·21 per 1,000 in the large towns, and 0·26 per 1,000 in Cardiff for the same period. The number of cases of Enteric Fever notified within the Borough, and the number of deaths registered during each year since the adoption of the Infectious Disease Notification Act, is given below :—

YEAR.	CASES NOTIFIED.		DEATHS.		PERCENTAGE MORTALITY.	
1890	..	152	...	23	...	15·1
1891	...	190	...	26	...	20·0
1892	...	118	...	24	...	20·3
1893	...	103	...	18	...	17·4
1894	...	62	...	7	...	11·2
1895	...	79	...	14	...	17·7

The number of cases of Typhoid Fever reported to the Sanitary Authority during each quarter of the year 1895 was as follows :—

	CASES NOTIFIED.			DEATHS.		
First Quarter	18	...	3
Second „	8	...	1
Third „	27	...	5
Fourth „	26	...	5

Of the total number of cases reported, two were of children under five years of age, the incidence of the disease at other age periods being as follows :—

NO. OF CASES REPORTED.				AGE PERIODS.	
10	...	...	...	5 and under 10 years.	
18	...	...	...	10	" " 15 "
14	...	...	...	15	" " 20 "
12	...	...	...	20	" " 25 "
9	...	...	...	25	" " 30 "
10	...	...	...	30	" " 40 "
3	...	...	...	40	" " 50 "
1	...	...	...	50 and upwards.	

The following Table gives the Fever Mortality in Cardiff as compared with that of England and Wales and the large towns in successive years.

FEVER MORTALITY.—Death-rates per 1,000 of the Population.

TABLE XXIV.

	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
England and Wales...	0·20	0·18	0·18	0·18	0·18	0·15	0·22	0·16	Not yet Published.
33 Large Towns ...	0·22	0·20	0·20	0·19	0·20	0·15	0·24	0·19	0·20
Cardiff ...	0·16	0·33	0·25	0·19	0·19	0·19	0·12	0·04	0·10

During 1895 in the 33 large towns the lowest Fever rates were 0·06 in Huddersfield, 0·08 in Plymouth, 0·09 in Bristol, and 0·10 in Cardiff. The highest rates were 0·37 in Liverpool, 0·39 in Birkenhead, 0·42 in Salford, 0·45 in Bolton, and 0·96 in Sunderland. An examination of the sanitary conditions of the houses in the Borough in which cases of Typhoid Fever occurred, was the means of discovering defects of drainage in twenty-three of these houses. These defects were remedied without delay. A comparative immunity from Typhoid Fever has of late years been one of the most satisfactory features in the health reports of this District, and may be taken as evidence of the value of the Public Works which have been carried out by the Sanitary Authority. Perhaps the chief agents in producing this improvement in the health of the community have been the provision of a pure and constant supply of water and an increased efficiency in the sanitary administration of the District.

DIARRHŒA.—The deaths from Diarrhœa numbered 158, as compared with 45 in 1894 and with 131 in 1893. The deaths registered were equal to an annual death-rate of 1·01 per 1,000 of the population as compared with 1·20, the average rate in the 33 large towns of England and Wales.

The average annual death-rate from Diarrhœa in the ten years 1885-94 was 0·83 per 1,000 in the large towns, and 0·85 in Cardiff for the same period. The lowest rates from Diarrhœa during 1895 were 0·48 per 1,000 in Huddersfield, 0·52 in Plymouth, 0·56 in Croydon, and 0·58 in Halifax. The highest rates were 2·14 in Burnley and in Blackburn, 2·46 in Hull, and 2·58 in Preston.

The distribution of the Diarrhœa deaths in Cardiff according to the season of the year and the various age-periods, was as follows during the year 1895:—

TABLE XXV.

Deaths from Diarrhœa.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
Under one year ...	6	12	80	29	127
One and under five years ...	2	2	11	3	18
Five and under fifteen ...	...	...	...	...	...
Fifteen and under twenty-five	...	...	...	...	...
Twenty-five and under sixty	...	1	1	1	3
Sixty years and upwards ...	1	1	7	1	10
Total ...	9	16	99	34	158

As usual the majority of deaths occurred during the third or summer quarter of the year and amongst children under one year of age. In this quarter ninety-nine deaths were registered from Diarrhœa, and of these, eighty occurred amongst children under one year of age. The deaths from Diarrhœa in this quarter corresponded to an annual rate of 2·55 per 1,000, as compared with 1·79 the average rate in the five preceding third quarters. In England and Wales the rate was unusually high during the third quarter of 1895, reaching 2·36 per 1,000; in only one third quarter since that of the year 1884 has the Diarrhœa mortality reached this figure, the average rate in the third quarters of the ten years 1885-94 was 1·53 per 1,000.

The relation between the temperature of the air and the prevalence of Diarrhœa is shown in the following Table, which gives the Diarrhœa death-rate and the mean temperature of the air in Cardiff during the third quarters of the ten years 1886-95, was 1·53 per 1,000.

TABLE XXVI.

YEAR.	DEATH-RATE FROM DIARRHŒA.		MEAN TEMPERATURE.
	
1886	...	4·6	61·2
1887	...	2·8	58·8
1888	...	1·4	57·6
1889	...	1·7	59·0
1890	...	2·9	59·7
1891	...	0·8	57·8
1892	...	2·3	60·4
1893	...	2·5	61·8
1894	...	0·5	57·0
1895	...	1·0	59·5

The following Table shows the distribution of mortality from the Seven Chief Zymotic Diseases, from Phthisis, from diseases of the Respiratory Organs, and from Other Causes in each Street in the Borough during the year 1895.

TABLE XXVII.—CENTRAL WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Bridge and Little Bridge street	1	4	5
Blackweir	1	1	1	1	4
Bute street and terrace	2	...	2	1	5
Caroline street	1	1	2	4
Cross street	1	...	1
Castle court	1	1
Glamorgan Canal	4	4
Canal bank	1	1	...	2
Charles street	1	...	...	...	...	...	4	5
Clytha Street	2	2
Dumfries place	2	...	...	2
David street	1	3	4
Eisteddfod street	4	4
East terrace	3	3
Edward street and terrace	1	6	7	7
Edward place	1	1
Frederick street	1	...	...	...	...	1	2	...	7	11
Friends' place	1	1
Football field	1	1
Green gardens court	2	2	2
Gough street	3	3
Guildford street	1	1
Havelock street	1	...	3	3	7
Homfray street	1	...	1	2
Hills' terrace	1	...	2	3
Hills' street	1	1
The Hayes	1	1	1	2
Love lane	1	4	5
Millicent street	1	...	1	5	7
Maindy works	1	1
Mary Ann street	3	3	16
Nazareth house	3	2	11	6
Park grove	1	1
Park place	1	1
Park street	1	1	2
Park hall buildings	1	1
Ruperra street	4	4
Queen street	1	...	3	4
Quay street	1	1
Rodney street	3	3
Rising sun court	1	...	1
River Taff	2	2
Richmond terrace	1	1
Scott street	1	1	1	3
St. John's square	2	2
St. Mary street	1	1
Station terrace	1	1	2
Stanley street	1	...	1
Spring gardens court	1	1
St. Andrew's place and crescent	1	...	1	2
Tredegar street	2	...	6	8
Union buildings	1	...	1
Union street	1	...	3	7	11
Warehouse	1	1
Wood street	1	...	...	...	...	...	...	2	5	8
Wellington terrace	1	1	2
Windsor place	4	4
Vachell's terrace	1	1
Total	2	...	1	...	...	7	15	34	133	192

