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With the Medical Officer of Health's Compliments.

1899.

THIRD QUARTER.



COUNTY BOROUGH OF CARDIFF.

REPORT

To the Health and Port Sanitary Committee

BY THE

MEDICAL OFFICER OF HEALTH

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

Printed by Order of the Sanitary Authority.

CARDIFF:
TUDOR PRINTING WORKS.

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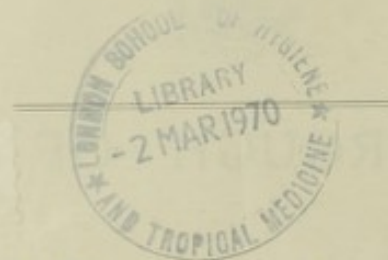
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COUNTY BOROUGH OF CARDIFF.



Health and Port Sanitary Committee.

Mayor:

ALDERMAN SIR THOMAS MOREL, J.P.

Chairman:

ALDERMAN T. WINDSOR JACOBS, J.P.

ALDERMAN P. W. CAREY, J.P.

„ J. RAMSDALE, J.P.

COUNCILLOR T. ANDREWS, J.P.

„ J. JENKINS, J.P.

„ W. H. ALLEN.

„ LEWIS MORGAN.

COUNCILLOR R. HUGHES, J.P.,
Deputy Chairman.

„ C. A. J. WARD.

„ W. S. CROSSMAN.

„ HY. WHITE.

„ J. MUNN.

„ H. CORY, J.P.

Cardiff Urban Sanitary Authority.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE THIRD QUARTER OF 1899.

TOWN HALL,

CARDIFF, *November, 1899.*

TO THE HEALTH AND PORT SANITARY COMMITTEE

GENTLEMEN,

The population of the County Borough of Cardiff, as enumerated at the Census in April, 1891, was 128,915, being an increase of 46,154, or 55 per cent., since the Census in 1881.

The population of the Borough, as estimated by the Registrar-General to the middle of the year 1899, is 185,826, and the rates given in this report have been calculated on this basis.

The number of births registered during the thirteen weeks, ending September 30th, 1899, was 1,315, of these 654 were males and 661 females. The births corresponded to an annual birth-rate of 28·4 per thousand of the population, compared with 29·8 the rate in the 33 large towns in England and Wales.

The following Table shows the distribution of Births in each Ward in the Borough, and the number of Deaths under one year of age :—

TABLE I.

WARDS	Legitimate.		Illegitimate.		Total.		TOTAL.	Deaths under One Year.
	M.	F.	M.	F.	M.	F.		
Central Ward ...	31	38	1	—	32	38	70	15
South „ ...	27	24	—	—	27	24	51	26
Cathays „ ...	80	77	—	3	80	80	160	51
Park „ ...	87	80	2	2	89	82	171	47
Adamsdown „ ...	47	60	1	—	48	60	108	26
Riverside „ ...	33	36	—	—	33	36	69	30
Canton „ ...	100	103	6	1	106	104	210	48
Roath „ ...	51	61	—	—	51	61	112	32
Grangetown „ ...	90	95	—	3	90	98	188	62
Splott „ ...	88	69	2	—	90	69	159	39
Union Workhouse ...	—	1	8	8	8	9	17	9
Total ...	634	644	20	17	654	661	1,315	385

The number of deaths registered during the quarter at all ages and from all causes was 857, of these 446 were males and 411 females.

The 857 deaths corresponded to an annual death-rate of 18·5 per 1,000 persons living, as compared with 21·9, the rate in the 33 large towns, and with 16·1 the average rate in the third quarters of the five preceding years.

The male death-rate was 18·8, and the female 18·0 per 1,000 of the sexual divisions of the population.

The following Table gives the deaths and death-rates at various age periods :—

TABLE II.

Age Periods.	Deaths.	Death-rate per 1,000.
Under one year	387	77·4
One and under five years	95	
Five and under fifteen years	26	2·5
Fifteen and under twenty-five years	45	4·8
Twenty-five and under sixty-five years	219	11·2
Sixty-five and upwards	85	72·6

The death rates in the large towns ranged from 15·6 in Croydon, 16·4 in Huddersfield, 17·1 in Halifax, 17·5 in Bristol, 18·5 in Cardiff, to 20·6 in London, 21·8 in Brighton, 22·4 in Portsmouth, 24·2 in Birmingham, 26·3 in Burnley, 27·6 in Manchester, and 29·9 in Liverpool.

The proportion of deaths under one year of age to registered births was equal to 293 per 1,000. In the 33 large towns the rate was equal to 303 per 1,000, as against 232, 278, and 275 in the corresponding quarters of the three preceding years. In London the rate was 279 per 1,000, while it averaged 318 in the 32 provincial towns, among which it ranged from 200 in Halifax, 234 in Swansea, 239 in Bristol, 241 in Huddersfield, and 245 in Sunderland, to 360 in Portsmouth, 361 in Nottingham, 374 in Salford, 390 in West Ham, 392 in Preston, and 507 in Burnley.

ZYMOTIC DISEASES.—The deaths from all causes included :—

29	...	...	...	attributed to Whooping Cough.
18	...	...	..	Diphtheria.
12	...	...	..	Enteric Fever.
150	...	...	..	Diarrhoea.

The 209 deaths ascribed to these diseases corresponded to an annual rate of 4·52 per 1,000 living, as compared with 3·18 the rate in the third quarter of the five preceding years, and with 5·61 the average rate in the 33 large towns.

TABLE III.

Analysis of Deaths in the Municipal Borough of Cardiff, in the Registration Sub-districts, and in each Ward in the Borough, during the Third Quarter of 1899.

