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CITY OF



CARLISLE

REPORT  
ON THE  
SANITARY CONDITION  
OF THE  
CITY OF CARLISLE

FOR THE YEAR

1929

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).

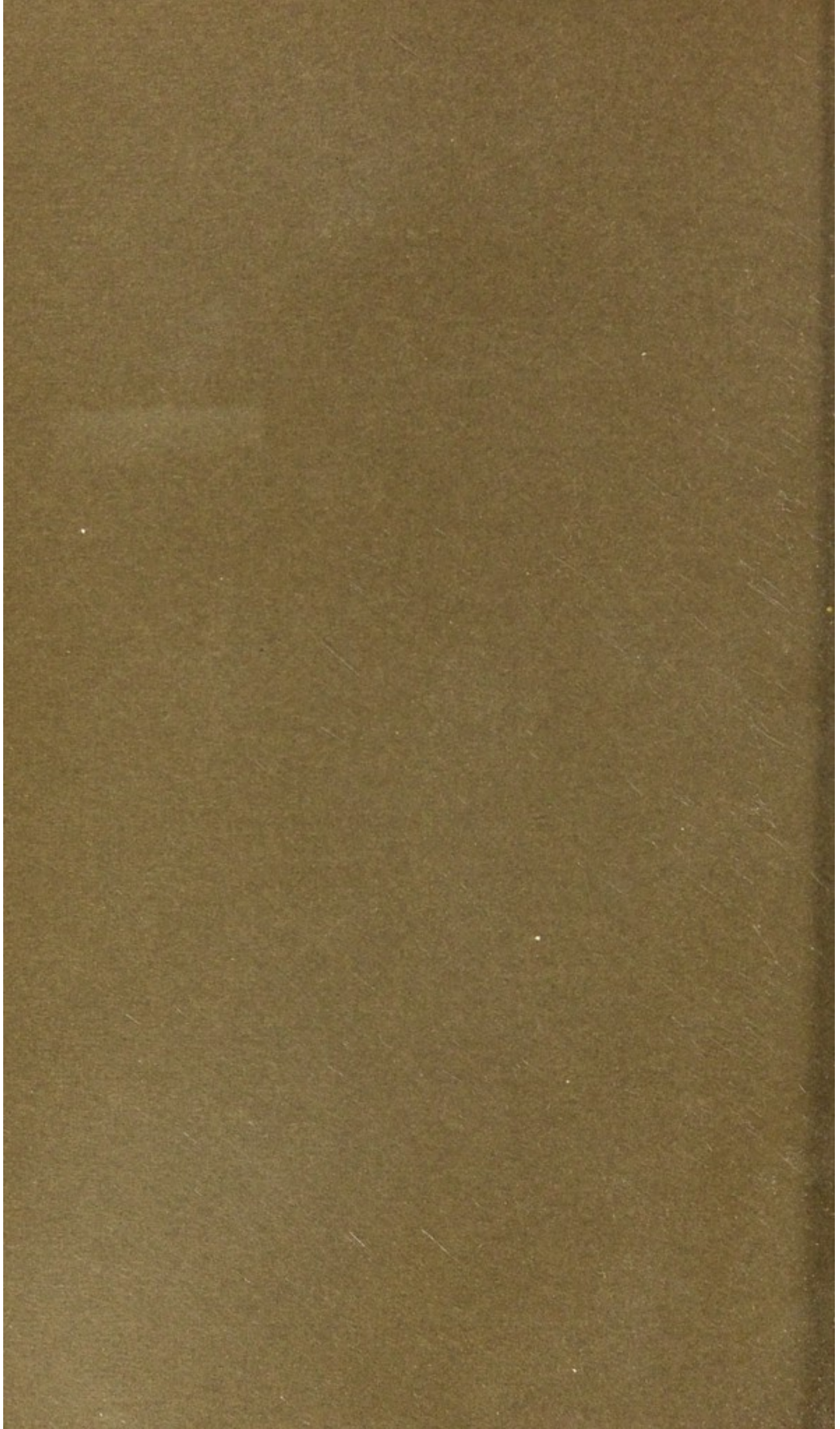
MEDICAL OFFICER OF HEALTH,  
SCHOOL MEDICAL OFFICER,  
CHIEF TUBERCULOSIS OFFICER, &c.

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CARLISLE :

CHAS. THURHAM & SONS, PRINTERS, 11 ENGLISH STREET.

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## INDEX.

	PAGE.		PAGE.
Air Pollution .....	82	Midwives .....	17, 55-57
Ambulance .....	15	Milk Supply...27-29, 84, 88, 89	
Bacteriological Work 17, 18,		Mortuary .....	13
	21	Nursing .....	17, 57
Births .....	5-7, 11, 12	Nursing Homes .....	72
Bye-laws, &c. ....	19	Offensive Trades .....	86
Cancer .....	13	Ophthalmia Neonatorum ...	72
Cerebro-Spinal Fever .....	35	Pneumonia .....	34
Chemical Work' 17, 22, 88, 89		Poliomyelitis .....	73
Clinics, List of .....	16	Population .....	5, 6
Common Lodging Houses ...	82	Puerperal Fever } ...	71, 72
Dairies, Cowsheds, and		Puerperal Pyrexia } ...	71, 72
Milkshops .....	27, 84	Rainfall .....	20
Deaths .....	5, 7-13	Rats and Mice Destruction	
Diarrhœa .....	35	Act .....	86
Diphtheria .....	32, 33	Refuse Disposal .....	86, 87
Disinfection .....	85	Sanitary Circumstances 21-23	
Drainage .....	23, 81	Sanitary Inspection of	
Dysentery .....	34	District .....	76
Encephalitis Lethargica ...	35	Scarlet Fever .....	31, 33
Enteric Fever .....	33, 34	Shops Acts .....	85
Factories and Workshops		Slaughter-houses 29, 83, 89, 90	
82, 91-93		Smallpox .....	33
Food .....	27-29, 83, 84	Social Conditions .....	5
Food and Drugs Acts 85, 88, 89		Stable Premises .....	87
Hospitals .....	11, 14	Staff .....	3
Housing .....	24-26, 80, 81, 94	Statistical Summary .....	5
Illegitimacy .....	70	Still-births .....	62, 63
Infant Mortality .....	63-70	Tuberculosis .....	36-50
Infectious Diseases ...30-35, 85		Typhoid Fever .....	33
Influenza .....	34, 35	Typhus Fever .....	33
Inquests .....	13	Urinals .....	87
Malaria .....	34	Van Dwellings .....	82
Maternity and Child		Venereal Diseases .....	51-53
Welfare .....	54-74	Veterinary Inspection .....	75
Maternity Homes .....	57-60	Water Supply .....	21-23
Meat Inspection .....	29, 83, 84		

## PUBLIC HEALTH STAFF.

This list includes all officers 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., L.R.C.P., 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	W. ALEXANDER ROBERTS, L.D.S.
Veterinary Inspector (part-time)	R. CRAIG ROBINSON, M.R.C.V.S.
Sanitary Inspector, and Inspector under Food and Drugs (Adulteration) Act, Shops Acts, &c.	* † ‡ W. HANSON
Senior Assistant Sanitary Inspector	* ‡ E. S. BROADHEAD
Junior Assistant Sanitary Inspector	** R. WAGENER
Health Visitors	Misses H. M. HILL, J. G. SMITH, C. STORDY
Nurse in charge of School Clinic and Tuberculosis Dispensary	Miss M. E. GLOYNE
Tuberculosis and School Nurses	Misses J. H. BRADEN, M. B. COULTHARD, H. R. MACRAE, M. C. MADDISON
Matron of Maternity Hospital	Miss M. C. WALKER
Matron of Infectious Diseases Hospital	Miss M. F. EDMOND
Clerks	G. E. BARROW, L. OATES, S. STYTH, H. L. LITCHFIELD, Misses L. HIND, M. PURDAM, A. WILSON
Ambulance & Disinfecting Officer	H. PORTER
Superintendent of Public Slaughter-houses	* ‡ J. ALDERSON
Public Analyst (part-time)	CYRIL J. H. STOCK, B.Sc., F.I.C., DARLINGTON
Bacteriologists (part-time)	THE PUBLIC HEALTH LABORATORY, MANCHESTER (Prof. H. B. MAITLAND), AND THE CLINICAL RESEARCH ASSOCIATION, LONDON

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

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

\*\* Sanitary Inspectors' Certificate, R.S.I. & S.I. Exams. Joint Board.

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



To the Chairman and Members of the  
Public Health Committee.

Ladies and Gentlemen,

I have the honour to submit the Annual Report on the Health of the City for the year 1929.

The Report has been prepared, as far as practicable, in accordance with the requirements of Circulars 1048 of the 5th December, 1929, and 939 of the 13th December, 1928, of the Ministry of Health, consideration having been given to the recording of such particulars as may be required for future reference.

As this will be my last Report as Medical Officer of Health, I desire to express my warmest thanks to the Committee for the unfailing help they have given, and their great confidence in me during the whole of my period of service.

I am,

Ladies and Gentlemen,

Your obedient Servant,

JOSEPH BEARD

Medical Officer of Health.

Public Health Department,

19 Fisher Street,

Carlisle,

March, 1930.

## STATISTICS AND SOCIAL CONDITIONS.

### General Statistics.

Area (acres)	-	-	-	4,488
Population (Census, 1921)	-	-	-	53,200
Population (1929), Estimate of Registrar-General				56,380
Number of Inhabited Houses (Census, 1921)				11,316
Number of Families (Census, 1921)	-	-	-	11,742
Rateable Value	-	-	-	£376,186
Sum represented by a Penny Rate	-	-	-	£1,279

### Extracts from Vital Statistics of the Year.

#### Births—

	Total.	M.	F.	
Legitimate	969	470	499	
Illegitimate	68	38	30	
				Birth-rate 18.4

Deaths	-	757	390	367	
					Death-rate 13.4

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

From Sepsis	-	-	-	2
From other causes	-	-	-	1

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

Legitimate	-	-	70.1	
Illegitimate	-	-	58.8	
				Total 69.4

Deaths from Measles (all ages)	-	-	13
„ Whooping Cough (all ages)	-	-	22
„ Diarrhœa (under 2 years of age)	-	-	3



### Population.

An estimate of the population at mid-year, 1929, supplied to me by the Registrar-General, is 56,380, which figure has been used in making the various calculations in this report.

### Births.

The number of births registered during the year was 1,037, a decrease of 72 on the figure for the previous year, and the birth-rate is 18.4 per 1,000 of the population, or a decrease of 1.2 on the figure for 1928.

The birth-rate for the whole of England and Wales during 1929 was 16.3 per 1,000. The rate for the 107 great towns, to which classification Carlisle belongs, was 16.6 per 1,000, and for the 157 smaller towns of England and Wales 16.0 per 1,000.

Year.	Number of Births Registered.			Per 1,000 of the population.
	Males.	Females.	Total.	
1925	530	515	1045	18.8
1926	604	555	1159	20.5
1927	515	522	1037	18.3
1928	595	514	1109	19.6
1929	508	529	1037	18.4

**Table showing details of the Births in the several Wards, 1929.**

Quarter Ended	Stanwix and Etterby	Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	S. Cuthbert's	Caldewgate	Newtown & Belle Vue	Totals for City
March 31 .....	12	26	19	22	19	29	32	24	31	27	241
June 30 .....	13	17	25	28	27	52	29	29	32	36	288
September 30 ...	12	19	14	29	22	47	13	24	28	44	252
December 31 ..	10	21	16	39	23	36	25	25	28	33	256
Totals .....	47	83	74	118	91	164	99	102	119	140	1037

### Illegitimate Births.

The number of illegitimate births registered was 68, or 65.5 per 1,000 of the total births. This shows a decrease of 15 illegitimate births upon the figure for 1928.

In 14 instances, or 20.6 per cent. of the total illegitimate births, 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	Caldewgate	Newtown & Belle Vue	Totals for City
Males	—	6	1	6	5	5	—	2	7	6	38
Females	1	5	4	4	6	1	1	3	4	1	30
Totals	1	11	5	10	11	6	1	5	11	7	68

### Deaths.

The total number of deaths registered was 852, as compared with 830 in 1928. 21 deaths occurred of persons belonging to the City in Institutions and other

places away from Carlisle, while the deaths of 116 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 757 remains, which is equal to a nett death-rate of 13.4 per 1,000 of the estimated population at all ages, against 13.0 per 1,000 in 1928.

The corrected death-rate for the City, which is obtained by multiplying the above nett death-rate of 13.4 per 1,000 by the factor supplied by the Registrar-General, viz., .947, is 12.6 per 1,000 of the estimated population living at all ages.

The death-rate for the whole of England and Wales during 1929 was 13.4 per 1,000. The rate for the 107 great towns, to which classification Carlisle belongs, was 13.7 per 1,000, and for the 157 smaller towns of England and Wales, 12.3 per 1,000.

**Table showing details of Deaths of Residents in the various Wards, 1929.**

QUARTER ENDED.	STANWIX AND ETTERBY.	RICKERGATE.	AGLIONBY.	GREYSTONE.	ST. NICHOLAS.	CURROCK.	DENTON HOLME.	ST. CUTHBERT'S.	CALDEWGATE.	NEWTOWN AND BELLE VUE.	TOTALS FOR CITY.
March 31 .....	23	26	31	25	15	34	38	29	36	31	288
June 30 .....	6	16	20	16	15	23	15	12	22	21	166
September 30 ...	8	10	16	15	19	25	18	11	14	6	142
December 31 ...	11	17	13	18	14	21	17	16	16	18	161
Totals... ..	48	69	80	74	63	103	88	68	88	76	757

**Table showing the number of Deaths at all Ages and at several age periods, 1929.**

	All Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards
No. of Deaths ...	757	72	75	19	24	249	318

The following Table shows the diseases causing the largest number of deaths during 1929, and a comparison with those of 1928, &c. :—

DISEASE.	1928.	1929.	Increase or Decrease	Average No. of Deaths for past 10 yrs.
Pulmonary Tuberculosis & Phthisis	56	37	—19	46
Other forms of Tuberculosis ...	5	4	— 1	13
Pneumonia ... ..	33	59	+26	49
Other Diseases of Respiratory System	38	64	+26	59
Measles ... ..	3	13	+10	9
Influenza ... ..	18	35	+17	23
Whooping Cough ... ..	4	22	+18	8
Diphtheria, Membranous Croup ...	5	9	+ 4	6
Disease of Heart and Blood Vessels	204	206	+ 2	167
Rheumatic Fever, Chronic Rheu- matism, Rheumatoid Arthritis ..	14	6	— 8	8
Cancer and Malignant Disease ...	83	80	— 3	73
Diseases of Digestive System other than Diarrhœa and Enteritis ...	26	20	— 6	25
Diseases of Genito-Urinary System	29	35	+ 6	29
Diseases of Nervous System ...	56	40	—16	59
Prematurity and Injury at Birth, &c.	52	32	—20	34
Accidents due to Negligence ..	21	24	+ 3	20
Diarrhœa and Enteritis ...	11	9	— 2	18

+ Shows an increase in the number of deaths.

