[Report 1908] / Medical Officer of Health, Liverpool City.

Contributors

Liverpool (England). City Council.

Publication/Creation

1908

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HEALTH DEPARTMENT.



REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING

1908

BY THE

MEDICAL OFFICER OF HEALTH.



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HEALTH DEPARTMENT.

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING

1908

BY

E. W. HOPE, M.D., D.Sc.,

Medical Officer of Health.





(Ordered by the Health Committee to be printed, 6th May, 1909.)

LIVERPOOL:

C. TINLING & CO., LTD., PRINTING CONTRACTORS, 53, VICTORIA STREET.

1909.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND
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PREFACE.

The following report relates to the health history of the City during the 52 weeks terminating on Saturday, December 26th, 1908.

During the year the birth-rate was 31·7, and the death-rate 18·5. The zymotic rate was 2·1, and the phthisis rate 1·5.

Trade Depression.

The past year was one of exceptional trade depression, which resulted in much distress amongst the poor, necessitating exceptional methods for its relief. This distress was not without its influence upon the prevalence of sickness.

Liverpool is at all times subject to the immigration of broken down persons seeking work at the docks, a circumstance which also affects its health statistics, whilst the large number of sick and afflicted persons from other parts of the country who are attracted to its Nursing Homes and other public charitable institutions which do not come under the category of public institutions for the treatment of the sick, add also their share to the rate of mortality.

Infant Mortality.

The rate of infant mortality was 140 per thousand births, a lower rate than has ever been recorded in this City. The subject continues to receive the closest attention, the great aim being to instruct mothers in the poorer districts as to the manner in which the infant is to be fed. It is not an uncommon experience to find women whose last infant is the sole survivor of eight, ten, or even twelve children born.

It is obvious that the infants born where life's battle is so hard do not receive adequate attention, and those who die are rapidly replaced by others, a large proportion of whom meet a similar fate.

The early part of the year was characterised by a considerable prevalence of influenza, which destroyed many valuable lives.

Plague was re-introduced after an absence of seven years, but the disease was limited to the originally infected barge.

Small-pox also was introduced on four separate occasions, but no extension of the disease followed. No death occurred from it.

The presence of measles rendered it necessary to close certain of the schools. The table on page 52 is deserving of study.

Mr. Newstead has continued his investigations into the life history of the house fly, and close attention has been paid to the conditions of middensteads and other breeding places of this insect, which may be the carrier of disease germs of a dangerous character. Two photographs illustrating different stages in the life of the insect are shown.

Tuberculosis.

The progress of sanitation in this City during the last half century has taught some extremely important lessons with regard to tuberculosis. It is by no means easy always precisely to connect cause and effect, but in the case of tuberculosis, results which have followed certain sanitary measures are too striking to admit of question.

The aim in regard to tuberculosis is not only to remove the conditions with which the disease is notoriously associated, but to remove also the conditions which render the spread of tuberculosis easy, or even possible. The principles are simple enough, but many of the difficulties in giving effect to them, have still to be surmounted.

With regard to the patient himself, there are cogent reasons why he should be treated in hospital unless he has comfortable surroundings at home; his prospects of recovery are improved, especially in the early stages, and his condition is usually improved, at all events temporarily, in the advancing or later stages; whilst the removal of a possible source of infection is an advantage from the point of view of the public health.

The limitation of the sanatorium treatment to carefully picked cases which are most likely to result in recovery, must not be regarded as the limitation of the usefulness of isolation. On the contrary, good as it is for the patient, it is of less immediate value than the isolation of the patient with advanced disease. The case, in fact, presents many analogies with a restriction of hospital treatment to mild cases of scarlet fever, and the rejection of severe ones.

It will be readily conceded that the work of the Consumption Hospital and Poor Law and other institutions in this City, with some 600 beds available, has rendered valuable service in regard to isolation, but the system has some obvious gaps; for example, many advanced cases are neither eligible for nor willing to accept Poor Law relief. Difficulty often arises from the capricious action of the patient himself, who will

leave the hospital at times when it is highly undesirable that he should be allowed to leave, and perhaps enters another public institution, or alternates short stays in hospital with sojourns with friends; hence it is not unusual to find the same cases notified several times over within a very brief period.

The compulsory detention of patients whose habits, condition, or home surroundings render them a danger, is a matter for serious consideration in the public interest. It has been urged that this would be a hardship upon the patient, whose illness will probably ultimately terminate fatally, and which therefore differs from that of an ordinary infectious disease from which speedy recovery may reasonably be expected. But, on the other hand, it must not be overlooked that hardship, if any, from compulsory detention would be counterbalanced by the comfortable quarters and good nursing not only by the fact that his friends could visit him without any risk because his surroundings in hospital are good, but he cannot be taken home without grave risk, because his surroundings at home are not good. Cases in which the patient is also the breadwinner present additional difficulties, and a proposal has been made to establish a fund for the temporary assistance of the families of such patients whilst in hospital. The public will in due course realise the advantages of isolation of this character, and methods can be directed more successfully as knowledge increases and public opinion is educated.

The increasing closeness of connection between the Public Health Department and various bodies engaged in dealing with the question of tuberculosis, such as the Consumption Hospital, Dispensaries, Queen Victoria District Nursing Association, and Poor Law Authorities, must enable action to be directed with more precision and with greater effect. Both the Health Committee and the Hospitals Committee have, during the year, continued to give careful attention to the important questions involved.

It is very gratifying to notice that patients who are under treatment in their homes are, when visited by the Health Officer, almost invariably found to be endeavouring to follow to the best of their ability, the instructions given to them by the officers of the Health Department, or by the Institutions at which they are being treated.

Milk and Tuberculosis.

There is also a valuable lesson to be learned from the action which has been taken during the last thirteen years in regard to the milk supply.

From cows kept within the City tubercular milk is rare, the tubercle bacillus having been found in something under 2·0 per cent. of the samples taken as against 6·2 per cent. in milk taken at the railway stations on arrival from the country. But statistics from other places also show that the action of the Health Committee has materially improved the quality of the milk sent in from the country; for example, a report was presented to the London County Council towards the close of the year, which showed that out of 92 samples of milk examined under the auspices of the London County Council no less than 22 (that is, a percentage of 23·9) proved to be tuberculous—a very different state of affairs to what obtains in Liverpool.

Excessive Drinking.

There is a satisfactory decline in the number of deaths certified by Coroner's juries to be due to the result of excessive drinking. The number, however, is still deplorable, and the extent of the mischief caused by excessive drinking is very far beyond the direct destruction of life which the inquests indicate. The squandering of money in drink means the deprivation of the necessaries of life to the men or the women who squander it and to the children also, nor is the cruelty of drunken parents to the children limited to this form of neglect. Facilities for obtaining drink have recently been diminished in the lower parts of the City with very satisfactory results, but that they are still too numerous will be seen from a glance at the maps facing page 270, showing the insanitary areas now being dealt with by the Housing Committee.

It has been urged that alcohol is a food, and a necessary food for the working-man. Those who accept this view will appreciate that the frequency with which it engages the attention of the Coroner's juries places it in a category apart from what is usually regarded as food. The loss of even two or three lives through an article of food during only one week would lead to a searching investigation. It is inconceivable that the continued sale of such an article of food under conditions which add regularly, week after week, to the death-roll, would be tolerated.

Over-crowding.

With regard to overcrowding, the diminution continues, whilst the number of sub-let houses upon the register has slightly declined.

The Ann Fowler Memorial Home, a large lodging-house for women, is gradually extending its sphere of usefulness.

Re-housing.

Further progress has been made with the rebuilding on the Burlington Street Area, and negotiations are slowly progressing in regard to other areas officially reported in previous years by the Medical Officer of Health. The number of insanitary houses demolished or reconstructed during each one of the last three years is:—

1906.	1907.	1908.
765	387	317

Richmond Fair had from time to time engaged the attention of the Committee, but this insanitary area, which comprised 80 houses, has been purchased, and is now entirely closed, the site being intended for an ecclesiastical building.

An Inquiry was held by the Local Government Board into certain points in connection with the six insanitary areas which the Medical Officer of Health scheduled as insanitary in the year 1906. One of these areas, viz., the Bevington Street area, had already been scheduled by the Medical Officer in the preceding year, but the Committee declined to proceed with it, owing to the difficulties in dealing with the large numbers of licensed premises upon it.

Medical Inspection of School Children.

A very important work, namely, the systematic medical inspection of school children was initiated during the year. Two alternative proposals were made at the outset, one being to establish a separate medical department to act under the direction of the Director of Education, another being to carry out the work under the direction of the Medical Officer of Health, who is also Medical Officer to the Education Authority, and whose staff already had an intimate connection with the schools, and with the health of the school children. This latter plan was recommended by the Board of Education and by the Local Government Board, and was approved of by the Education Authority. The progress of the work under this arrangement has been perfectly satisfactory.

New Parliamentary Powers.

The Liverpool Corporation Bill, which became law during the year 1908, contained some exceedingly valuable sanitary clauses, amongst them being powers to remove human remains from old burial grounds, and also powers to deal with dilapidated buildings.

An important measure relates to cellar dwellings. These have at all times been one of the insanitary features of Liverpool, and step by step all cellar dwellings coming within the purview of the Liverpool Improvement and Waterworks Act of 1871, or

the Public Health Act of 1875, have been dealt with in such a manner that no hardship should arise from the dispossession of the occupants. There still remain, however, nearly 2,000 cellars let separately as dwellings, and the floors of nearly all of these are more than two feet below the surface of the adjacent ground. They have also the additional disability of being situated, for the most part, in old and narrow streets. Their continued occupation is prejudicial to the health of the inmates, and the Corporation desire to close these, as circumstances permit, with the least inconvenience to the occupants. Five years is allowed for the complete closure of these cellar dwellings, but as this period is a very outside necessary limit, some compensation is offered to the owners of those cellars closed at an earlier date.

Further clauses dealt with infectious disease in schools, and powers were also sought to protect neglected and verminous children of all ages, but unfortunately the Committee of the House of Commons declined to recognise the necessity for granting the powers sought in regard to the children below the school age, although they allowed them in the case of the children attending school. The children attending school, however, do come under the cognizance of the teachers and others, and therefore are less liable to be neglected than those of more tender age. Measures already exist for the free bathing and washing of school children, and also for disinfecting clothing infested with vermin.

A clause provided for the purchase of the Crematorium, thus putting the Corporation into the possession and control of a modern, well-equipped, and well-constructed Crematorium placed in altogether appropriate and suitable surroundings. The medical profession in the City have by resolution expressed their approval of the establishment of a Crematorium.

The most important measures in regard to further developments, were those relating to streets and buildings and development of building estates. Important works have already been carried out by the City Engineer in connection with these matters, which will be of lasting benefit to the City.

E. W. HOPE,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,

MUNICIPAL OFFICES,

LIVERPOOL, *6th May*, 1909.

STATISTICS

RELATING TO

BIRTHS, DEATHS, AND CAUSES OF DEATH, &c.,

ZYMOTIC DISEASES AND THEIR INCIDENCE.

SUMMARY

OF

VITAL STATISTICS FOR 1908.

Area of City	16,619	Acres. (26 square miles)
Population	750,203	
*Density	45·1	Persons per Acre.
*Births	23,891,	Birth-rate 31·7.
*Deaths	13,930,	Death-rate 18·5.
*Infantile Mortality	3,355	Deaths under one year, or 140 per 1,000 Births.
Zymotic Death-rate (7 principal Zymotic Diseases)	2·1	per 1,000.
Phthisis Death-rate	1·5	per 1,000.

* For variations in different districts see plan-map in the Appendix.

BIRTHS.

During the fifty-two weeks of the year, terminating on Saturday, December 26th, 1908, the returns of the local registrars recorded 23,891 births within the City. Of the total births 12,241 were males and 11,650 were females.

The birth-rate in the City of Liverpool is considerably above the average of the great towns, as well as of England and Wales taken as a whole (see diagram, page 8). During 1908 the birth-rate was 31·7 per 1,000 of the population, being exactly the same rate as in 1907; the average of the previous five years (1903-1907) being 32·8. The rates are calculated upon the corrected population as ascertained by the Census of 1891 and 1901.

The variations in the birth-rate and the distribution of the births in the different wards and districts of the city are indicated upon the accompanying plan-map (see Appendix), and have also been arranged in the following tables:—

BIRTHS.

Districts.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		1908.		Corrected Average Rate per 1000 during the 5 years 1903-1907.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Births.	Rate per 1000	
Scotland	247	266	264	256	258	266	236	265	2058	39·2	41·4
Exchange	168	156	158	137	130	116	143	131	1139	27·9	29·5
Abercromby	221	218	254	221	260	226	208	212	1820	36·2	33·0
Everton	570	496	581	541	509	508	524	490	4219	34·3	35·4
Kirkdale	269	276	293	316	334	270	239	252	2249	31·9	33·4
West Derby—West	335	374	379	362	371	351	290	287	2749	30·5	32·1
Toxteth	458	389	414	409	397	402	418	385	3272	31·2	32·6
Walton	278	259	279	275	308	247	283	225	2154	33·6	32·5
West Derby - East	205	190	215	193	217	192	187	207	1606	30·8	31·3
Wavertree	134	129	135	157	154	135	125	130	1099	28·1	31·7
Sefton Park (late Toxteth Rural)	96	70	112	84	75	92	82	75	686	18·2	19·1
Garston	100	94	88	87	105	112	90	68	744	31·2	34·6
Fazakerley	13	14	8	14	13	10	11	13	96	21·4	29·6
City	3094	2931	3180	3052	3131	2927	2836	2740	23891	31·7	32·8

The birth-rate is still very high in the old parts of the city, in some instances higher than in the rapidly-extending areas in the suburbs. The high birth-rate amongst the poorer classes no doubt partially results from very early marriage.

The large numbers of inmates of registered Common Lodging-houses and Model Lodging-houses explains in a measure the apparently low birth-rate in Exchange.

In the district known as Sefton Park, the large proportion of domestic employés partially accounts for the low birth-rate.

The following table shows the population, number of births, and the corrected birth-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Births.	Rate per 1,000.
1884	541,031	20,071	37·1
1885	537,548	19,464	36·2
1886	534,088	19,559	36·6
1887	530,649	18,414	34·7
1888	527,233	17,777	33·7
1889	523,838	17,676	33·7
1890	520,466	17,592	33·8
1891	518,302	17,832	34·4
1892	519,590	17,758	34·2
1893	520,882	18,328	35·2
1894	522,178	17,893	34·3
*1895	652,523	22,006	33·7
1896	658,050	21,943	33·3
1897	663,633	22,280	33·6
1898	669,243	22,227	33·2
1899	674,912	22,488	33·3
1900	680,628	22,762	33·4
1901	686,332	21,980	32·0
** 1902	710,337	24,283	34·2
1903	716,810	23,910	33·3
1904	723,430	24,278	33·5
*** 1905	733,714	24,350	33·2
1906	739,180	24,123	32·6
1907	746,144	23,654	31·7
1908	753,203	23,891	31·7

The foregoing table shows the decrease in the birth-rate during the last 25 years. This decrease has, however, been even more pronounced in other parts of the country, and notwithstanding the decline in Liverpool, the birth-rate in this city is still amongst the highest, being exceeded by only three of the towns having a population of more than 100,000.

* City area extended. ** Garston included. *** Fazakerley included.

The following table shows the *natural* increase or decrease of population, that is, the increase or decrease in the number of births as compared with the number of deaths during the year 1908, in the several districts of the city. In only one district, viz., Exchange, is any decrease shown; the nett result in the city showing an increase of births over deaths of 9,961.

Districts.	Population.	Births.	Deaths.	Number of Births over Deaths.	Number of Deaths over Births.
Scotland	52,478	2,058	1,519	539	—
Exchange	40,775	1,139	1,176	—	37
Abercromby	50,272	1,820	940	880	—
Everton	122,970	4,219	2,577	1,642	—
Kirkdale	70,536	2,249	1,411	838	—
West Derby—West	89,902	2,749	1,477	1,272	-
Toxteth	104,905	3,272	1,917	1,355	—
Walton	64,053	2,154	868	1,286	—
West Derby—East	52,130	1,606	838	768	—
Wavertree	39,150	1,099	474	625	—
Sefton Park ... ... (late Toxteth Rural)	37,768	686	344	342	—
Garston	23,848	744	335	409	—
Fazakerley	4,476	96	54	42	—
City	753,203	23,891	13,930	9,961	—
Deaths of persons brought into the City Hospitals from outside the City	—	—	733	—	—
Total ...	753,203	23,891	14,663	—	—

The following tables give the estimated population, number of births recorded, and birth-rate of eighty-two of the large towns of the United Kingdom.

TOWNS.	Estimated Population in the middle of the year 1908.	No. of Births.	Annual Rate to 1,000 of population.
London	4,795,757	122,898	25·2
Croydon	157,698	4,070	25·4
Willesden	154,792	4,099	26·1
Hornsey	92,713	1,514	16·1
Tottenham	126,146	3,871	30·2
West Ham	315,000	9,229	28·8
East Ham	142,976	3,609	24·8
Leyton	125,815	3,300	25·8
Walthamstow	131,486	3,508	26·2
Hastings	67,817	1,069	15·5
Brighton	129,967	2,808	21·3
Portsmouth	211,493	6,110	28·4
Bournemouth	70,801	1,234	17·1
Southampton	122,196	2,971	23·9
Reading	81,647	1,879	22·6
Northampton	96,405	2,045	20·9
Ipswich	73,852	1,839	24·5
Great Yarmouth	53,152	1,440	26·7
Norwich	122,841	3,152	25·2
Plymouth	122,113	2,750	22·2
Devonport	81,525	2,104	25·4
Bristol	372,785	8,739	23·1
Hanley	67,998	2,283	33·0
Burton-on-Trent	53,936	1,211	22·1
Wolverhampton	103,318	2,712	25·8
Walsall	97,778	2,942	29·6
Handsworth	68,051	1,590	23·0
West Bromwich	69,786	2,297	32·4
Birmingham	558,357	16,143	28·4
King's Norton	78,608	1,977	24·7
Smethwick	68,416	2,153	31·0
Aston Manor...	84,256	2,234	26·1
Coventry	78,889	2,629	32·8
Leicester	240,172	5,704	23·4
Grimsby	71,800	2,313	31·7
Nottingham	260,449	7,037	26·6
Derby	127,583	3,356	25·9
Stockport	102,339	2,885	27·7
Birkenhead	119,830	3,824	31·4
Wallasey	68,849	1,763	25·2

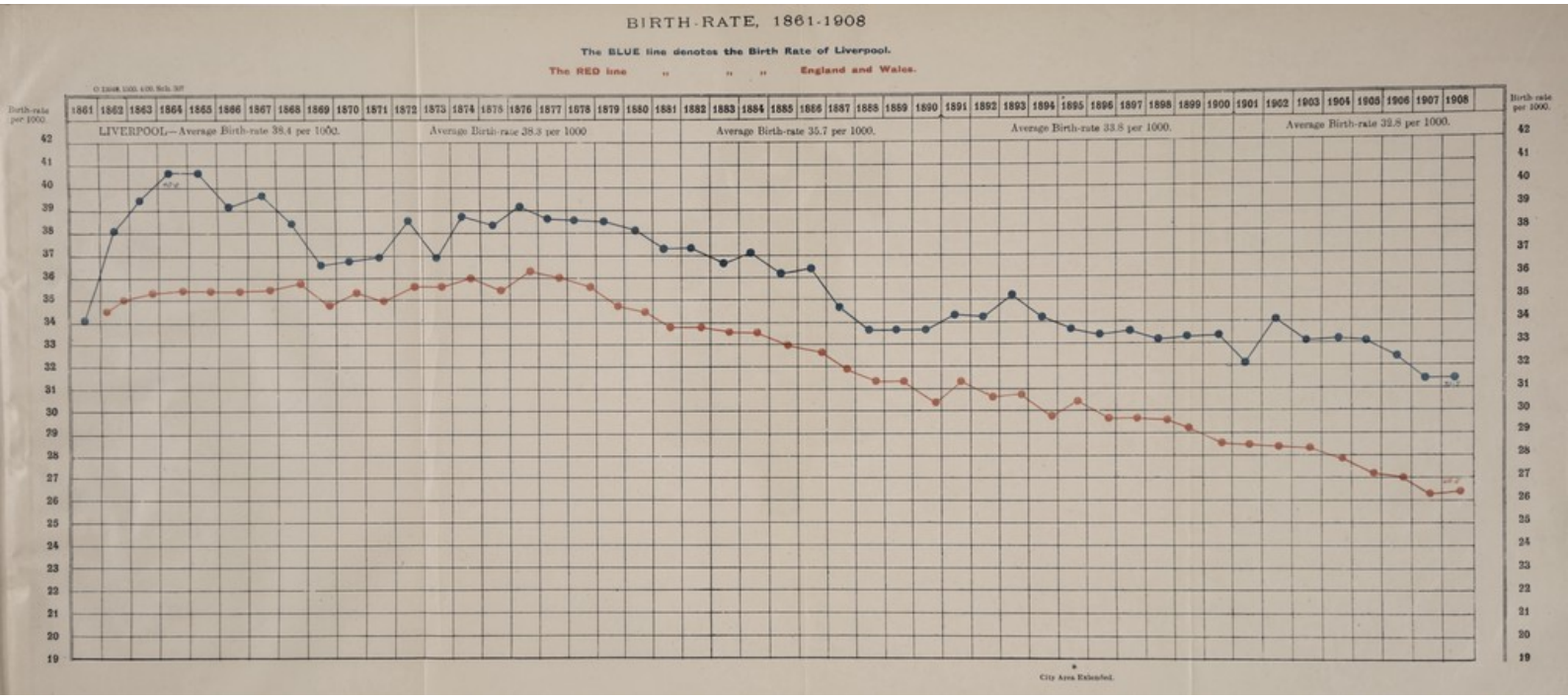
TOWNS.	Estimated Population in the middle of the year 1908.	No. of Births.	Annual Rate to 1,000 of population.
Bootle	68,248	2,169	31·3
St. Helens	93,812	3,311	34·7
Wigan	89,636	2,987	32·8
Warrington	71,268	2,369	32·7
Bolton	185,358	4,608	24·5
Bury	59,064	1,379	23·0
Manchester	649,251	19,217	29·1
Salford	239,294	7,201	29·6
Oldham	142,507	4,058	28·0
Rochdale	88,821	2,219	24·6
Burnley	105,100	3,015	28·2
Blackburn	135,961	3,459	25·0
Preston	117,799	3,311	27·7
Barrow-in-Furness	62,312	1,897	30·0
Huddersfield	94,776	2,348	24·4
Halifax	111,018	2,141	19·0
Bradford	292,136	5,995	20·2
Leeds	477,107	12,018	24·8
Sheffield	463,222	14,467	30·7
Rotherham	63,736	2,123	32·8
York	85,861	2,192	25·1
Hull	271,137	8,327	30·2
Middlesbrough	103,511	3,776	35·9
Stockton-on-Tees	53,160	1,706	31·6
West Hartlepool	77,573	2,083	26·4
Sunderland	157,693	5,286	33·0
South Shields	115,535	3,531	30·1
Gateshead	128,393	4,027	30·9
Newcastle-on-Tyne	277,257	8,379	29·7
Tynemouth	55,244	1,925	34·3
Newport, Mon.	76,955	2,552	32·6
Cardiff	191,446	5,172	26·6
Rhondda	133,137	5,454	40·3
Merthyr Tydfil	77,219	2,791	35·6
Swansea	97,810	3,289	33·1
Edinburgh	350,524	7,500	21·3
Glasgow	859,715	23,915	27·7
Dundee	168,616	4,624	27·4
Aberdeen	178,210	4,450	25·0
Dublin	394,525	11,500	28·7
Belfast	380,344	11,490	29·7
LIVERPOOL	**753,203**	**23,891**	**31·7**

The above table is, with the exception of Liverpool, taken without correction from the Returns of the Registrar-General of England and the Registrar-General of Scotland, and relates to the 53 weeks ending 2nd January, 1909

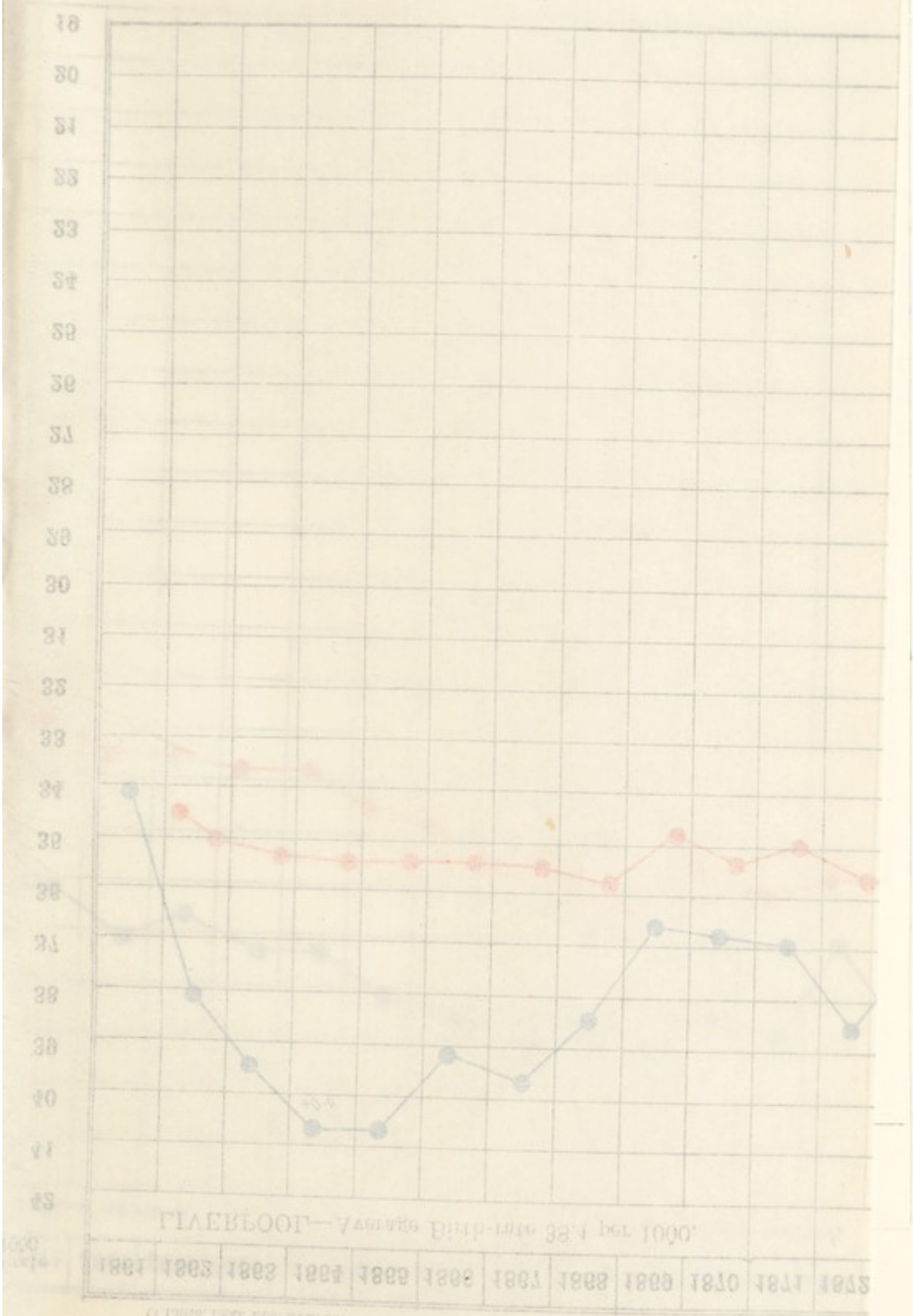
BIRTH-RATE, 1861-1908

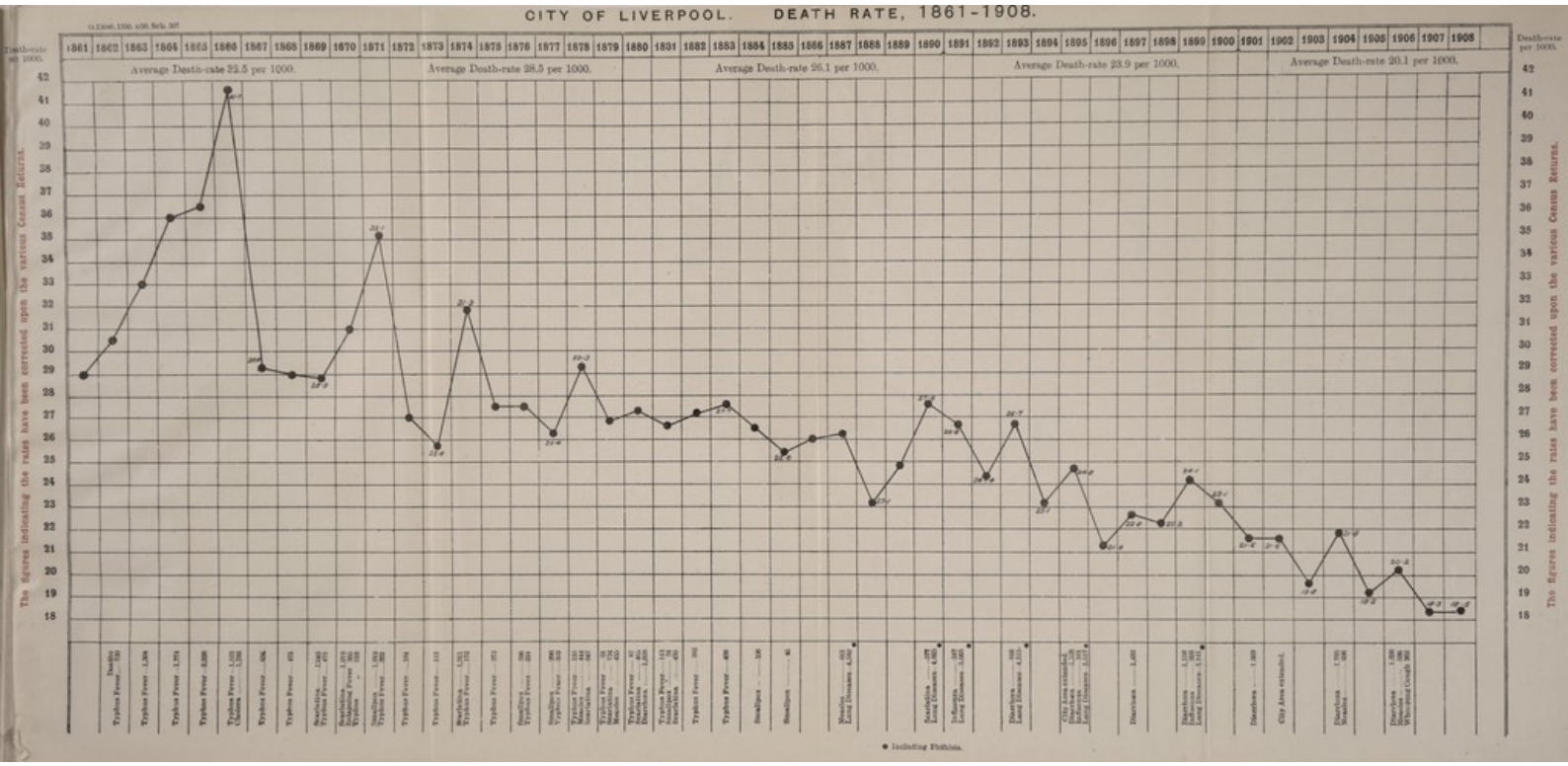
The BLUE line denotes the Birth Rate of Liverpool.

