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CITY OF LEEDS.

REPORT

ON THE

Health and Sanitary Administration

OF THE CITY

FOR THE YEAR 1919.

BY

J. JOHNSTONE JERVIS, M.D., D.P.H.,

Medical Officer of Health.

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CITY OF LEEDS.

To the Chairman and Members of the Health Committee.

Gentlemen,

I have pleasure in presenting to you this, my first Annual Report as Medical Officer of the City.

The year under review was one of steady progress in all branches of Public Health work, and the health of the City has been well maintained. Reconstruction after a war such as that from which the country has but lately emerged is no light task, and if the year's achievements seem to fall short of what might have been expected, one must remember that the difficulties in the way of progress have been great.

I must acknowledge my indebtedness to the Chairman and Members of the Health Committee for their unvarying courtesy during the year, and to the members of my staff for their splendid co-operation and loyalty.

I am, Gentlemen,

Your obedient servant,

J. JOHNSTONE JERVIS.

*Public Health Department,
Market Buildings, Leeds,
November, 1920.*

SUMMARY, 1919.

AREA OF CITY	26,275 Acres.	
POPULATION (Registrar-General's estimate) ..	430,834	
„ (Local estimate)	480,297	
	Average.	
	1919.	1909-18.
BIRTH RATE (births per 1,000 living) ..	17·56	22·02
MARRIAGE RATE (persons married per 1,000 living)	21·22	16·08
DEATH RATE (deaths per 1,000 living) ..	16·23	16·02
NATURAL INCREASE OF POPULATION ..	572	2,703
(Excess of births over deaths in the year)		
INFANT MORTALITY RATE	119	130
(deaths under 1 year per 1,000 births)		
DEATH RATE from Pulmonary Tuberculosis	1·26	1·35
„ „ other forms of Tuberculosis	0·41	0·56
„ „ Diarrhoea and Enteritis		
(under 2)	0·32	0·57
„ „ Pneumonia and Bronchitis	3·02	2·76
„ „ Cancer	1·33	1·06
Number of cases of Scarlet Fever	1,340	1,189
„ „ Diphtheria	811	763
„ „ Typhoid Fever	33	91

PART I.

GENERAL STATISTICS.

Population.—For the purpose of making the calculations in connection with the vital statistics of the City, two estimates of population have been supplied by the Registrar-General, one for determining the death-rate, namely 430,834, and the other for determining the birth-rate, 448,801. The death-rate population excludes all non-civilian males whether serving at home or abroad. The birth-rate population on the other hand includes all the elements of the population contributing to the birth and marriage rates. It consists therefore of the death-rate or civilian population plus all non-civilians enlisted from this country, whether serving at home or overseas. In the absence of definite figures of population which cannot be available until after the census of 1921, the Registrar-General has had recourse to the rationing returns placed at his disposal by the Ministry of Food and has based his estimates on information contained in these returns. In Leeds it has been the custom in past years to use only one estimate of population and that the first or death-rate estimate for calculating both the birth and death-rates. The population used throughout this report, except for marriages, is therefore 430,834. In estimating the marriage rate the population on which the calculations is based is that of the combined registration districts of the City of Leeds, together with Templenewsam and Rothwell, Churwell and Gildersome.

Marriages.—The total number of marriages registered in the Leeds, Hunslet, Holbeck and Bramley registration districts* during 1919, was 5,083, which gives a marriage-rate of 21·2 as compared with 15·5 for 1918, the highest rate ever recorded not excluding the year 1915 which was looked upon as a phenomenal one when the rate rose to 20·2. The marriage-rate for England and Wales shows a similar increase being 19·7 for 1919 as compared with 15·3 for 1918 and 19·4 for 1915.

* Registration districts are based on the areas of Poor Law Unions, of which there are four in Leeds, but the boundaries of the Unions do not coincide with those of the City. The whole of the Leeds Union is within the City, but only parts of the Hunslet, Holbeck and Bramley Unions. The Hunslet Union includes Templenewsam and Rothwell, Holbeck includes Churwell, and Bramley Union includes Gildersome.

MARRIAGE RATE.

Year.	Leeds.	England and Wales.
1909	15.1	14.7
1910	15.6	15.0
1911	15.7	15.2
1912	16.0	15.6
1913	16.4	15.7
1914	16.6	15.9
1915	20.2	19.4
1916	15.5	14.9
1917	14.2	13.8
1918	15.5	15.3
1919	21.2	19.7

BIRTH RATE.

Year.	No. of Births.	Birth Rate, LEEDS.	England and Wales.
1890-1894	62,270	33.2	30.5
1895-1899	63,873	31.5	29.6
1900-1904	64,791	30.1	28.4
1905-1909	59,117	26.9	26.7
1910-1914	53,267	23.6	24.2
1915	9,877	21.5	21.8
1916	9,432	21.1	21.6
1917	7,566	17.3	17.8
1918	7,392	17.3	17.7
1919	7,564	17.6	18.5

Births.—The total births registered in Leeds during 1919 were 7,837 and the nett births (after adding 23 which took place outside the City but whose parents were Leeds citizens, and deducting 296 which occurred in the City but whose parents belonged to outside districts) 7,564, which is 172 more than the total for 1918. This total when applied to the population living at all ages gives a birth-rate for the year 1919 of 17·6 per thousand as compared with 17·3 for the previous year and 18·5 for England and Wales. Had the birth-rate been calculated on the Registrar-General's birth-rate estimate of population, namely, 448,801, it would have been 16·9 instead of 17·6, or a difference of 0·7 per thousand.

A very striking feature in the birth-rate for the year was the extraordinary rise which took place between the first and last quarters. During the first quarter the rate declined to 13·6 per thousand of the population (the lowest on record); in the second it rose to 14·6, in the third to 17·5, whilst in the fourth quarter it reached the unusually high figure of 24·4.

It seems likely judging from the fact that the birth-rate has continued to be maintained at a high figure throughout the first and second quarters of the current year (1920) that the tide has set definitely in the opposite direction to that of the previous decade, and that the future will witness a gradual return to normal.

Unfortunately, in connection with the birth-rate, one has again to record an increase in the number of illegitimate births. In 1918 the number was 528, or 7·1 per cent. of the nett births registered, as compared with 567 or 7·5 per cent. in 1919, which is an increase of 0·4 per cent. This increase is to be the more deplored when one considers that the probability of survival in the case of the illegitimate child is just one-half that of the legitimate; and owing to the adverse influences, environmental and other to which the illegitimate child is exposed, the risk of permanent damage to health is exceedingly grave.

Deaths.—During 1919 there was a gratifying decrease in the number of deaths of Leeds residents. The total registered was 7,099, and the nett figure, after deducting the deaths of non-residents (315) and service men (86), and adding the deaths of Leeds residents which took place outside the City (294), was 6,992, giving a rate of 16·2 per thousand of the estimated population, a

BIRTHS AND BIRTH RATE IN WARDS.

MUNICIPAL WARD.	Population Estimated.	Births.	Birth- rate.	Illegiti- mate Births.	Percentage of Illegitimate Births to Total Births.
Central	11,484	195	16·98	20	10·3
North	40,417	629	15·56	54	8·6
North-East	36,333	647	17·81	48	7·4
New Ward*	7,451	96	12·88	1	1·0
East	34,644	775	22·37	54	7·0
South	10,972	251	22·88	21	8·4
East Hunslet ..	31,523	729	23·13	38	5·2
West Hunslet ..	35,673	547	15·33	22	4·0
Holbeck	28,432	543	19·10	45	8·3
Mill Hill	4,880	66	13·53	9	13·6
West	18,184	399	21·94	41	10·3
North-West	28,132	463	16·46	37	8·0
Brunswick	21,889	387	17·68	37	9·6
New Wortley ..	15,020	376	25·03	33	8·8
Armley and Wortley	35,488	516	14·54	38	7·4
Bramley	23,201	299	12·89	27	9·0
Headingley	47,111	646	13·71	42	6·5
City	430,834	7,564	17·6	567	7·5

* Roundhay, Seacroft, Shadwell, and Crossgates.

reduction of 3·7 per thousand on the rate for the previous year (19·9), which was abnormally high owing to the ravages of Influenza. The greatest number of deaths in 1919 took place in the first quarter (that is when the third outbreak of Influenza occurred), but rapidly diminished during the second and succeeding quarters. The rate for the third quarter was extremely low, namely, 11·3 per thousand of the population, and that more than compensated for the excessively high figure recorded for the first quarter and made the average for the year much more favourable than it otherwise would have been. Compared with that of England and Wales, 13·8 for the year, the Leeds death-rate 16·2 shows a considerable excess, though not much more so than in the previous five years.

The principal causes of death in order of numerical importance were Bronchitis, Heart Disease, Influenza, Cancer, Pneumonia and Pulmonary Tuberculosis.

Respiratory diseases taken as a group were responsible for a large proportion, approximately 20 per cent. of the total deaths, *vide* Table p. 12. This is a fact of some importance and one which has received far too little attention in the past. Respiratory diseases, Phthisis, Bronchitis and Pneumonia, are controllable and preventable diseases. They are largely the result of gross errors of living such as bad clothing, bad feeding, the breathing of impure air and the over-indulgence in alcohol. Whilst their victims are to be found in all classes of the community, they chiefly attack those who live in small, ill-ventilated, overcrowded houses in congested working-class areas. When they do occur a fatal result should be the exception, as taken in time and properly treated, recovery ought to be assured in the majority of instances. They are all essentially curable diseases and the fact that so many succumb is largely because of the lack of skilled treatment and proper nursing under good and healthy conditions.

No case of Pneumonia, Bronchitis or Pulmonary Tuberculosis can be safely treated in small, dark or ill-ventilated rooms. If the attempt is made, and it too often is, the result will almost certainly be disastrous. Where sufficient suitable accommodation for the treatment of cases of these diseases is not available in the home it should be supplied in our large public institutions. Certain provision has already been made for the treatment of Pulmonary Tuberculosis, but none for the other two diseases. This is a serious

GENERAL DEATH RATE.

Year.	Population.	No. of deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1901	429,383	8,204	19·2	16·9
1902	431,043	7,699	17·6	16·3
1903	432,703	7,263	16·8	15·5
1904	434,363	8,039	18·6	16·3
1905	436,023	7,047	16·2	15·3
1906	437,683	7,350	16·9	15·5
1907	439,343	7,167	16·4	15·1
1908	441,003	7,430	16·6	14·8
1909	442,663	6,806	15·4	14·6
1910	444,323	6,711	15·2	13·5
1911	445,983	7,331	16·5	14·6
1912	447,746	6,396	14·3	13·3
1913	457,295	7,237	15·6	13·7
1914	459,260	6,885	15·0	14·0
1915	459,260	7,609	16·6	15·1
1916	446,349	6,946	15·6	14·0
1917	438,254	7,052	16·1	14·4
1918	427,589	8,529	19·9	17·6
1919	430,834	6,992	16·2	13·8

MORTALITY RATE IN WARDS.

MUNICIPAL WARD.	Population Estimated.	Deaths.	Death-rate.
Central	11,484	229	19·94
North	40,417	528	13·06
North-East ..	36,333	484	13·32
New Ward*	7,451	81	10·87
East.. ..	34,644	605	17·46
South	10,972	258	23·51
East Hunslet ..	31,523	578	18·34
West Hunslet ..	35,673	529	14·83
Holbeck	28,432	455	16·00
Mill Hill	4,880	79	16·19
West	18,184	480	26·40
North-West ..	28,132	462	16·42
Brunswick	21,889	319	14·57
New Wortley ..	15,020	309	20·57
Armley and Wortley ..	35,488	555	15·64
Bramley	23,201	365	15·73
Headingley.. ..	47,111	676	14·35
City.. ..	430,834	6,992	16·23

* Roundhay, Seacroft, Shadwell and Crossgates.

PRINCIPAL CAUSES OF DEATH.

Death Rate.	DISEASES.	No. of Deaths in 1919.	Increase or Decrease Compared with 1918.
0.02	Enteric Fever	8	+ 3
..	Smallpox	..	..
0.11	Measles	48	- 369
0.05	Scarlet Fever	23	+ 4
0.15	Whooping Cough	66	- 64
0.10	Diphtheria and Croup ..	43	- 4
1.45	Influenza	623	- 778
0.02	Erysipelas	9	+ 3
1.26	Phthisis (pulmonary tuberculosis)	542	- 163
0.15	Tub. Meng. and Acute Hydroceph.	63	- 14
0.26	Other Tuberculous Diseases ..	114	- 66
1.33	Cancer, Malignant Disease ..	575	+ 75
0.09	Rheumatic Fever	37	- 1
0.21	Meningitis	92	- 25
1.46	Heart Disease	627	+ 6
1.72	Bronchitis	741	+ 88
1.30	Pneumonia (all forms) ..	560	- 208
0.27	Other diseases of respiratory organs	116	+ 28
0.39	Diarrhœa and Enteritis ..	169	- 22
0.05	Appendicitis and Typhlitis ..	21	+ 7
0.03	Cirrhosis of Liver	15	- 4
0.01	Alcoholism	3	+ 2
0.51	Nephritis and Bright's Disease	218	- 25
0.01	Puerperal Fever	6	+ ..
0.07	Other accidents and diseases of Pregnancy and Parturition	29	+ 10
0.76	Congenital Debility and Malformation including Premature Birth	328	- 11
0.48	Violent deaths, excluding Suicide	206	- 8
0.09	Suicides	37	+ 2
3.86	Other Defined Diseases ..	1,664	- 1
0.02	Diseases ill-defined or unknown	9	- 2
16.23		6,992	-1,537

omission and one which ought to be remedied. It always seems to me that far too much of the available bed accommodation in our general hospitals and infirmaries is taken up with chronic and incurable cases to the exclusion of the more acute and more hopeful ones. If the position could be reversed I am confident that the results would justify the change.

The excess of births over deaths for the year was 572, which is an improvement on 1918, but is still far from satisfactory. It is generally conceded that the enterprize and prosperity of a district, or for that matter of a nation, depends on the natural increase of its population. A high death-rate and a relatively low birth-rate connotes decadence whilst a low death-rate and a relatively high birth-rate implies progress. Throughout the years of war the natural increase of population steadily diminished and in 1918 the deaths were actually in excess of the births, a state of affairs which, had it continued, would inevitably have led to disaster. It is therefore all the more encouraging to be able to report a return to normal relationship between births and deaths with a balance in favour of the former.

In considering the mortality figures of a population, a very important point for purpose of comparison and deduction is the number of deaths in the various age groups. The reason for this will be obvious because in a healthy population one expects that the deaths in the later years of life will be considerably in excess of those in the earlier years. The risk of death is greatest at the two ends of life, infancy and old age, but there is this difference between the two periods, namely, that in the former the risk is reducible if not entirely preventible, whilst in the latter it is inevitable. The aim of any system of preventive medicine ought to be to safeguard and fortify the lives of the young and to increase not only the expectation of life, but the expectation of healthy life in the early stages. In a city such as Leeds and indeed in all large industrial centres there are many influences which militate against health and add to the risk of death in the early and more important years of life. Thus occupational or trade dangers, overcrowding, atmospheric pollution, poverty, epidemic diseases, etc., are all more potent influences in densely populated areas than in the open, fresh conditions which exist in non-industrial or rural

DEATHS IN AGE GROUPS, 1911-19.

Together with the percentage of the total deaths, represented by each group
(in italics).