Localities	* Population.	Births.	Deaths.	Principal Zymotic Diseases.										Other Diseases.										Rates per 1,000.			Deaths under one year per 1,000 Births Registered.						
				Small-Pox.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.	Fever (Typhus and Enteric).	Diarrhoea.	Other Zymotics.	Membranous Group.	Erysipelas.	Puerperal Fever.	Phthisis.	Diseases of Respiratory Organs.	Rheumatism.	Cancer.	Tubercular Meningitis.	Other forms of Tuberculosis.	Other Constitutional Diseases.	Disease of Heart.	Diseases of Nervous System.	Diseases of Digestive System.	Diseases of Parturition.	Anæmia.		Violence.	Other Causes.	Birth Rate.	Death Rate.	Zymotic Rate.	
Borough of Cardiff ..	185,826	1,315	857	..	..	29	18	..	12	150	16	2	5	1	48	75	3	15	7	28	5	..	42	42	161	2	..	28	168	28.4	18.5	4.52	292
West Cardiff	..	210	103	..	..	3	1	..	1	32	..	..	..	..	7	7	..	..	2	5	..	..	7	6	14	..	..	1	17	38.8	19.0	6.8	228
	..	18,857	69	66	..	..	..	..	3	13	..	..	..	..	..	3	8	..	..	..	..	..	2	5	10	1	..	..	18	14.6	14.0	3.6	434
	..	20,203	188	103	..	..	6	..	..	2	23	4	1	..	1	3	5	1	2	1	..	..	3	5	28	..	..	4	13	37.2	20.3	6.1	329
West Cardiff ..	60,678	467	272	..	..	9	2	..	6	68	4	1	..	1	13	20	1	4	3	6	..	..	12	16	52	1	..	5	48	30.7	17.9	5.6	299
Central Cardiff	..	51	48	..	..	6	1	..	..	4	2	..	1	..	2	3	..	1	..	1	..	..	1	1	13	..	..	2	10	17.3	16.3	3.7	509
	..	13,605	70	54	..	..	..	..	..	7	..	1	..	..	2	4	..	1	1	4	..	..	5	3	13	1	..	2	10	20.5	15.8	2.0	214
	..	18,637	160	92	..	..	2	2	..	1	21	2	..	2	3	4	..	..	2	4	1	..	7	5	21	..	..	..	15	34.3	19.7	5.5	318
..	13,573	108	76	..	..	1	..	..	..	9	1	..	..	..	5	12	1	2	..	3	1	..	6	4	9	..	..	5	17	31.8	22.3	2.9	240
Central Cardiff ..	57,589	389	270	..	..	9	3	..	1	41	5	1	3	..	12	23	1	4	3	12	2	..	19	13	56	1	..	9	52	27.0	18.7	3.7	303
East Cardiff	..	159	81	..	..	4	2	..	..	11	..	..	..	..	3	9	..	1	1	1	..	..	4	6	14	..	..	2	23	37.1	18.9	3.9	245
	..	14,875	112	62	..	..	2	1	..	1	12	2	..	1	4	7	..	..	..	7	1	..	1	2	12	..	..	1	8	30.1	16.6	4.3	285
	..	25,789	171	85	..	..	5	2	..	1	17	2	..	..	2	9	..	1	..	2	1	..	4	4	23	..	..	1	11	26.5	13.1	3.8	274
East Cardiff ..	57,779	442	228	..	..	11	5	..	2	40	4	..	1	..	9	25	..	2	1	10	2	..	9	12	49	..	..	4	42	30.6	15.7	4.0	266
Infectious Diseases Hospital	..	..	11	..	..	..	8	..	3	..	..	..	..	..	13	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Union Workhouse ..	..	17	54	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	1	1	3	..	..	2	22	..	..	..	529
Infirmary ..	..	..	22	..	..	..	..	..	..	..	..	..	..	..	1	..	1	5	..	..	..	..	1	..	1	..	..	8	4	..	..	..	..
Seamen's Hospital Ship ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

* The Population in the above Table is, in the case of the Registrar General as the estimate to the middle of the year 1899. The populations of the Registration Sub-districts and Wards are estimated on the basis of the number of the inhabited houses, allowing an average of 6.29 persons to each house.

During the quarter just ended 257 cases of infectious disease were reported to me by medical practitioners, under the provisions of the Infectious Disease Notification Act, on Forms supplied by the Sanitary Authority. A fee of 2/6 is paid for each case notified.

The following Table shows the distribution of infectious diseases in the Registration Sub-Districts and in each Ward of the Borough :—

TABLE IV.

[illegible]

PREVALENT SICKNESS.—On referring to Table III. it will be seen that the highest general death-rate (22·3) occurred in the Adamsdown Ward, and the lowest (13·1) in the Park Ward. The highest death-rate from Zymotic diseases (6·8) occurred in the Canton Ward, and the lowest (2·0) in the Central Ward.

WHOOPING COUGH.—Twenty-nine deaths were registered from Whooping Cough, giving an annual rate of 0·63 per 1,000 persons living, as compared with 0·21 the rate in the third quarter of 1898 and with 0·31 the average rate in the five preceding third quarters. Of the 29 deaths from this disease, 18 were amongst children under one year of age. In the 33 great towns the rate averaged 0·31 per 1,000; in London the death-rate from Whooping Cough was equal to 0·26 per 1,000, while it averaged 0·34 in the 32 provincial towns, among which this disease showed the highest proportional fatality in Portsmouth, Cardiff, Leicester, Liverpool, Burnley, Huddersfield and Leeds.

DIPHTHERIA.—Eighteen deaths were registered from Diphtheria as compared with 6 during the previous quarter. The deaths were equal to an annual death-rate of 0·39 per 1,000, as compared with 0·35, the average rate during the five preceding third quarters. The number of cases of Diphtheria notified amounted to 132, as compared with 108 during the previous quarter. The case mortality, or proportion of deaths to cases notified, was 13·6 per cent. The death-rate in the 33 large towns averaged 0·36 per 1,000; in London the death-rate from this disease was equal to 0·39 per 1,000, while it averaged 0·34 in the 32 provincial towns, among which Diphtheria was proportionally most fatal in West Ham, Swansea, Leicester, Preston, Leeds, and Sheffield.

ENTERIC FEVER.—Twelve deaths were registered from Enteric or Typhoid Fever, corresponding to an annual death-rate of 0·26 per 1,000, as compared with 0·15, the rate in the third quarter of 1898, and with 0·08, the average rate in the five preceding third quarters. Forty-five cases of Typhoid Fever were notified during the quarter, and in each case the sanitary surroundings of the infected premises were inspected. Ten of these cases had their origin outside the borough. Seventeen houses in which the disease occurred were found to have defective sanitary arrangements. These were remedied without delay. In the 33 large towns the "Fever" death-rate averaged 0·21 per 1,000; in London the "Fever" death-rate was 0·16 per 1,000, while it averaged 0·25 per 1,000 in the 32 provincial towns, and was highest in Portsmouth, Birkenhead, Salford, Sheffield, and Sunderland.

SCARLET FEVER.—There were no deaths from Scarlet Fever during the quarter. The number of cases of Scarlet Fever notified to the Sanitary Authority during the quarter amounted to 42, as compared with 31 during the previous quarter. Twenty-seven cases, or 64·2 per cent. were removed to the Sanatorium. In the 33 large towns the Scarlet Fever death-rate averaged 0·13 per 1,000; in London the rate was 0·08 per 1,000, while it averaged 0·16 in the 32 provincial towns, amongst which this disease was proportionally most fatal in Liverpool, Oldham, Burnley, Halifax, Bradford, and Sheffield.