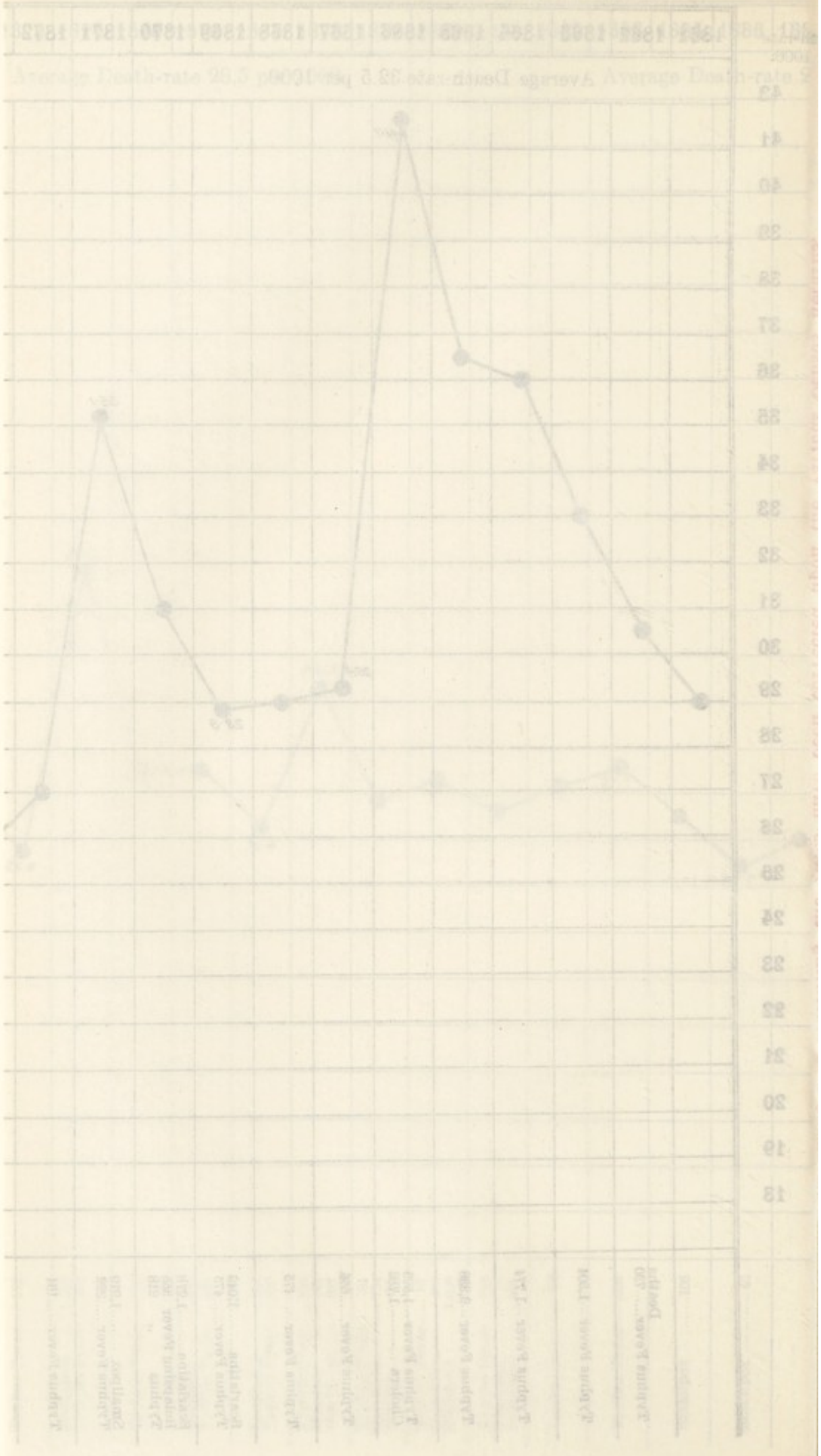
The RED line " " " England and Wales.



* City Area Extended.




CITY OF LIVERPOOL. DEATH RATE, 1861-1908.
Average Death-rate 32.5 per 1000.
Average Death-rate 28.5 per 1000.
Average Death-rate 26.1 per 1000.
Average Death-rate 23.9 per 1000.
Average Death-rate 20.1 per 1000.
Death-rate per 1000.
The figures indicating the rates have been corrected upon the various Census Returns.
1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908
42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18
Deaths
Typhus Fever—730
Typhus Fever—1,308
Typhus Fever—1,771
Typhus Fever—2,326
Typhus Fever—1,023
Cholera—3,700
Typhus Fever—594
Typhus Fever—472
Scarlatina—1,040
Typhus Fever—471
Scarlatina—1,674
Diphtheria Fever—333
Typhus —339
Smallpox
Typhus Fever—1,324
Typhus Fever—1,262
Typhus Fever—784
Typhus Fever—113
Scarlatina—1,351
Typhus Fever—1,172
Typhus Fever—973
Smallpox
Typhus Fever—396
Typhus Fever—334
Smallpox
Typhus Fever—293
Typhus Fever—313
Typhus Fever—110
Scarlatina—447
Scarlatina—78
Measles—170
Typhus Fever—87
Diarrhœa—1,054
Typhus Fever—143
Smallpox—74
Scarlatina—69
Typhus Fever—302
Typhus Fever—408
Smallpox—326
Smallpox—85
Measles—653
Lung Diseases—4,536
Scarlatina—377
Lung Diseases—4,403
Influenza—287
Lung Diseases—5,007
Diarrhœa—756
Lung Diseases—4,553
City Area extended.
Diarrhœa—1,526
Lung Diseases—5,274
Lung Diseases—5,077
Diarrhœa—1,493
Diarrhœa—1,158
Lung Diseases—5,181
Diarrhœa—1,369
City Area extended.
Diarrhœa—1,781
Measles—696
Diarrhœa—1,396
Measles—1,000
Whooping Cough—966
• Including Phthisis.



DEATHS.

The statistics dealing with mortality and its causes are set forth in the ensuing pages; the total death-rate of the city during the year was 18·5 per 1,000; the average rate of the ten years following the extension of the city boundaries (1896-1905) was 21·8, and that of the last three years 1906-8 was 19·0. The deaths in public institutions of 733 non-residents, equal to 0·9 per 1,000, have been eliminated from the total deaths.

On comparing the death-rate of one locality with that of another, it is necessary, before any correct conclusions can be drawn from the comparison, to ascertain whether the populations of the two localities are comparable in point of age; if they are not, certain corrections must be made. Quite apart from conditions of sanitation, mortality varies widely at different age-periods, as the next table shows; consequently the death-rate of the community is largely influenced by the proportions living at each age-period; the effect of a high birth-rate in raising the crude death-rate is well seen by the table, which also indicates plainly enough how the crude returns are modified if there happens to be an unusual proportion of the population at any one age-period. A hospital for foundlings, or a home for aged people, will have a very different influence upon the mortality returns of the district than a school containing an equal number of boys from 10 to 15 years of age.

If, for example, we could conceive that the whole population of Liverpool consisted of persons between the ages of 20 and 30, the death-rate last year would have been 4·5 per 1,000; if, on the other hand, we could conceive that it consisted entirely of people above 60 years, the death-rate would be 75·8 per 1,000. It is plain that any variation in the *proportions* living at the respective age-periods would affect the death-rate, and this with absolutely no change whatever in the condition of municipal sanitation. These proportions, however, vary very slowly and very slightly year by year in each district, so that yearly comparisons of the mortality-rate of the same district may be fairly made, but one district must not be put into comparison with another unless the conditions of each are known, and the necessary corrections made.

THE FOLLOWING TABLE SHOWS THE ANNUAL RATE OF MORTALITY PER 1,000 AT EACH OF TWELVE AGE-PERIODS DURING LAST YEAR IN LIVERPOOL, AS WELL AS THE TOTAL NUMBER OF DEATHS.

THE DIFFERENCES WHICH THE FIGURES SHOW ARE VERY STRIKING:—

1908.	* Under 1 year.	1 to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 and upwards.	Total at all Ages.
Rate of Mortality per 1,000 living at ages indicated.	140·4	62·5	18·6	5·1	2·8	4·5	8·9	15·4	27·2	57·9	105·2	176·9	18·5
Total Number of Deaths at each Age Period.	3355	1137	986	420	433	664	977	1219	1418	1768	1165	388	13930
†Estimated Population	20986	18184	52958	81188	150143	146145	108902	78927	51993	30520	11064	2193	753203

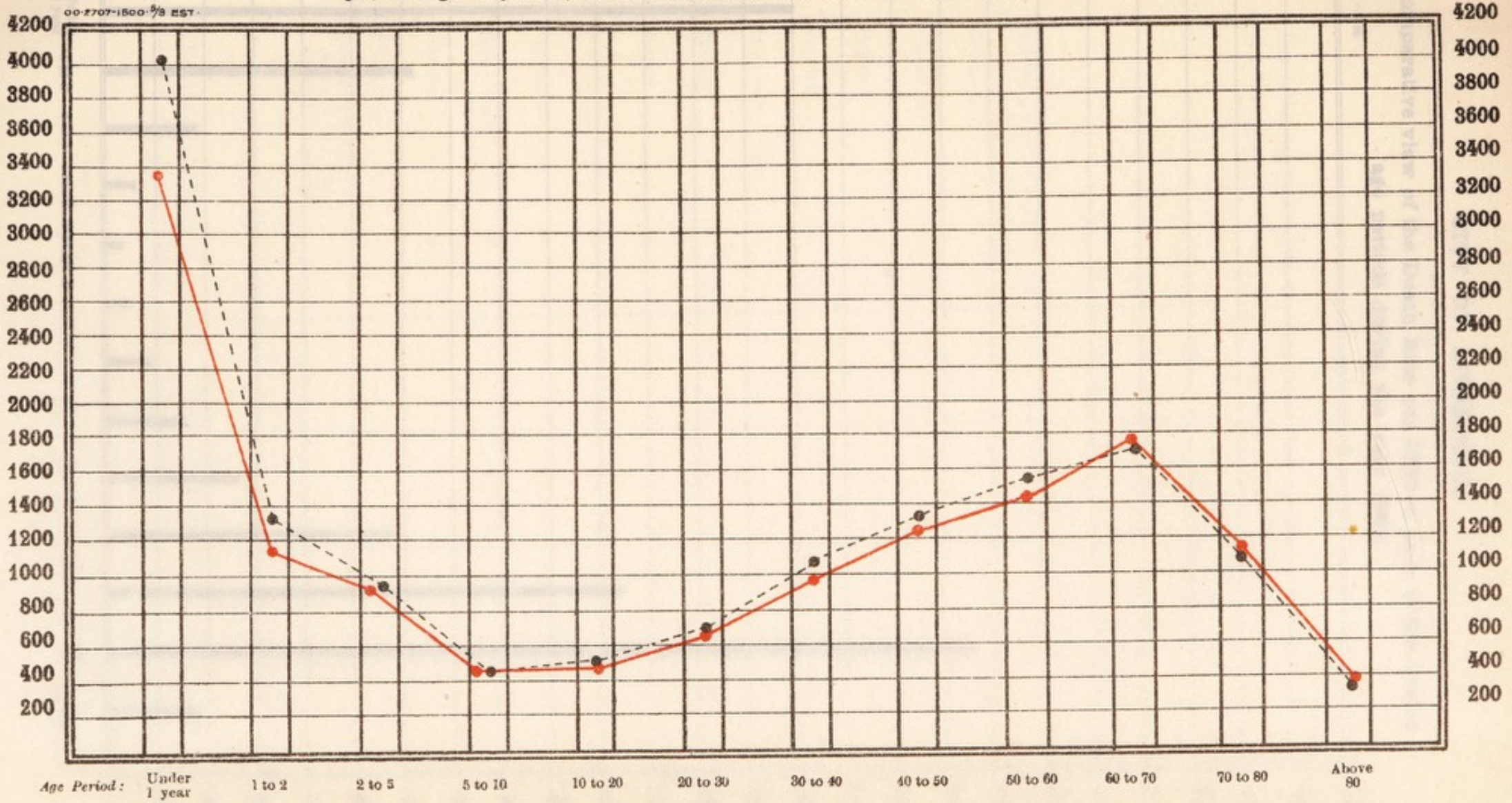
(See Comparative Chart on next page).

* Column I. indicates the rate of mortality under one year per 1,000 births during the year.

† This estimate being so far removed from the Census must be regarded as approximate.

CITY OF LIVERPOOL.

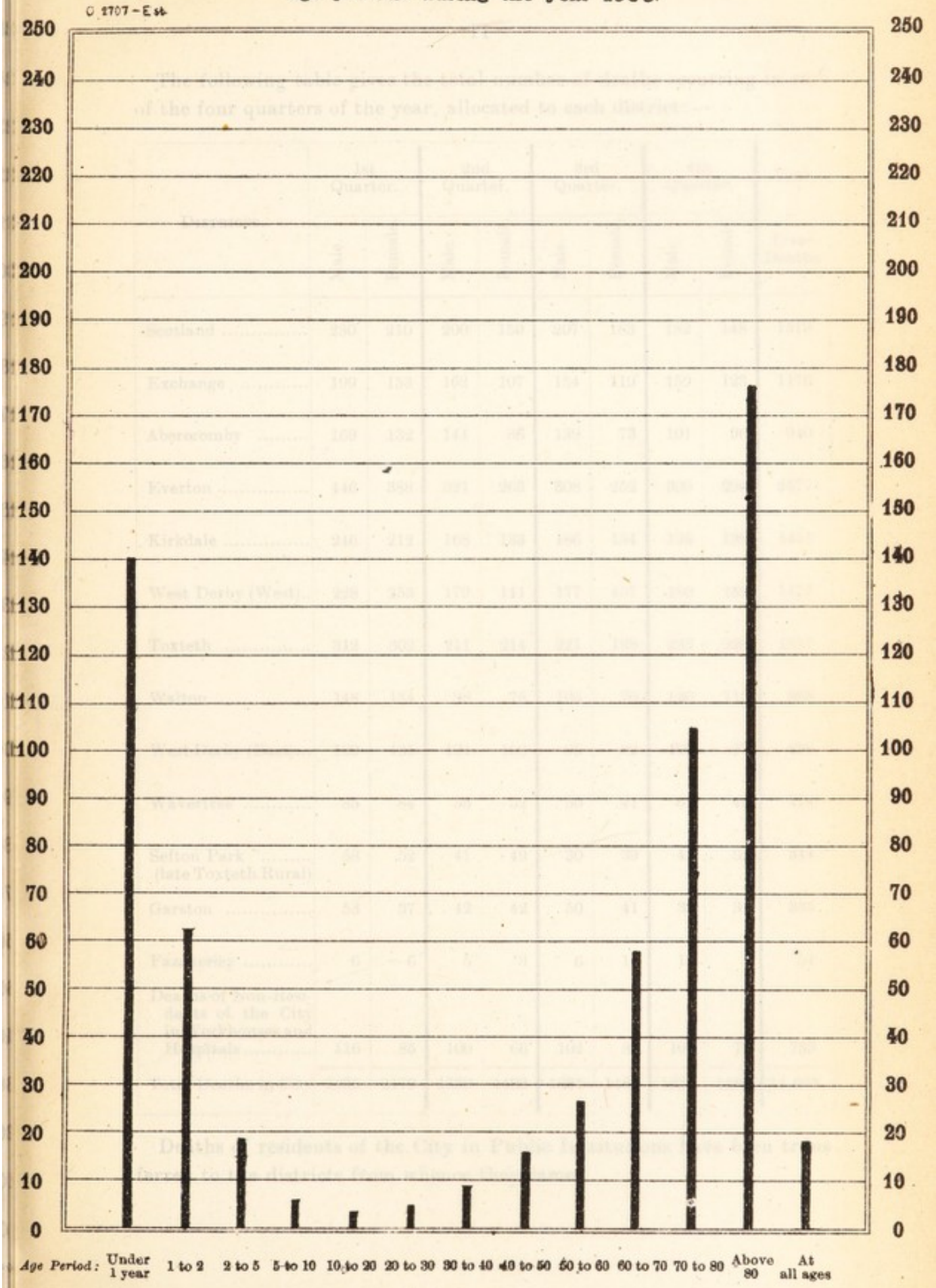
Comparative view of the total number of Deaths at twelve different age periods during the year 1908 shown in Red, the average for the preceding Ten years (1898-1907), being shown in the Black dotted line.



Comparative view of the total number of Deaths at twelve different periods during the Year 1908 shown in Red, the average for the preceding Ten years (1898-1907), being shown in the Black dotted lines.

CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 at each of the twelve age periods during the year 1908.



CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 at each of the twelve age periods during the year 1908.

The following table gives the total number of deaths occurring in each of the four quarters of the year, allocated to each district:—

Districts.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Year.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total Deaths.
Scotland	230	210	200	159	207	183	182	148	1519
Exchange	199	153	162	107	154	119	159	123	1176
Abercromby	169	132	144	86	139	73	101	96	940
Everton	446	388	321	263	308	252	309	290	2577
Kirkdale	246	212	168	133	186	134	193	139	1411
West Derby (West)..	228	253	179	141	177	157	180	162	1477
Toxteth	312	302	211	214	221	198	233	226	1917
Walton.....	148	134	98	78	105	70	120	115	868
West Derby (East)...	139	131	104	100	96	82	109	77	838
Wavertree	85	84	55	52	50	41	61	46	474
Sefton Park ..... (late Toxteth Rural)	58	52	41	49	30	39	43	32	344
Garston	53	37	42	42	50	41	39	31	335
Fazakerley	6	6	5	3	6	10	13	5	54
Deaths of Non-Residents of the City in Workhouses and Hospitals.....	116	85	100	66	102	83	109	72	733
Total Deaths in City	2435	2179	1830	1493	1831	1482	1851	1562	14,663

Deaths of residents of the City in Public Institutions have been transferred to the districts from whence they came.

DEATHS IN PUBLIC INSTITUTIONS

Deaths in Public Institutions are referred to the Districts from whence the patients came, but the following table shows that the deaths of 5,319 persons occurred in the undermentioned Institutions for the treatment of the sick:—

	Total Deaths.	Non-Residents of City.
Parish Workhouse	987	54
Royal Infirmary	321	90
Children's Infirmary	187	23
Maternity Hospital	24	—
Consumption Hospital	12	5
Hahnemann Hospital	21	2
Eye and Ear Infirmary...	6	5
David Lewis Northern Hospital	228	41
Stanley Hospital	144	36
Royal Southern Hospital	201	24
Mill Road Infirmary	874	63
Hospital for Women	39	24
City Hospital North	103	6
Do. South	46	—
Do. Parkhill	46	3
Do. East, Mill Lane	104	2
Do. Fazakerley	154	11
Walton Workhouse	845	182
Belmont Road Workhouse	160	65
Highfield Infirmary	262	21
St. Joseph's Home	40	15
Toxteth Workhouse	376	5
Home for Incurables	16	7
Olive Mount Home	7	—
Tuebrook Villa Asylum	5	3
Turner Memorial Home	7	3
St. Augustine's Home	29	6
Kirkdale Home	29	6
Walton Gaol	10	8
Garston Accident Hospital	3	1
Other Institutions	33	22
	5,319	733

From the returns made as to the residences of these persons, 4,586 of the deaths in these establishments are classified in the districts from whence the patients were removed, viz.:—565 under Scotland district,

620 under Exchange district, 401 under Abercromby district, 879 under Everton, 395 under Kirkdale, 508 under West Derby (West), 576 under Toxteth, 225 under Walton, 180 under West Derby (East), 97 under Wavertree, 52 under Sefton Park (late Toxteth Rural), 77 under Garston and 11 under Fazakerley; 597 were non-residents, who had sought relief in Liverpool Institutions, and of the remainder 136 were waifs, strangers to the city, whose previous residences were unknown.

In Liverpool the proportion of deaths which takes place in Public Institutions is larger than is the case in other towns, and the fact is an interesting one, as something may be learned of the social conditions of a locality when so large a proportion in times of sickness seek refuge in public institutions, more especially in the workhouses. Generally it implies poverty and want; but on the other hand, it may also, and no doubt does, imply that the institutions have a wide reputation, and attract sufferers to them not only from within the city, but from a distance. Probably both of these conditions exercise influence; but be that as it may, the fact remains that there is no provincial city in which so large a proportion of the deaths takes place in workhouses and hospitals.

The following table shows the percentage of deaths which have occurred in public institutions during the five years, 1904-1908, in the great towns of Birmingham, Leeds, Manchester and Liverpool:—

	1904.	1905.	1906.	1907.	1908.	Average.
Birmingham	22·4	22·2	21·8	24·6	26·0	23·4
Leeds	14·6	15·0	15·0	17·4	17·2	15·8
Manchester	24·1	23·2	24·6	26·0	26·3	24·8
Liverpool	27·8	33·0	31·6	34·5	36·2	32·6

The results of the allocation of deaths in public institutions to the districts from whence the patients had been removed, and the addition of these to the number of deaths of residents in those various districts,

are shown in the following table, from which a calculated rate of mortality per 1,000 per annum of the inhabitants has been made. The rates are calculated upon the corrected population as ascertained by the Census of 1891 and 1901.

Districts.	Population.	1908.		Corrected Average Rate per 1000 during the five years 1903-1907.
		Deaths.	Rate per 1000	
Scotland	52,478	1,519	28·9	30·5
Exchange	40,775	1,176	28·8	31·6
Abercromby	50,272	940	18·7	20·1
Everton	122,970	2,577	20·9	21·4
Kirkdale	70,536	1,411	20·0	19·6
West Derby (West)	89,902	1,477	16·4	18·0
Toxteth	104,905	1,917	18·3	20·3
Walton	64,053	868	13·5	14·7
West Derby (East)	52,130	838	16·0	16·4
Wavertree	39,150	474	12·1	13·7
Sefton Park	37,708	344	9·1	10·0
(late Toxteth Rural) Garston...	23,848	335	14·0	16·6
Fazakerley	4,476	54	12·0	11·3
City	753,203	13,930	18·5	19·9

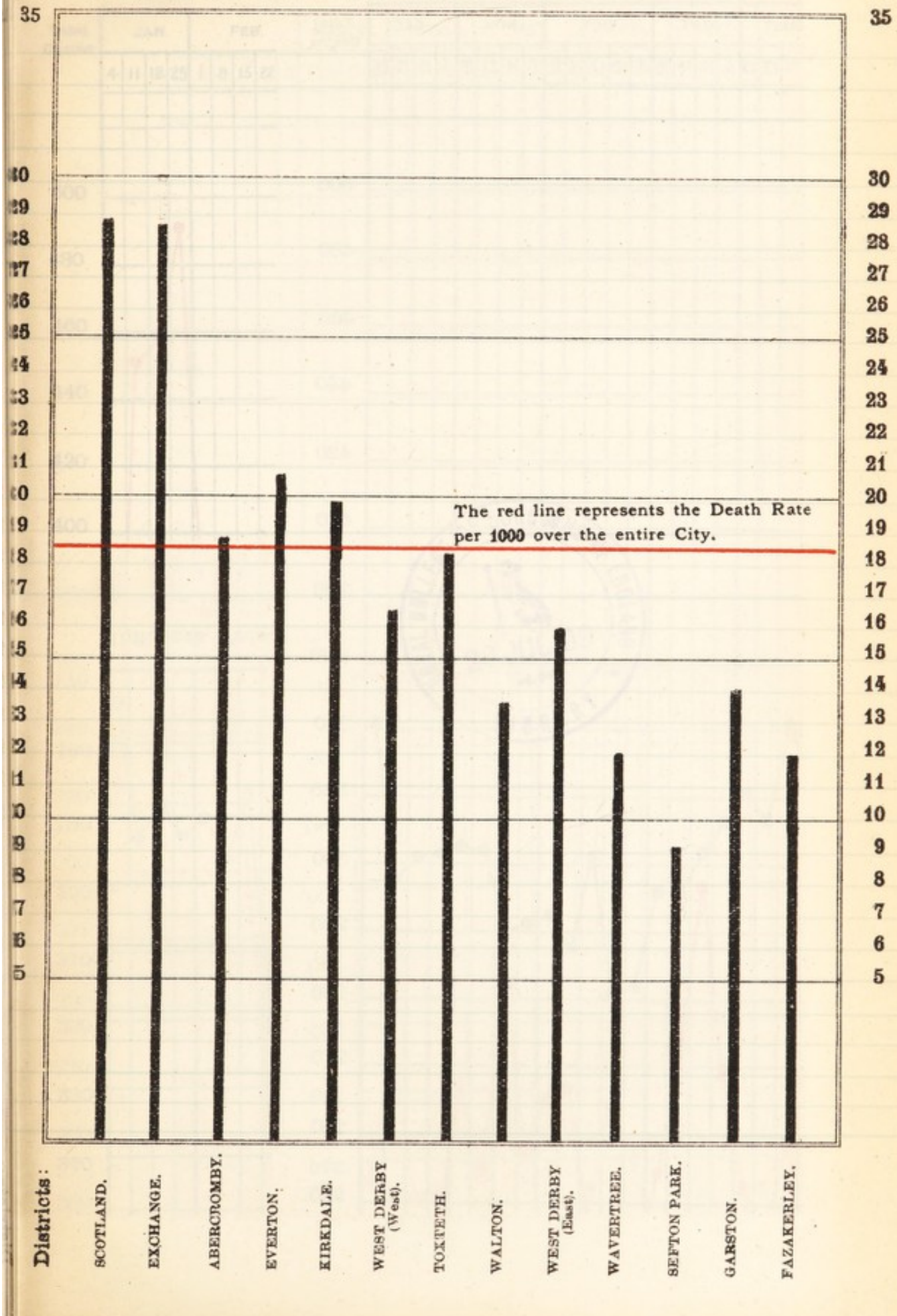
The District Registrars' Returns show that there were 39 deaths (26 of women and 13 of men) at the age of 90 and upwards, viz., 3 males and 10 females at 90, 2 males and 4 females at 91, 2 males and 3 females at 92, 3 males and 2 females at 93, 1 male at 94, 1 male and 2 females at 95, 3 females at 96, 1 female at 97, 1 male at 100, and 1 female at 102.

The death-rate per 1,000 for 1908 in each of the districts of the city is indicated upon the map at the end of the volume. Scotland and Exchange districts, it must be remembered, contain a great number of common lodging-houses, some of which are resorted to by non-residents of the districts, persons of very migratory habits, and often indigent and broken down in health. This class tends to swell the mortality of these two districts. Last year the rate in Scotland district was increased by about one per 1,000 from this cause, and in Exchange district by between three to four per 1,000.

CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 in the different districts of the City during the year 1908.

O.2797 – Est.

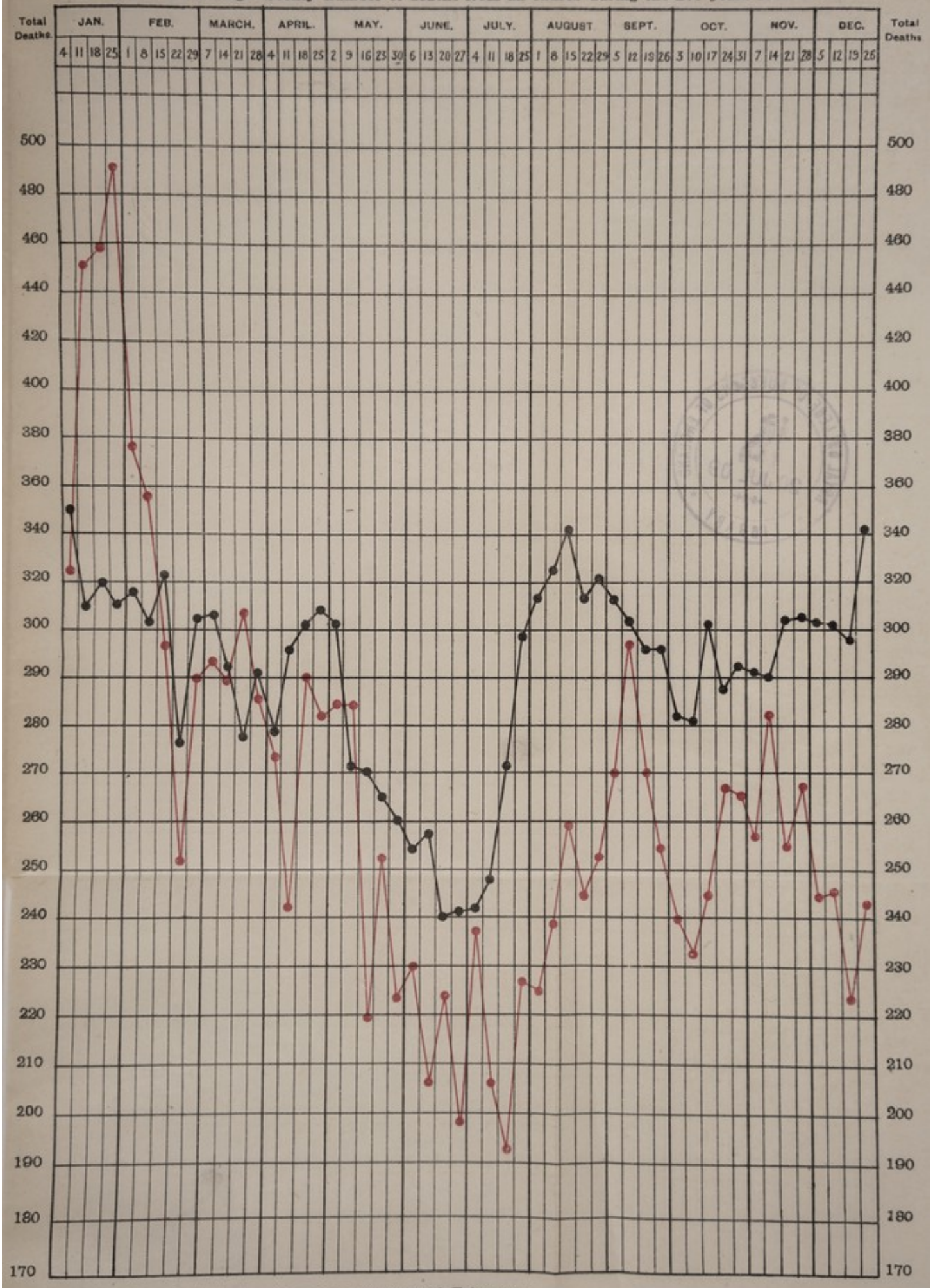


Comparative view of the Death Rate per 1000 in the different districts of the City during the year 1902.

CITY OF LIVERPOOL.

COMPARATIVE MORTALITY CHART.

The Red line denotes the weekly number of Deaths from all causes during the year 1908; the Black line the average weekly number of deaths from all causes during the five years 1903 to 1907.



Influenza Prevalent during January and part of February.

CITY OF LIVERPOOL

COMPARATIVE MORTALITY

The Red line denotes the weekly number of Deaths from Consumption

Black line the average weekly number of deaths from all causes

JAN. FEB. MARCH. APRIL. MAY. JUNE. JULY. AU

4 11 18 25 1 8 15 22 29 7 14 21 28 4 11 18 25 2 9 16 23 30 6 13 20 27 4 11 18 25 1 8

35 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6

Rate

250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

EXCHANGE BOOTLE BIRKDALE EARLE VAUXHALL TOXTETH PARK (NORTH) ST. JAMES'S (SOUTH) WAVERTREE BELLEVUE ROTHBURY

The following table shows the population, number of deaths, and the corrected death-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Deaths.	Rate per 1,000.
1884	541,031	14,382	26·6
1885	537,548	13,764	25·6
1886	534,088	13,919	26·1
1887	530,649	14,006	26·4
1888	527,233	12,159	23·1
1889	523,838	13,047	24·9
1890	520,466	14,293	27·5
1891	518,302	13,911	26·8
1892	519,590	12,671	24·4
1893	520,882	13,919	26·7
1894	522,178	12,073	23·1
*1895	652,523	16,215	24·8
1896	658,050	14,060	21·4
1897	663,633	15,117	22·8
1898	669,243	14,853	22·2
1899	674,912	16,276	24·1
1900	680,628	15,785	23·1
1901	686,332	14,879	21·6
**1902	710,337	15,396	21·6
1903	716,810	14,240	19·8
1904	723,430	15,851	21·9
***1905	733,714	14,103	19·2
1906	739,180	15,001	20·2
1907	746,144	13,676	18·3
1908	753,203	13,930	18·5

* City area extended. ** Garston included. *** Fazakerley included.