Year.	Under 1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
1911	1,679 <i>22.9%</i>	483 <i>6.6%</i>	380 <i>5.2%</i>	309 <i>4.2%</i>	303 <i>4.1%</i>	903 <i>12.3%</i>	1,589 <i>21.7%</i>	1,685 <i>23.0%</i>	7,331
1912	1,051 <i>16.4%</i>	311 <i>4.9%</i>	291 <i>4.5%</i>	286 <i>4.5%</i>	303 <i>4.7%</i>	906 <i>14.2%</i>	1,502 <i>23.5%</i>	1,746 <i>27.3%</i>	6,396
1913	1,469 <i>20.3%</i>	419 <i>5.8%</i>	344 <i>4.8%</i>	265 <i>3.7%</i>	292 <i>4.0%</i>	946 <i>13.1%</i>	1,684 <i>23.3%</i>	1,818 <i>25.1%</i>	7,237
1914	1,324 <i>19.2%</i>	469 <i>6.8%</i>	358 <i>5.2%</i>	269 <i>3.9%</i>	276 <i>4.0%</i>	923 <i>13.4%</i>	1,605 <i>23.3%</i>	1,661 <i>24.1%</i>	6,885
1915	1,253 <i>16.5%</i>	439 <i>5.8%</i>	389 <i>5.1%</i>	260 <i>3.4%</i>	318 <i>4.2%</i>	965 <i>12.7%</i>	1,850 <i>24.3%</i>	2,135 <i>28.0%</i>	7,609
1916	1,216 <i>17.5%</i>	391 <i>5.6%</i>	285 <i>4.1%</i>	240 <i>3.5%</i>	287 <i>4.1%</i>	885 <i>12.7%</i>	1,683 <i>24.2%</i>	1,959 <i>28.2%</i>	6,946
1917	1,023 <i>14.5%</i>	400 <i>5.7%</i>	422 <i>6.0%</i>	331 <i>4.7%</i>	302 <i>4.3%</i>	835 <i>11.8%</i>	1,734 <i>24.6%</i>	2,005 <i>28.4%</i>	7,052
1918	984 <i>11.5%</i>	474 <i>5.6%</i>	743 <i>8.7%</i>	514 <i>6.0%</i>	579 <i>6.8%</i>	1,214 <i>14.2%</i>	2,007 <i>23.5%</i>	2,014 <i>23.6%</i>	8,529
1919	899 <i>12.9%</i>	239 <i>3.3%</i>	298 <i>4.3%</i>	299 <i>4.3%</i>	344 <i>4.9%</i>	957 <i>13.7%</i>	1,780 <i>25.4%</i>	2,176 <i>31.2%</i>	6,992

communities. Hence the need for flinging wide the boundaries of our cities and absorbing as many green fields and woods and open spaces as possible.

Taking the number of deaths for the five years 1914-1918 between the ages 0-15 and comparing it with the number for a similar number of years between 65 and upwards one finds that the former is 6 per cent. in excess of the latter, or in other words Leeds as a city loses by death more people in the first fifteen years of life than in the last. There has, however, been a very gratifying improvement in this respect in recent years, but it cannot be denied that we are still far short of the ideal. That approximately one-third of the total deaths which occur in the city in a year should be of persons under fifteen years of age is a serious matter and emphasizes the need for more intensive effort at the beginning.

In 1919, 30 per cent. of the total deaths occurred between 0 and 25 years, as against 14 per cent. between 25 and 45, 25 per cent. between 45 and 65, and 29 per cent. between 65 years and 85. The age groups which show an increase on last year's figures are from 45 to 65 and 65 years and over. In 1918 the increases occurred in the groups 2 to 5 years, 5 to 15 and 15 to 25, so that the record for 1919 is a very much better one. It must be recollected, however, that in 1918 the City was visited by an epidemic of measles and influenza, which carried off a large number of the younger members of the population.

PART II.

INFECTIOUS AND OTHER DISEASES.

Influenza.—The year 1919 opened with a recrudescence of the epidemic of influenza. This marked the third visitation of the disease to the City, the first having been in the summer of 1918 and the second in the late autumn of the same year. Like its forerunners, the third wave involved not only the City of Leeds, but the population of England and Wales generally. On this occasion the disease was of a less virulent type and the mortality

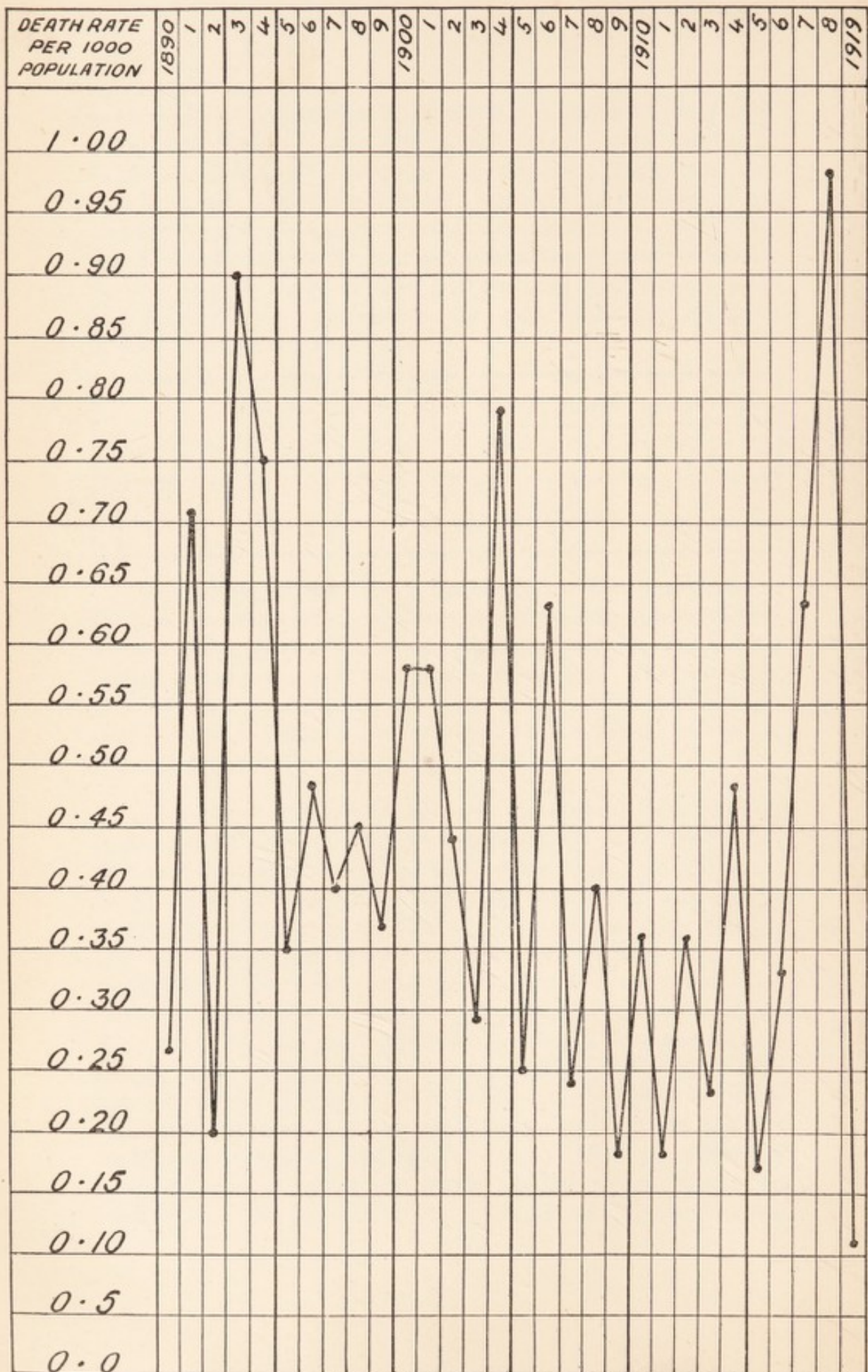
in consequence was considerably lower than in the previous epidemic though the incidence was just as widespread. The number of deaths attributed to "influenza" in the first quarter was 547, and to "other respiratory diseases" 741, as compared with 1,196 and 613 respectively for the previous quarter of 1918. The death-rate from influenza for the year was 1.45 and from other respiratory diseases 3.29, as compared with 3.28 and 3.54 respectively for the year 1918. The age distribution of the deaths in the three epidemics is shown in the following table:—

	0-5	5-15	15-25	25-35	35-45	45-65	65+
I. Quar., 1919	14.8%	5.1%	8.6%	20.3%	7.3%	27.0%	16.8%
July, 1918 ..	7.1%	8.9%	21.8%	16.6%	7.7%	29.5%	8.3%
Nov., 1918 ..	19.9%	10.5%	13.6%	18.7%	9.8%	16.9%	10.6%

In addition to that already suggested, another explanation of the lower mortality of the epidemic of 1919 as compared with that of 1918 (November) might be that the latter had rendered a large section of the population comparatively immune. The immunity, however, was not complete and whilst it was sufficient to prevent death it did not protect the individual from a second or even in some cases a third attack of the disease.

By the end of March the worst of the epidemic was over and in the second quarter it rapidly subsided—the deaths from "influenza" dropping to 57 and from "other respiratory diseases" to 251. The measures taken to cope with the epidemic were similar to those adopted during the autumn wave of 1918. Special hand-bills were distributed all over the town and by this means and through the public press the general public were instructed as to the best methods of treatment and prevention. Wards in the East Leeds War Hospital, which at the time of the epidemic was in process of being vacated by the Military Authorities, were requisitioned for the treatment of severe cases and cases in houses which were over-crowded or in which there were no proper facilities for nursing. Supplies of prophylactic vaccine issued by the Ministry of Health were distributed to general practitioners in the City on application. The services of the staffs of the District Nursing

MEASLES DEATH-RATE—Thirty years 1890-1919.



Associations and the health visitors were put at the disposal of those cases who either could not or would not go to hospital. These salutary measures undoubtedly resulted in much benefit to actual sufferers as well as to the community generally, but one has to confess that, good as they were, they fell far short of what they might have been had we possessed a more accurate knowledge of the etiology of the disease.

Measles.—The prevalence of measles during the year showed a very marked decline as compared with the previous year. The number of cases notified was 2,438 measles and 167 German measles, as compared with 6,641 measles and 73 German measles in 1918, or a little more than a third. The death-rate showed even a more marked decrease being 0.11 as compared with 0.98. Incidentally it may be mentioned that this is the lowest rate ever recorded for measles in Leeds. A similar low rate of mortality from this disease was recorded for the whole of the country..

NOTIFICATION OF MEASLES, AND DEATHS IN QUARTERS DURING 1919.

1919.	I.	II.	III.	IV.	Total.
Notifications ..	104	352	356	1,793	2,605
Deaths	2	1	5	40	48

The largest number of notifications and deaths was in the last quarter of the year which really marked the beginning of another epidemic wave concerning which further particulars will be given in my next report. The low incidence of measles had a favourable influence on the death-rate in the early age groups, that is from 0—1 and 1—5 which are the groups from which this disease mainly selects its victims, *vide* page 18.

Whooping Cough.—This disease may be said to be the twin sister of measles inasmuch as it affects individuals at the same period of life, namely 0—5 years. Outbreaks of the two diseases frequently occur together. Whooping cough is, however, more fatal to babies and very young children (compare tables page 19 and page 18). Whooping cough, like measles, is a disease which the public never will take seriously, and until both doctors and laity realise its importance as a factor in infant mortality and

adopt a sterner attitude towards it, the disease will continue to exact a heavy toll of child life. True it is a disease which is most difficult to control but there seems to be no reason why treatment of actual cases on proper lines should not be more successful in preventing death.

MEASLES.

Year	Deaths	Death-rate LEEDS.	Death-rate England and Wales.
1909	78	0·18	0·35
1910	160	0·36	0·23
1911	78	0·18	0·36
1912	159	0·36	0·35
1913	108	0·23	0·28
1914	218	0·48	0·24
1915	78	0·17	0·43
1916	149	0·33	0·15
1917	277	0·63	0·30
1918	417	0·98	0·28
1919	48	0·11	0·10

AGES AT DEATH FROM MEASLES.

1919	0-1	1-2	2-3	3-4	4-5	5-10	10-15	Total.
No. of Deaths	9	20	9	3	3	4	—	48

WHOOPING COUGH.

Year.	Deaths.	Death-rate. LEEDS.	Death-rate England and Wales.
1909	83	0·19	0·20
1910	150	0·34	0·24
1911	147	0·33	0·21
1912	54	0·12	0·23
1913	94	0·20	0·14
1914	141	0·31	0·21
1915	158	0·34	0·21
1916	45	0·10	0·16
1917	69	0·16	0·13
1918	130	0·30	0·29
1919	66	0·15	0·07

AGES AT DEATH FROM WHOOPING COUGH.

1919	0-1	1-2	2-3	3-4	4-5	5-10	Total.
No. of deaths	25	19	7	10	3	2	66

Scarlet Fever.—There was an increased incidence of this disease during 1919 as compared with the three previous years which were comparatively free. The number of cases notified was 1,340 equal to a rate of 3·11 per thousand of the population, as compared

with 1.33 for 1918, and the death-rate was 0.05 as compared with 0.04 for 1918. Of the cases notified 1,244 or 92.8 per cent. were treated in the City Hospital, Seacroft. The following table gives particulars of notifications, deaths and death-rates for the last nine years.

SCARLET FEVER.

Year.	Cases.	Deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1911	1,633	45	0.10	0.05
1912	1,227	40	0.09	0.05
1913	1,311	15	0.03	0.06
1914	1,346	30	0.07	0.08
1915	1,454	30	0.07	0.06
1916	881	23	0.05	0.04
1917	543	7	0.02	0.02
1918	570	19	0.04	0.03
1919	1,340	23	0.05	0.03

Diphtheria.—As in the case of scarlet fever the incidence of diphtheria showed a considerable increase over the four previous years. The cases notified numbered 811 as compared with 542 in 1918 and the death-rate was 0.10 per thousand of the population as compared with 0.11 for 1918. Thus though there were 269 more cases actually notified the death-rate remained practically the same. When compared with England and Wales the death-rate from diphtheria in Leeds was actually lower, the figures being for Leeds 0.10 and for England and Wales 0.13. Of the total cases 88.9 per cent. were treated at Seacroft and the low mortality was

undoubtedly due to greater care and watchfulness on the part of both doctors and parents in having cases expeditiously reported and removed.

DIPHTHERIA AND CROUP.

Year.	Cases	Deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1911	1,165	154	0·35	0·13
1912	705	95	0·21	0·11
1913	880	89	0·20	0·12
1914	700	59	0·13	0·15
1915	402	51	0·11	0·15
1916	423	40	0·09	0·14
1917	549	60	0·14	0·13
1918	542	47	0·11	0·14
1919	811	43	0·10	0·13

Smallpox.—There were no cases of this disease in the City during the year but in view of the fact that Glasgow and certain other towns have been visited recently by an epidemic of virulent smallpox it is as well that the strictest outlook should be kept, not only by medical practitioners, but also by every member of the community in order that any cases which occur may be detected and reported at the earliest possible moment. The need for such added care is all the greater seeing the vaccinated section of the community continues to become more and more contracted every year. The seriousness of this fact may be demonstrated any moment and it is as well that the public should realise the tremendous responsibility which rests upon its shoulders.