SOUTH WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Allen's court	1	...	1
Angelina street	2	2	1	5
Alice street	1	...	1	1	3
Adelaide street and place	1	...	4	8	13
Blake terrace	1	1
Bute crescent	2	2
Bute street	1	...	1	2	1	15	20
Bristol channel	3	3
Bute lane	1	...	...	...	1
Bute esplanade
Christina street	1	...	...	...	...	1	1	4	6	13
Crawshay street	1	1
Chrichton street	2	1	2	5
Canal	13	13
Canal street	1	...	1
Dudley street and terrace	1	3	...	4
Exchange	1	...	1
Eleanor street	2	...	1	6	9
Evelyn street	1	...	2	3	...	6
Francis street	1	...	1	...	2
Ferry road	1	1
George street	1	12	13
G. W. R.	1	1
Hannah street	2	2
Harrowby street	1	...	...	...	1	...	...	3	5
Hodge's row	1	1
Herbert street	1	...	1	6	8
Harpur street	1	1	2
Henry street	2	2
Hamadryad hospital	2	...	1	1	7	12
James street	2	...	1	3	9
John street	2	1	3
Louisa street	1	...	5	6
Loudoun square	1	2	5	8
Mount Stuart square...	1	1	...	2
Margaret street	1	...	...	...	4	3	8
Maria street	1	...	...	...	4	5
North Church street	2	2	4
Nelson street	2	2
Percy street	2	2
Penarth road	2	2
Peel street	1	1	3	2	7
Patrick street	2	2
South Church street	1	2	3
Sophia street	2	...	...	...	...	...	2	2	2	8
Sandon place	2	2
Stuart street	1	...	3
Sailors' Home	1	...	1
Sea Lock	1	1
South William street	2	5	7
Windsor esplanade	2	...	...	2
West Church street	4	1	5
Trade street	1	...	1
Tresillian terrace	2	1	...	3
Total	3	1	...	2	4	13	23	57	137	249

CATHAYS WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhea.	Phthi- siss.	Respiratory Diseases.	Other Causes.	Total.
Alexander street	1	...	1	...	2
Barracks	2	...	...	...	...	1	1	2
Cairns street	...	1	...	1	3	...	2	1	8	13	30
Cathays terrace	1	...	2	2	3	16	25
Coburn street	1	...	1	...	1	5	8
Cogan terrace	1	1
Crwys Road	...	1	...	...	...	...	1	...	...	12	14
Cranbrook street	1	1
Catherine street	1	...	...	...	1	...	2
Dalton street	1	2	3
Daniel street	1	...	3	...	1	4	9
Darren street	2	2
Fanny street	1	...	...	...	...	...	1
Fitzroy street	2	2	4
Flora street	1	...	6	2	9
Florentia street	...	1	...	...	...	...	...	...	...	1	2
Glynhodda street	3	3
George street	...	1	...	...	2	...	1	1	3	5	13
Hirwain street	2	2	4
Harriett street and place	2	1	1	8	11
Llanbleddian gardens	1	...	1
Llantrissant street	...	1	...	...	...	...	...	1	2	2	6
Letty street	1	...	...	1	1	2	5
Lucas street	1	...	1
Minnie street	1	...	...	...	...	3	4	8
Miskin street	1	...	1	...	...	6	8
Mundy place	1	...	...	1	1	...	3
May street	2	1	5	10	18
Merthyr street	3	2	5
Richard street	2	...	...	...	3	5	10
Rhymney terrace	2	2
Ruthin gardens	1	...	...	3	4
Robert street	2	...	...	1	...	3	3	9
Salisbury road	1	...	...	...	1	3	5
Senghenydd road	2	2
Thesiger street	...	1	...	...	1	1	...	1	2	7	13
Talygarn street	1	1
Treherbert street	1	1	...	2
Treorky street	2	2
Woodville road	...	1	...	...	...	...	2	...	4	12	19
Whitchurch terrace	2	2	4
Total	...	7	...	6	17	1	19	12	64	148	274

PARK WARD.

NAME OF STREET.	Small-Pox.	Menses.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Alfred street	1	...	...	1	...	4	6
Albany road	1	1	3	5
Arran street	1	...	1	1	2	2	7
Angus street	1	1	2
Arabella street	1	...	...	2	3
Brecon street	1	...	1	...	...	...	2
Byron street	1	3	4
Bedford street and place	2	2	2	5	11
Castle road	1	...	...	2	...	6	9	18
Cyfarthfa street	1	2	4	6	13
Crwys place	1	...	...	...	...	2	1	4
Clive place	1	...	1
Donald street	3	2	10	15
Diana street	2	1	3
Elm street	3	1	4	8
Essich street	1	1
Glenroy street	3	7	10
Gordon road	2	1	3	6
Heath street	1	1
Inverness place	1	1	2	4
Kincraig street	1	1	...	...	...	...	3	5
Keppoch street	1	...	2	...	...	2	1	4	10
Lily street	1	...	...	1	2
Montgomery street	1	1
Moy road	1	...	1	1	1	4	8
Milton street	1	...	...	2	...	6	9
Northcote street	1	1
Mackintosh place	2	2	4
Ninian road	1	...	1
Newport road	1	...	...	...	...	...	6	7
Oxford street	4	2	6
Pearson street	1	1
Plasnewydd road	1	...	...	...	...	...	1	3	4	9
Russell street	1	2	2	5
Rose street	1	1	5	7
Richmond road and crescent	1	...	...	...	1	3	3	8
St. Peter's street	1	1
Strathnairn street	1	...	...	2	...	2	1	...	3	9
Shakespeare street	2	...	...	4	6
Treharris street	1	1	...	...	1	5	10	18
The Parade	1	...	...	...	...	6	7
Tavistock street	1	...	...	1	2
The Walk	1	...	2	3
Talworth street	3	3
Violet row	1	1	2
Vere street	1	1
Wordsworth street	2	2
Total	2	1	6	12	...	15	28	54	144	262

ADAMSDOWN WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Disease.	Other Causes.	Total.
Augusta street	1	1	3	5
Adam street	1	...	...	...	...	...	1	2	10	14
Asgog street	1	1
Adamsdown square	2	2
Adamsdown place	1	1
Buzzard street	1	...	...	...	...	...	...	...	2	3
Cycle street	1	1	2	2
Comet street	2	...	3	2	7
Clyde street	1	...	...	1
Cumnock place and terrace	1	...	4	...	5
Clifton street	1	...	...	...	...	...	1	1	1	3
Cumrae street	1	...	...	1	...	...	...	1	2	5
Constellation street	1	...	...	1	...	1	3	6
Copper street	2	1	3
Duffryn street	2	2
Davies street	1	5	6
English Channel	3	3
East dock	10	10
Eclipse street	1	...	...	...	1	5	7
Ellen street	4	4	8
Galston street	1	1
Garth street	1	...	1	...	2
Gold street	2	2
Gaol lane	1	...	1
Godfrey street	1	2	1	4
Gwendoline street	1	1
Howard place	4	1	5
Inchmarnock street	1	2	2	5
Ivor street and place	1	2	1	4
Iron street	1	...	...	...	...	...	...	3	2	6
Infirmary	7	1	91	99
Kerrycrook street	2	2
Kilcatten street	2	2	4
Longcross street	2	2
Metal street	1	6	7
Lead street	3	...	3
Moon street	1	1
Lady Margaret terrace	1	...	...	...	2
Moira street and place	3	7	...	10
Meteor street	3	3
Morgan street	1	1	4	6
Nosh street	1	1
North Luton place	1	...	...	...	1	3	5
Orbit street	1	1
William street	1	2	5	8
Pellett street	1	1	...	...	...	...	...	...	3	5
Planet street	1	...	...	...	...	3	8	12
Platinum street	2	...	...	...	1	1	4
Pendoylan street	1	4	1	1	7
Prince Leopold street	1	...	...	1
Roberts' court	1	1
Roland street	1	4	10	15
Roath dock	9	9
H.M. Prison	3	3
Sanquahar street	1	...	...	...	...	...	...	...	3	4
Sandon place	1	...	4	5
Silver street	1	1	...	2
System street	1	6	7
Sun street	1	1
Taff street	1	...	...	2	3
Tin street	3	3
Tyndall street	5	16	21
Thomas' court	1	...	...	1
Victoria street	1	...	...	...	...	...	1	2	6	10
Windsor road	1	2	3
West dock	1	6	7
Zync street	1	...	...	...	1	...	2
Total	8	1	2	6	...	8	25	72	283	405