The following tables give the estimated population, the number of deaths recorded, the total death-rate, and the infant mortality rate to 1,000 births of eighty-two of the large towns of the United Kingdom :—

TOWNS.	Estimated Population in the middle of the year 1908.	No. of Deaths.	Annual Rate to 1000 of Population.	Deaths under 1 year to 1,000 Births.
London	4,795,757	67,353	13·8	113
Croydon	157,698	2,047	12·8	99
Willesden	154,792	1,653	10·5	99
Hornsey	92,713	783	8·3	62
Tottenham	126,146	1,608	12·5	96
West Ham	315,000	4,439	13·9	128
East Ham	142,976	1,503	10·3	110
Leyton	125,815	1,333	10·4	77
Walthamstow	131,486	1,407	10·5	107
Hastings...	67,817	806	11·7	81
Brighton...	129,967	1,945	14·7	104
Portsmouth	211,493	2,957	13·8	99
Bournemouth	70,801	925	12·9	83
Southampton	122,196	1,600	12·9	113
Reading	81,647	978	11·8	99
Northampton	96,405	1,132	11·6	96
Ipswich	73,852	1,073	14·3	107
Great Yarmouth	53,152	812	15·0	126
Norwich	122,841	1,759	14·1	116
Plymouth	122,113	1,861	15·0	129
Devonport	81,525	1,102	13·3	125
Bristol	372,785	5,139	13·6	126
Hanley	67,998	1,274	18·4	166
Burton-on-Trent	53,936	697	12·7	111
Wolverhampton	103,318	1,501	14·3	132
Walsall	97,778	1,484	14·9	148
Handsworth	68,051	742	10·7	87
West Bromwich	69,786	1,146	16·2	139
Birmingham	558,357	9,028	15·9	144
King's Norton	78,608	832	10·4	85
Smethwick	68,416	930	13·4	134
Aston Manor	84,256	1,071	12·5	127
Coventry	78,889	1,234	15·4	95
Leicester	240,172	3,165	13·0	131
Grimsby	71,800	1,053	14·4	139
Nottingham	260,449	4,030	15·2	145
Derby	127,583	1,693	13·1	112
Stockport	102,339	1,895	18·2	168
Birkenhead	119,830	1,919	15·8	136
Wallasey	68,849	949	13·6	102

TOWNS.	Estimated Population in the middle of the year 1908.	No. of Deaths.	Annual Rate to 1000 of Population.	Deaths under 1 year to 1000 Births.
Bootle	68,248	1,265	18·2	147
St. Helens	93,812	1,498	15·7	122
Wigan	89,636	1,639	18·0	156
Warrington	71,268	1,235	17·0	134
Bolton	185,358	2,910	15·4	148
Bury	59,064	949	15·8	129
Manchester	649,251	12,029	18·2	151
Salford	239,294	4,334	17·8	152
Oldham	142,507	2,873	19·8	159
Rochdale	88,821	1,660	18·4	168
Burnley	105,100	1,911	17·9	200
Blackburn	135,961	2,170	15·7	149
Preston	117,799	2,152	18·0	153
Barrow-in-Furness	62,312	828	13·1	111
Huddersfield	94,776	1,646	17·1	111
Halifax	111,018	1,592	14·1	101
Bradford	292,136	4,615	15·5	143
Leeds	477,107	7,412	15·3	137
Sheffield...	463,222	7,457	15·8	140
Rotherham	63,736	1,038	16·0	148
York	85,861	1,102	12·6	104
Hull	271,137	4,456	16·2	145
Middlesbrough	103,511	2,080	19·8	158
Stockton-on-Tees	53,160	970	18·0	152
West Hartlepool	77,573	944	12·0	113
Sunderland	157,693	2,840	17·7	146
South Shields	115,535	1,817	15·5	134
Gateshead	128,393	1,948	14·9	148
Newcastle-on-Tyne	277,257	4,505	16·0	136
Tynemouth	55,244	983	17·5	137
Newport, Mon....	76,955	1,263	16·1	134
Cardiff	191,446	2,521	13·0	125
Rhondda	133,137	2,487	18·4	184
Merthyr Tydfil	77,219	1,502	19·1	178
Swansea	97,810	1,844	18·5	151
Edinburgh	350,524	5,348	15·2	122
Glasgow	859,715	15,265	17·7	137
Dundee	168,616	3,131	18·6	150
Aberdeen	178,210	2,499	14·0	129
Dublin	394,525	8,634	21·5	146
Belfast	380,344	7,523	19·5	147
LIVERPOOL	**753,203**	**13,930**	**18·5**	**140**

The above table is, with the exception of Liverpool, taken without correction from the Returns of the Registrar-General of England and the Registrar-General of Scotland, and relates to the 53 weeks ending 2nd January, 1909.

INFANTILE MORTALITY.

The rate of infant mortality during 1908 shows a slight decrease on that of the year 1907, which was the lowest hitherto recorded in Liverpool.

The subject of infant mortality is one of great importance, and has been freely dealt with in recent reports.

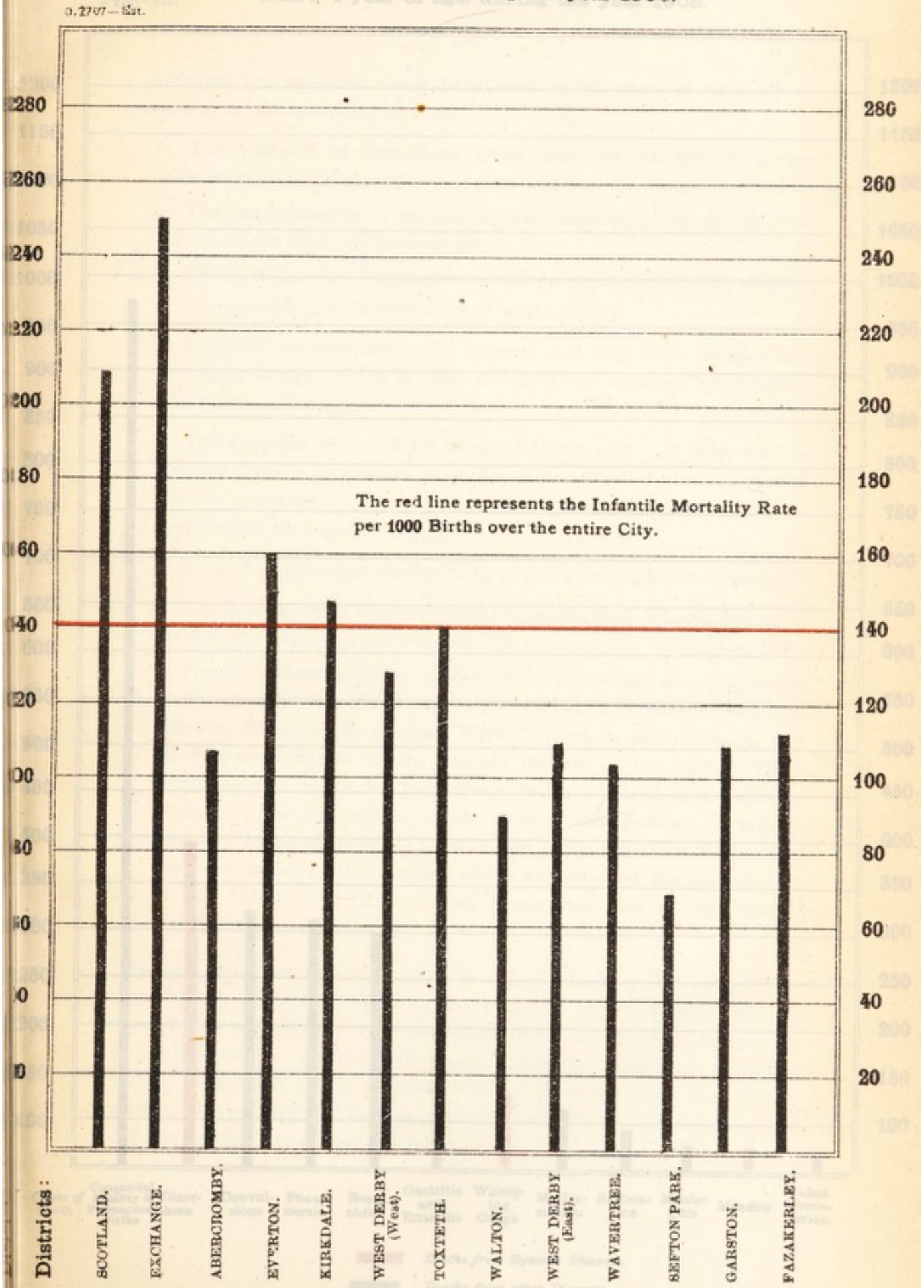
For a great number of years past the subject of the waste of infant life has received close attention from sanitarians, and time after time the conditions with which that waste of life is associated have been considered, and efforts made to grapple with the evil.

By the term "infant mortality" is meant the proportion of infants who died before reaching the age of twelve months out of the total number born during the year.

The mortality amongst infants, however good their surroundings and however intelligently maternal care is exercised, is considerable; a certain proportion are premature; some are born with malformations and other defects; others, the offspring of weakly parents, in spite of all care, succumb to one or other of the many ailments to which infancy is susceptible; making due allowance for these, an annual death-rate amongst infants of 80 per thousand seems unavoidable. But if this be granted, it follows that any higher rate is preventible, although the necessary means to prevent it are so extremely difficult to apply that even in good districts the loss of infant life is in excess of this standard. In the poorer districts it is plain to the most casual observer that necessary care and attention are not given to infants; nothing is more common than to see the infant handed over to the custody of children or irresponsible persons, whilst the responsible guardians are either at work or engaged in some other occupation. The children of the very poor are in this way exposed to neglect and inattention which is practically unavoidable, and which, together with improper food and scanty clothing, is reflected in the sacrifice of life.

CITY OF LIVERPOOL.

Comparative view of the Infantile Mortality per 1000 Births in the different districts of the City during the year 1903.

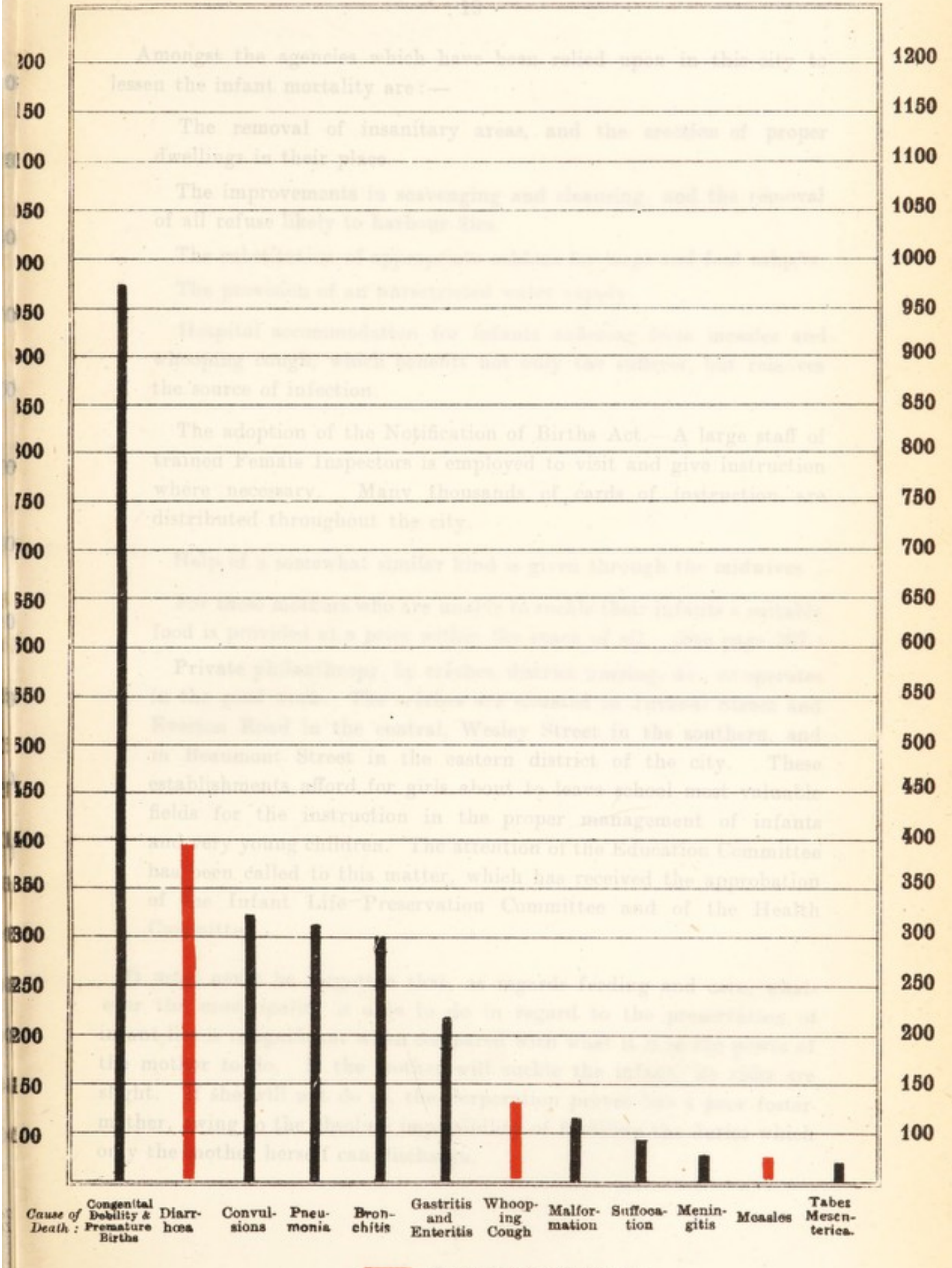


Comparative view of the Infantile Mortality per 1000 Births in the different districts of the City during the year 1908.

CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Infantile Mortality (below 1 year of age) during the year 1908.

6·2707 - Est.



CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Infantile Mortality
(below 1 year of age) during the year 1908.

1200
1150
1100
1050
1000
950
900
850
800
750
700
650
600
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450
400
350
300
250
200
150
100

Congenital Debility & Premature Births
Diarrhœa
Convulsions
Pneumonia
Bronchitis
Gastritis and Enteritis
Whooping Cough
Malformation
Bronchitis
Meningitis
Measles
Tabes Mesenterica

Deaths from Zymotic Diseases.
Deaths from other Diseases.

Amongst the agencies which have been relied upon in this city to lessen the infant mortality are:—

The removal of insanitary areas, and the erection of proper dwellings in their place.

The improvements in scavenging and cleansing, and the removal of all refuse likely to harbour flies.

The substitution of appropriate ashbins for large and foul ashpits.

The provision of an unrestricted water supply.

Hospital accommodation for infants suffering from measles and whooping cough, which benefits not only the sufferer, but removes the source of infection.

The adoption of the Notification of Births Act.—A large staff of trained Female Inspectors is employed to visit and give instruction where necessary. Many thousands of cards of instruction are distributed throughout the city.

Help of a somewhat similar kind is given through the midwives.

For those mothers who are unable to suckle their infants a suitable food is provided at a price within the reach of all. (See page 207.)

Private philanthropy, by crêches, district nursing, &c., co-operates in the good work. The crêches are situated in Juvenal Street and Everton Road in the central, Wesley Street in the southern, and in Beaumont Street in the eastern district of the city. These establishments afford for girls about to leave school most valuable fields for the instruction in the proper management of infants and very young children. The attention of the Education Committee has been called to this matter, which has received the approbation of the Infant Life Preservation Committee and of the Health Committee.

It must never be forgotten that, as regards feeding and care, whatever the municipality is able to do in regard to the preservation of infant life is insignificant when compared with what it is in the power of the mother to do. If the mother will suckle the infant, its risks are slight. If she will not do so, the Corporation proves but a poor foster-mother, owing to the absolute impossibility of fulfilling the duties which only the mother herself can discharge.

The Medical Officer has for many years pointed out that milk, as nature intended it to be given, is never once exposed to the air, that it passes directly at the time of the manufacture in the gland to the stomach; its composition, temperature and mixture, adapt it to the needs of the offspring; it has neither abstractions, adulterations, preservatives nor uncleanliness; it is, moreover, bacteriologically clean and pure. Nothing the municipality can do can equal this.

The highest infant mortality is always reached in the summer and early autumn, the cause of death being ascribed to diarrhœa. The subject has been carefully investigated bacteriologically, but no organism so far has been identified solely as the cause. The contents of some of the foul feeding bottles have been subjected to analysis, with results showing that this liquid was of an extremely dangerous character, and certain samples have proved so highly virulent as to kill the animal inoculated with it within 48 hours.

It is well known that infant mortality varies widely, not only in different towns, but in the various wards or districts of the same towns. Poverty or riches, sanitary or insanitary conditions, occupation or the want of it, high birth rate or low, all play their part in bringing these variations about. But every extended inquiry into the intricate subject of infant mortality brings to light the fact that parents living approximately under the same social and sanitary conditions have such varying success in rearing their infants that the personal factor deserves a careful study.

Families who have at command all the resources of wealth show an infant mortality which is relatively small. It is amongst the less well-off sections of the community that the investigation is most important. We want to get at the facts, and the time and care involved in an inquiry into this aspect of the question finds its reward by enabling preventive measures to be more closely applied.

One of the most important factors undoubtedly is the amount of intelligence which the mother possesses, an intelligence which, if it is not innate, is difficult to acquire, and for which even education is but a poor substitute.

Every town, no doubt, is a suitable field for inquiry in this direction, but in a place like Liverpool, where the greater necessities have led to greater municipal effort, the inquiry is specially interesting.

There is in Liverpool a very large population indeed, dependent upon unskilled labour of a very precarious character. Much poverty results from this, and an accentuation of the problem of dealing with that poverty.

The Corporation have expended very large sums of money in ameliorating the conditions of the congested districts and poorer parts of the city. Whole areas have been demolished, and new, bright, airy dwellings erected in their stead; dwellings which none but those dispossessed by the demolition of insanitary dwellings are permitted to tenant. Every facility is devised for their comfort, baths and washhouses are available, and a large staff of trained and skilled women are provided to give them such kindly aid as is possible to all dwellers in the poorer districts. Even food is provided for those infants whose mothers cannot suckle them, and, on occasion, for the mothers themselves when inability to suckle arises from poverty and malnutrition.

These measures are not without their reward, and the diminution in the infant mortality in districts as a whole is encouraging. Still we want to come to closer grip with the question. When we find, for example, that in 874 families, taken consecutively on account of the fact that in each the death of an infant had occurred, the total number of infants born in those families had been 3,801, and that no less than 1,895 of them had perished, practically all in infancy—representing an infant mortality of 498 per thousand—it is obvious that we must go further

into the question of the personal element. The extended inquiry shows, side by side with this, parents under similar conditions, with the same income, following the same occupations, the same hard struggle against poverty, and yet all or nearly all of the children reared. Every investigation shows that these differences are largely dependent upon the amount of parental care bestowed upon the infant, and in last year's report a number of illustrative cases were given.

Another factor in the prospects of life of the infant appears to be the actual number of infants born in the family, and the rapidity with which they make their appearance.

The resources of the average mother in poor circumstances are severely taxed by even two or three little children; the next one to arrive diverts attention from the rest, and as others come in quick succession, adequate attention is impossible.

During the last two years the returns of the Corporation dwellings for labourers are interesting. These are new dwellings erected for the accommodation of persons dispossessed from the insanitary courts and alleys which have been demolished, and may be said to represent the poorest section of the poorest class in Liverpool.

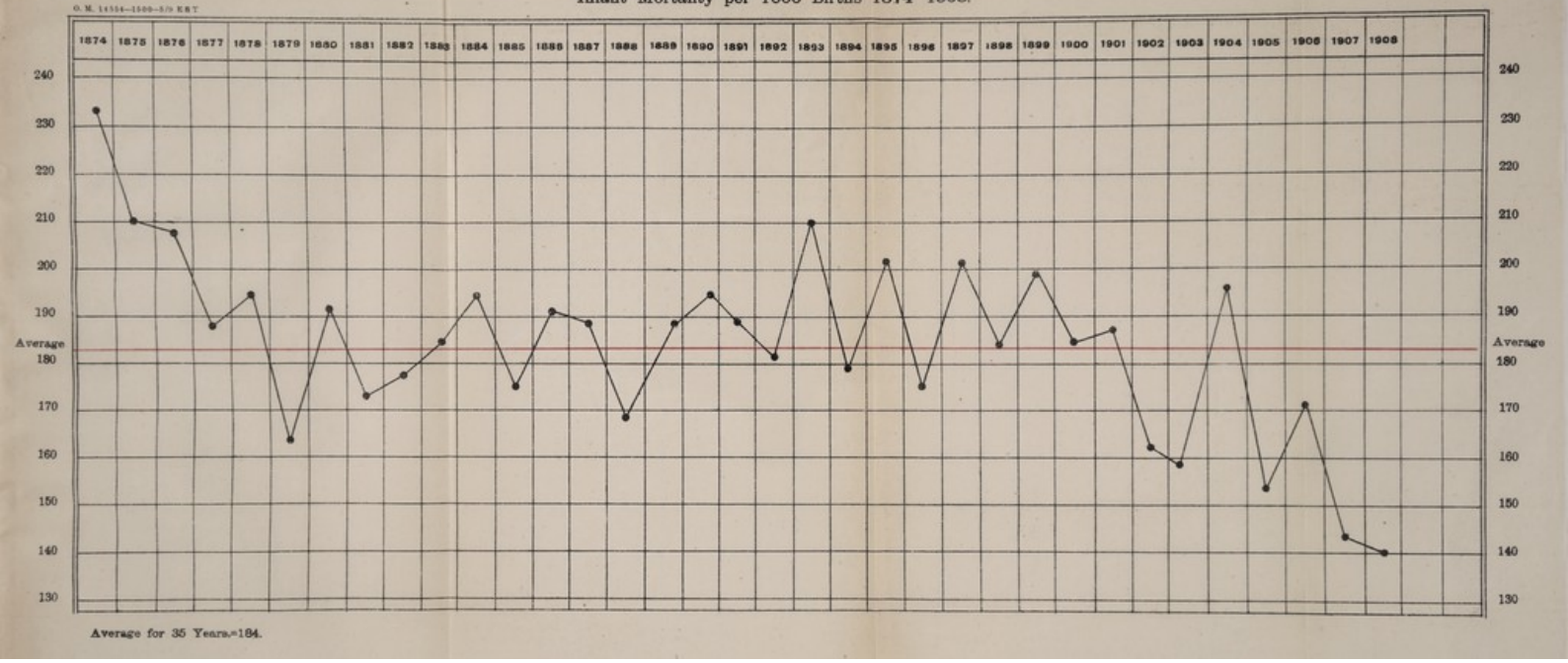
A very striking feature is the remarkable birth rate in the dwellings, which, calculated in the ordinary way, is not 26, as is the case with the general birth rate of the whole country, nor 40, which is the birth rate of the district in which the dwellings are situated, but reaches the extremely high average of 55 per thousand during the last two years.

That the infants born, where life's battle is so hard, do not receive adequate attention goes without saying, and those who die appear to be rapidly replaced with others, a large proportion of whom meet a similar fate.

The lesson to be learnt is the great value of visiting the homes of these poor people, and giving such supervision and kindly encouragement as is possible to the mothers to persevere on right lines in dealing with the infant. Nor need the assistance be limited only to this. Every town has its agencies and its charitable organisations, by which the deserving poor may receive help of a material kind, and the visit of the Inspector of the Health Department is one of the best ways of bringing relief to those in need of it.

CITY OF LIVERPOOL.

Infant Mortality per 1000 Births 1874—1908.



Average for 35 Years=184.

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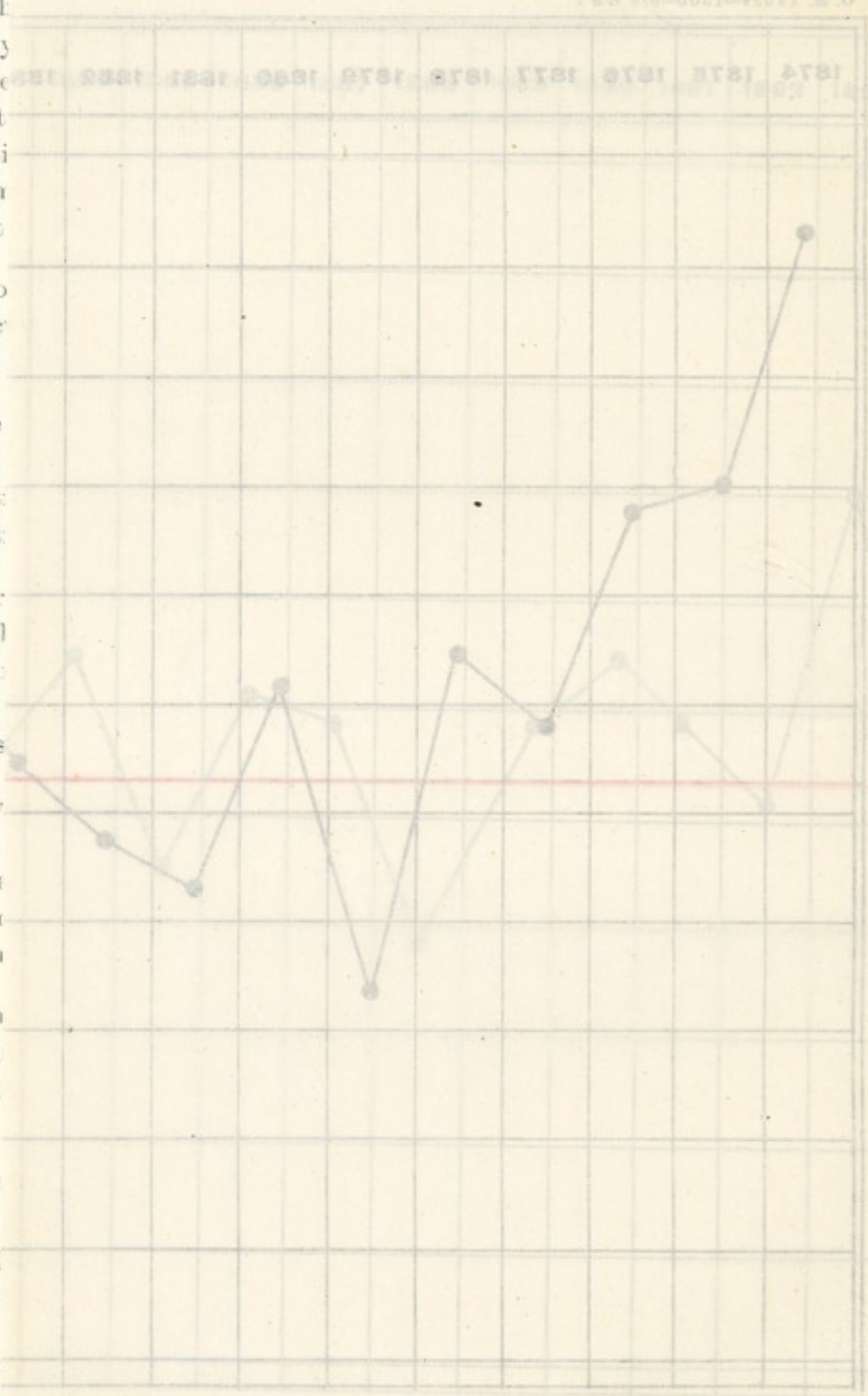
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The following Table indicates the incidence of Infantile Mortality in the various Districts of the City, and during different seasons, also the proportion of deaths under five years to the total deaths:—

Districts.	Quarters.				Deaths under 5 years of age.	Total Deaths.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.
	March.	June.	Sept.	Dec.				
Scotland	178	156	229	167	730	1,519	48·0	20·9
Exchange	117	74	133	123	447	1,176	38·0	24·9
Abercromby	85	70	62	76	293	940	31·1	10·6
Everton	300	262	307	285	1,154	2,577	44·3	16·0
Kirkdale	154	101	162	134	551	1,411	39·0	14·6
West Derby (West).	155	122	155	128	560	1,477	37·9	12·8
Toxteth	227	153	186	193	759	1,917	39·5	14·0
Walton	93	58	70	78	299	868	34·4	8·7
West Derby (East) .	99	58	57	69	283	838	33·7	11·0
Wavertree	59	42	35	45	181	474	38·1	10·4
Sefton Park (late Toxteth Rural)	19	22	15	18	74	344	21·5	7·0
Garston	32	23	44	30	129	335	38·5	11·0
Fazakerley	2	7	6	3	18	54	33·3	11·4
Workhouses & Hospitals (Residences outside City)	27	13	22	28	90	733	12·2	—
City	1,547	1,161	1,483	1,377	5,568	14,663	37·9	14·0

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

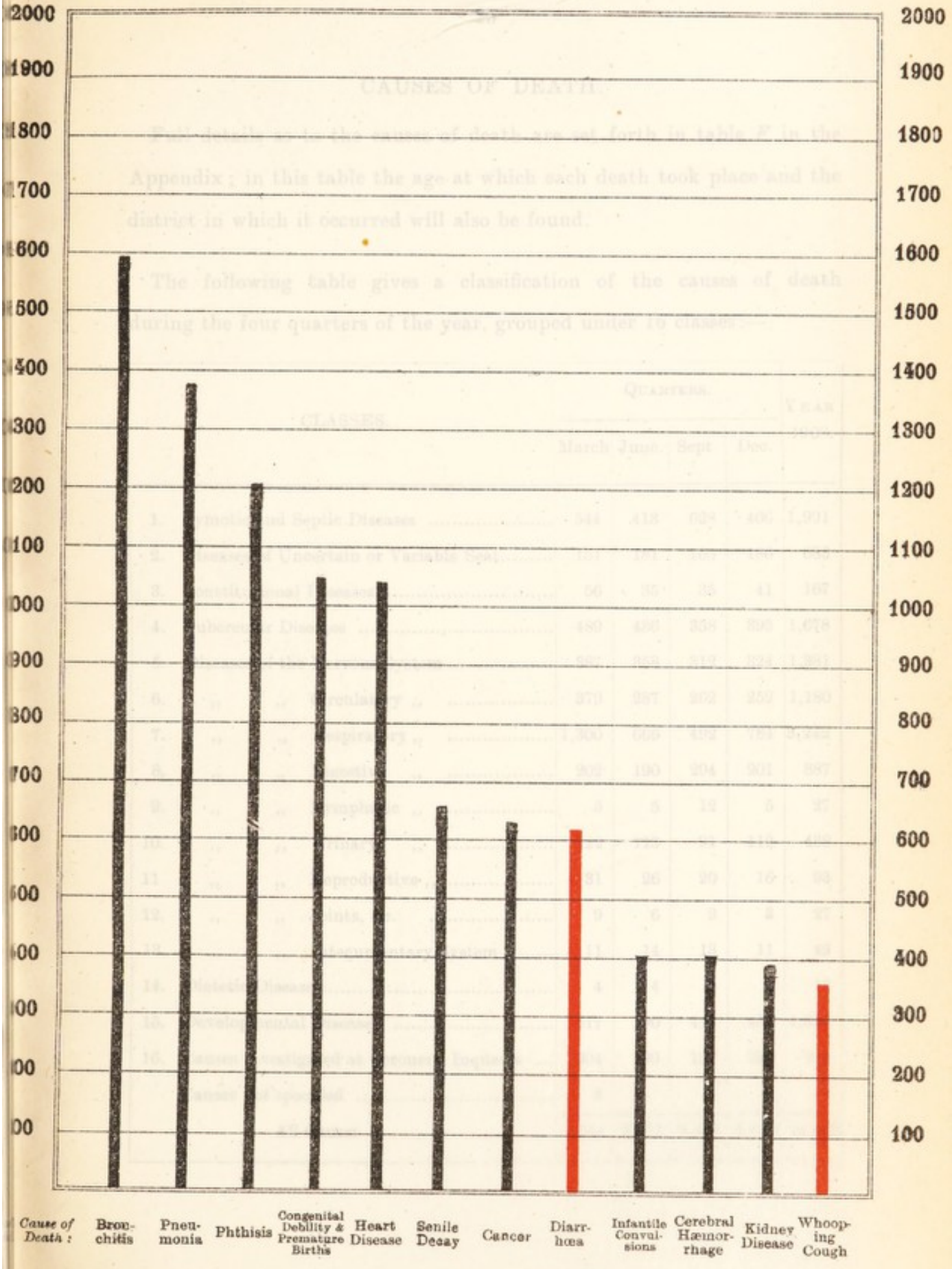
The proportion which the deaths of children under five years of age has borne to the total deaths in the various districts of the city during the last five years is shown in the following table, and also the proportion of deaths of infants under one year of age to every hundred births registered:—

DISTRICTS.	1904.		1905.		1906.		1907.		1908.	
	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.
Scotland	57·7	25·8	49·6	22·7	54·5	24·7	50·3	24·0	48·0	20·9
Exchange	43·3	28·1	36·0	24·0	41·2	26·0	36·6	25·0	38·0	24·9
Abercromby	34·5	13·3	31·8	12·4	33·0	12·0	27·2	9·4	31·1	10·6
Everton	55·0	21·3	45·7	15·9	50·9	20·3	40·3	15·0	44·3	16·0
Kirkdale	51·7	21·4	44·5	17·4	45·5	16·2	43·5	15·2	39·0	14·6
West Derby (West)	45·2	18·1	40·7	14·5	43·0	15·4	37·5	13·6	37·9	12·8
Toxteth.....	51·2	19·1	37·7	14·8	45·4	17·9	39·1	14·6	39·5	14·0
Walton	46·3	15·7	40·1	10·5	38·2	12 2	37·9	10·8	34·4	8·7
West Derby (East).....	38·5	14·6	33·1	11·2	36·9	14·1	29·1	10·3	33·7	11·0
Wavertree	46·6	15·1	42·7	11·2	44·7	12·7	38·9	9·9	38·1	10·4
Sefton Park ..... (late Toxteth Rural)	30·8	13·8	22·2	9·5	27·2	9·0	20·9	7·7	21·5	7·0
Garston	55·2	18·3	40·1	11·7	44·8	13·2	45·2	14·5	38·5	11·0
Fazakerley	33·3	13·0	32·0	8·4	42·5	10·0	19·5	3·9	33·3	11·4
Workhouse and Hospitals (Residences outside of City)	14·8	...	10·8	...	13·4	...	13·2	...	12·2	...
City	47·3	19·6	39·1	15·4	43·1	17·1	37·4	14·3	37·9	14·0

CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of death during the year 1903.

