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CITY OF CARLISLE.

REPORT

ON THE

Sanitary Condition of the City of Carlisle
FOR THE YEAR 1924,

BY

JOSEPH BEARD,

F.R.S. (Edin.), F.R.C.S. (Edin.),
L.R.C.P. (Lond.), D.P.H. (Cantab.), etc.
(Of Gray's Inn, Barrister-at-Law).

Medical Officer of Health,
School Medical Officer,
Chief Tuberculosis Officer, &c.

CARLISLE:
CHAS. THURNAM & SONS, PRINTERS, ENGLISH STREET.





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PUBLIC HEALTH STAFF

including all who are employed in work connected with the public health, whether under the Health, Maternity and Child Welfare, or the Education Committees:—

Medical Officer of Health, School Medical Officer, Chief Tuberculosis Officer, &c., &c.	JOSEPH BEARD, F.R.C.S., D.P.H., &c., &c.
Assistant Medical Officer of Health, Tuberculosis Officer, and Assistant School Medical Officer	ALLAN SEMPLE, M.B., Ch. B., D.P.H.
Assistant School Medical Officer, and Assistant Medical Officer (M. & C. W.)	Miss E. E. BOURNE, M.B., Ch.M., D.P.H.
Assistant Medical Officer (V.D.) (part-time)	ALEX. C. B. McMURTRIE, M.D., F.R.C.S., D.P.H.
Dental Surgeon (part-time)	WILLIAM TAYLOR, L.D.S.
Veterinary Inspector (part-time)	R. CRAIG ROBINSON, M.R.C.V.S.
Chief Sanitary Inspector, and Inspector under Sale of Food and Drugs Acts and Shops Acts	* C. W. HILL
Assistant Sanitary Inspectors	‡†* W. HANSON * E. S. BROADHEAD
Health Visitors	Misses H. M. HILL, J. G. SMITH, C. STORDY
Nurse in charge of School Clinic and Tuberculosis Dispensary	Miss M. E. GLOYNE
School Nurses	Misses J. S. GUTHRIE, J. H. BRADEN, M. WOOD
Matron of Maternity Hospital	Miss A. H. HARRIS
Clerks	G. E. BARROW, R. F. THOBURN, Misses L. HIND, and M. PURDAM
Disinfectors	H. PORTER
Superintendent of Public Slaughter-houses	J. DODDS
Public Analysts (part-time)	Messrs. HELLON & MANN, WHITE-HAVEN
Bacteriologists (part-time)	PUBLIC HEALTH LABORATORY, MANCHESTER CLINICAL RESEARCH ASSOCIATION, LONDON

* Sanitary Inspectors' Certificate, R.S.I.

† Sanitary Inspectors' Certificate, S.I.A.

‡ Meat Inspectors' Certificate, R.S.I.

The following Acts, Bye-laws, and Regulations are in force in the district, and were adopted on the dates mentioned:—

Bye-laws with respect to New Streets and Buildings under the Public Health Act, 1875	... ..	13th Oct., 1885
Regulations under the Contagious Diseases (Animals) Act, 1886, and the Dairies, Cowsheds, and Milkshops Order of 1885	... ..	16th July, 1889
The Infectious Diseases (Prevention) Act, 1890	... ..	10th March, 1891
The Public Health Acts (Amendment) Act, 1890	... ..	10th March, 1891
Bye-laws for regulating the Public Pleasure and Recreation Grounds, made in pursuance of the Public Health Act, 1875	... ..	14th Feb., 1893
Bye-laws with respect to Common Lodging-houses, made in pursuance of Section 80 of the Public Health Act, 1875	... ..	15th Aug., 1893
Bye-laws relating to the conveyance of carcases of dead animals through the streets	... ..	8th Jan., 1895
Bye-laws for regulating the Carlisle Public Slaughter-houses under the Public Health Act, 1875	... ..	12th May, 1896
Bye-laws made for regulating the carrying on of offensive trades, in pursuance of Section 113 of the Public Health Act, 1875	... ..	9th March, 1897
Baths and Wash-houses Acts	... ..	9th July, 1901
Measles Regulations, 1923	... ..	1st Jan., 1924



To the Chairman and Members of the Health Committee.

Ladies and Gentlemen,

I have the honour to submit my Seventeenth Annual Report on the Health of the City for the year 1924.

I have kept the report as far as practicable within the limit of the instructions contained in a circular of the Ministry of Health, giving, of course, consideration to the recording of any such particulars as may be required for future reference.

I am,

Ladies and Gentlemen,

Your obedient Servant,

JOSEPH BEARD,
Medical Officer of Health.

Public Health Department,
19 Fisher Street,
Carlisle,

April, 1925.

GENERAL STATISTICS.

Area (acres)	...	...	...	...	4,488
Population (1924) Estimate of Registrar-General					54,910
Number of Inhabited Houses (Census, 1921)	...				11,316
Number of Families (Census, 1921)	...	...			11,742
Rateable Value	...	...	...		£319,531
Sum represented by a Penny Rate	...	...	...		£1,200

EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

Births—	Total.	M.	F.	
Legitimate	1063	521	542	
Illegitimate	53	26	27	
				Birth-rate 20.3
Deaths ...	763	365	398	
				Death-rate 13.8

Number of women dying in, or in consequence of, childbirth—

From Sepsis	...	...	...	Nil
From other causes	...	...	...	3

Deaths of Infants under one year of age per 1,000 births—

Legitimate	...	...	95.9	
Illegitimate	...	...	75.4	
		—	Total	95.0

Deaths from Measles (all ages)	...	...	3
„ Whooping Cough (all ages)	...	...	8
„ Diarrhœa (under 2 years of age)	...	...	8

POPULATION.

The estimate of the population at mid-year, 1924, supplied to me by the Registrar-General, is 54,910, and this figure has been used in making the calculations for this report.

BIRTHS.

The number of births registered during the year was 1,116, a decrease of 65 on the figure for the previous year. The birth-rate is 20.3 per 1,000 of the population at all ages, a decrease of 1.5 on the previous year's figure.

The birth-rate for the whole of England and Wales during 1924 was 18.8 per 1,000. The rate for the 105 great towns, to which classification Carlisle belongs, was 19.4 per 1,000, and for the 157 smaller towns of England and Wales 18.9 per 1,000.

Year.	Number of Births Registered.			Per 1,000 of the population
	Males.	Females.	Total.	
1920	759	666	1425	24.7
1921	679	631	1310	24.6
1922	641	626	1267	23.6
1923	589	592	1181	21.8
1924	548	568	1116	20.3

Table showing details of the Births in the several Wards, 1924.

QUARTER ENDED.	STANWIX AND ETTERBY.	RICKERGATE.	AGLIONBY.	GREYSTONE.	ST. NICHOLAS.	CURROCK.	DENTON HOLME.	ST. CUTHBERT'S.	CALDEWEGATE.	NEWTOWN AND BELLE VUE.	TOTALS FOR CITY.
March 31	12	32	15	24	22	29	31	26	47	21	259
June 30	17	33	25	35	32	33	33	35	38	24	305
September 30 ...	13	33	14	28	43	20	33	39	46	21	290
December 31	16	26	26	22	38	25	30	23	39	17	262
Totals..	58	124	80	109	135	107	127	123	170	83	1116

ILLEGITIMATE BIRTHS.

The number of illegitimate births registered was 53, or 47.4 per 1,000 of the total births. This figure is the same as that for 1923.

In 10 instances, or 18.8 per cent. of the total illegitimate births for the year, the mother was not a resident of the City.

The distribution of the illegitimate births among the several wards was as follows:—

	Stanwix and Etterby	Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	S. Cuthbert's	Caldeewgate	Newtown & Belle Vue	Totals for City
Males	1	2	5	3	4	1	3	1	4	2	26
Females	3	2	3	2	4	3	1	1	6	2	27
Totals	4	4	8	5	8	4	4	2	10	4	53

DEATHS.

The total number of deaths registered was 849, as compared with 797 in 1923. 17 deaths occurred of persons belonging to the City in institutions and other places away from Carlisle, while the deaths of 103 persons not belonging to the City occurred in public institutions and other places within the City. Excluding the latter figure, and adding the deaths of Carlisle residents which occurred in other districts, a nett figure of 763 remains, which is equal to a nett death-rate of 13.8 per 1,000 of the estimated population at all ages, against 13.5 per 1,000 in 1923.

The death-rate for the whole of England and Wales during 1924 was 12.2 per 1,000. The rate for the 105 great towns, to which classification Carlisle belongs, was 12.3 per 1,000, and for the 157 smaller towns of England and Wales, 11.2 per 1,000.

Table showing details of the corrected Deaths in the Wards, 1924.

Quarter Ended	Stanwix and Fterby	Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	S. Cuthbert's	Caldewgate	Newtown & Belle Vue	Totals for City
March 31	18	18	31	21	16	16	16	34	28	16	214
June 30	11	18	25	21	31	24	29	21	24	11	215
September 30 ...	10	18	20	7	8	13	13	20	22	8	139
December 31 ..	13	24	22	26	12	15	20	25	21	17	195
Totals	52	78	98	75	67	68	78	100	95	52	763

Table showing the number of Deaths at all Ages and at several age periods, 1924.

	All Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.
No. of Deaths at all ages and at several age periods	763	106	44	27	33	245	308

The following Table shows the diseases causing the largest number of Deaths during 1924, and a comparison with those of 1923, &c.:—

DISEASE.	1923.	1924.	Increase or Decrease	Average No. of Deaths for past 10 yrs.
Pulmonary Tuberculosis & Phthisis	40	49	+ 9	53
Other forms of Tuberculosis ...	14	20	+ 6	20
Pneumonia	52	58	+ 6	56
Other Diseases of Respiratory System	37	57	+ 20	59
Measles	45	3	—42	12
Influenza	7	23	+ 16	35
Whooping Cough	8	8	...	10
Diphtheria, Membranous Croup ...	10	9	— 1	9
Disease of Heart and Blood Vessels	151	159	+ 8	161
Rheumatic Fever, Chronic Rheumatism, Rheumatoid Arthritis ..	9	12	+ 3	7
Cancer and Malignant Disease ...	78	72	— 6	65
Diseases of Digestive System other than Diarrhœa and Enteritis ...	24	33	+ 9	26
Diseases of Urinary System ...	25	21	— 4	30
Diseases of Nervous System ...	65	86	+ 21	48
Prematurity and Injury at Birth, &c.	59	43	—16	40
Accidents due to Negligence ..	15	19	+ 4	20
Diarrhœa and Enteritis ...	15	16	+ 1	24

+ Shows an increase in the number of deaths.

— Shows a decrease in the number of deaths.

The following Table sets out the Cause and the Ages at Death of 763 persons belonging to the City:—

CAUSE OF DEATH.				NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.							TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESI- DENTS" IN INSTITUTIONS IN THE DISTRICT.		
				All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.		45 and under 65.	65 and up- wards
1				2	3	4	5	6	7	8	9	10	11
All Causes	Certified	...	...	44	103	23	20	27	33	70	172	296	277
	Uncertified	..	...	19	3	1	...	...	...	...	3	12	4
Enteric Fever				...	..	...	...	...	...	..	...	...	...
Smallpox				...	...	...	...	...	...	...	...	...	...
Measles				3	1	1	1	...	...	...	...	...	...
Scarlet Fever				4	...	...	4	...	...	...	...	...	4
Whooping Cough				8	4	2	2	...	...	...	...	...	...
Diphtheria and Croup				9	...	...	2	7	...	...	...	...	6
Influenza				23	1	...	...	...	2	1	3	16	2
Dysentery				...	...	...	...	...	...	...	...	...	...
Erysipelas				1	...	...	...	...	1	...	...	...	...
Phthisis (Pulmonary Tuberculosis)				49	...	1	1	2	10	16	15	4	5
Tuberculous Meningitis				8	3	...	1	2	1	1	...	...	5
Other Tuberculous Diseases				12	1	3	2	...	4	1	1	...	9
Cancer, Malignant Disease				72	..	...	...	...	1	6	30	35	46
Rheumatic Fever				7	...	...	...	1	2	2	1	1	1
Meningitis				12	4	1	1	3	1	2	...	...	2
Organic Heart Disease				111	...	...	...	1	2	5	41	62	21
Bronchitis				52	9	1	...	...	...	2	12	28	4
Pneumonia (all forms)				58	21	6	3	1	2	5	5	15	7
Other Diseases of Respiratory Organs				5	1	...	...	...	..	...	3	1	1
Diarrhoea and Enteritis				16	6	2	...	...	1	2	2	3	12
Appendicitis and Typhlitis				10	...	...	1	2	1	1	4	1	15
Cirrhosis of Liver				2	...	...	...	...	...	...	1	1	2
Alcoholism				1	...	...	...	...	...	1	...	...	...
Nephritis and Bright's Disease				16	...	...	...	...	...	3	8	5	5
Puerperal Fever				...	...	...	...	...	...	...	...	...	1
Other Accidents and Diseases of Preg- nancy and Parturition				3	...	...	...	...	...	3	...	...	2
Congenital Debility & Malformation, including Premature Birth				43	41	2	...	...	...	..	...	...	7
Violent Deaths, excluding Suicide				19	1	...	1	1	...	2	3	11	17
Suicide				3	...	...	...	...	1	1	1	...	..
Other Defined Diseases				215	13	4	1	7	4	16	45	125	105
Diseases ill-defined or unknown				1	...	1	..	...	...	..	...	...	2
Totals				763	106	24	20	27	33	70	175	308	281
Sub- Entries included in above figures	Cerebro-spinal Meningitis			...	...	...	...	...	...	...	...	...	...
	Poliomyelitis			...	...	...	...	...	...	...	...	...	...
	Typhus Fever			...	...	...	...	...	...	...	...	...	...
	Lobar Pneumonia			13	2	2	1	1	...	2	2	3	4
	Pneumonia not defined			14	6	2	...	...	1	1	...	4	1

The following Table shows the Vital Statistics for the whole City during 1924 and previous years:—

YEAR.	Population estimated to Middle of each Year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Uncorrected Number.	Nett.		Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of age		AT ALL AGES.	
			Number.	Rate.					Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
+1915 {	52,625 50,036	1192	1192	22.6	994	18.8	72	31	172	144.3	953	18.1
+1916 {	49,721 54,097	1103	1103	20.3	850	17.0	93	24	112	101.3	781	15.7
+1917 {	59,151 53,064	1117	1120	18.9	826	15.5	101	46	119	106.5	771	14.5
+1918 {	60,188 53,717	1033	1037	17.2	921	17.1	120	49	131	126.8	850	15.8
+1919 {	57,500 55,198	1066	1078	18.7	778	14.1	112	54	115	107.9	720	13.6
+1920 {	57,697 57,397	1425	1417	24.7	785	13.7	117	37	114	80.0	705	12.3
+1921	53,200	1310	1298	24.6	818	15.3	85	21	138	105.3	754	14.1
+1922	53,490	1267	1267	23.6	864	16.1	101	21	103	81.2	784	14.6
+1923	54,010	1181	1171	21.8	797	14.7	91	26	98	82.9	732	13.5
+1924	54,910	1116	1123	20.3	849	15.4	103	17	106	94.9	763	13.8

† Registrar-General's estimates of population.