— Shows a decrease in the number of deaths

Following Table sets out the Cause and the Ages at Death  
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	
	2	3	4	5	6	7	8	9	10	11
Un- certified ...	716	64	31	41	19	22	61	172	301	270
Certified ...	41	3	2	1		2	6	10	17	...
...	...	...	...	...	...	...	...	...	...	...
...	13	...	6	4	2	1	...	...	...	2
...	22	12	2	7	1	...	...	...	...	...
Group ...	9	...	2	5	2	...	...	...	...	5
...	35	1	3	2	1	1	2	10	16	3
...	1	...	...	...	...	...	...	...	1	1
Primary Tuberculosis)	37	...	...	3	1	6	18	7	2	9
Angitis	...	...	...	...	...	...	...	...	...	...
Diseases ...	4	1	1	...	...	...	1	...	1	5
Disease ...	80	...	...	...	1	2	5	34	41	39
...	4	...	...	...	1	2	...	1	...	2
...	3	1	1	...	...	1	...	...	...	1
Case ...	116	...	...	...	...	1	9	34	72	31
...	50	7	1	1	...	...	1	8	32	5
(ms)	59	14	12	8	4	1	4	9	7	7
Respiratory Organs ...	14	...	...	...	...	1	1	4	8	2
eritis ...	9	2	1	2	...	...	...	3	1	7
typhlitis ...	3	...	...	...	...	...	...	2	1	9
...	1	...	...	...	...	...	...	1	...	...
...	...	...	...	...	...	...	...	...	...	...
ght's Disease	22	...	...	...	...	1	1	9	11	5
...	2	...	...	...	...	...	2	...	...	...
and Diseases of Preg- nitation ...	1	...	...	...	...	...	1	...	...	4
ty & Malformation, ature Birth	32	31	...	1	...	...	...	...	...	16
cluding Suicide	24	...	3	4	4	3	2	5	3	24
...	11	...	...	...	...	...	3	8	...	...
eases ...	204	3	1	5	3	6	17	47	122	93
l or unknown	1	...	...	...	...	...	...	...	1	...
Totals	757	72	33	42	19	24	67	132	318	270
ro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...
nyelitis ...	...	...	...	...	...	...	...	...	...	...
is Fever ...	...	...	...	...	...	...	...	...	...	...
Pneumonia	8	1	...	...	...	1	...	6	...	1
nonia not defined	2	...	...	...	...	...	1	1	...	1

The following Table shows the Vital Statistics for the whole City during 1929 and previous years:—

YEAR.	Registrar-General's Estimate of Population to Middle of each Year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Uncorrect 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
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
1925	*55,360 †55,160	1045	1030	18.8	848	15.3	122	22	82	78.4	748	13.5
1926	*56,320 †56,140	1159	1163	20.5	821	14.6	110	18	95	81.9	729	12.9
1927	56,620	1037	983	18.3	802	14.1	122	19	71	68.4	699	12.3
1928	56,380	1109	1085	19.6	830	14.7	117	24	80	72.1	737	13.0
1929	56,380	1037	1011	18.4	852	15.1	116	21	73	69.4	757	13.4

\* For Birth-rate.

† For Death-rate.

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

The Union Workhouse and its Infirmary.  
 The Cumberland Infirmary.  
 Carlisle Non-Provident Dispensary.  
 Strathclyde House (Home for Incurables).  
 St. Joseph's Home (aged and infirm persons).  
 Corporation Dispensary and School Clinic.  
 Corporation Maternity Hospital and Clinics.  
 Corporation Infectious Diseases Hospital,  
 Newtown.

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

Year.	No. of Births.	Birth-rate.	No. of Deaths.	Gross Death-rate.	Infantile Mortality.	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	21.8	15.3	88.5
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			
1925	1045	18.8	848	15.1	73.4			
1926	1159	20.5	821	14.6	81.9	19.1	14.7	74.0
1927	1037	18.3	802	14.1	68.4			
1928	1109	19.6	830	14.7	72.1			
1929	1037	18.4	852	15.1	69.4			

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

Cumberland Infirmary	...	...	81
Private Nursing Homes	...	...	15
Fusehill Hospital	...	...	12
Private Houses	...	...	7
Infectious Diseases Hospital	...	...	1

### Inquests.

During the year, the City Coroner held 43 inquests. Of this number, 34 related to deaths of persons who resided within the City, and 9 to persons who resided in other districts, but who died within the City. 9 related to children under five years of age, one of whom was under one year.

### Mortuary.

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

### Uncertified Deaths.

41 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 1928, 41 such deaths were registered.

### Cancer.

The number of deaths registered as due to cancer was 80, as against 83 in 1928, the rate of mortality from this disease being 1.4 per 1,000 of the population.

This figure includes all deaths from causes coming within the general term cancer.

**Table of Deaths from Cancer, 1920-1929.**

Age.	Numbers.									
	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
1 to 5 years ...	...	...	...	...	..	...	...	...	...	...
5 to 15 years ...	1	...	...	...	...	...	...	1	...	...
15 to 25 years ...	...	1	1	...	1	...	...	...	1	...
25 to 35 years ...	1	2	...	...	1	...	2	2	3	2
35 to 45 years ...	5	2	4	2	5	4	3	2	4	3
45 to 55 years ...	15	5	12	13	10	23	6	10	13	10
55 to 65 years ...	12	20	22	21	20	26	26	18	25	24
65 to 75 years ...	17	19	15	26	25	21	21	31	23	22
75 & upwards ...	11	4	14	16	10	10	9	15	14	19
Totals ...	62	53	68	78	72	84	67	79	83	80



**GENERAL PROVISION OF HEALTH SERVICES.**

---

**Hospitals provided or subsidised by the Local Authority.**

A (1) *Fever*. General infectious diseases are sent to the Corporation Infectious Diseases Hospital, 50 beds.

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

B (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 a like number of infants' cots.

(3) *Children*. There is a children's ward at the Cumberland Infirmary which provides for local requirements.

(4) *Others*. None.

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

In addition to the Fusehill Institution, accommodation is provided for the above classes by the North Cumberland and Carlisle City Association for Preventive and Rescue Work at Coledale Hall.

**Ambulance Facilities.**

(a) For infectious cases. The Corporation provide and own a motor ambulance for the removal to hospital of cases of infectious disease, which is operated by an officer of the Public Health Department. By arrangement, the ambulance and the officer who has charge of this work are also available for the removal to hospital of cases of infectious disease from any part of the area of the Carlisle Rural District Council.

(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.

## 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. do.	Caldewgate	Two Rooms and Kitchen	Do.
Do. do.	Howie Boyd Hall, Currock	Three Rooms and Two Kitchens	Do.
School Clinic, Minor Ailments, daily	2 George Street	Three Rooms	Carlisle Corporation
Do. Dental, daily	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, three times weekly	1 George Street	Four Rooms and Laboratory	Do.
Orthopædic Clinic, daily	St. Cuthbert's Hall, West Walls	Large Room of Hall upstairs and small adjacent room with sink, &c.	Carlisle Council of Social Service
Veneral Clinic, five sessions weekly and intermediate treatment	Cumberland Infirmary	Three Rooms	Jointly by Carlisle Corporation and the Cumberland County Council

**Professional Nursing in the Home.**

(a) *General.* None.

(b) *Infectious.* An annual retaining fee of £20 is paid by the Council to 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 do not employ midwives except at the Maternity Hospital, and do not pay any subsidy in respect of any midwife practising in the district.

There were 24 midwives in practice in the area at the end of the year.

**Chemical Work.**

This work is carried out by Cyril J. H. Stock, Esq., B.Sc., F.I.C., &c., of Darlington. The results of his analyses of the various foods, drugs, &c., for the year are shown on pages 22, 88, and 89.

**Bacteriological Work.**

30 samples of milk were submitted to the Public Health Laboratory, Manchester, for bacteriological examination, 25 being samples of fresh cows' milk and 5 of pasteurised cows' milk. These were all routine samples purchased from milkshops and carts in the City.

In two instances of the fresh cows' milk tubercle bacilli were found, and the City Veterinary Inspector and the Veterinary Inspector of the Cumberland County Council ascertained that a cow from a herd in each area had been sold shortly after the samples in question had been taken, and that in each instance the animal had been dealt with under the Tuberculosis Order, 1925, in the area to which it had been removed.

Six samples of milk, in addition to the foregoing, were submitted by the City Veterinary Inspector to the Clinical Research Association for bacteriological examination in the case of suspected animals, but tubercle bacilli were not found in any instance.

103 specimens of sputum have been examined at the Tuberculosis Dispensary for the presence of the tubercle bacillus, in 37 of which the organism was found.

38 swabs from throats were submitted to the Clinical Research Association for examination for the Klebs Loeffler Bacillus, and in 18 instances the organism was found.

Four 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 21.

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
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Regulations under the Contagious Diseases (Animals) Act, 1886 ...	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 12th Sept., 1922
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
City of Carlisle (Measles) Regulations, 1923 ... ..	1st Jan., 1924
Public Health Acts (Amendment) Act, 1907—	
Section 86, Marine Store Dealers, and Dealers in old Metal ...	22nd Jan., 1914
Section 95. Miscellaneous Provisions ... ..	31st March, 1925
Part VI. Recreation Grounds ...	24th Aug., 1926
Section 51. Offensive Trades ...	10th June, 1926
Section 50. Ambulance ...	4th Aug., 1926
Public Health Act, 1925—	
Parts II. III. IV. and V. ...	9th March, 1926
Part VI. ... ..	24th Aug., 1926

## RAINFALL.

*Observations taken at the Carlisle Cemetery.*

MONTHS.	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929.		Average for 10 years 1919-1928.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	Rainfall, days on which Rain fell.	Number of days on which Rain fell.	
January	2.88	4.17	5.01	2.25	1.74	2.77	2.19	2.67	2.97	5.13	0.98	10	3.18
February	1.05	2.61	0.16	2.87	4.08	0.95	4.82	3.94	1.41	3.16	0.91	9	2.47
March	2.35	3.11	3.71	1.31	0.84	1.73	1.27	1.39	2.58	2.57	0.41	5	2.1
April	1.49	2.17	0.86	1.89	2.55	1.81	3.27	1.75	2.38	0.65	1.57	11	1.88
May	1.10	3.48	1.28	1.79	1.98	3.73	3.48	2.16	1.67	1.59	2.21	12	2.23
June	2.66	2.11	0.65	2.98	0.60	1.90	0.40	3.17	3.07	4.23	1.62	13	2.18
July	0.87	4.26	2.44	4.54	2.22	4.63	1.97	2.94	3.34	2.88	3.95	13	3.01
August	2.96	2.50	5.39	2.53	7.42	3.13	3.18	2.91	7.11	5.03	6.17	24	4.22
September	1.81	1.89	2.15	2.92	3.01	3.33	4.08	5.74	6.99	1.92	1.49	10	3.38
October	2.36	1.00	2.56	1.20	5.61	4.13	3.73	3.15	1.86	3.39	4.61	22	2.90
November	2.35	2.02	1.68	0.84	4.06	1.97	1.06	4.23	3.21	4.19	4.42	23	2.56
December	3.32	2.79	3.94	3.43	2.42	5.03	2.72	0.65	0.79	2.43	5.22	23	2.76
Totals ...	25.21	32.11	29.83	28.55	36.53	35.11	32.17	34.70	37.38	37.17	33.56	175	32.87
Total number of days on which Rain fell {	191	211	205	209	231	210	189	201	204	221	...	..	207

## SANITARY CIRCUMSTANCES.

### Water Supply.

**Total annual distribution of Water from Cumwhinton covered reservoir during the years 1920 to 1929.**

Year.	Number of Gallons.	No. of Gallons per head, per day.
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
1925	737,000,000	32.06
1926	758,630,000	33.00
1927	785,990,000	34.03
1928	875,658,000	37.77
1929	889,620,000	38.42

### Bacteriological Results of Quarterly Samples of Water taken from a Domestic Tap.

QUANTITATIVE ANALYSIS	1929.			
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.			
	MAR.	JUNE.	SEPT.	DEC.
Non-Liquefying Bacteria ...	34	25	29	19
Liquefying Bacteria ...	11	5	6	4
Other Micro-Organisms ...	...	...	...	...
B. Anaerobic Micro-Organisms ...	...	...	...	...
	} 45	} 30	} 35	} 23

QUALITATIVE ANALYSIS.	1929.			
	MARCH.	JUNE.	SEPT.	DEC.
A. Bacteria associated with sewage or faecal pollution	B. Coli communis not found in 100 C.C.	B. Coli communis not found in 100 C.C.	B. Coli communis found in 100 C.C. but not found in 10 C.C.	B. Coli communis not found in 100 C.C.
B. Bacteria associated with disease	Not found	Not found	Not found	Notfound



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

Results shown in parts per 100,000.	1929			
CHEMICAL.	MARCH.	JUNE.	SEPT.	DEC.
Chlorine as Chlorides	0.9500	1.0000	1.0000	1.0000
Nitrogen as Nitrates ...	.0234	.0203	.0229	.0370
Ammonia ... ..	.0048	.0046	.0030	.0024
Albuminoid Ammonia	.0042	.0036	.0057	.0045
Oxygen absorption ...	.0592	.0620	.1880	.1044
Injurious Metals (Lead and Copper) ...	none	none	none	none
Total Solid Matter dried at 100° C. ...	13	11	14	15
Temporary Hardness ...	0.20°	3.00°	4.00°	0.20°
Permanent Hardness ...	6.80°	5.00°	4.80°	7.20°
Colour and Appearance in two-foot tube ...	not quite clear	clear	clear	clear
Odour when heated to 50° C. ... ..	none	none	none	none
Microscopical Examina- tion ... ..	Large deposit con- sisting of earthy and vegetable matter, etc.	Minute deposit con- sisting of earthy and vegetable matter, etc.	Minute deposit con- sisting of earthy and vegetable matter, etc.	Satisfactor

## **Rivers and Streams.**

None of the water from rivers or streams in the area of the Authority is used for drinking purposes, and no necessity arose for any action to be taken in respect of pollution.

## **Drainage and Sewerage.**

## **Closet Accommodation.**

## **Scavenging.**

## **Sanitary Inspection of the Area.**

## **Smoke Abatement.**

## **Offensive Trades.**

Information regarding these matters will be found on pages 76-79 and 81-87.

## **Schools.**

The sanitary condition of the schools generally is satisfactory, but some of the school buildings are old or of an old type. There are adequate facilities in every school in the area for an abundant supply of water, both for drinking and all sanitary purposes, from the Corporation's water supply.

Neither the Local Authority nor the Education Committee have for a number of years been able to satisfy themselves that any appreciable benefit in respect of the spread of infectious disease would be likely to result from school closure, consequently the methods adopted for the prevention of the spread of infectious disease have been the various active steps taken by the officers of the Authority, and the exclusion of individual scholars.

**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 Minister of Health was 2,549. 386 relate to the parlour type of house and 2,163 to the non-parlour type, and when the whole number is completed provision will have been made as follows:—

Denton Street, 24; Boustead's Grassing, 32; Stanwix, 74; Longsowerby, 330; Blackwell Road Estate, 632; Wigton Road Estate, 196; Raffles—Newtown Estate, 880; Botcherby Estate, 356; Duke Street, 14; and Rigg Street, 11.

The total number of houses erected at the end of the year was 2,299, which were provided as follows:—

Denton Street, 24; Bousteads Grassing, 32; Stanwix, 74; Longsowerby, 330; Blackwell Road Estate, 632; Wigton Road Estate, 196; Raffles—Newtown Estate, 742; Botcherby Estate, 244; Duke Street, 14; and Rigg Street, 11.

The number of houses in course of erection at the end of the year was 250, comprising 138 on the Raffles—Newtown Estate and 112 on the Botcherby Estate, 50 being of the parlour type and 200 of the non-parlour type.

Of the 2,163 non-parlour type houses, for which sanction has been received, 239 are two-bedroomed houses for the replacement of slum dwellings demolished, and are distributed as follows:—

Longsowerby Estate, 12; Duke Street, 14; Rigg Street, 11; Raffles—Newtown Estate, 188; and Botcherby Estate, 14.

At the end of the year 189 of these houses were completed and occupied, and those in course of erection were 36 on the Raffles—Newtown Estate and 14 on the Botcherby Estate.

During the year 42 houses of the parlour type were built by private enterprise, all of which were eligible for the subsidy under the provisions of the Housing, &c. Act, 1923. This subsidy ceased at the end of September, 1929, and the total number of such houses completed was 385, 315 being of the parlour type and 70 of the non-parlour type.