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	3	5
Beauchamp street	1	1
Brook street	2	...	...	...	2	...	2	6
Blackstone street	1	...	...	...	2	2	5
Brunel street	1	1
Cowbridge road	3	2	10	15
Craddock street	2	...	...	...	...	1	5	8
Cathedral road	1	...	...	...	...	...	...	...	6	7
De Burgh street	1	...	...	...	...	...	2	2	4
East street	3	3
Eldon road	1	...	...	...	1	12	14
Fitzhamon embankment	2	2	1	5
Gloucester street	1	...	...	4	5
Green street	1	1
Halket street	1	5	...	3	6	15	15
Hamilton street	1	...	...	...	...	4	5
Justin street	1	1
King's road	1	5	9	15
Lewis street	1	...	...	...	...	...	...	...	3	4
Mandeville place	2	1	3
Mark street	2	5	7
Machen place	1	1	2
North Morgan street	1	1
Neville street	1	...	6	7
Picton court	1	...	1
Plantagenet street	1	3	2	6
Pontanna avenue	1	...	...	...	1
Pitman street	1	1
Plasturton avenue	1	5	6
Sneaton street	3	3
Rennie street	2	...	1	3	6
Ryder street	2	1	3
Sneyed street	1	1
Rawden place	1	...	...	2	3
Severn road	1	...	4	5
Stephenson street	1	...	1
Talbot street	1	...	2	3
Telford street	1	...	1
Tudor road	2	...	...	...	1	7	16	26
Trevethick street	1	2	3
Union workhouse	3	...	51	37	143	234
Wellington street	3	3
Wells street	1	3	1	2	7
William street	1	1
Wyndham crescent	1	...	1	8	10
Wyndham road	2	1	3	5	11
Wyndham place	1	...	...	1	...	...	2
Total	2	1	6	5	3	15	69	84	294	478

CANTON WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total
Atlas road	1	1
Alexandra road	1	...	1	4	6
Albert street	1	...	1	1	1	4	8
Brecon street	2	...	1	2	5
Carmarthen street	1	...	3	4
Clive road	2	2	4
Church road	1	...	...	1
Chancery lane	1	...	2	...	1	4	8
Corporation yard	1	1
Cowbridge road	2	1	4	5	12
Conybere road	2	...	...	2
Commercial street	1	3	4
Denton road	1	...	...	1
Eldon road	1	...	...	1	1	4	7
Daisy street	2	...	2
Ethel street	1	...	...	10	11
Delta street	1	1	...	...	2
Egerton street	1	...	3	4
Evans terrace	1	...	1	...	2
Glynn street	1	...	1
Glamorgan street	1	...	...	...	1	...	...	6	8
G.W.R.	1	1
Gladstone crescent	1	...	...	...	...	...	1
Gray street	1	...	1	...	...	2	2	2	8
Harvey street	1	...	1
Jusiman avenue	1	1
King's road	1	1
Lone Farm	1	...	...	...	1
Leckwith road	1	4	5
Littleton street	1	1
Llandaff road	1	...	6	7
Lionel road	1	1
Mortimer road	1	1	2
Nottingham street	1	1
Market road	1	1
Nesta road	1	...	...	1	2
Picton place	2	2	4
Pontcanna place	1	4	5
Penypeel road	1	...	3	6	10
Percy street	1	...	1
Parry street	1	1
Pembroke road	1	5	6
Rolls street	1	...	...	...	...	...	2	1	4
Railway terrace	1	...	...	1	2
Radnor road	1	...	2	3
Romilly road and crescent	1	...	1	6	8
Severn road	2	1	4	7
St. John's crescent	1	...	1	2
Stag terrace	1	...	2
Springfield place	3	4	7
Talbot street	1	1
Thornhill street	2	2
Tintern street	1	...	1
Turberville street	1	...	2	3
Wyndham street	1	2	3
Wells street	2	1	...	3	6
Welby road	1	...	...	1
Wellington street	1	...	1	...	...	...	1	4	7
William street	1	...	1
York street	1	...	...	1
Total	4	...	1	5	...	19	22	40	125	216

ROATH WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Albany road	1	...	1
Agate street	1	1	2
Arthur street	1	...	1	...	...	...	...	...	2	4
Bradley street	1	...	...	1	2
Bertram street	3	...	...	...	...	2	...	...	9	14
Blanche street	2	...	...	...	...	2	2	6
Beresford road	1	...	1
Broadway	4	1	1	15	21
Booker street	1	1
Crofts street	1	1	2
Cecil street	1	...	...	1	1	1	7	11
Clifton street	2	1	3
Cyril crescent	1	...	1
Cottrell road	1	2	1	3	7
Claude road	1	...	2	3
Diamond street	2	1	3	3	9
Emerald street	1	1	3	8	13
Elm street	1	6	7
Fort street	1	...	...	...	...	...	...	1
Harold street	1	4	5
Helen street	2	1	1	2	6
Iron street	1	1
Nora street	3	2	3	4	12
Newport road	2	2
Oakfield street	1	...	...	...	...	...	4	5
Partridge road	2	2
Pearl street	2	...	...	2	2	7	15	28
Ruby street	2	1	3	6	12
Richard's terrace	2	2	4	8
Stacey road	1	2	1	7	11
Sapphire street	2	5	7
Snipe street	4	2	6
Theodora street	1	...	...	...	...	1	4	6
Topaz street	1	1	4	6
Spring Gardens place	1	5	6
Woodcock street	1	1
Total	4	...	9	...	...	22	18	46	134	283

GRANGETOWN WARD.