Enteric Fever.—This is one of the decadent diseases. In former years it was responsible for a considerable proportion of the total mortality from infectious disease, but its importance in this respect has been on the down grade for practically the last ten years. Last year the number of cases notified in Leeds was 33 as compared with 42 in the previous year and the corresponding death-rates were 0·02 and 0·01 per 1,000 of the population respectively.

ENTERIC FEVER.

Year.	Cases.	Deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1909	217	40	0·09	0·06
1910	104	21	0·05	0·05
1911	119	22	0·05	0·07
1912	65	18	0·04	0·04
1913	85	19	0·04	0·04
1914	84	23	0·05	0·05
1915	106	21	0·05	0·04
1916	48	9	0·02	0·03
1917	37	7	0·02	0·03
1918	42	5	0·01	0·03
1919	33	8	0·02	0·01

CASES OF ENTERIC FEVER MONTH BY MONTH.

Jan.	Feb.	March.	April	May.	June.	Julv.	Aug.	Sept.	Oct	Nov.	Dec.
5	2	1	4	5	2	4	3	2	1	1	4

Erysipelas.—During the year 1917 cases of erysipelas were notified and there were 9 deaths. These figures are a slight increase on those for 1918.

Puerperal Fever.—The number of cases of this disease notified during 1919 was 26 as compared with 17 in 1918. Of these, 10 were in the practice of midwives and the remainder in the practice of doctors or in institutions. There were 9 deaths, 3 of which were non-residents.

Cerebro-Spinal Meningitis.—Only 8 cases of this disease were notified during the year and of these 4 were removed to hospital. Six of the 8, or 75 per cent. died. This is a very high percentage and one which might easily be reduced if the diagnosis could be expedited and the appropriate treatment applied sooner.

Acute Anterior Polio-Myelitis.—Three cases of this disease were notified during the year, all of which recovered.

Encephalitis Lethargica.—This is the first appearance of this disease in the annual report of the Medical Officer of Health. It is a disease of the central nervous system which has come into prominence within recent years. It was the subject of a special report by the Medical Department of the Local Government Board and since the issue of that report has been added to the list of notifiable diseases. Its origin is obscure, but it is surmised that it is due to a micro-organism or germ as yet undiscovered. The number of cases notified in the City was 4, all of which died. Another death occurred from the same disease, a girl, 5 years old, which was not notified. It is therefore a disease of high fatality and one of which we are likely to hear further in the future.

OPHTHALMIA NEONATORUM.

The number of cases of this disease notified during the year was 105 as compared with 89 last year, an increase of 16, or 18 per cent. The increase though not altogether unexpected, is to be deplored and is a sad commentary on the state of the public morals at the present time. Fortunately the number of cases in which the sight was damaged is small, only 1 per cent. This

speaks well for the measures taken by the Public Health Department, the local medical practitioners and the various public institutions to provide early and effective treatment. Of the total number of cases 70 occurred in the practice of midwives and 35 were doctors' cases. The number treated at home was 78 and in institutions 27. Of the latter number 11 were treated in the beds reserved by the Health Committee for this purpose at the Maternity Hospital.

DAY OF ONSET FROM BIRTH.

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	10th-15th	15th-20th	20th-25th
No. of Cases	7	5	9	8	10	14	4	11	5	8	15	4	5

The result of treatment was as follows:—

Number of cases visited	..	..	..	105
Recovery apparently perfect	..	..	..	79
Sight of both eyes affected	..	..	..	1
Still under treatment	..	..	..	11
Died	..	..	..	7
Result not known owing to removal	..	..	..	7

DIARRHŒA AND ENTERITIS.

It is gratifying to be able to record for the sixth year in succession a decrease in the mortality from diarrhœa and enteritis. In 1913, 339 deaths of infants were certified as due to this disease, in 1914 the figure dropped to 287, in 1915 to 282, in 1916 to 214, in 1917 to 171, in 1918, to 146 and last year to 140. It is reasonable to infer from these figures that the efforts of the Public Health Department and of the many voluntary bodies engaged in child welfare work to educate parents in domestic cleanliness and methods of prevention is beginning to bear fruit and one may be forgiven for reiterating the hope that future years will show a still further decline. The death rate for this disease was 0.32 per 1,000 of the population.

DIARRHŒA AND ENTERITIS DEATHS UNDER TWO YEARS FROM
1909 TO 1919 WITH RATES PER 1,000 POPULATION.

Year.	Deaths.	Rate per 1,000 Population.
1909	166	0·38
1910	252	0·57
1911	578	1·30
1912	114	0·25
1913	339	0·73
1914	287	0·63
1915	282	0·61
1916	214	0·48
1917	171	0·39
1918	146	0·34
1919	140	0·32

The 140 deaths from diarrhœa and enteritis were of children aged as follows :—

Under one month ..	11	6-9 months ..	25
1-3 months	38	9-12 months ..	13
3-6 months	35	1-2 years	18

The incidence of diarrhœa month by month is shown in the small table.

DEATHS, TEMPERATURE AND RAINFALL IN EACH MONTH OF YEAR.

1919.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Deaths	4	9	7	7	5	4	11	40	27	20	2	4	140
Temperature °F.	42.40	36.56	39.71	48.52	59.31	63.08	60.83	63.32	59.08	50.69	40.89	42.49	50.44
Rainfall (inches)	3.99	1.31	3.99	1.16	2.10	0.46	1.95	2.00	0.71	1.48	2.84	3.41	25.40

BRONCHITIS AND PNEUMONIA.

Both these diseases continue to be very important factors in the causation of death. This is partly accounted for by the exceptional prevalence of influenza and partly by the cold, wet winters which we have experienced in the last two or three years. The two diseases have very much in common, so much so that they

BRONCHITIS.

Year	Deaths.	Rate per 1,000 Population.
1909	655	1.48
1910	541	1.22
1911	559	1.26
1912	576	1.29
1913	647	1.39
1914	539	1.18
1915	738	1.61
1916	620	1.39
1917	646	1.47
1918	653	1.53
1919	741	1.72

AGES AT DEATH FROM BRONCHITIS.

1919	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
No. of Deaths	75	29	13	5	7	34	193	385	741

PNEUMONIA.

Year.	Deaths.	Rate per 1,000 Population.
1909	618	1.40
1910	608	1.37
1911	612	1.38
1912	479	1.07
1913	585	1.26
1914	610	1.33
1915	725	1.58
1916	586	1.31
1917	565	1.29
1918	768	1.80
1919	560	1.30

AGES AT DEATH FROM PNEUMONIA.

1919	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
No. of Deaths	77	70	70	28	27	84	115	89	560

might be called blood relations. They frequently occur concomitantly and very often as complications of other diseases as for example measles, whooping cough and tuberculosis. The death-rate from both diseases was high in the first quarter of the year, that is during the quarter when influenza prevailed. From bronchitis the death-rate for the whole year was 1.72 per thousand of the population as compared with 1.53 for 1918. The age group

most affected by the high rate was 65 years and over. This is only what one expects as old people are more liable to succumb to this complaint than are those in the younger age groups with the exception perhaps of infants (*vide* pages 26 and 27).

On March 1st, 1919, acute primary pneumonia and acute influenzal pneumonia were by order of the Local Government Board added to the list of notifiable diseases. The total number of cases of pneumonia of both types notified since the introduction of the order was 521 and the death rate was 1.30 per 1,000 of the population as compared with 1.80 last year.

CANCER.

From the table it will be seen how little variation there has been in the death-rate from cancer during the last eleven years. It still ranks amongst the five most important causes of death.

Year.	Deaths.	Rate per 1,000 Population.
1909	449	1.02
1910	397	0.90
1911	423	0.95
1912	430	0.96
1913	525	1.13
1914	457	1.00
1915	521	1.13
1916	500	1.12
1917	535	1.22
1918	500	1.17
1919	575	1.33

VENEREAL DISEASES.

During the year the work in connection with this special department continued to grow. Unfortunately it has not yet been possible to make better arrangements at the Leeds General Infirmary for the treatment of these cases and the present accommodation is neither suitable nor sufficient. Notwithstanding the unsatisfactory conditions under which the work has had to be carried on, there has been no falling off either in the number of fresh cases admitted or in the number of attendances. Plans have been got out for the erection of a new block on vacant ground on the north-east side of the Infirmary. These have received the sanction of the Health Committee and the City Council and are now awaiting the final approval of the Ministry of Health. As soon as this has been obtained, work will be commenced and I hope the end of the year will see both officers and patients comfortably housed in a commodious, well lighted and well appointed building.

During the year 58 deaths were certified as due to syphilis. This must not be taken in any way as a true estimate of the ravages of the disease, because as has already been pointed out in these pages only a small proportion of the deaths actually attributable to syphilis appears in the death registers as such. Of the 58 deaths, 40 or 69 per cent. were of infants under one year. This is a fact of vital significance to the City as it demonstrates the terrible effects which this disease has on infant life. But not only does it destroy, it maims and permanently disables. Unfortunately figures are not available to show the full extent of its baleful effects in this direction.

The work of the venereal diseases centre (Leeds General Infirmary) for the year is set out in the following tables. Table 1 shows the total number of cases dealt with during the year including those from the contributory areas outside the City; table 2 refers to Leeds cases only.

TABLE 1.

				1918.		1919.		Increase or decrease.	
				M.	F.	M.	F.	M.	F.
Syphilis ..	first cases	..	478	413	915	475	+437	+ 62	
Soft chancre	..	..	..	..	32	..	+ 32	..	
Gonorrhœa	..	..	250	49	752	88	+502	+ 39	
Other diseases	..	..	..	..	..	..	..	..	
not Venereal	..	..	125	69	474	142	+349	+ 73	
Total	..	..	853	531	2,173	705	+1320	+174	
Total attendances of all cases				15,087		23,285		+8,198	
Aggregate No. of In-patient days				1,223		606		- 617	
No. of doses of Salvarsan substitutes				4,727		7,067		+2,340	
Pathological specimens examined :—									
Spirochetes				56		141		+ 85	
Gonococci				83		490		+ 407	
Other organisms				..		7		+ 7	
Blood—Wassermann reaction				1,837		2,814		+ 977	

TABLE 2.

	Year 1918.	Year 1919.	Increase or Decrease.
Syphilis first cases	546	815	+ 269
Soft chancre	..	26	+ 26
Gonorrhœa	198	621	+ 423
Other diseases, not Venereal	108	423	+ 315
Total	852	1,885	+1,033
Total attendances of all cases	9,842	14,987	+5,145
Aggregate No. of In-patient days	644	358	- 286
No. of doses of Salvarsan substitutes	2,790	4,322	+1,532
Pathological specimens examined :—			
Spirochetes	38	107	+ 69
Gonococci	55	336	+ 281
Other organisms	..	5	+ 5
Blood—Wassermann reaction	1,225	2,241	+1,016

In addition to the provision for in-patient treatment made at the Leeds General Infirmary, 15 beds and 5 cots are reserved at the Maternity Hospital, 42, Hyde Terrace, for the treatment of cases of pregnant women suffering from venereal disease and of infants suffering from ophthalmia neonatorum. Gonorrhœa is the cause of ophthalmia neonatorum and in every case of the latter disease reported, an attempt is made to get the mother under treatment at the same time as it is just as important to treat the mother who is the source of infection as the child.

A small hospital (The Hope Hospital) capable of accommodating 20 adults and 8 babies, was opened during the year at 126, Chapel-town Road, with the object of providing residential treatment for infected unmarried women and girls of the rescue class. The hospital is the property of the Yorkshire Diocesan Association, but a considerable proportion of the upkeep is borne by the City. The management is in the hands of a joint Committee of the Diocesan Association and the Health Committee. Though associated with the Church, the hospital is run entirely on undenominational lines and admits adherents of every creed or denomination without test. That there was need of such an institution in Leeds cannot be gainsaid. The work it does is most essential and most important both from the point of view of the individual and of the Public Health. The record of the institution since its opening in May, 1919, is very creditable as can be seen by consulting the table at the end of this section. Unfortunately the accommodation is barely sufficient to meet the demands and there have been occasions when there has been a considerable waiting list, a state of affairs not altogether desirable when dealing with such cases. Details of the year's work both of the Maternity Hospital and the Hope Hospital are set out in the tables which appear below.

MATERNITY HOSPITAL, 42, HYDE TERRACE.

	Cases in residence on Jan. 1st, 1919.	Cases admitted.	Cases discharged.	Cases in residence on Jan. 1st, 1920.
Syphilis	1	26	26	1
Gonorrhœa	4	46	50	..
Syphilis and Gonorrhœa ..	..	26	26	..
Other disease ..	..	..	..	..
Total	5	98	102	1

Total days in residence 1,430

No. of doses of Salvarsan substitute .. 171

Pathological specimens examined :—

Spirochetes	..	—
Gonococci	..	12
Other organisms ..	..	—
Blood—Wassermann reaction..	..	120

HOPE HOSPITAL, 126, CHAPELTOWN ROAD.

	Cases admitted.	Cases discharged.	Cases in residence on Jan. 1st, 1920.
Syphilis	10	7	3
Gonorrhœa	16	9	7
Syphilis & Gonorrhœa	12	2	10
Other disease	7	4	3
Total	45	22	23

Total days in residence 2,916

No. of doses of Salvarsan substitute .. 115

Pathological specimens examined :—

Gonococci 54

Blood—Wassermann reaction.. .. 50

The obvious conclusion arrived at as a result of a study of these tables and similar statistics furnished by other towns and counties in England and Wales is that venereal disease is on the increase and is rapidly becoming a grave menace to national and racial health. The full significance of this statement is difficult to comprehend so profound and so deadly are the effects of both syphilis and gonorrhœa not only on the social but also in the economic life of the nation. The facts are a clear call to action and steps have already been taken by practically every local authority in the country, including our own City, at the instigation of the Ministry of Health to combat the evil. But—and this must be clearly understood—this is a people's war as much as it is that of Local Sanitary Authorities and on the interest and active co-operation of the masses the final issue depends.

The local branch of the National Council for Combating Venereal Diseases have again carried out a great deal of educational and propaganda work. During the year there were four branch meetings, nine of the executive committee and two of the finance committee. Dr. C. J. Macalister and Miss Norah March, Editor of *National Health*, gave special addresses at two of these meetings on subjects connected with the various activities of the Council. Instructional courses of lectures illustrated by lantern slides were

delivered to medical practitioners, nurses and midwives. In addition to these, upwards of 20 addresses have been given during the past year to various social organisations and members of the general public. For the most part these have been well received, the average attendance being between 120 and 140.

In September, Dr. C. W. Vining, the Medical Officer in charge of the Treatment Centre gave up this post and at the same time resigned his membership of the executive committee. Dr. J. P. Bibby, who succeeded him as Venereal Diseases Officer has joined the branch and been elected to the executive committee.

Comparative Statistics of the larger English Cities, 1919.