The following Public and other Institutions are within the City:—

The Union Workhouse and its Infirmary.
 The Cumberland Infirmary.
 Carlisle Non-Provident Dispensary.
 The Crozier Lodge Isolation Hospital.
 Strathclyde House (Home for Incurables).
 St. Joseph's Home (aged and infirm persons).
 Chadwick Memorial Industrial School.
 Corporation Dispensary and School Clinic.
 Corporation Maternity Hospital and Clinics.

**Birth-rate, Death-rate, and Infantile Mortality in
Carlisle since 1891.**

Year.	No. of Births.	Birth- rate.	No. of Deaths.	Gross Death- rate.	Infantile Mor- tality.	Average Five Years.		
						Birth- rate.	Death- rate.	Infantile Mortality.
1891	1207	30.8	789	20.1	137	31.8	20.1	142.6
1892	1213	30.5	805	20.2	123			
1893	1389	34.5	868	21.6	178			
1894	1315	32.0	780	19.2	133			
1895	1311	31.4	794	19.4	142			
1896	1246	29.6	753	18.2	137	29.9	19.5	146.6
1897	1324	30.8	811	19.4	134			
1898	1311	30.0	935	22.2	183			
1899	1300	29.4	818	19.2	145			
1900	1354	30.1	807	18.8	134			
1901	1246	27.3	810	17.8	129	26.7	17.9	131.0
1902	1245	27.0	856	18.5	117			
1903	1322	28.4	813	17.4	118			
1904	1278	26.7	933	19.7	152			
1905	1168	24.3	783	16.3	139			
1906	1227	25.3	811	16.7	132	23.6	15.1	127.5
1907	1178	23.8	848	17.1	143			
1908	1223	24.4	713	14.2	129			
1909	1149	22.6	735	14.5	123.6			
1910	1145	22.2	683	13.2	110.0			
1911	1109	23.8	776	16.7	145.0	23.2	17.1	128.2
1912	1142	24.6	813	17.5	102.4			
1913	1164	22.1	821	15.6	127.1			
1914	1209	23.0	848	16.1	122.4			
1915	1192	22.6	1027	19.5	144.3			
1916	1103	20.3	850	17.0	101.5	19.9	15.5	104.5
1917	1117	18.8	826	15.5	106.5			
1918	1033	17.1	921	17.1	126.8			
1919	1066	18.5	778	14.1	107.9			
1920	1425	24.7	785	13.7	80			
1921	1310	24.6	818	15.3	105.3	23.0	15.0	88.8
1922	1267	23.6	864	16.1	81.2			
1923	1181	21.8	797	14.7	82.9			
1924	1116	20.3	849	15.4	95.0			

The following figures relate to the deaths of persons not normally resident in the district which occurred within the City :—

Cumberland Infirmary ...	72
Private Nursing Homes ...	21
Private Houses ...	2
Fusehill Hospital ...	4
Crozier Lodge ...	2
Dead body found on railway one mile north of Citadel Station ..	1
Died in ambulance whilst being brought into the Cumberland Infirmary ...	1

INQUESTS.

During the year the City Coroner held 40 inquests. Of this number, 32 related to deaths of persons who resided within the City, and 8 to persons who resided in other districts, but who died within the City. 6 related to children under five years of age, 3 of whom were under one year.

MORTUARY.

13 bodies were removed to the Public Mortuary, a post-mortem examination being made in each instance.

UNCERTIFIED DEATHS.

19 deaths were registered of persons belonging to the City in which no certificate was given by a medical man, and in which no inquest was held.

During 1923, 15 such deaths were registered.

CANCER.

The following figures include all deaths from causes coming within the general term cancer. The number of deaths registered during 1924 was 72, against 78 in 1923.

Calculated upon the population at all ages a mortality rate of 1.3 per 1,000 is obtained.

TABLE OF DEATHS FROM CANCER,
1915 to 1924.

Age.	Numbers.									
	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
1 to 5 years ...	...	...	...	...	...	...	...	...	...	...
5 to 15 years ...	...	...	...	1	...	1	...	...	...	...
15 to 25 years ...	1	1	1	1	...	...	1	1	...	1
25 to 35 years ...	...	2	1	1	2	1	2	...	...	1
35 to 45 years ...	3	6	7	5	...	5	2	4	2	5
45 to 55 years ...	7	17	10	13	9	15	5	12	13	10
55 to 65 years ...	21	21	32	21	19	12	20	22	21	20
65 to 75 years ...	20	18	14	17	15	17	19	15	26	25
75 & upwards ...	6	9	8	7	4	11	4	14	16	10
Totals ...	58	74	73	66	49	62	53	68	78	72

RAINFALL.

Observations taken at the Carlisle Cemetery by J. T. Charlton, Esq.

MONTHS.	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924.		Average for 10 years 1914-1923.
											Rainfall, days on which Rain fell.	Number of Rain fall.	
January	in. 2.64	in. 3.17	in. 3.55	in. 1.53	in. 3.13	in. 2.88	in. 4.17	in. 5.01	in. 2.25	in. 1.74	in. 2.77	17	in. 3.01
February	.. 2.59	.. 3.56	.. 3.31	.. 1.13	.. 2.86	.. 1.05	.. 2.61	.. 0.16	.. 2.87	.. 4.08	.. 0.95	13	.. 2.42
March	.. 2.67	.. 1.88	.. 2.14	.. 1.98	.. 0.66	.. 2.35	.. 3.11	.. 3.71	.. 1.31	.. 0.84	.. 1.73	7	.. 2.07
April	.. 1.36	.. 1.91	.. 2.44	.. 2.45	.. 0.50	.. 1.49	.. 2.17	.. 0.86	.. 1.89	.. 2.55	.. 1.81	12	.. 1.76
May	.. 1.73	.. 2.04	.. 2.98	.. 1.91	.. 1.88	.. 1.10	.. 3.48	.. 1.28	.. 1.79	.. 1.98	.. 3.73	24	.. 2.02
June	.. 1.06	.. 1.15	.. 3.30	.. 2.01	.. 0.87	.. 2.66	.. 2.11	.. 0.65	.. 2.98	.. 0.60	.. 1.90	17	.. 1.74
July	.. 3.04	.. 3.80	.. 4.61	.. 1.31	.. 3.73	.. 0.87	.. 4.26	.. 2.44	.. 4.54	.. 2.22	.. 4.63	24	.. 3.08
August	.. 2.73	.. 3.27	.. 2.39	.. 5.64	.. 3.21	.. 2.96	.. 2.50	.. 5.39	.. 2.53	.. 7.42	.. 3.13	20	.. 3.80
September	.. 1.28	.. 1.03	.. 2.06	.. 2.61	.. 7.36	.. 1.81	.. 1.89	.. 2.15	.. 2.92	.. 3.01	.. 3.33	22	.. 2.61
October	.. 1.11	.. 1.25	.. 5.10	.. 4.33	.. 4.00	.. 2.36	.. 1.00	.. 2.56	.. 1.20	.. 5.61	.. 4.13	18	.. 2.85
November	.. 4.52	.. 0.58	.. 4.34	.. 2.83	.. 2.01	.. 2.36	.. 2.02	.. 1.68	.. 0.84	.. 4.06	.. 1.97	12	.. 2.52
December	.. 3.58	.. 4.64	.. 2.75	.. 1.40	.. 3.44	.. 3.32	.. 2.79	.. 3.94	.. 3.43	.. 2.42	.. 5.03	24	.. 3.17
Totals	28.31	28.28	38.97	29.13	33.65	25.21	32.11	29.83	28.55	36.53	35.11	210	31.05
Total number of days on which Rain fell {	201	183	228	176	190	191	211	205	209	231	...	...	203

WATER SUPPLY.

Bacteriological Results of Quarterly Samples taken from a Domestic Tap.

Examinations made at the Public Health Laboratory, Manchester.

QUANTITATIVE ANALYSIS		1924.							
A. Aerobic micro-organisms growing in 3 days in nutrient gelatine at 20° C. to 21° C.		Number of colonies in one gramme of water.				No. of kinds clearly recognisable.			
		MAR.	JUNE.	SEPT.	DEC.	MAR.	JUNE.	SEPT.	DEC.
Non-Liquefying Bacteria ...	70	48	199	82	3	3	4	3	
Liquefying Bacteria ...	12	15	74	33	4	5	5	5	
Other Micro-Organisms ...	2	0	0	0	...	...	...	...
B. Anaerobic Micro-Organisms ...	...	...	...	...	...	...	...	...

QUALITATIVE ANALYSIS.		1924.			
A. Bacteria associated with sewage or faecal pollution		MARCH.	JUNE.	SEPT.	DEC.
		B. Coli communis found in 100 C.C. but not in 10 C.C.	B. Coli communis found in 100 C.C. but not in 10 C.C.	B. Coli communis found in 100 C.C. but not in 10 C.C.	B. Coli communis not found in 100 C.C.
B. Bacteria associated with disease		Not found.	Not found	Not found	Not found

Bacteriologically all the samples were satisfactory.

Results of Chemical Analyses of Quarterly Samples of Water taken from a Domestic Tap.

Examinations made by Messrs. Hellon and Mann, Whitehaven.

Results shown in grains per gallon.		1924			
CHEMICAL.	MARCH.	JUNE.	SEPT.	DEC.	
Total Solid Matter in solution dried at 212° Fahr.	10.080	10.360	9.520	8.960	
Chlorine existing as Chlorides ... ..	.560	.490	.420	.455
Ammonia	traces	traces	traces	traces	
Albuminoid Ammonia	.001	.001	.002	.002	
Nitrogen existing as Nitrates	traces	traces	traces	traces	
Oxygen absorbed in 15 minutes at 80° Fahr.	.023	.034	.127	.067	
Oxygen absorbed in 4 hours at 80° Fahr. ...	.039	.064	.201	.119
Lead & other Poisonous Metals	None	None	None	None	
Hardness before boiling	7 $\frac{1}{4}$ °	7 $\frac{1}{4}$ °	7°	7°	
Hardness after boiling	1 $\frac{1}{4}$ °	1 $\frac{1}{4}$ °	1°	1 $\frac{1}{4}$ °	
Appearance in two-foot tube	Clear ; yellowish- green	Clear ; yellowish- green	Clear ; brownish- yellow	Clear ; yellowish- green	
Smell when heated to 100° Fahr.	None	None	None	None	
Microscopical Examina- tion	Slight deposit of Mineral particles and Vegetable debris	Slight deposit of Vegetable debris	Slight deposit of Mineral particles and Vegetable debris	Slight deposit of Mineral particles and Vegetable debris	

A determination of the plumbo-solvent action of the water was made according to the method of the Local Government Board in all samples taken during the year, the results being satisfactory.

The Lacmoid re-action in all instances was Alkaline.

**Total annual distribution of Water from Cumwhinton
covered reservoir during the years 1915 to 1924.**

Year.	Number of Gallons.	No. of Gallons per head, per day.
1915	710,974,000	34.03
1916	758,483,000	35.80
1917	801,490,000	33.78
1918	795,220,000	34.58
1919	804,040,000	34.88
1920	814,170,000	35.41
1921	771,250,000	33.54
1922	759,500,000	32.98
1923	747,320,000	32.49
1924	712,630,000	30.90

FOOD.

MILK SUPPLY.

There are 21 registered cow-keepers in the City, and there were 34 occupied cow-sheds with an average of 240 cows kept therein during the year. There were 54 purveyors of milk on the register, 28 of whom reside in the City and the remaining 26 in districts outside.

19 samples of milk, brought into the City from outside dairies, were purchased and submitted for bacteriological examination for the presence of tubercle bacilli, further details of which are shown on page 32. 44 samples of milk were also purchased and submitted to chemical analysis, of which 41 were found to comply with the standard laid down by the Regulations. 2 samples showed that the milk was below the limit in non-fatty solids, and in the remaining instance the milk was below the limit in milk fat; further particulars relating to these unsatisfactory samples are given in the table on page 75.

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS,
1912 AND 1917.

1. *Milk; and Cream not sold as Preserved Cream.*

(a) Number of samples examined for the presence of a preservative:—

Milk.....	44	Cream.....	2
-----------	----	------------	---

(b) Number in which a preservative was reported to be present:—

Milk.....	Nil	Cream.....	1
-----------	-----	------------	---

Nature of preservative in each case as shown in (b) and action taken under the Regulations in regard to it.

This sample contained .25% Boric Acid. Vendor was cautioned.

2. *Cream sold as Preserved Cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct:—

(i) Correct statements made ...	4
(ii) Statements incorrect ...	Nil

Total ...	4
-----------	---

(iii) Percentage of preservative found in each sample.	Percentage stated on statutory label.
Boric Acid ... .49	... .40
" "33	... .40
" " ... Nil	... .40
" "19	... .40

(b) Determinations made of milk fat in cream sold as preserved cream:—

(i) Above 35 per cent. ...	3
(ii) Below 35 per cent. ...	1

Total ...	4
-----------	---

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed:—Nil.

(d) Particulars of each case in which the Regulations have not been complied with and action taken:—

One sample contained .49% Boric Acid. The vendor was cautioned.

3. *Thickening Substances.* Any evidence of their addition to cream or to preserved cream. Action taken where found.

The Analyst makes no remark upon the question of thickening substances in his reports.

4. *Other Observations (if any).* Nil.

MEAT.

In addition to the Public Slaughter-houses, there are 3 private slaughter-houses, 2 of which, viz., the L. & N.E. Railway and L.M. & S. Railway, are used in respect of the slaughter of sheep and lambs, the third, that of Messrs. Cavaghan & Gray, Harraby, being exclusively used for the slaughter of pigs.

PUBLIC SLAUGHTER-HOUSES.

The following Table gives particulars of Animals killed, Carcases examined, and particulars of Carcases unfit for human food:—

Animal	Total number of animals slaughtered and examined	Number of carcases specially referred for examination	Number in which the whole carcase was unfit for human food	Number in which a portion of a carcase was unfit for human food	Number affected with Tuberculosis.	
					Whole carcase condemned	Part of carcase condemned
Oxen	4,106	78	56	22	25	14
Sheep	14,385	41	40	1	...	...
Calves	436	8	8	...	1	...
Pigs	5,896	8	7	1	4	1
Totals	24,823	135	111	24	30	15

OTHER FOODS.

Information concerning unsound food, food inspection, bakehouses, &c., and the work under the Sale of Food and Drugs Acts, is given on pages 70-72 and 74-75 (Report of the Sanitary Inspector).

Table showing the Age Groups and Wards in which cases of Infectious Diseases were notified during 1924.