NAME OF STREET.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Andrews' terrace	1	...	4	5
Allerton street	1	...	5	6
Amherst street	1	...	...	...	1	...	2	4
Bromfield street	1	...	5	6
Bradford street	1	...	...	...	...	1	...	...	3	5
Bromsgrove street	2	1	3
Bedwas street	4	4
Brickpond	2	2
Corporation road	2	2
Clive street	1	...	...	3	2	4	14	24
Clarence road	1	1
Compton street	1	1	2	1	5
Cornwall street and road	1	1	6	8
Clare road	1	...	...	1	...	...	...	4	18	19
Court road	2	1	...	2	6	11
Chester street	1	...	...	...	...	...	2	...	2	5
Cambridge street	1	...	...	...	...	1	...	2	3	7
Dorset street	2	...	...	1	...	...	7	10
Devon street and place	2	1	5	8
Durham street	1	...	4	5
Earl street	2	2
Forrest street	1	...	1	...	2
Ferry road	1	1
Fairview	1	1
Francis street	1	...	1
Homesdale street	2	...	...	...	...	...	3	5
Hewell street	1	...	...	...	...	...	...	...	11	12
Hereford street	3	3
Jubilee terrace	1	1	...	...	...	...	...	1	3
Kent street	1	...	3	4	8
Knole street	1	...	2	3
Llanmaes street	3	2	5
Ludlow street	1	3	4
Lucknow street	1	...	...	...	1	1	3
Monmouth street	1	...	3	4
Madras street	5	5
Machen street	1	...	...	2	3
Newport street	1	...	...	1	2
North street	1	1
Oakley street	1	1	1	6	9
Penhevad street	1	...	2	3
Penarth road	1	...	1	...	...	1	1	1	12	17
Pentrebane street	1	...	...	...	1
Paget street	1	...	1	3	5
Rudry street	1	...	1
Rutland street	3	3
Redlaver street	1	...	1	1	...	5	8
Sevenoak street	5	5
Sea view	3	...	3
Somerset street	2	2
Stoughton street	1	...	...	...	...	...	2	1	11	15
Saltmead road	1	...	4	5	10
Stockland street	2	2	...	2	6
Sanatorium	3	3	...	2	...	...	...	...	8
Tynant street	2	...	2
Thomas street	1	1	...	6	8
T. V. R.	1	1
Warwick street	1	2	...	3	6
Total	7	4	11	3	4	22	26	42	202	321

SPLOTT WARD.

NAME OF STREET.	Small-Pox.	Menses.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phtisic.	Respiratory Diseases.	Other Causes.	Total.
Aberdovey street	1	...	...	...	...	...	...	1	4	6
Adeline street	1	1	6	8	16
Aberystwith street	8	8
Burnaby street	1	...	...	...	8	8	7
Bridgend street	8	8	6
Coveny street	8	8
Caerphilly street	1	...	...	1	2
Cornelia street	1	...	...	...	...	2	8	6
Carlisle street	1	...	...	...	...	...	...	5	9	15
Dowlais works	1	1
Eyre street	2	2
Elaine street	1	...	...	8	4
Fishguard street	1	...	...	8	2	6
G.W.R.	1	1
Gwendoline street	1	1
Habershon street	1	...	1	...	...	...	...	2	10	14
Howard street	2	...	...	1	5
Hinton street	1	1	...	2
Hansard street	1	...	1
Janet street	1	...	8	5	9
Layard street	4	4
Llanelly street	1	1	...	1	4	7
Moorland road
Marion street	1	...	...	1	...	...	2	4
Milford street	1	1
Menelaus street	1	1
Ordell street	1	...	...	7	8
Portmanmoor road	1	...	...	1	...	1	...	4	16	28
Pontypridd street	1	...	8	...	...	4	8
Rumney river	1	1
Railway street	8	1	5	7	16
Sanquahar street	4	4
Seymour street	1	...	1	1	8
Sploft road	1	...	1	...	...	1	...	...	4	7
Singleton road	1	4	5
Swansea street
Tenby street	1	...	...	...	...	...	...	1	2
Walker's road	1	...	5	6
Total	6	...	4	8	2	18	4	44	129	210

BOROUGH HOSPITALS.—The present Hospital accommodation for persons suffering from infectious diseases is as follows :—

- (a) The New Sanatorium containing 60 beds.
- (b) The Small-pox Hospital „ 50 „

The New Sanatorium was opened for the reception of patients in August last, by His Worship The Mayor of Cardiff, Alderman P. W. Carey, J.P., who entertained on the occasion a large number of the principal inhabitants to whom an opportunity was given of visiting the Wards and the Administrative Departments. The Sanatorium comprises two pavilions, each containing two large wards, one for the reception of males the other for females suffering from the same infectious disease. Adjoining each large ward is a small single bed ward for special or private cases.

In addition there has been provided an “ Isolation Block ” containing six beds and intended for the reception of cases about the nature of which there may be some doubt, or for such as develop some other infectious disease concurrently with that for which they were admitted.

Up to the present, the large wards and the single bed wards adjoining have been used entirely for cases of Scarlet Fever. The beds of the Isolation Block for the few cases of Typhoid Fever and Diphtheria which were admitted.

The Small-pox Hospital (which was at first temporarily used for Scarlet Fever) is situated on land adjoining the grounds of the Sanatorium but completely separated from it.

It is administered separately and has a separate staff, laundry, ambulance, and approach, and contains altogether in three wards accommodation for about 50 persons.

It is strictly speaking a temporary structure made of galvanised iron, wood, and felt, etc., and as regards structure and nature of accommodation one of the best of its kind. The Hospital Committee have resolved to acquire the land between the Hospital and the railway embankment for the purpose of improving the boundaries. This has become an absolute necessity now that these wards are used for Small-pox. It is recognised on all sides, whatever views one may have as to the aërial transmission of Small-pox, that the area on which a Small-pox Hospital stands should be greater in extent than that of a Hospital of similar size intended for the ordinary infectious diseases, and that communication with the surrounding neighbourhood should be cut off as far as possible.

Indeed, the Local Government Board have in a recent memorandum advised that a Local Authority should not contemplate the erection of a Small-pox Hospital on any site where it would have within half-a-mile of it, as a centre of population 500 to 600 persons, whether in one or more institutions or in dwelling-houses. Hence the extreme and urgent necessity of acquiring more land in the neighbourhood of this Hospital.

Generally, as regards Hospital accommodation and means for preventing the spread of infectious disease, it may be affirmed that your Authority was never so well equipped as it is at present, although doubtless before long the rapid increase in the population will necessitate an extension of the wards of the Sanatorium.

Although no definite rule can be laid down, we may take the late Sir George Buchanan's estimate of one bed for every 1,000 inhabitants as approximately correct, and in that case we should have at the present time at least 160 beds available for cases of infectious disease.

In considering this matter it must be borne in mind that your Hospitals are increasing in popularity as evidenced by the willingness of the public to avail themselves of the accommodation provided. The total Hospital expenditure during the year amounted to £1,055, from which must be deducted £35 received for the maintenance of patients. The average cost per head of patients during the year was £4, and the average cost per week per patient was 11s. 2d.

I have to acknowledge the excellent service to the Hospitals rendered by the Matron and her efficient staff of nurses.

TABLE XXVIII.—Shewing the number of Patients under treatment in the Cardiff Sanatorium, 1895.

	MALES.		FEMALES.		TOTAL.
	Under 5 Years.	Over 5 Years.	Under 5 Years.	Over 5 Years.	
I.—Patients remaining in hospital on December 31st, 1894 :—					
Scarlet Fever	3	9	4	11	27
II.—Admitted during the year ending December 31st, 1895 :—					
Scarlet Fever	40	66	36	70	212
Typhoid Fever ... ..	...	5	...	6	11
Diphtheria	1	4	1	2	8
Total	41	75	37	78	231
Total under treatment in 1895					
	44	84	41	89	258
III.—Of the above there were Discharged Recovered :—					
Scarlet Fever	35	69	34	63	201
Typhoid Fever ... ..	...	2	...	4	6
Diphtheria ... ..	...	3	1	1	5
Total	35	74	35	68	212
IV.—Died :—					
Scarlet Fever	2	...	...	1	3
Typhoid Fever ... ..	...	1	...	1	2
Diphtheria	1	1	...	1	3
Total	3	2	...	3	8
V.—Remaining in hospital on December 31st, 1895 :—					
Scarlet Fever	6	6	6	17	35
Typhoid Fever ... ..	...	2	...	1	3
Diphtheria ... ..	...	...	...	...	...
Total	6	8	6	18	38
Total under treatment in 1895					
	44	84	41	89	258

The proportion of deaths to cases under treatment during the year was as follows :—

Scarlet Fever	...	...	1·2 per cent.
Typhoid Fever	...	...	18·1 „
Diphtheria	...	...	37·5 „

MORTALITY FROM DISEASES IN CLASSES IV., V., AND VI.