	Population.	Birth rate.	Death rate.	Infant Mortality rate.	Death rate from		
					Phthisis.	Other Tuberculosis.	Diarrhoea and Enteritis under 2.
London .. {	4,540,062 4,358,309	18.2	13.6	85	1.22	0.23	0.31
Birmingham ..	910,000	20.9	13.0	84	1.10	0.18	0.21
Liverpool	781,948	23.9	17.0	110	1.4	0.3	0.3
Manchester ..	778,229	17.6	13.7	98	1.20	0.30	0.20
Sheffield .. {	493,450 473,695	21.1	14.0	96	1.00	0.27	0.28
Leeds	430,834	17.6	16.2	119	1.26	0.41	0.32
Bristol .. {	376,312 361,247	18.4	13.9	84	1.05	0.26	0.14
Hull .. {	291,327 279,664	19.3	15.1	111	1.0	0.4	0.2
Bradford .. {	294,504 282,714	13.4	16.3	113	1.10	0.22	0.13
Newcastle .. {	286,571 275,099	23.3	17.8	120	1.24	0.43	0.37
Nottingham {	268,314 257,573	18.3	14.5	106	1.27	0.33	0.26

PART III.

TUBERCULOSIS.

MORTALITY STATISTICS.

It is pleasing to be able to record a reduction in the death-rate from this disease as compared with that of the previous four years. The war was undoubtedly responsible for a very marked rise in the mortality from tuberculosis for the whole country during the years 1914-1918. Indeed, the death-rate for 1918 showed such a marked increase as to create alarm. As soon as the strain occasioned by the war was removed and the cloud which had overhung the people for five years was lifted, a better standard of health became evident. During 1919 certain of the institutions in the City which had been occupied for military purposes were restored and reopened for the treatment of tuberculosis. Killingbeck Hospital was handed back to the Corporation on May 31st and reopened on July 16th. Armley House, the property of the Association for the Prevention and Cure of Tuberculosis, was likewise restored and reopened in January, 1919. So that for nine months of the year the available accommodation for tuberculosis was at pre-war standard.

Towards the end of the year negotiations were resumed with the Leeds Association for the Prevention and Cure of Tuberculosis and resulted in the Association agreeing to hand over the whole of the clinical work under their control, including the two sanatoria, Armley House and Gateforth Hall, to the Corporation. Certain details have still to be settled before the agreement is completed, but it is anticipated that there will be no difficulty in coming to a final settlement. The entire responsibility for the treatment of the disease will then be in the hands of the Health Committee.

The number of cases of tuberculosis notified during the year was "pulmonary tuberculosis" 1,076 as compared with 1,238 for 1918, and "other forms of tuberculosis" 208 as compared with 241 for last year, which is a decrease in both types. Of the notifications of pulmonary tuberculosis, 898 were received from medical

PULMONARY TUBERCULOSIS.

YEAR.	MALES.		FEMALES.		TOTAL.	
	Deaths.	Death rate.	Deaths.	Death rate.	Deaths.	Death rate.
1909	320	1.52	228	0.99	548	1.24
1910	302	1.43	208	0.90	510	1.15
1911	346	1.64	212	0.91	558	1.26
1912	342	1.61	229	0.98	571	1.28
1913	336	1.53	221	0.90	557	1.20
1914	330	1.52	239	0.99	569	1.24
1915	386	1.78	265	1.09	651	1.42
1916	412	..	283	..	695	1.56
1917	378	..	296	..	674	1.54
1918	369	..	336	..	705	1.65
1919	295	..	247	..	542	1.26

PHTHISIS. DEATHS AT VARIOUS AGES.

1919.	-5	5-10	10-15	15-20	20-25	25-45	45-65	65+	Total.
Males ..	7	6	9	16	22	121	101	13	295
Females	10	3	15	42	34	97	38	8	247
TOTALS	17	9	24	58	56	218	139	21	542

PHTHISIS DEATHS IN WARDS.

WARD.	Deaths.	Rate per 1000 Population.	WARD.	Deaths.	Rate per 1000 Population.
Central ..	35	3.05	Mill Hill ..	6	1.23
North ..	48	1.19	West ..	37	2.03
North-East ..	48	1.32	North-West ..	33	1.17
New Ward ..	3	0.40	Brunswick ..	32	1.46
East ..	61	1.76	New Wortley	28	1.86
South ..	22	2.00	Armley and Wortley ..	36	1.01
East Hunslet	40	1.27	Bramley ..	17	0.73
West Hunslet	36	1.01	Headingley ..	35	0.74
Holbeck ..	25	0.88	Total ..	542	1.26

Non-Pulmonary Tuberculosis.—The distribution according to site of disease, age and sex are given in the following tables.

NON-PULMONARY TUBERCULOSIS. DEATHS.

1919.	Tubercular meningitis.	Abdomin- al.	Bones and Joints.	Other tuber- culosis.	Total.
Males ..	32	27	6	25	90
Females ..	31	32	7	17	87
Totals ..	63	59	13	42	177

AGES AT DEATH.

Ages.	-5	5-10	10-15	15-20	20-25	25-45	45-65	65+	Total.
Males ..	36	19	6	8	3	10	7	1	90
Females	29	18	11	10	3	11	3	2	87
Totals ..	65	37	17	18	6	21	10	3	177

practitioners, 17 from school medical officers and 161 from institutions. A certain number of cases, 128 to be exact, had not been notified prior to death and were only heard of through the Registrars' death returns. Though a decided improvement on the previous year, this figure is still much too high and tends to show that for one reason or another certain medical practitioners fail to realize all that early notification means both to the individual and to the community. Added significance is given to this when one reflects that by far the greatest number of cases which died unnotified were of the pulmonary type and therefore of the more dangerous order as far as the public health is concerned.

The death-rate from pulmonary tuberculosis for 1919 was 1.26 per thousand of the population as compared with 1.65 for the previous year. This is the lowest death-rate for this form of the disease recorded since 1914, which goes to prove the statement made in the opening sentences of this section of the report with reference to the effects of the war on the incidence of the disease. The death-rate from all forms of tuberculosis was 1.67 per thousand of the population, a decrease of 0.58 on the figure for last year (2.25) and of 0.37 on the average death-rate for the previous five years (2.04).

Notifications.—The following tables show the number of notifications of tuberculosis received during the year.

PULMONARY.

Ages.	-1	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65+	Total.
Males ..	..	9	76	121	166	200	76	35	14	697
Females	1	16	80	98	92	61	16	6	9	379
Totals ..	1	25	156	219	258	261	92	41	23	1,076

NON-PULMONARY.

Ages.	-1	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65+	Total.
Males ..	..	18	52	18	7	6	3	..	2	106
Females	4	15	46	26	4	6	1	..	..	102
Totals ..	4	33	98	44	11	12	4	..	2	208

PATIENTS EXAMINED AT CENTRAL DISPENSARY FROM JANUARY 1ST TO DECEMBER 31ST, 1919.

PULMONARY TUBERCULOSIS.

	New Patients.		Number bacteriologically positive.		Number clinically positive.		Number found not to be tuberculous.		Number recommended for Sanatoria.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Insured	..	..	600	108	88	37	307	58	205	13	298	62
Non-insured	..	..	81	144	12	16	55	106	14	22	35	58

OTHER FORMS OF TUBERCULOSIS.

	New Patients.		Glands.		Bones and Joints.		Abdominal.		Others and indefinite.		Number recommended for Sanatoria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Insured	341	35	15	6	16	3	4	0	306	26	2	2
Non-Insured	199	244	55	47	7	7	6	6	51	184	5	9

Total attendances of all cases :—Insured—Males			..	20,110	Non-Insured—Males			..	7,404
Females			..	7,151	Females			..	6,965
Total			..	27,261	Total			..	14,369

Tuberculosis Dispensary.—Details of the work of the Tuberculosis Dispensary will be found in the appended table. This institution continues to grow in usefulness and importance and it will soon be necessary either to extend the present premises or to find others, that is if the work is to continue to be carried on efficiently. It must not be inferred from this that the disease is on the increase in the City. On the contrary it is decreasing, but so much more attention has to be given to each individual case, and then there are the contacts, chiefly children from the homes of definite cases to be examined and classified—a very big task which demands a lot of time and makes great claims on the accommodation. During the year the staff of nurses attached to the Dispensary has been increased to twelve and another full-time Medical Assistant has been appointed. A Tuberculosis After-Care Committee has been established on a provisional basis and has done useful work throughout the year, but it is hoped that this most important department of the work will be placed on a more solid foundation in the near future.

Institutional Treatment.—As already stated it was not until the end of May when Killingbeck was reopened after military occupation that the full quota of beds (260) in the various sanatoria became available. From that date or practically for three quarters of the year the number of cases of tuberculosis of all forms treated in institutions was 816. Details of these cases will be found in the following table :—

Institution.	Pulmonary Tuberculosis.		Other Forms of Tuberculosis.			
	Males.	Females	Males.		Females.	
			Under 15.	Over 15.	Under 15.	Over 15.
City Hospitals, Seacroft and Killingbeck ..	363	167	3	9	2	6
Gateforth Sanatorium ..	114	43	..	..	..	1
Armley House ..	100	..	1	7	..	..

Of the cases admitted to Killingbeck (details of those admitted to Gateforth and Armley Sanatorium are lacking), 322 were discharged cured or improved, 83 not improved and 72 died.

Besides these cases 66 males and 39 females were admitted to Poor Law Institutions suffering from pulmonary tuberculosis and 10 males and six females suffering from "other forms." Of the deaths from phthisis belonging to the City, 182 or 33.6 per cent. took place in public institutions.

Provision for the treatment of Surgical Tuberculosis in children has been made by agreement with the Invalid Children's Aid Society and the Governors of Lord Mayor Treloar's Hospital, Alton, Hampshire. By the former ten beds are reserved at the Marguerite Home, Thorparch, for the treatment of children up to 10 years of age recommended by the Tuberculosis Officer, whilst by the latter a varying number of beds, according as vacancies occur, are put at the disposal of the Leeds Corporation for the treatment of cases of children up to 16 years of age suffering from Tuberculosis of the bones or joints. This provision for the treatment of "Children's Tuberculosis" will fill an important gap in the scheme of the Local Authority, and should prove of the greatest benefit to the child community.

BACTERIOLOGY.

At the beginning of the year, an agreement was concluded with the Leeds University, by which the whole of the pathological and bacteriological work in connection with the Health Department and certain other departments of the Corporation was transferred to the Department of Pathology and Bacteriology at the Medical School, under the control of the Professor of these subjects—Professor M. J. Stewart—who assumes the title of City Bacteriologist.

PART IV.

MATERNITY AND CHILD WELFARE.

STATISTICS OF INFANT MORTALITY.

The nett number of births credited to Leeds for the year was 7,564, an increase of 172 over the total for 1918, and of these 567, or 7.5 per cent. were illegitimate. The total number of deaths of

infants under one year was 899, which is equal to a rate of 119 per thousand births as compared with 133 for the previous year, a decrease of 14 per thousand births. The fall in this rate is very encouraging and due credit for it must be given to the health visitors, clinic nurses and voluntary staffs of the infant centres who have striven unremittingly to achieve this end. But, good as the year's results are, one cannot fail to recognize that the wastage of infant life even at 119 per thousand is still too great. The extent of our failure or rather non-success becomes evident when we reflect that any death-rate over 30 per thousand is unjustifiable because it is excessive and entirely preventable. From 119 to 30 per thousand births is a far cry, but it is the goal to which we must direct our future endeavours and if New Zealand is able to reduce its infant mortality rate to 50 per thousand there is no reason why Leeds should be content with a higher figure.

The infant mortality in quarters for the three years 1917-1919 is shewn for purposes of comparison :—

Year.	I.	II.	III.	IV.
1919	173	102	123	96
1918	162	101	114	155
1917	121	122	152	151

The percentage changes in the infant death rate in 1919 as compared with the average of the previous ten years are as follows :—

Under 1 week, increase	15.6%	3-6 months, decrease ..	16.6%
Under 1 month ..	12.8%	6-9	17.9%
1-3 months, decrease ..	16.7%	9-12	29.0%
Whole year decrease, 8.5%			

Comparison of these figures with those of last year shows that with the exception of one there has been a complete reversal in the position of the various age periods. Thus in 1918 a decrease was recorded in the deaths of children under one week, under one month and from one to three months, whilst an increase was recorded in the deaths of children from three to six months, six to nine months and nine to twelve months. In 1919 the opposite was the case, the increases being in the early age groups up to one month, whilst the decreases affect the later age groups from one

INFANTILE MORTALITY DURING THE ELEVEN YEARS 1909-1919 AT DIFFERENT PERIODS OF
THE FIRST YEAR OF LIFE.

Year.	Births in year.	Under one week.		Under one month.		One and under three months.		Three and under six months.		Six and under nine months.		Nine and under twelve months.		Under one year.		
		Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	
1909	..	10,909	308	28.2	471	43.2	230	21.1	256	23.5	208	19.1	178	16.3	1,343	123
1910	..	10,768	299	27.8	499	46.3	259	24.1	244	22.7	223	20.7	208	19.3	1,433	133
1911	..	10,471	267	25.5	470	44.9	346	33.0	340	32.5	285	27.2	231	22.1	1,672	160
1912	..	10,260	263	25.6	424	41.3	187	18.2	162	15.8	137	13.4	138	13.5	1,048	102
1913	..	10,858	304	28.0	493	45.4	283	26.1	269	24.8	218	20.1	200	18.4	1,463	135
1914	..	10,652	277	26.0	455	42.7	236	22.2	252	23.7	201	18.9	180	16.9	1,324	124
1915	..	9,877	258	26.1	413	41.8	194	19.6	242	24.5	205	20.8	199	20.1	1,253	127
1916	..	9,432	247	26.2	437	46.3	220	23.3	234	24.8	156	16.5	169	17.9	1,216	129
1917	..	7,566	179	23.6	318	42.0	185	24.4	213	28.1	159	21.0	148	19.5	1,023	135
1918	..	7,392	189	25.6	316	42.7	154	20.8	199	26.9	175	23.7	140	18.9	984	133
1919	..	7,564	230	30.4	373	49.3	147	19.4	156	20.6	125	16.5	98	13.0	899	119

to twelve months. It has been demonstrated beyond doubt that many of the deaths in the first month of infancy are due to causes which have operated during pregnancy and points to the necessity for the intensification of pre-natal work.

The number of illegitimate births in 1919 was 567, an increase of 39 on the previous year's record. The death-rate of illegitimate children was 205, as compared with 218 for 1918. Contrasted with the death-rate of legitimate children, which was 112, the illegitimate death-rate is almost double and accounts for a considerable proportion of the total rate of death of infants under one year. Here is a great field for useful work which has been too long neglected. The first step is to reduce the number of children born out of wedlock and the only way to accomplish this is by elevating the moral tone of the people, by idealizing marriage in the eyes of our boys and girls and by teaching them elementary facts concerning sex biology. There is nothing shameful or debasing about sex itself—the whole sex system is openly exposed in the flower and is part of its beauty—any shame or ugliness there is lies deeper in the human mind.

DEATHS FROM STATED CAUSES UNDER ONE YEAR OF AGE.

Causes of death.	Year 1918.	Year 1919.	Increase or decrease.
Smallpox	..	..	..
Chickenpox	1	..	- 1
Measles	54	9	-45
Scarlet fever	..	..	..
Whooping cough ..	45	25	-20
Diphtheria and Croup	..	..	..
Influenza	49	27	-22
Erysipelas	2	3	+ 1
Tuberculous diseases	20	22	+ 2
Meningitis	11	11	..
Convulsions	56	61	+ 5
Laryngitis	2	2	..
Bronchitis	73	75	+ 2
Pneumonia (all forms)	80	77	- 3
Diarrhoea and Enteritis	129	122	- 7
Gastritis	10	17	+ 7
Syphilis	51	40	-11
Rickets	4	2	- 2
Suffocation, overlying	9	6	- 3
Injury at birth ..	11	16	+ 5
Atelectasis	11	24	+13
Congenital Malformations	32	35	+ 3
Premature birth ..	182	190	+ 8
Atrophy, Debility, and Marasmus	113	98	-15
Other Causes	39	37	- 2
Totals	984	899	-85

BIRTHS AND DEATHS UNDER ONE YEAR WITH RATES.—CALENDAR YEAR 1919.