	Number of Cases Notified at various Ages.						Number of Cases notified in each Ward.										Total number of cases notified	Number of cases in- correctly notified	Nett number of cases notified	Number of cases removed to hospital	
	Under 1 year	1—5 years	5—15 years	15—25 years	25—45 years	45—65 years	65 and up- wards	Stanwix and Etterby	Ricker gate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	St. Cuthbert's	Caldegate					Newtown & Belle Vue
Scarlet Fever	2	65	155	14	9	...	...	7	35	8	23	13	14	29	65	36	15	245	15	230	171
Diphtheria ...	...	17	43	4	4	...	...	1	2	1	3	3	17	22	8	7	4	68	11	57	46
Puerperal Fever	...	...	...	1	3	...	...	...	...	...	...	1	1	...	...	...	2	4	...	4	...
Erysipelas ...	1	...	1	3	1	10	3	...	3	2	1	1	1	4	3	2	2	19	...	19	...
Malaria ...	...	...	...	2	6	...	...	...	2	1	...	...	1	1	...	3	...	8	...	8	...
Acute Primary Pneumonia	16	38	28	4	14	8	4	1	4	10	11	16	8	10	13	32	7	112	...	112	1
Acute Influenzal Pneumonia	1	7	2	2	10	6	4	1	4	2	5	3	5	4	3	5	...	32	...	32	1
Encephalitis Lethargica	...	...	3	2	1	...	...	...	1	...	1	1	2	...	...	...	1	6	...	6	...
Ophthalmia Neonatorum	10	...	...	...	...	...	...	1	1	...	1	1	...	1	2	2	1	10	...	10	...
Cerebro-spinal Fever	...	...	2	1	1	...	...	1	1	1	1	...	1	...	...	...	...	4	...	4	...
Para-Typhoid Fever	...	1	...	4	2	...	...	...	1	...	...	...	...	...	...	...	6	7	...	7	...
Measles ...	13	162	...	...	...	...	...	...	41	13	19	12	7	14	...	...	9	175	1	174	...
Pulmonary Tuberculosis	1	2	31	21	26	19	4	4	9	10	11	8	10	11	17	16	7	104	...	104	...
Other forms of Tuberculosis	3	2	7	5	2	1	...	5	3	3	3	1	...	3	2	4	...	20	...	20	...
Enteric Fever	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1

INFECTIOUS DISEASES.

During the year 815 notifications of infectious disease were received, 124 of which related to various forms of tuberculosis, and 691 to other infectious diseases.

The number of deaths certified as due to the seven principal zymotic diseases was 40, equal to a zymotic death-rate of 0.7 per 1,000 of the population. In the previous year 79 deaths were certified as due to zymotic diseases.

SCARLET FEVER.

During the year 245 cases of scarlet fever were notified, an increase of 95 on the number notified during the previous year, the incidence of the disease being higher during the latter part of the year. Cases occurred in all parts of the City, and there was no evidence of any particular local spread of infection.

171 of the patients, or 69.7 per cent., were removed to the Isolation Hospital.

4 deaths of residents were registered as being due to scarlet fever.

8 cases of this disease occurred at the Cumberland Infirmary, 2 of whom were patients who did not reside in the City.

1 patient notified as suffering from diphtheria was found not to be suffering from the disease, but from scarlet fever.

9 return cases occurred.

Table showing notifications, cases isolated, and number of deaths from scarlet fever during the years 1920-1924.

Year.	No. of cases notified.	No. of cases isolated in Hospital.	Average period in Hospital (days).	No. of return cases.	No. of deaths.	Deaths per 100 cases.
1920	70	47	42.8	1	0	0.0
1921	79	57	43.5	0	1	1.
1922	104	65	40.5	2	1	0.
1923	150	82	41.7	2	1	0.
1924	245	171	35.9	9	4	1.6

DIPHTHERIA.

The number of cases of diphtheria notified was 68, compared with 87 in 1923.

9 deaths of residents were registered as being due to diphtheria.

The death-rate for this disease was 0.16 per 1,000 of the estimated population at all ages.

46, or 67.6 per cent., of the cases notified were removed to the Isolation Hospital.

In 11 instances the patient was subsequently found not to be suffering from diphtheria.

Table showing notifications, cases isolated, and number of deaths from diphtheria during the years 1920-1924.

Year.	No. of cases notified.	No. of cases isolated in Hospital.	No. of deaths.	Deaths per 100 cases.
1920	35	20	2	5.7
1921	57	42	8	14.0
1922	64	48	2	3.1
1923	87	46	10	11.5
1924	68	46	9	13.2

ANTI-DIPHTHERIA SERUM.

36 applications were made by medical practitioners for the free supply of anti-diphtheria serum, 224,000 units being supplied.

Table showing case mortality of Scarlet Fever and Diphtheria isolated in Hospital compared with Home Cases.

Year.	SCARLET FEVER.				DIPHTHERIA.			
	Hospital Cases.		Home Cases.		Hospital Cases.		Home Cases.	
	No. of Cases Isolated.	Death-rate per 100	No. of Cases Isolated.	Death-rate per 100	No. of Cases Isolated.	Death-rate per 100	No. of Cases Isolated.	Death-rate per 100
1920	47	0·0	20	0·0	20	5·0	10	10·0
1921	57	1·7	22	0·0	42	11·9	15	20·0
1922	65	1·5	39	0·0	48	4·1	16	0·0
1923	82	0·0	68	1·4	46	6·5	41	17·0
1924	171	1·7	74	1·3	46	13·0	22	13·6

SMALLPOX.

The City was free from Smallpox. Notifications were received from Port Sanitary Authorities that 5 persons were proceeding to Carlisle who had arrived in the country in ships on which Smallpox had occurred.

ENTERIC FEVER.

One case of Enteric Fever was notified during the year. The patient, a boy of 9 years of age, was admitted into the Cumberland Infirmary from a village adjacent to Carlisle, on account of a broken leg. Certain clinical signs present caused him to be suspected as suffering from Enteric Fever, and he was removed to the Isolation Hospital; this diagnosis was, however, not sustained, the symptoms observed being in all probability due to Tuberculosis, from which he was also suffering.

PARA-TYPHOID FEVER.

7 cases of Para-typhoid Fever were notified during the year. 1 of these cases was a resident of Carlisle, who was taken ill about the 26th July. Investigations into the history of the case gave no reliable evidence of

the probable date or the source of infection. The patient, a young woman aged 27, had not been away from the City for several months. She was removed to the Isolation Hospital, and the behaviour of the illness throughout justified the diagnosis of Para-typhoid Fever.

With regard to the other 6 cases, these were notified from the Cumberland Infirmary as follows:—

23rd August, two females, aged 17 and 23 years respectively, both resident in the County of Cumberland, admitted into the Infirmary in one instance for a simple operation, and in the other for the purpose of radiography.

9th September, a female, aged 31, also a resident in the County of Cumberland, admitted to the Infirmary for removal of appendix. The clinical history and bacteriological findings supported the earlier diagnosis.

24th October a female, aged 16. This patient, whose home was in the County of Westmorland, at the time of notification was employed as a maid at the Infirmary. At the commencement the illness was suggestive of acute abdominal inflammation. At a later date the blood gave a positive re-action for Para-typhoid Fever.

3rd November, a female, aged 3, also a resident of the County of Westmorland, who had been operated upon for an abscess in connection with the appendix, later on developed signs of Para-typhoid Fever; this diagnosis was supported by the blood test.

8th November, a female, aged 17, who for some time had been engaged as a maid at the Infirmary. A Widal test was positive in dilutions up to 1-100.

Table showing the average number of cases notified as enteric fever for 5-year periods, 1890—1919, and for the 5 years 1920—1924.

Years.	Average for periods of 5 years.	Year.	Number of cases notified.
1890-1894	21·2	1920	2
1895-1899	18·6	1921	1
1900-1904	12·6	1922	...
1905-1909	3·2	1923	...
1910-1914	3·8	1924	8
1915-1919	1·4	...	...

No case of typhus or continued fever was notified.

MALARIA.

8 notifications relating to patients suffering from Malaria were received. In each instance the patient had been abroad on active service, and had been infected with the disease whilst abroad.

No case of malaria of indigenous origin was notified.

DYSENTERY.

No case of Dysentery was notified.

PNEUMONIA.

144 notifications of cases of Pneumonia were received during the year. In 32 instances the disease was stated to be of the acute influenzal type, and in 112 instances of the acute primary type.

The cases were investigated by the Health Visitors and, where the patient was not removed to Hospital, isolation carried out as far as possible, and where necessary advice given as to nursing and prevention of infection to others. 259 visits by the Health Visitors were made in this connection.

In 2 instances the patient was removed to Hospital.

Death took place in 6 instances of the cases notified as influenzal pneumonia, and in 22 instances of those notified as primary pneumonia.

INFLUENZA.

23 deaths of residents were registered as due directly to influenza, as against 7 in 1923.

The age distribution of the deaths occurring among the 23 persons was as follows:—

0 to 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and up- wards	Total
1	2	...	1	1	2	7	9	...	23

INFLUENZA VACCINE.

No application was received during the year for a supply of influenza vaccine.

ENCEPHALITIS LETHARGICA.

6 cases of Encephalitis Lethargica were notified during the year, 3 of whom were males and 3 females. In 5 instances the notifications related to residents of Carlisle. Brief particulars of the cases are as follows:—

(1) Female, aged 18, weaver, who 8 weeks before had suffered from influenza, began with drowsiness followed by slight squint and double vision. There were no other subjective or objective signs of nervous disease. This patient, who recovered entirely, was considered an abortive case of Encephalitis Lethargica.

(2) Male, schoolboy, aged 12. Treated in the Cumberland Infirmary for rise of temperature, drowsiness, slight nystagmus and squint. This case, which recovered entirely, was regarded as an abortive case of Encephalitis Lethargica.

(3) Male, schoolboy, aged 14, commenced with double vision, slight squint, and vomiting, followed by delirium for four days; these symptoms passed off and the patient became unnaturally sleepy, but was fairly

easily roused. This continued for about a week, when his condition improved and terminated in complete recovery. This was regarded as an abortive case of Encephalitis Lethargica.

(4) Female, aged 18, commenced with insomnia and disordered movement of limbs, followed by considerable excitement for about a week, which passed off and was followed by drowsiness, the development of ptosis of both eyelids, headache, and hoarseness. All these symptoms appeared to pass away entirely, and the patient became bright and cheerful. A month later, however, she began to have difficulty in swallowing, which rapidly progressed, and this, with other grave symptoms, terminated fatally.

(5) Male, school boy, aged 12, whose illness began with unnatural sleepiness which lasted for a week, followed by double vision, which was present for three days; at the end of that period slight dropping of one eyelid and dilatation of one pupil, with absence of re-action to both light and accommodation, was observed. This case recovered, with the exception of slight dilatation of the pupil, which now appears to be permanent. It was regarded as an abortive case of Encephalitis Lethargica.

With regard to the case of the non-resident, a woman aged 44, married, who resided a good distance from Carlisle, was admitted into the Cumberland Infirmary on account of this illness, but died immediately after admission. This was considered to be a case of Encephalitis Lethargica.

CEREBRO-SPINAL FEVER.

During the year 4 cases of Cerebro-spinal Fever were notified. In 3 instances the illness was fatal. Brief particulars of the 4 cases are as follows:—

(1) Female, aged 7, began with what appeared to be a cold with vomiting, followed by pains in the head and neck, which caused her to cry out. This condition was quickly followed by grave symptoms of disease of the central nervous system, and the patient died 5 days after receipt of notification.

(2) Male, aged 8, exhibited high temperature, intense headache, and twitching of limbs, marked retraction of head, and arching of spine, who died whilst the doctor was paying his first visit before the case was notified.

(3) Female, aged 16, factory worker, began with severe frontal headache, nausea, stiffness of neck, and pain in back. Other characteristic symptoms of disease of the central nervous system quickly developed. This patient was admitted into the Cumberland Infirmary, and eventually recovered. She left feeling well.

(4) Female, married, aged 42, admitted into the Cumberland Infirmary with symptoms of acute disease of the central nervous system. Died six days after admission.

TETANUS, &c.

No case of tetanus was notified during the year, and no application was received for a supply of tetanus antitoxin.

NOTIFICATION FEES.

The total amount paid in fees for notifications of all notifiable diseases during 1924 was £82 1s. 0d.

Particulars relating to puerperal fever, ophthalmia neonatorum, measles, whooping cough, chickenpox, and mumps, are given on pages 57 and 58.

SUMMARY OF NURSING ARRANGEMENTS, HOSPITALS, AND OTHER INSTITUTIONS, AVAILABLE FOR THE DISTRICT.

Professional Nursing in the Home.

(a) *General.* None.

(b) *Infectious.* An annual retaining fee of £20 is paid by the Council to the Queen's Nurses of the Carlisle District Nursing Association, on condition that nursing facilities will be made available by them for such cases of puerperal fever, ophthalmia neonatorum, measles, whooping cough, and epidemic diarrhoea, as the Council may require them to attend. In addition, 1s. per visit is paid on account of such cases.

Midwives.

The Corporation does not employ midwives except at the Maternity Hospital, and does not pay any subsidy in respect of any midwife practising in the district.

Hospitals provided or subsidised by the Local Authority.

(1) *Tuberculosis.* The Corporation has a call upon 20 beds in the Blencathra Sanatorium, Threlkeld, Cumberland, in accordance with the agreement made between the Local Government Board, the Sanatorium Committee, and the Corporation.

(2) *Maternity.* A hospital has been provided by the Corporation at 3 George Street, Carlisle, containing 13 beds and cots.

(3) *Children.* There is a children's ward at the Cumberland Infirmary which provides for local requirements. The Corporation make a general contribution to the funds.

(4) *Fever.* General infectious diseases are sent to Crozier Lodge Isolation Hospital, Carlisle, 50 beds.

(5) *Smallpox.* The Corporation has provided a hospital for the isolation of smallpox a few miles out of the City, containing 12 beds.

(6) *Others.* None.

LIST OF EXISTING CLINICS AND INFANT WELFARE CENTRES IN THE CITY.

Nature of Centre.	Address.	Accommodation.	Provided by.
Maternity and Child Welfare (Post-natal), once weekly	Maternity Hospital, 3 George Street	Waiting, Consulting, and Weighing Rooms	Carlisle Corporation
Maternity and Child Welfare (Ante-natal), once weekly	Do.	Waiting, Consulting, and Dressing Rooms	Do.
Infant Welfare Centre, weekly	West Walls	One Large Room	The Carlisle Mothers' and Babies' Welcome Society
Do.	St. John's Hall, South Street	Two Rooms	Do.
Do.	Caldewgate	One Room	Do.
Do.	Howie Boyd Hall, Currock	Two Rooms	Do.
School Clinic, Minor Ailments, daily	2 George Street	Three Rooms	Carlisle Corporation
Do. Dental, twice weekly	Do.	Two Rooms	Do.
Do. Special Ophthalmic Examinations, weekly	Do.	Two Rooms and Dark Room	Do.
Do. X-Ray, weekly	Do.	Two Rooms	Do.
Tuberculosis Clinics, four times weekly	1 George Street	Four Rooms and Laboratory	Do.
Venereal Clinic, five sessions weekly and intermediate treatment	Cumberland Infirmary	Three Rooms	Jointly by Carlisle Corporation and the Cumberland County Council

Institutional Treatment for Unmarried Mothers, Illegitimate Infants, and Homeless Children.