On referring to the Tables in the appendix it will be seen that in these classes are included (1) Constitutional Diseases, (2) Developmental Diseases, (3) Local Diseases.

From the point of view of preventive medicine, the various forms of tubercular disease, including Phthisis or Pulmonary Consumption are perhaps of the greatest interest. Taking Phthisis alone we find that 242 deaths were registered during the year. These deaths were equal to a death-rate of 1·55 per 1000 persons living, with one exception the highest rate for any single disease.

In London the mortality from Phthisis was equal to 1·77 per 1000. In the Central groups of sanitary districts it was 2·65. In the East group 2·05 and 1·70, 1·63, and 1·55 per 1000 in the South, North, and West groups respectively.

The following table gives the death-rate from Phthisis in Cardiff as compared with the rate in England and Wales during the years 1885-1894.

TABLE XXIX.—Death-rate per 1,000 from Phthisis.

YEAR.	ENGLAND AND WALES.			CARDIFF.
1885	...	1·770	...	2·488
1886	...	1·739	...	2·124
1887	...	1·615	...	2·000
1888	...	1·508	...	1·948
1889	...	1·573	...	1·987
1890	...	1·682	...	1·974
1891	...	1·599	...	1·834
1892	...	1·468	...	1·777
1893	...	1·468	...	1·615
1894	...	1·385	...	1·524

Phthisis may in a certain sense be regarded as an Infectious disease and indeed compulsory notification, and hospital isolation have been suggested by some as suitable preventive measures in the case of this disease. At present however we must place our chief reliance on such general measures of hygiene as can be put in force, supplementing them by practical suggestions based on our present knowledge. The usual manner of infection is by taking the poison (the tubercle bacillus) into the system through the lungs or swallowing with our food. In the latter case the danger may be either in cows' milk or in butchers' meat, hence the necessity of an efficient system of food inspection and of a constant watch over the dairies and cowsheds of the district. When the poison is taken into the system through the lungs it is conveyed by the dried sputum from a tuberculous patient which becomes scattered about as dust. Having regard to these facts Sanitarians have at times issued certain recommendations. For completeness and attention to detail I have seen none to surpass those drafted by the North Western Branch of the Association of Medical Officers of Health. The most important of these suggestions are the following :—

MEASURES FOR THE PREVENTION OF THE SPREAD OF PHTHISIS FROM PERSON
TO PERSON.

All phthisical sputum must, therefore, be burnt or efficiently disinfected if any decided measure is to be taken to prevent the spread of Phthisis from person to person.

The sputum from consumptive people should be at once burned by being spat into the fire, or better still, spat into a piece of paper or a rag, which should be at once burned.

Sputum may, however, be spat into a glass or porcelain vessel containing a 15 per cent. solution of carbolic acid, or (if carbolic acid cannot be obtained) simply some water. The contents of this vessel should be emptied once a day into the sewer outside, after which the vessel should be washed with boiling water and recharged.

All persons affected with a cough which has become chronic, should, when attending a workshop, assembly, or church, spit into a hand-glass spittoon containing the aforementioned disinfecting solution. Such a spittoon may be conveniently attached to the person.

No person suspected to have consumption should spit into a pocket-handkerchief, or into a rag, or on clothes unless such be forthwith burned.

No person, whether consumptive or not, should on any account spit on the floor or walls of any room, railway carriage, or public conveyance.

The eating utensils of a person suffering from consumption should be kept separate from all other utensils of other persons, and should be washed separately from others in boiling water as soon after their use as possible.

The clothing of a consumptive person must be washed separately from the clothing of other persons.

The bowel discharges of a consumptive person should be disinfected with the aforementioned solution, and soiled linen should be at once boiled.

A consumptive patient should, as far as possible, occupy a separate room or rooms, and where this is not possible special care should be exercised in destroying the sputum and excreta of the patient.

The furniture of a consumptive patient's room should be as simple and plain as possible, without fluting or carving which provide lodgment for dust; especially should hangings and unnecessary carpets and rugs be avoided.

When it is settled that any member of a household is consumptive, the whole house should be at once thoroughly cleansed, including the walls and ceilings; the furniture and floors should be washed with water as near boiling temperature as possible and containing carbolic acid in the proportion of four table-spoonfuls to a gallon of water; the walls should be cleaned down with the crumb of bread, the ceilings whitewashed, and clothing and bedding disinfected by steam or by boiling as in the case of any one of the other infectious diseases.

The walls, floors, and ceilings of the living and sleeping rooms of persons suffering from Phthisis should be cleaned and disinfected in the foregoing manner once in every two months.

The room or rooms of a consumptive patient should, in the event of death, be disinfected as after death from one of the infectious diseases.

Besides these special rules for individual cases the general measures to be adopted as regards the public consist in promoting as far as possible, healthy well ventilated houses, which shall be free from damp and offensive accumulations. The provision of wide streets and efficient sewerage and the enforcement of cleanliness in every possible way. There can be no doubt that in a low lying district like Cardiff every precaution should be taken to render the site of buildings as dry as possible. Damp soil has a very great influence on Phthisis. Buchanan has shown that dampness bears a direct relation to Phthisis mortality. Hence I have always advocated the adoption of bye-laws which will require in the case of new buildings amongst other things the covering of building sites with concrete, the construction in walls of a proper damp course of impervious material beneath the level of the lowest timbers and at least six inches above the ground, and the removal of all decomposing animal and vegetable matters from the proximity of dwellings.

TABLE XXX.—Death-rate per 1,000 from classes of disease.

YEARS.	Class IV. Constitutional Diseases.		Class V. Developmental Diseases.		Class VI. Local Diseases.	
	Cardiff.	England and Wales.	Cardiff.	England and Wales.	Cardiff.	England and Wales.
1885	4·122	3·340	3·091	1·614	10·924	10·007
1886	4·305	3·370	3·563	1·638	10·373	10·040
1887	3·203	3·213	3·442	1·578	10·384	9·867
1888	3·306	3·166	2·947	1·569	9·275	9·643
1889	3·690	3·223	1·446	1·550	9·164	9·394
1890	3·498	3·374	1·692	1·611	10·101	10·364
1891	3·645	3·339	1·366	1·690	11·398	10·807
1892	3·517	3·168	1·240	1·624	7·791	9·801
1893	3·470	3·210	1·257	1·593	8·261	9·536
1894	3·143	3·015	1·208	1·462	7·280	8·427

SANITARY CONDITION OF THE DISTRICT, AND SUMMARY OF WORK
PERFORMED BY THE
OFFICERS OF THE HEALTH DEPARTMENT.

The systematic house to house inspection of the district, commenced in January, 1891, was continued throughout the year. The following tables show the result of this inspection during the year, from which it will be seen that a large number of sanitary defects have been remedied. The erection of new houses, together with the construction of their drainage, is entirely under the control of the Borough Engineer and Surveyor, and of the Officers of his Department.