DIARRHŒA.—One hundred and fifty deaths were registered during the third quarter of the year. Of these 123 occurred amongst children under one year of age. The deaths from Diarrhœa corresponded to an annual death-rate of 3·24 per 1,000, as compared with 2·15, the average rate in the five preceding third quarters. In the 33 great towns the rate averaged 4·16; in London the Diarrhœa death-rate was equal to 3·22 per 1,000, while it averaged 4·78 in the 32 provincial towns, among which this disease showed the highest proportional fatality in Portsmouth, Liverpool, Manchester, Salford, and Preston. The appended table will show the distribution of infantile diarrhœa in the various wards at three age periods. From this it will be seen that the proportion of deaths at certain ages to the total deaths from Diarrhœa under one year of age was as follows :—

Under 3 months	...	...	...	26·0 per cent.
3—6 „	...	...	...	33·3 „
6—12 „	...	...	...	40·6 „

From the above it is clear that amongst infants the greatest fatality from Diarrhœa occurs between the ages of six and twelve months. Dr. Hope, the Medical Officer of Health for Liverpool, after careful inquiries, came to the conclusion that 50 per cent. of infants under 3 months of age are fed upon breast milk alone; that at ages from 3 to 6 months about 20 per cent. are so fed, and that from 6 to 12 months of age artificial foods are almost universally given. There can be no doubt, therefore, of the influence of artificial food upon diarrhœal mortality.

The Meteorological Table shows generally that the fatality from Diarrhœa is also much influenced by the temperature and rainfall during the third quarter of the year, and that a cool and wet summer results in a low rate of mortality.

The table shows that during the third quarters of the 10 years ending 1899, the highest death-rate from Diarrhœa occurred in the third quarter of the present year, and that this rate corresponded with the highest mean temperature and lowest rainfall. The conditions were, therefore, favourable to the growth of micro-organisms and to the more rapid decomposition of the artificial foods upon which many infants are very injudiciously fed. It has been noticed also that even very heavy and prolonged showers of rain are followed by a lessened prevalence of Diarrhœa.

It is desirable in times of drought to supplement the scanty rainfall by a plentiful supply of water to the streets, and by a thoroughly efficient cleansing and scavenging of public highways to remove all accumulation of offensive matter. Much might be done by a system of domiciliary visits undertaken with the view of instructing parents upon the best methods of feeding infants. In some large towns this work is undertaken voluntarily by Health Missioners or by Nursing Associations, and in other towns by a staff of trained Female Inspectors. In this way the dangers of improper feeding are brought home to mothers, and they are given practical demonstration upon many points connected with the care of infants, particularly in the methods of rendering cows' milk sterile or free from injurious organisms.

The following table gives the death-rate from Diarrhœa, the Mean Temperature, and the Rainfall during the third quarters of the years 1890—1899 :—

Third Quarters. Year.	Diarrhœal Death Rate.	Mean Temperature.	Rainfall.
1890	2·9	59·7	9·09 inches
1891	0·8	57·8	11·83 „
1892	2·3	60·4	12·42 „
1893	2·5	61·8	8·96 „
1894	0·5	57·0	10·99 „
1895	2·5	59·5	9·96 „
1896	2·4	58·9	11·37 „
1897	2·6	59·3	14·30 „
1898	2·6	60·3	5·82 „
1899	3·2	63·3	5·37 „

DIARRHŒA DEATHS UNDER ONE YEAR IN THREE AGE PERIODS.

WARDS.	Under 3 Months.	3—6 Months.	6—12 Months.	TOTAL.
Central	1	3	1	5
South	1	—	2	3
Cathays	6	6	7	19
Park	4	7	6	17
Adamsdown	1	2	2	5
Riverside	4	4	1	9
Canton	6	12	8	26
Roath	2	2	5	9
Grangetown	3	3	14	20
Sploitt	4	2	4	10
Total	32	41	50	123

CARDIFF SANATORIUM.

The following Table gives the number of Patients admitted into the Hospital during the quarter, and the result in each case.

This shows that 133 patients were admitted, as compared with 72 during the previous quarter. Of these 27 suffered from Scarlet Fever, 83 from Diphtheria and 23 from Typhoid Fever.

Report of the Resident Medical Superintendent of the Cardiff Sanatorium for the Third Quarter of 1899.

AGES.	SCARLET FEVER.					TYPHOID FEVER.					DIPHTHERIA.								
	Patients in Hospital, 1st July, 1899.	Admitted.	Recovered.	Died.	Mortality per cent. of Admissions. Remaining in Hospital, 20th Sept., 1899.	Patients in Hospital, 1st July, 1899.	Admitted.	Recovered.	Died.	Mortality per cent. of Admissions.	Remaining in Hospital, 20th Sept., 1899.	Patients in Hospital, 1st July, 1899.	Admitted.	Recovered.	Died.	Mortality per cent. of Admissions. Remaining in Hospital, 20th Sept., 1899.			
0 — 5	8	10	12	...	...	6	...	...	...	...	...	2	17	12	3	...	4	
5 — 15	8	12	10	...	...	10	...	3	1	1	...	1	10	46	37	3	..	16
15 — 25	...	2	1	...	...	1	1	2	5	1	...	7	1	18	14	...	...	5
25 — 35	1	3	1	...	...	3	...	5	1	...	...	4	1	1	2	...	...	...
35 — 45	...	...	...	...	...	...	...	3	1	1	...	1	...	1	...	...	...	1
45 — 55	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
55 — 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
65 Upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	...	17	27	24	...	nil.	20	1	23	8	3	13	13	15	83	66	6	7·2	26

Total number admitted ... 133

Total patients in Hospital on 30th September, 1899 ... 59

B. W. BROAD, M.B.

SUMMARY OF WORK DONE BY THE OFFICERS OF THE HEALTH DEPARTMENT DURING THE THIRD QUARTER, 1899.

The systematic house to house inspection of the district has been carried on as usual.

The following table shows the results of the inspection made during the quarter by Inspectors Warren, Fisher, Evans, Glover, and Holden.

Report of Mr. Vaughan, Chief Inspector of Nuisances.

HOUSE INSPECTION DURING THE THIRD QUARTER, 1899.

NAME OF WARD.	No. of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.'s.	Defective Traps.	Number of W.C.'s.	Inside W.C.'s. not Ventilated.	Outside W.C.'s. not ventilated.	Outside W.C.'s. not supplied with water.	Dampness of Premises.	Other Nuisances.
Roath	154	3	8	4	...	155	...	154	153	7	7
Central	233	7	11	5	1	209	...	205	181	...	30
Grangetown	115	3	1	7	...	113	...	109	81	6	22
South	61	...	2	4	2	47	...	46	44	...	19
Adamsdown	250	...	3	...	6	259	...	249	243	57	...
Riverside	32	1	10	18	...	32	...	32	30	...	...
Park	98	11	1	8	...	100	...	98	73	16	13
Canton	124	12	...	21	28	124	...	124	120	7	15
Cathays	111	13	...	7	15	177	1	82	55	...	10

SHOP HOURS ACT, 1892-95.