With the exception of a small house provided by the Diocesan Association at 25 Myddleton Street, Carlisle, which makes provision for one or two expectant unmarried females temporarily, there is no institution providing these facilities except those of the Poor Law Authority.

Ambulance Facilities.

(a) For infectious cases. An ambulance is kept at the Isolation Hospital for the use of cases occurring in the City and the adjacent Rural District.

(b) For non-infectious and accident cases. A public ambulance, provided by the Corporation, for accidents and illness other than infectious disease is kept at the Fire Station, Spring Gardens Lane, for which the following charges are made:—

For residents in the City ...	... 7/6 for each removal
For not exceeding 2 miles outside the City ...	... 10/- „
For beyond 2 miles and not exceeding 3 miles ...	... 12/6 „
For each additional mile thereafter (limited to 20 miles outside the City) ...	... 3/- per mile

Between 9 p.m. and 7 a.m. 50 per cent. additional is charged.

In cases of accidents in the streets no charge is made for the removal of persons to the Infirmary or their homes.

BACTERIOLOGICAL WORK.

During the year 74 specimens of sputum have been examined for the presence of tubercle bacilli, in 24 of which the organism was found.

43 swabs from throats were submitted to the Clinical Research Association for examination for the Klebs Loeffler Bacillus, and in 15 instances the organism was found.

19 samples of milk were purchased from persons purveying milk within the City and submitted to the Public Health Laboratory, Manchester, for experimental inoculation, and in 18 instances no ill effect was observed in the health of the animals experimented upon. In 1 instance tubercle bacilli were found. Inoculation of animals from further samples of milk taken from the cows at the same farm gave no indication of the presence of tubercle bacilli.

5 samples of milk taken by the Veterinary Inspector from cows at a farm outside the district were sent to the Clinical Research Association, London, for bacteriological examination, and were all found to be free from tubercle bacilli.

1 specimen of blood for examination for the presence of *B. Typhosus*, *B. Paratyphosus*, *B. Aertycke*, and *B. Enteritidis*, was sent to the Public Health Laboratory, Manchester. Cultures were all negative, as was also the result of a Weil-Felix test.

2 specimens of Fæces were sent to the Public Health Laboratory, Manchester, for examination for the presence of organisms of the Typhoid Group; no organisms of this group were isolated.

4 samples of City water, taken from a domestic tap, were submitted to the Public Health Laboratory, Manchester, for bacteriological examination. A tabulated summary of the reports is given on page 15.

TUBERCULOSIS.

131 notifications of tuberculosis were received during the year, of which 7 were duplicates. Of the primary notifications 92 were by medical practitioners and 32 by the School Medical Officers or Tuberculosis Officer. 104 notifications related to pulmonary tuberculosis and 20 to other forms of the disease.

Summary of Notifications of Tuberculosis from 30th December, 1923, to 3rd January, 1925.

NOTIFICATIONS ON FORM A.

		Number of Primary Notifications.															Total Prim-ary Noti-fications on Form A.
		Ages.															
		0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 & up-wards.	Total Prim-ary Noti-fications.				
Pulmonary	Males	...	1	6	2	3	6	9	4	3	5	1	40	42			
	Females	...	1	..	2	7	5	8	5	8	3	3	43	48			
Non-pulmonary	Males	2	...	...	...	1	1	2	...	1	...	...	7	7
	Females	1	2	1	...	2	1	..	...	..	...	...	7	7
Totals		4	4	7	4	13	13	19	9	12	8	4	97	104			

NOTIFICATIONS ON FORM B.

		Number of Primary Notifications.				Total Noti- fications on Form B.
		0-5	5-10	10-15	Total.	
Pulmonary	Males	...	7	2	9	9
	Females	...	6	6	12	12
Non-pulmonary	Males	...	2	1	3	3
	Females	...	2	1	3	3
Totals		...	17	10	27	27

NOTIFICATIONS ON FORM C.

		Poor Law Institutions.		Sanatoria.	
Pulmonary	Males	...	4	23	
	Females	..	1	27	
Non-pulmonary	Males	...	...	1	
	Females	...	...	...
Totals		...	5	51	

SUPPLEMENTAL RETURN.

New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health otherwise than by notification on Form A or Form B under the Public Health (Tuberculosis) Regulations, 1912.

Ages.	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and upwards.	Total Cases
Pulmonary—												
Males .. .. .	...	...	..	...	1	...	...	...	...	1	1	3
Females .....	...	1	...	...	...	...	...	1	...	...	...	2
Non-pulmonary												
Males	2	1	1	...	2	...	...	...	...	..	...	6
Females	1	3	1	...	...	..	...	...	...	...	...	5
Totals	3	5	2	...	3	...	...	1	...	1	1	16

The total number of deaths of City residents registered from all forms of tuberculosis was 69, equal to a death-rate of 1.2 per 1,000 of the population at all ages. Of this number, 49 (71 per cent.) were due to pulmonary tuberculosis, equal to a death-rate of 0.8 per 1,000 of the estimated population at all ages.

Distribution of the Deaths from Tuberculosis in the various Wards of the City, 1924.

	Stanwix and Etterby	Ricke gate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	St. Cuthbert's	Caldewgate	Newtown & Belle Vue	Carlisle
Pulmonary ...	1	2	6	10	5	4	3	7	8	3	49
Non-Pulmonary ...	1	1	2	3	4	3	...	2	3	1	20
Totals	2	3	8	13	9	7	3	9	11	4	69

Age and Sex distribution of New Cases and Deaths from Tuberculosis, 1924.

Ages.	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and over.
New Cases.											
Pulmonary—											
Male ...	...	1	13	4	3	6	9	4	3	5	1
Female ...	1	1	6	8	7	5	8	5	8	3	3
Non-Pulmonary—											
Male ..	2	...	2	1	1	1	2	...	1	..	...
Female ..	1	2	3	1	2	1	...	...	...	...	...
Deaths.											
Pulmonary—											
Male ...	...	1	...	...	3	2	6	3	3	3	2
Female ...	...	1	...	2	3	2	4	3	8	1	2
Non-Pulmonary—											
Male ...	3	1	1	...	3	1	...	1	1	...	...
Female ...	1	5	1	...	1	...	1	...	...	...	...

Table showing the period persons dying in 1924 survived after notification.

	Not Notified	Died before Notification	Died within 7 days	Survived more than									
				1 week	1 month	3 months	6 months	9 months	1 year	1½ years	2 years	3 years	4 years
Pulmonary ...	5	...	5	39	35	29	21	18	16	14	13	9	6
Non-Pulmonary	8	3	3	6	6	6	3	2	2	2	2	2	1

Deaths from Tuberculosis, Influenza, and other Respiratory Diseases, 1920-1924.

Year.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Tuberculosis, all forms.	Influenza.	Other Respiratory diseases.
1920	36	15	51	23	119
1921	46	22	68	18	105
1922	50	14	64	55	136
1923	40	14	54	7	89
1924	49	20	69	23	115

The number of persons suffering from tuberculosis who died before notification was somewhat smaller than in 1923, viz., 19 per cent., as against 26 per cent., of the deaths registered from all forms of tuberculosis, but the condition is still far from satisfactory. Furthermore, in 16 per cent. of the notified cases the patient died either before receipt of the notification or within one week after. 60 per cent. only of the fatal cases survived more than a month after notification, 50 per cent. survived over 3 months, 34 per cent. over 6 months, and 26 per cent. over a year. It is therefore obvious that the Local Authority are severely handicapped in their efforts to check this scourge, and until the existence of cases is brought to the attention of the Medical Officer of Health earlier, together with a fuller use of the Tuberculosis Clinic in respect of the assistance in the diagnosis in doubtful cases, no substantial progress is likely to be recorded. This matter is in the hands of medical practitioners, the patients themselves, and their relations, whom it is hoped will take greater advantage of the facilities provided by the Authority's scheme.

The Tuberculosis Officer examined 172 new cases during the year, 152 at the Dispensary and 20 at the homes of the patients. 73 of the patients were notified cases, and 17 were notified after observation by the Tuberculosis Officer. 36 were classified as doubtful, and 46 were found not to be suffering from tuberculosis.

Of the notified cases, 36 were insured persons, 2 were discharged soldiers, 32 children of school age, and 20 outside these categories. 77 of the patients were suffering from pulmonary tuberculosis, and 13 from non-pulmonary tuberculosis, the classification being as follows:—

	Insured Persons.	Discharged Soldiers.	School Children.	Others.	Total.
Stage I	6	—	23	3	32
Stage II	18	1	1	5	25
Stage III	10	1	—	9	20
	—	—	—	—	—
	34	2	24	17	77
Non-Pulmonary	2	—	8	3	13
	—	—	—	—	—
	36	2	32	20	90
	—	—	—	—	—

The classification of the contacts, &c., examined was as follows:—

	Insured Persons.	School Children.	Others.	Total.
Doubtful ...	1	31	4	36
Not Tubercular ...	10	31	5	46
Afterwards Notified ...	4	11	2	17
	—	—	—	—
	15	73	11	99
	—	—	—	—

235 old cases also came under the personal supervision of the Tuberculosis Officer, and of these patients 180 were notified cases and 55 contacts and suspects still regarded as doubtful.

The classification of the old cases was as follows:—

	Insured Persons.	Discharged Soldiers.	School Children.	Others.	Total.
Notified ...	49	21	67	43	180
Not Notified ...	2	—	47	6	55
	—	—	—	—	—
	51	21	114	49	235
	—	—	—	—	—

The total number of patients under supervision during the year was therefore 407, and the total number of attendances at the Tuberculosis Dispensary for examination was 1579, made up as follows:—

	Insured Persons.	Discharged Soldiers.	School Children.	Others.	Total.
Notified ...	261	102	542	154	1059
Not Notified ...	26	—	468	26	520
	—	—	—	—	—
	287	102	1010	180	1579
	—	—	—	—	—

139 visits to the homes of patients were made by the Tuberculosis Officer.

45 patients received treatment by means of Tuberculin (B.E.), the total number of injections given being 480.

The Tuberculosis Clinic was open on 205 occasions, the average number of patients attending per session

being 7.7. 5138 visits were made by the nurses to the homes of patients on the register, which at the end of the year contained 824 names. 682 of these were suffering from pulmonary tuberculosis, and 142 from non-pulmonary tuberculosis.

Cod Liver Oil and Malt were supplied free in 19 instances, sputum flasks in 5 instances, and thermometers in 3 instances.

74 specimens of sputum were examined, in 24 of which Tubercle Bacilli were found.

There were 9 patients in Blencathra Sanatorium at the beginning of the year, and 51 were admitted during the year; 2 of the latter were admitted twice, making a total of 58 patients receiving sanatorium treatment. 48 patients were discharged, including 2 who were twice discharged, and of the net total of 46 the condition on leaving was as follows:—Much improved, 19; improved, 22; unchanged, 5. The average duration of residential treatment was 123.5 days. 12 patients were still undergoing treatment at the end of the year.

The absence of facilities for the treatment away from the home of the advanced case is a serious drawback, as these disabled and infecting persons will not entertain the idea of removal to the shelters at Fusehill, consequently they remain in their own homes, which are so often overcrowded or otherwise unsatisfactory, a danger to those about them.

TREATMENT OF DISCHARGED SOLDIERS.

1 new case (Stage II) and 1 new case (Stage III), and 21 old cases, attributable to or aggravated by service in the Great War, have been under supervision during the year. The advanced cases were seen at their own homes at regular intervals, and the others paid 102 visits to the Dispensary.

5 pensioners died during the year.

2 pensioners were receiving combined treatment and training at Englethwaite Tuberculosis Colony at the beginning of the year, and both were discharged during the year. One has since died, the condition of the other being very satisfactory.

2 pensioners were admitted into Blencathra Sanatorium for periods of 28 and 56 days respectively, the condition on discharge being improved in both cases.

PUBLIC HEALTH (VENEREAL DISEASES) REGULATIONS, 1916.

DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES.

During the year 203 persons residing in Carlisle, 139 of whom were males and 64 females, were under treatment or observation at the Clinic at the Cumberland Infirmary. This is a decrease of 14 persons upon the figure for the previous year.

118 new patients attended for the first time, as compared with 123 for the previous year.

82 patients were found to be suffering from syphilis, 5 from non-syphilitic chancre, 92 from gonorrhœa, and 24 from conditions other than venereal disease.

1235 attendances were made by these patients, a decrease of 27 on the figure for the previous year. In addition, 2384 attendances were made by patients for intermediate treatment by irrigation, and 258 doses of arsenobenzol compounds were administered to patients.

CLINICS.

Clinics were held on the same days and at the same hours as in the previous year, viz.:—for women and children on Mondays at 2-30 p.m., and Thursdays at 5-30 p.m. The male clinics for syphilis were held on Wednesdays at 2-30 p.m., and Thursdays at 6 p.m.; and the male clinics for gonorrhœa on Wednesdays at 6 p.m.

New cases were seen at any of the clinics.

With regard to the examination of pathological material, in addition to the figures given in the following table, 2 specimens for the detection of Gonococci and 69 for Wassermann Re-action were sent on behalf of Medical Practitioners to the Public Health Laboratory, Manchester.

Return relating to all persons resident in the City of Carlisle who were treated at the Treatment Centre at the Cumberland Infirmary during the year ended the 31st December, 1924:—

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than Venereal.		Total.	
	M	F	M	F	M	F	M	F	M	F
1. Number of persons who, on the 1st Jan., 1924, were under treatment or observation for	34	17	1	...	27	6	...	...	62	23
2. Number dealt with during the year for the first time and found to be suffering from	12	19	4	...	45	14	16	8	77	41
Total-Items 1 2	46	36	5	...	72	20	16	8	139	64
3. Number of persons who ceased to attend										
(a) before completing the first course of treatment for	4	6	1	...	18	6	...	...	23	12
(b) after one or more courses, but before completion of treatment for	13	5	...	...	...	...	...	...	13	5
(c) after completion of treatment, but before final tests as to cure of	7	5	1	...	2	...	...	...	10	5
4. Number of persons transferred to other Treatment Centres after treatment for	...	1	...	...	...	1	...	...	...	2
5. Number of persons discharged after completion of treatment and observation for	4	...	2	...	16	...	...	...	22	...
6. Number of persons who, on the 1st Jan., 1925, were under treatment or observation for	18	19	1	...	36	13	...	...	55	32
Total-Items 3, 4, 5 & 6	46	36	5	...	72	20	...	...	123	56
7. Out-Patient attendances:—										
(a) For individual attention by the Medical Officer	228	220	7	...	628	100	36	16	899	336
(b) For intermediate treatment, e.g., irrigation, dressings, etc.	4	...	3	...	2370	7	...	...	2377	7
Total Attendances	232	220	10	...	2998	107	36	16	3276	343

Aggregate number of "In-patient days" of treatment given:—Nil.

Number of doses of Salvarsan-substitute administered in Out-patient Clinic:—258.