HOUSE INSPECTION.—CENTRAL WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Siphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Frederick street	90	2	...	5	34	1	...	83	26
Stanley street	31	1	2	1	2	...	...	31	1
Mary Ann street	94	2	3	1	5	...	...	88	29
Love lane	54	...	1	5	1	...	...	54	12
Canal street	17	1	...	...	3	...	...	14	5
Williams' court	2	...	...	...	...	...	...	2	...
Kingston court	10	...	...	...	...	...	...	Trough Closets.	...
Peter's court	7	...	...	...	2	...	...	7	2
French cottages	4	...	...	...	...	...	...	4	...
Rodney street	18	11	...	4	...	...	...	18	10
Little Frederick street	35	13	1	3	4	...	...	35	15

CATHAYS WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scully Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with Water.	Other Nuisances.
Crwys road	57	3	2	...	8	...	...	55	10
Thesiger street	66	4	1	4	23	...	...	65	12
Cobourn street	109	15	1	3	29	...	...	108	15
Fitzroy street	25	4	...	...	12	...	...	25	8
Cairns street	190	42	13	11	15	...	...	190	44

PARK WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scully Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Milton street	69	19	2	1	11	...	...	69	27
Crwys road	7	...	1	...	...	...	...	...	13

ADAMSDOWN WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scully Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Tyndall street	83	...	2	23	15	2	...	81	49
Ellen street	14	1	...	1	5	...	...	14	4

CANTON WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Siphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scully Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Mortimor road	99	4	...	6	25	...	...	99	19
Stacey terrace	10	8	...	5	10	...	...	10	27
Gladstone crescent	16	4	...	1	1	1	...	16	8
William street	4	1	...	2	2	...	...	4	5
Springfield place	27	1	3	5	...	...	...	27	30
Wellington street	25	7	1	2	3	...	...	25	9
Rennie street	28	2	1	...	...	...	...	28	2
Pontcanna place	35	4	3	4	19	...	...	35	17

ROATH WARD.

NAME OF STREET.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Siphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scully Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with Water.	Other Nuisances.
Nora street	144	5	2	2	4	...	...	144	36
Richards' terrace	86	14	3	10	111	1	1	71	19
Helen street	94	1	1	4	3	1	...	94	7
Tyler street	16	1	1	1	3	...	...	16	5
Fort street	13	6	...	1	...	...	...	13	4
Beresford road	43	1	...	...	...	...	...	43	5
Pearl street	196	18	...	3	59	2	1	196	60
Harold street	50	1	1	13	5	1	...	79	34
Bertram street	63	7	...	1	5	...	...	34	16
Theodora street	48	1	...	7	...	...	...	48	2

RIVERSIDE WARD.

NAME OF STREET.			No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with water.	Other Nuisances.
Halket street	...	...	147	...	8	2	9	...	...	147	33
Wells street	...	...	40	...	...	3	...	...	...	40	4
Gloucester street	...	...	46	2	1	5	8	1	...	46	37

GRANGETOWN WARD.

NAME OF STREET.			No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with Water.	Other Nuisances.
Saltmead road	...	...	32	...	2	1	...	...	...	32	4
Stoughton street	...	...	76	2	1	4	1	...	...	76	49
Lucknow street	...	...	12	1	...	...	8	...	...	11	9
Thomas street	...	...	45	6	...	4	33	...	...	43	33
Madras street	...	...	27	2	...	1	6	...	...	27	9

SPLOTT WARD.

NAME OF STREET.			No. of Houses Inspected.	Defective Drains.	Choked Drains.	W.C. Pans and Syphons Defective.	Defective Stench Traps permitting an escape of Sewer Gas.	Scullery Sinks connected direct with Drain.	Inside Closets not ventilated.	Closets not supplied with Water.	Other Nuisances.
Adeline street	...	...	55	6	11	39	...	...	...	55	9
Tenby street	...	...	15	...	...	1	...	...	...	15	3
Milford street	...	...	40	1	1	2	...	...	...	40	2

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.

Since that date special attention has been paid to the Inspection of Common Lodging Houses. Altogether 221 houses have been registered. The number remaining on the register at the end of the year being 115.

The Bye-laws require that every case of infectious sickness should be immediately reported to the Medical Officer of Health by the keeper of the Lodging House. Six such cases occurred during the year. These comprised 1 case of Diphtheria and 5 cases of Typhoid Fever. These were all removed to the Borough Hospital for infectious diseases with the exception of 1 case of Typhoid Fever.

COMMON LODGING HOUSES.

Total number on register	...	...	...	...	...	115
Registered rooms	...	...	...	...	...	464
Number of persons certified to accommodate	...	...	...	...	...	1,799
Day inspections	...	...	...	...	...	2,354
Night	...	...	...	...	...	487
W.C.'s cleansed and repaired	...	...	...	...	...	261
„ supplied with water	...	...	...	...	...	44
Additional W.C. accommodation provided	...	...	...	...	...	0
Drains trapped and repaired	...	...	...	...	...	96
Soil pipes ventilated	...	...	...	...	...	0
Special ventilation provided to rooms	...	...	...	...	...	53
Limewashed	...	...	...	...	...	258
Repaired	...	...	...	...	...	114
Overcrowded	...	...	...	...	...	0
Yards paved	...	...	...	...	...	26
Accumulations removed	...	...	...	...	...	13
Infectious disease discovered	...	...	...	...	...	6
Registered during the year	...	...	...	...	...	42

BYE-LAWS AS TO SEAMENS' LODGING HOUSES.—The Sanitary Authority have made Bye-laws for the regulation of these houses which are now awaiting the approval of the Board of Trade.

The new Bye-laws will come into operation on the 1st January, 1897, after which date the Authority will, if they see fit, on the application of any person, grant to him a licence authorising him to keep a Licensed Seamen's Lodging House.

As the licensing of these Lodging House keepers is not compulsory it is probable that there will be but few applications, as the advantage of a license is not obvious.

Should however the Corporation apply for an order in Council, under the provisions of the Merchant Shipping (Fishing Boats) Act, 1883, none but those possessing licenses will be able to keep Seamen's Lodging Houses or let lodgings to seamen, and anyone acting in contravention of such order will be liable to a penalty not exceeding One Hundred Pounds.

The Bye-laws will apply not only to a Licensed Keeper of a Lodging House but also to a keeper of such house to whom a licence has not been granted, and in so far as they relate to the latter deal entirely with the sanitary condition of the premises and correspond with the Bye-laws now in force with regard to Common Lodging Houses.

Most of these unlicensed Seamen's Lodging Houses are now registered as Common Lodging Houses and are therefore subject to the Common Lodging House Bye-laws.

A license to keep a Seamen's Lodging House cannot be granted to a person who holds a license for the sale of intoxicating liquor or who is engaged or interested in the business of a Clothier, Outfitter, or Slop Dealer.

In these Bye-laws the definition of "Seaman" is as follows:—"Seaman" means any male person other than the holder of a certificate of competency or service as Master, Mate, or Engineer in the Merchant service, who within four weeks immediately preceding the date of any transaction or occurrence within the scope of these Bye-laws has been employed in any capacity whatsoever on board a ship whether British or Foreign; but shall not include apprentices or persons engaged in Fishing Boats, or in Steam or other Trawl Boats.

SLAUGHTER HOUSES AND MEAT INSPECTION.—The two Public Abattoirs have been regularly inspected. During the year 249 visits were paid to these places and 306 to the meat markets. No private Slaughter Houses exist in the Borough and no cases of illegally slaughtering in unlicensed premises came to the knowledge of the Inspectors.