O 2107 – Est.



2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
Whooping Cough
Kidney Disease
Cerebral Hæmorrhage
Infantile Convulsions alone
Diarrhœa
Cancer
Senile Decay
Heart Disease
Congenital Debility & Premature Births
Phthisis
Pneumonia
Bronchitis
Deaths from Zymotic Diseases.
Deaths from other Diseases.

CAUSES OF DEATH.

Full details as to the causes of death are set forth in table *F* in the Appendix; in this table the age at which each death took place and the district in which it occurred will also be found.

The following table gives a classification of the causes of death during the four quarters of the year, grouped under 16 classes:—

CLASSES.	Quarters.				Year 1908.
	March	June.	Sept.	Dec.	
1. Zymotic and Septic Diseases	544	413	628	406	1,991
2. Diseases of Uncertain or Variable Seat	151	181	165	186	683
3. Constitutional Diseases	56	35	35	41	167
4. Tubercular Diseases	489	436	358	395	1,678
5. Diseases of the Nervous System	387	358	312	324	1,381
6. ,, ,, Circulatory ,,	379	287	262	252	1,180
7. ,, ,, Respiratory ,,	1,300	666	492	784	3,242
8. ,, ,, Digestive ,,	202	190	294	201	887
9. ,, ,, Lymphatic ,,	5	5	12	5	27
10. ,, ,, Urinary ,,	122	113	91	112	438
11 ,, ,, Reproductive ,,	31	26	20	16	93
12. ,, ,, Joints, &c.	9	6	9	3	27
13. ,, ,, Integumentary System	11	14	13	11	49
14. Dietetic Diseases	4	4	3	2	13
15. Developmental Diseases	617	390	418	451	1,876
16. Causes investigated at Coroner's Inquests	304	199	197	223	923
Causes not specified	3	—	4	1	8
All Causes	4,614	3,323	3,313	3,413	14,663

ZYMOTIC DISEASES.

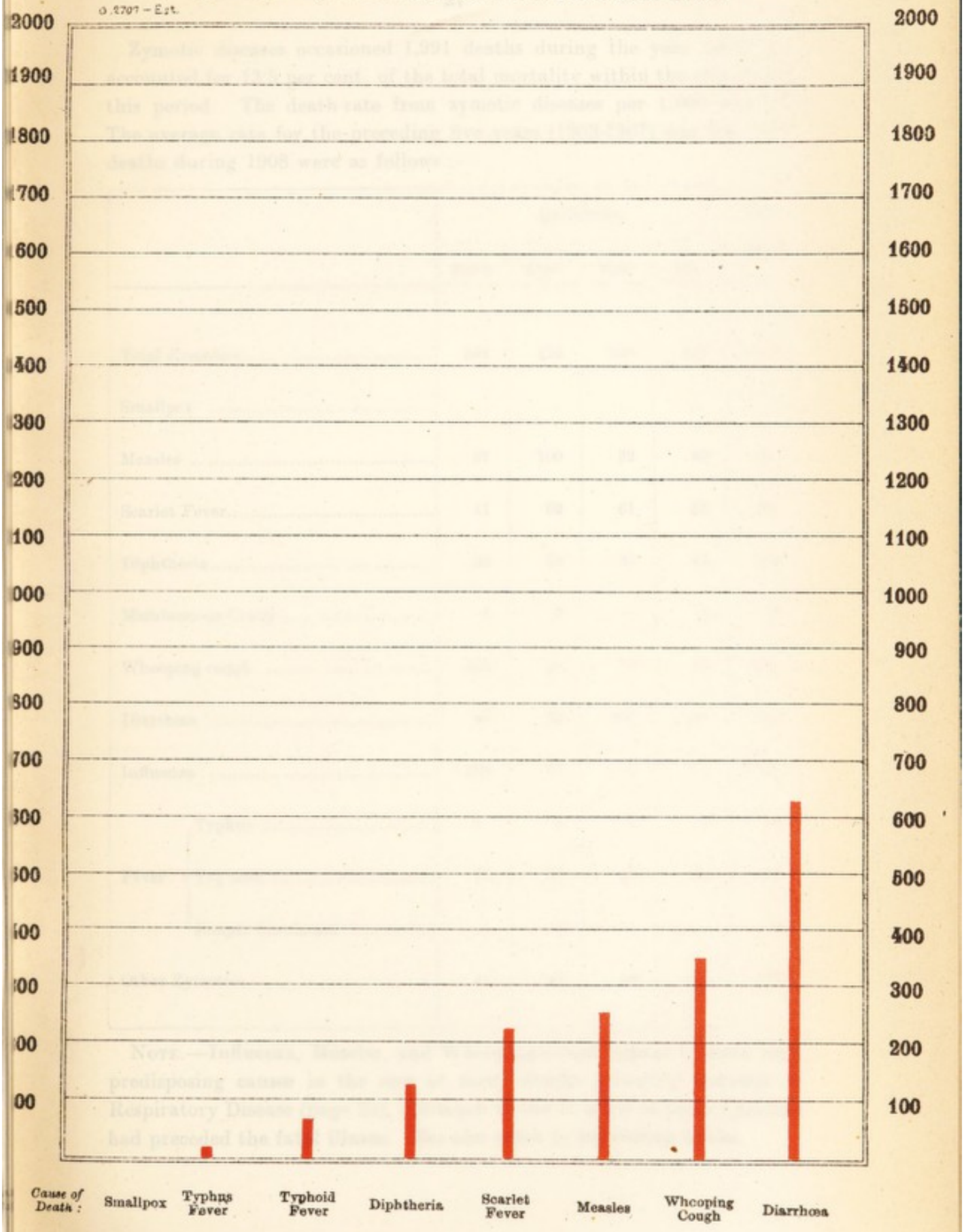
This class of disease is one calling for special attention, and is dealt with in some detail in the following tables, the first of which shows the localities and the periods of the fatal prevalence of zymotic diseases, and the subsequent tables deal specifically with each form of zymotic disease during 1908:—

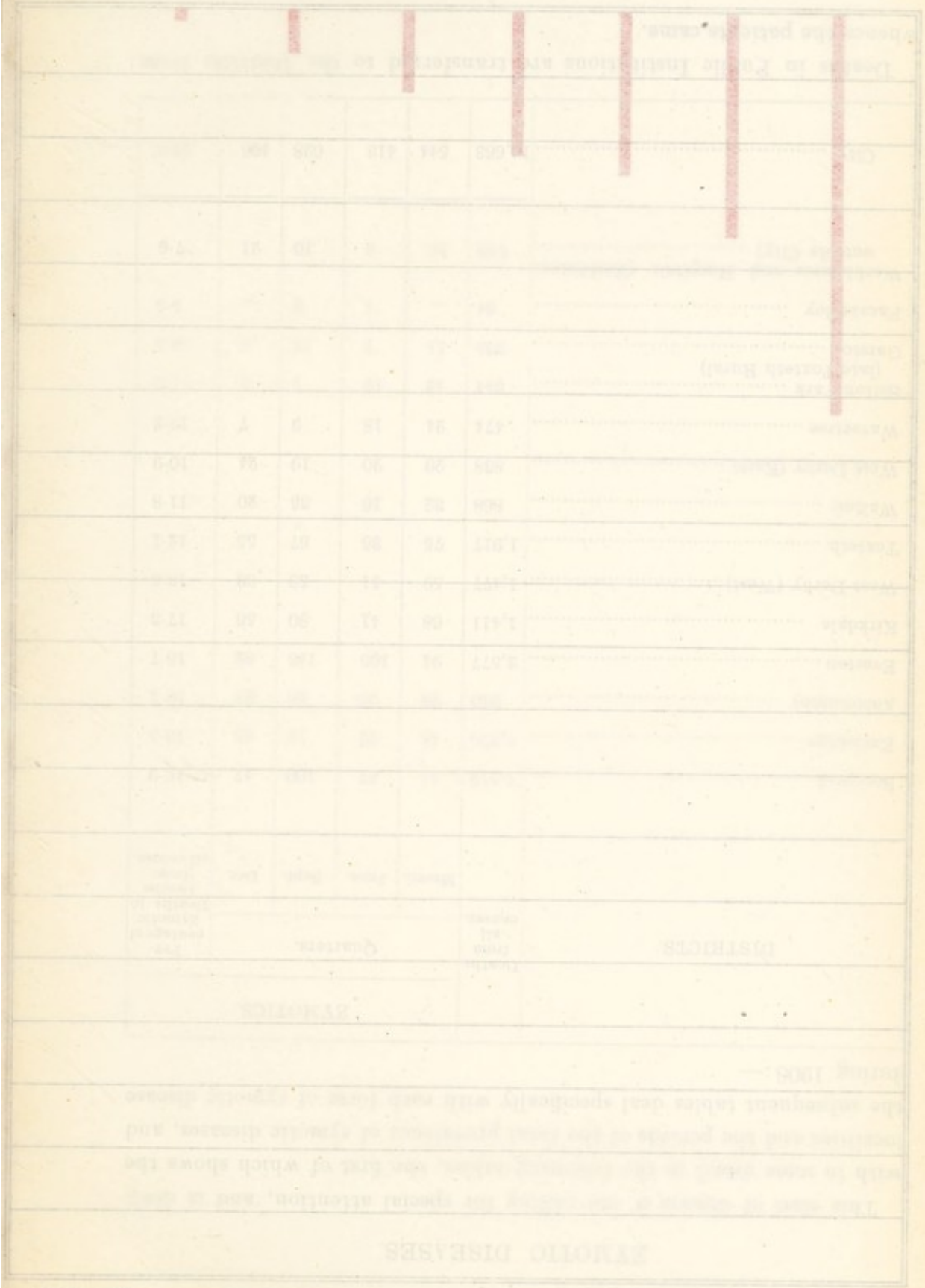
DISTRICTS.	Deaths from all causes.	ZYMOTICS.				
		Quarters.				Percentage of Zymotic Deaths to Deaths from all causes.
		March.	June.	Sept.	Dec.	
Scotland	1,519	54	57	100	47	16·9
Exchange	1,176	40	22	72	25	13·5
Abercromby	940	29	20	26	21	10·2
Everton	2,577	94	105	125	82	15·7
Kirkdale	1,411	68	41	80	56	17·3
West Derby (West)	1,477	59	51	58	33	13·6
Toxteth	1,917	75	36	67	55	12·1
Walton	868	32	16	35	20	11·8
West Derby (East)	838	29	20	19	24	10·9
Wavertree	474	24	18	9	7	12·2
Sefton Park (late Toxteth Rural)	344	13	10	7	9	11·3
Garston	335	11	7	18	6	12·5
Fazakerley	54	...	1	2	...	5·5
Workhouses and Hospitals (Residences outside City)	733	16	9	10	21	7·6
City	14,663	544	413	628	406	13·5

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

CITY OF LIVERPOOL.

Comparative view of the total number of Deaths from the principal Zymotic Diseases during the year 1908.





Zymotic diseases occasioned 1,991 deaths during the year 1908, and accounted for 13·5 per cent. of the total mortality within the city during this period. The death-rate from zymotic diseases per 1,000 was 2·6. The average rate for the preceding five years (1903-1907) was 3·4. The deaths during 1908 were as follows: —

	Quarters.				Year 1908.
	March.	June.	Sept.	Dec.	
Total Zymotics	544	413	628	406	1,991
Smallpox	...	...	...	...	...
Measles	87	100	32	40	259
Scarlet Fever	41	62	61	53	217
Diphtheria	28	29	26	41	124
Membranous Croup	4	2	2	4	12
Whooping-cough	166	94	50	36	346
Diarrhœa	47	39	393	151	630
Influenza	108	17	5	11	141
Fever — Typhus	5	3	1	1	10
Fever — Typhoid	17	17	17	22	73
Fever — Simple Continued	...	1	1	...	2
Other Zymotics	41	49	40	47	177

Note.—Influenza, Measles, and Whooping-cough appear to have been predisposing causes in the case of many deaths primarily ascribed to Respiratory Disease (page 25), inasmuch as one or other of these Zymotics had preceded the fatal illness. See also notes to succeeding tables.

PLAGUE.

After an absence of seven years, Plague appeared in Liverpool in October. Fortunately, however, it confined itself to a barge in the docks. The following is an epitome of the Medical Officer's report on the subject.

October 23rd, 1908.—Ernest Illage, of Widnes, mate of the coal barge, "Wesley," Trafalgar Dock, who had been ailing for a couple of days, was told by the medical man who attended him to go to Hospital. Later in the evening his wife, who lived with him on board, conveyed him to Hospital, which he reached at 8-30 p.m.; on arrival the man was found to be dead.

On October 23rd a post-mortem examination was made and an inquest held, the verdict being that death was due to natural causes consequent upon acute blood poisoning.

As the Hospital surgeon suspected that the case might have been typhus, he communicated at this stage with the Medical Officer, who requested Dr. Hanna, Assistant Port Medical Officer, whose large experience of Plague has on former occasions proved so valuable, to see the body and obtain specimens for cultivation.

Dr. Hanna found indications of the presence of an axillary bubo, and he obtained a portion of the tissues for bacteriological examination at the Laboratories and a portion was forwarded to the Bacteriologist of the Local Government Board.

Meantime, October 27th, the barge in question was thoroughly disinfected, and a rat-catcher was immediately placed on board, but no rats could be found. Furthermore, a survey and careful inquiry were made along the line of docks and the area which the barge traversed, but no dead rats could be seen or had been observed. Meanwhile, considerably over 100 live rats from the vessels with which the barge had dealings and from sheds in the neighbourhood were sent to Professor Sir Rubert Boyce for examination, and all were found healthy.

The usual proceedings were taken to keep under observation all persons who could be ascertained to have been in contact with the patient or to

have had dealings with the barge, some of the probable contacts being in Widnes. A cat which had belonged to the patient could not at this time be found; it may also be mentioned that the cabin was found to be swarming with fleas. The articles of clothing of the deceased were either destroyed or disinfected, and some of them which had been pawned were recovered from the pawnshop and dealt with in a similar way.

The bacteriological investigations were pursued with every care both in Liverpool and London, but no positive results could be obtained by either investigator, owing probably to the delay in taking the material, and to the presence of large numbers of other organisms, until the afternoon of November 3rd, when positive results were arrived at.

It may be stated here that immediately E. Illage fell ill, a man named W. Thompson was taken on board the barge to assist in its navigation, and on October 26th, before the disinfection of the quarters, his wife also came on board. The master of the barge lived at Walton and only came on board during the day.

On November 4th, under the terms of the Paris Convention relative to Plague, the case was reported to the Local Government Board, and at the same time the Medical Officer informed the Consular body in the City. On the evening of November 5th, an announcement was made to the daily press by the Local Government Board.

On the morning of November 6th, Mrs. Thompson, in conformity with instructions to report herself if any sickness arose, came to the Port Office and stated that her husband had been unwell throughout the night, and that she had been unable to get any medical assistance for him owing to the barge being remotely placed in the dock.

Dr. Hanna at once visited the barge and Thompson and his wife were removed to Hospital at New Ferry, and the barge again submitted to a further disinfection with hatches closed down.

The usual notifications were given in conformity with the terms of the Paris Convention, and Dr. Farrar, of the Local Government Board, visited Liverpool on November 8th and gave material assistance in investigating the origin of the first case.

With reference to the two patients, Thompson and his wife, in each case the illness was of a most critical nature, and although the man succumbed to the disease, the woman fortunately recovered. The patients were under the care of Dr. Hanna, and he also applied prophylactic vaccination to the staff of the hospital.

The barge was employed for the purpose of coaling steamers in the Trafalgar Dock, and travelled between that dock and the Bramley Moore Coal tips.

One possible source of the disease which fell under suspicion was certain bales of rags brought round from Newcastle, the time of arriving coinciding with the average period of incubation of plague, and there are good reasons to think that Illage may, in some way, have come in contact with them. The rags in question, however, had been dealt with in Liverpool, and no one who handled them was any the worse for it. Moreover, as soon as they were unpacked, they were dealt with in a carboniser, a process subjecting them to high temperature and the intense fumes of hydrochloric acid. All hands at these mills remained well.

The source of origin of the first case, therefore, is extremely obscure, but the origin of the other two cases is abundantly evident, these persons having obviously been infected on the barge.

It seems hardly necessary to say that the main importance of the incident arises, not from any effect on the public health which may ensue, but from the great commercial injury which may be done to the port unless every care and discretion are exercised.

SMALL-POX.

Small-pox was introduced into the city on four separate occasions during the year. In three instances the patients, four in number, were removed direct from ships, and one, who arrived apparently well, developed the disease at his residence.

Subsequent to the removal of the patients to hospital, isolation and re-vaccination of those who had been exposed to infection, disinfection of the infected clothing, houses, &c., were all carried out, and daily visits were made for fourteen days to infected houses to inquire if any sickness of any kind had arisen.

Including the imported cases, there was a total number of 7 cases notified, all of whom recovered.

The accompanying table is of interest as showing the greater intervals which are occurring in any considerable prevalence of small-pox.

Until 1877, deaths only were recorded, and between that date and the passing of the Notification Act (1889) the record was incomplete. Since that date, however, it is unlikely that any case escaped registration.

In 1884 there were nearly 200,000 fewer people in the city than there were in 1903, hence the relative incidence in 1903 was very much less than that of 1884. Efficiency of vaccination is the safeguard against small-pox.

SMALL-POX DURING THE LAST FORTY-SIX YEARS.

Years of Increase.	No. of Cases.	Deaths.	Years of Subsidence.	No. of Cases.	Deaths.
1863	Unrecorded	100			
1864	,,	482			
1865	,,	459			
1866	,,	102			
			1867	Unrecorded	22
			1868	,,	18
			1869	,,	20
1870	,,	174			
1871	,,	1,919			
1872	,,	50			
			1873	,,	10
			1874	,,	30
			1875	,,	29
1876	,,	386			
1877	1,660	299			
			1878	35	3
			1879	12	...
			1880	14	2
			1881	262	34
			1882	67	6
			1883	126	26
1884	832	106			
			1885	375	46
			1886	234	29
			1887	23	1
			1888	27	1
			1889	9	1
			1890	2	...
			1891	21	2
			1892	177	13
			1893	75	9
			1894	229	20
			1895	130	12
			1896	8	...
			1897	6	...
			1898	17	2
			1899	10	1
			1900	156	23
			1901	37	6
1902	560	20			
1903	1720	141			
			1904	27	2
			1905	15	...
			1906	19	1
			1907	19	...
			1908	7	...

TYPHUS FEVER.

This disease is particularly liable to spread amongst dirty, ill-fed, and intemperate persons, and incessant watchfulness is necessary in order to hold it in check. The disease almost always attacks the children of the family first; in them the symptoms are obscure, and are often unrecognised until adults succumb.

Of the total number of cases, ten, as the table shows, resulted fatally, the majority of the deaths taking place during adult age, the period when the disease is most fatal.

The total number of cases reported was 21, against 116 in the preceding year, the average number of the last five years being 127.

Ages at Death.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
—	—	1	1	—	1	*3	1	2	1	—	10

* One a non-resident.

Reports for preceding years sufficiently illustrate the importance of the daily visits which are made to houses which have been infected with typhus fever, as well as the importance of keeping under supervision every person who is known to have been in contact with the patient. None of the stringent measures which have been adopted against typhus are in any way relaxed.

The number of deaths during each of the preceding ten years has been as follows:—

1898	... ...	19 deaths.
1899	... ...	13 ,,
1900	... ...	11 ,,
1901	... ...	14 ,,
1902	... ...	25 ,,
1903	... ...	57 ,,
1904	... ...	25 ,,
1905	... ...	28 ,,
1906	... ...	8 ,,
1907	... ...	18 ,,

List of streets in the city where cases of Typhus Fever occurred during the year 1908.

Streets.	Cases.	Deaths.	Streets.	Cases.	Deaths.
Cazneau	1	...	Upper Milk	1	1
Conway	1	...	Vernon Grove	1	...
Eldon	1	...	Villars	1	1
Fernie	1	...			
Greek	2	1			
Greenwood Terrace	1	1			
do. Street					
Kew	5	2			
Llewellyn	1	1			
Louis	3	1			
Mason	2	1			

TYPHOID FEVER.

There were 447 cases of Typhoid Fever reported during the year, the numbers remaining low, as was the case in several preceding years. There were 1,026 in 1902, 681 in 1903, 434 in 1904, 325 in 1905, 491 in 1906, and 482 in 1907. The deaths were 73, being 19 fewer than in the preceding year. The figures include the deaths of non-residents.

Upwards of 80 per cent. of the total number of cases notified during the year were removed to hospital. (See page 279.)

The accompanying charts are instructive. The first one indicates the steady decline in the mortality from typhoid fever since the year 1894, a decline which may be ascribed to various reasons, such as the greater facility for isolation of the sick, the abundant supply of pure water, and the greater care taken in the supervision of those food supplies which play an important part in the dissemination of this disease.

The second chart indicates the incidence of typhoid fever during each week of the year 1908, the absence of the usual late autumn rise being a very satisfactory feature.

The number of deaths from Typhoid Fever during each of the preceding ten years, 1898-1907, has been as follows:—

1898	... ...	148 deaths.
1899	... ...	182 ,,
1900	... ...	120 ,,
1901	... ...	154 ,,
1902	... ...	190 ,,
1903	... ...	108 ,,
1904	... ...	82 ,,
1905	... ...	49 ,,
1906	... ...	85 ,,
1907	... ...	92 ,,

The following table shows the periods of the year and the localities in which deaths from typhoid fever occurred, and also the ages at death

DEATHS FROM TYPHOID FEVER.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	1	1	1	...	..	...	1	...	3	1	4
Exchange	1	...	1	2	2	1	1	2	5	5	10
Abercromby	...	1	...	1	...	...	1	...	1	2	3
Everton	...	3	...	...	4	...	1	1	5	4	9
Kirkdale	1	1	1	...	...	...	4	3	6	4	10
West Derby (West)	...	...	2	1	...	1	1	...	3	2	5
Toxteth	1	...	1	1	1	2	1	1	4	4	8
Walton	2	...	...	...	1	1	2	...	5	1	6
West Derby (East)	...	2	2	...	...	1	...	...	2	3	5
Wavertree	...	...	1	...	...	...	...	...	1	...	1
Sefton Park (late Toxteth Rural)	...	...	...	...	1	...	...	...	1	...	1
Garston	1	...	1	...	...	...	...	1	2	1	3
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	2	...	...	2	1	1	2	...	5	3	8
City	9	8	10	7	10	7	14	8	43	30	73

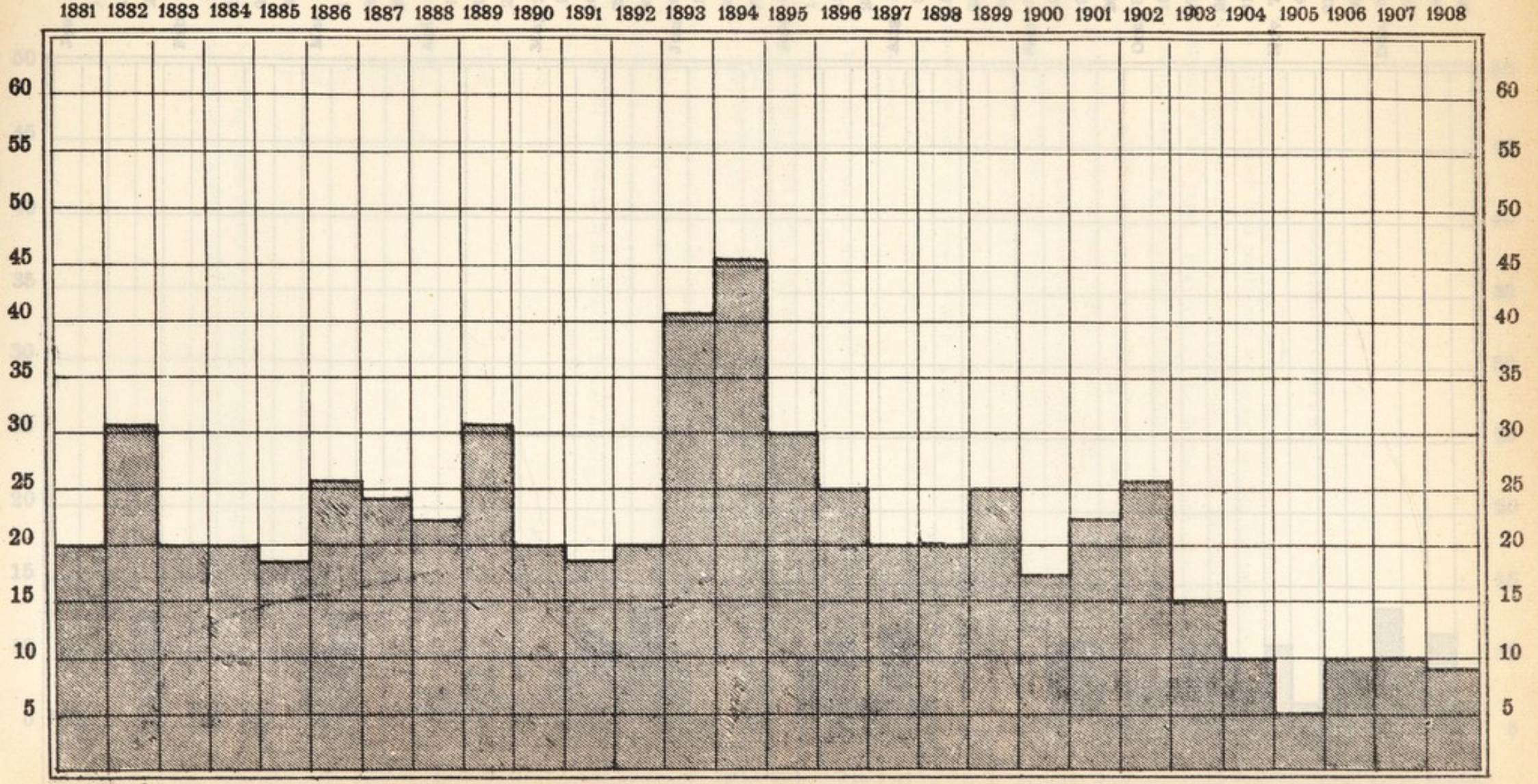
Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 and upwards.	All Ages.
...	...	2	1	1	8	8	7	18	14	12	2	...	73

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

CITY OF LIVERPOOL.

Death Rate per 100,000 of resident Population from Typhoid Fever, 1881—1908.



Death Rate per 100,000 of resident Population

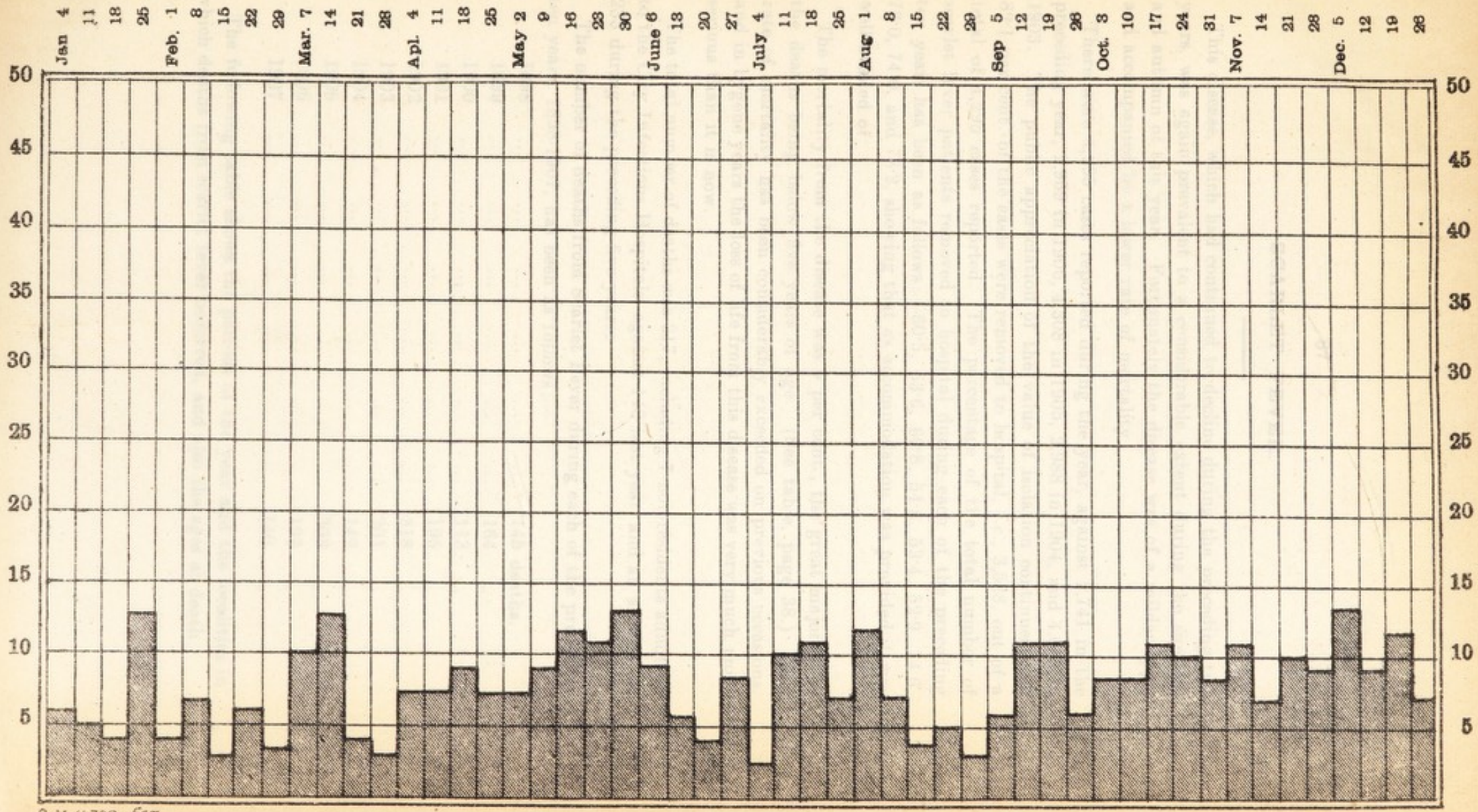
From Typhoid Fever, 1881–1908.

60 55 50 45 40 35 30 25 20 15 10 5

1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908

CITY OF LIVERPOOL.

Cases of Typhoid Fever reported during each week of 1908.



O M 14702 Est

SCARLET FEVER.

This disease, which had continued to decline during the preceding two years, was again prevalent to a considerable extent during the summer and autumn of this year. Fortunately the disease was of a milder type, and accompanied by a lower rate of mortality.

There were 4,295 cases reported during the year, against 2,741 in the preceding year, 2,959 in 1906, 4,308 in 1905, 2,988 in 1904, and 4,053 in 1903. The public appreciation of the value of isolation continues, and 82·1 per cent. of the cases were removed to hospital, *i.e.*, 3,528, out of a total of 4,295 cases reported. The percentage of the total number of scarlet fever patients removed to hospital during each of the preceding ten years has been as follows:—60·5, 63·6, 60·8, 54·8, 53·4, 52·9, 74·6, 73·0, 74·0, and 78·2, showing that as accommodation was provided it was well availed of.