WARD.	TOTAL BIRTHS.	Birthrate per 1,000 population.	No. of legitimate births.	No. of illegitimate births.	Total deaths under one year.	Deathrate per 1,000 births.	No. of legitimate deaths under one year.	Legitimate deathrate per 1,000 legitimate births.	No. of illegitimate deaths under one year.	Illegitimate deathrate per 1,000 illegitimate births.
Central ..	195	16.98	175	20	26	133	21	120	5	250
North ..	629	15.56	575	54	67	107	59	103	8	148
North-East ..	647	17.81	599	48	68	105	61	102	7	146
*New Ward ..	96	12.88	95	1	11	115	10	105	1	—
East ..	775	22.37	721	54	87	112	80	111	7	130
South ..	251	22.88	230	21	45	179	38	165	7	333
East Hunslet ..	729	23.13	691	38	86	118	80	116	6	158
West Hunslet ..	547	15.33	525	22	69	126	66	126	3	136
Holbeck ..	543	19.10	498	45	55	101	46	92	9	200
Mill Hill ..	66	13.53	57	9	8	121	7	123	1	111
West ..	399	21.94	358	41	72	180	62	173	10	244
North-West ..	463	16.46	426	37	54	117	42	99	12	324
Brunswick ..	387	17.68	350	37	39	101	30	86	9	243
New Wortley ..	376	25.03	343	33	43	114	40	117	3	91
Armley & Wortley ..	516	14.54	478	38	56	109	50	105	6	158
Bramley ..	299	12.89	272	27	46	153	34	125	12	444
Headingley ..	646	13.71	604	42	67	104	57	94	10	238
CITY ..	7,564	17.56	6,997	567	899	119	783	112	116	205

*Roundhay, Seacroft, Shadwell and Crossgates.

SUPERVISION OF MIDWIVES.

Number of Midwives.—On December 31st, 1918, there were 57 midwives on the local register, but five of these were not in practice as midwives. During the year 18 new names were added which made a total of 70 midwives who had notified their intention to practice in the City. Twenty-nine of these were attached to institutions. The actual number who took cases during the year was 67, of whom 44 (or 65.7 per cent.) were trained and 23 (or 34.3 per cent.) untrained. The number of births attended by midwives was 4,433 (or 56.6 per cent.) of the total births registered in the City.

The following table gives an analysis of the cases attended by midwives :—

TRAINED.			UNTRAINED.	
*44 midwives. Total cases attended .. 2,234 Average per midwife 51 cases.			23 midwives. Total cases attended .. 2,199 Average per midwife 96 cases.	
No. of Cases.	Practising on their own account.	Attached to institutions.	No. of Cases.	Practising on their own account.
Over 300	1	1	Over 200	3
" 200	—	3	" 150	2
" 150	—	—	" 100	6
" 100	—	—	" 50	5
" 75	1	2	" 25	4
" 50	3	1	" 10	2
" 25	4	—	" 5	—
" 10	—	9	Under 5	1
" 5	—	—		
Under 5	6	13		

* Twenty-nine attached to institutions.

Advising Medical Help.—Notifications of having advised medical assistance were received in 682 cases which may be classified as follows :—

Illness during Pregnancy, Abortion or Miscarriage ..	19
Malpresentation	37
Delayed or Obstructed Labour	131
Ruptured Perineum	126
Retained Membrane or Placenta	24
Hæmorrhage	34
Convulsions, Eclampsia	—
Puerperal rise of temperature	29
Illness of Child	235
Other causes	47

Sixteen notifications of deaths of infants were received where no medical assistance had been obtained.

Still-births.—The total number of still-births notified was 340 or 4.2 per cent. of the total births notified. This is an increase on the figure for last year which was 287 or 4.0 per cent. of the notified births. The number is probably understated as there are a considerable number of still-births which are not notified. This is unfortunate for many reasons, but particularly so because still-births are the only index which we have of ante-natal health or disease. That a large amount of life is lost prior to birth cannot be doubted and the generally accepted estimate that as many children die before birth as between birth and the end of the first year of life is probably not far from the truth. The only way to obtain accurate knowledge of the deaths of infants before birth is by making still-births compulsorily registrable. Legislation on these lines is long overdue.

BIRTHS NOTIFIED (LIVE AND STILL).

Year.	Live Births notified.	Still Births notified.	Total Births notified Live and Still.	Percentage of Still to Live Births notified.
1914	9,738	105	9,843	1.1
1915	8,153	350	8,503	4.1
1916	7,836	394	8,230	4.8
1917	7,017	328	7,345	4.5
1918	6,892	287	7,179	4.0
1919	7,684	340	8,024	4.2

Notification of Births Act came into force 1st January, 1914.

Of the still-births notified, 122 (or 35·8 per cent.) were by midwives, and the remainder, 218 (or 64·2 per cent.) by medical practitioners. Of the midwives cases, 103 were investigated by the inspector of midwives and a summary of these investigations is given below :—

Sex of still-born children :—Males 61, females 39, doubtful 3.

Period of Gestation.	Cases.	Percentage of Total.
- 7 months	3	2·9
7-8 months	19	18·4
8-9 months	17	16·5
Full time	62	60·2
Doubtful	2	1·9

Condition of fœtus.—Macerated, 47; not macerated, 41; doubtful, 15.

Presentation.—Vertex, 60; Placenta prævia, 23; Transverse, 2; Face, 1; Breech, 12; Footling, 3; Cord, 1; B.B.A., 1.

Age of Mother.—Under 25 years 16; 25-35 years 42; 35-45 years 35; 45-48 years 2; doubtful 8.

The chief inspector of midwives attended inquests held by the City Coroner on 2 still-born children, 42 children, and 3 mothers.

The inspection of midwives' bags and books was carried out as usual, 47 inspections being made. Midwives were interviewed in connection with breaches of the rules and minor misdemeanour in 49 instances and 97 visits for other reasons were made to homes of midwives.

All cases of puerperal fever and high temperature were investigated and where the case was infectious, disinfection of the midwife's person, clothing and maternity bag was carried out under the personal supervision of the chief woman inspector. During the year 20 midwives were so dealt with and 26 visits were paid to handywomen.

ANTE-NATAL AND POST-NATAL WORK.

Ante-Natal.—The succeeding table gives a short summary of the work of the ante-natal centres, from which it will be noted that there has been a very marked increase in the attendances of expectant mothers during the year as compared with that for the previous year. During 1918 the number of new names added to

the registers at the various centres was 385, whereas in 1919 the number was nearly doubled, viz., 758. The total attendances at all the centres during 1918 were 1,966 and in 1919 they rose to 3,989. This side of the work is developing rapidly and it will soon be necessary to duplicate some of the clinics as it is becoming increasingly difficult to keep pace with the numbers. When first they were inaugurated expectant mothers showed a certain diffidence in attending the ante-natal clinics, but as the objects for which they exist become better known, and the value of the advice and help given at them is more widely recognized, that shyness is gradually disappearing. There is still room for improvement in the numbers attending some of the centres and it is to be hoped that the present year will show further progress in this direction.

	No. on Register at beginning of year.	Registered during year.	Live Births.	On Register end of year.	Total attendance of expectant mothers.
Ellerby Road ..	9	141	95	45	669
West Street ..	8	67	43	22	385
Burmantofts ..	7	79	47	26	724
Hunslet	23	98	69	46	618
University ..	6	35	23	14	206
Woodhouse ..	7	60	37	28	274
Holbeck	11	73	41	33	362
Armley	13	109	64	52	473
Chapelton ..	11	35	20	16	94
St. Nicholas ..	4	41	22	19	70
*Bramley	..	20	12	8	114
Totals ..	109	758	473	309	3,989

* Opened May 3rd, 1919.

During the year the clinic nurses and health visitors made a total of 2,101 visits to the homes of 1,241 expectant mothers.

Natal Work.—Of the 7,837 births registered in the City, 1,159 took place in institutions and in nursing homes. This is an increase over the number recorded in 1918 and in all probability the number for the current year will show a still greater increase. The tendency of parents to seek institutional accommodation, especially in these days of overcrowded homes and shortage of nursing and domestic help, is a growing one, but it is one to be encouraged because there cannot be any doubt that the present day home is in many cases the most unsuitable place for a baby to be born.

Of the 1,159 births taking place in institutions, 362 (or 31·2 per cent.) were illegitimate. It is this class of mother which is hardest hit in the matter of accommodation at the time of child-birth. As a rule the unmarried mother, a prey to her own fears, torn with anxiety for the future of herself and her baby and divorced from the sympathy of her fellows, is driven to seek a home and a birth place for her child in any hovel or garret often amongst inhospitable and insanitary surroundings. Herein lies one explanation of the inordinately high death-rate of illegitimate babies. A home is needed for these cases where comfort, cleanliness and cheerfulness abound and where skilled nursing and medical attention are available at all times.

Post-Natal Work.—The number of births notified during the year (exclusive of still-births) was 7,684 or 98 per cent. of the total births registered. Birth notification has never been so nearly complete since the adoption of the Notification of Births Act in Leeds and that there should be only 2 per cent. unnotified is a matter for congratulation.

Home Visiting.—First visits were paid by the health visitors to 7,046 infants which is a little more than 600 short of the total births notified. The number of revisits paid was 54,801 which together with first visits makes a total of 61,847 visits during the year.

In addition to the regular visitation of newborn infants and children up to five years of age (after that age they come under the care of the School Medical Service) the health visitors undertake the visitation of all cases of Ophthalmia Neonatorum, measles and such special cases as are referred from the Almoners of the Leeds

General Infirmary and the Public Dispensary. The following is a complete record of this work for the year :—

Ophthalmia Neonatorum	345 visits.
Measles	4,566 „
Medical Aid and Milk	655 „
Pneumonia and Broncho-pneumonia ..	479 „
Other Cases	1,390 „

Every year sees some augmentation of the work of the health visitor. She has become a permanent institution in the country and her services are being taken advantage of by the community to an ever increasing extent. For that reason and in order that she may retain the confidence of the public, every endeavour should be made to maintain a high standard of training and efficiency. But if this is to be achieved and if the best type of woman is to be attracted into the service, the remuneration must be adequate. At the present time it is not so and much of the failure of the health visiting services of which we hear and read is due to the employment by Local Authorities of inefficient women because the services of these women are to be had at a cheaper rate.

Infant Welfare Centres.—The various activities of the infant welfare centres were not only maintained throughout the year, but were developed and extended. There are now 11 centres in the City, the latest addition being the Bramley Babies' Welcome in the Salem Hall, Westover Road, Bramley. The opening of this centre supplies a long felt want in a populous ward of the City and already it bids fair to be one of the most successful of the welcomes. This success is in great measure due to the enthusiasm of the committee of lady helpers, by whose efforts funds were collected for furnishing and equipping the centre.

The popularity of the child welfare movement continues to grow at a rapid rate as is shown by the marked increase both in the number of new cases registered during the year and in the total number of attendances. This is all to the good, but the rate of growth last year quite outstripped the organization and it became necessary in order to meet the public demand to undertake further expansion. This expansion took the form of a duplication and in some cases a triplication of the infant consultations at the busiest centres and a rearrangement of the time table of the medical officers and nurses. Even though the attendances at the medical consultations at practically all the centres are still too large for efficient

work and a scheme is at present under consideration by the Maternity and Child Welfare Committee and the Leeds Babies' Welcome Association for a further division of the work and the appointment of additional medical and nursing staff to undertake the extra duties. That the welcomes have been justified in the eyes of Leeds mothers cannot now be doubted. It is no longer a slur but an honour to be called a "welcome" mother. But there is a danger that all this spoon-feeding of mothers may be overdone and result in the weakening of maternal intuitiveness. It must not be forgotten that the movement is educational as well as medical and its object is to prevent rather than to cure disease.

The following tables give a summary of the year's work at the various centres and if the figures be compared with those produced in my report for the previous year it will be observed that there has been an increase in the totals both of new cases registered and of attendances.

The visitation work done by the clinic nurses in the homes of the mothers has also been tabulated and appears below. In connection with this it should be noted that the number of visits paid by the clinic nurses is steadily dwindling. This is due to the fact that the demands of the internal work of the centres are growing so rapidly that there is little or no time left for visiting.

BABIES UNDER ONE REGISTERED DURING YEAR 1919.

DISTRICT.	0-1 month.	1-3 months.	3-6 months.	6-12 months.	Total.
Ellerby Road	72	160	25	43	300
West Street ..	107	177	55	47	386
Burmantofts ..	100	192	46	32	370
Hunslet ..	136	164	53	33	386
University ..	43	78	23	15	159
Woodhouse ..	68	94	38	43	243
Holbeck ..	92	157	50	47	346
Armley ..	115	147	57	55	374
Chapelton ..	26	50	37	48	161
St. Nicholas ..	50	86	34	33	203
*Bramley ..	18	38	25	34	115
Totals ..	827	1,343	443	430	3,043

* Opened May 3rd, 1919.

BABIES OVER ONE REGISTERED DURING YEAR 1919.

DISTRICT.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	Total.
Ellerby Road	40	18	11	5	74
West Street ..	50	19	10	10	89
Burmantofts ..	48	28	13	11	100
Hunslet ..	51	20	13	15	99
University ..	16	10	12	5	43
Woodhouse ..	19	12	2	..	33
Holbeck ..	47	37	19	5	108
Armley ..	61	40	20	18	139
Chapelton ..	17	15	5	3	40
St. Nicholas ..	38	30	29	15	112
*Bramley ..	41	34	31	12	118
Totals ..	428	263	165	99	955

* Opened May 3rd, 1919.

ATTENDANCES MADE AT INFANT WELFARE CENTRES DURING YEAR 1919.

DISTRICT.	Consultations and meetings.			Morning treatment.				
	Expect- ant Mothers.	Babies under 1 year.	Babies 1-5 years.	Expect- ant Mothers.	Mothers.	Babies under 1 year.	Babies 1-5 years.	Callers.
Ellerby Road..	669	2,814	1,541	201	476	915	727	1,309
West Street ..	385	4,603	1,539	96	262	242	313	1,287
Burmantofts ..	724	4,073	1,401	138	169	1,060	439	2,279
Hunslet ..	618	3,704	1,910	188	174	973	668	1,535
University ..	206	1,729	1,258	238	972	1,176	1,362	1,680
Woodhouse ..	274	2,629	958	104	220	315	195	899
Holbeck ..	362	3,473	2,167	163	1,380	1,245	873	999
Armley ..	473	2,839	2,816	290	636	1,269	1,366	1,292
Chapelton ..	94	1,690	686	71	185	739	227	1,023
St. Nicholas ..	70	2,301	877	237	969	847	476	700
*Bramley ..	114	822	844	97	204	505	327	358
Totals ..	3,989	30,677	15,997	1,823	5,647	9,286	6,973	13,361

* Opened May 3rd, 1919.

HOME VISITS PAID BY CLINIC NURSES DURING YEAR 1919.