Examination of Pathological Material :—

	For Detection of			For Wassermann Re-action.
	Spirochaetes.	Gonococci.	Other Organisms.	
(a) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre ...	2	41	6	...
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory ...	...	8	3	149

With regard to the joint scheme of the County Council and the City, during the past year a total of 416 persons were treated at the two treatment centres, of whom 254 were seen for the first time, the remainder being carried over from the previous year. 68 of these were found not to be suffering from venereal disease, leaving 348. The figure for 1923 was 379.

In the number of new cases of syphilis (64) there was a decrease of 45, but there was an increase of 30 in the new cases of gonorrhœa (111).

Areas in which Patients resided.	New Patients.	Total Attendances.
Carlisle ...	118	3619
Cumberland ...	125	924
Westmorland ...	3	11
Dumfriesshire ...	2	45
Ireland ...	2	12
London ...	2	2
Durham ...	1	21
Lancashire ...	1	2
Totals ...	254	4636

NOTES BY DR. MC.MURTRIE ON THE INCIDENCE OF SYPHILIS AND GONORRHOEA IN CARLISLE DURING THE 5-YEAR PERIOD, 1920-24.

Five years have now elapsed since the Venereal Diseases Clinic was opened at the Cumberland Infirmary, and it is of interest to note the variation in the incidence of syphilis and gonorrhœa. This is graphically shown on the accompanying chart.

The number of new cases of syphilis fell from 70 in 1920 to 31 in 1924. The figure for 1920 is rather mis-

leading, as this was the first complete year of the Clinic, and consequently the number of new cases was abnormally high. Allowing for this, the decrease is remarkable.

Still more striking is the fall in cases of recently acquired syphilis. Here the 1920 figure is not in any way misleading, and there is a decrease from 26 to 5. Of these 5 cases in 1924, 3 are known not to have been contracted in Carlisle or Cumberland. The remaining 2 may have been contracted in Carlisle.

Congenital syphilis appears to be declining, having reached its maximum in 1921 to 1923. This is better shown in the Cumberland figures, where the maximum was in 1923.

We can with confidence look forward to the time when syphilis in this county will be almost a thing of the past, and those cases which do occur will be contracted for the most part abroad. In larger cities than ours, especially seaports, the extermination of the disease will naturally take longer, but it appears to be merely a question of time. The resulting benefit to the health of the community will be enormous, and the longevity of the race will be materially increased.

One cannot say the same about gonorrhœa. There is no really satisfactory treatment now known for this disease, and all the efforts made to combat it merely tend to shorten the period of infectivity. Many cases are still untreated or insufficiently or improperly treated, and many cease to attend before they are rendered non-infective.

From 1922 there has apparently been a steady rise in the incidence of Gonorrhœa in Carlisle. The number of new cases in 1922 was 38; in 1924 it was 59. To some extent this may be discounted by the increasing popularity of the Clinic, but there can be little doubt that the real explanation is that the disease is spreading, and there seems to be no reason why it should not continue to spread unless some more adequate measures can be found to combat it.

Chart by Dr. Mc.MURTRIE,
illustrating the incidence of
Venereal Diseases in Carlisle,
1920—1924.

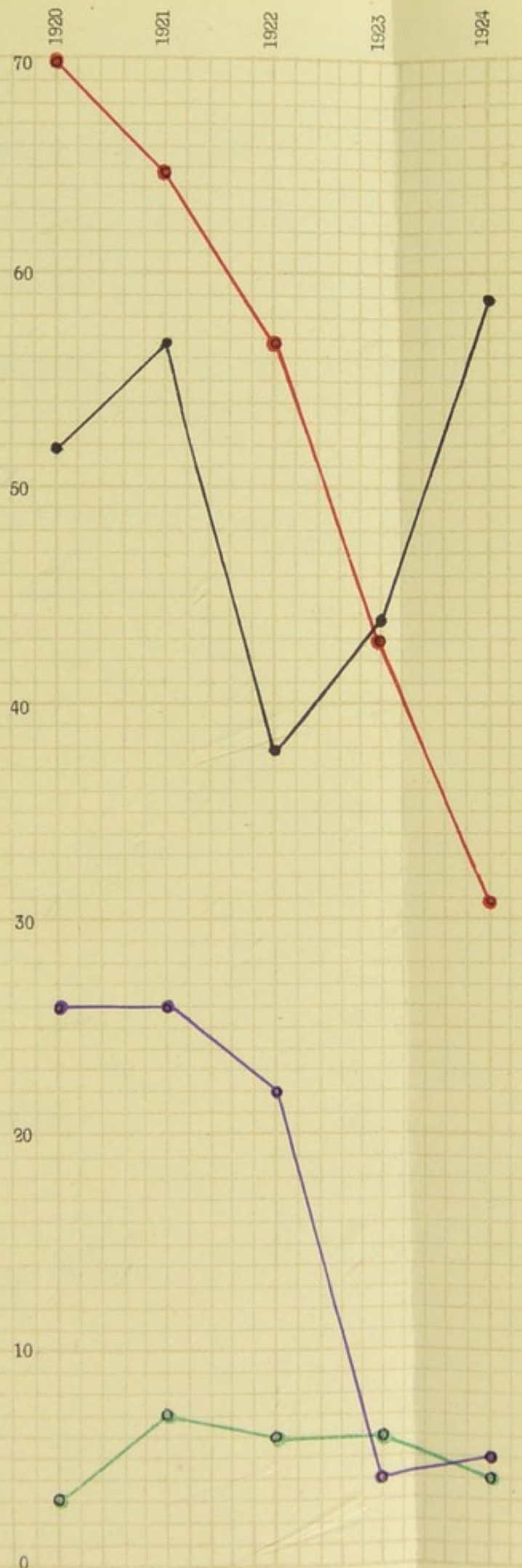
PATIENTS ATTENDING AT V.D. CLINIC,
CUMBERLAND INFIRMARY, CARLISLE, AND
RESIDING IN CARLISLE.

RED.— New Cases Syphilis.

BLACK.— New Cases Gonorrhoea.

VIOLET.—New Cases Syphilis con-
tracted within 6 months
prior to date of first atten-
dance, i.e., recent infections.

GREEN.— New Cases Congenital
Syphilis.



MATERNITY AND CHILD WELFARE.

During the past year 1,173 notifications of birth were received, 1,122 of which related to live births and 51 to still-births. 629 were notified by medical practitioners, 544 by midwives, and in 18 instances failure to notify occurred.

HEALTH VISITORS.

The following is a summary of the visits paid by the Corporation Health Visitors:—

Total number of homes visited	...	...	...	13371
Primary visits in connection with the notification of births	...	...	...	1130
Re-visits in connection with the notification of births—				
0—1 year	...	...	...	4738
1—2 years	...	...	...	3583
2—3 years	...	...	...	3328
3—4 years	...	...	...	2746
4—5 years	...	...	...	2250
			—	16645
Total number of routine visits to children	...	...	...	17775
Visits to boarded-out children	...	...	...	114
Visits to expectant mothers—				
Primary	...	...	...	241
Re-visits	...	...	...	287
			—	528
Visits in connection with—				
Deaths of children under 1 year	...	...	...	95
Ophthalmia Neonatorum	...	...	...	49
Diarrhœa	...	...	...	77
Bronchitis	...	...	...	234
Broncho-pneumonia	...	...	...	97
Acute Lobar and Influenzal Pneumonia	...	...	...	259
Measles	...	...	...	853
Whooping Cough	...	...	...	435
Chicken-pox	...	...	...	34
Mumps	...	...	...	302
Puerperal Fever	...	...	...	1
Spina Bifida	...	...	...	2

INSPECTION OF MIDWIVES.

During January 20 midwives gave notice of intention to practise, and on later dates 12 others notified their intention to practise, making a total of 32. 10 midwives left the City, leaving at the end of the year 22 midwives on the register.

These midwives attended a total of 557 confinements.

No case of puerperal fever occurred in the practice of a midwife.

Notices in accordance with the rules of the Central Midwives' Board were received in connection with the following conditions:—

Cases in which a midwife called for the assistance of a medical practitioner	...	...	...	20
Cases in which a midwife advised that medical help should be obtained	...	...	...	93
Notification of the intention to substitute artificial for breast feeding	...	...	...	22
Notification of still-births	...	...	...	13
Notification of having laid out a dead body	...	...	...	4
Notification of liability to be a source of infection	...	...	...	5
Notification of death of infant	...	...	...	1

The circumstances in which medical help was either obtained or advised are given as follows:—

Condition of Mother—

Ante-natal	...	...	...	...	10
Excessive vomiting	...	...	...	...	2
Hæmorrhage	...	...	...	...	6
Swelling of feet, hands, face, &c.	...	...	...	...	1
Abortion	...	...	...	...	1
During labour	...	...	...	...	38
Delayed labour	...	...	...	...	16
Malpresentation	...	...	...	...	8
Retained Secundines	...	...	...	...	3
Varicose Veins	...	...	...	...	2
Contracted Pelvis	...	...	...	...	1
Fits	...	...	...	...	1
Nervousness	...	...	...	...	5
Twins	...	...	...	...	2

Post-natal	...	...	...	...	...	38
Rupture of Perineum	...	...	...	...	30	
Hæmorrhage	...	...	...	...	2	
Rise of Temperature	...	...	...	...	2	
Swelling of Abdomen	...	...	...	...	1	
Inflammation of Breast	...	...	...	...	1	
Weak Heart	...	...	...	...	1	
Fits	...	...	...	...	1	
Condition of Child	...	...	...	...	...	27
Feebleness	...	...	...	...	9	
Prematurity	...	...	...	...	3	
Hæmorrhage from Bowels	...	...	...	...	1	
Conjunctivitis	...	...	...	...	9	
Jaundice	...	...	...	...	3	
Fits	...	...	...	...	2	

The following conditions are given as the reasons for the substitution of artificial feeding:—

By doctors' orders on account of—

Albuminuria in mother	...	...	...	...	1
Debility of mother	...	...	...	...	1
Mother's milk insufficient	...	...	...	...	3
No definite reason	...	...	...	...	3
					—
					8
					—

By midwives on account of—

Insufficient milk	...	...	...	...	3
Debility of mother	...	...	...	...	4
Puerperal Fever	...	...	...	...	1
Disinclination of mother	...	...	...	...	2
Infant nursed out	...	...	...	...	4
					—
					14
					—

Midwives were regularly inspected by visits at their own homes, and the necessary examinations of their outfits and registers have also been carried out. 28 routine and 24 special visits have thus been paid.

Letters have been written to midwives, drawing their attention to points in connection with the Rules of the Central Midwives Board, as under—

Incorrect designation on name plate	...	...	1
Failure to notify the birth of a still-born viable child	...	...	1
Failure to visit patient on the tenth day after confinement	...	...	5
Failure to note the date of birth in the midwife's register	...	...	1
Failure to enter a case in the midwife's register			1
Failure to note in the register the substitution of artificial feeding	...	...	3

HOME NURSING.

Under the arrangement with the Carlisle District Nursing Association the following visits were paid by the nurses of the Association:—

	No. of Cases.	No. of Visits.
Pneumonia	9	138
Bronchitis	1	11
Ophthalmia	1	17
		<hr/> 166

MATERNITY HOSPITAL.

145 patients received treatment in this institution, 8 of whom were admitted upon the request of medical practitioners.

No maternal death occurred.

In 2 instances the blood was submitted to the Wassermann test, and in each case the result was negative.

The following are also amongst the important particulars relating to the work of the Maternity Hospital:—

Remaining in Hospital on 31st December, 1923	...	7
Number of cases admitted during the year	...	138
		<hr/>
Total	...	145

Average duration of stay ...	...	11.6 days
Number of cases delivered by midwives ...	...	114
Number of cases delivered by a doctor ...	...	20
Total number of confinements ...	...	134
Number of cases treated ante-natally only ...	...	4
Number of cases treated during puerperium only	...	7

Number of cases in which medical assistance was specially indicated:—

Mothers—

Before labour ...	...	22
Albuminuria ...	...	4
Malpresentation ...	...	7
Pelvic Contraction ...	...	3
Varicose Veins ...	...	2
Incarcerated Retroverted Gravid Uterus ...	...	1
Heart Disease ...	...	1
Tuberculosis ...	...	2
Hyperemesis ...	...	2
During labour ...	...	27
Delayed labour ...	...	19
Placenta Prævia ...	...	1
Adherent Placenta ...	...	2
Malpresentation ...	...	3
Eclampsia ...	...	1
Abortion ...	...	1
After labour ...	...	25
Rupture of Perineum ...	...	20
Raised Temperature ...	...	3
Bronchitis ...	...	1
Pleurisy ...	...	1
For Infant ...	...	9
Malformation ...	...	3
Feebleness ...	...	2
Artificial feeding ...	...	4
Number of Maternal Deaths ...	...	0
Number of foetal deaths ...	...	8
Number of Still-births ...	...	4
Causes—		
Malpresentation ...	...	2
Prematurity ...	...	1
Maternal Tuberculosis ...	...	1

Died before 10 days	...	...	...	...	4
Causes—					
Prematurity	...	...	...	...	2
Ante-Partum Hæmorrhage	...	...	...	...	1
Twin	...	...	...	...	1
Conditions necessitating the substitution of artificial feeding for breast feeding:—					
Insufficient Milk	...	...	...	...	3
Defect of Nipples	...	...	...	...	1

ANTE-NATAL CLINIC.

The number of attendances made at the clinic for expectant mothers was 555, a slight increase on the figures for last year, which show a growing appreciation of the value of the ante-natal visits. Of these, 158 were first visits of new patients.

Among the conditions requiring medical attention or advice were the following:—Heart disease, bronchitis, anæmia, constipation, hyperemesis, dyspepsia, defective teeth, chronic nephritis, albuminuria, œdema, varicose veins, hyperthyroidism, retracted nipples, cracked nipples, mastitis, uterine prolapse, pelvic contraction, malpresentation, hæmorrhage, leucorrhœa, hydramnios, and retroverted gravid uterus.

INFANT CONSULTATIONS.

At the clinics for children up to five years of age there were 795 attendances, about the same number as in 1923, of which 202 were attendances by new cases. Treatment or advice was found to be necessary for the following conditions:—Malnutrition, injudicious feeding, prematurity, debility, marasmus, diarrhœa, dyspepsia, constipation, worms, hernia, rickets, bronchitis, whooping cough, seborrhœa, eczema, impetigo, pruritus, boils, blepharitis, conjunctivitis, strabismus, otorrhœa, adenoids, phimosis, tongue-tie, cleft palate, talipes, adenitis, hyperthyroidism, fits, congenital malformations, &c.

VOLUNTARY AGENCY.

BABIES' WELCOMES AND SCHOOLS FOR MOTHERS.

Each of the four centres, viz., West Walls, Botchergate, Caldewgate, and Currock, was visited in turn by the Assistant Medical Officer for Maternity and

Child Welfare, one centre being visited each week; the mothers who attend are advised, as required, concerning the health of individual children, and are also addressed collectively by the Medical Officer on some matter of hygiene to which local or general events lend a momentary or perennial interest.