The mortality from the disease was 5 per cent., the great majority of the deaths being below five years of age. (See table, page 38.) This rate of mortality has been considerably exceeded on previous occasions, and in bygone years the loss of life from this disease was very much more serious than it is now.

The total number of deaths was 217, including 7 non-residents admitted to the City Infectious Hospitals, against 140 last year, and an average of 233 during the preceding five years.

The number of deaths from Scarlet Fever during each of the preceding ten years, 1898-1907, has been as follows:—

1898	... ...	145 deaths.
1899	... ...	164 ,,
1900	... ...	113 ,,
1901	... ...	195 ,,
1902	... ...	318 ,,
1903	... ...	201 ,,
1904	... ...	149 ,,
1905	... ...	303 ,,
1906	... ...	193 ,,
1907	... ...	140 ,,

The following table shows the periods of the year and the localities in which deaths from scarlet fever occurred, and also the ages at death.

DEATHS FROM SCARLET FEVER.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	3	4	1	6	4	8	2	2	10	20	30
Exchange	1	2	1	...	2	2	2	2	6	6	12
Abercromby	...	3	...	...	1	...	...	2	1	5	6
Everton	3	2	12	5	11	8	5	4	31	19	50
Kirkdale	2	4	6	5	3	2	2	4	13	15	28
West Derby (West)	2	4	5	6	4	2	...	1	11	13	24
Toxteth	2	2	...	2	2	2	7	4	11	10	21
Walton	2	2	...	3	2	2	1	1	5	8	13
West Derby (East)	...	...	...	6	3	...	1	3	4	9	13
Wavertree	1	1	2	1	...	...	...	1	3	3	6
Sefton Park (late Toxteth Rural)	...	...	...	...	...	1	1	2	1	3	4
Garston	1	...	...	...	1	...	...	...	2	...	2
Fazakerley	...	...	1	...	...	...	...	...	1	...	1
Hospitals (Residences outside the City)	...	...	...	...	1	...	2	4	3	4	7
City	17	24	28	34	34	27	23	30	102	115	217

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5 -	10—	15—	20—	30—	40—	50—	All Ages.
8	20	41	38	26	53	21	4	4	1	1	...	217

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

MEASLES.

Measles was prevalent during the early months of the year to an extent which rendered necessary the closure for short periods of a number of the Infant schools.

The disease subsided during the summer months, appearing again towards the winter. The total cases reported during the year were 4,653, showing a decrease compared with the preceding year, when the cases reported reached 5,640, as against 6,819 in 1906, 3,938 in 1905, 9,453 in 1904, 2,728 in 1903, 7,141 in 1902, and 6,766 in 1901. There were 259 deaths directly ascribed to it, the great majority of them being of infants below 3 years of age. The number of deaths in the preceding year was 291.

As has been frequently pointed out, the number of deaths does not fully indicate the destruction of life due to measles, since this disease is commonly associated with bronchitis and pneumonia, and it is beyond any question that deaths primarily due to measles are entered in the returns as due to pulmonary disease. The isolation of the infectious sick in hospital is important and necessary. Provision of hospital accommodation, for a limited number of cases, has now been made for measles, but the deaths from measles do not show a decline comparable to that which has taken place in the forms of infectious disease for which hospital accommodation is available. In the great number of homes in which measles occur isolation in the house is difficult or impossible. In making arrangements for hospital isolation of measles, difficulties of a special kind arise owing to the tender age of the patient, and the peculiarities of the infection in this form of disease.

The tendency of this disease to recur at intervals of about 18 months is well illustrated in the accompanying diagrams. There has, however, been no considerable outbreak since May, 1906, although the prevalence of the disease during 1907 and 1908, as compared with former inter-epidemic periods, was more general.

The following table shows the periods of the year and the localities in which deaths from Measles occurred, and also the ages at death.

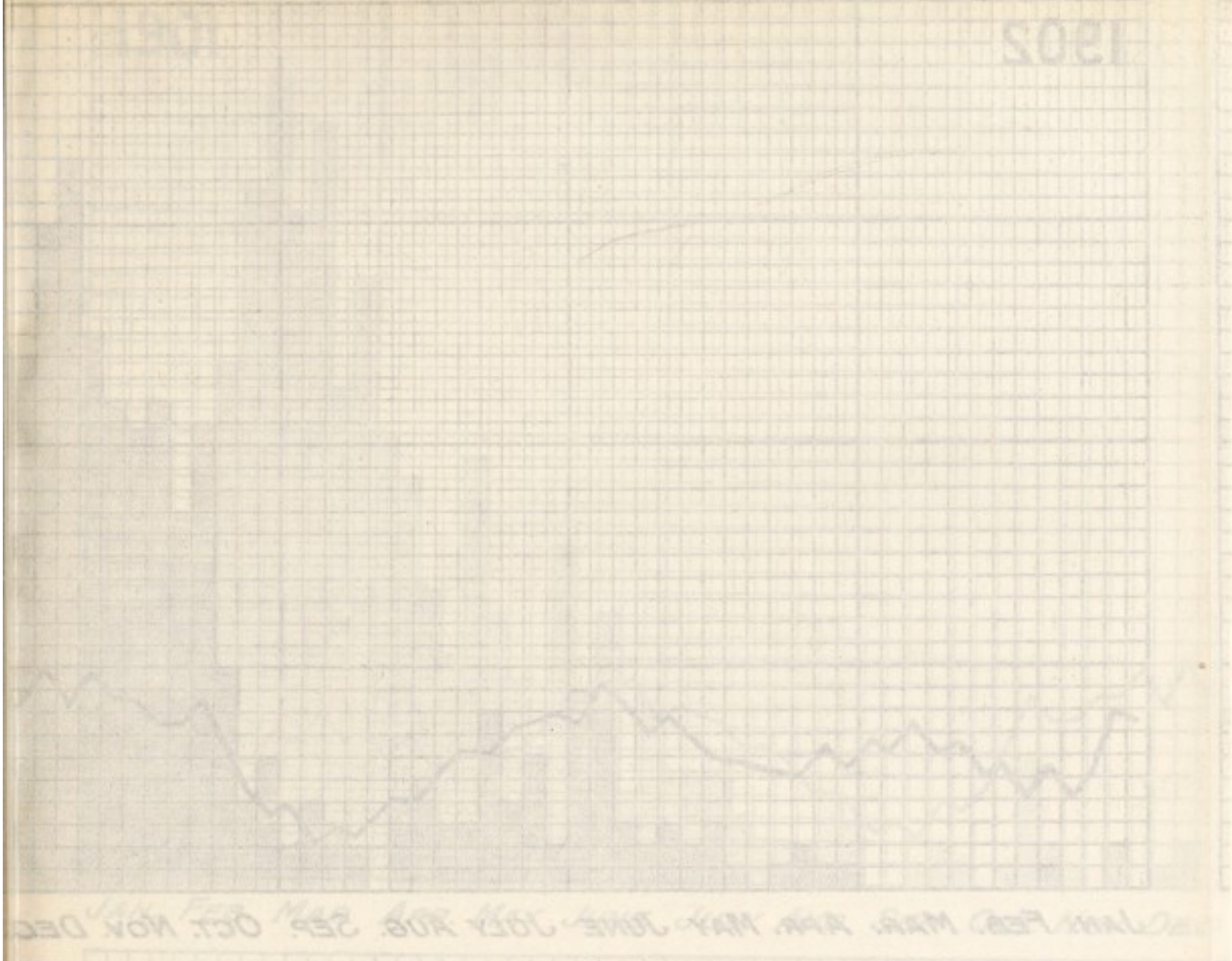
The number of deaths from Measles during each of the preceding ten years, 1898-1907, has been as follows:—283, 321, 150, 473, 334, 132, 696, 247, 586 and 291.

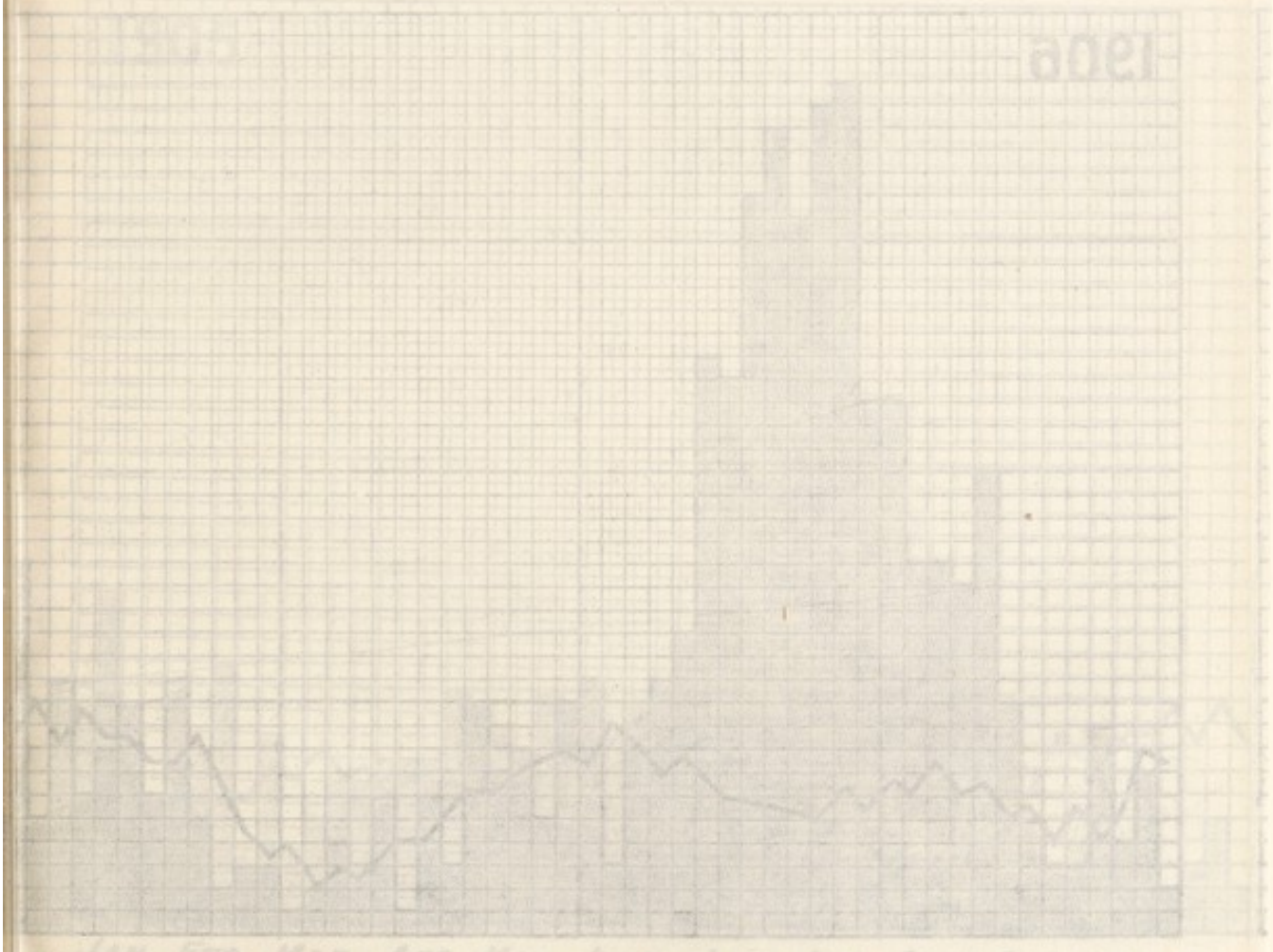
DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	8	4	11	4	1	6	5	2	25	16	41
Exchange	4	6	1	1	1	...	1	1	7	8	15
Abercromby	1	3	...	1	1	...	...	1	2	5	7
Everton	4	11	17	14	3	2	11	5	35	32	67
Kirkdale	...	7	9	10	3	6	...	3	12	26	38
West Derby (West)	2	1	5	5	...	...	1	1	8	7	15
Toxteth	7	5	2	1	3	2	...	...	12	8	20
Walton	3	4	2	2	1	...	...	3	6	9	15
West Derby (East)	3	3	2	2	...	...	1	...	6	5	11
Wavertree	4	2	3	3	1	...	...	...	8	5	13
Sefton Park (late Toxteth Rural)	1	...	2	...	...	...	...	...	3	...	3
Garston	...	...	...	...	1	1	1	...	2	1	3
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	2	2	1	2	...	...	3	1	6	5	11
City	39	48	55	45	15	17	23	17	132	127	259

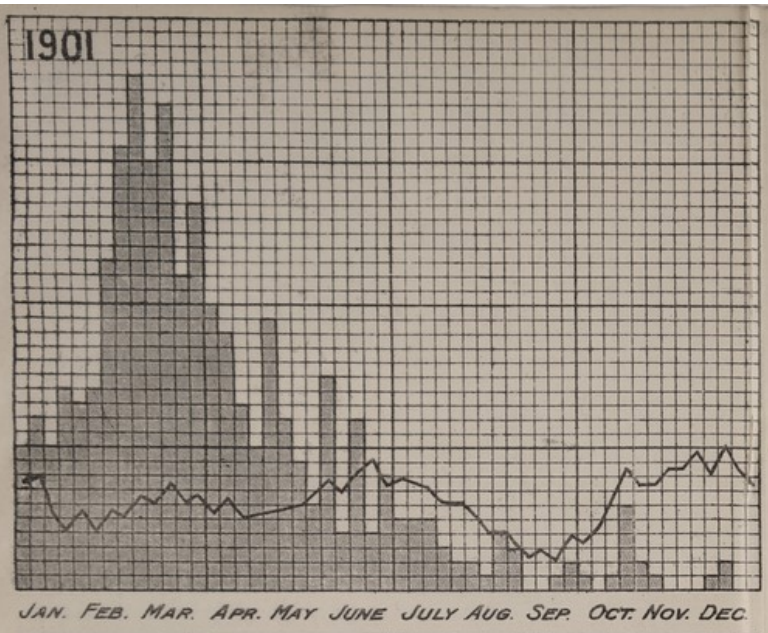
Ages at Death.

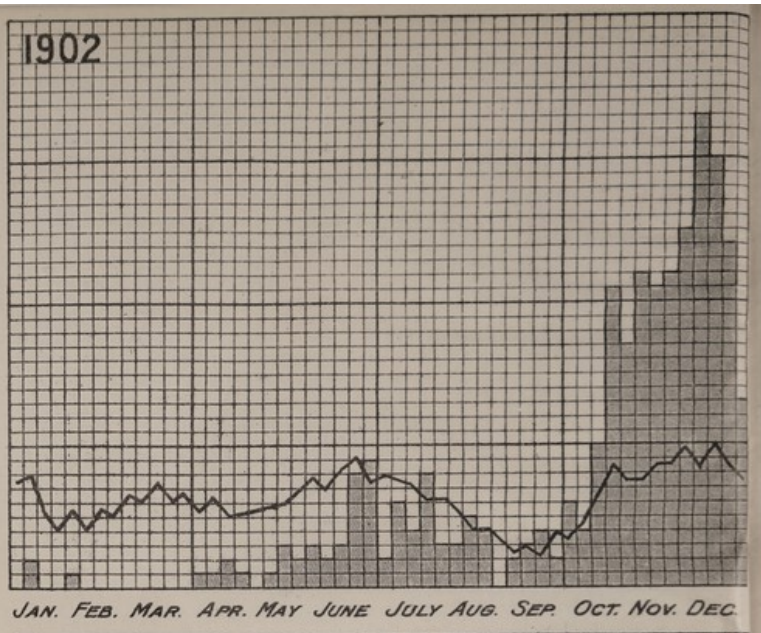
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
47	114	45	26	12	14	...	...	...	1	...	...	259

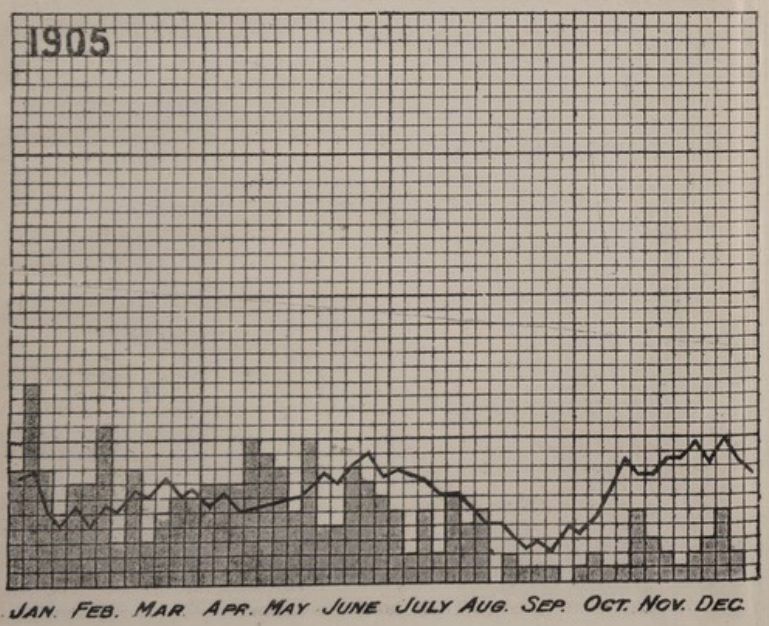
Deaths in Public Institutions are transferred to the Districts from whence the patients came.

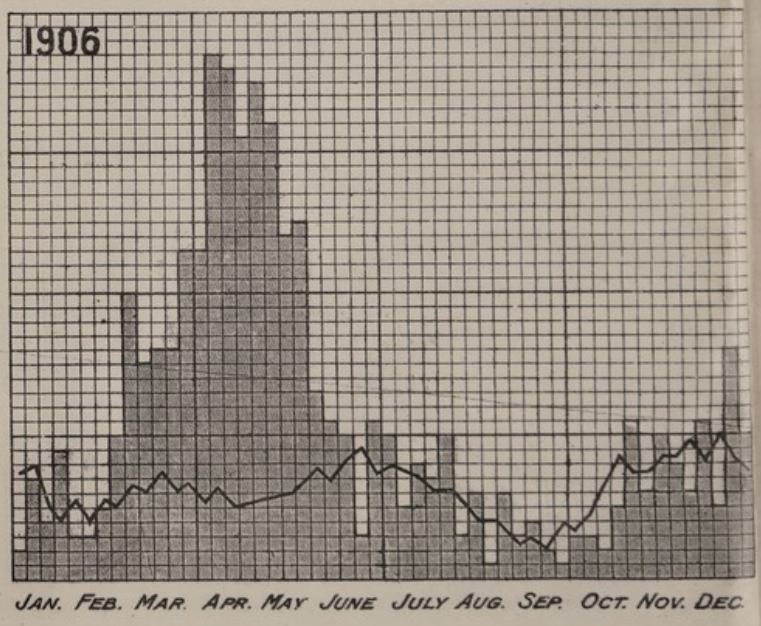




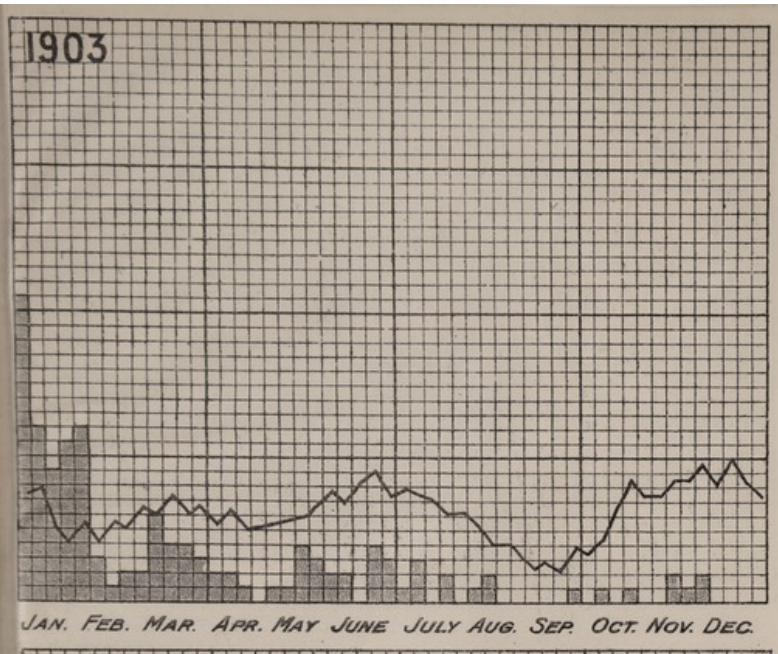


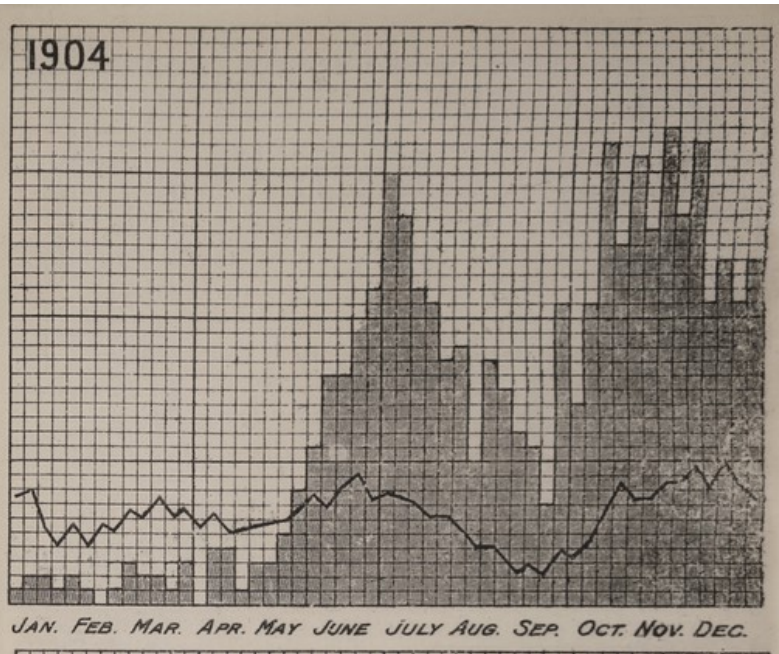


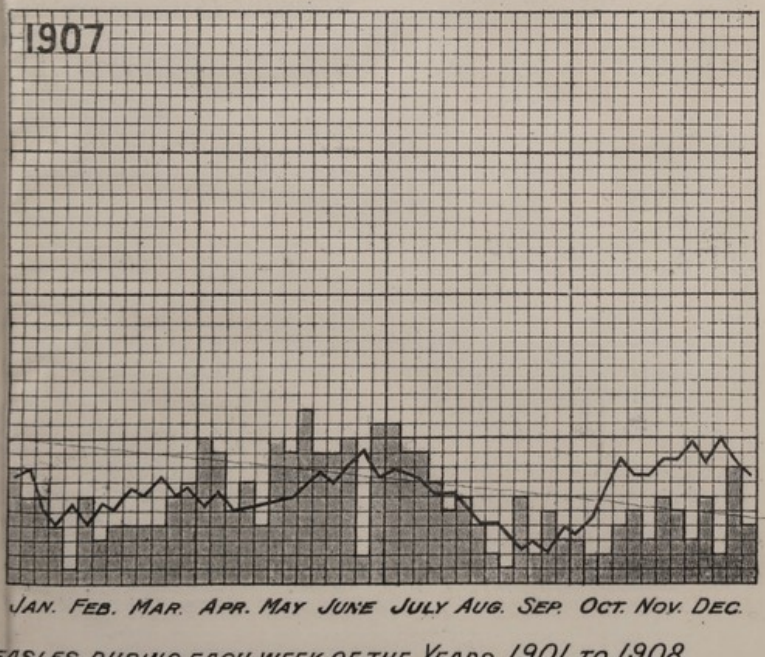


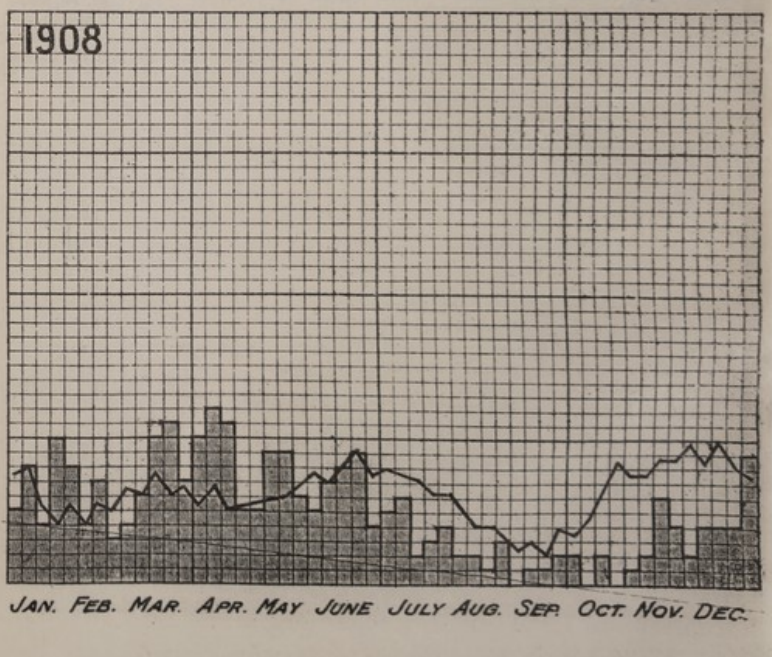


THE BLACK COLUMNS INDICATE THE NUMBER OF DEATHS FROM W
THE LINE IN THE DIAGRAM FOR EACH YEAR REPRESENTS THE WE

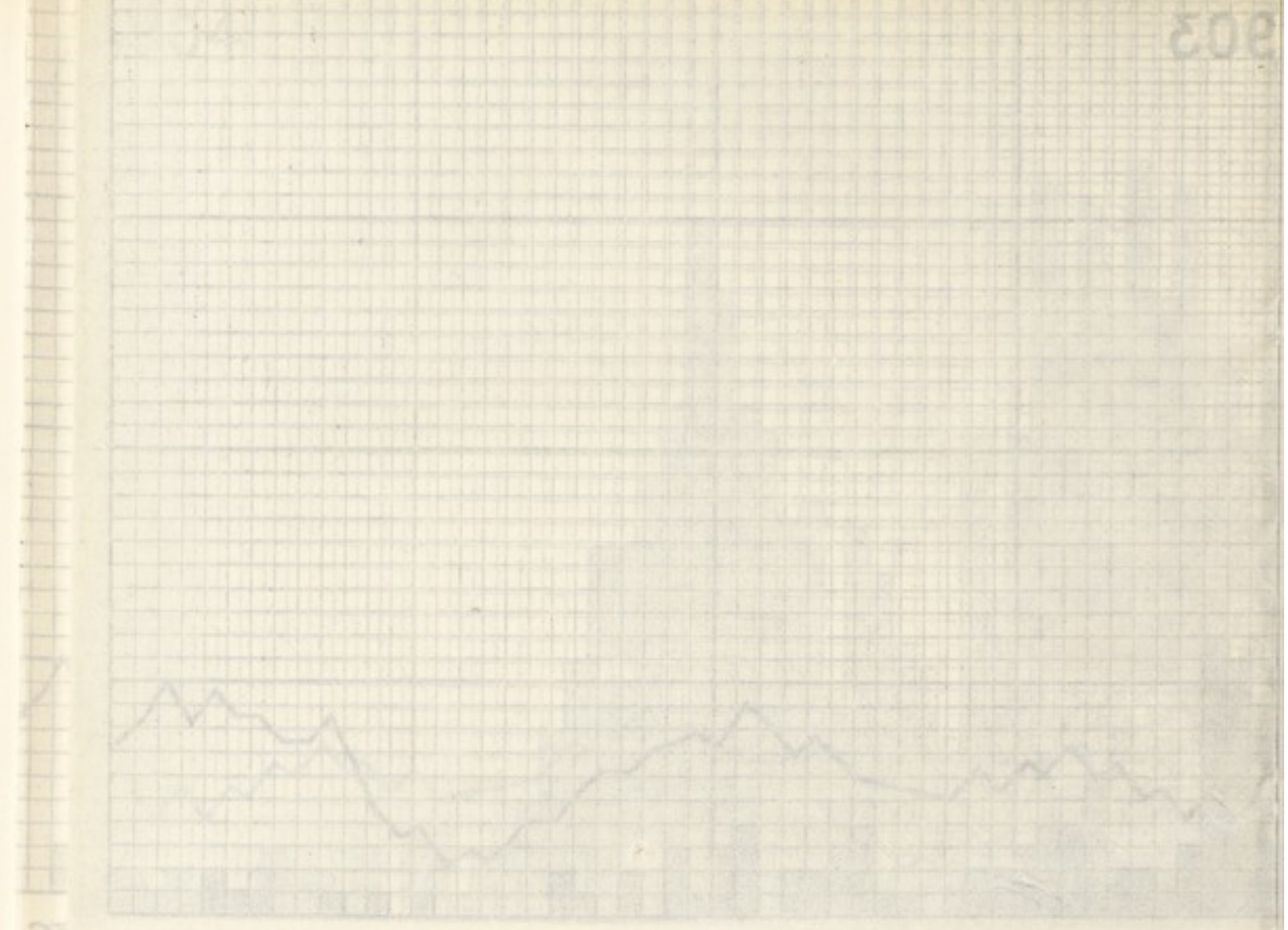


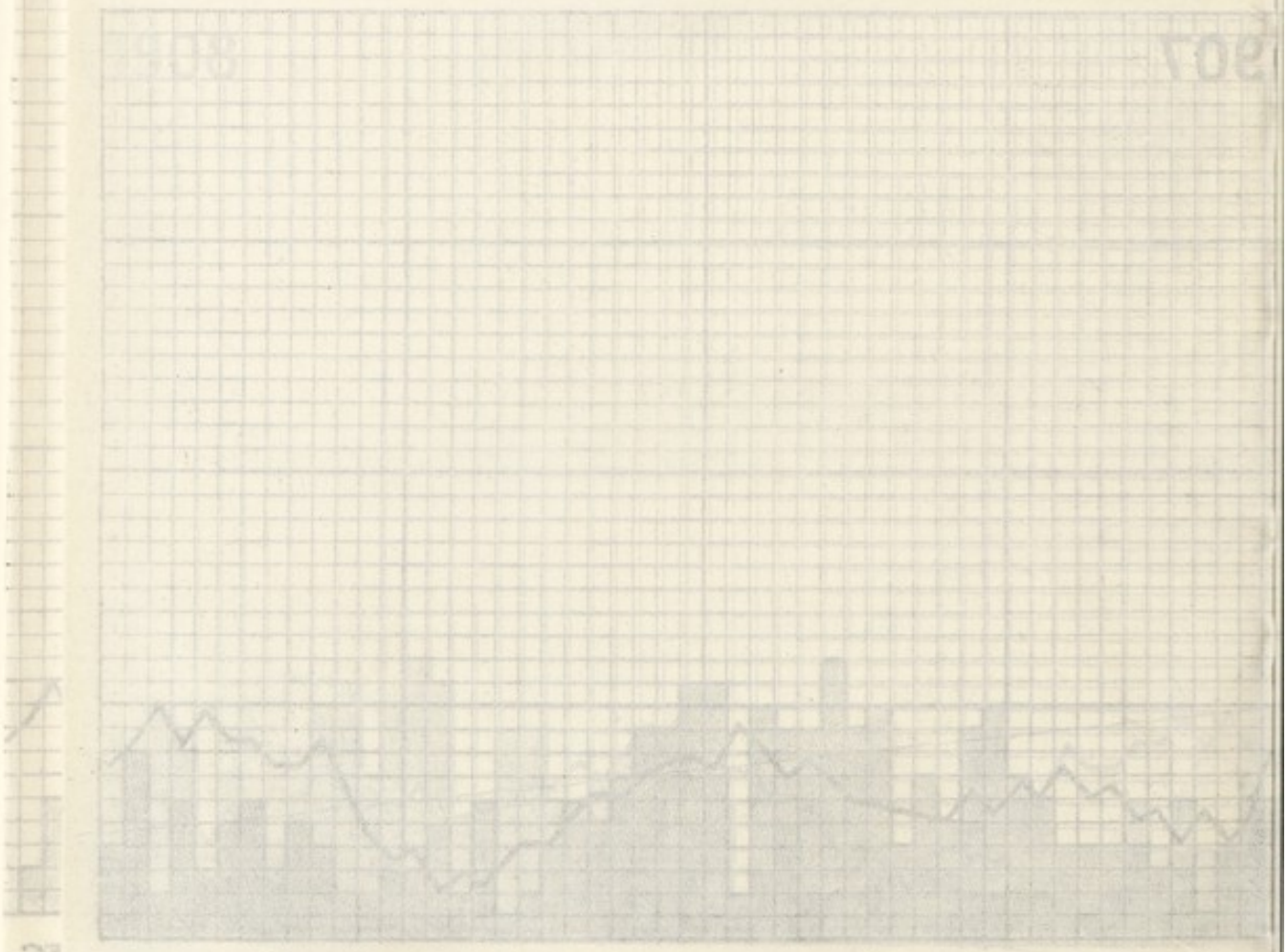






EASLES DURING EACH WEEK OF THE YEARS 1901 TO 1908.
KLY AVERAGE Nº OF DEATHS IN THE 10 YEARS 1896-1905.