DISTRICT.	Babies under 1 year.	Babies 1—5 years.	Odd Visits.	Total Visits.	Expectant Mothers.	Total Visits to both.
Ellerby Road ..	79	68	51	198	85	283
West Street ..	461	393	92	946	150	1,096
Burmantofts ..	145	181	24	350	220	570
Hunslet ..	100	150	6	256	101	357
University ..	150	142	60	352	106	458
Woodhouse ..	629	498	376	1,503	124	1,627
Holbeck ..	215	304	13	532	125	657
Armley ..	80	126	2	208	80	288
Chapeltown ..	481	165	112	758	138	896
St. Nicholas ..	388	351	71	810	106	916
*Bramley ..	383	337	55	775	117	892
Totals ..	3,111	2,715	862	6,688	1,352	8,040

* Opened May 3rd, 1919.

I cannot close this brief survey of this most important department of the work without expressing my gratitude to the members of the Leeds Babies' Welcome Association and particularly to those ladies who have so freely and unstintingly given of their leisure and their energy to the arduous duties in connection with the various activities of the centres.

Milk Distribution.—The scheme for the distribution of fresh and powdered cows' milk, free or at assisted rates to mothers and babies attending the infant welfare centres has continued to expand. Last year the quantity of fresh milk supplied free, reached a total of 56,032½ pints, and assisted, 171,511 pints, as compared with 23,583½ free, and 79,313½ pints assisted in 1918. The amount of powdered milk supplied free was 2,043½ lbs. in 1919, as compared with 616½ in 1918, and assisted, 25,310½ lbs. in 1919 and 15,066 lbs. in 1918. As in the previous year the Leeds Babies' Welcome Association has organized and supervised the supply and distribution of the milk. This is no light task, and entails not only a large amount of book-keeping, but also considerable worry and

anxiety in securing, storing, and allocating supplies. The Health Committee bears the expenses in connection with the administration of the scheme as well as the loss on the sales of milk. Last year the charge on the City funds was £2,467. The money has been well spent and numbers of poor mothers have been saved from anxiety and their children from disease by the scheme. Such a scheme readily lends itself to abuse, but the precautions taken to prevent the benefits going to unworthy persons are such that only an insignificant number of cases of abuse have come to the notice of the supervisory committee.

THE INFANTS' HOSPITAL, WYTHIER.

The hospital has completed another very busy year. The number of cases admitted was considerably in excess of that of the previous year, indeed was the highest on record. As in former years during the summer months one half of the cots was devoted to the treatment of epidemic enteritis or summer diarrhoea. The total number of cases of this disease treated was 48 and valuable work was accomplished in saving the lives of babies who otherwise might have succumbed to this deadly infant malady. Wyther still remains the only institution in the City which caters solely for the needs of sick children and the accommodation might easily be doubled. But even then it would supply but a fringe of the child population's need inasmuch as it takes only children up to five years of age. What is needed is a large, modern hospital, properly equipped and staffed sufficient to meet the requirements of a City of the size of Leeds. The work of the hospital for the year is summarized below.

SUMMARY OF CASES TREATED IN THE INFANTS' HOSPITAL, WYTHIER, DURING THE PERIOD JANUARY 1st—DECEMBER 31st, 1919.

	Males.	Females.	Total.
Remaining in Hospital, December 31st, 1918	10	8	18
Admitted during the year 1919	158	105	263
Discharged during the year ..	116	73	189
Died during the year	34	29	63
Remaining in Hospital, December 31st, 1919	18	11	29

Mortality Rate per cent, 22.4.

Average stay in Hospital was 34.6 days.

CLASSIFICATION ACCORDING TO AGE AND SEX.

Males.		Females.		Total Infants		Grand Total.
Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	
77	81	43	62	120	143	263

ANALYSIS OF DEATHS.

Cause of death.	Under 1 year.		Over 1 year.		Total.
	Males.	Females	Males.	Females	
Marasmus	11	8	1	3	23
Broncho-Pneumonia (Primary)	3	..	..	..	3
Tuberculosis (Non-Pulmonary)	..	1	1	1	3
Gastro-Enteritis	..	1	..	1	2
Pneumonia (Primary)	..	..	1	..	1
Laryngismus Stridulus	..	1	..	..	1
Congenital Syphilis	2	..	..	..	2
Epidemic Diarrhoea	13	7	1	2	23
Cerebral Abscess	..	1	..	..	1
Rickets	..	..	1	1	2
Bronchitis	..	2	..	..	2

ANALYSIS OF CASES ADMITTED DURING 1919.

	Males.	Females.	Total.
Bronchitis	3	3	6
Marasmus	35	16	51
Debility and Wasting	8	11	19
Rickets	24	22	46
Scurvy Rickets	..	1	1
Ileo-colitis	..	2	2
Broncho-Pneumonia (Primary)	9	2	11
Pneumonia (Primary)	1	..	1
Influenza	1	1	2
Bronchiectasis	3	..	3
Congenital Syphilis	4	5	9
Tuberculosis—Pulmonary	..	..	..
Non-Pulmonary	14	10	24
Neglect and Wasting	..	1	1
Nephritis	1	..	1
Adenitis	4	..	4
Diphtheria	2	..	2
Duodenal Ulcer	..	1	1
Tetany	1	1	2
Laryngismus Stridulus	..	1	1
Rötheln	..	1	1
Gastritis	1	3	4
Gastro-Enteritis	..	1	1
Acute Enteritis	2	2	4
Impetigo	1	..	1
Intussusception	1	..	1
Epidemic Diarrhoea	34	14	48
Cerebral Abscess	..	1	1
Convulsions	1	..	1
Suppurating Nævus	1	..	1
Otorrhoea and Keratitis	1	..	1
Other Diseases	6	6	12
Totals ..	158	105	263

Day Nurseries.—Since 1914 when the first day nursery was opened at Cobden Place the Leeds Day Nurseries Association has maintained four day nurseries, a residential nursery, and a nurses' hostel. The last mentioned is intended as a residence for the staff of nurses which serve the day nurseries. The situations of the respective nurseries in addition to the one already mentioned at Cobden Place, are Sweet Street, Holbeck, Willow Road, off Kirkstall Road, and Hunslet Lane. The day nurseries were established with the object of providing for the care of healthy infants and young children of mothers compelled by home circumstances to go out to work or who are temporarily in distress by reason of sickness in themselves or their dependents. During the war there was an exceptional demand for female labour and the wives of many men who joined His Majesty's Forces found it necessary to undertake regular employment outside their homes in order to augment their separation allowances and provide sufficient to keep themselves and their families. The widows and dependents of soldiers and sailors killed or wounded in action were in similar

case and were compelled by stress of circumstances and the hard times to seek employment, leaving their babies and children of tender years to the care of relatives or neighbours. The conditions under which many of these little children had to exist in the absence of their mothers were far from satisfactory and it was this fact which brought about the establishment of the nurseries in the Hunslet, Holbeck, and Kirkstall Road areas. The first mentioned was opened by the Ministry of Munitions especially for the children of munition workers. The need for these institutions did not disappear with the end of the war and it was found necessary to continue them after the armistice had been signed and peace declared.

As regards the residential nursery at North Hill House this was established to provide a suitable and healthy home for the children of deserted or widowed mothers and of such women as were employed outside the city and were unable to get home except at the week-end. Only children of one year of age and up to three years were accepted at this institution and it was run on the lines of a nursery school and was used by the local Education Authority for the training of students attending the Training College.

The financing of the whole scheme of day and residential nurseries was in the hands of the Leeds Day Nurseries Association, aided by grants from the Board of Education and the Ministry of Munitions. With the passing of the Maternity and Child Welfare Act, in 1918 the responsibility for the control of crèches and day nurseries passed from the Board of Education to the Ministry of Health. At the same time the financial burden entailed by the maintenance of the day nurseries became too much for the funds of the voluntary association to bear unassisted, so negotiations were entered into with the Corporation and in April, 1919, the whole scheme, including buildings, equipment, and staff, was absorbed by the City Council and the Health Committee became responsible for its administration. A joint committee composed of members of the Leeds Day Nurseries Association, the Education Committee and the Health Committee was formed to manage the affairs of the nurseries. Great praise is due to the Day Nursery Association for the splendid manner in which they carried on the work for five years and the good results obtained.

The available accommodation at the various nurseries is as follows :—**Non-resident** : Cobden Place, 40 cots ; Sun Dial House, 20 cots ; Holbeck, 40 cots ; Burley (Willow Road), 40 cots ; total 140 cots. **Resident** : Sun Dial House, 20 cots ; North Hill House, 22 cots, total 42 cots. A record of the year's work from January 1st to December 31st is shown in the following table :—

TOTAL ATTENDANCES OF RESIDENT AND DAY CHILDREN AT THE NURSERIES, IN AGE GROUPS,
FOR THE YEAR ENDED 31ST DECEMBER, 1919.

NURSERY.	RESIDENT.				DAY.								Grand Totals.
					WHOLE ATTENDANCES.				HALF ATTENDANCES.				
	Under 3	3-5	Over 5	Total.	Under 3	3-5	Over 5	Total.	Under 3	3-5	Over 5	Total.	
	Under 3	3-5	Over 5	Total.	Under 3	3-5	Over 5	Total.	Under 3	3-5	Over 5	Total.	
Cobden Place	..	..	..	..	3,322	224	149	3,695	400	15	18	433	5,181
Sun Dial House	5,473	526	298	6,297	1,865	183	33	2,081	184	15	1	200	8,578
Holbeck	..	..	..	..	2,552	122	53	2,727	233	4	2	239	3,600
Burley	..	..	..	..	1,722	673	525	2,920	157	38	60	255	3,773
North Hill House	1,367	2,639	1,721	5,727	..	..	..	..	..	..	..	..	5,727
Totals	6,840	3,165	2,019	12,024	9,461	1,202	760	11,423	974	72	81	1,127	26,859

Convalescence of Mothers and Babies.—Arrangements were completed during the year with the Leeds Children's Convalescent and Summer Holiday Fund for the provision of convalescent treatment for mothers and infants under five years of age attending the infant welfare centres or any of the institutions included in the Corporation's scheme of maternity and child welfare, the expenses of the same being borne in whole or part (according to means) by the parent, the Health Committee being responsible for any balance or deficit and also for the payment of administrative charges to the fund. During the year 10* mothers and 10 babies benefitted under the scheme. No scheme for helping mothers and children whose lot it is to live in crowded centres of industry can be said to be complete without facilities for convalescence in the country or at the seaside.

Propaganda.—Continuous efforts were made throughout the year to enlighten the general public and especially parents or parents-to-be on the principles of parenthood, mothercraft and the care of children. For this purpose special demonstrations and exhibitions were given in connection with National Baby Week and the World Service Exhibition; articles dealing with the subject appeared from time to time in the public press; and leaflets giving information on various aspects of infant life and health were distributed by the health visitors and through the medium of the infant welfare centres.

* The scheme did not come into operation until October.

PART V.

SANITARY ADMINISTRATION.

The accumulated arrears of sanitary work left over from the war period has been resolutely tackled during the year. Shortage of men and material, together with the high prices prevailing for labour and for every kind of sanitary appliance have retarded progress considerably, but nevertheless fairly satisfactory results have attended the efforts which the department has put forward to restore the sanitary conditions of the city to normal. There is much to be done and a year is too short a time to expect to make very much impression on a pile of arrears of five years' growth.

As in other parts of the country, Housing had an important place on the year's programme. Housing and health are inseparable and if the sickness and mortality statistics of the country could be closely and carefully analyzed it would be found that bad housing is a factor in the causation of ill-health and death more vital than all the known diseases put together. The evil effects on human life—especially in the early years—which accrue from living in small, overcrowded, ill-ventilated, ill-lighted and often overheated houses are incalculable. An unhealthy dwelling is a fitter sepulchre for the dead than cradle for the living and yet for many, life has its beginnings in such places.

WORK OF WOMEN INSPECTORS.

Below is given the work of the women sanitary inspectors.

Infectious Diseases.—The following visits were made :—

To schools (on account of 719 cases) ..	1,142
To absent pupils	165
To factories (126)	257
To workshops (5)	7
To workplaces, including restaurants (20)	37
To absent employees	11

Outworkers.—Visits paid to the homes of outworkers numbered 1,735. Of these, 436 were first visits and the remainder, 1,299 were additional visits for special reasons. In addition to these, 168 visits were paid to the premises of employers of outworkers. There were 57 sanitary defects found, of which 55 were rectified on representation from the Public Health Department.

Factories and Workshops.—The work done by the women inspectors under this heading is shown in table on pages 64 and 65.

In addition to that appearing in the table the following visits were paid :—

Factories on receipt of complaint ..	328
Workshops (routine and complaint) ..	272
Workplaces, restaurants (do.) ..	114
Houses on receipt of complaint ..	22
Total	736

Nuisances found 426, abated 359.

SMOKE INSPECTION.

One of the most pressing problems with which the City is faced is that of atmospheric pollution by smoke. Recent investigations made in Manchester, and in our own City by Dr. Ruston, of the Leeds University, prove that not only is the production of smoke in connection with factories, public works and domestic fires wasteful and unnecessary, but it has also a markedly deleterious effect on plant life. One has only to compare the grass, trees and flowers (where such exist) in the smoke area of the City with those beyond to test the truth of this assertion, and speaking broadly it may be taken that what is inimical to plant life is unfavourable to the healthy growth and development of human. Much of the smoke produced by factories and public works is altogether unnecessary and to a great extent avoidable. Even the forges ought not to be excused though by law they are exempt from penalties. Surely the time has arrived when the old fashioned methods of generating heat and power from the combustion of raw fuel in furnaces and open fires should be abolished and replaced by the more modern and hygienic, not to say more economical methods, gas or electricity. At present I am engaged in the compilation of a report on the whole subject of smoke pollution, which will be presented to the Health Committee in due course, and which one hopes may stimulate public interest in the problem and bring about some improvement in the atmospheric conditions of the City.

	1919.	1918.
Complaints received	17	20
Furnaces inspected	7,367	8,736
Observation of chimneys (1 hour each) ..	1,976	2,051
Average duration of dense smoke per observation of one hour	1 min. 15 secs.	1 min. 18 secs.
Number of chimneys found emitting dense smoke three minutes per hour	78	73
Notices served on manufacturers	5	8
Notices served on stokers	23	21
Prosecutions	none	none
Smoke prevention appliances adapted to furnaces	68	48
Chimneys newly erected	6	6
Furnaces in connection with new chimneys..	10	25

SANITARY INSPECTION OF DISTRICTS.

	N.E.	S.E.	S.W.	N.W.	City Total.
Houses completely examined for—					
Infectious disease	570	736	496	497	2,299
Alleged nuisances	376	619	839	316	2,150
Routine inspection	1	21	3	—	25
Premises examined only as to—					
Occupants	29	38	62	12	141
Buildings and offices ..	241	123	426	102	892
Drainage	93	512	291	278	1,174
Nuisances found in above or other houses—					
Dirty houses	46	113	55	74	288
Overcrowded houses	17	41	13	14	85
Dampness or dilapidation ..	333	411	467	320	1,531
Drain or closet defects ..	2,330	2,939	2,179	1,924	9,372
Defective ashpits or bins ..	928	1,316	1,179	1,205	4,628
Other nuisances	1,854	2,393	1,613	1,811	7,671
Outside nuisances found (gullies, etc.)	1,682	2,271	789	1,568	6,310
Total nuisances found ..	7,190	9,484	6,295	6,916	29,885
Additional visits paid to houses for—					
Infective disease	903	1,023	955	1,009	3,890
Nuisances	1,710	5,652	4,129	5,188	16,679
Completion of reports ..	37	33	91	169	330
To inspect work in progress	267	696	767	576	2,306
Other causes	22,514	19,294	4,640	18,080	64,528
Drains tested	516	1,286	882	659	3,343
Defects found in ditto.	76	321	396	130	923

SANITARY WORKS CARRIED OUT DURING 1919.