The Managers of the Abattoirs report to me that during the year the following animals were slaughtered:—

		CANTON ABATTOIR.		ROATH ABATTOIR.
Beasts	...	822	...	7,287
Sheep	...	6,536	...	39,035
Calves	...	475	...	3,700
Pigs	...	3,646	...	25,065
Total	...	<u>11,479</u>		<u>75,087</u>

The following is the amount and description of food seized and dealt with under the 116th Section of the Public Health Act:—

Beef	...	...	4,025 lbs.
Pork	...	...	328 lbs.
Mutton	...	...	100 lbs.
Veal	...	...	70 lbs.

INSPECTION OF FACTORIES AND WORKSHOPS.

UNDER THE FACTORY AND WORKSHOP ACTS, 1878-1891, 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. A special Inspector has been appointed under the Shop Hours Act; his duty consists in preventing the employment in shops of any young persons under 18 years of age for a period longer than 74 hours in any one week. A list of out-workers connected with workshops has been kept, and notices in the form prescribed by the Secretary of State have been served upon 10 Dressmakers, and upon 21 Tailors.

INSPECTION OF WORKSHOPS.

Nature of Workshop.	Number Inspected.
Tailors	173
Box Makers	1
Dressmakers	197
Hose Makers	1
Boot Makers	92
Bakers	361
Confectioners	1
Tin Workers	2
Electricians	2
Milliners	44
Flour Packers	3
Butchers' Tailors	6
Coach Builders	7
Toy Manufacturers	1
Plumbers	17
Beer Bottling Stores	1
Carpenters	15
India Rubber Merchants	2
Smiths	10
Tinkers	1
Fire Wood Merchants	6
Brush Makers	5
Pianoforte Manufacturers	5
Painters	5
Printers	3
Wheelwrights	2
Upholsterers	17
Paper Bag Makers	7
Oil Skin Makers	3
Saddlers	3
Electro-plate Manufacturers	1
Tent Cover Makers	1
Bedding Manufacturers	5
Coopers	3
Wire Workers	4
Watch Makers	3
Plaster Moulders	1
Cigarette Makers	4
Cabinet Makers	7
Dye Packers	1
Butchers	1
Cap Makers	3
Total	1,027

WORKSHOPS.

Nuisance Abated.	Tailors.	Bake-houses.	Flour Packers.	Milliners.	Firewood Merchants	Carrriage Builders.	Dress Makers.	Photographers.	Brush Makers.	Boot Makers.	Upholstevers.	Confec-tioners.	TOTAL.
Water closets cleansed and repaired	3	8	...	...	...	1	1	...	1	...	...	...	9
Water closets supplied with water ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Drains trapped and repaired ... ..	...	8	...	...	...	...	4	1	...	1	...	...	9
Ventilation Provided ... ..	...	...	1	...	...	...	...	...	...	...	...	...	1
Lime washed	1	15	...	1	1	...	4	...	3	5	8	2	35
Repaired ... ..	...	6	...	...	...	...	1	...	...	8	...	...	10
Overcrowded ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Closed ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
W.C. accommodation provided ... ..	...	...	...	...	1	...	...	...	...	...	1	...	2
Total	4	27	1	1	2	1	10	1	4	9	4	2	66

SHOP HOURS ACT.

NATURE OF SHOPS INSPECTED.	Number of Inspections.	Number of Shops in which young persons are employed.	Infringements of Act.	Proceedings taken. Result.
Drapers ...	287	239	...	...
Butchers ...	217	190	1	Cautioned
Grocers ...	483	435	...	...
Hairdressers ...	237	213	1	5/- and Costs.
Chemists ...	123	118	...	...
Boot and Shoe Shops	144	129	...	...
Restaurants ...	89	74	...	...
Ship Chandlers ...	31	30	...	...
Clothiers ...	175	163	...	...
Stationers ...	86	84	...	...
Hatters ...	37	34	...	...
Ironmongers ...	81	79	...	...
Jewellers ...	7	6	...	...
Furniture Shops ...	14	13	...	...
Toy Shops ...	76	75	...	...
Leather Dealers ...	1	4	...	...
Public Houses ...	18	14	...	...
Confectioners ...	33	24	...	...
Tobacconists ...	51	42	2	2 to pay Cost of Court
Mantle Shops ...	19	18	...	...
Fruiterers ...	41	35	...	...
Tea Shops ...	19	16	...	...
Carvers and Gilders ...	34	30	...	...
Fishmongers ...	45	43	...	...
Pawnbrokers ...	38	35	...	...
India Rubber Stores ...	9	8	...	...
Wine Merchants ...	1	1	...	...
Potato Stores ...	2	1	...	...
Hosiers ...	19	17	...	...
China Dealers ...	2	2	...	...
Hotels ...	33	25	...	...
Wholesale Stores ...	18	16	...	...
Umbrella Makers ...	1	1	...	...
Total ...	2471	2214	4	4

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	374	367	7	1=£5 and costs 2=£4 " " 1=£2 " " 1=10/- " " 1=5/- " " 1=Dismissed
Mustard	6	3	3	1=Case withdrawn. 2=No case
Butter	103	102	1	1=2/6 and costs
Coffee	36	35	1	Dismissed
Flour	22	22	...	
Bread	4	4	...	
Malt Vinegar	12	11	1	Dismissed
Cream of Tartar	12	12	...	
Margarine	8	8	...	
Pepper	12	12	...	
Tea	12	12	...	
				Exposing Margarine for sale without being properly marked
				1=£10 and costs 1=£2 " " 3=20/- " " 2=5/- " "
Total	601	588	13	

MAGISTERIAL PROCEEDINGS.

	No. of Cases.	Fines.		
		£	s.	d.
Proceedings under Sale of Food and Drugs Act	17	31	7	6
Proceedings under Section 126, Public Health Act, 1875	1	2	0	0
Proceedings under Shop Hours Act, 1892	4	0	5	0
Non-compliance with Notices	9			

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.

COWSHEDS AND MILKSHOPS :

Number of cowkeepers on register	...	...	...	...	...	67
„ milksellers	„	„	„	„	„	515
					Total	582
Number of cowkeepers registered during the year	...	...	...	...	...	5
„ milksellers	„	„	„	„	„	112
					Total	117
Number of cowsheds inspected	...	...	...	...	...	533
„ milkshops	„	„	„	„	„	841
„ re-visits	„	„	„	„	„	244
					Total	1,618
Notices served, written	...	...	...	...	...	244

COWSHEDS, MILKSHOPS AND DAIRIES.

PARTICULARS OF INSPECTION.	COWSHEDS, MILKSHOPS AND DAIRIES.	
	COWSHEDS.	MILKSHOPS.
Total number inspected	533	841
Found in good condition	439	757
Impure water supply	1	...
Water Closets, Sinks, or Drains Defective	15	43
„ „ communicating with premises	...	...
Receptacles for manure erected	5	5
Cesspools	1	1
Yards badly paved and accumulations of rubbish	20	36
Dairies or milkshops used for purposes incompatible with proper preservation of milk	...	...
Dirty milk vessels	...	1
Infectious disease amongst persons employed	...	3
Swine kept on premises	...	...
Cowsheds with defective lighting, cleansing and ventilation or air space	62	...
„ „ cattle disease	...	...

CANAL BOATS.

Number of boats on register	...	...	...	...	48
„ „ inspected	...	...	...	...	137
„ „ found in good condition	...	...	...	...	127
„ „ with wrong register number	...	...	...	...	3
„ „ „ „ defective ventilation	...	...	...	...	6
„ „ „ „ change of Masters	...	...	...	...	5
Number of notices served and complied with	...	...	...	...	9

Meteorological Observations for the Year 1895.