WHOOPING-COUGH.

This disease, which again showed a considerable prevalence in the city, is one of the most distressing and painful causes of death in very early life; a large number of deaths certified to be primarily due to diseases of the lungs are found on inquiry to have originated in whooping-cough, the great majority of the deaths occurring below two years of age, and more than one-third below twelve months of age. It is plain from this circumstance that isolation of the infected infant in hospital presents many difficulties, similar in character to those which arise in the case of Measles. In a large proportion of cases the patient would have to be accompanied by the mother, whilst the period of detention in hospital would in the majority of cases be protracted. During last year 346 deaths were directly attributed to whooping-cough, but this figure is by no means a complete representation of the mischief caused by it.

Notwithstanding the difficulties in the way, isolation for a limited number of cases has been found, and some lessening of this disease may be expected with confidence. Experience has repeatedly shown that the introduction of a case of whooping-cough into a court has resulted in the spread of the infection to practically the whole of the infant population in that court.

The following table shows the periods of the year and the localities in which deaths from Whooping-cough occurred, and also the ages at death.

The number of deaths from Whooping-cough during each of the preceding ten years, 1898-1907, has been as follows:— 333, 314, 538, 166, 407, 318, 426, 151, 362 and 324.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	7	7	5	8	1	...	...	2	13	17	30
Exchange	6	5	...	1	1	4	1	...	8	10	18
Abercromby	5	2	2	4	1	...	...	2	8	8	16
Everton	16	18	12	14	7	10	5	7	40	49	89
Kirkdale	10	13	2	3	5	2	7	1	24	19	43
West Derby (West)	11	14	9	6	1	3	2	2	23	25	48
Toxteth	15	13	3	10	5	4	1	3	24	30	54
Walton	1	7	2	3	...	...	1	...	4	10	14
West Derby (East)	2	6	1	2	...	1	...	1	3	10	13
Wavertree	...	4	2	1	...	2	...	...	2	7	9
Sefton Park (late Toxteth Rural).	1	...	...	1	...	...	...	...	1	1	2
Garston	...	...	3	...	1	2	...	...	4	2	6
Fazakerley	...	...		...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	2	1	...	...	...	...	...	1	2	2	4
City	76	90	41	53	22	28	17	19	156	190	346

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
130	117	43	32	17	7	...	...	...	...	...	...	346

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

DIPHTHERIA.

Deaths from Diphtheria attained their maximum during the fourth quarter of the year. Appended is a table showing the periods of the year and the localities in which the deaths from Diphtheria occurred, and also the ages at death.

The number of deaths during each of the preceding ten years has been as follows:—123, 192, 143, 158, 200, 153, 181, 138, 137 and 95.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	2	...	...	...	2	...	...	...	4	...	4
Exchange	...	...	1	1	2	1	2	...	5	2	7
Abercromby	...	2	2	...	1	...	1	...	4	2	6
Everton	1	5	4	4	3	5	2	4	10	18	28
Kirkdale	2	...	3	...	1	1	5	5	11	6	17
West Derby (West)	1	3	1	1	1	1	1	1	4	6	10
Toxteth	...	3	4	2	...	1	2	2	6	8	14
Walton	2	...	...	...	2	...	3	1	7	1	8
West Derby (East)	2	...	...	1	1	...	4	1	7	2	9
Wavertree	1	...	...	1	...	...	...	...	1	1	2
Sefton Park (late Toxteth Rural).	1	2	1	3	1	...	1	1	4	6	10
Garston	1	...	...	...	...	...	1	1	2	1	3
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	...	...	1	2	2	1	3	3	6
City	13	15	16	13	15	11	24	17	68	56	124

Ages at Death

Under 1 year.	1 —	2 —	3 —	4 —	5 —	10 —	15 —	20 —	30 —	40 —	50 —	60 —	All Ages.
8	22	20	15	12	38	4	2	2	1	...	...	...	124

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

CROUP.

The following table shows the periods of the year and the localities in which deaths attributed to Croup occurred, and also the ages at death. Twelve of the deaths were attributed to Membranous Croup, and ten to Croup.

The number of deaths during each of the preceding ten years has been as follows:—41, 50, 40, 51, 41, 24, 33, 37, 24 and 22.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	...	...	...	1	...	1	...	...	...	2	2
Exchange	...	...	...	...	...	...	1	...	1	...	1
Abercromby	...	1	...	...	...	...	...	...	...	1	1
Everton	2	...	...	...	...	...	...	3	2	3	5
Kirkdale	1	...	...	...	...	...	2	...	3	...	3
West Derby (West)	1	...	1	...	...	...	...	1	2	1	3
Toxteth	...	1	1	...	...	...	1	1	2	2	4
Walton	...	...	...	...	1	...	...	...	1	...	1
West Derby (East)	...	1	...	...	...	...	...	...	...	1	1
Wavertree	...	...	...	...	...	...	...	...	...	...	...
Sefton Park (late Toxteth Rural).	...	...	...	...	...	...	...	...	...	...	...
Garston	...	...	...	...	...	...	...	...	...	...	...
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	...	1	...	...	...	...	...	1	1
City	4	3	2	2	1	1	4	5	11	11	22

Ages at Death.												
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
5	3	6	4	3	1	...	...	...	...	...	...	22

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

ZYMOTIC DIARRHŒA.

Zymotic Diarrhœa is one of the most fatal diseases of infants in this City; it is by no means confined to infancy, but during 1908, as in preceding years, nearly three-fourths of the total number of deaths were of infants under twelve months old. It is most satisfactory to be able to again record a very marked decline in this form of disease, a result no doubt due partly to the low temperature and amount of rain in the early months of the summer, as well as to the increased municipal effort to lessen the prevalence of the disease. The disease did not commence to figure prominently in the mortality returns until a later period than usual, namely, the end of July, and continued until the end of October. Over 600 deaths were registered from it, which represents a lower proportion to the population than has been recorded in any year with the exception of 1907.

Investigation proves incontestably that the deaths of infants from this cause are closely associated with the method of feeding, putrefying food being the medium by which the specific poison is commonly introduced. The deaths amongst children under three months of age, either wholly or partially fed on artificial foods, are fifteen times as great as they are amongst an equal number of infants fed upon breast milk; *e.g.*, investigation has tended to prove that, out of every 1,000 infants under three months of age, naturally fed upon breast milk alone, 20 die of autumnal choleraic disease; but if the same number of infants, at the same age, are artificially fed, then, instead of 20 dying, as many as 300 will die from this cause. It is mainly with a view to meet this excessive mortality that sterilized milk depôts have been established, to ensure a supply of food for infants which is bacteria-free, and which can be given without any exposure to sources of contamination. (See also pp. 18 and 278).

The connection between the meteorological conditions and the prevalence of zymotic diarrhœa during the third quarter of the year, is well shown in the following diagrams.

These five diagrams give the daily variations of the rainfall and the mean temperature of the air, during the months of June to September, and the daily deaths from zymotic diarrhœa during July, August, and September, for the years 1904, 5, 6, 7 and 8, October being included in the two latter years.

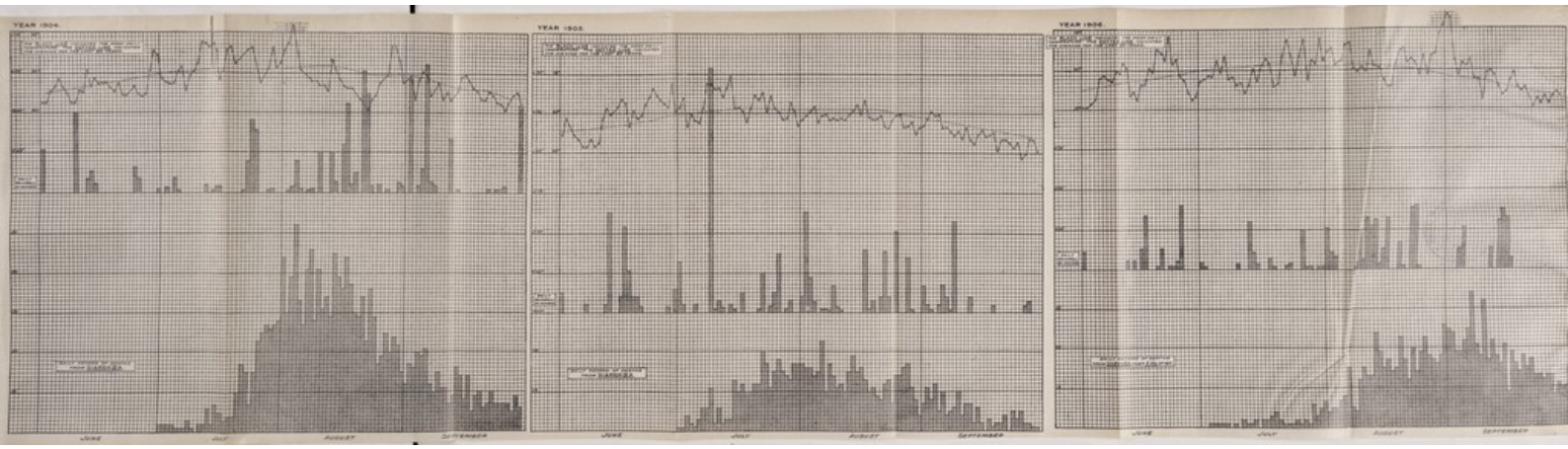
In comparing the years 1905, 1907 and 1908 with the years 1904 and 1906 it will be seen that the mean temperature in the latter frequently rose far above the 20 years' average, and remained so for several days together; it seldom fell below the average. The rainfall during the years 1904 and 1906 was scanty. The summer and autumn of both these years were characterised by severe outbreaks of diarrhœa. On the other hand, the mean temperature during the years 1905, 1907 and 1908 was usually below the average, and rarely rose above it, and then only for short intervals of a day or so. The amount of rain which fell was much greater. These conditions were associated with a death-rate from diarrhœa which was about one-half of that which occurred in 1904 and 1906.

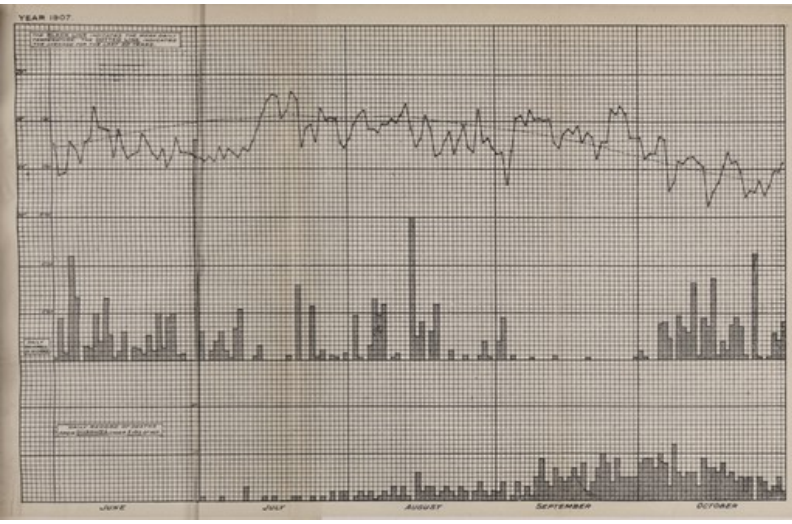
The numbers of deaths during each of the preceding ten years have been as follows:—956, 1,158, 900, 1,269, 611, 657, 1,785, 960, 1,298 and 544.

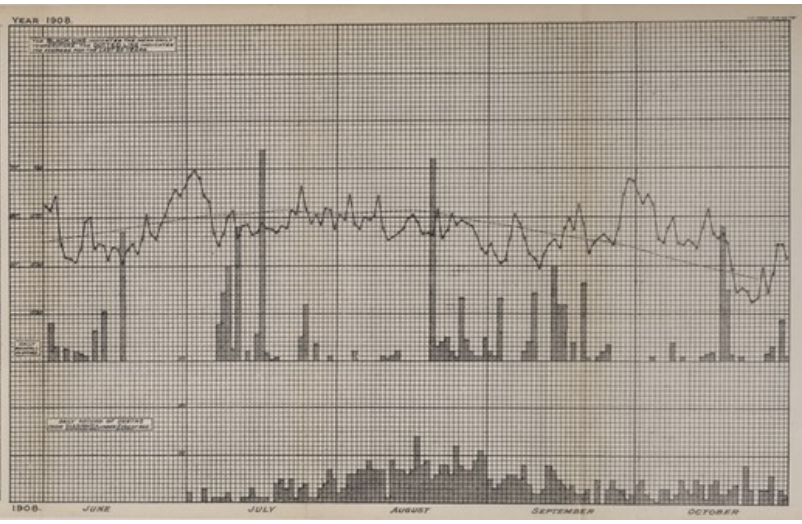
Provision was made during the year for the treatment at the Fazakerley Hospital of a limited number of infants suffering from infantile diarrhœa. See p. 278 (Hospitals).

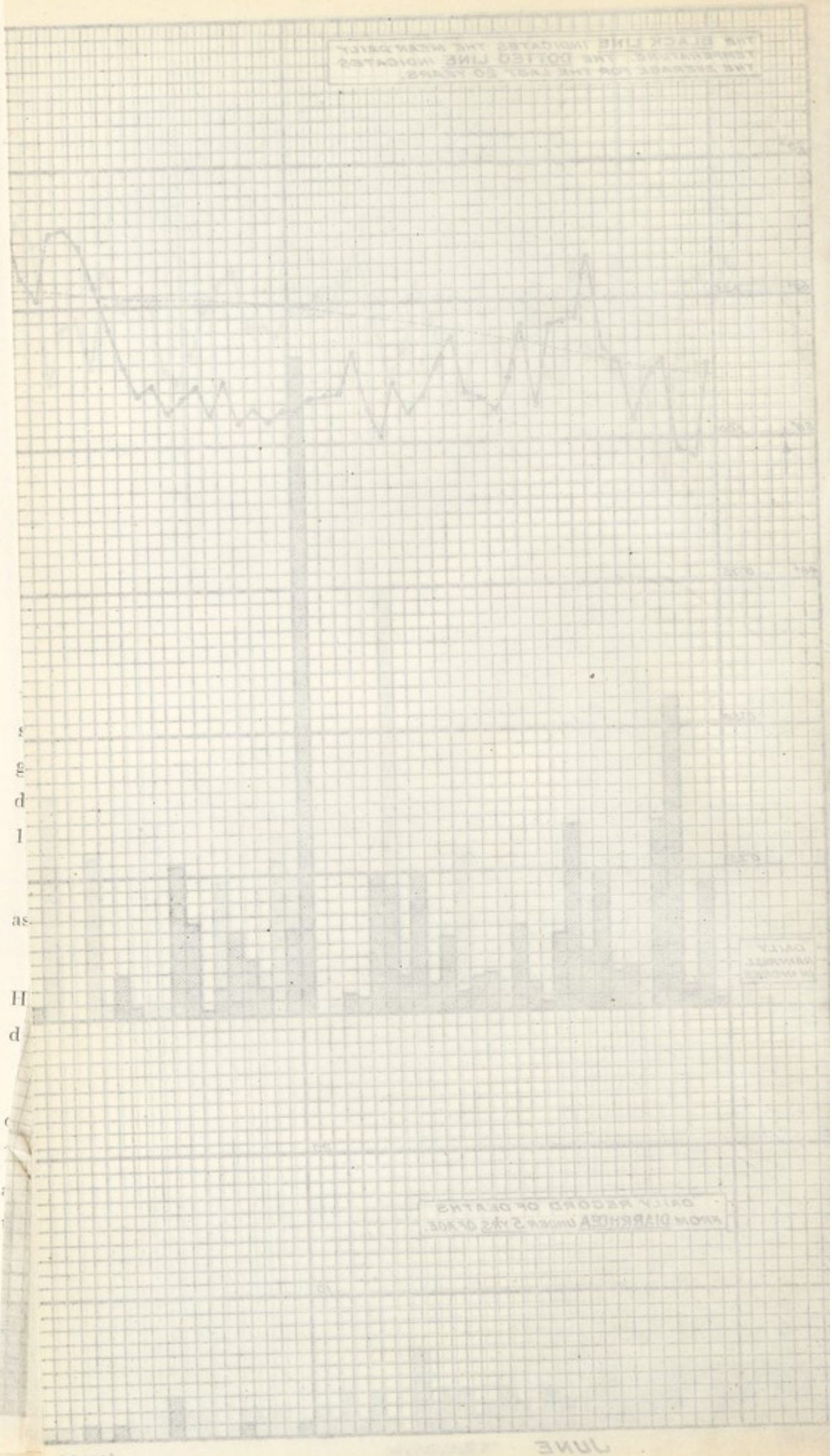
Valuable service has been rendered in previous years by the authorities of the Royal Infirmary, Stanley Hospital, David Lewis Northern Hospital, Belmont Road Hospital, and Children's Infirmary in receiving a considerable number of patients, all of them infants, suffering from this disease. In some instances the cost was defrayed by the Corporation.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
27 JUL 09
LIBRARY


YEAR 1904.
JUNE
JULY
AUGUST
SEPTEMBER
YEAR 1905.
JUNE
JULY
AUGUST
SEPTEMBER
YEAR 1906.
JUNE
JULY
AUGUST
SEPTEMBER


YEAR 1907.
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


YEAR 1908.
1908.
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER



DEATHS FROM DIARRHŒA

The following table gives the Districts in which fatal diarrhœa occurred, the seasons in which it took place and the ages of the patients. It will be seen that the greatest fatality was amongst infants under 12 months of age:—

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	1	1	6	5	33	41	16	10	56	57	113
Exchange	6	5	...	3	22	29	8	2	36	39	75
Abercromby	2	1	2	2	12	7	7	2	23	12	35
Everton	6	1	4	3	34	32	15	10	59	46	105
Kirkdale	3	3	...	...	30	24	10	9	43	36	79
West Derby (West)	3	4	2	3	22	21	8	9	35	37	72
Toxteth	3	4	3	...	20	15	14	8	40	27	67
Walton	2	1	...	1	20	3	2	3	24	8	32
West Derby (East)	...	...	...	3	3	6	4	5	7	14	21
Wavertree	...	1	...	...	2	3	2	3	4	7	11
Sefton Park ... ... (late Toxteth Rural)	...	...	1	...	1	1	...	1	2	2	4
Garston	...	...	1	...	5	5	...	1	6	6	12
Fazakerley	...	...	...	...	1	1	..	...	1	1	2
Hospitals (Residences outside the City)	...	...	...	...	...	...	1	1	1	1	2
City	26	21	19	20	205	188	87	64	337	293	630

Ages at Death.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
394	164	34	12	1	3	2	...	3	2	3	2	10	630

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

List of Streets in the City wherein Three or more Deaths from Diarrhœa occurred during the year 1908.

Streets.	No. of Deaths.	Streets.	No. of Deaths.
Arkwright	6	Hornby	4
Burlington	4	Holborn	3
Bond	3	Howe	3
Birkett	3	Hopwood	3
Boundary	4	Lowwood	3
Bidder	3	Latimer	4
Buckingham	6	Maria Road	3
Beau	3	Mill	3
Canterbury	3	Phythian	3
Cranmer	4	Rose Hill	3
Crealock	3	Robsart	3
Dryden	5	Rockingham	3
Evans	5	Stitt	3
Field	4	Slade	3
Flinders	3	Tillard	4
Gordon	3	Upper Beau	3
Gerard	5	Victoria Square	3
Great Richmond	3	Wolfe	3

In arranging the foregoing list of streets, all deaths occurring in hospitals have been transferred to the streets from whence the patients were removed.

OTHER ZYMOTICS.

The following table indicates the localities in which deaths from other forms of zymotic disease occurred during the year:—

DISTRICTS.	Influenza.		Erysipelas.		Syphilis.		Rheumatic Fever.		Puerperal Fever.		Other Zymotics.		YEAR.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	4	4	3	...	2	4	5	...	...	2	3	3	30
Exchange	...	3	2	1	3	2	...	1	...	3	4	1	20
Abercromby	3	4	1	4	2	1	...	1	...	...	1	...	20
Everton	13	9	2	1	9	3	3	5	...	3	3	2	53
Kirkdale	6	13	2	...	2	...	1	3	...	1	...	2	30
West Derby (West) ..	3	8	...	2	2	...	4	1	...	2	2	...	24
Toxteth	13	8	...	3	6	1	2	4	...	1	6	3	47
Walton	5	3	...	...	...	...	1	...	...	2	3	...	14
West Derby (East)...	7	3	1	1	...	2	2	1	...	...	2	...	19
Wavertree	2	7	...	...	1	...	1	1	...	...	2	2	16
Sefton Park..... (late Toxteth Rural)	4	4	...	...	1	...	2	1	...	1	1	2	16
Garston	7	2	...	...	...	...	2	1	...	1	1	...	14
Fazakerley	...	...	...	...	...	...	...	...	...	...	...	...	...
Hospitals(Residences outside the City)..	2	4	...	...	...	...	...	...	...	4	6	1	17
City	69	72	11	12	28	13	23	19	...	20	37	16	320

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

THE FOLLOWING TABLE SHOWING THE ANNUAL AVERAGE NUMBER OF DEATHS FROM SIX OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, IS INTERESTING AND INSTRUCTIVE. THE DECLINE IN THE MORE FORMIDABLE FORMS OF INFECTIOUS DISEASES IS VERY MARKED.

Years.	Small Pox.	Typhus.	Scarlet Fever.	Measles.	Whooping Cough.	Diarrhœa.
1866 to 1875	237·4	652·8	789·4	425·7	496·8	995·3
1876 to 1885	90·8	238·0	421·2	517·8	472·3	658·4
1886 to 1895	8·8	37·1	257·5	399·5	322·4	600·6
*1896 to 1905	19·5	25·1	201·3	329·0	330·4	1,051·9
1906-8	·3	11·3	176·6	370·0	340·3	817·0

* Including extended city area.

ANNUAL AVERAGE NUMBER OF DEATHS FROM SIX OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, DISTINGUISHING THOSE OF PERSONS ABOVE AND BELOW FIVE YEARS OF AGE.

Years.	Smallpox.		Typhus.		Scarlet Fever.		Measles.		Whooping Cough.		Diarrhœa.	
	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.
1866 to 1875	141·7	95·7	*...	*...	187·7	601·7	14·4	411·3	9·9	486·9	105·7	889·6
1876 to 1885	62·5	28·3	*...	*...	137·0	284·2	35·4	482·4	18·6	453·7	61·9	596·5
1886 to 1895	6·2	2·6	†33·2	† ·7	87·6	169·9	28·3	371·2	15·1	307·3	60·2	540·4
**1896 to 1905	14·5	5·0	24·2	·9	61·7	139·6	17·1	311·9	11·9	318·5	53·6	1,008·3
1906-8	·3	—	10·6	·6	60·3	116·3	20·3	349·6	12·3	328·0	30·3	786·6

* During these years the ages at death from Typhus were not differentiated.

† During the eight years, 1888-1895.

** Including extended City Area.

The following table shows the number of deaths, the annual average death-rate per 100,000 of the population from the undermentioned forms of disease during the last five decades 1856 to 1905, and during the last three years 1906-8:—

DISEASE.		1856 to 1865, Average Population 443,938.	1866 to 1875, Average Population 493,405.	1876 to 1885, Average Population 538,651.	1886 to 1895, Average Population 536,974.	1896† to 1905, Average Population 691,351.	1906-8, Average Population 746,176.
Scarlet Fever	Total Deaths.....	5,994	7,894	4,212	2,575	2,013	550
	Rate per 100,000 per annum.	135·0	159·9	78·1	47·9	29·1	24·5
Typhus Fever	Total Deaths.....	7,482	6,527	2,855	371	251	36
	Rate per 100,000 per annum.	168·5	132·2	53·0	6·9	3·6	1·6
Typhoid Fever	Total Deaths.....	*	*	1,264	1,530	1,344	250
	Rate per 100,000 per annum.			21·5	28·4	19·3	11·1
Measles	Total Deaths.....	3,215	4,257	5,178	3,995	3,290	1,136
	Rate per 100,000 per annum.	72·4	86·2	96·1	74·3	47·5	50·7
Whooping Cough	Total Deaths.....	4,779	4,968	4,723	3,224	3,304	1,032
	Rate per 100,000 per annum.	107·6	100·6	87·6	60·0	47·7	46·1
Smallpox	Total Deaths.....	1,673	2,374	908	88	195	1
	Rate per 100,000 per annum.	37·6	48·1	16·8	1·6	2·8	·04
Phthisis	Total Deaths.....	15,572	16,476	13,754	11,436	12,632	3,706
	Rate per 100,000 per annum.	350·7	333·9	255·3	212·9	182·7	166·0

† City Boundaries extended in 1895. * Records not available.

TUBERCULOSIS.

The increasing attention paid during the last decade to Tuberculosis renders it desirable to deal shortly with the past history and present position of the subject. Some illustrative cases are given with a view to indicate the lines on which administrative methods are progressing.

Tuberculosis in its various forms has for many years been known to be associated with insanitary surroundings and bad conditions of life. Dwellings in courts and alleys—often damp, dark, dirty, and so constructed that a foul and foetid atmosphere takes the place of sunlight and pure air—are the breeding places for tuberculosis, and conditions approximating to these, whether of the home, the school, the workshop, or place of business, favour its growth and spread, and it is with conditions such as these that its prevalence is notorious. Poverty, intemperance, ill-feeding, prejudicial habits, occupation, anything in fact which tends to debilitate or to lower the constitution increases susceptibility to the disease.

The actual cause of the disease, whether manifesting itself as phthisis, or as tubercular disease of the glands or joints or elsewhere, is a minute organism, which at certain stages of the disease is given off by the consumptive patient, usually from the lungs, and under the conditions described, is capable of being transmitted to healthy individuals, and may give rise to the disease in them.

It is also capable of being transmitted in quite another way, namely, from animals to man, more especially through the medium of the milk of a tuberculous cow; indeed, some eminent experts regard this latter as of even more importance as a source of infection than the communicability from person to person; the safest course, however, is to recognise the danger of each. It is the close, dark, dirty, ill-ventilated and over-crowded cowshed which favours the disease in the cow, just as similar surroundings favour it in the human being.

The liability of transmission from person to person is obviously very variable, and is affected by various conditions; in early stages of phthisis and in tuberculosis of internal organs other than the lungs

the risk is small, if any, but when there is copious expectoration large quantities of bacilli may be discharged, which may be dispersed into the atmosphere in the act of coughing or sneezing, and inhaled or swallowed by others. A careless patient in bad surroundings may easily become a source of infection.

In those cases where infection is possible the risk is greatest when the surroundings are bad. In well ventilated, properly constructed places, and with due precaution the risk is trifling.

Again, the susceptibility of the individual who inhales or swallows the bacilli varies; constitutional predisposition, the habits, the occupation, the intemperance of the exposed person may prepare the way for it. In numberless cases the likelihood is that the bacillus is swallowed or inhaled without any ill effect.

It will be seen, therefore, that the consumptive patient must not be always and under all circumstances regarded as a source of danger to others.

Attacks of consumption and other forms of tuberculosis are, in the main, and under ordinary conditions, recovered from. A feature of the disease, however, is that it may disappear altogether from the person who has had the attack for a very prolonged period, perhaps for years, and then reappear. It may be that the disease has remained latent all that period, or it may be that the patient has had a re-infection.

The various views of experts on this and other points are of great interest, and although of a technical character, can be conveniently studied by those desiring more information.

A highly gratifying feature in regard to tuberculosis is the remarkable decline in the disease which in the last half century has accompanied the progress of improved sanitation in the country, a decline which, if it stood as the only result of preventive measures, would fully justify the expenditure involved. No other forms of pulmonary disease, for example, bronchitis or pneumonia, show any decline at all comparable with it, nor any indication of being similarily affected by measures of general sanitation.

In order to correctly appreciate this decline, it is of the utmost importance to thoroughly grasp and understand the conditions with

which tuberculosis was associated at the period of its maximum prevalence, and to study the circumstances which, step by step, have preceded or accompanied the remarkable decline referred to. Unless this is done, no correct estimate can be formed either of the circumstances operating in its causation or of the relative value of the various preventive measures which have been adopted.

Anything approaching detail would be far beyond the scope of this report, but a brief description is necessary for purposes of comparison.

From a Report of a Special Commission of Inquiry, instituted some 60 years ago, into the health of the great towns of England, there is no room to doubt that Liverpool in many respects was, from the sanitary standpoint, behind any of them, whilst its position as a rapidly growing seaport rendered it of all places most liable to invasion by disease. The conditions of the town were absolutely favourable to the dissemination of disease, and from the day of that Commission of Inquiry onwards, perhaps even before that day, Liverpool has without intermission, and with such growing lights and increasing powers as she could obtain, been the seat of war against tuberculosis.

We learn from the Report referred to, as well as from other sources, that 100,000 inhabitants were dwelling in houses so aggregated and so constructed as to be from these circumstances alone unfit for human habitation, and that 40,000 were living in cellars. We learn also of the absence of light and ventilation, of the darkness and the filth; and not this alone, but of the over-crowding, more especially of the cellars and of the lodging-houses which were unregistered and without supervision; we learn of the condition of schools, wretched in the extreme, dark, confined, damp and dirty, used as a dwelling, dormitory, and school-room, the atmosphere offensive by filth; we note the absence of water supply and of draining and scavenging, the whole conditions of the town being aggravated by extreme poverty and the constant immigration of destitute people.

The condition of the dwellings alone, in fact, then, and for years afterwards, constituted, so far as tuberculosis was concerned, a gigantic experiment upon man. Nothing is more useful nor instructive than a careful study of the difficulties encountered and

the results of the millions of money and the years of labour expended in remedying these evils, their step by step diminution, and the coincidental decline of the disease now under consideration.

Some interesting figures are available in reference to the more recent history of phthisis in Liverpool. In the year 1895 the City boundaries were extended and included a population of 652,000 people. The rate of phthisis mortality amongst that population during that year was 1·9 per thousand. It has steadily declined since that date, and in 1907 and 1908 was 1·5. If the phthisis rate of 1895 had remained stationary and had not dropped as it has done there would have been in the interval approximately one thousand more deaths from phthisis than actually did occur.

For many years a Committee known as the Insanitary Property Committee, has been engaged in demolishing insanitary areas of the worst description in the City, and replacing them to a limited extent by sanitary dwellings upon the same site, the balance of cottage building being left to private enterprise, and taking place in the suburbs. This Committee, with a view to give a greater emphasis to the re-building aspects of its duties, in the year 1900, changed its title from Insanitary Property Committee to that of Housing Committee.

Under that Committee's control there are at the present time some 2,000 dwellings occupied by 8,022 people. These Corporation dwellings are erected practically upon the sites of the insanitary areas which they replaced, and are reserved not for any person who makes an application for one, but only for the people dispossessed by the action of the Corporation from condemned insanitary dwellings, condemned cellar dwellings, and so forth, that is to say, for the poorest of the poor, who, in most cases, cannot afford to pay the full market rentals, the balance of the rentals being made up out of the rates. These people constitute, probably, not less than 80 per cent. of the total inhabitants, the most material alteration in their circumstances being the change from a dwelling which was unfit for human habitation to one that is.