NATURE OF SHOPS INSPECTED.				Number of Inspections.	Number of Shops in which young persons are employed.	Infringe- ments of Act.	Proceedings Taken. RESULT.
Chemist	...	...	...	14	12	...	...
Public House	...	...	...	15	6	...	...
Fruiterer	...	...	...	40	21	...	...
Boot Shop	...	...	...	19	14	...	...
Outfitter	...	...	...	25	17	...	...
Stationer	...	...	...	7	6	...	...
Grocer	...	...	...	86	51	...	...
Confectioner	...	...	...	39	8	...	...
Ironmonger	...	...	...	12	8	...	...
Jeweller	...	...	...	3	3	...	...
Wine Stores	...	...	...	2	2	...	...
Fancy Dealer	...	...	...	5	3	...	...
Beer Dealer	...	...	...	1	...	...	...
Tobacconist	...	...	...	6	2	...	...
Restaurant	...	...	...	1	...	...	...
Decorator	...	...	...	1	...	...	...
Furniture Dealer	...	...	...	4	1	...	...
Fishmonger	...	...	...	1	...	...	...
Tea Merchant	...	...	...	2	2	...	...
General Dealer	...	...	...	2	...	...	...
Dyers' Receivers...	...	...	...	2	2	...	...
Draper	...	...	...	25	16	...	...
Dairy Produce	...	...	...	2	2	...	...
Hairdresser	...	...	...	29	16	...	...
Newsagent	...	...	...	24	19	...	...
Cycle Dépôt	...	...	...	5	3	...	...
Butcher	...	...	...	56	24	...	...
Corn Stores	...	...	...	1	...	...	...
Picture Dealer	...	...	...	1	...	...	...
Hosier	...	...	...	2	2	...	...
China Dealer	...	...	...	4	2	...	...
Umbrella Dealer...	...	...	...	1	...	...	...
Total	...	...	...	437	242	...	...

INSPECTION OF WORKSHOPS.

Nature of Workshops Inspected.			Number Inspected.	
Tailors	...	...	123	
Bakers	...	...	106	
Bedding Manufacturers	...	...	1	
Herbalists	...	...	1	
Coachbuilders	...	...	5	
Blacksmiths	...	...	6	
Milliners	...	...	12	
Dressmakers	...	...	99	
Bootmakers	...	...	53	
Bottling Stores	...	...	8	

INSPECTION OF WORKSHOPS.

Nature of Workshop Inspected.	Number Inspected.
Cabinet Makers	5
Printers	5
Plumbers	6
Saddlers	3
Waterproof Manufacturers	2
Plaster Moulders	2
Basket Makers	2
Paper Bag Makers	3
Carpenters and Joiners	20
Laundries	7
Cycle Manufacturers	7
Sugar Boilers	9
Jewellers	5
Furrier	1
Electro-Platers	3
Tinsmiths	3
Blue Factory	5
Umbrella Makers	2
Picture Frame Makers	7
Bookbinders	2
Wheelwrights	3
Chemists' Packers	7
Pianoforte Manufacturers	1
Total	524

WORKSHOPS.

NATURE OF NUISANCE ABATED.	Baker.	Chemists' Packer.	Milliner.	Book-Maker.	Tailor.	Dressmaker.	Sugar Boiler.	Tin Workers.	Picture Frame Maker.	Smiths.	Carpenter.	Carriage Builders.	Plumber.	Blue Factory.
Manure Pit provided	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Limewashed	12	1	...	2	1	...	...	...	...	...	...	...	...	...
Defective Trough ... ..	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Flushing Apparatus provided	1	...	...	...	...	2	1	...	...	...	1	...	...	...
Choked Drains ... ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Defective Shutes ... ..	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Overcrowding ... ..	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Insufficient Ventilation	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Defective Flushing Apparatus	...	...	...	1	...	...	...	...	...	...	...	...	2	1
Defective Plastering ... ..	...	...	...	...	...	2	...	...	...	...	...	...	...	...
Dirty W.C. Pans	1	...	...	1	...	...	...	...	...	...	...	...	...	...
W.C. Accommodation provided	...	...	...	...	1	...	1	...	...	...	...	...	...	...
W.C. Pan Broken ... ..	...	...	...	...	...	1	...	...	...	1	...	1	...	...
No Water Supply ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No Down Pipe to Shutes ... ..	...	...	...	...	1	...	...	1	...	...	...	...	...	...
Accumulation of Manure	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	19	1	1	5	4	5	2	1	1	1	1	1	2	1

Notices of New Workshops from Inspector of Factories under Factory Act, 1891, Sec. 26, Sub. 2, Factory Act, 1895, Sec. 41 = 7.

Notices from Inspector *re* Sanitary Defects in Workshops, Sec. 4, Factory and Workshops' Act, 1878 = 1.

Notices sent by Sanitary Authority to Inspector of Factories under Sec. 3, Factory and Workshop Act, 1891 = 25.

Notices sent by Sanitary Authority to Inspector of Factories *re* Over-working = 1.

INSPECTION OF SLAUGHTER HOUSES AND MARKETS.

Mr. Moir, M.R.C.V.S., your Inspector of Meat, reports to me that he has made daily inspection of the Public Abattoirs at Roath and Canton.

The following is the result of his inspections:—

		Canton Abattoir.		Roath Abattoir.
Beasts slaughtered	...	81	...	907
Sheep	..	1,780	...	15,016
Calves	..	45	...	688
Pigs	..	714	...	6,134
		<u>2,620</u>	...	<u>22,745</u>

The following is the amount and description of food seized and dealt with under the 116—119 Sections of the Public Health Act:—

Beef	... 2,100 lbs.	|	Pork	... 790 lbs.
Fruit	... 2,240 lbs.	|		

The nature of the diseases of the animals destroyed was in each case as follows:—

Tuberculosis	...	...	3 Cows.
Ditto	...	...	1 Pig.
Acute Enteritis	...	...	2 Pigs.
Suspicious Swine Fever	...	...	1 Pig.
Found dead in pen	...	...	2 Pigs.
Swine Fever	...	...	2 Pigs.

INSPECTION OF SEAMEN'S LODGING HOUSES.

Since the Bye-Laws came into force in January, 1897, 280 persons have applied to the Council for licenses, of these applications 42 were refused, and in the remainder the licenses were granted.