Number of New Houses erected during the year :—

(a) Total (including numbers given separately under (b)).	543
(b) With State assistance under the Housing Acts :	
(i) By the Local Authority.	501
(ii) By other bodies or persons.	42

*1.—Inspection of Dwelling Houses.*

(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) ... ..	251
(2) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ...	214
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	155
(4) Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ...	None

*2.—Remedy of Defects without Service of formal Notices.*

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers ... ..	41
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## 3—Action under Statutory Powers.

(a) Proceedings under Section 3 of the Housing Act, 1925—		
(1) Number of dwelling houses in respect of which notices were served requiring repairs	... ..	None
(2) Number of dwelling houses which were rendered fit after service of formal notices		
(a) By Owners	... ..	None
(b) By Local Authority in default of Owners	... ..	None
(3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of intention to close	... ..	None
(b) Proceedings under Public Health Acts—		
(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied	... ..	37
(2) Number of dwelling houses in which defects were remedied after service of formal notices		
(a) By Owners	... ..	37
(b) By Local Authority in default of Owners	... ..	None
(c) Proceedings under Sections 11, 14, and 15 of the Housing Act, 1925—		
(1) Number of representations made with a view to the making of Closing Orders		155
(2) Number of dwelling houses in respect of which Closing Orders were made	... ..	146
(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit	... ..	None
(4) Number of dwelling houses in respect of which Demolition Orders were made	... ..	60
(5) Number of dwelling houses demolished in pursuance of Demolition Orders	... ..	None

## INSPECTION AND SUPERVISION OF FOOD.

### Milk Supply.

The number of milk producers in the City is 15, the number of cowsheds 29, and the average number of cows housed therein 219.

During the year there were 15 milkshops and 82 milk purveyors on the register, 33 of the purveyors being persons whose premises are situated outside the City.

With regard to the milk supply of the City, no outbreak of acute infectious illness has occurred; some of the milk, however, leaves a good deal to be desired in respect of micro-organisms and dirt content.

The larger proportion of the fresh milk retailed in the City comes from districts outside, and is sold direct from the cans, conveyed mostly by carts, and in 9 instances by motor vehicle. 2 purveyors retail the whole of their milk in bottles, the milk being cooled and bottled at the time of production. 11 other purveyors sell partly from the can and partly in bottle; in 7 instances the milk is cooled and bottled at the time of production on premises in the City, and in the remaining 4 instances the milk is not bottled until after its arrival in the City from farms outside.

With regard to the administration of the Milk and Dairies Order, 1926, 282 inspections of premises have been made.

5 licences have been issued under the Milk (Special Designations) Order, 1923, 1 to the Carlisle Co-operative Society, Ltd., and 1 to the Nestlé and Anglo-Swiss Condensed Milk Co., in respect of pasteurising plant, and 3 to retailers, 2 of which were in respect of Certified Milk, and 1 in respect of Grade A (Tuberculin Tested) Milk.

12 samples of Grade A (Tuberculin Tested) Milk and 10 of Certified Milk were obtained and submitted for the statutory bacteriological tests, and all were found to comply with the requirements of the Order.

There has been no refusal nor revocation of registration of a retailer or of a licence for graded milk.

The following particulars, which exclude the question of tubercle bacilli, show the bacterial condition of 30 samples of milk.

#### PASTEURISED MILK.

No. of sample.	Date when sample was taken.	Total No. of bacteria per 1 c. c.	B. Coli present in			Total sediment (cells, cellular products, litter, dung, &c.) in parts per 100,000.
			1 c. c.	.1 c. c.	.01 c.c.	
1	19th Feb.	22,600	+	-	-	12
2	13th May	10,350	+	+	-	12
3	9th Sept.	164,000	+	+	+	8
4	23rd Sept.	31,500	+	+	+	14
5	9th Dec.	19,500	-	-	-	7

#### RAW MILK.

No. of sample.	Date when sample was taken.	Total No. of bacteria per 1 c. c.	B. Coli present in			Total sediment (cells, cellular products, litter, dung, &c.) in parts per 100,000.
			1 c. c.	.1 c. c.	.01 c.c.	
1	19th Feb.	5,300	+	-	-	15
2	"	82,000	-	-	-	12
3	"	31,500	+	+	+	18
4	"	69,500	-	-	-	16
5	"	35,500	+	+	+	20
6	13th May	63,000	+	+	-	14
7	"	420,000	+	+	-	20
8	"	1,910,000	+	+	+	9
9	"	98,000	+	+	+	8
10	"	4,600,000	+	+	+	30
11	9th Sept.	81,500,000	+	+	+	*
12	"	41,600,000	+	+	+	*
13	"	53,500,000	+	+	+	*
14	"	24,600,000	+	+	+	*
15	"	790,000	+	+	+	25
16	23rd Sept.	233,000	+	+	+	18
17	"	2,950	+	+	+	10
18	"	61,000	+	+	+	24
19	"	445,000	-	-	-	5
20	"	995,000	+	+	-	12
21	9th Dec.	31,500	-	-	-	8
22	"	56,500	+	-	-	10
23	"	34,000	+	+	+	5
24	"	620,000	+	+	+	8
25	"	164,000	+	+	+	12

\* The milk clotted on centrifugalization and no dirt estimation was possible.

### **Adulteration, &c.**

Information relating to action taken under the Food and Drugs (Adulteration) Act, 1928, will be found on pages 85, 88, and 89.

No samples of Condensed Milk or Dried Milk were submitted for examination.

All samples of a perishable nature have been examined for the presence of preservatives and, with the exception of 6 samples of Sausage which were found to contain Sulphur Dioxide within the amount permitted by the Public Health (Preservatives, &c., in Food) Regulations, 1925-1927, no such additions were detected. In 3 instances the Sausages were sold with the necessary declaration, while in the 3 remaining instances the offence against the Regulations was that of failure to declare the presence of Sulphur Dioxide, and the vendors were cautioned.

### **Meat.**

The Corporation maintain a commodious and well-equipped Slaughter-house, at which, with the exception of the three following premises, all animals slaughtered in the City are dealt with, viz., the L.N.E. Railway and the L.M.S. Railway killing sheds, two in number, which are used exclusively for the slaughter of sheep and lambs for the Smithfield Market, and a third exclusively for the slaughter of pigs by Messrs. Cavaghan & Gray, Harraby.

Inspection of meat at the Public Slaughter-house is performed in the first instance by the Superintendent, who retains all unsound, diseased, or suspected meat for further examination by the Medical Officer of Health or other authorised officer of the Local Authority acting under him. Meat stalls are not permitted in the City, other than those situate inside the Public Market, a large covered market owned by the Local Authority. All other shops from which meat is sold are regularly inspected, and without exception every butcher's shop in the City is fitted with a window or windows.

Particulars of the numbers of animals killed and carcasses examined, &c., will be found on pages 89 and 90.

### **Other Foods.**

Information concerning unsound food, food inspection, bakehouses, &c., and the work under the Sale of Food and Drugs Acts will be found on pages 83 to 90.



Table showing the Age Groups and Wards in which cases of Infectious Diseases were notified during 1929.

	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	Stannix and Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	St. Cuthbert's	Caldegate	Newtown & Belle Vue					
	Scarlet Fever	2	14	35	10	6	...	...	2	9	8	7	11	2	6	8	6				
Diphtheria	...	14	48	7	2	...	...	4	8	7	7	13	9	9	3	10	74	69	52		
Puerperal Fever	...	...	...	1	1	...	...	...	...	1	...	...	...	...	1	...	2	2	...		
Erysipelas	...	2	1	3	10	13	16	...	3	4	4	3	5	2	3	12	45	45	12		
Malaria	...	...	...	3	10	6	...	1	4	2	...	6	2	...	3	8	35	35	1		
Acute Primary Pneumonia	3	3	8	5	10	6	...	3	2	7	2	6	2	...	3	8	35	35	1		
Acute Influenzal Pneumonia	3	12	5	...	8	7	5	3	2	3	4	6	6	2	6	4	40	40	1		
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Ophthalmia Neonatorum	11	...	...	...	...	...	...	1	...	1	...	2	2	2	1	1	11	11	...		
Cerebro-spinal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Para-Typhoid Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Measles	50	579	...	...	...	...	...	26	60	56	36	60	67	73	88	101	629	629	3		
Pulmonary Tuberculosis	...	3	4	13	22	8	4	5	5	2	4	5	5	9	9	7	54	54	...		
Other forms of Tuberculosis	...	...	12	5	4	1	...	1	4	2	1	4	3	2	...	4	22	22	...		
Enteric Fever	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	1	...		
Dysentery	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...		
Puerperal Pyrexia	...	...	...	5	10	...	...	...	2	...	2	3	2	1	1	2	15	14	...		

## PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES.

### Infectious Diseases Generally.

995 notifications of infectious disease were received during the year, 76 of which related to various forms of tuberculosis, and 919 to other infectious diseases.

53 deaths were certified as due to the seven principal zymotic diseases, equal to a zymotic death-rate of 0.9 per 1,000 of the population. In the previous year 25 deaths were certified as due to zymotic diseases.

### Scarlet Fever.

67 cases of scarlet fever were notified, as compared with 71 in 1928. There was no evidence of any particular local spread of infection.

42 of the patients, or 62.6 per cent., were removed to the Infectious Diseases Hospital.

No deaths of residents were registered as being due to Scarlet Fever.

1 return case occurred.

No experimental work in connection with ascertainment of susceptibles nor in respect of immunisation has been undertaken.

**Table showing notifications, cases isolated, and number of deaths from scarlet fever during the years 1925-1929.**

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.
1925	369	190	37.9	10	4	1.0
1926	240	129	38.6	6	4	1.6
1927	95	59	36.1	2	0	0.0
1928	71	49	34.7	0	2	2.8
1929	67	42	43.9	1	0	0.0

### Diphtheria.

74 cases of diphtheria were notified, compared with 71 in 1928.

In 5 instances the patient was subsequently found not to be suffering from diphtheria.

9 deaths of residents of the City occurred, and the death-rate for this disease was 0.1 per 1,000 of the estimated population at all ages.

52, or 70.2 per cent., of the cases notified were removed to the Infectious Diseases Hospital.

No return case of diphtheria occurred.

No experimental work in connection with ascertainment of susceptibles nor in respect of immunisation has been undertaken.

**Table showing notifications, cases isolated, and number of deaths from diphtheria during the years 1925-1929.**

Year.	No. of cases notified.	No. of cases isolated in Hospital.	No. of deaths.	Deaths per 100 cases.
1925	19	7	2	10.5
1926	56	35	10	17.8
1927	31	15	2	6.4
1928	71	57	5	7.0
1929	74	52	9	12.1

### Anti-Diphtheria Serum.

39 applications were made by medical practitioners for the free supply of anti-diphtheria serum, 292,000 units having been supplied.

**Table showing case mortality of Scarlet Fever and Diphtheria isolated in Hospital compared with that of 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
1925	190	0.0	179	2.2	7	0.0	12	16.6
1926	129	2.3	111	0.9	35	17.1	21	19.0
1927	59	0.0	36	0.0	15	6.6	16	6.2
1928	49	0.0	22	9.1	57	5.2	14	14.3
1929	42	0.0	25	0.0	52	9.6	22	18.1

### **Smallpox.**

It is gratifying to know that the City was free from this disease during the year, and no notification of any Carlisle resident having been in contact with a case of smallpox was received.

No vaccinations were undertaken during the year under the Public Health (Smallpox Prevention) Regulations, 1917.

### **Enteric Fever, Para-Typhoid Fever, Typhus or Continued Fever.**

One notification relating to Enteric Fever was received, and this proved to be a true case of the disease.

**Table showing the average number of cases notified as enteric fever for 5-year periods, 1890—1924, and for the 5 years 1925-1929.**

Years.	Average for periods of 5 years.	Year.	Number of cases notified.
1890-1894	21·2	1925	...
1895-1899	18·6	1926	...
1900-1904	12·6	1927	2
1905-1909	3·2	1928	...
1910-1914	3·8	1929	1
1915-1919	1·4	...	...
1920-1924	2·2	...	...

### **Malaria.**

No notification relating to malaria was received.

### **Dysentery.**

No case of dysentery was notified.

### **Pneumonia.**

75 notifications of pneumonia were received during the year. In 40 instances the disease was stated to be of the acute influenzal type, and in 35 instances of the acute primary type.

All were investigated by the Health Visitors and advice given as to the nursing and prevention of infection to others. 115 visits were made in this connection.

In 2 instances the patient was removed to Hospital.

Death took place in 14 instances of the cases notified as influenzal pneumonia, and in 4 instances of those notified as primary pneumonia.

### **Influenza.**

35 deaths of residents were registered as due to influenza, as against 18 in 1928.

The age distribution of the deaths occurring among the 35 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	3	2	1	1	1	1	5	5	3	8	4	35

### Encephalitis Lethargica.

No case of encephalitis lethargica was notified.

### Cerebro-Spinal Fever.

No case of cerebro-spinal fever was notified.

### Tetanus.

No case of Tetanus was notified.

### Diarrhœa.

9 deaths occurred from diarrhœa during the year, and the Health Visitors paid 73 visits in connection with cases of diarrhœa and gastro-enteritis.

The following table shows the age incidence:—

Age.	No. of Deaths.
0—1 year	2
1—2 years	1
2—5 years	2
5—15 years	—
15—25 years	—
25—45 years	—
45—65 years	3
Over 65 years	1
	9

### Other Infectious Diseases.

Information relating to puerperal fever, ophthalmia neonatorum, measles, whooping cough, chicken-pox, and mumps, are given on pages 71 to 74.

### Notification Fees.

The total amount paid in fees for notification of all notifiable diseases during 1929 was £81 18s. 3d.

## TUBERCULOSIS.

The number of primary notifications of tuberculosis received during the year was 76, of which 69 were made by medical practitioners and 7 by the Authority's Medical Officers. 54 were in respect of pulmonary tuberculosis, and 22 of other forms of the disease. 18 additional cases came to the notice of the Medical Officer of Health otherwise than by notification, making a total of 94 new cases. Compared with the previous year there is an increase in Form A notifications, particularly non-pulmonary. In Form B notifications there is a decrease of pulmonary and an increase in non-pulmonary, making a decrease in total Form B notifications. Altogether the total of pulmonary notifications is lower and non-pulmonary are much higher, while the supplementary return shows an increase. The sex incidence for all new cases is males 37, females 39; divided as to pulmonary—males 29, females 25, and non-pulmonary—males 8, females 14; and this, compared with the previous year's figures, shows a decrease in the incidence of the disease on the basis of notification among both males and females.

The number of deaths of city residents was 41, equal to a death-rate of 0.7 per 1,000 of the population at all ages. 37, or 90.2 per cent., of the deaths were due to pulmonary tuberculosis, equal to a death-rate of 0.6 per 1,000.

The number of deaths and the death-rate from all forms of tuberculosis is much less than in 1928, but the percentage of deaths due to pulmonary tuberculosis is substantially the same. 21.9 per cent. of the deaths occurred in persons who had not been notified, as compared with 14.7 per cent. in 1928 and 17.7 per cent. in 1927. A further 12.1 per cent. died within a week of notification, making 34 per cent. in respect of whom no action could be taken. 60.9 per cent. survived for more than one month, and only 36.5 per cent. for more than three months after notification. These figures indicate that notification is not playing the important part it ought in the control of this disease, and while no instance has come to my notice where there has been wilful neglect or refusal to notify, there are far too many instances of late notification, and consequently the Local

Authority is seriously handicapped in the effective carrying on of the scheme for the treatment of Tuberculosis.