When the insanitary areas were condemned the Medical Officer of Health gave evidence as to the great amount of phthisis and diseases of the lungs amongst the occupiers of those dwellings. What is the condition amongst those same people under their new surroundings?

The phthisis mortality rate in the Corporation dwellings taken as a whole, notwithstanding the history of the occupiers, was, during 1907-08, 1·35 per thousand, actually lower than that of the City taken as a whole, and very considerably below that of the districts in which the dwellings are situated. No practical sanitarian would suggest that if, instead of spending the money in demolishing the slums, purchasing the sites, and erecting the dwellings, it had been spent in providing sanatoria and in removing and maintaining the diseased people therein, that the results would have been at all comparable either in benefit to the City or to the inmates of the dwellings themselves.

England and Wales taken as a whole show, though in a less degree, that, as in Liverpool, the decline in the Phthisis rate has been more marked amongst females than amongst males (see Chart, England and Wales). In his Report for 1907, the Registrar-General states that:—"In proportion to the living, the victims of Phthisis are now only half as numerous as they were half a century ago." Whether the male be more susceptible than the female or not, there is no doubt that the occupations and the habits of males tend to expose them to greater liability than women. Dusty trades, those involving prolonged exposure, exert their influence, whilst the vicissitudes of sea life, varying and precarious employment, and the number of broken-down men coming to the City in search of employment, still further explain the greater incidence of phthisis upon males; moreover, it is generally acknowledged that on the whole men are less temperate than women. On the other hand, the woman is more in the home, and the improvements which have taken place in regard to housing benefit the female to a larger extent than the male. (See Chart, Liverpool.)

The rates of mortality from Phthisis in Liverpool show, besides the general decline, another interesting point, and that is, that of late years the maximum mortality is taking place at a later age; in other words, death is postponed and useful life prolonged. For example, during the last three years ending 1907, there is a decline at each age period up to 50 years of age. (See Chart.)

What is known as the old Parish of Liverpool is the central part of the City, abutting on the river and comprising the oldest parts of Liverpool. The well-to-do residents have long since left it, and it is now largely occupied by those sections of the community with whom the struggle of life is hardest. Precarious and unsettled labour of the

unskilled kind is a feature of the district, but it is here that the greatest efforts towards sanitary improvement have been made. Information as to what these efforts have been is at the disposal of any person who will take the trouble to study the records. Meantime, the decline in the number of deaths from phthisis, per 100,000 of the inhabitants, following upon these sanitary measures is deserving of study, and shows in something less than 20 years a decline of nearly 14 per cent. in the males and 33 per cent. in the females, notwithstanding the fact that there have been, and are, continually drifting into the lodging-houses in this part of the City derelict and indigent men from all parts of the country.

Forms of tuberculosis other than phthisis may be regarded as practically non-infectious. The large majority of the cases of phthisis come under the same category, whilst the remainder are infectious only under circumstances favourable to infection, and have little, if any, tendency to spread where reasonable precautions can be adopted. For example, in the great Consumption Hospitals of the country, notwithstanding the constant exposure of the attendants on the sick, infection is extremely rare. The same observation applies to the results, so far as they can be ascertained, of the Liverpool Hospital for Consumption, and the Poor Law Institutions in which large numbers of consumptive patients are treated.

All of these experiences confirm the view that it is the vicious domestic or living conditions which lie at the root of the evil, and it is against these that sanitary effort has been directed. A large and suitably trained and qualified sanitary staff has for years been at work to ameliorate these conditions.

The results of the efforts of the Corporation have been to approximate the living places and the surroundings of the people to the requirements of sanitation, to remove the breeding places of disease, and to substitute conditions as favourable as it is possible for people to live under. These works, needless to say, cannot be regarded as finished, notwithstanding demolition of insanitary property, and re-housing the dispossessed, and the provision of wide streets and open spaces, parks and gardens, baths and other similar necessaries for health.

No one familiar with the sanitation of cities would suggest that if the Corporation, instead of following the policy indicated, had left untouched

the slums and insanitary conditions, and had provided in hospitals for disease as it was bred, that the same results would have been obtained; the experience of what remains forbids absolutely any such inference.

If such a policy had been pursued, and hospital accommodation had been provided for the whole of the cases of phthisis as they arose, the probability is that the Corporation to-day—whilst in possession of an enormous hospital establishment, which in construction and current expenses would have swallowed up as much money as has been spent in the whole sanitary administration of the City—would also have been in possession of breeding-places for the disease which would produce enough phthisis to tax these Hospitals to their utmost capacity. Meanwhile all other evils of insanitation would have been untouched. Clearly this reflection shows that with phthisis, as with other diseases, prevention is better than cure, and attention must not be diverted from the preventive aspects by prospects (often illusory) which are held out of cure.

To summarise the principal efforts made to combat tuberculosis would be to summarise the whole of the great sanitary operations which have been carried out with such good results for the extended period already referred to.

But of more recent years measures of a more specific kind have been taken, for example, since the year 1899 many thousands of cards of instruction have been distributed, giving advice to consumptives and those who live with them, as to the ordinary regulation of their lives. (See page 93.) Early in 1901 a voluntary system of notification of cases of consumption and other forms of tuberculosis was inaugurated, a special form was used for these notifications, the object being to ascertain as far as possible particulars of cases in which some action on the part of the Health Department could be taken with advantage. The ordinary notification fee has been paid in each case. (See pages 70 and 71.)

At the time when this system was commenced the question had been discussed as to the advisability of seeking powers to include tuberculosis amongst the notifiable diseases. In view, however, of the divergence of tuberculosis in essential particulars from the ordinary forms of infectious disease it was plain at that time that compulsion would be regarded with disfavour, and sufficient material for the education of public opinion upon the matter was not available.

Eight years' experience of the voluntary system of notification and ten years' experience of education by the distribution of cards of instruction and in other ways have not been without their effect, and it is interesting to notice that in Sheffield, where compulsory notification was adopted in 1904 the number of notified cases to every 100 deaths, during a period of three years, varied but slightly from the number notified per 100 deaths in Liverpool during the same period. This would suggest that the voluntary system in Liverpool has grown in favour, and has probably resulted in bringing most of the cases to the knowledge of the Health Department. Furthermore, these preliminary measures facilitated the work relating to the compulsory notification of pauper consumptives.

Notices have also been distributed to be exhibited in factories, workshops and other places, relating to the dangers of spitting. Parliamentary powers were sought at one time to make promiscuous spitting in public places an offence, a proposal which, although a majority of the City Council voted in favour of it, did not obtain the statutory number of votes required to include the clause in the Bill.

In connection with the University Laboratories, an Association has been established by which the sputum of suspected patients can be examined at a very trifling cost.

More recently, the system which is now evolving of the medical inspection of school children will open up further avenues of action.

Further, the compulsory notification of all pauper consumptives will facilitate the application of remedial measures.

It has been noted that poverty and its train of evils hamper sanitation in Liverpool. It is probable that there is a larger amount of poverty, apart from pauperism, in Liverpool than in other large cities.

It is in Liverpool that a larger proportion of the total deaths takes place in Workhouses and in Public Institutions than in other large towns, and a further sidelight is thrown upon the struggling poverty by the hostility to measures having for their object the protection of children from the hardship of, for them, excessive labour; for example, objections were raised to the regulations under the Employment of Children Act, on account of the loss to the family income of the earnings of the little children, notwithstanding that the employment was seriously

and obviously detrimental to the interests of the children. Considerations such as these indicate the nature of the additional difficulties arising from poverty.

For many years the Dispensaries have given valuable aid in the amelioration of the conditions of the consumptive, and excellent work has also been carried out at the Out-Patient Department of the Liverpool Consumption Hospital. None of these Institutions, however, is exactly comparable with the French Tuberculosis Dispensaries, as at these latter places material aid, food and clothing are given as well as medical guidance.

In 1907 the number of cases of Phthisis notified from the Dispensaries was 502, which in all probability represents all the cases of Phthisis in which the diagnosis was clearly established, but excluding glandular troubles. The patients suspected to be suffering from Phthisis coming for the first time to the Dispensary at the ordinarily appointed time, viz., from 9-30 a.m. to noon, are advised in case of necessity to return again in the evening for a more extended examination. The Dispensaries tap the districts within say a mile or so of their situation, although from time to time patients do come from greater distances. There is also the Out-Patient Department of the David Lewis Northern Hospital, and further out to the North end of the City is the Out-Patient Department of the Stanley Hospital. Both Hospitals are attended by consumptives, amongst other patients. The Out-Patient Department at the Stanley Hospital is an exceptionally large one. At the South End a large Out-Patient Department is available at the Royal Southern Hospital, and there is little doubt that the additions to the Out-Patient Department facilities now projected at the Royal Infirmary will serve a wide area. There is a large Out-Patient Department in connection with the Consumption Hospital, Mount Pleasant, to which patients come from all parts of Liverpool.

The Consumption Hospital, Mount Pleasant, consists of a well-equipped Hospital and Sanatorium, containing 70 beds in all. It was built, and is supported, by private philanthropy, and the Institution was a pioneer one, being the first in the country established with the object of the treatment and the cure of consumption.

Accommodation for cases of phthisis is also provided at:—

Heswall Sanatorium	... ...	24 beds.
Fazakerley Hospital	... ...	50 ,,

At all of these Institutions cases from time to time appear in which the patient is the breadwinner, and in which there would be great advantage in having some fund to support the family whilst the patient is in hospital.

In November last the Medical Officer suggested that the Consumption Hospital or Dispensaries would be suitable places from which to draw patients for admission to the Fazakerley Hospital. This arrangement would obviate the trouble consequent upon unsuitable cases going out to the Hospital for admission. The ultimate admission of the patients would, of course, rest with Dr. Rundle, the Medical Superintendent.

As already stated, the evidence is conclusive that attacks of phthisis in the vast number of cases and under ordinary circumstances are recovered from, but the more favourable the conditions, the more likely is this result to happen. Comfortable surroundings in a pure atmosphere, abundance of food, regular living, warmth, suitable clothing, rest, with carefully graduated exercise or agreeable recreation have, as might be supposed, an extremely beneficial effect upon the consumptive, in most cases ameliorating his condition, and in many, leading, if not to complete recovery, at all events to a cessation of the destructive processes.

These results follow more conspicuously when the patient is removed from his bad surroundings in the early stage. That relapses ensue in a disappointingly large number of cases when the patient returns to his former surroundings or even to his daily work has perhaps not been sufficiently emphasised, and the too sanguine expectations held out have resulted in disappointment. The necessary length of the treatment has itself proved an obstacle, the breadwinner, knowing that his family are dependent upon others and feeling himself well, being unwilling to prolong his stay long enough to ensure recovery.

Amendment no doubt in varying degree follows the ordinary treatment in an ordinary hospital ward.

It must not be overlooked that the treatment of consumption in hospitals and workhouse infirmaries, has for a great number of years, up to a point and with limitations, been a helpful preventive measure, by receiving for longer or shorter periods advanced cases of consumption amongst poor persons. Although many, perhaps the majority, either left the institutions or remained outside at times

when it was most desirable that they should be treated within its walls, yet it is probable that the various Poor Law Institutions have not been without a valuable effect in lessening the dissemination of the disease.

These facts again raise the question as to whether or no pauper consumptives, or indeed any consumptives whose reckless mode of life, or whose general surroundings are such as to render them a danger to those with whom they associate, should not be compulsorily detained in a curative institution for the purpose of isolation for the same reason that the law now authorises the detention of persons suffering from a dangerous infectious disease. It is not improbable that such powers would require special legislation, but they would discriminate between the consumptive who is harmless and the consumptive who is dangerous.

TUBERCULOSIS AND MILK SUPPLY.

The investigations of many experts of the highest eminence have led them to the conclusion that tuberculosis is at least as frequently introduced into the system by swallowing as by inhalation; be this as it may, constant and unceasing efforts have been, and are, made to ensure that the milk supplied to the City shall be free from tubercle. This can only be assured by keeping cows under healthy conditions.

Regulations relating to the Milk Supply were adopted by the Health Committee on 9th August, 1894. The Committee had been in touch with the Liverpool Cowkeepers' Association, and a Deputation from the Association attended a meeting of the Committee.

The object of these Regulations is to minimise tuberculosis, but there was some apprehension at the time they were framed that Regulations of too stringent a kind might result in transferring the trade beyond the City limits, where little or no supervision took place. Liverpool was then, and is still, dependent for about half of its milk-supply upon the country cowsheds, where there is still very defective supervision. It was in consequence of this that in the year 1900, owing to the frequent introduction of tubercular milk from the country, that special Parliamentary Powers were obtained by Liverpool to prohibit the importation of tuberculous milk, and the necessity for these Powers is shown by the

fact that upwards of 300 Sanitary Authorities even to-day have made no Regulations whatever under the powers which they possess for the supervision of cows and cowsheds.

The well-known Corporation milk depôts, where milk for infants is provided, furnish an additional safeguard as regards the milk supply, so far as those using this milk are concerned, but these depôts are not sufficiently availed of by the public.

OBSERVATIONS UPON A CONSECUTIVE SERIES OF CASES OF PHTHISIS REPORTED.

As illustrative of the conditions found on re-visits to the homes of consumptives, the following epitome relating to 200 cases taken consecutively is interesting; 126 being males and 74 females, the persons affected being principally of the Artizan and Labouring class.

STATEMENT INDICATING HOW THE 200 CASES WERE DEALT WITH.

Removed to Hospital (Belmont Road, 11; Brownlow Hill, 53; City Hospital, Fazakerley, 1; Consumption Hospital, 2; Mill Road Infirmary, 22; Toxteth Workhouse, 11; Walton Workhouse, 24)	124
Notified at death	17
Incorrect address, or patient left, or no access...	12
Treated at home	47
Total	200

With regard to the 47 cases treated at their own homes, the ages are as follows:—

Under 15 years	3	(Average Age 7·)
Between 15 and 30 years ...	19	(,, ,, 24·6)
,, 30 ,, 50 ,, ...	18	(,, ,, 38·5)
Over 50 years...	7	

Although the duration of the illness which led to the present notification of the disease ranged only from a few weeks to three months, yet in almost every case this period had been preceded by the usual attacks of intermittent sickness, extending as a rule over several years. Four out of the 47 cases were residing, or had been residing, in insanitary court-houses, 16 live in apartments in sub-let houses, and 2 occupied dark cellar dwellings. The remaining 25 cases live in houses containing at least six rooms. Of the total number 31 patients are still receiving attention, either at the Dispensary or by the Parish Medical Officer; the remaining 16 cases are under the care of a private Practitioner or are out-patients at the Consumption Hospital, Mount Pleasant.

The occupations may be classified as follows:—Ships' Scalers, 3; Housewives, 13; Baker, 1; Painters, 2; Tobacco Workers, 2; Seamen, 1; Labourers, 8; Tailoress, 1; ex-Policeman, 1; Window Cleaner, 1; Stonemason, 1; Clerk, 1; Publican, 1; Paper Bag Maker, 1; Plasterers, 2; Fruit Hawkers, 2; Printer, 1; Draper, 1. The 4 cases not classified are children or young persons.

As a result of close observation and enquiry, it was found to be generally realised that it is necessary to deal with the sputum by burning. The usual practice is to use soft paper to receive the expectoration, which is afterwards placed in the fire. In only 4 instances does it appear that a disinfectant is used in the receptacle for the sputum.

In 9 instances separate bedrooms are provided. In 32 cases the patient sleeps with some other adult member of the family, and in the remaining 6 cases children share the patient's bed. Where the instructions with regard to the isolation are not observed, it is generally due to the limited accommodation of the dwelling and the poverty of the occupiers.

Cleanliness in regard to clothes, bedding and dwellings is in the majority of cases carefully observed, although there are exceptions. Directing attention to this deficiency will lead to improvement.

It is almost invariably the practice where milk is taken, to boil it before using, and as a general rule food is not kept in the patient's bedroom, but where the patient either sleeps in the kitchen or occupies the one apartment in a sub-let house, the food is, of necessity, stored in the infected room.

Careful attention is directed to ascertain, as far as possible, the present health of the inmates of the infected houses, and with the exception of 4 cases, there was no reason to believe that persons, other than the patient, exhibited any of the usual physical indications of Phthisis. These observations were confirmed by the statement of the relatives. The Medical Officers at the Consumption Hospital are always willing to examine any case of doubt.

In 15 instances the disease was known to have previously existed in the family, but in the remaining cases, although very careful enquiries were made, no record of Phthisis could be ascertained.

Disinfection of rooms and bedding is carried out by the Staff wherever required.

As far as the patients themselves are concerned, most of them recognise the necessity for fresh air, and as far as possible are anxious to avail themselves of permanent means of ventilation, by open windows in the bedrooms. Where their condition of health permits, they endeavour to be as much out of doors as possible. There are, however, instances in which the patient occupies a room in which the aspect does not permit sunlight to enter. Patients in the early stages of the disease appear to dislike attending the out-patients' department, where they come in contact with more advanced cases and occupy the same waiting-room.

The reader who peruses the illustrative cases will be impressed with the frequency, almost the uniformity, with which the patients and their friends are following the advice which has been given them. The hospital, as well as the visitor, plays a helpful part in educating the patient as to his mode of life, and from this aspect a short stay in a hospital where attention is given to educate the patient is most valuable to him. It is obvious that in few cases can the patient be kept in hospital until he is absolutely cured, but however short his stay he can, if he is at all amenable, be instructed as to his subsequent

conduct. The experiences of the Fazakerley Hospital bear this out, the number of patients not amenable to the discipline, or who were removed contrary to advice, being exceedingly small.

Hospital provision for the late stages as well as the early stages of the disease is necessary, and there is abundant scope for the charitable in giving help to families whose bread winner may be in an advanced stage of consumption. No doubt a great deal is done already by philanthropic effort to meet these needs, and Boards of Guardians on the other hand have fulfilled an important part in providing for those poor who are incapacitated by sickness, either from this cause or from the multitude of other causes which afflict them.

The experiences of Liverpool show very conclusively that improvement, at least of a temporary character, follows in a very pronounced degree when selected cases are placed in wards constructed either for receiving consumption in the early stage or for the reception of ordinary cases of infectious disease. These wards are situated in more airy and open localities than the ordinary general hospitals or infirmaries, and this may explain their advantages. It is held that a specially selected site and a specially constructed hospital would show some material advantages even over the pavilions of such an Institution as the Fazakerley Hospital, situated in a selected site of some 130 acres. It is very doubtful whether this would be so, but it is clear that in the event of the decision being arrived at to establish an additional special hospital, that no disadvantages could possibly attend its construction upon the special plans which receive general acceptance and which are designed with the object of ensuring the maximum of sunlight and pure air.

The Liverpool Sanatorium at Delamere, or the Liverpool Sanatorium at Heswall, furnish local illustrations of the construction of Consumption Hospitals with which the Committee are already familiar, but other types may with advantage be studied.

PHTHISIS AND OTHER TUBERCULAR DISEASES.

Death Rates per annum per 100,000 persons living during the year 1907, in certain large towns.

Towns.	Death Rates per 100,000 persons living. Phthisis.	Other Tubercular Diseases
Belfast	250	126
Birmingham	122	45
Bradford	114	46
Brighton	141	57
Dublin	320	169
Gateshead	141	54
Glasgow	156	98
Hull	113	46
Leeds	129	53
Liverpool	149	52
London	*139	48
Manchester	170	57
Newcastle-on-Tyne	146	62
Nottingham	129	50
Salford	163	63
Sheffield	115	48
South Shields	158	70
New York	†237	31

* Ranging from 258 in Holborn to 70 in Hampstead.

† "During the past five years the Death Rate from Tuberculosis has been almost at a standstill in the City of New York" (Dr. William H. Guilfoy, Registrar of Records Department of Health, City of New York. Paper read before Section VI., International Congress on Tuberculosis, Washington, 2nd October, 1908).

Table showing decline in the number of Deaths from Phthisis and other Tubercular Diseases in the Parish of Liverpool.

PHTHISIS.

Mortality Rate per 100,000 at all ages.

Year.	Total.	Males.	Females.
1871-1880	354	390	319
1881-1890	300	338	261
1891-1900	277	325	228
1901-1907	252	323	181

OTHER TUBERCULAR DISEASES.

Mortality Rate per 100,000 of both sexes at all ages.

1871	—	87	—
1881	—	88	...
1891	—	83	—
1901	—	75	—
1907	—	63	—

Form for Hospitals and Public Institutions

COPY OF FORM OF NOTIFICATION IN USE SINCE JANUARY, 1901.

No.

CITY OF LIVERPOOL.

VOLUNTARY NOTIFICATION OF PHTHISIS AND OTHER FORMS OF TUBERCULOSIS.

To the Medical Officer of Health for the City of Liverpool.

I hereby certify and declare, that in my opinion

Name ..... age.....

an inmate or out-patient of .....

is suffering from .....

the probable duration of which has been .....

Dated the.....day of.....190

(Signed).....

Medical Practitioner

I also consider that the following preventive measures should be adopted, viz.:—

.....

.....

.....

.....

.....

(Please state whether disinfection of rooms, clothing, &c., is desirable).

Please state—

Date of admission of Patient.....

Address .....

Occupation .....

COPY OF FORM OF NOTIFICATION USED BY PRIVATE PRACTITIONERS SINCE JANUARY, 1901.

No.

CITY OF LIVERPOOL.

VOLUNTARY NOTIFICATION OF PHTHISIS AND OTHER FORMS OF TUBERCULOSIS.

To the Medical Officer of Health for the City of Liverpool.

I hereby Certify that in my opinion

(Name) .....(aged).....

(Occupation) .....

residing at .....

is suffering from .....

the probable duration of which has been .....

I also consider that the following preventive measures should be adopted, viz. :—

.....

.....

.....

.....

.....

(Please state whether disinfection of rooms, clothing, &c., is desirable).

Dated the.....day of.....190

(Signed) .....

Medical Practitioner.

ILLUSTRATIVE CASES.

12, E—— STREET.

Name, Age and Occupation.—M—— F——. 30 years. Ship scaler.

Duration of Sickness.—Ailing 2 years. Ill 2 months.

Family History.—No record of Phthisis.

Habits of Occupiers.—Fairly clean. Patient very intemperate.

Condition of Premises.—Sub-let house, 6 apartments, clean, fairly well ventilated. Eight persons in all in the house.

Means of Family.—Wife supports family (2 children) by fruit hawking. Chief tenant is wife's mother.

Methods adopted.—Instruction card has been left, but no special precautions taken. Much indiscriminate expectoration takes place, said to be generally directed into fireplace. Bedding and apartment kept clean, but window rarely open.

Isolation.—Patient now removed to Hospital.

Disinfection.—None desired owing to advanced stage of pregnancy of wife.

Visitor's Remarks.—Emphasised the printed instructions and advised *re* window ventilation.

54, D—— STREET.

Name, Age and Occupation.—L—— R——. 30 years. Housewife. Not sub-let.

Duration of Sickness.—Ailing several years. Ill since last confinement, 4 months ago. Has had several miscarriages.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean and temperate.

Condition of Premises.—Clean, 4 apartments.

Means of Family.—Husband a labourer, work irregular.

Methods adopted.—Instructions on Phthisis Card are being observed. No expectoration. Clothing and bedding frequently washed. Milk boiled before using. Windows frequently open, but patient is not much out of doors.

Isolation.—Not isolated; no means of fully isolating. Baby, age 4 months, sleeps with mother.

Disinfection.—Declined.

Remarks.—Advised patient as to additional means of ventilating. Patient desirous of admission to Fazakerley Hospital.

54, C—— STREET.

Name, Age and Occupation.—J—— H——. 51 years. Baker.

Duration of Sickness.—Ailing 6 months. Ill 2 weeks.

Family History.—No record of Phthisis.

Habits of Occupiers.—Fair.

Condition of Premises.—Clean, 6 apartments, rather badly lighted.

Means of Family.—Patient a single man, lodging with relatives.

Isolation.—Now removed to Toxteth Hospital.

Remarks.—Left Card of Instructions, and advised in the event of the return home of the patient that the instructions be followed. Sister refused to allow any disinfection.

11, F—— STREET.

Name, Age and Occupation.—J—— S——. 63 years. Painter.

Duration of Sickness.—Ailing 2 years Ill 8 weeks. Confined to bed.

Family History.—Unable to ascertain. Mrs. S—— also confined to bed with Bronchitis.

Habits of Occupiers.—Apparently clean.

Condition of Premises.—4 apartments (2 seen, clean and well lighted).

Means of Family.—Patient unable to work. One son (painter) is out of work. Two daughters earn 10s. and 9s. per week respectively.

Isolation.—Not isolated. Son sleeps with father. Arrangements will be made to provide a separate bedroom.

Methods adopted.—Card of Instructions previously left. Expectoration (profuse) received into iron bucket, which is said to be cleansed daily and Condy's Fluid used. Bedroom window constantly open. Condensed milk used.

Remarks.—Neighbour who was looking after both patients during day time promised to inform Mrs. S—— of Inspector's visit, and to convey his suggestions as to disinfection and disposal of sputum, &c. Will be kept under close observation.

108, E—— STREET.

Name, Age and Occupation.—S—— H——. 19 years. Single. Employed at —— Tobacco Co.'s Works, —— Street.

Duration of Sickness.—Ill 11 weeks. Sickness said to be the result of getting wet.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean and tidy.

Condition of Premises.—Fairly clean. 2 apartments on ground floor. Kitchen used as a shop for matches, soap, sweets, &c.

Means of Family.—Besides the small business, a sister earns 5s. per week.

Methods adopted.—Instructions on Phthisis Card being observed as far as possible. Expectoration received on paper and burnt. Bedding and floors kept clean. Milk boiled before using. Window of bedroom constantly open.

Isolation.—No means of isolation at home.

Disinfection.—Declined.

Remarks.—Patient is being assisted by Messrs. ——, her employers, and has just received an intimation that her application for admission to Delamere Sanatorium has been accepted. She is now awaiting instructions from Matron.

1 in 2 COURT, F—— STREET.

Name, Age and Occupation.—M—— B——. 34 years. Housewife.

Duration of Sickness.— Ailing 1 year. Ill 2 months.

Family History.—No record of Phthisis. Present case attributed to privation and successive colds.

Habits of Occupiers.—Fairly clean.

Condition of Premises.—Fairly clean. 2 apartments (usual court type). Floors and stairs recently washed.

Means of Family.—Very poor. Husband a Barber out of work. Occasional casual labour.

Methods adopted.—Instructions on Phthisis Card and from Dispensary are observed as far as possible. Expectoration received on paper and burnt. Clothing and bedding kept clean. Condensed milk used. Windows have several broken panes, which admit air freely. No direct sunlight.

Isolation.—None possible at home. 3 children sleep with patient.

Remarks.—Only 2 small rooms available for all purposes. Patient appears respectable and striving, but in very ill health.

7 in 2 COURT, R—— HILL.

Name, Age and Occupation.—M—— J——. 16 years. No occupation.

Duration of Sickness. Ill 4 weeks. Had an accident at age of 3 years which resulted in an injury to spine.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean and tidy.

Condition of Premises.—3 apartments. Fairly clean. Walls painted.

Means of Family.—Father a badge porter. Employment uncertain.

Methods adopted.—Instructions on Phthisis Card observed as far as possible. Expectoration received into chamber utensil and then deposited in w.c. Windows frequently open. Clothes and bedding kept clean. Milk boiled before using.

Isolation.—Not isolated. Occupies bed with sister 14 years old. No means of isolating.

Remarks.—Advised a more sanitary method of dealing with sputum, and instructed occupier with regard to improved window ventilation.

73, H—— STREET.

Name, Age and Occupation.—A—— C——. 30 years. Housewife. Came from Belfast.

Duration of Sickness.—Ailing several years. Ill 2 months.

Family History.—Brother and sister died from Phthisis. Another sister apparently consumptive.

Habits of Occupiers.—Clean.

Condition of Premises.—Clean, well lighted and ventilated. Six apartments.

Means of Family.—Apparently in good circumstances. Father a Master Carter.

Methods adopted.—Instruction Card left (see Isolation).

Isolation.—Patient is now at her home in Belfast, and is said to be dangerously ill. She was here on a visit to her father in December, and consulted a local doctor. She returned to Belfast 3 weeks ago.

58, K—— STREET.

Name, Age and Occupation.—M—— T——. 39 years. Housewife.

Duration of Sickness.—Ailing 2 years. Ill 2 months. Now deceased.

Family History.—No record of Phthisis.

Habits of Occupiers.—Fairly clean and temperate.

Condition of Premises.—Clean. 3 apartments. House sub-let. 1 room occupied by patient's family.

Means of Family.—Husband a Casual Labourer.

Methods adopted.—Instructions on Phthisis Card were observed as far as possible. Room has been disinfected by staff.

Remarks.—Patient was removed to Mill Road Infirmary and died there.

11, BACK S—— STREET.

Name, Age and Occupation.—M—— F——. 45 years. Housewife.

Duration of Sickness—Ailing 8 months. Ill 14 days. Confined to bed.

Family History.—Father is believed to have died from Phthisis.

Habits of Occupiers.—Fairly clean and temperate.

Condition of Premises.—Clean. 3 apartments. House stripped and cleansed 4 months ago by owner.

Means of Family.—Dependent on husband's earnings as Casual Labourer.

Methods adopted.—Instructions on Phthisis Card and from Dispensary being observed as far as possible. Expectoration (profuse) received into chamber utensil and deposited in w.c. Windows constantly open. Bedding kept clean and frequently changed.

Isolation.—Not isolated. No means of fully isolating.

Remarks.—Patient is alone during day time (children at school). Depends on neighbours for attention and assistance.

12, C—— STREET.

Name, Age and Occupation.—H—— B——. 27 years. Tobacco Worker.

Duration of Sickness.—Hæmorrhage 2 years from exertion. Ill 2 months. Occasionally confined to bed.

Family History. No record of Phthisis.

Habits of Occupiers.—Very clean.

Condition of Premises.—Clean. 6 apartments. Well lighted and ventilated.

Means of Family.—Patient principal support of mother, with slight assistance from a married cousin and one lodger.

Methods adopted.—Instructions of medical attendant being followed. Expectoration (slight) is received on paper and burnt. Milk boiled before using. Windows always open. Occasional out-door exercise.

Isolation.—Patient occupies a separate bedroom.

Disinfection.—Declined.

Remarks.—Applicants for assistance from Walker Fund.

68, UPPER F—— STREET.

Name and Age.—J—— C——. 3½ years.

Duration of Sickness.—Ill 4 months. Previously suffered from Measles. Now confined to house.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean.

Condition of Premises.—7 apartments (4 bedrooms), clean, well lighted.

Means of Family.—Father in constant work.

Methods adopted.—Instructions on Phthisis Card being followed as far as possible, and in a very intelligent manner. Expectoration received on paper and burnt. Clothing and bedding frequently washed, floors clean. Milk boiled before using. Windows constantly open.

Isolation.—Not isolated. Occupies kitchen during day time, and at night sleeps with mother and infant brother. This is the only arrangement possible at present.

Remarks.—Mrs. C—— is endeavouring to have the child removed to hospital, and in that event would have the premises disinfected.

10, K—— S——.

Name, Age and Occupation.—F—— J——. 31 years. Seaman (latterly employed as canal gate-man at Latchford).

Duration of Sickness.—Ailing 2 years. (Out-patient, Consumption Hospital.)

Family History.—No Phthisis in family.

Habits of Occupiers.—Clean and temperate.

Condition of Premises.—10 apartments. Patient occupies 2 rooms. Clean and well lighted.

Means of Family.—Patient the sole support of wife and one child. Is at present unable to work.

Methods adopted.—Instructions on Phthisis Card being carried out as far as possible Expectoration received on paper and burnt. Clothing

and bedding frequently washed. Windows constantly open. Out-door exercise taken. Milk boiled before using.

Isolation.—Not isolated. No means of properly isolating. Wife and child occupy same bed.

Remarks.—Clean and roomy apartments. Patient desirous of Sanatorium treatment.

6, H—— STREET.

Name, Age and Occupation.—W—— D——. 21 years. Labourer.

Duration of Sickness.—Ailing about 2 years.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean and temperate.

Condition of Premises.—Fairly clean. 4 apartments. Cleansed by owner 18 months ago.

Means of Family—Father a Labourer. Good employment.

Methods adopted.—Instruction Card previously left. No expectoration. Clothes and bedding said to be changed frequently. Milk boiled before using. Windows said to be frequently opened. Out-door exercise taken.