The following table gives a general summary of the work of the centres:—

Number of Sessions held	...	...	156
Attendances of Children—			
1st Attendances	...	...	192
Subsequent Attendances	...	...	4447
			<hr/>
Aged 0—1 year	...	...	1308
Aged 1—5 years	...	...	3331
			<hr/>
Total	...	...	4639
Attendances of Mothers—			
1st Attendances	...	...	161
Subsequent Attendances	...	...	3398
			<hr/>
Total	...	...	3559
Classes and Addresses—			
Mothercraft	...	...	67
Sewing	...	...	4
Hygiene	...	...	31
Cooking	...	...	12
			<hr/>
Total	...	...	114

HEALTH VISITOR.

Total number of homes visited	...	...	2984
Primary visits	...	...	667
Re-visits to children—			
0—1 year	...	...	1506
1—2 years	...	...	512
2—3 years	...	...	455
3—4 years	...	...	378
4—5 years	...	...	310
			<hr/>
			3161
Total number of visits to children	...	...	3828

Visits to expectant mothers—

Primary	...	...	...	...	9
Re-visits	...	...	...	...	45
Number of attendances at Babies' Welcomes					120

FREE PROVISION OF MILK.

During the year 2409 gallons of fresh milk were supplied to 159 families for the purpose, principally, of assisting the feeding of infants, and in a few instances to nursing mothers. Previous to supplying the milk, careful investigation of the circumstances was made in each instance.

STILL-BIRTHS.

The number of still-births notified during the year was 51, or 1 less than the number notified in 1923. Of this number 13 were notified by midwives, concerning which the following particulars are available:—5 were full-time still-births and 8 premature; of the 5 full-time still-births, 4 were macerated foetuses and 1 was born before the arrival of the midwife; of the 8 premature still-births, 3 were macerated foetuses and 3 complications at labour.

It will be seen from the following table that in 13 cases the cause of the still-birth was unascertainable, while in a number of instances information suggestive of a history of ante-partum hæmorrhage was obtained, and in others the cause was an instrumental delivery or a malpresentation of the child.

In one instance no information was obtainable regarding the still-birth, and in one case the child was a monster, the sex not being ascertainable.

The bodies of 48 still-born children were given burial in the Carlisle Cemeteries.

- The figure in respect of the percentage of illegitimacy to still-births cannot be stated owing to the particulars concerning one of the cases not being obtainable. The percentage, however, would be less than half that for 1923.

Table showing certain particulars regarding the 51 still-births.

	Total.	Legitimate.	Illegitimate.	Male.	Female.	Full Time.	8 Months.	7 Months or less.
Maternal Conditions—								
Albuminuria ...	1	0	1	0	1	0	1	0
Ante-partum Hæmorrhage...	9	9	0	6	3	3	1	5
Strain or Accident ...	2	2	0	1	1	1	0	1
Delayed Labour ...	1	1	0	1	0	1	0	0
Contracted Pelvis ...	2	2	0	1	1	2	0	0
Instrumental Delivery ...	8	8	0	?	?	6	1	1
Malpresentation ..	4	3	1	3	1	3	1	0
Malformation of Child ...	2	2	0	0	2	1	0	1
Prolapse of Cord ...	2	2	0	0	2	2	0	0
Twins ...	3	3	0	2	1	2	0	1
Marked Prematurity ..	2	2	0	2	0	0	1	1
Post-maturity ...	1	1	0	0	1	1	0	0
No cause ascertained ...	13	13	0	9	4	10	1	2
No information available ...	1	?	?	?	?	?	?	?

INFANT MORTALITY.

The total number of deaths of infants under one year was 111; the number of deaths of residents was 106, which provides a net infant mortality rate of 95.0 per 1,000 of the registered births. Correcting for variations by adopting the method suggested by the Registrar-General, viz., taking as a denominator the sum of 70 per cent. of the current year's births and 30 per cent. of the births of the previous year, the infant mortality rate for 1924 is 93.4 per 1,000 births registered, a rather higher figure than that for the previous year.

The number of deaths due to diarrhœa amongst infants up to one year was 5.4 per 1,000 registered births, as compared with 7.6 per 1,000 registered births in 1923, and with 5.5 per 1,000 registered births in 1922.

The mortality rate for infants under four weeks was a good deal lower than during 1923. Nevertheless no fewer than 13 children died before they were a day old, 19 before they were one week old, and 24 before the fourteenth day. The number of deaths caused by prematurity of birth was 19, or 17.0 deaths per 1,000 of the registered births, as compared with 28.0 per 1,000 in 1923; whilst marasmus and allied disorders were stated

to have caused 11 deaths in 1924, as compared with 6 in 1923. A large percentage of deaths attributable to marasmus may, however, be regarded as due to prematurity.

The increase in the death-rate is chiefly due to respiratory disorders, bronchitis, and pneumonia, caused by the damp and sunless seasons; these two diseases caused 30 deaths in 1924, as compared with 14 in 1923, *i.e.*, they accounted for nearly one-third of the infantile death-rate.

In this connection it is interesting to note that practically all the deaths from gastro-enteritis occurred in the winter months, and were probably referable to cold and damp as predisposing causes, in contradistinction to the form of epidemic gastro-enteritis, which occurs in a hot and dry summer. Owing to the dampness there has been no real summer diarrhoea; 1 death from gastro-enteritis occurred in June, but that is much too early for the typical form of summer diarrhoea.

Meningitis and tuberculosis caused 4 deaths each in 1924, as compared with 1 each in 1923; the damp is responsible for the increase in tuberculosis.

Deaths from epidemic diseases, especially whooping cough, were more numerous in 1924 than in 1923, the fatal termination in many of these cases being due to some respiratory complication.

That the infantile deaths were not dependent upon food infection is supported by the information given in the table in which the infantile deaths are shown in reference to the mode of feeding, from which it will be seen that the proportion of breast-fed babies who died was much larger than in any year since 1914. The rather high mortality of last year was therefore unpreventable and principally occurred among children suffering from respiratory diseases; it is possible that some of these deaths might not have occurred had the condition of the home and surroundings been more favourable.

It is possible that if provision were specially made in the nature of a sick ward for such cases one of the principal objections to removal from home would disappear, but it would probably still be necessary to provide for isolation, seeing that these cases so often start in the first instance with some zymotic infection.

INFANT MORTALITY, with deaths from stated causes, at various ages and in various seasons, of children under one year of age.

CAUSE OF DEATH.	AGE.								MONTH.												Total Deaths under One Year.	
	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks & under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.		December.
All Causes. } Certified ...	18	5	7	3	33	25	11	21	13	8	17	16	14	7	9	3	3	4	5	4	13	103
Causes. } Uncertified ...	1	...	...	...	1	1	1	...	...	...	...	1	...	...	...	...	...	1	1	...	...	3
Whooping Cough ...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	4
Influenza ...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Measles ...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1
German Measles ...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1
Syphilis ...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Tuberculosis (all forms)	...	...	...	...	...	1	...	1	2	...	...	1	2	...	1	...	...	...	...	...	...	4
Septicaemia	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Meningitis ...	...	...	...	...	...	...	1	1	2	1	4	1	1	...	...	...	...	...	...	1	...	4
Bronchitis ...	...	...	1	1	2	3	1	2	1	1	...	...	...	...	1	...	...	...	...	...	...	9
Pneumonia (all forms)	...	1	1	1	3	4	4	7	3	3	5	6	1	...	1	...	...	...	1	...	...	21
Congestion of the Lungs	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Enteritis ...	...	...	...	...	...	2	...	3	1	1	3	...	...	...	1	...	...	...	...	...	...	6
Gastritis ...	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1
Convulsions	...	...	2	...	2	1	1	2	...	1	1	1	...	...	...	...	...	1	...	...	...	7
Prematurity	9	2	2	1	14	4	...	...	1	...	2	1	5	2	1	1	2	3	1	1	...	19
Congenital Defects	2	1	1	...	4	2	...	1	...	...	...	1	...	1	2	...	...	1	...	...	...	7
Other Defects of Early Infancy	3	...	...	...	3	1	...	...	...	...	...	2	3	1	1	2	...	...	...	...	...	4
Atrophy, Debility & Marasmus	4	1	...	...	5	4	1	1	...	...	1	2	...	2	1	...	...	...	1	...	...	11
Asphyxiation	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Hæmophilia	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Totals	19	5	7	3	34	26	12	21	13	8	17	17	14	7	9	3	3	5	6	4	13	106

**Rates of Mortality among Infants at various ages, and
from the principal causes, per 1,000 births.**

Year	Nett Infant Mortality Rate.	AGES.					CAUSES.					
		Under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Months	Not Preventable.			Preventable.		
							Premature Birth	Atrophy, Debility & Marasmus	Congenital Malformations and Atelectasis.	Diarrhoea and Enteritis	Bronchitis and Pneumonia	Whooping Cough
1909	123.6	47.9	26.1	20.9	14.8	13.9	21.7	17.4	7.0	20.9	13.1	4.4
1910	109.1	41.9	19.1	21.0	15.7	11.4	28.8	13.1	5.2	12.2	14.8	4.4
1911	145.0	45.0	27.0	27.0	25.2	20.8	18.0	12.6	4.5	37.9	26.1	9.0
1912	102.4	42.0	15.8	16.6	17.5	10.5	15.8	15.8	9.6	9.6	21.9	6.1
1913	127.1	49.8	17.2	27.5	19.0	13.7	28.4	12.9	6.0	19.0	18.0	3.4
1914	122.4	48.0	25.6	21.5	15.7	11.6	19.8	15.7	5.6	20.7	18.2	5.8
1915	144.3	51.2	30.2	26.8	14.3	21.8	30.2	12.6	5.9	15.9	20.1	10.1
1916	101.5	47.1	13.6	16.3	15.4	9.1	27.2	7.3	8.1	17.2	14.5	0.0
1917	106.5	39.4	16.1	23.3	15.2	12.7	20.6	7.2	10.8	24.2	10.7	1.8
1918	126.8	38.7	17.4	26.1	30.0	14.5	22.3	10.6	4.8	14.5	25.2	19.4
1919	107.9	45.9	17.8	18.8	13.1	12.3	19.7	22.5	9.4	13.1	20.6	0.0
1920	80.0	30.2	13.4	19.3	10.5	7.0	16.1	11.9	9.1	8.6	13.3	3.5
1921	105.3	38.2	17.5	23.7	16.8	9.1	11.4	17.5	9.1	22.1	13.7	2.3
1922	81.2	35.5	11.0	14.2	7.9	12.6	17.4	8.7	6.3	5.5	15.8	2.4
1923	82.9	39.7	11.0	7.6	14.3	10.1	29.6	5.0	6.7	7.6	11.8	0.8
1924	95.0	30.5	23.3	10.7	18.8	11.7	17.0	9.9	6.3	5.4	26.9	3.6

Infant Mortality Rates for the various Wards, 1918-1924.

Year	Stanwix & Etterby	Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	St. Cuthbert's	Caldewgate	Newtown & Belle Vue	Carlisle
1918	108.7	141.2	135.4	101.7	94.9	93.8	125.0	193.3	156.2	97.2	126.8
1919	81.6	97.8	123.3	83.9	125.0	65.4	160.6	119.0	115.1	65.8	107.9
1920	46.5	77.5	54.3	100.0	68.6	57.4	81.6	113.2	87.0	78.4	80.0
1921	23.8	150.7	91.7	174.6	86.9	62.0	105.2	62.5	158.4	56.8	105.3
1922	50.8	47.6	84.0	75.7	102.9	90.9	98.7	65.7	78.5	112.5	81.2
1923	163.2	79.6	64.0	82.6	77.5	44.9	73.0	64.1	141.0	107.6	82.9
1924	68.9	96.7	150.0	36.6	81.4	93.4	55.1	130.0	158.8	36.1	95.0

INFANT MORTALITY IN RELATION TO THE MODE OF FEEDING.

The following table shows the deaths of infants under one year in relation to the mode of feeding:—

MODE OF FEEDING.	Number so Fed.			Number of Deaths.			Mortality Rate per 1,000 so fed.
	Legitimate.	Illegitimate.	Total.	Legitimate.	Illegitimate.	Total.	
Breast	802	29	831	46	0	46	55.4
Partly Breast and partly Bottle	119	19	138	22	3	25	181.2
Bottle—							
(1) Boat-shaped	108	11	119	13	1	14	117.6
(2) Tube bottle	2	0	2	0	0	0	0.0
Debilitated Infants—							
(1) Spoon-fed	4	0	4	4	0	4	1,000.0
(2) Unable to be fed	14	1	15	14	1	15	1,000.0
No information re feeding	28	0	28	6	0	6	214.3

Table showing the Death-rate per 1,000 infants under 1 year, classified according to the Method of Feeding,
1915—1924.

Mode of Feeding.	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	10 years.		
											Total No. of Children.	Total No. of Deaths.	Average Mortality Rate.
Total infant mortality rate ...	144.3	101.5	106.5	126.8	107.9	80.0	105.3	81.2	82.9	95.0	11988	1200	103.1
Mortality rate for breast-fed infants ..	7.49	4.43	25.3	49.6	44.2	35.1	39.6	38.4	33.8	55.4	9323	409	33.3
Mortality rate for infants partly fed on breast and partly on bottle ...	500.0	133.3	515.1	122.2	378.4	171.7	407.7	152.0	141.7	181.2	827	135	270.3
Mortality rate for infants fed by bottle	612.0	428.6	324.3	520.4	230.3	209.8	229.2	212.5	117.1	117.6	1093	358	30.0

INFANT MORTALITY AND RAINFALL.

Year.	Rainfall in Inches.	Number of days on which rain fell.	Infant Mortality.
1909	33.13	162	123.6
1910	29.64	197	110.0
1911	30.20	181	145.0
1912	30.01	217	102.4
1913	27.53	194	127.1
1914	28.31	201	122.4
1915	28.28	183	144.3
1916	38.97	228	101.5
1917	29.13	176	106.5
1918	33.65	190	126.8
1919	25.21	191	107.9
1920	32.11	211	80.0
1921	29.83	205	105.3
1922	28.55	209	81.2
1923	36.53	231	82.9
1924	35.11	210	95.0

ILLEGITIMACY.

The number of illegitimate births registered was 53, or 47.4 per 1,000 registered births, being 2.9 per 1,000 greater than the figure for 1923. The number of deaths amongst these children was 4, or 75.4 per 1,000 illegitimate births. The deaths of legitimate children numbered 102, or 95.9 per 1,000 legitimate births. The Health Visitors paid 114 visits to boarded-out children.

PUERPERAL FEVER.

During the year 4 notifications relating to puerperal fever were received, and in 2 instances the condition was fatal. In 1 fatal case the condition followed instrumental delivery, and in the other, a non-resident of Carlisle, Cæsarean section had been performed. The remaining 2 cases, which recovered, were slight; the illness in one case followed on some manipulation for hæmorrhage, the other following an abortion which was associated with a severe cold or influenza. The diagnosis in this case was, however, doubtful.

OPHTHALMIA NEONATORUM.

10 cases of ophthalmia neonatorum were notified, compared with 12 in 1923, 22 in 1922, and 24 in 1921.

In 9 instances both eyes were affected, and in the remaining case only one eye was affected. 2 cases were notified by medical practitioners, 3 by midwives, and 5 by both doctor and midwife. The discharge was purulent in each instance, but in no case was there any permanent damage to the eye.