The number of cases on the notification register at the beginning of the year was:—

<i>Type.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Pulmonary ...	152	152	304
Non-Pulmonary ...	44	53	97
	<hr/>	<hr/>	<hr/>
All Cases ...	196	205	401
	<hr/>	<hr/>	<hr/>

and at the end of the year:—

<i>Type.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Pulmonary ...	129	132	261
Non-Pulmonary ...	51	57	108
	<hr/>	<hr/>	<hr/>
All Cases ...	180	189	369
	<hr/>	<hr/>	<hr/>

### TUBERCULOSIS SCHEME.

132 new cases were examined in connection with the Tuberculosis Dispensary during the year, and in addition 6 other cases transferred from other areas or "lost sight of" cases returned: 54 of these cases were contacts, 2 of which were found to be definitely tuberculous, while 7 were doubtful and the others not tuberculous. Of the 78 cases notified or suspected to be suffering from tuberculosis, 57 were definitely tuberculous, 10 were doubtful, and the remaining 11 were not considered to be suffering from tuberculosis.

The classification of the 59 new cases definitely tuberculous was 43 pulmonary and 16 non-pulmonary, 44 being adult cases and 15 children.

202 cases previously on the Dispensary Register submitted themselves for re-examination, bringing the total number of persons under supervision to 340. The total number of attendances at the Dispensary was 598, of which 208 were by insured persons, 230 by school children, and 160 by other categories. 111 visits were made by the Tuberculosis Officer to the homes of bed-



ridden patients. The decrease in the number of attendances at the Dispensary is mainly in respect of school children, and it may be mentioned that re-examination of a large number of children who used to attend the Dispensary is now undertaken at the Open-air Class in respect of definite early cases of tuberculosis, and at the ordinary schools or school clinic in respect of suspected cases. The number of sessions devoted to the work of the Tuberculosis Dispensary was 98, the average attendance being 6 approximately. The number of cases referred by general practitioners to the Tuberculosis Officer, with the object of arriving at a definite diagnosis in doubtful cases, was less than in 1928.

This function of the Tuberculosis Dispensary should be utilised to a much greater extent, and would undoubtedly reduce the number of notifications received in respect of persons in an advanced state of the disease. There are too many instances of patients not being notified until tubercle bacilli are found in the sputum, which means that the early cases which are particularly responsive to sanatorium treatment are not brought to the notice of the Tuberculosis Officer. The examination and supervision of doubtful cases at the Tuberculosis Dispensary would occupy less time than the repeated bacteriological examination of sputum, and would almost certainly result in finding the early instead of the advanced case of tuberculosis, and at the same time relieve the general practitioner of a considerable amount of responsibility.

At the beginning of the year there were 263 persons on the Dispensary Register, in 6 instances the diagnosis not being completed. The yearly revision has resulted in 31 patients being written off as "cured" while 67 were considered not to be tuberculous, 23 have died, and 20 have been lost sight of, leaving 260 on the Register at the end of the year. Of this number 4 were not definitely diagnosed as tuberculous, and of the definite cases 198 were pulmonary and 58 non-pulmonary.

A larger number of contacts, particularly children, were examined than in the previous year, and although the greater portion of these presented no signs of definite

disease, in many instances delicate children were discovered and dealt with at the Open-air School, thus preventing the probable onset of the disease. Medicines are not regularly supplied from the Dispensary, but in 8 instances Cod Liver Oil and Malt or Virol was given, 2 patients were supplied with thermometers, and 4 with sputum flasks.

Several cases of non-pulmonary tuberculosis attend the Voluntary Orthopædic Clinic, but as this is outside the Authority's Scheme the number of attendances made at this Institution are not given, and the same remark applies to cases receiving "light" and other forms of treatment at the Cumberland Infirmary. No arrangement has been made for dental treatment in connection with the Tuberculosis Dispensary, but this matter is still under consideration.

The reduction in the number of visits, viz., 1,941 by the tuberculosis nurses, is probably accounted for by the fact that an accurate distinction is now made between the visits in connection with the Dispensary and visits for the purpose of the Public Health (Tuberculosis) Regulations, 1912, the former only being set out in the table. With regard to sanatorium treatment, of which detailed information is given in the accompanying tables, 52 cases in all were dealt with. The average duration of residential treatment in respect of the 35 patients discharged during the year was 153 days, 10 staying less than three months, 16 over 3 and under 6 months, 6 over 6 and less than 12 months, and 3 for more than 1 year. The average period of residence in respect of the 17 patients still undergoing treatment in the sanatorium at the end of the year was 198 days.

The tables on pages 44-47 summarise the condition of all patients who have come under the Authority's scheme for the treatment of tuberculosis since its inception and should serve as a valuable indication of the progress made in dealing with tuberculosis.

No action was taken under the Public Health (Prevention of Tuberculosis) Regulations, 1925, nor under Section 62, Public Health Act, 1925.

## Work of the Dispensary.

Diagnosis	Pulmonary				Non-Pulmonary				Total			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	F.	
A—New Cases examined during the year (excluding contacts):—												
(a) Definitely tuberculous ...	21	17	1	3	..	6	5	4	21	23	6	7
(b) Doubtfully tuberculous ...	...	...	...	...	...	...	...	...	3	3	1	3
(c) Non-tuberculous ...	...	...	...	...	...	...	...	...	1	2	5	3
B—Contacts examined during the year:—												
(a) Definitely tuberculous ...	...	...	1	...	...	...	...	1	..	...	1	1
(b) Doubtfully tuberculous ..	...	...	...	...	...	...	...	...	...	1	3	3
(c) Non-tuberculous...	...	...	...	..	...	..	...	...	3	6	15	21
C—Cases written off the Dispensary Register as												
(a) Cured ... ..	5	4	12	6	1	...	2	1	6	4	14	7
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ...	...	...	...	...	...	.	...	...	4	11	22	30
D—Number of Persons on Dispensary Register on December 31st:—												
(a) Diagnosis completed ...	61	58	36	43	3	9	21	25	64	67	57	68
(b) Diagnosis not completed ...	...	...	...	...	...	...	...	...	1	2	1	...

## Work of the Dispensary—continued.

1. Number of Persons on Dispensary Register on January 1st ... ..	263	9. Number of Patients to whom Dental Treatment was given, at or in connection with the Dispensary ... ..	—
2. Number of Patients transferred from other areas and of "lost sight of" cases returned ... ..	6	10. Number of consultations with medical practitioners:—	
3. Number of Patients transferred to other areas and cases "lost sight of" ... ..	20	(a) At Homes of Applicants ... ..	5
4. Died during the year .. ..	23	(b) Otherwise ... ..	15
5. Number of observation cases under A (b) and B (b) on previous page in which period of observation exceeded 2 months ... ..	6	11. Number of other visits by Tuberculosis Officers to Homes ... ..	111
6. Number of attendances at the Dispensary (including Contacts) ... ..	598	12. Number of visits by Nurses or Health Visitors to Homes for Dispensary purposes ... ..	1941
7. Number of attendances of non-pulmonary cases at Orthopædic Out-stations for treatment or supervision ... ..	—	13. Number of	
8. Number of attendances, at General Hospitals or other Institutions approved for the purpose, of patients for		(a) Specimens of sputum, &c., examined ... ..	82
(a) "Light" treatment ... ..	—	(b) X-ray examinations made ... ..	—
(b) Other special forms of treatment ... ..	—	in connection with Dispensary work	
		14. Number of Insured Persons on Dispensary Register on the 31st December .. ..	79
		15. Number of Insured Persons under Domiciliary Treatment on the 31st December ... ..	21
		16. Number of reports received during the year in respect of Insured Persons:—	
		(a) Form G.P. 17 ... ..	20
		(b) Form G.P. 36 ... ..	54

**Residential Institutions.**

**A—AVERAGE NUMBER OF BEDS AVAILABLE FOR PATIENTS DURING THE YEAR 1929.**

	Observation	Pulmonary Tuberculosis		Non-Pulmonary Tuberculosis		Total
		"Sanatorium" Beds	"Hospital" Beds	Disease of Bones and Joints	Other Conditions	
Adult Males ...	1	6	2	...	...	9
Adult Females ...	...	4	1	...	...	5
Children under 15 ...	...	4	..	2	...	6
<b>Total ...</b>	<b>1</b>	<b>14</b>	<b>3</b>	<b>2</b>	<b>...</b>	<b>20</b>

**B—EXTENT OF RESIDENTIAL TREATMENT DURING THE YEAR 1929.**

	In Institutions on Jan. 1.	Admitted during the year	Discharged during the year	Died in the Institutions	In Institutions on Dec. 31
Number of Patients ...	M.	20	11	3	11
	F.	10	14	...	1
	M.	3	2	...	4
	F.	3	4	..	1
Number of Observation Cases ...	M.	...	1	..	...
	F.	...	...	..	...
	M.	...	...	...	...
	F.	...	...	..	...
<b>Total ...</b>	<b>16</b>	<b>36</b>	<b>32</b>	<b>3</b>	<b>17</b>



## (a) PULMONARY

Annual Return showing in summary form the condition of all Patients whose case records relate to the years in which the patients first came under Public Medical Treatment for pulmonary tuberculosis.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1926					1926						
				Class T.B. minus	Class T.B. plus				Class T.B. minus	Class T.B. plus					
					Group 1	Group 2	Group 3	Total (Class T.B. plus)		Group 1	Group 2	Group 3	Total (Class T.B. plus)		
ALIVE	Discharged as cured	Adults	M.	TOTAL				...	...	...	...	...			
			F.	..	..	..	..	..	..	..	..				
		Chil-dren	M.	..	..	..	..	..	..	..	..	..			
			F.	..	..	..	100	..	..	..	..	..			
	Disease arrested	Adults	M.	5	3	1	..	4	..	..	..	..			
			F.	9	..	..	..	..	1	..	1	..			
		Chil-dren	M.	12	..	..	..	..	2	..	..	..			
			F.	7	..	..	..	..	4	..	..	..			
	Disease not arrested	Adults	M.	7	1	6	..	7	1	..	3	..			
			F.	6	1	3	..	4	1	..	1	..			
		Chil-dren	M.	4	1	1	..	2	..	..	..	..			
			F.	6	..	1	..	1	..	..	..	..			
	Condition not ascertained during the Year ... ..				21	1	1	..	2	1	..	2	..	2	
	Lost Sight of or otherwise removed from Dispensary Register ...				TOTAL				..	220	5	1	1	..	2
	DEAD	Adults	M.	..	..	..	..	198	..	3	9	5	..	17	
			F.	..	..	..	..	190	3	1	4	..	..	5	
Chil-dren		M.	..	..	..	..	14	..	..	..	..	..	..		
		F.	..	..	..	..	28	..	1	..	1	..	2		
TOTALS ... ..				..	..	..	..	..	18	6	21	6	33		

# BERCULOSIS.

in the possession of the Dispensary (or Dispensaries) at the end of 1929, arranged according to tuberculosis, and their classification as shown on Form A.

1927				1928					1929				
Class T.B. plus				Class T.B. minus	Class T.B. plus				Class T.B. minus	Class T.B. plus			
Group 1	Group 2	Group 3	Total (Class T.B. plus)		Group 1	Group 2	Group 3	Total (Class T.B. plus)		Group 1	Group 2	Group 3	Total (Class T.B. plus)
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	4	..	..	..	..	9	4	6	1	11
..	1	..	1	5	..	3	..	3	2	5	4	3	12
..	..	..	..	5	..	..	..	..	3	..	..	..	..
..	..	..	..	8	..	..	..	..	2	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	1	2	..	2	..	2	..	..	..	..	..
..	..	..	..	2	1	..	..	1	2	..	..	..	..
1	4	8	13	1	..	2	4	6	1	..	..	3	3
1	7	7	15	1	..	5	6	11	..	..	1	2	3
..	..	1	1	2	..	..	2	2	1	1	..	..	1
..	..	..	..	..	..	..	1	1	..	..	..	..	..
2	13	16	31	30	1	12	13	26	20	11	11	9	31



**(b) NON-PULMONARY**

Annual Return showing in summary form the condition of all Patients whose case records according to the years in which the Patients first came under Public Medical Treatment

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1926					1926					
				Bones and Joints	Abdominal	Other Organs	Peripheral Glands	Total	Bones and Joints	Abdominal	Other Organs	Peripheral Glands		
ALIVE	Discharged as cured	Adults	M.	TOTAL	...	...	4	...	...	...	...			
			F.	"	...	...	3	...	...	...	...			
		Children	M.	"	...	...	15	...	...	...	1			
			F.	"	...	...	18	...	...	...	1			
	Disease arrested	Adults	M.	1	...	...	...	1	...	...	...			
			F.	2	...	...	...	2	...	...	...			
		Children	M.	...	...	...	1	1	1	...	1			
			F.	2	...	...	3	5	...	1	...	1		
	Disease not arrested	Adults	M.	...	...	...	...	...	...	...	...			
			F.	...	...	...	...	...	...	...	...			
		Children	M.	2	...	1	..	3	...	..	...			
			F.	...	...	..	..	...	...	...	1			
Transferred to Pulmonary				1	...	...	1	2	..	...	..	...		
Condition not ascertained during the Year				1	...	...	4	5	1	...	...	1		
Lost Sight of or otherwise removed from Dispensary Register				TOTAL					...	33	..	1	...	...
DEAD	Adults	M.	"	...	...	9	...	...	...	...				
		F.	"	..	..	7	...	...	...	..				
	Children	M.	"	..	..	4	...	...	..	...				
		F.	"	...	...	5	...	...	...	...				
TOTALS				...	...	...	...	117	2	2	...	6	10	

**BERCULOSIS.**

In the possession of the Dispensary (or Dispensaries) at the end of 1929, arranged by classification as shown on Form A.

1927				1928					1929				
Abdominal	Other Organs	Peripheral Glands	Total	Bones and Joints	Abdominal	Other Organs	Peripheral Glands	Total	Bones and Joints	Abdominal	Other Organs	Peripheral Glands	Total
...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	..	...	..	...	...	...	..	...	...	...	..
...	...	..	..	..	...	...	..	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	..	...	...	...	...
...	...	...	...	...	...	...	...	...	...	..	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	..	2	3	...	...	1	...	1	...	...	...	...	..
...	...	...	1	..	..	...	...	...	...	..	...	...	...
...	...	...	...	..	...	...	...	...	...	...	...	...	...
...	...	...	...	..	...	...	...	...	2	1	1	...	4
...	..	1	3	1	...	..	...	1	3	1	...	1	5
...	...	1	1	..	...	...	4	4	3	1	...	1	5
..	...	...	...	...	...	..	...	...	...	...	...	..	...
1	1	...	3	2	...	...	1	3	...	...	...	..	...
...	...	1	1	1	...	...	...	1	...	..	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	..	...	...	...	...	...	...	1	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	..	...	1	...	..	1	...	1	...	...	...	...	...
2	1	5	13	4	...	2	5	11	8	4	2	2	16

**Summary of Notifications of Tuberculosis from 30th December, 1928, to 28th December, 1929.**

**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.		
Pulmonary	Males	...	2	1	...	3	3	8	6	4	...	1	28	
	Females	...	1	...	2	4	3	6	2	1	3	3	25	
Non-pulmonary	Males	...	...	1	3	...	2	...	...	...	...	6	7	
	Females	...	...	2	...	2	1	3	1	...	1	10	10	
Totals		...	3	4	5	9	9	17	9	5	4	4	69	71

**NOTIFICATIONS ON FORM B.**

		Number of Primary Notifications.			Total Noti-fications on Form B.
		Ages. 0-5	5-10	10-15	
Pulmonary	Males	...	1	...	1
	Females	...	...	...	...
Non-pulmonary	Males	...	2	...	2
	Females	...	3	1	4
Totals		...	6	1	7

**NOTIFICATIONS ON FORM C.**

		Poor Law Institutions.		Sanatoria.	
		Males	Females	Males	Females
Pulmonary		...	...	...	...
		...	...	...	...
Non-pulmonary		...	...	...	...
		...	...	...	...
Totals		...	...	...	...
		23	13	1	...
		...	...	...	37

### 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 up-wards.	Total Case
Pulmonary—												
Males .....	...	...	..	...	...	1	3	1	2	1	...	8
Females .....	...	1	1	...	1	...	1	1	1	...	...	6
Non-pulmonary												
Males .....	1	...	...	...	...	...	...	1	...	...	...	2
Females .....	...	1	1	...	..	...	...	...	...	...	...	2
Totals.....	1	2	2	...	1	1	4	3	3	1	...	18

### Distribution of the Deaths from Tuberculosis in the various Wards of the City, 1929.

	Stanwix and Etterby	Rickergate	Aglionby	Greystone	St. Nicholas	Currock	Denton Holme	St. Cuthbert's	Caldelegate	Newtown & Belle Vue	Carlisle	
Pulmonary	...	2	2	...	3	4	5	4	4	11	2	37
Non-pulmonary	...	...	1	1	...	...	...	...	1	1	...	4
Totals		2	3	1	3	4	5	4	5	12	2	41

### Age and Sex distribution of New Cases and Deaths from Tuberculosis, 1929.

Ages.	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and over.
<b>New Cases.</b>											
<b>Pulmonary—</b>											
Male	...	2	2	...	3	4	11	7	6	1	1
Female	...	2	1	2	5	3	7	3	2	3	3
<b>Non-Pulmonary—</b>											
Male	1	...	3	3	...	2	...	1	...	...	...
Female	...	1	6	1	2	1	3	1	...	1	...
<b>Deaths.</b>											
<b>Pulmonary—</b>											
Male	...	2	...	...	...	1	2	2	6	1	...
Female	...	1	1	...	3	2	6	7	1	...	2
<b>Non-Pulmonary—</b>											
Male	1	...	...	...	...	...	...	1	...	...	...
Female	...	1	...	...	...	...	...	...	...	...	1

Table showing the period persons dying in 1929 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	2 years	3 years	4 years
Pulmonary	6	1	3	27	25	15	13	10	10	5	4	4
Non-Pulmonary	3	...	1	...	...	...	...	...	...	...	...	...