The following table gives a detailed account of the work done in connection with these Bye-laws since they came into operation.

Total number of applications	...	...	...	280
" " persons licensed	...	...	...	119
" " houses, the occupiers of which have been licensed	...	...	...	121
Maximum number of lodgers authorised to be received in the above				1286

Quarter ending September 30th, 1899.

Number of day inspections	671
„ night inspections	101
Number of houses in which sanitary improvements have been effected	31

Nature of Sanitary Defects—

Defective Water Closets	26
Insufficient w.c. accommodation	3
Defective drains	21
Defective paving in yards	17
Defective bedroom ventilation	30
Stables without manure pits	—
Houses with walls and roofs out of repair	19
Soil pipes unventilated	1
Houses not limewashed	68
Infectious diseases discovered	1

COMMON LODGING HOUSES.

Inspection of Common Lodging Houses.				Number.
Total number on register	...	...	...	37
Registered rooms	...	...	...	147
Number of persons certified to accommodate	...	...	...	471
Day inspections	...	...	...	184
Night inspections	...	...	...	45
W.Cs. cleansed and repaired	...	...	...	14
„ supplied with water	...	...	...	—
Additional W.C. accommodation provided	...	...	...	—
Drains trapped and repaired	...	...	...	11
Soil pipes ventilated	...	...	...	—
Special ventilation provided to rooms	...	...	...	16
Lime-washed	...	...	...	42
Repaired	...	...	...	12
Overcrowded	...	...	...	—
Yards paved	...	...	...	5
Accumulations removed	...	...	...	19
Infectious diseases discovered	...	...	...	—
Registered	...	...	...	—
Legal proceedings taken	...	...	...	—

NUISANCES.

Nuisances inspected	...	...	...	...	1123
Notices issued	...	...	...	...	993
Nuisances abated without legal proceedings	...	...	...	...	993
" " with "	...	...	...	...	—
Animals kept so as to be a nuisance	...	...	...	...	38
Injurious and foul accumulations	...	...	...	...	167
Nuisances from smoke	...	...	...	...	2
Cesspools and Privies cleansed	...	...	...	...	—
" abolished	...	...	...	...	—
Defective drainage	...	...	...	...	238
Drains unstopped and cleansed	...	...	...	...	143
" trapped and repaired	...	...	...	...	67
" tested	...	...	...	...	169
" found defective	...	...	...	...	104
Foul and offensive W.Cs. cleansed	...	...	...	...	78
Defective apparatus to water closets repaired	...	...	...	...	17
Water laid on to water closets	...	...	...	...	1
" " urinals	...	...	...	...	—
" " dwelling houses	...	...	...	...	8
Offensive W.Cs. abolished	...	...	...	...	—
Over-crowding notices	...	...	...	...	—
Dilapidated houses repaired	...	...	...	...	177
Dirty houses and workshops cleansed and lime-washed	...	...	...	...	36
Stagnant water under floor of house	...	...	...	...	5
Additional W.C. accommodation provided	...	...	...	...	2

DISINFECTION.

Houses disinfected	...	...	...	...	160
Articles of bedding and clothing disinfected	...	...	...	...	2,959
" " " destroyed	...	...	...	...	19

OFFENSIVE TRADES.

Premises visited	167
------------------	-----	-----	-----	-----	-----

SLAUGHTER HOUSES AND MARKETS.

Visits paid to slaughter houses	...	...	...	...	74
" " markets	...	...	...	...	98
Articles destroyed unfit for food—Beef 2,100 lbs., Fruit 2,240 lbs., Pork 790 lbs.	...	...	...	...	250

COWSHEDS AND MILKSHOPS.

Number of Cowkeepers on register	...	...	...	...	37
" Milksellers	...	...	...	...	594
Total					631
Number of Cowkeepers registered during the quarter	...	...	...	...	—
" Milksellers	...	...	...	...	23
Total					23
Number of Visits paid to cowsheds	...	...	...	...	65
" " " milkshops	...	...	...	...	131
Notices served	...	...	...	...	7
Total					203

PARTICULARS OF INSPECTION.						COWSHEDS.	MILKSHOPS.
Total number inspected	...	...	...	...	...	65	131
Found in good condition	...	...	...	...	...	65	124
Impure water supply	...	...	...	...	...	...	...
Water closets, sinks, or drains defective	...	...	...	...	...	...	2
„ „ communicating with premises...	...	...	...	...	...	...	...
Receptacles for manure erected	...	...	...	...	...	...	...
Cesspools constructed	...	...	...	...	...	...	...
Yards badly paved and accumulations of manure	...	...	...	...	...	...	5
Dairies or milkshops used for purposes incompatible with proper preservation of milk	...	...	...	...	...	...	...
Dirty milk vessels	...	...	...	...	...	...	...
Infectious disease amongst persons employed...	...	...	...	...	...	...	...
Swine kept on premises	...	...	...	...	...	...	...
Cowsheds overcrowded	...	...	...	...	...	...	...
Cowsheds with defective lighting, cleansing, ventilation, and limewashing	...	...	...	...	...	...	...

FOOD AND DRUGS analysed by Mr. T. Hughes, F.I.C., F.C.S., Borough Analyst.

Samples obtained.		Number of Samples.	Number of Genuine Samples.	Number of Samples Adulterated.	Fines.
Milk	...	102	101	1	10/- and costs.
Butter	...	12	12	—	
Bread	...	6	6	—	
Tea	...	6	6	—	
Sugar	...	6	6	—	
Sausage	...	6	6	—	
Flour	...	6	6	—	
Total	...	144	143	1	

CANAL BOATS.

Number of boats on register	...	...	...	...	47
„ inspections	...	...	...	...	23
„ boats found in good condition	...	...	...	...	17
„ „ with wrong register numbers	...	...	...	...	1
„ „ registered	...	...	...	...	—
„ „ ventilators defective	...	...	...	...	4
Certificates cancelled	...	...	...	...	—
Water vessels defective	...	...	...	...	1
Notices served and complied with	...	...	...	...	6

CARDIFF PORT SANITARY AUTHORITY.

INFECTIOUS DISEASES.

During the quarter the following cases of infectious disease have been dealt with by the Medical Officer of Health, as follows :—

ENTERIC FEVER.—On September 16th a case of enteric fever was notified from the "Hamadryad" Hospital Ship. The patient was a fireman on board the s.s. "Centurion," from Rotterdam, lying in Barry Dock. The infected vessel and effects were disinfected by the officers of the Barry Port Sanitary Authority, and the patient was removed to the Cardiff Sanatorium.