NATURE OF WORK.	N.E.	S.E.	S.W.	N.W.	City Total.
Houses cleansed	18	61	27	28	134
Overcrowded houses dealt with	5	12	2	4	23
Defective spouting, &c., repaired	325	568	410	438	1,741
Urinals cleansed or repaired ..	4	15	5	4	28
Privies or ash places repaired ..	32	18	19	44	113
Privies or pail closets converted	..	7	1	..	8
Waterclosets erected	..	9	6	1	16
New dry ashpits	2	..	1	7	10
Ashbins provided	301	375	303	315	1,294
Trough closets converted into W.C.'s	..	27	7	4	38
Closets cleansed (limewashed), etc.	266	170	101	156	693
Drainage works carried out ..	26	203	57	55	341
Cesspools filled up	..	1	..	..	1
Public or private wells abolished	..	..	..	..	..
Houses supplied with towns' water	..	..	10	4	14
Trough and water closets repaired	626	886	685	660	2,857
Other house nuisances remedied	1,149	1,747	933	1,351	5,180
Total houses for which above work was done	3,285	4,319	2,810	3,300	13,714
Houses in which all defects found have been remedied	3,249	4,309	2,782	3,234	13,574
Offensive accumulations removed and stopped gullies cleansed	855	1,100	434	530	2,919
Pollution of streams remedied ..	..	2	5	3	10
Other non-domestic nuisances re- moved	48	146	61	161	416
Total nuisances abated	3,657	5,347	3,067	3,765	15,836

FACTORIES AND WORKSHOPS.

I.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries.) ..	693	202	..
Workshops (Including Workshop Laundries.) ..	1,691	679	..
Workplaces	93	5	..
Total	2,477†	886	..

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness	363	293	..	..
Want of ventilation	81	69	..	..
Overcrowding	..	..	..	..
Want of drainage of floors ..	1	1	..	..
Other nuisances	229	192	..	..
Sanitary accom- modation. { insufficient ..	64	31	..	..
{ unsuitable or defective ..	232	193	..	..
Sec. 22 in force. { not separate for sexes ..	38	25	..	..
<i>Offences under the Factory and Work- shop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101)	..	..	..	..
Breach of special sanitary require- ments for bakehouses (SS. 97 to 100)	16	16	..	..
Other offences	..	..	..	..
Total	1,024	820	..	..

* Including those specified in Sections 2, 3, 7, and 8, of the Factory Act as remediable under the Public Health Acts.

† Exclusive of 3,265 visits to 690 bakehouses by ward inspectors.

3. 4. 5.—OTHER MATTERS.

Homework :—	Number of		
	Lists.	Outworkers.	
<i>List of Outworkers (S. 107) :—</i>		C.	W.
(No homeworkers on our register except amongst those engaged in making wearing apparel)	..	..	..
Lists received twice in the year	178	758	1,232
„ once in the year	29	21	99
Addresses of) received from other Authorities ..		27	
outworkers) forwarded to other Authorities ..		17	
Notices to occupiers as to keeping or sending lists ..		496	
Prosecutions.. .. .		..	
Inspection of Homeworkers' premises		436	
<i>Homework in unwholesome premises :—</i>			
Instances		57	
Notices		57	
Prosecutions.. .. .		..	
<i>Homework in infected premises :—</i>			
Instances		11†	
Orders made (S. 110)		..	
Prosecutions (SS. 109, 110)		..	
[Infectious cases removed, disinfection carried out under ordinary powers.]			
<i>Workshops on the Register (S. 131) at the end of year :—</i>			
Ordinary (154 trades)		1,313	
Domestic (19 trades)		70	
Bakehouses on register as workshops		182	
Do. domestic		508	
Total number of workshops on Register		2,073	
<i>Matters notified to H.M. Inspectors of Factories :—</i>			
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		..	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5).	Notified by H.M. Inspector ..	97	
	Reports (of action taken) sent to H.M. Inspectors..	..	
Other		..	
<i>Underground Bakehouses (S. 101) :—</i>			
Certificates granted during the year		..	
In use at the end of 1919		36	

† Of these 11, 8 were patients suffering from scarlet fever, 2 from diphtheria, and 1 from erysipelas.

The above table is that required by the Home Office and represents work done by the male workshops inspectors and by the women inspectors.

LODGING-HOUSES, CANAL BOATS, VANS, etc.

Common Lodging-Houses.

Number registered—

Men's	27	Beds available	1,328	}	..	..	29
Women's	2	"	115				
Routine visits paid to C.L. Houses	..	..	..	..	..	..	127
Visits as to infective disease	..	..	..	..	..	..	1
Visits as to suspected smallpox	..	..	..	..	..	..	—
Visits as to drain tests and abatements	..	..	..	..	..	..	23
							—
Total visits	..	..	..	..	..	..	151
							—

Nuisances found :—

				FOUND.		ABATED.
Dirty closets	..	..	..	6	..	6
Defective drains	..	..	..	—	..	—
Other nuisances	..	..	..	15	..	15
				—		—
Total	..	..	..	21	..	21
				—		—

In addition to the Common Lodging-Houses enumerated on the table there are three lodging-houses for men and one for women which are under the control of the Salvation Army and the Church Army. These contain altogether 340 beds for men and 20 for women.

Houses Let in Lodgings.

				HOUSES.		ROOMS.
Registered during 1919, let as furnished rooms	—	..	..	—	..	—
Removed from register	..	..	..	16	..	31
On register at end of 1919	..	..	..	33	..	121
Houses let in lodgings visited though not registered	..	..	..	476	..	1,310
Houses examined (new lodgings)	..	..	..	—	..	—
Drain testings (3 defects found)	..	3				
Re-testings on completion of work	..	2				
Visits for Abatement	..	..	248			
„ Infectious disease	..	..	4			
„ Additional inspection	..	3,713				
Visits to soldiers' billets	..	..	—			

Nuisances—				FOUND.	ABATED.
Dirty or bad bedding	..	..	..	16	16
Dirty rooms	..	..	..	44	44
Overcrowding	..	..	..	14	14
Dirty closets	..	..	..	25	25
Other nuisances	..	..	..	96	83
Structural defects	..	..	..	49	42

At the request of the University Authorities all lodgings are inspected by the Public Health staff before the houses are placed on the register of approved lodgings for the use of students.

New houses inspected during 1919 54 with 138 rooms to let.

Total visits to these houses .. 65

Canal Boats.

Registered during the year 1919	..	..	..	4
Re-registered „ „	..	..	..	1
Transferred to fresh owners	..	..	..	5
Struck off register (on revising register)	..	..	..	25
Remaining on register at end of year	..	..	..	170
Visits of inspection to wharves and locks	..	..	..	426
Complete inspections of boats (76 boats)	..	..	..	287
Cases of infectious disease	..	..	..	—
Cases of overcrowding	..	..	..	2
Dirty cabins	..	..	..	4

Vans and Tents.

Visits to vans during 1919	..	..	..	354
„ „ tents „ „	..	..	..	15
„ „ cellar dwellings or suspected dwellings	..	..	..	108
Additional visits to camping grounds	..	..	..	52
Visits for infectious diseases	..	..	..	—
Ice cream carts inspected on fair grounds	..	..	..	18

Nuisances—				FOUND.	ABATED.
Dirty camping grounds	..	..	..	3	3
Dirty vans	..	..	..	2	2
Dirty closet	..	..	..	4	4
Camping grounds with no accommodation for van dwellers	..	..	..	5	5
Cellar dwellings closed	..	..	..	5	5
Dirty cellar dwellings	..	..	..	2	2
				—	—
Total	..	..	..	21	21
				—	—

FOOD AND DRUGS.

Inspection of Cows and Cowsheds.—Throughout the year the Veterinary Inspector paid 399 visits to cowsheds within the City and made 5,082 separate examinations of cows diseased or suspected of being diseased. Three cows were found to be suffering from tuberculosis disease of the udder, five from tuberculosis of other parts of the body, and five were diagnosed as suffering from diseases other than tuberculosis.

In addition to visits made to cowsheds within the City, 162 visits were made to farms outside the City boundaries from which part of the City's milk supply is derived, and a total of 1,696 examinations of cows were made. The result of these visits was that six cows were found with tuberculosis of the udder, six with tuberculosis of other parts of the body, and seven with diseases other than tuberculosis.

The following is a summary of the work done by the Food and Drugs Inspectors in connection with the milk supply.

Visits to milkshops	504
Visits to cowsheds	366
Visits to railway stations	419
Farms or milkshops visited <i>re</i> infectious disease..	62
Number of milk retailers in City	486
Number of cowsheds in City	124
New cowsheds built	—
Cowsheds improved or reconstructed	—

SAMPLES OF FOOD SENT TO THE CITY ANALYST FOR EXAMINATION DURING 1919.

Article.	Genuine.	Adul- terated.	Total.	Taken formally.		Taken informally.	
				Genuine.	Adul- terated.	Genuine.	Adul- terated.
Milk	171	85	256	169	80	2	5
Skim-Milk	1	..	1	..	..	1	..
Dried Milk	3	..	3	..	..	3	..
Butter	6	..	6	5	..	1	..
Margarine	14*	..	14*	14*	..	..	..
Pepper	3	..	3	1	..	2	..
Vinegar	4	..	4	4	..	..	..
Beer.. .. .	1	..	1	..	..	1	..
Baking Powder	2	..	2	..	..	2	..
Jam	3	..	3	..	..	3	..
Cheese	1	..	1	..	..	1	..
Zinc Ointment	5	..	5	..	..	5	..
Sulphur Ointment	1	..	1	..	..	1	..
TOTAL ..	215	85	300	193	80	22	5
				273		27	

* Eight of these not properly labelled.

SUMMONSES ISSUED DURING 1919, UNDER THE SALE OF FOOD
AND DRUGS ACT.

No. of Sample	Article.	Adulteration or Offence.	Fines. £ s. d.	Remarks.
36	Milk ..	17% added water	..	to pay 4s. 6d. costs ; see samples 50 & 51 for farmer's milk
40	Margarine	Sold without label ..	..	to pay 4s. 6d. costs
41	Do.	Do. do. ..	..	do.
42	Do.	Do. do. ..	0 10 0	
50	Milk ..	11% added water, 18% fat deficient	10 0 0	} same farmer
51	Do. ..	10% added water	5 0 0	
52	Margarine	Sold without label ..	..	
53	Do.	Do. do. ..	..	to pay 4s. 6d. costs
54	Do.	Do. do. ..	..	do. do.
55	Do.	Do. do. ..	..	do. do.
56	Do.	Do. do. ..	..	do. do.
58	Milk ..	38.5% added water ..	10 0 0	} second conviction
76	Do. ..	19.5% do. ..	3 0 0	
84	Do. ..	20% added water, 16% fat deficient	3 0 0	
85	Do. ..	20.5% added water, 11% fat deficient	3 0 0	} same farmer
113	Do. ..	5% added water, 2% fat deficient	2 0 0	
114	Do. ..	10% added water	1 0 0	
126	Do. ..	15% added water	..	second conviction ; farmer fined £60 and costs on four samples in another Court
129	Do. ..	10% added water, 9% fat deficient	5 0 0	dismissed under Pro- bation Act ; see 129 for farmer's milk
147	Do. ..	7% added water	1 0 0	second conviction
			£ 43 10 0	

During the year 189 samples of milk were submitted to the Medical School for examination for the presence of the Tubercle Bacillus. Of these 12, or 6.3 per cent. were returned as positive and 177 as negative.

Further particulars regarding the adulteration of milk and other foods are set out in the accompanying tables.

The year witnessed no change in the powers granted to local authorities to secure for the people an abundant supply of high-grade pure milk. The Country is still where it was at the beginning

of the war, and, speaking generally, the milk supplied for human consumption is neither cleaner nor of better quality. In Leeds, however, we may claim to have done something in this respect, without the aid of the law, thanks to the local cowkeepers and dairymen who have shown an added interest in the production of a more wholesome and better article and who have exhibited a keener desire to co-operate with the Health Authority in raising the standard of cow keeping and milk production within the City. But there are still delinquents, though they are chiefly producers outside the City boundaries, who will only be brought to heel by the rigorous application of stern legal measures. At present a comprehensive bill is before Parliament to effect this object. A special Sub-Committee of the Health Committee is also engaged in an exhaustive enquiry into the whole subject.

MEAT INSPECTION.

The past year was a very active one as far as food supervision and meat inspection were concerned. The control imposed by the Government during the War was continued throughout the year, though preparations were steadily made for its removal and the return to normal conditions. Since the introduction of Government regulations the provision of meat supplied to the City has been in the hands of two separate bodies, namely, the wholesale butchers and the retail butchers. The former operate entirely from the Public Abattoir, and the latter from the Co-operative Abattoir in Gelderd Road and also from eleven sub-centres situate in eleven districts of the City, including Seacroft and Crossgates. At the Co-operative Abattoir cattle are received on a dead weight basis, and special classes of cattle, namely, ungraded cattle, cattle of low grade, and cattle suspected of being diseased are received for slaughter. The selection of this slaughter house by the Government as a special control centre and the sub-centres in the various districts of the City already spoken of has brought about considerable decentralization of slaughtering and, in consequence, increased very materially the inspectorial work. In addition a close watch had to be kept upon the supplies of frozen meat imported into the City and on carcasses of pigs and calves slaughtered either within the City or outside.

The fact that a total weight of 224,620 lbs. of beef and 36,383 lbs. of mutton were condemned during the year as unsound and unfit for human consumption shows how very necessary it is that a close watch should be kept on the meat supply. But in addition to the inspection of beef, mutton, veal and pork, the inspectors have also had to maintain a constant vigil to see that such other foods as fish, poultry and game, rabbits, butter, cheese, eggs, vegetables, boxed fruit and canned goods were of such quality as to be fit for human consumption. All this has meant hard and constant work on the part of the staff, and it is well that the public should realize how dependent they are for the wholesomeness and purity of their food supply on the conscientiousness and care with which this part of the work of the Public Health Department is carried out. In this connection fresh legislation is urgently required, (1) to make compulsory the licensing of all places where food is prepared for sale to the public; (2) for the better control of the transportation and handling of food; (3) for the entire abolition of private slaughter houses and the centralization of slaughtering in the public abattoir.

As regards the first it cannot be denied that much of the food both of the cooked and the uncooked variety which is exposed for sale in the shops has been prepared under conditions which are neither suitable nor sanitary. As for the second, one has only to examine the carts which convey the freshly killed meat from the public abattoir through the streets of the City to the retail butchers' premises to realize how little attention is paid to the elementary rules of cleanliness, and with what carelessness and negligence the meat is exposed to contamination from dirty covers and dirty hands. The same is true about the carriage of frozen meat and bacon.

With regard to the private slaughter house, all authorities are agreed to-day that the registered private slaughter house is an anachronism and ought to disappear at the earliest possible moment.

The work of the meat inspectors is shown in the following table :—

MEAT, ETC., DESTROYED BY CONSENT.