### Deaths from Tuberculosis, Influenza, and other Respiratory Diseases, 1925-29.

Year.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Tuberculosis, all forms.	Influenza.	Other Respiratory diseases.
1925	49	7	56	21	100
1926	48	15	63	7	92
1927	51	11	62	14	126
1928	56	5	61	18	71
1929	37	4	41	35	123

## VENEREAL DISEASES.

During the year 241 persons residing in Carlisle were under treatment or observation at the Clinic at the Cumberland Infirmary, an increase of 16 persons upon the figure for 1928. 170 were males and 71 females, of whom 143 attended for the first time, as compared with 126 for 1928.

82 patients were found to be suffering from syphilis, 14 from non-syphilitic chancre, 126 from gonorrhœa, and 19 from conditions other than venereal disease.

1,656 attendances were made by these patients, a decrease of 25 on the figure for the previous year. In addition, 2,087 attendances were made by patients for intermediate treatment by irrigation. 560 doses of arsenobenzol compounds were administered to patients.

5 medical practitioners in the area are entitled to free supplies of arsenobenzol compounds, but none was issued during the year.

With regard to the examination of pathological material, in addition to the figures in the following table 21 specimens for Wassermann re-action were sent on behalf of medical practitioners to the Public Health Laboratory, Manchester.

No action has been taken in the area under the Venereal Diseases Act, 1917.

### 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.

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 31st December, 1929.

	Syphilis.		Soft Chancre.		Gonorrhoea.		Conditions other than Venereal.		Total.	
	M	F	M	F	M	F	M	F	M	F
1. Number of cases which— (a) at the beginning of the year under report were under treatment or observation for ... .. (b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection ... ..	24	17	3	...	34	8	...	...	61	25
Total—Items 1 (a) and 1 (b) ... ..	28	18	3	...	37	10	...	...	70	28
2. (a) Number of cases dealt with at the Treatment Centre during the year for the first time with infections of ... .. <div style="display: flex; align-items: center;"> <div style="font-size: 3em; margin-right: 10px;">{</div> <div> <p>1. Less than one year's standing ... ..</p> <p>2. More than one year's standing ... ..</p> </div> </div>	8	6	10	1	66	6	4	13	100	43
Total—Items 1 (a), 1 (b), and 2 (a) ... ..	47	35	13	1	104	22	6	13	170	71
2. (b) Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection ... ..	1	...	...	...	3	...	...	...	4	...
3. Number of cases which ceased to attend— (a) before completing the first course of treatment for ... .. (b) after one or more courses, but before completion of treatment for ... .. (c) after completion of treatment, but before final tests as to cure of ... ..	5	5	5	...	30	10	...	...	40	15
4. Number of cases transferred to other Treatment Centres after treatment for ... ..	7	9	...	...	...	...	...	...	7	9
5. Number of cases discharged after completion of treatment and observation for ... ..	1	...	1	...	17	2	...	...	19	2
6. Number of cases which, at the end of the year under report, were under treatment or observation for ... ..	2	1	...	...	1	1	...	...	3	2
Total—Items 3, 4, 5 & 6 ... ..	47	35	13	1	104	22	...	...	164	58
7. Out-Patient attendances— (a) For individual attention by the Medical Officer ... .. (b) For intermediate treatment, e.g., irrigation, dressings, etc. ... ..	554	359	58	17	553	84	9	22	1174	482
	...	...	...	2	2038	47	...	...	2038	49

## Examinations of Pathological Material:—

	For Spirochaetes.	Detection of Gonococci.	Other Organisms.	For Wasser- mann Re-action.
(a) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre...	...	75	2	...
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory ...	9	15	4	185

With regard to the joint scheme of the County Council and the City, during the year a total of 357 persons were treated at the treatment centre at the Cumberland Infirmary, Carlisle, of whom 217 were seen for the first time, the remainder being carried over from the previous year. 28 of these were found not to be suffering from venereal disease, leaving 329. The figure for 1928 was 288.

In the number of new cases of syphilis (49) there was an increase of 14, and an increase of 19 in the new cases of gonorrhœa (126).

Areas in which Patients resided	New Patients	Total Attendances
Carlisle ... ..	143	3,743
Cumberland ... ..	59	791
Westmorland ... ..	5	35
Cheshire ... ..	1	1
London ... ..	1	1
Dumfriesshire ... ..	2	38
Glasgow ... ..	1	2
N. Ireland ... ..	1	6
Barrow ... ..	—	2
Essex ... ..	1	2
Manchester ... ..	1	1
Northumberland ... ..	2	8
	217	4,630



## MATERNITY AND CHILD WELFARE.

1075 notifications of birth, or 75 less than in 1928, were received during the year; 1022 of these related to live births and 53 to still-births. 572 notifications were by medical practitioners and 501 by midwives, while in 2 instances the birth was notified by a person who was neither doctor nor midwife. In 10 instances only did failure to notify occur, 8 of these being live births, and 2 still-births, all being doctors' cases.

### Health Visitors.

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

Total number of homes visited	...	...	11,495
Primary visits in connection with the notification of births	...	...	1,048
Re-visits to children between—			
0—1 year	...	...	3,802
1—2 years	...	...	2,820
2—3 years	...	...	2,781
3—4 years	...	...	2,669
4—5 years	...	...	2,159
		—	14,231
Total number of routine visits to children	...	...	15,279
Visits to children nursed or maintained by persons other than the parents	...	...	97
Visits to expectant mothers—			
Primary	...	...	169
Re-visits	...	...	200
		—	369
Visits in connection with			
Deaths of children under 1 year.	...	...	68
Ophthalmia Neonatorum	...	...	32
Diarrhœa	...	...	73
Bronchitis	...	...	119
Broncho-pneumonia	...	...	64
Acute Lobar and Influenzal Pneumonia	...	...	115
Measles	...	...	1252
Whooping Cough	...	...	606
Chicken-pox	...	...	226
Mumps	...	...	86
Puerperal Fever and Puerperal Pyrexia	...	...	9
Pemphigus Neonatorum	...	...	3

### Inspection of Midwives.

During January, 21 certified midwives gave notice of intention to practise during 1929, and on various occasions during the year 6 other midwives notified their intention to practise, making a total of 27. One of the midwives on the 1928 register notified her intention to cease practise on account of ill-health. 6 midwives, including some who were employed temporarily, left the City, and 3 of these, who were attached to institutions, were replaced, leaving 24 on the register. One midwife notified a change of name by marriage.

The midwives other than those employed in hospitals attended a total of 354 confinements.

6 cases of puerperal pyrexia occurred among midwives' cases; in 2 instances the condition was due to Phlebitis, 3 cases were considered to be due to Influenza, and in the remaining case, that of an excitable young girl, the cause of the temperature was considered to be due to lactation.

Notices from private midwives, in accordance with the rules of the Central Midwives' Board, were received in respect of the following conditions:—

Cases in which a midwife called for the assistance of a medical practitioner	...	...	134
Notification of the intention to substitute artificial for breast feeding	...	...	17
Notification of still-births	...	...	5
Notification of death before a doctor's arrival...			1
Notification of liability to be a source of infection			7

In addition to the above-mentioned notifications of the intention to substitute artificial feeding by private midwives, the names of all children who were not entirely breast fed when leaving the Corporation Maternity Home were notified to the Public Health Department. Details of these cases will be found in the section relating to the Corporation Maternity Home.

The conditions for which medical help was either obtained or advised are as follows:—

Condition of Mother—

Ante-natal	...	...	...	15
Hæmorrhage	...	...	5	
Others	...	...	10	
During Labour	...	...	...	41
Delayed Labour	...	...	19	
Malpresentation	...	...	10	
Miscellaneous	...	...	12	
Post-natal	...	...	...	48
Retained Secundines	...	...	4	
Ruptured Perineum	...	...	29	
Phlebitis	...	...	8	
Hæmorrhage	...	...	4	
Others	...	...	3	
Condition of Child	...	...	...	30
Feebleness	...	...	10	
Inflammation of the Eyes	...	...	16	
Others	...	...	4	

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

By doctors' orders, on account of—

Debility of mother	...	...	...	2
Mother's milk insufficient	...	...	...	2
Tuberculosis	...	...	...	2
Pyrexia	...	...	...	1
No definite reason	...	...	...	2
				—
				9

By midwives, on account of—

Insufficient milk	...	...	...	2
Disinclination of mother	...	...	...	3
Infant nursed out	...	...	...	3
				—
				8

77 visits, viz., 25 routine and 52 special, were made by the Medical Officers to midwives for the purpose of supervision at their own homes, and their bags, outfits, and registers have been regularly inspected. As the work of the midwife becomes more complex more "special" visits have to be made in connection with various aspects of the work, and in 1929 there were 13 more "special" visits than in 1928, these being mainly in connection with the Puerperal Pyrexia Regulations.

Letters relating to the following matters in connection with the rules of the Central Midwives' Board were written to midwives, viz:—

Irregular use of medical help forms ... ..	1
Wrong date or omissions in register ... ..	2
Reminder to forward registers for inspection ...	44
To arrange an interview ... ..	1
Acknowledging notification of intention to discontinue practice ... ..	1

### Home Nursing.

Under the arrangement with the Carlisle District Nursing Association the following conditions were attended to by their nurses:—

	No. of Cases.	No. of Visits.
Pneumonia ... ..	2	31
Puerperal Pyrexia ... ..	2	32
Measles and Pneumonia ... ..	1	16
Measles and Whooping Cough ... ..	1	18
Ophthalmia Neonatorum ... ..	1	13
	—	—
	7	110
	—	—

### Corporation Maternity Home.

207 patients received treatment in this institution, being 25 more than during the previous year.\* 22 patients, twice as many as last year, were admitted upon the request of medical practitioners, and there was no maternal death during the year.

Obstetrical operations were performed as follows:—  
Application of Forceps, 16; Induction of Labour, 4;  
External Version, 9; Internal Podalic Version, 5;  
Craniotomy, 2; Repair of Perineum, 45.

2 pupils sat for the examination of the Central Midwives' Board and passed successfully. Among the trainees of the Corporation Maternity Home, 26 in number, no failure in this examination has occurred, every pupil having passed at the first attempt.

There have been 1,493 confinements in the Home since it was opened in May, 1920.

The following particulars relate to the work of the Maternity Home:—

In hospital on 31st December, 1928	...	...	7
Admitted during year	...	...	200
			<hr/>
			207
			<hr/>
Average duration of stay	...	...	12 days
Number of cases delivered by midwives	...	...	166
Number of cases delivered by a doctor	...	...	29
Total number of confinements	...	...	195
Born before admission	...	...	1
Abortions	...	...	3
Number of cases treated ante-natally only	...	...	1
Number of cases treated during puerperium only	...	...	7
Puerperal Pyrexia notified	...	...	2
Ophthalmia Neonatorum	...	...	1
Slight Inflammation of Eyes	...	...	9

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

Mothers—

Before Labour	...	...	16
Eclampsia	...	...	1
Malpresentation	...	...	9
Pelvic Disproportion	...	...	4
Heart Disease	...	...	2
During Labour	...	...	35
Post Maturity	...	...	2
Pelvic Contraction	...	...	2
Delayed Labour	...	...	11
Placenta Prævia	...	...	4
Accidental Hæmorrhage	...	...	4
Malpresentation	...	...	7
Hydrocephalus	...	...	3
Eclampsia	...	...	2

After Labour ... ..	...	...	54
Rupture of Perineum ...	...	45	
Post-partum Hæmorrhage ...	...	1	
Albuminuria ... ..	...	1	
Pyelitis ... ..	...	1	
Phlebitis ... ..	...	1	
Pyrexia ... ..	...	1	
Vaginitis ... ..	...	1	
Jaundice ... ..	...	1	
Bronchitis ... ..	...	1	
Influenza ... ..	...	1	
For Infant ... ..	...	...	57
Malformation ... ..	...	1	
Feebleness ... ..	...	7	
Artificial Feeding ...	...	34	
Slight Inflammation of Eyes	...	9	
Ophthalmia Neonatorum ...	...	1	
Eczema ... ..	...	1	
Brachial Paresis ... ..	...	1	
Gastritis ... ..	...	2	
Congenital Syphilis ...	...	1	
Number of Maternal Deaths ...	...	...	Nil
Still-births ... ..	...	...	20
Causes—			
Malpresentation ... ..	...	4	
Eclampsia ... ..	...	1	
Pyelitis ... ..	...	1	
Accidental Hæmorrhage ...	...	2	
Placenta Prævia ... ..	...	3	
Hydrocephalus ... ..	...	3	
Pelvic Contraction ... ..	...	2	
Post Maturity ... ..	...	2	
Unknown ... ..	...	2	
Died before 10 days ... ..	...	...	4
Causes—			
Prematurity ... ..	...	3	
Icterus Neonatorum ...	...	1	
Total Number of Fœtal Deaths ...	...	...	24
Conditions necessitating the substitution of artificial feeding for breast feeding, wholly or partly ... ..	...	...	34
Insufficient Milk ... ..	...	31	
Influenza ... ..	...	1	
Twins ... ..	...	1	
Placenta Prævia ... ..	...	1	

### **Ante-Natal Clinic.**

The number of attendances by expectant mothers was 750, or 107 more than last year. Of these, 210 were first visits of new patients. There is a general tendency for expectant mothers to visit the Clinic at an earlier period than formerly, which is a matter for congratulation. Midwives practising in the town continue to send to the Ante-Natal Clinic cases upon which they desire a medical opinion as to the patient's condition.

Among the conditions in which medical attention or advice was given were the following:—bronchitis, dyspepsia, hydramnios, eczema, urticaria, albuminuria, varicose veins, neuritis, pelvic contraction, malpresentation, and leucorrhœa.

### **Infant Consultations.**

At the clinics for children up to five years of age there were 1,810 attendances, or 952 more than in 1928, of which 365 were attendances by new cases, and treatment or advice was given in the following conditions:—Malnutrition, injudicious feeding, prematurity, jaundice, diarrhœa, dyspepsia, constipation, mastitis, hernia, rickets, bronchitis, anæmia, nævus, eczema, seborrhœa, perionychia, abscess, papilloma, burns, impetigo, pemphigus, blepharitis, conjunctivitis, ophthalmia, otorrhœa, adenoids, phimosis, tongue-tie, stomatitis, defective speech, dental caries, brachial palsy, sleeplessness, congenital syphilis, malformation, torticollis, and mongolism.