In connection with this condition the Health Visitors of the Corporation paid 49 visits to affected babies in order that, if appropriate treatment was not being carried out, arrangements could be made for treatment.

In all the cases the condition was treated at home, but in one case the family doctor sent the child during treatment to the Cumberland Infirmary for a specialist's opinion. In another case the eyes of the child were attended to by the District Nurses.

Noti- fied.	CASES.		Vision un- impaired	Vision impaired	Total Blind- ness.	Deaths during treat- ment.	Remarks.
	At Home.	In Hos- pital.					
10	10	Nil.	10	Nil.	Nil.	Nil.	

INFECTIOUS DISEASES.

The Health Visitors paid 1,881 visits to cases of zymotic diseases, apart from their visits to children suffering from gastro-enteritis and ophthalmia neonatorum.

DIARRHŒA.

There were 16 deaths from diarrhœa during the year, and the Health Visitors paid 77 visits in connection with cases of diarrhœa and gastro-enteritis.

The following table shows the age incidence:—

Age.				No. of deaths.
0— 1 year	...	...	...	6
1— 2 years	...	...	...	2
2— 5 years	...	...	...	—
5—15 years	...	...	...	—
15—25 years	...	...	...	1
25—45 years	...	...	...	2
45—65 years	...	...	...	2
Over 65 years	...	...	...	3
				—
				16
				—

POLIOMYELITIS.

No notification relating to poliomyelitis was received during the year.

DEATHS AMONG CHILDREN AGED 1—5 YEARS.

44 deaths occurred among children aged 1—5 years from causes detailed hereunder:—

Infectious Diseases	...	12
Tubercular Diseases	...	8
Respiratory Diseases	...	10
Gastro-intestinal Diseases	...	2
Violence ...	...	2
Other Diseases	...	10
		—
		44
		—

HYGIENE OF PLACES OF PUBLIC ENTERTAINMENT.

The visits made in this connection will be found in the Sanitary Inspector's Report, page 81.

REPORT OF THE VETERINARY INSPECTOR.

During the year 136 newly purchased cows were examined in the several byres of the City, amongst which the following conditions were found:—

Disease of the udder ...	4
Disease of the lungs and udder ...	1
	—
	5
	—

The latter animal was tested with tuberculin, a characteristic re-action being obtained. All 5 animals were returned to the sellers.

The bovine animals exposed for sale at the Sands Cattle Market, and also at the Auction Marts, were examined, a total of 22,593 examinations being made.

The Auction Marts were visited each Monday in the year, and 13,730 pigs were examined.

236,195 sheep were also examined during the year.

A total of 2,856 examinations of milk cows were made in the several byres of the City, in order to ascertain the presence of disease likely to affect the milk supply, in the course of which the following conditions were found:—

Inflammation of the Udder ...	2
Septic Poisoning ...	4
Gastric Derangement ...	1
Milk Fever ...	1
Pneumonia ...	1
Abortion ...	1
	—
	10
	—

The milk from these 10 animals was destroyed until convalescence was established.

The Corporation horses, 20 in number (including the one employed at the Cemetery), have been under close observation, and have been free from serious illness during the year.

ANIMALS (LANDING FROM IRELAND) ORDER, 1922.

2,210 examinations were made of animals detained under the provisions of the above Order.

15 rams from Norfolk, which came under the Ministry of Agriculture licence for 14 days' detention, were examined.

On 1st January notice was received that a cow in one of the City dairies was suspected to be suffering from Foot and Mouth Disease, and on 10th January that an Irish heifer grazing amongst 24 other cattle was also suspected to be suffering from this disease. Both animals were, however, found to be free from Foot and Mouth Disease.

On the 4th January Foot and Mouth Disease was found to exist at the Beeches Farm, Botcherby. 2 animals were found to be affected. The stock on the farm consisted of 66 dairy cows, 4 calves, and 30 pigs. The whole of this stock was slaughtered within 24 hours of the discovery of the outbreak.

On the 5th May I accompanied the Medical Officer of Health to a farm outside the City and examined a herd of 28 dairy cattle. Three of the animals were found to be affected as follows:—

- One with symptoms of disease of the lungs;
- One suffering from a chronic disease of the udder;
and
- A third in a debilitated condition.

Samples of milk from each of these cows were submitted for bacteriological and biological examination, and each gave evidence of disease of the udder and also contained an excessive amount of extraneous dirt.

The byres and the cows therein were in a very dirty and neglected condition; the milkers themselves were

seen to be objectionably dirty, and were carrying out the milking in a disgustingly dirty manner.

I subsequently visited the farm with the Medical Officer of Health and found that two of the cows which exhibited the worst condition of illness had been sold. I made an examination of the other cow and found her condition more satisfactory than on the previous visit. A considerable improvement had also taken place in the cleanliness of the byres and the cows, and also in the persons of the milkers.

On a later visit to the farm I found the improved conditions were being maintained.

On 7th May, at the request of the Chief Constable, I made an examination on the carcass of a stirk that was found dead within the City Boundary. I found the same to be free from contagious disease.

On 30th August, when inspecting cattle in one of the auction marts, I found a black polled cow in an unhealthy condition. As the animal was a source of danger to in-calf cows, I ordered it to be immediately removed from the byre and directed the attention of the Auction Mart Authorities to the matter. A thorough cleansing and disinfection of the stall in which the animal had been standing was made.

On 30th August a black-faced lamb in a lot of 129 was found to be suffering from a skin disease. On examination I found the lamb had, some time previously, been infected with sheep scab, but was now cured. I took scrapings and wool for microscopical examination, which gave negative results for live acari. As the lamb was of very little value the owner had it slaughtered, and the remaining 128 sheep were removed into the country. As a precautionary measure I informed the County Veterinary Inspector as to where the sheep had been moved.

On 20th September it was reported that a Suffolk tup lamb was suffering from a skin disease. I took scrapings of the skin and wool for microscopical examination, which gave negative results for acari.

HOUSING.

Up to the end of the year the total number of houses for the erection of which the Corporation had received the sanction of the Ministry of Health was 914, 160 relating to the parlour type and 754 to the non-parlour type of house, to be provided as follows:—Denton Street, 24; Boustead's Grassing, 32; Stanwix, 74; Longsowerby, 98; Blackwell Road Estate, 500; and Wigton Road Estate, 186.

The total number of houses erected by the end of the past year was 378, as follows:—Denton Street, 24; Boustead's Grassing, 32; Stanwix, 74; Longsowerby, 98; Blackwell Road Estate, 108; and Wigton Road Estate, 42.

The houses in course of erection at the end of the year comprised 88 on the Wigton Road Estate, and 112 on the Blackwell Road Estate, all of which relate to the non-parlour type.

During the year 77 houses, 60 relating to the parlour type and 17 to the non-parlour type, were built by private enterprise. Of these, 40 of the parlour type and 17 of the non-parlour type were eligible for the subsidy under the provisions of the Housing, &c., Act, 1923.

At the end of the year 78 houses, 61 of the parlour type and 17 of the non-parlour type, which are being built by private enterprise, were in course of erection.

In addition to the particulars given in the following tables, other information will be found in the Inspector's Report, pages 68 and 69.

Table showing number of dwelling-houses erected in the City during the past ten years:—

Year.	No. of Houses erected.	Year.	No. of Houses erected.
1915	9	1920	27
1916	1	1921	96
1917	2	1922	123
1918	0	1923	96
1919	2	1924	139

Table relating to the present position of certain houses in which Closing or Demolition Orders have been made.

Number and Situation.	Date represented to Committee.	Date of Closing Order served under Housing, Town Planning, &c., Act, 1909.	Date of Demolition Order served under Housing, Town Planning, &c., Act, 1909.	Remarks.
1, 2, 3, 4, 5, 6, 7, & 9 Barley Stack Lane	21st Nov., 1913	9th Dec., 1913	10th June, 1914	Part of the property demolished, the other part still standing
12, 14, 16, 18, 22, 26, & 28 Chapel Street	19th June, 1914	15th July, 1914	14th Sept., 1915	<i>In statu quo</i>
5 houses in Donald's Court, Willow Holme	19th June, 1914	15th July, 1914	14th Sept., 1915	Do.
3 houses, Willow Holme	19th June, 1914	15th July, 1914	14th Sept., 1915	Do.
Fay's Lodging House, Drovers Lane, Rickergate	2nd Dec., 1921	13th Dec., 1921	12th Sept., 1922	Property demolished.
27, 27a, 27b, 29, 30a, 30b, 30c, & 31 South John Street 8 houses in Dunn's Court, South John St.	2nd May, 1923	8th May, 1923	...	Do.
40 & 42 Crown Street 8 houses in Irving's Court No. 2, Crown St.	2nd May, 1923	8th May, 1923	..	Property made habitable by conversion into 4 self-contained flats. Two houses demolished.

Number and Situation.	Date represented to Committee.	Date of Closing Order served under Housing, Town Planning, &c., Act, 1909	Date of Demolition Order served under Housing, Town Planning, &c., Act, 1909	Remarks.
2 Dona Court, Crown St.	1st June, 1923	12th June, 1923	...	House demolished.
3 houses in Irving's Court No. 1, Crown St.	1st June, 1923	12th June, 1923	...	Property in course of being made habitable by conversion.
30 Robert Street 4 and 5 Young's Crt., Robert St.	1st June 1923	12th June, 1923	13th May, 1924	Property in course of being made habitable.
37 South John St. 3 houses in Rayson's Ct. No. 1, South John St.	1st June 1923	12th June, 1923	...	Property converted into business premises.
39 & 49 South John Street 1 house in Barker's Court, South John St. 3 houses in Rayson's Court No. 2, South John St.	1st June 1923	12th June, 1923	...	Property made habitable.
93, 95, 97, 101, 103, and 105 Union St.	30th Nov., 1923	11th Dec., 1923	28th Oct., 1924	...
99 & 99a Union St.	30th Nov., 1923	11th Dec., 1923	28th Oct., 1924	Operation of Demolition Orders postponed for six months.

Number of New Houses erected during the year :—

(a) Total.	139
(b) With State assistance under the Housing Acts, 1919, 1923 or 1924 :—	
(i) By the Local Authority.	62
(ii) By other bodies or persons.	57
<i>1.—Unfit Dwelling Houses.</i>	
<i>Inspection.</i> —(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	125
(2) Number of dwelling houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	76
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	3
(4) Number of dwelling houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	73
<i>2.—Remedy of Defects without Service of formal Notices.</i>	
Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers	10
<i>3.—Action under Statutory Powers.</i>	
(a) Proceedings under Section 28 of the Housing, Town Planning, &c., Act, 1919—	
(1) Number of dwelling houses in respect of which notices were served requiring repairs	24
(2) Number of dwelling houses which were rendered fit after service of formal notices	
(a) By Owners	22
(b) By Local Authority in default of Owners	Nil
(3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of intention to close ...	Nil

(b) Proceedings under Public Health Acts—	
(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied	49
(2) Number of dwelling houses in which defects were remedied after service of formal notices	
(a) By Owners	40
(b) By Local Authority in default of Owners	Nil
(c) Proceedings under Sections 17 and 18 of the Housing, Town Planning, &c., Act, 1909—	
(1) Number of representations made with a view to the making of Closing Orders	Nil
(2) Number of dwelling houses in respect of which Closing Orders were made ...	Nil
(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit	6
(4) Number of dwelling houses in respect of which Demolition Orders were made	12
(5) Number of dwelling houses demolished in pursuance of Demolition Orders ...	Nil

Chief Inspector's Annual Report.

To the Chairman and Members of the Health Committee.

Ladies and Gentlemen,

I have the honour to submit my Annual Report upon the work of the Sanitary Inspectors during the year 1924.

HOUSING.

The improvement of the Crown Street area has been continued during the year, and the whole of the block bounded by Robert Street, South John Street, Crown Street, and Currock Street has now been taken in hand.

Further notices were served during the year under Section 28 of the 1919 Act in respect of property at the Currock Street end of the block. Part of this work was done, but as one owner appealed to the Ministry of Health against the notices the matter is in abeyance awaiting the Minister's report.

As a result of the effort to reduce the density of this district a further 19 tenements were converted into 6 self-contained houses.

The number of dwelling-houses inspected for housing defects was 125, and in 76 cases particulars were specially recorded under the Inspection of District Regulations. Of these, 3 were found to be unfit for habitation, and the remaining 73 not in all respects reasonably fit.

10 houses were improved by owners without the necessity of notices from this Department.

The displacing and re-housing of the tenants in the Queen Street and Rigg Street area is postponed until the completion of the new houses allotted under the improvement scheme.

Closing orders and notices to quit served in respect of property at Union Street are also in abeyance owing to the impossibility of erecting houses to accommodate the tenants.

A tabulated list of the works executed in accordance with notices under the Housing Acts is at the end of the report, along with a list of housing works done by notices under the Public Health Acts.

It is perhaps early to form any opinion regarding those tenants who removed from condemned houses in Crown Street and South John Street to new houses on the Corporation estates, but in a few instances they do not appear to have adapted themselves to the new surroundings, although the undesirables are by no means confined to tenants removed from this district.

NUISANCES AND DRAINAGE.

The number of complaints reported at the office was 146, and your Inspectors discovered in routine inspections a further 635 matters requiring attention. Notices were served to abate nuisances in 365 instances, 11 matters being outstanding at the end of the year.

33 new drains were laid under the supervision of the Department. 1,063 inspections of drains were made by the Inspectors, and in 91 cases tests, either chemical or water, were applied.

CONVERSION TO WATER CARRIAGE SYSTEM.

At Stanwix 1 insanitary midden was converted into 2 water-closets.

VAN DWELLINGS.

Periodical inspections have been made as usual to the Sands, whereon the fairs are held. The vans were inspected twice during the year and found to be satisfactory.

The sanitation of this ground is now much improved by alteration, and the conduct of the van dwellers has contributed to a satisfactory state of affairs. There was no infectious disease reported amongst van dwellers.

In 2 instances only were vans on private premises the cause of temporary trouble.

COMMON LODGING-HOUSES.

The only registered common lodging-house is the one known as Lowther House, Lowther Street, owned and controlled by this department. It was conducted in a satisfactory manner.

The late lodging-house, known as Fay's, in Drovers Lane, was completely demolished during the year.

STABLE PREMISES.

There are approximately 120 stable premises in the City, to which 198 inspections were made. The cold season was not productive of many flies from this or any other source.

FACTORIES AND WORKSHOPS.

The number of workshops on the register was 291. Of these, 32 are known as domestic workshops. Included also in this are 75 bakehouses, 3 of which are underground. 1 bakehouse was improved during the year, and at 1 tripe dressing place certain structural improvements were carried out.

On the whole a good standard of cleanliness and sanitation in the workshops is maintained, and we met with no overcrowding. 502 visits were paid to factories and workshops. The number of factories is 90.