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.	Wet Bulb.	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.	Zymotic Diseases.		
								1 foot.	4 feet.											
January	48	30.140	49°-0	12°-5	39°-1	27°-9	38°-5	41°-4	46°-8	38°-5	32°-9	96	3°-88	0°-71	19th	20	14.4	0.92		
February	45	30.480	46°-8	11°-0	35°-6	28°-0	29°-8	37°-0	42°-0	29°-1	27°-8	72	0°-17	0°-08	24th	4	22.2	1.02		
March	52	30.350	57°-8	28°-0	49°-3	33°-9	41°-6	46°-2	45°-0	41°-7	40°-0	87	3°-92	0°-85	27th	21	30.8	1.08		
April	55	30.650	61°-2	26°-2	55°-0	40°-9	47°-9	52°-0	49°-0	48°-2	45°-2	79	0°-208	0°-55	24th	12	16.4	1.61		
May	60	30.592	82°-0	31°-0	66°-7	42°-2	54°-4	59°-5	54°-0	58°-0	52°-5	69	0°-50	0°-41	31st	8	19.7	1.23		
June	65	30.400	84°-0	34°-4	70°-7	46°-3	58°-5	65°-2	58°-2	63°-7	57°-7	67	1°-15	0°-32	30th	9	15.4	2.23		
July	65	30.032	79°-2	41°-2	68°-1	50°-9	60°-0	68°-2	59°-0	62°-5	57°-8	74	4°-71	0°-94	23rd	15	14.4	3.00		
August	64	30.272	78°-2	38°-0	67°-3	50°-7	59°-0	68°-8	60°-2	62°-3	59°-2	82	4°-08	1°-19	12th	17	21.5	4.39		
September	66	30.900	82°-0	62°-5	71°-3	48°-1	59°-7	64°-0	69°-8	61°-8	58°-2	79	1°-17	0°-40	6th	10	17.1	3.23		
October	25	30.470	67°-2	22°-0	55°-0	38°-4	46°-7	57°-5	59°-0	46°-9	45°-1	87	4°-96	0°-94	3rd	15	17.4	2.02		
November	56	30.280	62°-0	28°-0	52°-4	42°-1	47°-2	50°-2	51°-2	47°-2	45°-0	85	4°-21	0°-60	5th	23	21.5	2.00		
December	52	30.184	58°-6	25°-8	45°-4	34°-6	40°-0	48°-8	49°-8	39°-8	38°-0	86	3°-45	0°-48	17th	31	13.9	1.33		

175.9 519.0
 503 209
 257 2
 46.1

130

Mean Temperature of each month in the year, as compared with that of the previous five years.

MONTH.	1890	1891	1892	1893	1894	MEAN OF 6 YEARS.	1895
January	41°8	35°8	36°2	36°8	39°4	38°0	38°5
February	38°1	41°6	38°6	42°2	43°0	40°7	29°3
March	45°1	40°8	35°9	47°1	44°4	42°6	41°6
April	45°1	45°5	43°2	53°0	47°0	46°7	47°9
May	54°7	50°9	50°7	57°3	49°7	52°6	54°4
June	57°7	60°2	54°5	62°4	57°1	58°3	58°5
July	59°7	60°2	64°1	63°6	60°3	61°5	60°0
August	59°8	56°4	61°3	64°8	57°5	59°9	59°0
September	59°8	57°0	56°0	57°1	53°2	56°6	59°7
October	47°5	48°8	42°9	51°0	50°3	43°1	46°7
November	45°3	41°7	43°8	43°2	47°2	44°2	47°2
December	35°3	40°4	35°8	42°1	41°8	39°0	40°0

The following Table illustrates the daily direction of Wind throughout the year 1895.

Direction of Wind.	Jan.	Feb.	Mar.	Apr.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year 1895.
N.	...	1	1	...	...	...	...	...	...	...	1	1	4
N.E.	8	12	...	...	3	...	2	...	1	5	9	6	46
N.W.	6	2	2	6	2	2	...	1	...	4	2	2	29
N.N.E.	...	...	...	...	...	...	...	...	...	...	...	...	...
N.N.W.	...	...	...	...	...	...	...	...	...	...	...	...	...
S.	3	...	2	2	2	8	6	1	3	3	2	2	34
S.E.	7	8	5	7	12	14	1	9	14	2	5	...	84
S.W.	6	3	12	6	7	4	19	16	8	11	9	13	114
S.S.E.	...	...	...	...	...	...	...	...	...	...	...	...	...
S.S.W.	...	...	...	...	...	...	...	...	...	...	...	...	...
E.	...	1	...	4	4	1	1	1	4	3	2	5	26
W.	1	1	9	5	1	1	2	3	...	3	...	2	28

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY YEARS, 1876—1895.

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	5·83	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	0·86	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	0·82	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	0·82	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	1·85	17th	3·89	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	1·82	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	0·38	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	2·88	19	0·58	20th	1·18	6	0·48	16th
1893	2·88	19	0·94	12th	6·04	22	0·95	25th	0·81	6	0·14	2nd
1894	3·20	23	0·44	19th	3·68	20	0·78	17th	3·87	13	0·82	1st
1895	3·88	20	0·71	19th	0·17	4	0·08	24th	3·92	21	0·85	27th

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY YEARS, 1876—1895.

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	0.88	28th	0.28	4	0.12	24th	1.91	9	0.52	16th
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	2.88	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	18.1	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	18	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	6th	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	1.85	11	0.66	27th	1.98	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	8	0.41	31st	1.15	9	0.32	30th

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY YEARS, 1876-1895.

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	1.14	27th	3.25	8	1.39	27th
1878	2.01	9	0.78	23rd	10.82	24	3.64	15th	8.21	9	1.28	22nd
1879	4.00	21	0.81	19th	8.12	22	1.84	27th	4.85	17	0.69	7th
1880	6.64	23	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	13	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	0.62	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	1.88	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

TABLE SHEWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY YEARS 1876—1895.

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	3·97	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	3·33	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	0·90	4	0·33	18th	20·23
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	32·68
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

Chart showing death-rate per 1,000 of the population from Zymotic Diseases during the Years 1878—1895.

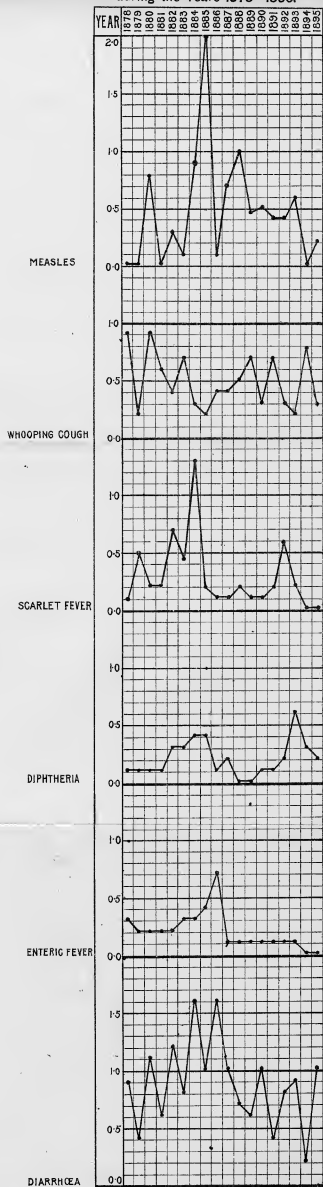


Chart showing the influence of temperature on the Diarrhoea death-rate in Cardiff, during the Summer quarters of the Years 1872—1895.