### **Voluntary Agency.**

#### **BABIES' WELCOME AND SCHOOL FOR MOTHERS.**

The Assistant Medical Officer for Maternity and Child Welfare has visited each week one of the three Voluntary Infant Welfare Centres, at which she personally interviews each mother and baby, and sees such children up to 5 years, as may require attention. In addition to the 365 new cases seen at the Corporation Clinics, 197 new cases were seen at the Voluntary Centres, making 562 fresh children seen during the year, an

increase of 131 as compared with the new cases seen in 1928. The new cases seen at all centres, both municipal and voluntary, therefore amount to more than half the total number of births for the year, a result better than has ever before been attained, but which is still somewhat less than what is desired. Short addresses on hygienic subjects were given to the mothers on the occasion of the visits of the Medical Officer.

The following is a general summary of the work of the centres:—

Number of sessions held	...	...	150
Attendances of children—			
First attendances	...	...	197
Subsequent attendances	...	...	4,412
			—
Aged 0—1 year	...	...	1,269
Aged 1—5 years	...	...	3,340
		Total	— 4,609
Attendances of mothers—			
First attendances	...	...	172
Subsequent attendances	...	...	3,506
		Total	— 3,678
Classes and addresses—			
Mothercraft	...	...	49
Hygiene	...	...	53
Sewing	...	...	2
Cooking	...	...	4
		Total	— 108

#### HEALTH VISITOR.

Total number of homes visited	...	...	3,942
Primary visits to children	...	...	371
Re-visits—			
0—1 year	...	...	1,366
1—2 years	...	...	1,086
2—3 years	...	...	1,043
3—4 years	...	...	880
4—5 years	...	...	875
			— 5,250
Total number of visits to children	...	...	5,621
Visits to expectant mothers	...	...	214
Number of attendances at Babies' Welcomes			107



### Free Provision of Milk by the Corporation.

During the year 1,933 gallons of milk were supplied free of cost to 152 families for the purpose principally of assisting the feeding of infants, and in a few instances to nursing mothers, in each instance only after careful investigation into the circumstances of the family.

### Still-births.

The number of still-births notified was 53, and in addition there were 3 not notified, making altogether 56, 3 more than in 1928. Of this number 9 were born of parents not resident in the City. The total still-birth rate was 51.2 per 1,000 births and still-births registered in 1929. 56 still-births were duly registered preliminary to burial as required by the recent Act. 55 still-born children were given burial in the Carlisle Cemetery.

Three of the children still-born in 1929 were not buried in the Carlisle Cemetery. 1 still-birth was registered but not notified nor buried, and in one case the still-birth was notified but not registered nor buried. In 1 case the body was buried after an inquest on an unknown child, and in 1 case there was failure to notify the still-birth only. In the case of 2 of the still-born children buried early in 1929, the still-birth had occurred late in 1928.

In 11 instances no doctor was present at the still-birth, the following being details regarding these cases:—in 1 case the child was markedly premature, in 1 there was malpresentation of the child, in 2 there had been previous hæmorrhage, in 1 case the cord was compressing the child's neck, 1 mother had eclampsia, another albuminuria, 2 had had falls, and in 2 cases the cause was unknown, 1 of those having been found abandoned. Of the 45 still-births at which a doctor was present, in 14 instances the child was premature, the prematurity being accompanied by albuminuria in 1 case, by eclampsia in 1 case, by ante-partum hæmorrhage in 3 cases, by hydramnios in 1 case, and by hydrocephalus in 2 cases, while in 6 instances no cause except marked prematurity could be assigned. The remaining 31 cases,

in which a doctor was present, were full-time, and in 5 cases no cause for the still-birth could be ascertained; in 11 cases the delivery was instrumental, in 2 cases craniotomy was necessary, 6 were cases of malpresentation, 1 of hydrocephalus, 1 of strangulation by the cord, 1 was a monster, while in 4 cases the mother suffered from hæmorrhage.

4 of the still-births, or 5 if the still-born child found abandoned be included, were illegitimate, giving an illegitimate still-birth rate of 68.5 per 1,000 illegitimate registered births and still-births, the legitimate still-birth rate being 50.0. 34 of the still-births were males and 22 females.

**Table showing certain particulars regarding the 56 still-births.**

	Total	Legitimate	Illegitimate	Male	Female	Full Time	8 Months	7 Months or less	Doctor present	No Doctor present
<b>Maternal Conditions—</b>										
Ante-Partum Hæmorrhage...	9	9	...	6	3	6	...	3	7	2
Falls ... ..	2	2	...	1	1	1	1	...	...	2
Albuminuria ... ..	2	2	..	2	...	...	1	1	1	1
Eclampsia ... ..	2	2	...	1	1	1	...	1	1	1
Hydramnios ... ..	1	1	...	...	1	...	1	..	1	...
Defects of Cord ... ..	2	1	1	1	1	2	...	...	1	1
Instrumental Delivery ... ..	11	11	...	7	4	11	...	...	11	...
Malpresentation ... ..	7	5	2	5	2	7	..	...	6	1
Hydrocephalus ... ..	3	3	...	2	1	1	1	1	3	...
Craniotomy ... ..	2	2	..	1	1	2	...	...	2	...
Monstrosity ... ..	1	1	...	..	1	1	...	...	1	...
Marked Prematurity .. ..	7	7	...	5	2	...	1	6	6	1
No cause ascertained ... ..	6	5	1	3	3	6	...	..	5	1
No information obtainable ... ..	1	...	...	...	1	1	...	...	...	1

### **Infant Mortality.**

The total number of deaths of infants under one year was 80, the number of such deaths belonging to residents being 72, which provides a net infant mortality rate of 69.4 per 1,000 of the registered births. If the figures are corrected by adopting the method suggested by the Registrar-General, viz., taking as the 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 1929 was less, viz., just under 68 per 1,000, 2.7 per 1,000 less than that for 1928.

The rate is the second lowest recorded for the City, and is only 1.0 per 1,000 more than the rate for 1927, which was the lowest ever recorded for the City.

Many medical practitioners have not quite accustomed themselves to the new method of certification, and in the following remarks and table this was assumed to be the case as regards 2 cases in which both broncho-pneumonia and gastro-enteritis were mentioned. The strict reading of the certificate would give gastro-enteritis as the main terminal cause of death, but in consideration of the season, among other things, it is thought that a juster view would assign the chief cause to broncho-pneumonia, and they have been classified accordingly. There were only 2 deaths in which gastro-enteritis only was given as a cause in the certificate, and these also occurred outside the season of epidemic diarrhoea, so that there have actually been no deaths from the epidemic form of diarrhoea, a satisfactory state of affairs for which we may thank the damp cool summer. The 2 deaths from gastro-enteritis give a rate of 1.9 per 1,000 registered births, as compared with 6.4 per 1,000 registered births in 1928, a reduction of 4.5 per 1,000.

The number of deaths caused by prematurity, congenital defects, debility, marasmus, atelectasis, birth injuries, and other diseases of the newly born, was 21, less than half the number that occurred from these causes in 1928.

Of the total infant deaths, 29 occurred before the child was one month old, this number constituting not much more than one-third of the total infant mortality, which represents a substantial reduction in the neo-natal death-rate. Nevertheless, 20 infants died before they were a week old and 10 of these deaths occurred before the child had lived for 24 hours. These deaths were practically all caused by congenital defects or by marked prematurity.

The regrettable feature of the infantile deaths for 1929 is the number in which bronchitis, broncho-pneumonia, or

some other form of pneumonia was the cause. Consideration of the figures emphasises the urgent need for hospital accommodation for young children who develop pneumonia, often as a result of measles, whooping cough, or influenza, and who cannot possibly receive adequate attention in their own homes, where even the visit of a district nurse quite fails to meet the necessity. The number of such fatal cases occurring in 1929 was 22, and, in addition, in 10 of the deaths from whooping cough chest symptoms affected the issue, making a total of 32 cases, or nearly half the total number of deaths from all causes. With the provision of hospital beds and constant nursing for these cases a different complexion might be put upon our infant mortality.

The deaths from bronchitis and broncho-pneumonia were doubly regrettable, as they occurred in many cases in children who were previously healthy and who had surmounted the obstacles belonging to neo-natal life.

The death-rate from bronchitis and pneumonia, including 1 case of influenzal pneumonia, was 21.2 per 1,000, as compared with 11.7 per 1,000 in 1928 and with 24.1 per 1,000 in 1927. The deaths from whooping cough numbered 12, or 11.5 per 1000. Apart from bronchitis and broncho-pneumonia, the 2 remaining deaths from whooping cough were associated with convulsions and dilatation of the heart respectively. Fortunately, although measles was prevalent in the town, no death from this disease occurred among children under 1 year.

The number of deaths of legitimate children was 68, or 70.1 per 1,000 legitimate births. The number of deaths of illegitimate children resident in the City was 4, a rate of 58.8 per 1,000 illegitimate births, or 11.3 per 1,000 less than the legitimate death-rate, a result which is usual in Carlisle where the care expended upon such children by Health Visitors and others is diligent and unremitting.

The Health Visitors paid 68 visits to homes with special reference to deaths of children under one year of age.

**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.	
<b>All Causes.</b>	19	5	2	2	28	6	9	12	15	18	16	5	3	2	3	5	2	4	4	4	4	4	70
	1	...	...	...	1	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	2
Whooping Cough ...	...	...	...	...	...	...	3	5	4	6	3	1	...	1	...	...	...	...	...	...	...	...	12
Pneumococcal Meningitis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Tubercular Meningitis & Enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Congenital Syphilis	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Bronchitis ...	...	1	...	...	1	1	1	4	...	2	3	1	...	...	...	1	...	...	...	...	...	...	1
Pneumonia (all forms)	...	...	...	1	1	1	3	4	6	5	5	1	1	...	1	...	...	...	1	...	...	...	7
Enteritis and Gastro Enteritis	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	15
Cerebral Abscess ...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
Prematurity	8	2	1	1	12	...	...	1	...	2	3	1	1	...	...	3	...	...	1	...	...	...	1
Congenital Defects	5	...	1	...	6	1	1	...	...	1	2	...	1	1	...	...	...	2	1	2	...	...	1
Atelectasis	2	...	...	...	2	...	...	...	...	1	...	...	1	...	...	1	...	...	1	...	...	...	12
Icterus Neonatorum	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	8
Other Diseases of Early Infancy	2	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
Atrophy, Debility & Marasmus	...	...	...	...	...	3	...	...	...	...	1	...	1	...	1	...	1	...	...	1	...	...	3
Birth Injuries	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2
Accidentally Suffocated	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Thymic Asthma ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
<b>Totals</b>	20	5	2	2	29	7	9	12	15	18	17	5	4	2	3	5	2	4	4	4	4	4	72

**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.	Diarrhea and Enteritis	Bronchitis and Pneumonia	Measles and 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	6.0
1910	109.1	41.9	19.1	21.0	15.7	11.4	28.8	13.1	5.2	12.2	14.8	5.2
1911	145.0	45.0	27.0	27.0	25.2	20.8	18.0	12.6	4.5	37.9	26.1	11.7
1912	102.4	42.0	15.8	16.6	17.5	10.5	15.8	15.8	9.6	9.6	21.9	11.3
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	5.7
1915	144.3	51.2	30.2	26.8	14.3	21.8	30.2	12.6	5.9	15.9	20.1	17.6
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	4.4
1918	126.8	38.7	17.4	26.1	30.0	14.5	22.3	10.6	4.8	14.5	25.2	21.2
1919	107.9	45.9	17.8	18.8	13.1	12.3	19.7	22.5	9.4	13.1	20.6	3.7
1920	80.0	30.2	13.4	19.3	10.5	7.0	16.1	11.9	9.1	8.6	13.3	4.2
1921	105.3	38.2	17.5	23.7	16.8	9.1	11.4	17.5	9.1	22.1	13.7	2.2
1922	81.2	35.5	11.0	14.2	7.9	12.6	17.4	8.7	6.3	5.5	15.8	2.3
1923	82.9	39.7	11.0	7.6	14.3	10.1	29.6	5.0	6.7	7.6	11.8	8.4
1924	95.0	30.5	23.3	10.7	18.8	11.7	17.0	9.9	6.3	5.4	26.9	4.4
1925	78.4	37.3	15.3	3.8	9.6	12.4	26.8	4.8	9.6	6.7	15.3	3.8
1926	81.9	38.8	13.8	13.8	3.4	12.1	20.7	6.0	13.8	10.4	12.9	9.4
1927	68.4	24.1	6.8	13.5	14.4	9.6	8.7	1.9	12.5	7.7	24.1	0.9
1928	72.1	45.1	11.7	6.3	4.5	4.5	28.8	1.8	14.4	6.3	11.6	1.8
1929	69.4	28.0	6.7	8.7	11.5	14.5	11.5	2.9	14.5	1.9	21.2	11.5

**Infant Mortality Rates for the various Wards, 1918-1929.**

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
1925	85.1	70.1	66.6	90.9	78.2	37.3	101.5	59.3	97.0	92.7	78.4
1926	30.3	75.7	79.4	71.4	66.6	55.5	112.7	76.9	116.7	112.1	81.6
1927	45.4	72.0	108.1	51.2	102.0	66.6	41.6	54.0	79.1	61.8	68.4
1928	57.6	47.1	81.3	102.0	69.3	54.9	49.5	75.4	101.6	69.1	72.1
1929	0.0	60.2	27.0	42.3	32.9	97.5	101.0	19.6	117.6	107.1	69.4

### 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 ... ..	658	28	686	25	1	26	37.9
Partly Breast and partly Bottle ... ..	74	7	81	13	2	15	185.2
Bottle—							
(1) Boat-shaped ... ..	178	27	205	11	1	12	58.5
(2) Tube bottle ... ..	0	0	0	0	0	0	0.0
Debilitated Infants—							
(1) Spoon-fed ... ..	4	0	4	4	0	4	1,000.0
(2) Unable to be fed ... ..	19	2	21	19	2	21	1,000.0
No information re feeding ... ..	12	1	13	3	0	3	230.7

Death-rates per 1,000 among infants under 1 year, classified according to the Method of Feeding,  
1920-1929.

Mode of Feeding.	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	18 years.		
											Total No. of Children.	Total No. of Deaths.	Actual Mortality Rate.
Total infant mortality rate	80.0	105.3	81.2	82.9	95.0	78.4	81.9	68.4	72.1	69.4	20734	2022	97.5
Mortality rate for breast-fed infants ...	35.1	39.6	38.4	33.8	55.4	49.4	37.0	36.5	25.2	37.9	15832	684	43.2
Mortality rate for infants partly fed on breast and partly on bottle ...	171.7	407.7	152.0	141.7	181.2	155.3	116.3	127.6	81.3	185.2	1335	269	201.5
Mortality rate for infants fed by bottle ...	209.8	229.2	212.5	117.1	117.6	42.9	117.6	126.8	56.7	58.5	2306	604	261.9



### Infant Mortality and Rainfall.

Year.	Rainfall in Inches.	Number of days on which rain f-ll.	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
1925	32.17	189	78.4
1926	34.70	201	81.9
1927	37.38	204	68.4
1928	37.17	221	72.1
1929	33.56	175	69.4

#### **Illegitimacy.**

The number of illegitimate births registered was 68, or 65.5 per 1,000 registered births, being 9.3 per 1,000 less than the figure for 1928. The number of deaths amongst these children was 4, or 58.8 per 1,000 illegitimate births. The Health Visitors paid 97 visits to children nursed or maintained by persons other than parents.