His Majesty's Inspector of Factories reported sanitary defects at 7 factories and workshops, these being remediable under the Public Health Acts. Successful action was taken in every instance and the Inspector notified accordingly. The matters complained of were:—

Failure to cleanse or limewash premises ...	...	4
Absence of intervening ventilated spaces ...	...	1
Absence of flue to gas stove ...	...	1
Defective stove pipe ...	...	1

7

SMOKE NUISANCES.

Carlisle is particularly fortunate in the absence of smoke nuisances from factories, electrification contributing largely to this state of affairs. Trouble, however, is being experienced with locomotives on the railways, and informal action was taken respecting a nuisance from engine sheds.

INSPECTION OF MEAT AND OTHER FOODS,

The amount of meat condemned during the year as unfit for human consumption was 16 tons 2 cwts. 0 qrs. 26 lbs. Details of this and the other miscellaneous foodstuffs surrendered as unfit are reported in the appendix. It was not found necessary to take any legal proceedings under the Public Health Acts in respect of unsound foodstuffs.

SLAUGHTER-HOUSES.

The public slaughter-houses, owned and under the control of this department, have been structurally repaired during the year, and altogether well maintained. A table showing the total number and nature of the animals killed is given on page 76.

There are 3 licensed slaughter-houses in the City, 1 each at the L. M. & S. and L. & N. E. Railways, and 1 at Cavaghan & Gray's Bacon Factory, Harraby. The railway slaughter-houses are used exclusively for the slaughter of sheep, mainly for the London markets; whilst Cavaghan & Gray's premises are used solely for pigs, for bacon curing at their premises.

The L. & N. E. Railway Slaughter-house, improved last year, was further improved during the year, in that the tracks and dock within a good distance of the slaughter-house were laid in concrete, thus facilitating the proper cleansing, not only of the slaughter-house, but the immediate vicinity.

540 inspections were made to slaughter-houses.

DAIRIES, COWSHEDS, AND MILKSHOPS.

There are now 21 cow-keepers on the register. Numerous visits to premises were made during the year.

The number of milk retailers is 54, 26 of whom reside outside the city. There are in addition 15 milkshops registered. 71 inspections were made to milk retailers' premises.

FRIED FISH AND POTATO SHOPS.

We have 34 of these premises on the register, and frequent inspections were paid during the year. No serious nuisance existed at any of the premises, and the trade is, generally speaking, carried on satisfactorily.

ICE CREAM SHOPS.

It is difficult to maintain a complete register of dealers in this commodity, as the business is carried on at restaurants and other premises secondary to other trades. We have 18 such places on our register.

On 2 occasions premises were found to be unsatisfactory. In 1 case the premises were condemned as unfit for the making of ice cream, and the occupier now buys from a wholesaler. In the other, improvements were effected designed to prevent contamination.

FOOD AND DRUGS ACTS.

During the year I purchased 139 samples under these Acts, and full particulars of the nature of the samples, together with the results of the analyses will be found in the appendix. It was found necessary to take legal proceedings in respect of certain samples of new milk certified by the Analyst to be deficient in non-fatty solids. The vendor was convicted and fined £2 2s. and costs.

OFFENSIVE TRADES.

The number and description of these trades remain the same, *i.e.*, 1 gut scraper, 2 tripe dressers, 1 tanner, and 1 fellmonger.

At 1 of these places the premises were improved structurally.

REFUSE REMOVAL.

The daily collection is still in operation in the centre of the City, whilst the remainder is subject to a twice or thrice-weekly collection, according to the requirements of the district. The whole of the refuse is disposed of by tipping at several tips, which are under constant supervision.

In November the Committee purchased an S.D. Freighter as an experiment. This petrol vehicle is well designed for the purpose, having a very low loading line, and during the short time it has been in use has proved to be satisfactory. Up to the present the vehicle has been doing the work previously done by two horses.

The garbage from the public slaughter-houses was also disposed of by tipping, and amounted to 534 loads.

During the year 18,612 loads of refuse were disposed of by tipping (trade refuse carted privately excluded).

URINALS.

The cleansing of the public urinals is under the charge of my department, and is done daily. 1 new urinal has been erected at Stanwix. 3 of the existing urinals will shortly be demolished as a result of public improvements, and new sites will have to be found.

DEPOT.

The stud of horses at the Depot, Boustead's Grassing, numbers 19. Part of the stud is engaged on house refuse removal and part on scavenging, &c. During 1924, 2 horses were bought and 1 sold.

The new petrol vehicle engaged upon house refuse removal has been provided with a garage at the Depot.

SHOPS ACTS.

891 inspections were made with the object of enforcing these Acts. In no case were legal proceedings taken.

INFECTIOUS DISEASE AND DISINFECTION.

Your inspectors investigated 340 cases of infectious disease during the year, and 227 cases were removed to Hospital. The number and description of articles of bed clothing, &c., disinfected are in the appendix.

RAT REPRESSION.

Numerous visits were made upon complaints of the existence of rats on premises. Where the drains were suspected these were examined, and, if necessary, tested, and other advice given.

1,032 dead rats were received at the Dépôt. The Corporation pay 2d. for every dead rat caught in the City.

DISEASED AND UNSOUND FOOD.

The following table shows the amount of food seized or surrendered as being unfit for human consumption:—

Nature of Food Condemned.					Quantity.			
					Tons.	Cwts.	Qrs.	Lbs.
Beef	...	...	...	...	14	7	4	0
Mutton	...	...	...	...		16	3	18
Pork	...	...	...	...		12	0	6
Veal	...	...	...	...		5	1	2
Total					16	2	0	26
Rabbits	...	...	...	...	16 couples			
Tinned Fruits, etc.	...	...	...	...	77 tins			
Tinned Meat, Fish, etc.	...	...	...	...
Tinned Milk and Cream	...	...	...	...
Salmon	...	...	...	...
Tomatoes	...	...	...	...
Cauliflowers	...	...	...	...	2 dozen			

SALE OF FOOD AND DRUGS ACTS.

Table showing articles purchased during the year, with results of analyses and remarks as to action taken thereon.

Article.	No. of Samples.	No. found to be Genuine.	Number Adulterated.	Extent and Form of Adulteration.	Remarks.
Milk ...	44	41	3	<i>a.</i> Non-fatty solids 0.28 % below limit <i>b.</i> Non-fatty solids 1.17 % below limit <i>c.</i> Non-fatty solids 0.69 % below limit	Vendor cautioned. Samples <i>b</i> and <i>c</i> were purchased from same source. Vendor was prosecuted & fined £2 2s. and costs.
Butter ...	29	29	...	...
Cheese ...	7	7	...	...
Cream ..	4	4	...	...
Coffee ...	11	11	...	...
Olive Oil ...	4	4	...	...
Cordials ...	6	6	...	...
Pepper ...	1	1	...	...
Custard Powder	5	5	...	...
Baking Powder	11	11	...	...
Lard ...	13	13	...	...
Camphorated Oil	2	2	...	...
Prescriptions ...	2	2	...	..
No. of Samples	139				
No. Genuine	...	136			
No. Adulterated	...	...	3		

The following Tables give the number of animals killed during the years stated:—

PUBLIC ABATTOIR.

Year.	Beasts.	Sheep and Lambs.	Calves.	Pigs.	Total.
1917	4,166	15,609	248	3,334	23,357
1918	3,257	53,357	235	1,894	58,743
1919	3,054	57,885	815	2,451	64,205
1920	2,930	35,862	828	2,462	42,082
1921	3,135	15,566	545	3,625	22,871
1922	3,512	16,294	518	4,711	25,035
1923	4,028	13,249	768	4,644	22,689
1924	4,106	14,385	436	5,896	24,823

L.M. & S. RAILWAY SLAUGHTER-HOUSE.

1921	...	31,301	...	...	31,301
1922	...	40,790	...	...	40,790
1923	...	26,121	...	...	26,121
1924	...	39,427	...	...	39,427

L. & N.E. RAILWAY SLAUGHTER-HOUSE.

1921	...	43,366	...	...	43,366
1922	...	55,926	...	...	55,926
1923	...	39,897	...	...	39,897
1924	...	64,811	..	...	64,811

REFUSE REMOVAL.

Number of Loads of House Refuse removed to	
Tips	18,612
,, Loads of Slaughter-house Garbage	534

DISINFECTION.

Number of Cases of Infectious Diseases Investigated	340
,, Cases of Infectious Disease removed to Hospital	227
,, Mattresses and Beds Disinfected	165
,, Bolsters and Covers	120
,, Pillows and Covers	451
,, Blankets	470
,, Quilts	319
,, Carpets and Rugs	12
,, Sheets	65
,, Coats	16
,, Miscellaneous Articles	424
,, Houses Disinfected	245
,, Schools Disinfected	1

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—Inspection of Factories, Workshops, & Workplaces.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES (Including Factory Laundries)	91	5	Nil
WORKSHOPS (Including Workshop Laundries)	411	36	Nil
WORKPLACES (Other than Outworkers' premises included in Part 3 of this Report)			
TOTAL	502	41	N

3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.					
	Lists received from Employers.					
	Sending twice in the year.			Sending once in the year.		
	Lists.	Outworkers.		Lists.	Outworkers.	
		Con- tractors.	Work- men.		Con- tractors.	Work- men.
Wearing apparel— Making, &c. ...	2	...	...	1	...	..
Cleaning and Washing ...	...	...	...	...	..	..
Total ...	2	...	...	1	...	...

2.—Defects found in Factories, Workshops, and Workplaces.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness	25	25	...	...
Want of ventilation	3	3	...	..
Overcrowding... ..	...	...	...	...
Want of drainage of floors ...	...	...	...	...
Other nuisances	7	7	1	...
Sanitary accommodation :—				
{ Insufficient ... ..	...	...	...	...
{ Unsuitable or defective	1	1	...	...
{ Not separate for sexes	...	...	...	...
<i>Offences under the Factory and Workshop Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101)...	...	..	...	..
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	2	2	...	...
Other offences (Excluding offences relating to outwork, which are included in Part 3 of this report)	3	3	...	...
Total	41	41	1	Nil

4.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year			Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Workshops ... ..	...	184
	Domestic Workshops ...	...	32
	Bakehouses ... ..	...	75
	Total number of workshops on Register ...		291

5.—Other Matters.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Acts (s. 133, 1901) ... ..	..
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory & Workshop Acts (s. 5, 1901) :	
Notified by H.M. Inspector	7
Reports (of action taken) sent to H.M. Inspector	7
Other ... ..	...
Underground Bakehouses (s. 101) —	
In use at the end of the year	3

6.—Classified List of Workshops.

Business.	No.	Business.	No.
Millinery	23	Tinsmiths	2
Tailoring	32	Hand-weavers	2
Sugar Boiling	4	Fishing Tackle	2
Cycle Repairing	9	Stocking Knitting... ..	1
Dressmaking	26	Scale Repairers	2
Bakehouses	75	Picture Framing	2
Boot Repairing	35	Photography	4
Saddlery	6	Tripe Dressing	2
Meat Preparation	20	Chocolate Making	1
Watch Makers, &c.	14	Marine Dealers	5
Upholstering	3	Gut Scraper	1
Cloggers	11	Fellmonger	1
Coopers	3	Tanner	1
Basket Making	2	Rudd Maker	1
Umbrella Repairing	1		
		Total	291

**TABULATED LIST OF WORKS EXECUTED
DURING 1924 AS A RESULT OF NOTICES
SERVED UNDER THE HOUSING ACTS.**

Particulars of Work.	Under Sec. 28, Housing, &c., Act, 1919.	As a result of Closing Orders.
	No. of Houses.	
Damp Walls rendered in Cement	—	5
Walls Plastered or Re-plastered	15	5
Ceilings „ „	14	5
Flagged or Boarded Floors Re-laid or Repaired	12	5
Windows provided, or Overhauled and made to Open	16	5
Roofs made Watertight... ..	9	5
Eaves and Down Spouting made Watertight ...	11	5
External Walls Pointed in Cement	9	5
Door Jambs, Window Sills, Heads, and Plinths Faced Up in Cement	12	5
Doors and Internal Woodwork Repaired ...	11	6
Handrails to Stairs provided	1	—
Skirtings (wood or cement) Made or Repaired ...	11	5
Cooking Ranges Re-set or Repaired	12	5
New „ provided	—	6
Ventilated Food Stores provided	6	4
Slop-sinks provided, with Trapped Waste-pipes, complete	6	5
Water Supply laid on to above	3	3
Drains, New or Repaired	4	5
	Number	
Yards Paved or Re-paved	6	3
Common Passages or Staircases Re-plastered and Repaired	6	4
Common Passages Re-paved	6	4
New Water-Closets provided	9	3
New Wash-houses provided	2	5
Wash-houses Repaired	1	1
Decorations (Paint and Distemper, &c.) ...	4	5
Back to Back Tenements converted to Through Houses	2	17
Through Houses resulting	1	5

SUMMARY OF SANITARY WORK PERFORMED IN CONNECTION WITH INSPECTION OF DISTRICT.

Nature of Inspections.	Number of visits paid.
HOUSES—	
Houses inspected in accordance with the Housing (Inspection of District) Regulations, 1910	2299
Houses inspected under the Public Health Act, 1875	3613
Houses inspected, special inquiry	91
Visits <i>re</i> Infectious Diseases	987
Drains Inspected	1063
„ Tested	91
Common Lodging-houses inspected	6
Inspections <i>re</i> Nuisances from Fowls & Animals	16
Common Yards, Courts, & Alleys inspected ...	7272
Temporary or movable dwellings inspected ...	129
Public Halls, Schools, etc.... ..	9
Dirty Houses	19
Nuisances investigated	781
TRADE PREMISES—	
Bakehouses	214
Laundries	2
Cowsheds	87
Milkshops	71
Ice-Cream Shops	44
Fried Fish Shops	143
Slaughter-houses	540
Markets	185
Factories	91
Workshops and Workplaces	411
Chimneys observed (smoke nuisances) ...	15
Visits after serving notices to supervise works in progress	243
Refuse Tips	145
Stables	198
Shops Act Inspections	891
Water samples taken for analysis	8
Visits <i>re</i> Rats and Mice Destruction Order ...	27
Miscellaneous inspections	1627
Urinals Inspected	89
Notices served to abate Nuisances	365
„ complied with	354

REMEDIAL WORKS DONE BY NOTICES UNDER THE PUBLIC HEALTH ACTS.

Walls, Damp and Defective, Remedied	20
Roofs, Guttering, &c., Repaired	66
Yards Paved and Repaired	5
Abatement of Nuisances caused by Animals and Birds	16
Water-closets Repaired	33
Flushing Apparatus Repaired	12
Drains Unstopped	95
Drains Reconstructed and Repaired	40
Drains Tested	91
Accumulations of Manure &c., Removed	12
Workshops Cleansed or Limewashed	10
Bakehouses Cleansed or Limewashed	20
Sinks Provided	1
Sink Waste Pipes Repaired	1
Mill Race Cleansed	2
Windows Made to Open	9
Washhouses Repaired	10
Firegrates and Ovens Repaired	10
Chimney Stacks Repaired	6
Floors Repaired	4

I have the honour to be,

Your obedient Servant,

C. W. HILL,

Chief Inspector.