On September 18th a case of enteric fever was notified from the "Hamadryad" Hospital Ship. The patient was an ordinary seaman on board the "Orient," from Hernosand, lying in Barry Dock.

On September 21st a case of enteric fever was notified from the "Hamadryad" Hospital Ship, which had been sent into the hospital from the barque "Orient" now lying in the Penarth Dock. The patient, a seaman, was subsequently removed to the Cardiff Sanatorium.

On September 23rd another case of enteric fever was notified and taken from the "Orient," now lying in the Penarth Dock. The patient, a seaman, was at once removed to the Cardiff Sanatorium.

On September 30th a fourth case of enteric fever was notified on the "Orient," a seaman, who was also removed to the Sanatorium. The vessel and effects were thoroughly disinfected by the officers of your Sanitary Authority, the water tanks were emptied and cleansed, and a fresh supply of Cardiff water taken on board. No fresh cases occurred up to the date of sailing.

PLAGUE.—On the 16th August the Local Government Board sent an intimation to this Port Sanitary Authority that they had received information of an epidemic of Plague at Oporto, and that since July 4th up to the 12th August there had been 25 cases and 4 deaths. The Board advised that special attention should be given to vessels coming from that port. In accordance with this advice, and in consultation with the Chairman of the Health Committee, I directed that the Port Inspectors should attend the tides inspecting vessels from Portuguese ports as they arrived at the Customs Boarding Station, in conjunction with the Customs officers.

On the 23rd August Dr. Richard Reece, one of the Medical Inspectors of the Local Government Board, visited this port and conferred with the Chairman of the Committee, the Deputy Town Clerk, and the Medical Officer of Health, with respect to the precautions against Plague in this port.

Dr. Reece visited the hospital of the Port Sanitary Authority on the Flat Holm Island and inspected all the arrangements made by your Authority, and at the same time visited the Cardiff Sanatorium, into which infectious cases from the port are received, and expressed himself well pleased with everything done.

At the next meeting of the Health and Port Sanitary Committee it was resolved that the Chairman of this Committee and the Medical Officer of Health be authorised, and empowered, to take any further precautions they may consider necessary (including the temporary engagement of extra Inspectors) to prevent the introduction of the Plague into the town and port.

During the quarter the following vessels entered the port from Oporto and were dealt with in accordance with the Local Government Board Regulations of November, 1896, relating to Cholera, Yellow Fever, and Plague :—

August 26th. The schooner "Britannia" sailed from Oporto on the 11th August and arrived in this port on the 26th. All persons on board were examined by the Medical Officer of Health and found well. There had been no illness on board during the voyage or stay in port. None of the crew left the vessel.

August 29th. The barque "Nova Sympathia" sailed from Oporto on August 19th and arrived in this port on the 29th. All persons on board were examined by the Medical Officer of Health and found free from Plague. There had been no infectious illness on board during the voyage or stay in port. None of the crew left the vessel.

September 21st. The s.s. "Bremen" sailed from Oporto on September 16th and arrived in this port on the 21st. All persons on board were examined by the Medical Officer of Health and found well. There had been no illness on board during the voyage or stay in port. None of the crew left the vessel.

The following table gives the number of vessels boarded during the Quarter ending September 30th, 1899, by the Medical Officer of Health and Inspectors, on account of disease on board during the voyage or at the time of arrival in the District of the Car iff Port Sanitary Authority:—

TABLE I.

DATE 1899.	TIME.	NAME OF SHIP.	NATION- ALITY.	WHERE FROM.	NATURE OF SICKNESS.	REMARKS.
August 9	11.0 a.m.	Nor	Norwegian	Havre	Diarrhoea	On arrival the Master reported that all the members of the crew had suffered more or less from Diarrhoea on the passage from Havre to Cardiff, which was attributed to the drinking water obtained at that port. Water tanks emptied and cleansed, and a fresh supply taken at this port.
„ 17	11.30 a.m.	s.s. Milton	British	Philadelphia <i>via</i> Copenhagen	Typhoid Fever	The Master reported that H. Holland, A.B., aged 35 years, was taken ill August 1st, on the passage from Philadelphia, and on arrival at Copenhagen on August 4th, he was removed to Hospital suffering from Typhoid Fever. Water tanks emptied and fresh supply taken at Copenhagen, and fore-castle disinfected at this port.
„ 19	6 p.m.	s.s. Gladiolus	British	Vera Cruz, New Orleans and Cadiz, <i>via</i> Lisbon	Yellow Fever	On boarding this vessel on arrival the Master reported that W. H. Sanders (late Master), aged 39 years, was taken ill on May 19th, and landed on May 24th at Vera Cruz, suffering from Yellow Fever, taking all his effects with him. Ship was fumigated by the Authorities at that port. All well on arrival here.
Sept. 15	11.0 a.m.	s.s. Pearlmoor	British	Mobile and Halifax <i>via</i> Dordrecht	Malarial Fever	The Master reported that several members of crew have suffered more or less from Malarial Fever during the voyage. All well on arrival at this port.

TABLE I.—*continued.*

DATE 1899.	TIME.	NAME OF SHIP.	NATION- ALITY.	WHERE FROM.	NATURE OF SICKNESS.	REMARKS.
Sept. 16		s.s. Centurion...	British ...	Rotterdam ...	Typhoid Fever	Notification received to the effect that George Mayne, fireman, aged 27 years, was admitted to the Hamadryad Hospital Ship on September 13th, from s.s. Centurion, lying in Barry Dock, and certified on September 15th to be suffering from Typhoid Fever, and forthwith removed to the Sanatorium.
" 18		Orient ...	Norwegian	Hernosand ...	Typhoid Fever	Notification received to the effect that Otto Carl Anderson, O.S., age 23 years, was admitted to the Hamadryad Hospital Ship on September 13th from Orient, in Barry Dock, and certified on the 18th to be suffering from Typhoid Fever. This ship afterwards put back to Penarth Dock on September 19th, and on the following day Aksel Tranto, A.B., aged 25 years, and Aksel Johansen, A.B., aged 19 years, were found ill on board, and on the 21st Tranto was removed, and on the 23rd Johansen was removed to the Hamadryad Hospital Ship suffering from Typhoid Fever.
						On September 30th C. M. Ericksen, A.B., aged 33 years, was also certified to be suffering from Typhoid Fever, and forthwith removed to the Hamadryad Hospital Ship. These three last cases afterwards removed to Sanatorium. All the effects of the crew were removed for disinfection; vessel fumigated and cleansed, water tanks emptied and cleansed, and a fresh supply taken in. No other case of sickness occurred up to day of sailing, October 6th.