#### **Maternal Mortality.**

During the year, 7 deaths occurred of mothers within 21 days of the confinement, and in connection with all these cases, except 1 due to hyperemesis which was referable to the Westmorland County Council area, a form of investigation for the information of the Maternal

Mortality Committee now in session was completed by the Assistant Medical Officer with the help of the doctor who attended the case. 1 of these deaths, caused by eclampsia, was that of a resident of Scotland, and there is no transference of deaths between the Registrars-General of England and Scotland. This state of affairs affects most unfavourably the maternal and neo-natal mortalities and the still-birth rate of Carlisle. The Cumberland Infirmary provides accommodation *inter alia* for a large number of serious cases from across the border in which the death-rate is likely to be high, and these facts must be carefully weighed when considering any statistics based on the Registrar-General's figures.

In 2 instances the causes of death were influenza and pueumococcal peritonitis respectively, and neither certificate would appear to indicate puerperal origin.

The other 3 maternal deaths were caused respectively by septicæmia in 2 cases, and post-partum hæmorrhage in the remaining case.

### **Puerperal Fever and Puerperal Pyrexia.**

14 notifications relating to puerperal pyrexia and 2 relating to puerperal fever were received, and there were 2 deaths, 1 among the cases notified as puerperal pyrexia and the other among those notified as puerperal fever. In 1 of the fatal cases the patient had helped to nurse a relation who was ill with a septic sore throat, and had also suffered from sore throat herself, besides having chronic inflammation of the accessory nasal sinuses. The other case was an instrumental one and the patient had also had a sore throat for a week or so before the birth.

The 14 non-fatal cases had the following features in connection with them:—1 developed pyelitis and an acute

abscess of her appendix, 1 was a difficult breech delivery, 3 were instrumental deliveries with injury of the soft parts, and one of these developed salpingitis, while in another manual removal of the placenta was necessary; 1 case in which the placenta was delivered manually developed double phlebitis, 2 cases had had the perineum sutured, 1 was a case of varicose veins in which phlebitis developed, in 1 case there had been post-partum hæmorrhage, 1 case had a simple pyelitis, 2 suffered from influenza only, while in 1 case the temperature appeared to be associated with the development of lactation only. 6 cases of puerperal pyrexia occurred in the practices of midwives; 3 cases were treated in hospitals and the remainder in their own homes.

#### **Nursing Homes Registration Act, 1927.**

At the beginning of the year 5 homes were registered under the Nursing Homes Registration Act, 1927, and 14 visits were paid to these homes by the Medical Officer of Health and the Assistant Medical Officer. 1 Home has since been discontinued, leaving 4 still on the register.

#### **Ophthalmia Neonatorum.**

11 cases of ophthalmia neonatorum were notified by medical practitioners. The discharge was purulent in 8 instances and in the remaining 3 instances the discharge never reached the purulent stage, owing to early application of appropriate treatment.

In 5 instances both eyes were affected, and in the remaining 6 cases only 1 eye was affected.

All of these children survived, but in 1 case there was some permanent damage to the eyes, serious visual impairment resulting to 1 eye.

In connection with these cases the Health Visitors of the Corporation paid 32 special visits to affected babies in order to ensure arrangements for appropriate treatment.

3 cases were attended daily by the nurses of the District Nursing Association, in all of which the treatment was supervised by the doctor in charge of the case. In 6 instances, which showed slight symptoms, treatment was received at home under the direction of the medical practitioner in attendance; in 1 instance the child was treated as a hospital out-patient, and in the remaining instance as an in-patient.

CASES.			Vision un-impaired	Vision impaired	Total Blindness.	Deaths during treatment.	Remarks.
Notified.	Treated.						
	At Home.	In Hospital.					
11	10	1	10	1	Nil.	Nil.	...

### Infectious Diseases.

The Health Visitors paid 2170 visits to cases of zymotic diseases, in addition to their visits to children suffering from ophthalmia neonatorum and pneumonia, and the cases of puerperal fever and puerperal pyrexia, the number of visits in this connection being 878 more than in 1928, owing to the great increase in the number of case of measles, chickenpox, and mumps.

### Poliomyelitis.

No notification relating to poliomyelitis was received during the year.

**Deaths among children aged 1-5 years.**

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

Diphtheria	...	...	...	...	7
Whooping Cough	...	...	...	...	9
Measles	...	...	...	...	10
Influenzal Pneumonia	...	...	...	...	5
Pneumonia and Broncho-pneumonia	...	...	...	...	20
Bronchitis	...	...	...	...	2
Pulmonary Tuberculosis	...	...	...	...	3
Tuberculous Mastoiditis	...	...	...	...	1
Meningitis	...	...	...	...	1
Enteritis and Diarrhœa	...	...	...	...	3
Septicæmia	...	...	...	...	1
Pernicious Anæmia	...	...	...	...	1
Vincent's Angina	...	...	...	...	1
Diabetes	...	...	...	...	1
Convulsions	...	...	...	...	1
Post-operative (Knock-knee and Cleft Palate)	...	...	...	...	2
Burns and Scalds	...	...	...	...	4
Drowning Accidents	...	...	...	...	2
Motor Accidents	...	...	...	...	1
					—
					75
					—

The death-rate among children aged 1-5 years was high, the number of deaths, 75, being more than 3 times that for 1928, of which infectious diseases including influenza accounted for 31, or 7 more than were accounted for last year from all causes. There were also 7 accidents, whereas last year there was only 1 death from this cause. With reference to the deaths from diphtheria, 7 in number, it is not improbable that a system of immunisation applied to all young children would reduce these to vanishing point.

### **HYGIENE OF PLACES OF PUBLIC ENTERTAINMENT.**

Information in this connection will be found on pages 76, 78, and 84.

### VETERINARY INSPECTION.

During the year 115 newly-purchased cows were examined in the byres of the City, amongst which the following conditions were found:—

Defective Udders	...	...	7
Fœtid Discharge	...	...	1
Irregular Breathing	...	...	1
			—
			9
			—

These animals were returned to the sellers.

During the year a total of 2,747 examinations of milk cows were made in order to ascertain the presence of disease likely to affect the milk supply, in the course of which 15 ailing animals were discovered, the conditions from which they were suffering being as follows:—

Chill	...	...	...	4
Gastric Derangement	...	...	...	2
Milk Fever	...	...	...	2
Johne's Disease	...	...	...	2
Gangrenous Mastitis	...	...	...	3
Inflammation of Udder	...	...	...	2
				—
				15
				—

54,062 bovine animals exposed for sale at the Sands Cattle Market and the Auction Marts were examined.

160,494 sheep and 17,060 pigs were also examined at the Auction Marts.

1 case of suspected Swine Fever was notified.

1 case of suspected Anthrax was notified, but microscopical examination of the blood gave negative results for Anthrax Bacilli.

At the request of the Medical Officer of Health post-mortem examinations were made at the Public Slaughterhouses on 2 carcasses of beef, 1 of which was certified to be unfit for human food.

11 cows were dealt with under the Tuberculosis Order, 1925.

### SANITARY INSPECTION OF THE DISTRICT.

Houses inspected and re-inspected	...	...	2,152
„ visited <i>re</i> Infectious Diseases	...	...	442
„ „ Water Supplies	...	...	10
„ „ Overcrowding	...	...	150
„ „ Dirty Condition	...	...	30
„ „ Animals kept	...	...	72
„ „ Sanitary Accommodation	...	...	208
„ „ under Housing Acts	...	...	1946
„ „ and particulars specially recorded under Housing (Consolidated) Regulations	...	...	214
No. of Cases of Infectious Diseases investigated			187
Nuisances investigated	...	...	1,073
Courts and Lanes inspected	...	...	3,816
Vans inspected at the Sands, &c.	...	...	138
Entertainment Houses, Schools, &c. No. of visits			79
Factories visited	...	...	52
Workshops visited	...	...	208
Meat Preparation Premises visited	...	...	171
Bakehouses visited	...	...	182
Shops visited <i>re</i> Shops Act	...	...	747
Shops visited <i>re</i> Meat and other Foods	...	...	88
Dairies inspected	...	...	282
Ice-cream Premises inspected	...	...	22
Slaughter-houses inspected	...	...	296
Markets inspected	...	...	417
Offensive Trade Premises inspected	...	...	30
Fried Fish Shops inspected	...	...	33
Stable Premises inspected	...	...	66
Drains inspected	...	...	1,040
Smoke observations	...	...	48
Visits <i>re</i> Rats and Mice Destruction Act	...	...	28
No. of Visits to Tips	...	...	63
Interviews (Owners, Tradesmen, &c.)	...	...	425
Miscellaneous visits	...	...	1,412

## WORKS EXECUTED.

	<i>By Notice.</i>	<i>Without Notice.</i>
Houses :—		
Provided with sufficient sanitary accommodation ... ..	7	8
Provided with a sufficient supply of water ... ..	2	7
Cleansed ... ..	7	—
Overcrowding abated ... ..	10	—
Disinfected ... ..	117	—
No. of rooms disinfected ... ..	128	—
Yards paved or repaired ... ..	11	2
Spouting fixed or repaired ... ..	41	19
Spouting disconnected from drain ... ..	2	6
Factories—		
Sanitary conveniences improved ... ..	3	1
Sanitary conveniences, additional, provided ... ..	3	1
Separate Sanitary accommodation provided for the sexes ... ..	3	—
Workshops—		
Cleansed or lime-washed ... ..	26	10
Sanitary conveniences lime-washed ... ..	—	15
Additional sanitary accommodation provided ... ..	1	—
Separate sanitary accommodation provided for the sexes ... ..	1	—
Lighting and ventilation improved ... ..	5	—
Overcrowding discontinued ... ..	1	—
Found with no abstract fixed ... ..	3	—
Found with no notice ... ..	1	—
Bakehouses (Retail)—		
Cleansed and lime-washed ... ..	29	24
Lighting and ventilation improved ... ..	1	—
Walls repaired ... ..	6	—



Works Executed ( <i>continued</i> ).	<i>By</i> <i>Notice.</i>	<i>Without</i> <i>Notice.</i>
Milk and Dairies Order:—		
<i>Byres</i> —		
Lighting and ventilation improved	3	1
Floors repaired ... ..	2	—
Middens removed to suitable positions ... ..	1	1
Yards paved ... ..	1	1
New drains constructed ...	2	—
Walls rendered with cement ...	2	—
Walls lime-washed and wood- work cleansed ... ..	3	12
Overcrowding discontinued ...	1	—
Closed or discontinued... ..	2	—
Milking methods improved ...	2	1
Milk houses erected ... ..	2	—
<i>Milkshops</i> —		
Sanitary conditions improved ...	3	1
Properly covered milk vessels provided ... ..	1	—
Ice Cream Premises:—		
Sanitary conditions improved ...	—	2
Slaughter-houses:—		
Lighting and ventilation improved	1	—
Buildings repaired ... ..	1	—
Floors repaired or re-laid... ..	4	—
Walls rendered with cement ...	1	—
Lime-washed ... ..	5	—
Entertainment Halls:—		
Ventilation improved ... ..	2	—
Decoration improved ... ..	—	3
Sanitary accommodation improved	2	—
Sanitary accommodation provided with intervening space ...	2	—
New seating accommodation ...	—	1
New floor ... ..	—	1
Drains:—		
Opened out for inspection ...	17	11
Constructed (new) ... ..	40	13
Re-constructed (old) ... ..	7	11
Cleansed or repaired ... ..	83	21
Ventilated ... ..	15	1

	<i>By</i> <i>Notice.</i>	<i>Without</i> <i>Notice.</i>
Works Executed ( <i>continued</i> ).		
Inspection chambers built ...	10	4
Under house abolished ...	1	2
Openings removed from inside buildings ...	2	—
Self-cleansing gullies provided ...	30	11
Subsoil drains provided ...	—	1
Sinks and other Sanitary Fittings:—		
New sinks fixed ...	—	21
Bath or W.H.B's fixed ...	1	2
Waste pipes trapped or repaired ...	5	14
Waste pipes disconnected from drains ...	—	2
Urinals:—		
Cleansed ...	20	—
Abolished ...	—	1
Erected ...	—	1
Midden Privies:—		
Abolished ...	17	—
Ashpits:—		
Abolished ...	4	—
Water Closets:—		
Repaired or cleansed ...	17	1
Provided with sufficient water supply ...	12	8
New cisterns fixed ...	27	22
Cisterns repaired ...	7	—
Soil pipes repaired ...	2	—
Substituted for other types ...	36	10
Total number provided ...	15	13
Offensive Trades:—		
Premises lime-washed ...	3	—
Streams and Watercourses:—		
Cleansed ...	3	—
Nuisances:—		
Arising from the keeping of Swine or other animals, abated ...	5	—
Arising from the emission of Smoke, abated ...	4	—
Offensive Accumulations:—		
Removed ...	18	—

**HOUSING.**

The activities of the Sanitary Inspectors in this direction were almost wholly confined to inspections of houses for the recording of particulars preliminary to representation as unfit for human habitation. Particulars as to the structural condition, &c., of 214 houses were recorded, and the number of visits and re-visits in connection with such houses was 1,946. The policy of erecting houses of small rental to accommodate the displaced tenants was continued, and it was thus made possible for a further 155 houses to be represented to the Health Committee as unfit for habitation, and in 146 cases Closing Orders were made.

At the close of the year 49 of these houses were still occupied.

During the year tenants from condemned property were re-housed as follows:—

No. of families removed from condemned property directly to new houses (slum-replacement type)	...	...	...	...	70
No. of families removed from condemned property to other houses (conceding their claim to a slum replacement type house to some other person)	...	...	...	...	74
Total slum replacement type houses occupied during the year	...	...	...	...	144
Total slum replacement type houses occupied during 1928	...	...	...	...	45
Total occupied to December, 1929	...	...	...	...	189
Number of tenants removed from condemned property to new houses of larger type (3 bedrooms)					
Directly	...	...	...	...	6
Indirectly	...	...	...	...	3
					— 9

The whole of the properties represented for Closing Orders were inspected by members of the Health Committee prior to the service of Closing Orders.

9 houses in Shakespeare Street, 5 in Caldcotes, and 2 in Beswick's Court, Caldcotes, as well as part Corporation property in Rayson's Court, Rickergate, were demolished during the year, following Closing Orders, without the necessity of serving Demolition Orders. 2 other houses, 1 in Water Street and 1 in Church Street, Stanwix, were voluntarily closed and demolished.

2 cellar dwellings occupied contrary to the provisions of the Public Health Act, 1875, were ordered to be closed as separate dwellings.

The above work necessitated the service of the following notices:—

No. of Closing Orders	...	...	...	146
No. of copies of Closing Orders on the several persons interested in properties	...	...	...	438
No. of Notices to Quit upon Tenants	...	...	...	97
No. of Notices of Time and Place of Meeting to consider demolition	...	...	...	37
No. of Demolition Orders	...	...	...	60

### **DRAINAGE.**

The number of new drains laid under the supervision of the Department was 29, and 4 others were repaired. The smoke test was applied to 32 drains and the water test to 32. This, together with the supervision of the work, necessitated 1,040 inspections during the year. As a result of several adverse reports on the sanitary condition of the Grammar School, 15 new drains were laid and several obsolete fittings removed. The sanitary condition of this School is now satisfactory.

### **CLOSET ACCOMMODATION.**

The number of privy middens and pail-closets was still further reduced during the year by the conversion of midden and pail-closets to water-closets at 16 houses at Belle Vue and 2 at Botcherby. Negotiations are proceeding with the Railway Company in connection with the conversion of the midden privies at the Midland Cottages, Petteril Bridge, and it is expected these will

be superseded by water-closets during the coming year. 15 houses at Eden Bridge having been bought by the Corporation for demolition, it is probable that during the coming year the number of privy middens and pail-closets in the Town will be reduced to 25.

### **COMMON LODGING-HOUSES.**

There is no registered common lodging-house in the City. There is in existence, however, a well-appointed lodging-house where men only are received, owned and controlled by the Corporation, and known as Lowther House.

### **VAN DWELLINGS.**

The usual enquiries relative to the incidence of infectious disease were made at the vans attending the Fairs. These vans, and one or two others pitched on other premises, were kept in a satisfactory condition.