	1919.	1918.	1917.	1916.
Beef	224,620 lbs.	186,852 lbs.	72,960 lbs.	79,463 lbs.
Veal	6,239 "	7,185 "	2,384 "	3,492 "
Mutton	36,383 "	9,496 "	5,874 "	6,776 "
Bacon and Ham..	1,642 "	18,793 "	2,123 "	..
Pork	5,848 "	3,032 "	3,179 "	3,912 "
Offals	20,713 "	12,520 "	12,804 "	13,217 "
Horse Flesh ..	3,672 "	3,496 "	..	..
Rabbits	37,229 "	17,927 "	8,458 "	10,656 "
Venison	..	..	..	240 "
Poultry	3,278 lbs.	841 lbs.	635 lbs.	173 "
Game	198 "	78 "	..	..
Eggs	77,235 "	1,738 "	2,000 "	7,602 "
Cheese	2,469 lbs.	34 lbs.	70 lbs.	30 lbs.
Fish	176,955 "	87,602 "	37,254 "	25,753 "
Shellfish	27,409 "	23,552 "	24,218 "	12,875 "
Oysters	..	4,000 "	2,000 "	3,000 "
Fruit	19,671 lbs.	1,904 lbs.	7,062 lbs.	15,238 lbs.
Dried Fruit ..	700 "	..	..	..
Dates	15,867 "	..	..	..
Vegetables ..	47,980 "	89,059 lbs.	49,943 lbs.	43,225 lbs.
Inedible fungi ..	10 "	543 "	25 "	..
Edible fungi ..	332 "	..	..	..
Butter	5,401 "	6,886 lbs.	..	..
Margarine ..	4,480 "	512 "	..	..
Flour	140 "	13,162 "	..	..
Chocolate ..	..	100 "	..	..
Liquid Eggs ..	..	225 "	..	..
Yeast	504 "	..	..	..
Groceries ..	2,796 "	..	..	..
Tinned Goods ..	1,656 "	..	..	..
Sundries	51 "	..	..	..

In no case was any article destroyed that could safely be used as pig or poultry food, and substances containing fat were sent for treatment to tallow melting firms.

The Sunday morning inspections of hawkers' carts have been regularly undertaken throughout the year in the Bank district and East End of the City. Open shops and slaughter houses in the Jewish area have been inspected in a similar fashion.

SUMMARY OF INSPECTION.

Public Abattoir	1
Private slaughter-houses—(Registered)	63
(Licensed)	8
Knackers' Yards	2
Visits to Markets, Shops and Stations	8,405
Visits to Slaughter-houses	8,005

BAKEHOUSES.

OVERGROUND.			UNDERGROUND.			
Employees beyond family.	Workshop Bake-houses.	Domestic Bake-houses.	Employees beyond family.	Workshop Bake-houses.	Domestic Bake-houses.	Total Visits to all.
447	in 164	490	40	in 18	18	3,265

HOUSING.

A complete survey of the entire city was made during the year in accordance with the instructions of the Ministry of Health, and as a result, several areas are scheduled as being in need of reconstruction or improvement. The survey also revealed, as it did in practically every other town in the country, a considerable degree of overcrowding, there being as many as 3,841 houses with two or more families resident in them.

These houses are not confined to any one district, though they are more numerous in the working class areas, but are fairly evenly distributed all over the city. Such overcrowding does not make for healthy living and the first duty of the Local Authority, and one the urgency for which has already been recognised, is to supply the houses necessary to accommodate the surplus population. Until this is done it will be quite impossible to make a start with any scheme or schemes for the improvement of scheduled areas.

The Improvements Committee, which is the Committee to which has been entrusted the whole of the work in connection with the new housing schemes, has not been slow to realise the city's need, and throughout the year has been unremitting in its endeavours to relieve the situation created by the shortage of houses. Amongst the large towns of England, Leeds was one of the first to launch its housing proposals, and had it not been for the intervention of adverse circumstances over which the Committee had no control—shortage of material and labour, etc.—progress towards the materialisation of these proposals would have been much more rapid.

As it is six estates have been purchased, and the lay-out has been so far completed on five estates for building operations to have been commenced, and by the end of the year it is hoped that a fair

number of houses will be ready for occupation. (See table). In all something like 2,000 houses of various types have been contracted for, and with steady, well sustained work on the part of the builders and their employees a big hole should be made with the total number of houses required by the end of next year.

TABLE SHOWING THE ESTATES AND THE NUMBER OF HOUSES OF VARIOUS TYPES THAT HAVE BEEN CONTRACTED FOR TO DATE.

Estates.	Type A.	Type B.	Type B4.
Hawksworth Wood	127	167	..
Wyther House	88	136	..
Meanwood	370	370	60
Ivy House	24	..	..
Cross Gates	145	308	48
Section 12 (Subsidy Houses, &c.)	89	10	..
Contracts signed for ..	843	991	108
Total Number of Houses, 1,942.			

Type A.—Non-parlour houses, with 3 bedrooms.

„ B.—Parlour houses, with 3 bedrooms.

„ B4.—Parlour houses, with 4 bedrooms.

The following is a summary of the work done during 1919 under the Housing, Town Planning, Etc. Act, 1909:—

Special Examinations for Sections 15 and 17 of the Housing, Town Planning, &c., Act, 1909					52
Number of houses represented as unfit for human habitation					2
Houses repaired without representation	..	..	..		22
Unoccupied houses repaired and let..	..	..	..		9
Houses voluntarily disused as dwellings	..	..	..		4
Inspections were made throughout the City of properties, districts, and areas in connection with the Form of Housing Survey issued by The Ministry of Health of Housing Needs in the City. This inspection occupied several months of work in collecting data in regard to:—Housing Accommodation, Overcrowding, Unhealthy Areas, Insanitary Houses, etc.					

AMBULANCE WORK AND DISINFECTION.

The following cases were removed by the ambulances to the City Hospitals, Seacroft and Killingbeck, during 1919 :—

Smallpox	—
Scarlet Fever	1,262
Diphtheria	710
Typhoid Fever	49
Tuberculosis	157
Other Diseases	106
Total	2,184

In addition, 9 cases of Tuberculosis were conveyed to Armley House Sanatorium. Removals of cases from Seacroft and Killingbeck Hospitals to their own homes or to other institutions, numbered 59, and from Armley House Sanatorium, 2. Over and above these, 27 other journeys were made.

The demands on the ambulance service increase year by year, and it is becoming increasingly difficult to overtake the work with the present quota of ambulances. The purchase of a third ambulance has been sanctioned by the Health Committee, and when that arrives, the situation will be greatly relieved as we shall then be secure in case of accident or break-down.

Disinfection.—The following work was done by the Disinfecting Staff :—

Houses disinfected	2,714
Rooms disinfected (stripped 10, limewashed 20) ..	6,149
Beds and mattresses disinfected	8,611
Articles of bed clothing disinfected	21,915
Articles of wearing apparel disinfected	39,163
Miscellaneous articles disinfected	8,932

Also 611 infected persons or contacts went, or were taken to one or other of the sanitary depots to have a disinfecting bath and disinfection of clothing carried out.

At the Sanitary Laundry at Beckett Street, 93,730 articles of bedding, clothing, etc., have been washed and disinfected.

Medicine bottles sterilized for the Tuberculosis Dispensary, 16,618.

STAFF CHANGES.

The following changes in the personnel of the staff took place during the year :

- Dr. J. Johnstone Jervis was appointed Medical Officer of Health of the City *vice* Dr. William Angus, deceased.
- Dr. Z. P. Fernandez was appointed Assistant Clinical Tuberculosis Officer (new appointment).
- Dr. May I. Meldrum was appointed Assistant Medical Officer for Maternity and Child Welfare *vice* Dr. Agnes Jervis, resigned.
- Dr. J. P. Bibby was appointed Venereal Diseases Officer *vice* Dr. C. W. Vining, resigned.
- Dr. R. H. H. Jolly was appointed Assistant Medical Officer of Health *vice* Dr. Jervis, promoted.
- Dr. Nicholas Gebbie, on return from active service, was appointed Medical Superintendent at Killingbeck Sanatorium.
- Dr. Helen Y. Murdoch was appointed Assistant Resident Medical Officer at Killingbeck Sanatorium.

MINISTRY OF HEALTH TABLES.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1919 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected 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
1912	447,746	10,367	10,309	23.1	6,204	13.9	275	467	1,051	102	6,396	14.3
1913	457,295	10,947	10,877	23.4	7,231	15.6	281	287	1,469	135	7,237	15.6
1914	459,260	10,749	10,652	23.3	6,874	15.0	313	324	1,324	124	6,885	15.0
1915	459,260	9,990	9,877	21.5	7,557	16.5	298	350	1,253	127	7,609	16.6
1916	446,349	9,572	9,432	21.1	6,867	15.4	302	381	1,216	129	6,946	15.6
1917	438,254	7,738	7,566	17.3	6,962	15.9	307	397	1,023	135	7,052	16.1
1918	427,589	7,609	7,392	17.3	8,452	19.8	318	395	984	133	8,529	19.9
1919	430,834	7,837	7,564	17.6	7,099	16.5	401	294	899	119	6,992	16.2

Area of District in acres (land and inland water) } 21,593

Total population at all ages .. 445,550 } At Census, 1911.
Total families or separate occupiers .. 102,514

In November, 1912, by the addition of Roundhay, Seacroft, Shadwell and Crossgates, the area was increased by 4,682 acres and the population by 7,398 (Census 1911).

TABLE II. CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE CALENDAR YEAR 1919.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.						TOTAL CASES NOTIFIED IN EACH LOCALITY. (e.g. Parish or Ward) of the District.													Total Cases removed to Hos- pital.						
	At all Ages.	At Ages—Years.					Central.	North.	North-East.	New Ward.	East.	South.	East Hunslet.	West Hunslet.	Holbeck.	Mill Hill.	West.	North-West.	Brunswick.		New Wortley.	Armley and Wortley.	Bramley.	Headingley.		
		under 1.	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.																			45 and under 65 years.	65 and upwards.
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Cholera (C) Plague (P)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Diphtheria (including Mem- branous croup)	811	2	167	474	122	41	5	..	20	75	46	11	47	21	58	97	78	24	26	33	63	82	34	70	721	
Erysipelas	197	4	4	12	28	57	62	30	5	20	14	2	23	10	14	13	11	4	5	10	11	10	15	18	12	
Scarlet Fever.. .. .	1,340	9	229	897	161	42	2	..	39	136	71	19	126	42	133	156	112	20	29	66	55	120	38	114	1,244	
Measles	2,438	86	1,247	1,053	39	12	1	..	52	138	127	16	287	202	401	287	288	9	68	54	131	93	73	156	35	
German Measles	167	4	45	98	18	2	..	..	6	35	..	6	14	8	9	8	12	..	6	2	4	8	13	17	12	
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Enteric Fever	33	..	1	6	13	12	1	..	1	3	2	2	2	2	3	3	..	1	..	2	..	1	1	8	25	
Relapsing fever (R) Continued fever (C)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Puerperal Fever	26	..	..	..	6	20	..	..	2	4	1	..	5	..	..	..	3	..	4	1	..	..	3	3	11	
Continued High Temperature	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Cerebro-Spinal Meningitis	8	2	3	..	1	2	..	..	..	..	..	..	..	..	3	1	..	..	..	1	..	..	..	1	4	
Polymyelitis	3	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	
Ophthalmia Neonatorum	105	105	..	..	..	..	..	..	2	12	8	..	13	8	11	6	8	3	3	3	7	3	10	3	4	
Encephalitis Lethargica	4	..	1	1	..	1	1	..	..	..	..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	
*Malaria	130	..	..	..	16	108	6	..	6	11	5	3	21	4	6	7	10	2	3	10	9	5	11	7	10	
*Dysentery	3	..	..	..	1	2	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	
Pulmonary Tuberculosis	1,076	1	25	156	219	519	133	23	62	78	89	4	131	50	83	68	76	14	85	68	53	57	17	81	530	
Other Forms of Tuberculosis	208	4	33	98	44	23	4	2	6	12	24	6	24	5	23	18	15	4	6	17	6	12	6	8	20	
*Pneumonia (acute Primary and acute Influenzal)	521	15	77	71	80	160	91	27	5	35	43	3	40	49	23	74	51	2	17	20	19	30	26	37	1	
TOTALS	7,070	232	1,834	2,867	748	1,001	306	82	208	562	430	72	733	401	770	739	664	84	252	310	280	360	438	244	523	2,621

Isolation Hospital or Hospitals, Sanatoria, &c.:—City Fever Hospital, Seacroft and Killingbeck.

In addition to the 530 Pulmonary Tuberculosis and 20 Tuberculosis (Other Forms), removed, 100 Pulmonary Tuberculosis and 8 Tuberculosis (Other Forms), were admitted to Armley Sanatorium, and 157 Pulmonary Tuberculosis and 1 Tuberculosis (Other Forms), were admitted to Gateforth Sanatorium which is outside the City. They are included in the 1,076 and 208 notified.

* Notified from 1st March, 1919.

TABLE III. 79

CAUSES OF, AND AGES AT DEATH DURING THE CALENDAR YEAR 1919.

[illegible]

TABLE IV.

INFANT MORTALITY. CALENDAR YEAR 1919. NETT DEATHS FROM STATED CAUSES
AT VARIOUS AGES UNDER 1 YEAR OF AGE.

CAUSES OF DEATH.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total 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.	Total Deaths under 1 year.
All causes { Certified	230	57	53	33	373	147	156	125	98	899
{ Uncertified	..	..	..	..	..	..	..	..	..	..
Small-pox	..	..	..	..	..	..	..	..	..	..
Chicken-pox	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	1	..	4	4	9
Scarlet fever	..	..	..	..	..	..	..	..	..	..
Whooping Cough	..	..	1	..	1	4	6	9	5	25
Diphtheria and Croup	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	8	9	10	27
Erysipelas	1	..	..	..	1	..	..	..	2	3
Tuberculous Meningitis	..	..	..	..	..	1	2	1	1	5
Abdominal Tuberculosis	..	..	..	1	1	1	5	3	3	13
Other Tuberculous Diseases	..	..	..	..	..	1	..	1	2	4
Meningitis (not Tuberculous)	..	..	..	1	1	1	5	2	2	11
Convulsions	14	5	6	4	29	15	6	8	3	61
Laryngitis	..	..	..	..	..	..	..	2	..	2
Bronchitis	..	1	5	..	6	19	20	18	12	75
Pneumonia (all forms)	..	1	2	..	3	4	18	22	30	77
Diarrhoea	..	3	3	5	11	38	35	25	13	122
Enteritis	..	..	..	..	..	..	..	..	..	..
Gastritis	..	1	1	1	3	4	4	4	2	17
Syphilis	1	2	6	5	14	11	8	5	2	40
Rickets	..	..	..	..	..	..	1	..	1	2
Suffocation, overlying	3	..	..	..	3	1	2	..	..	6
Injury at birth	15	1	..	..	16	..	..	..	..	16
Atelectasis	17	1	2	2	22	2	..	..	..	24
Congenital Malformations	14	4	7	..	25	6	3	1	..	35
Premature birth	127	28	13	8	176	12	1	1	..	190
Atrophy, Debility and Marasmus	36	6	3	6	51	20	21	4	2	98
Other Causes	2	4	4	..	10	6	11	6	4	37
Totals	230	57	53	33	373	147	156	125	98	899