During the quarter ending September 30th, 1899, the ordinary inspection of shipping was carried out as usual by Chief Inspector David Jenkins, and the Assistant Inspectors, F. S. Rees and S. J. Holbourn.

The inspection has resulted in the abatement of a large number of nuisances on board ships.

Altogether 1,776 vessels were inspected.

TABLE II.
VESSELS INSPECTED.

British steam ships ...	...	...	1,093
British sailing ships ...	...	...	297
Foreign steam ships ...	...	...	259
Foreign sailing ships...	...	...	127
			<hr/> 1,776
Extra inspections of work in hand	...	...	312
			<hr/>
Total	...	...	2,088

The nationalities of the vessels inspected are as follows :—

TABLE III.

NATIONALITY.	STEAM.	SAIL.	TOTAL STEAM AND SAIL.
Austrian ...	18	—	18
Argentine ...	...	1	1
Belgian ...	3	—	3
Brazilian ...	2	—	2
British ...	1,093	297	1,390
British American ...	1	2	3
Danish ...	4	2	6
Dutch ...	8	1	9
French ...	51	42	93
German ...	22	11	33
Greek ...	22	—	22
Italian ...	32	13	45
Norwegian ...	47	40	87
Portuguese ...	—	2	2
Russian ...	2	2	4
Spanish ...	26	6	32
Swedish ...	21	5	26
Totals ...	1,352	424	1,776

The forecastles, berths, waterclosets, etc., in 136 British ships and 55 foreign ships respectively, have either been cleansed, painted or limewashed.

They are of the following nationalities :—

TABLE IV.

Austrian ...	3
Argentine ...	1
Belgian ...	3
Brazilian ...	1
British ...	136
British American...	2
French ...	14
German ...	4

Greek ...	...	...	...	...	2
Italian ...	...	...	...	...	7
Norwegian ...	...	...	...	...	10
Spanish ...	...	...	...	...	7
Swedish ...	...	...	...	...	1
Total ...					191

The following Table shows the number and nationalities of the vessels on which nuisances or structural defects were detected :

TABLE V.

NATIONALITY.	Number of ships.																	CASSES.	REMEDIED.
	Defective side ports.	Defective water closets.	Defective bulkheads and floors in crew's spaces.	Defective cable casings in crew's spaces.	Defective or unlined iron decks over berths.	Defective stores and funnels in crew's spaces.	Defective ventilation.	Defective ventilation to deck water closets.	Defective and dirty water casks and tanks.	Defective lighting.	Defective ventilators in crew's spaces.	Defective drainage.	Leaky decks over berths.	Foul bilges and peaks.	Ship's stores kept in crew's spaces.	Foul accumulations.	Water closets and paint lockers adjoining and ventilating into crew's spaces.		
Argentine	1							1							1			2	2
Austrian	4	1	1										1	1	2			6	5
British	98	31	12	5	3	5	1	7	4	6	10	12	7	8	11	11	1	134	111
Danish	1	1																1	1
Dutch	2		1					1		1				1				4	4
French	14	3		1				7	2	9				2	4			28	24
German	7	2	2					6	1							1		12	11
Greek	3	1	1								1							3	3
Italian	12	3	2	1				2	4	2	1			1	2			18	15
Norwegian	18	1	4					8	8	1	1		1		1			25	25
Russian	1												1					1	1
Spanish	4	1							2						3			6	6
Swedish	5	1			1		2	2		1								7	5
Totals	170	40	22	11	5	6	1	27	25	14	23	13	10	13	21	15	1	247	213

LEGAL PROCEEDINGS—OCTOBER 12TH, 1899.

Proceedings were instituted against Captain Watts of the British vessel "Amazon" for non-compliance with an order of the Port Sanitary Authority to remedy certain sanitary defects on his vessel.

A summons was issued, but was withdrawn on payment of costs and the captain promising to carry out the necessary work, which was done.

ARTICLES DESTROYED AS UNFIT FOR FOOD.—July 17th, 1899. Cargo of British vessel "Morning Star," consisting of 46 tons of potatoes, which were certified by the Medical Officer of Health as unfit for human consumption, was seized, and an order of the Magistrates was obtained for its destruction.

I have the honour to be, Gentlemen,

Your obedient Servant,

EDWARD WALFORD, M.D.,

Medical Officer of Health for the Cardiff Urban and Port Sanitary Districts.

APPENDIX.

METEOROLOGICAL OBSERVATIONS FOR THE THIRD QUARTER OF 1899.

The mean reading of the Barometer was 30.015 inches, and was .058 of an inch above the mean reading for the corresponding quarter of the six preceding years.

The mean temperature of the air during the quarter was 62.8, and was 3.2 above the mean reading for the corresponding quarter of the six preceding years.

During the month of July the wind was chiefly N.W. The mean reading of the Barometer was 30.088 inches. The mean temperature of the air was 63.8; the average for the corresponding month of the past six years being 61.4. The maximum temperature in the shade was 86.5 on the 20th, the minimum 44.5 on the 16th. The total rainfall for the month was .32 of an inch, being 2.49 inches below the average for the corresponding month of the past six years.

During the month of August the wind was chiefly N.E. The mean reading of the Barometer was 30.096 inches. The mean temperature of the air was 68.3, the average for the corresponding month of the past six years being 60.3. The maximum temperature in the shade was 88.8 on the 24th, the minimum 46.8 on the 23rd. The total rainfall for the month was 1.74 inches, being 2.16 inches below the average for the corresponding month of the past six years. The greatest fall in 24 hours was .56 on the 29th.

During the month of September the wind was chiefly N.W. The mean reading of the Barometer was 29.862. The mean temperature of the air was 57.8, the average for the corresponding month of the past six years being 56.6. The maximum temperature in the shade was 81.2 on the 6th, the minimum 34.5 on the 28th. The rainfall was 3.31 inches, being .20 of an inch below the reading for the corresponding month of the past six years. The greatest fall in 24 hours was .80 on the 2nd.

Meteorological Observations for the Third Quarter of the Year, 1899.