### **FACTORIES AND WORKSHOPS.**

No. of Workshops registered	...	190
„ „ Bakehouses	... ..	68
„ „ Underground Bakehouses	... ..	3
„ „ Factories	... ..	90
„ „ Visits of Inspection	... ..	613

5 notices were received from H.M. Inspector of Factories relating to nuisances remediable under the Public Health Acts. These complaints received attention and the Factory Inspector was subsequently acquainted with the action taken.

28 notices were served by your Inspector directing attention to nuisances in factories and workshops.

At two premises where made-up meat foods were being manufactured, action was taken to discontinue their use as being unsuitable for the purpose, and contravening the Public Health (Meat) Regulations, 1924. Eleven letters were sent to traders under these regulations.

### **AIR POLLUTION.**

There was no serious complaint to make respecting the emission of dense smoke from factory chimneys, but 5 letters were addressed to firms as a result of observations taken. The number of chimneys is relatively small, viz., 36.

## **INSPECTION OF MEAT AND OTHER FOODS.**

Frequent inspections were made of stalls in the Public Market and elsewhere, as well as food shops and slaughter-houses. The nature of the diseases and conditions affecting animals slaughtered and found to be wholly or partly unfit for food, together with the amount of meat condemned as unfit for food, will be found on pages 87 and 90.

In December the Sanitary Inspector addressed a letter to all the meat purveyors in the City, directing their attention to the provisions of the Sale of Food Order, 1921, in connection with the exposure of Imported Meat, etc.

### **SLAUGHTER-HOUSES.**

The Public Slaughter-houses, owned by the Corporation and controlled by the Public Health Department, were kept satisfactorily. A table showing the number and nature of animals killed is given on page 89. Humane killers of the Greener and Captive Bolt types are in operation. A "trap" and gangway recently installed have simplified the slaughtering of pigs.

Repair works, including painting, were continued during the year at a cost of approximately £400.

There are three private slaughter-houses licensed. In 2 instances these are on railway premises and used for the slaughter of sheep for the London Markets, and in one instance for the slaughter of pigs in connection with a bacon factory.

### **FRIED FISH AND POTATO SHOPS.**

These premises were visited from time to time and 33 such visits were paid during the year. The number of fried fish shops on the Register is 35. No complaint respecting the conduct of the trade was received.

### **ICE-CREAM SHOPS.**

The tendency to centralise the manufacture of this commodity simplifies the work of inspection and supervision. 22 visits were paid to such premises.

## DAIRIES.

At two dairy farms certain outstanding works, which had been ordered by notice, were executed. In one case a cow byre was enlarged so as to include an existing stable. This improvement afforded increased light and ventilation, the installation of a proper water supply, the erection of a new milk house, the paving of the ground surrounding the byre and milk house, and the erection of a new manure pit.

Of two unsatisfactory premises registered, one is being improved (an erection for the reception of milk utensils has been built and further works are in progress), and at the other the works required have not been executed as the occupier has ceased to keep milk cows and the premises are not now used for any purpose under the Milk and Dairies Order.

Several letters were addressed to cowkeepers or dairymen respecting breaches of the Order.

The number of dairies registered at the 31st December was 97. Of these 82 are retailers and 15 producers, occupying 29 byres. 282 inspections were made to dairies during the year.

## HYGIENE OF PLACES OF PUBLIC ENTERTAINMENT.

The inspection of these places is undertaken at the request of the Minister of Health and in conjunction with the Licensing Authorities. 67 visits were made to Theatres, Picture Houses, etc., during the year.

The plan of one Picture House erected during the year was amended to give increased sanitary accommodation and provide intervening ventilated space to a convenience.

An opportunity was taken of securing an improvement in the ventilation and separate approaches to sanitary conveniences at one Picture House, which was altered under new management. At 3 other Picture Houses the attention of the Licensing Authorities was directed to breaches of the Regulations prescribing the minimum distance from screen to observer.

**INFECTIOUS DISEASE AND DISINFECTION.**

187 cases of infectious disease were investigated, and 111 cases removed to Hospital.

**FERTILISERS AND FEEDING STUFFS ACT.**

Three samples, two of feeding stuffs and one of fertiliser, were submitted to the Analyst, and he found upon analysis that one sample of feeding cake and one of dairy meal did not comply with the government standards. The manufacturers were in each case asked for an explanation, which, on receipt, was deemed to be satisfactory.

**MERCHANDISE MARKS ACT.**

Observations were kept upon retail shops in order to secure the observance of several Orders in Council made in respect of foreign apples, honey, etc.

**RAG FLOCK ACT.**

Seven samples of Rag Flock were obtained from upholsterers, and submitted to the Public Analyst. When tested all the samples were found to conform to the standard, which allows a maximum of 30 parts of Chlorine per 100,000 parts of Flock.

**FOOD AND DRUGS (ADULTERATION) ACT.**

Various articles of food were sampled during the year, particulars of which are tabulated on pages 88 and 89. The total number of samples was 170.

**SHOPS ACTS.**

Day and evening inspections, numbering 747, were made during the year under these Acts. As a result, 16 letters of caution were sent to shopkeepers respecting breaches of the closing hours and the improper working of assistants.

Two shopkeepers were proceeded against for failing to comply with the Shops (Hours of Closing) Act, 1928, and ordered to pay the costs.



### **RATS AND MICE DESTRUCTION ACT.**

In order to encourage the destruction of rats, the Corporation pays 2d. per head for rats delivered to them at their Destructor, Boustead's Grassing. During the year 1888 rats were destroyed.

During National Rat Week the activities of the Department included the exhibition of large posters on hoardings, railway goods yards, etc. Advice leaflets, bearing prescriptions for poisons, were also distributed.

A number of informative lantern slides, prepared by the Sanitary Inspector, setting out facts in connection with the rat menace were, through the courtesy of the Managers, shown at several Picture Houses.

A special raid on the refuse tips was particularly productive.

In consequence of complaints received respecting rats on premises, 28 visits were made. In some instances the drains were tested and in others advice given respecting the extermination of the pest.

### **OFFENSIVE TRADES.**

The number and description of the offensive trades is the same as previously, viz., 1 tripe boiler, 1 gut scraper, and 1 fellmonger.

Premises are licensed, in one instance, under the Public Health Acts (Amendment) Act, 1907, as a receiving depôt for hides, &c.

### **REFUSE REMOVAL WORK, STABLES, &c.**

House and trade refuse is removed daily from the central portion of the City, and in other districts twice or thrice weekly according to district. The refuse is disposed of at 5 tips. The "kerbside" method of collection is in operation.

No charge is made for the removal of small quantities of trade refuse. A small destructor is maintained for the destruction of condemned meat, fish, and other offals delivered by private traders. There is a separate weekly collection of paper from tradesmen, bags being supplied free by the Corporation. About 46 tons of paper were baled and sold.

In connection with this work and for supplying team labour for street gully cleansing, &c., work, 14 horses are kept at the Depôt, Boustead's Grassing. 9 of these horses are employed in connection with refuse removal, and there is a fleet of four S.D. Freighters, one of which was purchased during the year.

Number of Loads of House and Trade Refuse removed to Tips	23617
Number of Loads of Slaughter-house Garbage	430

### LAVATORIES, URINALS, &c.

The public urinals, 20 in number, including one underground convenience with five attendants, are controlled by this Department.

One urinal was abolished at the Viaduct and a new one erected at Holme Head.

### LEGAL PROCEEDINGS.

Legal proceedings were taken against four persons. Two of the cases were breaches of the Shops (Hours of Closing) Act, 1928, and the defaulters were ordered to pay the costs. In two other cases the Bench made orders for the abatement of nuisances arising from the improper keeping of animals.

### 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	25	12	1	20
Mutton	1	2	1	23
Pork	...	19	2	9
Veal	...	11	1	21
Total	28	5	3	17
Ham	...	...	...	68 lbs.
Bacon	...	...	...	160 „
Corned Beef	...	...	...	146 „
Tongue	...	...	...	6 „
Haddocks	...	...	...	112 „
Cabbages	...	...	...	7½ doz.

### FOOD AND DRUGS.

**Table showing nature of Articles purchased, with results of analyses:—**

Article	No. of Samples	No. found to be genuine	No. adulterated
Milk ... ..	112	94	18
Sausages ... ..	12	12	...
Cream ... ..	8	8	...
Butter ... ..	5	5	...
Whisky ... ..	5	5	...
Cheese ... ..	4	4	...
Meat Paste ... ..	3	3	...
Coffee ... ..	2	2	...
Peas ... ..	2	2	...
Cake ... ..	2	2	...
Baking Powder ... ..	2	2	...
Mixed Spice .. ..	2	2	...
Fish Cakes ... ..	1	1	...
Arrowroot ... ..	1	1	...
Brandy Snaps ... ..	1	1	...
Rum ... ..	1	1	...
Lard ... ..	1	1	...
Vinegar ... ..	1	1	...
Gravy Salt ... ..	1	1	...
Fruit Sauce ... ..	1	1	...
Cocoa Essence ... ..	1	1	...
Pickled Cabbage ... ..	1	1	...
Sweets ... ..	1	1	...
Total ... ..	170	152	18

Two samples of milk (included in above) were broken in transit. Three samples of milk were deficient in both milk fat and non-fatty solids; one was deficient in fat only, and 14 were deficient in non-fatty solids only. There were 2 "appeal to the cow" samples.

No legal proceedings were taken in respect of any sample, but 16 vendors of milk were warned by letter and 2 firms warned against the misuse of Preservatives under the Public Health (Preservatives, &c., in food) Regulations.

**Average composition of 94 samples of Milk taken during the year under the Food and Drugs (Adulteration) Act.**

	No.	Average contents	
		Fat	Non-fatty solids
Certified as genuine ... ..	94	3.75%	8.29%
„ „ adulterated .. ..	18	4.03%	7.30%

The following Tables give the number of animals killed annually during the past five years:—

**PUBLIC SLAUGHTER-HOUSES.**

Year.	Beasts.	Sheep and Lambs.	Calves.	Pigs.	Total.
1925	4,343	13,814	372	5,775	24,404
1926	4,478	14,889	285	4,712	24,364
1927	4,454	16,981	193	5,548	27,179
1928	4,651	17,714	320	6,682	29,367
1929	5,054	17,740	501	5,403	28,698

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

1925	...	48,279	...	...	48,279
1926	...	46,745	...	...	46,745
1927	...	69,939	...	...	69,939
1928	...	52,213	...	...	52,213
1929	...	37,686	...	...	37,686

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

1925	...	79,906	...	...	79,906
1926	...	72,232	...	...	72,232
1927	...	88,807	...	...	88,807
1928	...	74,126	..	...	74,126
1929	...	45,790	...	..	45,790

**HARRABY BACON FACTORY.**

1926	..	...	...	248	248
1927	..	..	...	338	338
1928	...	...	...	606	606
1929	...	...	...	580	580

## PUBLIC SLAUGHTER-HOUSES.

**Table showing incidence of Tuberculosis in Food Animals.**

ANIMAL.	No. Slaughtered.	No. Affected.	Amount unfit for food.		
			Offal only.	Part Carcasses.	Whole Carcasses.
Cattle ... ..	5,054	91	12	20	59
Calves ... ..	501	8	...	...	8
Pigs ... ..	5,403	7	...	4	3
	10,958	106	12	24	70

**Table showing number of Carcasses and Part Carcasses condemned for diseases other than Tuberculosis.**

DISEASE.	Unfit for food.							
	Part Carcase.				Whole Carcase.			
	Cattle.	Sheep.	Pigs.	Calves.	Cattle.	Sheep.	Pigs.	Calves.
Accident ... ..	5	3	...	...	2	6	...	1
Inflammation and Septicæmia ...	1	1	3	...	4	15	1	1
Putrefaction ... ..	4	...	...	...	..	7	...	...
Asphyxiation ... ..	...	...	...	...	...	...	...	...
Malignant Diseases ... ..	..	..	..	..	1	...	1	...
Dropsy & Emaciation ... ..	...	...	...	...	...	5	1	1
Parasitic Diseases ... ..	...	...	...	...	1	4	...	...
Actinomycosis .. ...	2	...	...	...	1	...	...	...
Fœtal ... ..	...	...	...	...	...	...	...	4
Bacterial ... ..	...	...	...	2	3	...	...	...
Part Carcasses ... ..	12	4	3	2	...	...	..	...
Whole Carcasses ... ..					12	37	3	7

## FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

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

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES . . . . .	52	2	Nil
WORKSHOPS ... ..	} 561	28	Nil
WORKPLACES ... .. (Other than Outworkers' premises)			
TOTAL .. ..	613	30	Nil

### 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 Pro-secutions.
	Found.	Remedied.	Referred to H. M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness ... ..	18	18	...	...
Want of ventilation ... ..	4	4	...	..
Overcrowding... ..	...	...	...	...
Want of drainage of floors ...	1	1	...	...
Other nuisances ... ..	4	3	1	...
 <i>Sanitary accommodation :—</i>				
{ Insufficient ... ..	...	...	...	...
{ Unsuitable or defective	1	1	...	...
{ Not separate for sexes	...	...	...	...
 <i>Offences under the Factory and Workshop Acts :—</i>				
Illegal occupation of under-ground bakehouse (s. 101)...	...	..	...	..
Other offences ... .. (Excluding offences relating to outwork, which are included in Part 3 of this report)	...	..	...	...
Total ... ..	28	27	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, are enumerated here.	Workshops ... .. 190
	Bakehouses ... .. 71
Total number of workshops on Register ...	261

#### 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 ... .. .	5
Reports (of action taken) sent to H.M. Inspector ... .. .	5
Other ... .. .	..
Underground Bakehouses (s. 101) —	
In use at the end of the year ... .. .	3

#### 6.—Classified List of Workshops.

Business.	No.	Business.	No.
Millinery .. .. .	12	Fishing Tackle .. .. .	2
Tailoring ... .. .	30	Stocking Knitting... .. .	1
Sugar Boiling ... .. .	3	Scale Repairers ... .. .	2
Cycle Repairing ... .. .	7	Picture Framing ... .. .	2
Dressmaking ... .. .	13	Photography ... .. .	3
Bakehouses ... .. .	71	Tripe Boiling ... .. .	1
Boot Repairing, Cloggers ... .. .	41	Marine Dealers ... .. .	3
Saddlery ... .. .	5	Gut Scraper .. .. .	1
Meat Preparation ... .. .	31	Fellmonger ... .. .	1
Watch Makers, Jewellers ... .. .	14	Sewing Machine Repairer .. .. .	1
Upholstering .. .. .	3	Engraver ... .. .	1
Coopers ... .. .	3	Wagon Sheet Repairer ... .. .	1
Basket Making ... .. .	2	Firewood Dealers ... .. .	1
Umbrella Repairing ... .. .	1		
Taxidermist ... .. .	1		
Tinsmiths ... .. .	2		
Hand-weavers ... .. .	2	Total ... .. .	261



### Tabulated list of Housing Works executed during 1929.

Particulars of Works executed.	Number of Houses.	
	By Notice.	Without Notice
Walls plastered or re-plastered ... ..	12	12
Ceilings re-plastered or repaired ... ..	5	..
New Floors ... ..	...	3
Floors re-laid or repaired ... ..	3	2
Windows repaired and made to open for ventilation ... ..	2	..
Cooking ranges re-set or repaired ... ..	2	...
Interior walls remedied of dampness ... ..	5	2
Woodwork of doors and cupboards repaired ..	1	...
Jams and sills faced with cement ... ..	...	1
Roofs repaired and made watertight ... ..	17	16
External walls pointed ... ..	...	11
Chimney stacks repaired ... ..	5	13
Yards concreted ... ..	...	14
Yards repaired ... ..	4	5
Wash-houses—		
New Wash-houses ... ..	...	5
Floors repaired ... ..	1	..
Roofs repaired .. ...	3	3