MONTH.	JULY.				AUGUST.				SEPTEMBER.				
	8	15	22	29	5	12	19	26	2	9	16	23	30
WEEK ENDING.													
Mean Barometric Pressure	30.141	30.007	30.052	30.194	30.178	30.114	30.180	30.190	29.820	30.077	30.075	29.765	29.604
„ Temperature	60.1	64.0	67.3	62.5	69.8	61.5	66.4	67.6	61.4	63.4	60.5	55.0	51.3
Maximum Temperature in shade	72.5	77.8	86.5	76.8	87.8	80.2	84.5	88.8	75.8	81.2	71.2	68.8	63.5
Minimum Temperature	48.8	46.8	44.5	45.8	52.5	50.2	52.5	46.8	49.8	47.2	41.0	35.8	34.5
Mean Dry Bulb Temperature	62.6	64.0	69.5	66.4	68.3	64.5	67.0	69.7	61.4	66.9	61.8	58.8	51.8
„ Wet „	58.0	60.7	62.9	60.8	62.4	59.4	61.0	62.7	59.0	61.5	58.0	52.8	48.8
Relative Humidity	74	80	67	70	68	71	68	65	86	71	82	66	80
One foot { Earth Thermometer {	61.7	66.1	67.5	66.4	68.1	66.3	67.0	68.0	65.8	65.7	63.9	60.0	56.7
Four feet {	59.5	60.9	60.7	63.0	63.5	64.0	63.7	64.3	59.0	64.0	63.8	62.7	60.9
Rainfall in inches	...	.12	.08	.03	.28	.22	.09	...	2.07	.10	.03	.35	1.91
No. of days on which .01 or more rain fell	...	3	1	1	2	1	1	...	5	1	1	2	7

DEATHS FROM SPECIFIED CAUSES AT ALL AGES, AND AT SIX GROUPS OF AGES,

During the Thirteen Weeks ending September 30th, 1899.

Estimated Population, 185,826.

CLASSES.	CAUSES OF DEATH.			0 to 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards.	ALL AGES.			Rate per 1,000 living.												
ALL CAUSES.				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.											
I.	Small-pox	Vaccinated	..	..	..	..	..	..	..	..	..	..	..	..
		Unvaccinated	..	..	..	..	..	..	..	..	..	..	..	..
		No Statement	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
		Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..
		Influenza	..	..	..	..	..	..	1	1	..	..	1	1	2							
		Whooping Cough	..	..	..	..	..	..	1	..	..	..	18	11	29							
		Diphtheria	..	..	..	..	..	..	1	..	..	..	9	9	18							
		Enteric Fever	..	..	..	..	..	..	1	7	1	3	..	2	10	12						
		Simple Cholera, Chol. Diarrhoea	..	..	..	..	..	..	..	1	..	..	1	2	3	0.06						
		Diarrhoea Dysentery	..	..	..	..	..	..	..	4	..	2	2	83	67	150	3.24					
		Veneral Affections	..	..	..	..	..	..	..	3	..	..	..	4	1	5	0.10					
		Erysipelas	..	..	..	..	..	..	1	..	2	..	1	2	3	5	0.10					
Pyæmia, Septicæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	1	..	..	1	1	0.02								
Other Specific Feb. or Zymotic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
II.	Parasitic Diseases			..	..	..	..	..	..	..	..	..	..	..	..
III.	Dietic Diseases, Alcoholism			..	..	..	..	..	..	1	..	..	1	1	0.02							
IV.	Rheumatic Fever	Rheumatism	..	..	..	..	1	..	1	..	..	1	..	2	1	3	0.06					
		Rickets	..	..	..	1	1	..	..	..	..	..	1	1	2	0.04						
		Cancer, Malignant Diseases	..	..	..	..	..	..	..	7	6	1	1	8	7	15	0.32					
		Tuberc Mesenterica	..	..	..	..	..	..	..	..	..	..	..	4	3	7	0.15					
		Tubercular Meningitis, Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	8	20	28	0.60					
		Phthisis Pulmonalis	..	..	..	..	..	2	1	1	7	23	11	1	28	20	48	1.03				
		Scrofula, Tuberculosis	..	..	..	..	..	..	..	..	1	2	..	..	3	2	5	0.10				
		Anæmia, Chlorosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Diabetes Mellitus	..	..	..	..	..	..	..	1	3	2	..	..	3	3	6	0.12				
		Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V.	Premature Birth	..	..	..	..	..	..	..	..	..	..	..	13	5	18	0.38						
		Congenital Malformations	..	..	..	..	..	..	..	..	..	..	..	4	2	6	0.12					
		Old Age	..	..	..	..	..	..	..	2	2	11	13	13	15	28	0.60					
VI.	Inflammation of Brain and Membranes	Apoplexy, Paralysis	..	..	..	..	..	..	..	..	..	..	1	..	1	0.02						
		Epilepsy	..	..	..	..	..	..	..	..	..	..	..	5	3	2	2	7	5	12	0.25	
		Convulsions	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	2	4	0.04	
		Laryngismus Stridulus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Paraplegia, Disease of Spinal Cord	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Other Diseases of Nervous System	..	..	..	..	..	..	..	..	..	..	..	2	3	1	4	3	7	0.15		
		Endocarditis, Valvular Diseases	1	1	2	13	13	6	5	19	23	42	0.90	
		Pericarditis	
		Angina Pectoris	
		Syncope	
		Aneurism	..	..	..	..	..	..	..	..	..	..	..	1	4	..	2	1	6	7	0.15	
		Senile Gangrene	
		Embolism, Thrombosis	1	
		Other Diseases of Circulation	
		Laryngitis	
		Croup	
		Other Diseases of Larynx and Trachea
			Emphysema, Asthma	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2	0.04
			Bronchitis	1
			Pneumonia	..	..	..	..	..	..	..	..	..	..	..	3	6	6	6	18	16	34	0.73
			Other Respiratory Diseases	..	..	..	..	..	..	..	..	..	..	..	1	5	7	1	13	18	31	0.66
			Stomatitis	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	2	5	7	0.15
			Dentition
			Diseases of Stomach and Intestines	..	..	..	..	..	..	..	..	..	..	..	2	1	1	3	4	7	0.15	
			Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	6	7	0.15
			Enteritis
			Peritonitis	..	..	..	..	..	..	..	..	..	..	..	3	2	2	2	74	57	131	2.81
			Jaundice	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	0.04
			Cirrhosis and other Diseases of Liver	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	0.02
			Other Diseases of Digestive System	..	..	..	..	..	..	..	..	..	..	..	4	3	..	..	4	3	7	0.15
			Diseases of Urinary Organs	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	1	3	4	0.08
			Diseases of Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	3	4	3	..	5	7	12	0.25
			Diseases of Organs of Parturition	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	0.02	
			Diseases of Integumentary System	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	2	0.04	
		Other Local Diseases	
VII.	Accident, Negligence	Suffocation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21	4	25	0.53		
		Homicide	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	0.02		
		Suicide	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	0.02		
		Execution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	0.02		
		Other Ill-defined Causes		
VIII.	Debility, Atrophy, Inanition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23	31	54	1.16			
		Other Ill-defined Causes	..	..	..	..	..	..	..	..	..	..	..	11	3	2	2	15	5	20	0.43	
TOTAL				309	178	49	46	16	10	19	26	113	106	40	45	446	411	857	18.5						