Isolation.—Not isolated. Patient sleeps at night in the kitchen, where meals are taken in day time.

Disinfection.—Declined.

Remarks.—Atmosphere in house oppressive. Windows closed at time of visit, owing, it was explained, to the high wind prevailing.

15 CELLAR, D—— STREET.

Name, Age and Occupation.—A—— M——. 50 years. Fruit Hawker.

Duration of Sickness.—Ailing 1 year. Ill in Brownlow Hill Hospital 5 weeks. Came out 3 weeks ago.

Family History.—No record of Phthisis.

Habits of Occupiers.—Fair.

Condition of Premises.—2 cellars (front and back) both used for sleeping (sub-let). Fairly clean. Light and ventilation bad.

Means of Family.—Very poor. No means of support. Widow.

Methods adopted.—No special precautions taken to prevent the spread of infection. Patient does not admit the nature of the disease and is inclined to be careless, and not over clean in person and clothing. No expectoration.

Isolation.—Patient said to occupy the back cellar alone, but at time of visit a boy was asleep there.

Remarks.—Before entering Hospital patient resided at 82, L—— Street, and on coming out she came to this address. There is no bedding or furniture, only a sofa. Floors bare, and not over clean. Advised return to Hospital and stricter cleanliness in premises.

107, B—— STREET.

Name, Age and Occupation.—J—— C——. 24 years. Labourer.

Duration of Sickness.—Ailing 2 years. Left Brownlow Hill Hospital 10 days ago. Now at work.

Family History.—Mother died of Phthisis.

Habits of Occupiers.—Fairly clean. Temperate.

Condition of Premises—3 apartments. Sub-let house.

Means of Family.—Casual labour. Wife employed at bag works.

Methods adopted.—Instruction Card previously left. Very little expectoration, which is said to be burnt. Windows frequently open. Bedding said to be washed frequently. Condensed milk used.

Isolation.—No means of providing separate accommodation.

Disinfection.—Declined.

Remarks.—Instructed chief tenant as to the necessity for care and cleanliness.

8, S—— STREET.

Name, Age and Occupation.—C—— K——. 20 years. No occupation.

Duration of Sickness. Ailing 4 years. Ill 2 months.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean.

Condition of Premises.—6 apartments and cellar kitchen. Clean. Well lighted and ventilated.

Means of Family.—Apparently comfortably off.

Methods adopted.—Instructions from Consumption Hospital being followed. Expectoration received on paper and burnt. Milk boiled before using. Strict cleanliness observed in clothing and bedding. Window of bedroom constantly open. Out-door exercise taken.

Isolation. Separate bedroom. Not isolated in day time.

Disinfection.—None required.

Remarks.—Patient was an inmate of Consumption Hospital up to 4 weeks ago and remains an out-patient. Discharged much improved in health.

41, B—— STREET.

Name, Age and Occupation.—E—— A——. 16 years. Tailoress.

Duration of Sickness.—Ailing 14 months. Ill 2 months. Confined to house.

Family History.—No record of Phthisis. Patient is said to have suffered up to quite recently from Tapeworm.

Habits of Occupiers.—Fairly clean.

Condition of Premises.—6 apartments. Fairly clean. Coal business carried on in cellar.

Means of Family.—Step-father carries on business.

Methods adopted.—Instruction Card previously left. Patient is attending Consumption Hospital weekly. Expectoration received on paper and burnt. Milk from R——'s Dairy—not boiled before use. Windows frequently opened. Cleanliness observed.

Isolation.—Separate bedroom. Not isolated during day time.

Remarks.—Advised additional ventilation of bedroom by means of Hincke's bird ventilator and instructed occupier how to construct and fix same, which he proceeded to do.

17, O—— STREET.

Name, Age and Occupation.—J—— B——. 48 years. Ex-Policeman. now Caretaker of Club.

Duration of Sickness.—Ailing 14 months. Influenza 12 months ago.

Family History.—No record of Phthisis. One daughter delicate.

Habits of Occupiers.—Very clean. Temperate.

Condition of Premises.—Premises a branch of —— Association. Patient and family occupy 5 apartments on 2nd floor. Clean and airy.

Means of Family.—Police Pension and Wages as Caretaker.

Isolation.—Patient has just been removed to Consumption Hospital.

Methods adopted.—Instructions on Phthisis Card and from Dr. C—— are observed. Expectoration received into cup and burnt. Windows constantly open. Scrupulous cleanliness observed.

Disinfection.—On the advice of Inspector, Mrs. B—— agreed to have bedroom disinfected. This has now been done by staff.

Remarks.—An objectionable feature of patient's occupation was the daily cleansing of a number of metal spittoons from the Club smoke-room.

98, E—— STREET.

Name, Age and Occupation.—T—— P——. 25 years. Window Cleaner.

Duration of Sickness.—Ailing 2 years. Ill 2 months.

Family History.—No record of Phthisis. One sister suffering from a cold.

Habits of Occupiers.—Clean. Temperate.

Condition of Premises.—6 apartments. Clean and well ventilated.

Means of Family.—Father a Carter for Health Committee.

Methods adopted.—Instructions on Phthisis Card (previously left) are followed as far as possible. Expectoration received into a cup containing carbolic acid and then deposited into w.c. Clothing and bedding washed weekly. Milk boiled before using. Windows constantly open. Outdoor exercise taken.

Isolation.—Separate bedroom (in parlour). Not isolated in day time.

Disinfection.—A post-card has been left for disinfection of room when patient is admitted to Hospital, of which the parents are desirous.

Remarks.—A large family in the house, although the regulations as to cubic air space do not appear to be infringed.

36, R—— STREET.

Name, Age and Occupation.—J—— H——. 41 years. Stonemason.

Duration of Sickness.—Ill 12 weeks. Has suffered from what he calls a "Stonemason's chest" for several years.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean. Temperate.

Condition of Premises.—6 apartments. Clean and well lighted.

Means of Family.—Patient regularly employed on C—— Works, and expects to return to work shortly.

Methods adopted.—No special precautions taken except cleanliness. Expectoration generally directed into fireplace. Very little out of doors at present. Windows occasionally open.

Isolation.—Not isolated. Difficult to suggest to patient, who does not consider his illness more than a temporary ailment and would probably resent suggestion.

Remarks.—Mrs. H——is aware of the nature of the disease, although she may not mention it to patient. Inspector advised her on leaving as to the precautions which should be taken. Patient has been treated at the Consumption Hospital.

120, G—— ROAD.

Name, Age and Occupation.—J—— J——. 28 years. Booking Clerk.

Duration of Sickness.—Ailing 2 years Said to be recovered.

Family History.—No record of Phthisis.

Habits of Occupiers.—Clean. Temperate.

Condition of Premises.—6 apartments. Clean. Well lighted. Walls of patient's bedroom coloured—no paper on.

Means of Family.—Patient has not ceased to follow his employment.

Methods adopted.—Instructions of medical attendant carried out. Strict cleanliness, and attention to thorough ventilation. Milk boiled before using. No expectoration.

Isolation.—None.

Disinfection.—Declined.

Remarks.—Inspector was informed that patient's weight had increased in 12 months from 8 stone to 11 stone 6 lbs.

1, A—— STREET.

Name, Age and Occupation.—Mrs. L—— C——. 40 years. Housewife.

Duration of Sickness.—Ailing about 2 years. Attributes present condition to 8 years' privation owing to lack of employment for her husband.

Family History.—No Phthisis on record.

Habits of Occupiers.—Very clean. Temperate.

Condition of Premises—6 apartments. Sub-let house. Clean. Well lighted.

Means of Family.—Husband now in regular work. Portion of house sub-let.

Methods adopted.—No special precautions beyond cleanliness and open window. Out-door exercise taken. There is no expectoration. Patient has read Instruction Card and noted the advice therein.

Isolation.—Not isolated. No means of isolating.

Disinfection.—Declined.

Remarks.—Very clean people. Patient believes she is suffering from general weakness owing to being run down.

1, E—— STREET.

Name, Age and Occupation.—H—— B——. 33 years. Publican.

Duration of Sickness.—About nine months. Ill 14 days. Now in Consumption Hospital.

Family History.—Brother died from Phthisis.

Habits of Occupiers.—Clean. Temperate.

Condition of Premises.—Clean. 8 apartments. Well lighted.

Means of Family.—Supported by the business.

Methods adopted.—Instructions on Phthisis Card being observed. Slight expectoration, either burnt or deposited in w.c. Clothing and bedding clean. Milk boiled before using. Window of bedroom always open.

Isolation.—Now in Hospital. Could be isolated at home.

Disinfection.—Declined.

Remarks.—Family fully aware of the necessity for care in home treatment.

8, B—— STREET.

Name, Age and Occupation.—D—— C——. 28 years. Employed at Oil Cake Mills.

Duration of Sickness.—Ailing 3 years. Ill 9 months. Confined to bed.

Family History.—Both parents died from Phthisis.

Habits of Occupiers. Fairly clean. Temperate.

Condition of Premises.—4 apartments. Cleansed recently by owner.

Means of Family.—Receiving 12s. per week sick pay.

Methods adopted.—Instruction Card previously left and directions observed as far as possible. Expectoration received into cup and burnt. Windows occasionally opened. Clothing, bedding and floors kept clean. Condensed milk used.

Isolation.—Patient occupies a separate bedroom shared only by his wife, who attends to him.

Disinfection.—Declined.

Remarks.—Apparently too ill for removal to Hospital.

44, H—— ROAD.

Name, Age and Occupation.—Mrs. J—— L——. 56 years. Housewife.

Duration of Sickness.—Ailing 2 years. Ill 7 months. Confined to bed.

Family History.—No record of Phthisis in patient's family. Several cases have occurred in husband's family.

Habits of Occupiers.—Clean. Temperate.

Condition of Premises.—6 apartments. Clean. Well lighted.

Means of Family.—Apparently comfortable.

Methods adopted.—Instruction Card previously left. Dr. D—— in attendance. Expectoration (profuse) received into special cup with disinfectant and then deposited in w.c. Milk boiled before using. Windows constantly open. Clothing and bedding frequently changed.

Isolation.—Separate bedroom—shared only by husband.

Disinfection.—Declined.

Remarks.—Previous to 2 years ago patient enjoyed good health. Two years ago, while on a visit to Wales, she states that she occupied a bed said to have been previously occupied by a consumptive who died there. Ever since the patient has been ailing.

39, D—— STREET.

Name, Age and Occupation.—M—— H——. 45 years. Charwoman.

Duration of Illness.—Ailing 5 years. Said to be recovering. Dr. A—— attending.

Family History.—No record of Phthisis.

Habits of Occupiers.—Fairly clean.

Condition of Premises.—4 apartments. Clean. Sub-let.

Means of Family.—Patient a widow, supports herself and two children, ages 12 and 14 years.

Methods adopted.—Instruction Card previously left. Very little expectoration. Windows frequently open. Condensed milk used. Cleanliness of person and clothing observed. Little out-door exercise taken.

Isolation.—No means of isolation. Children kept in same room, but in separate bed.

Disinfection.—Declined.

Remarks.—Patient states that she is gaining weight and is much improved in health.

55, E—— A——.

Name, Age and Occupation.—Mrs. B—— E——. 35 years. Housewife.

Duration of Sickness.—Ailing 5 years. Ill 3 months. Dr. C—— attending.

Family History.—A sister died from Phthisis.

Habits of Occupiers.—Very clean and temperate.

Condition of Premises.—Very clean. 6 apartments. Well lighted.

Means of Family.—Apparently comfortably off.

Methods adopted.—Instructions on Phthisis Card and directions of medical attendant strictly observed. Expectoration received into special cup containing a disinfectant, and then burnt or deposited in w.c. Windows constantly open. Out-door exercise daily. Milk boiled before using. Cleanliness of clothing and bedding maintained.

Isolation.—Patient is not isolated. Husband shares bed, but the child, aged 5 years, sleeps in separate room.

Disinfection.—Declined.

Remarks.—Patient is fully aware of the nature of the disease and its treatment. Every precaution is taken to prevent the spread of infection.

Of 475 consecutive cases notified, 110 were duplicates, 287 of the patients were males and 188 females, 38 referred to glandular or joint disease, 72 were already in hospital, and 92 were under treatment at home. In 36 instances death had occurred.

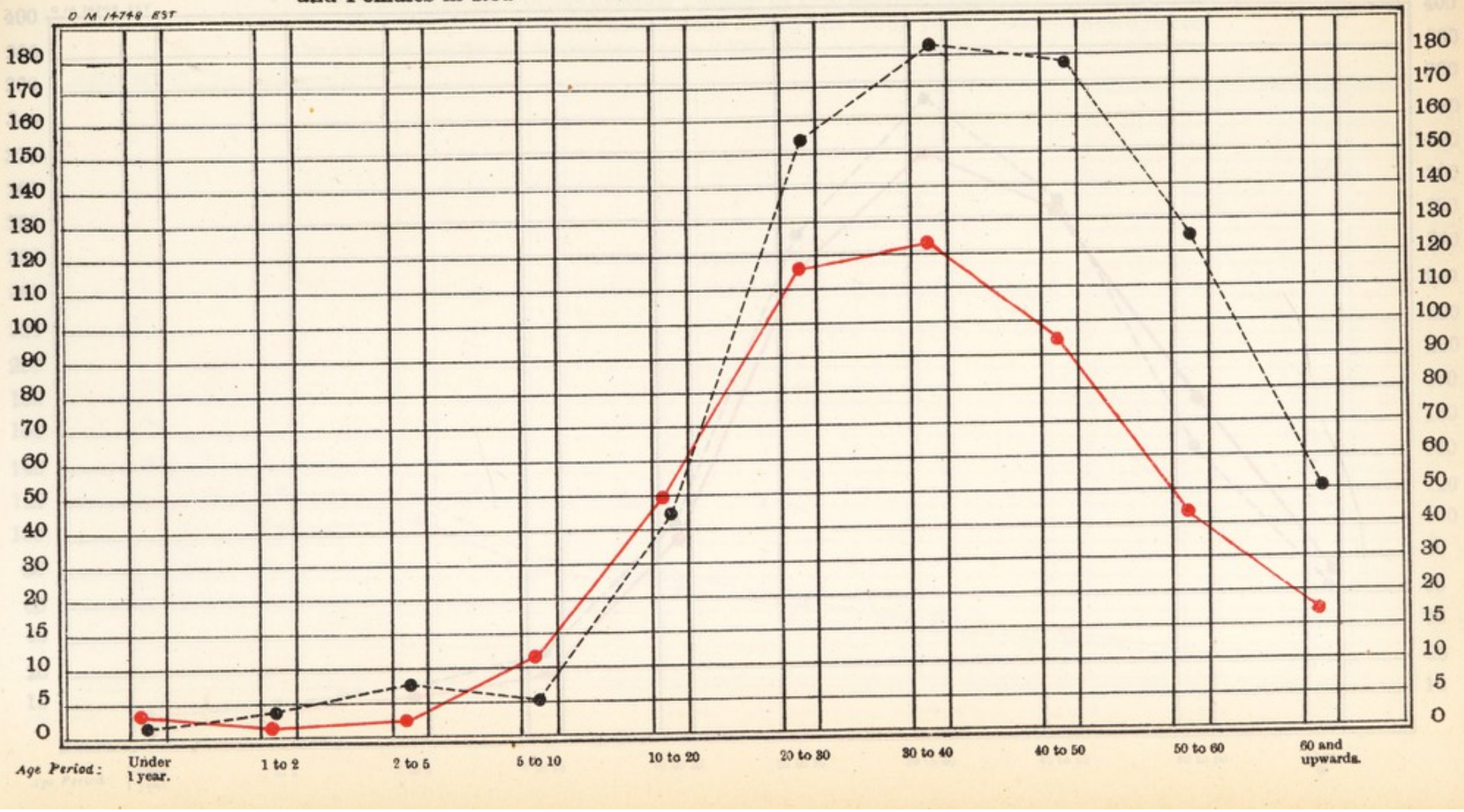
Although the majority of the patients were natives of Liverpool, 37 of them belonged to other towns, and a few were foreigners.

Twenty-one of the patients were living in insanitary court houses and cellars, whilst 63 occupied apartments in sublet houses. Fifty occupied dwellings not sublet containing four or more rooms. In 17 instances the habits of the patients were dirty and intemperate, whilst in 37 more there was a history of intemperance, although the habits of the person were fairly good.

There appears to be a general desire on the part of the patients themselves, where the nature of the disease is admitted to carry out the instructions given them, but there are numerous examples in which the surroundings prevent the instructions being effectively followed.

CITY OF LIVERPOOL.

Comparative view of the total number of Deaths from Phthsis at ten different age periods during the year 1908, Males being shown in Black dotted line. and Females in Red.



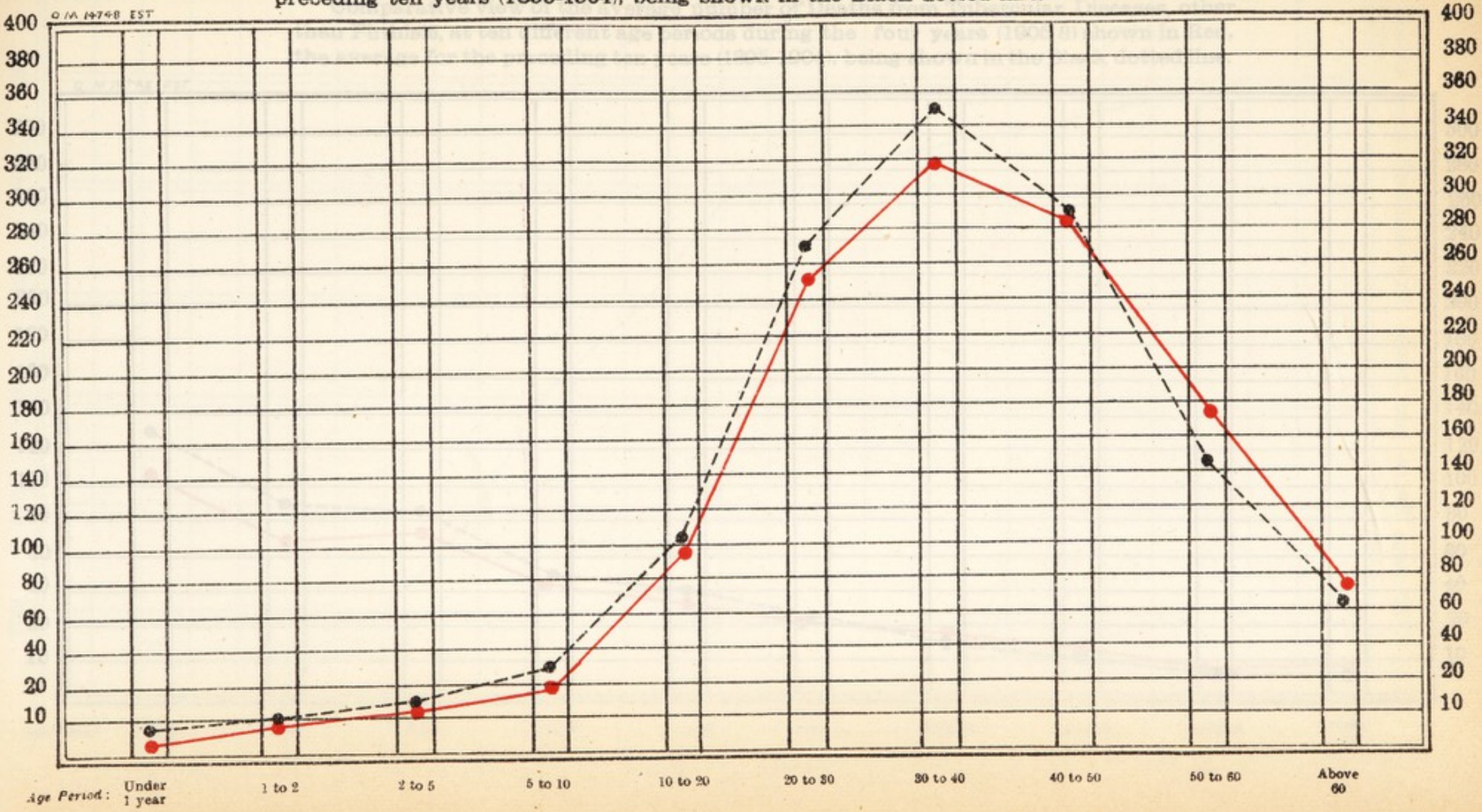
Comparative View of the Total Number of Persons in Each Year 1808, Males being shown in Black dotted line.

different age periods during the Year 1808, Males being shown in Black dotted line.

and Females in Red.

CITY OF LIVERPOOL.

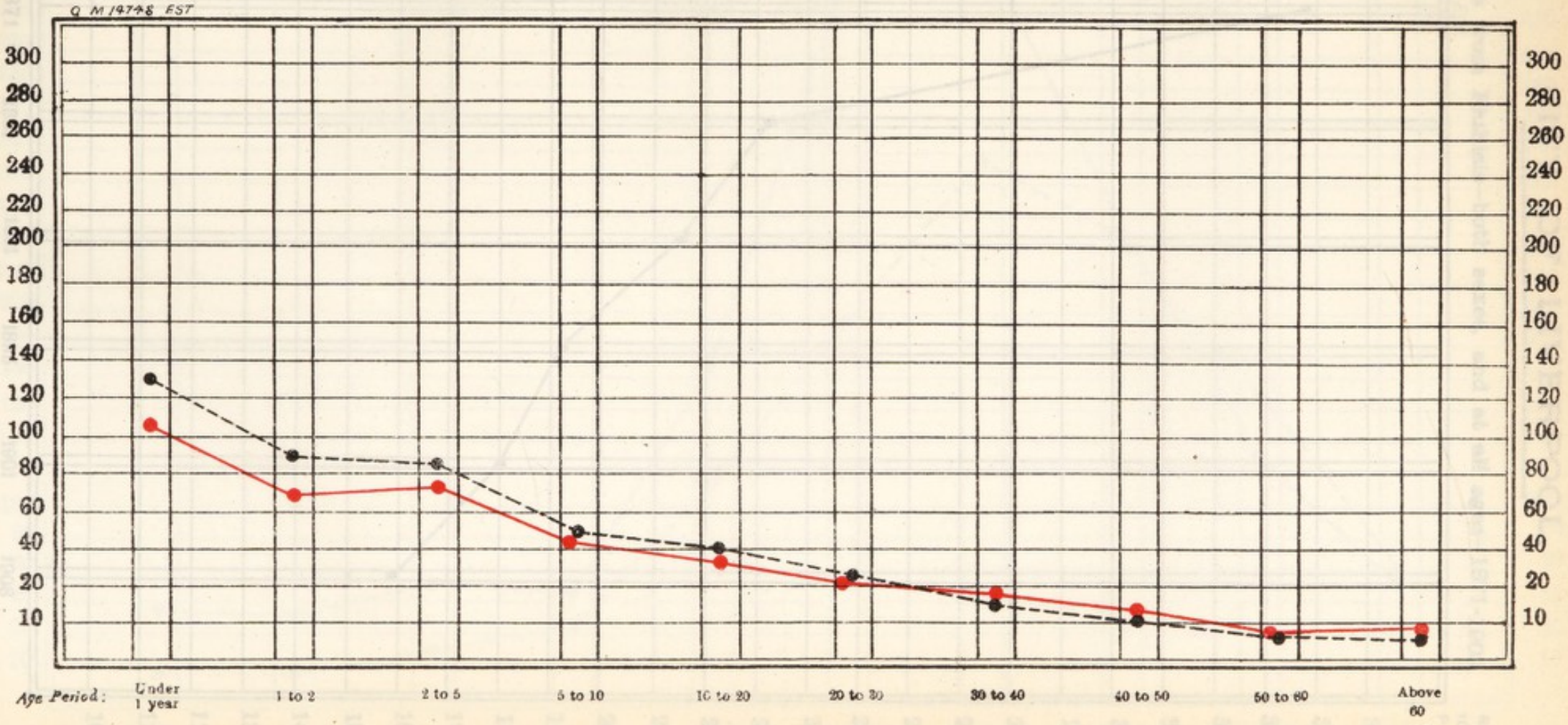
Comparative view of the average number of Deaths from Phthsis at ten different age periods during the four years (1905-1908), shown in Red, the average for the preceding ten years (1895-1904), being shown in the Black dotted line.



Comparative view of the average number of deaths from Cholera in Bengal to the average number of deaths from the same disease in the Black Coated Fever years (1869-1894), during the first two years of the Black Coated Fever (1869-1870), and during the first two years of the Cholera epidemic (1892-1893).

CITY OF LIVERPOOL.

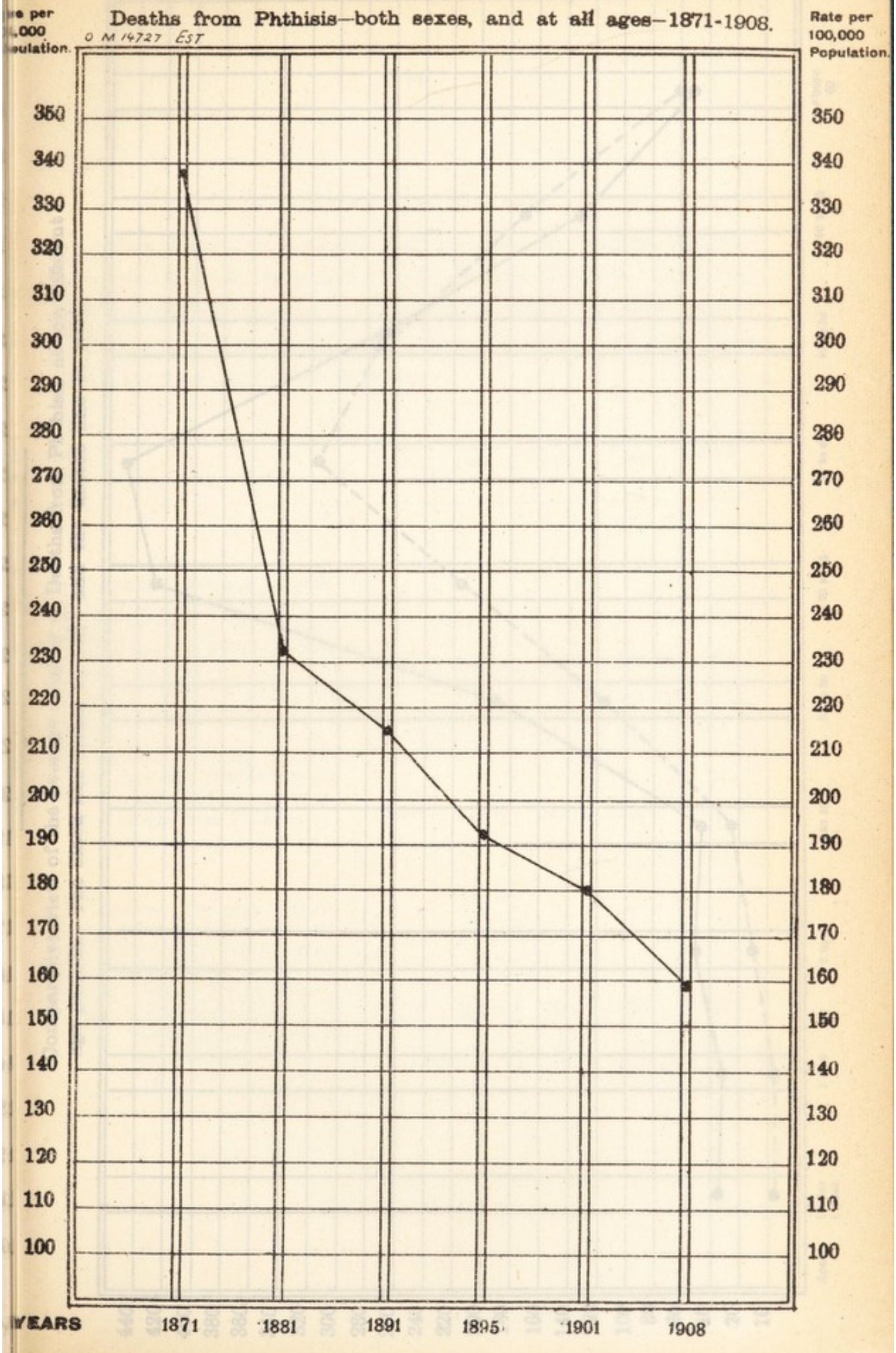
Comparative view of the average number of Deaths from Tubercular Diseases, other than Phthisis, at ten different age periods during the four years (1905-8) shown in Red, the average for the preceding ten years (1895-1904), being shown in the Black dotted line.

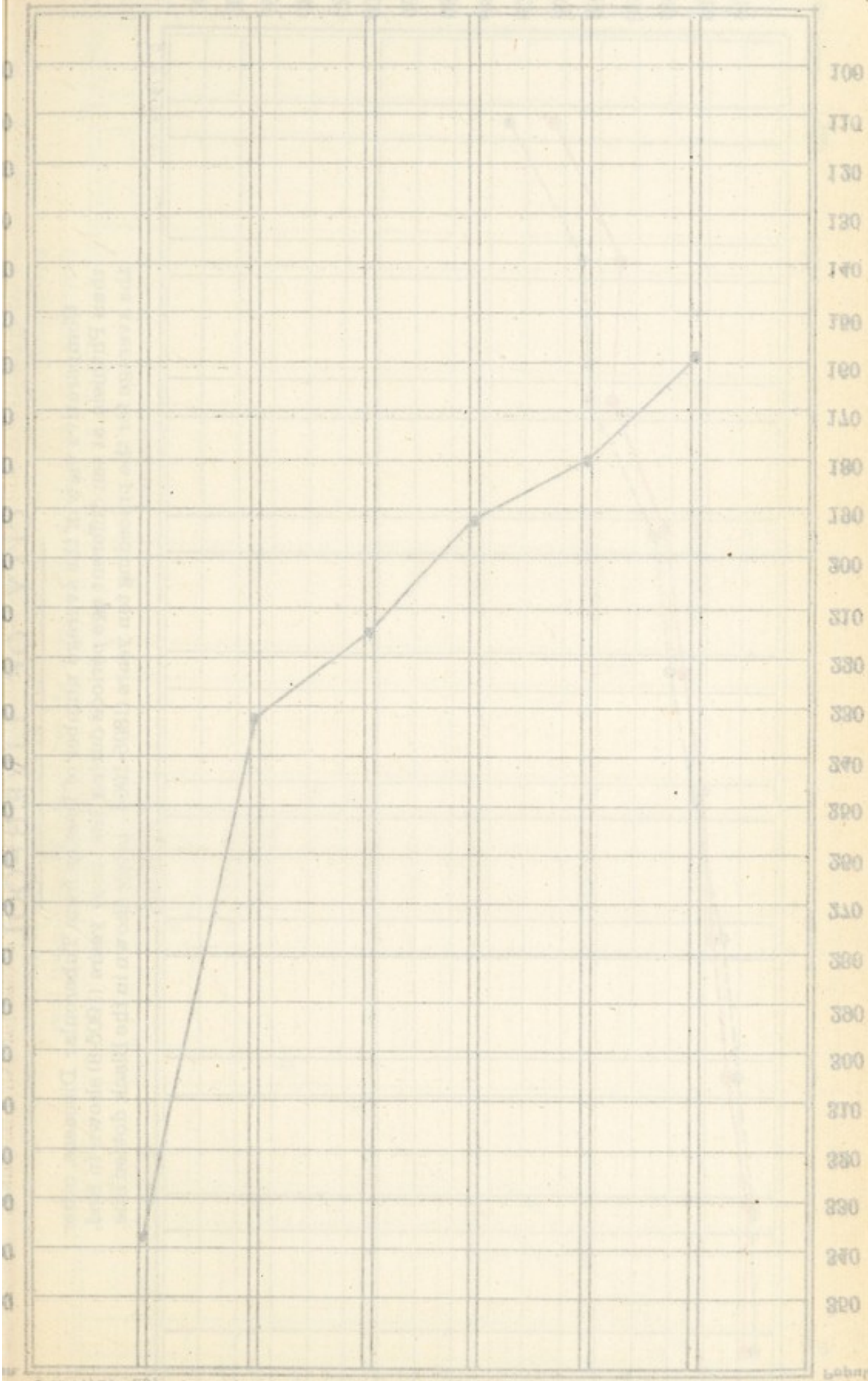


CITY OF LIVERPOOL.

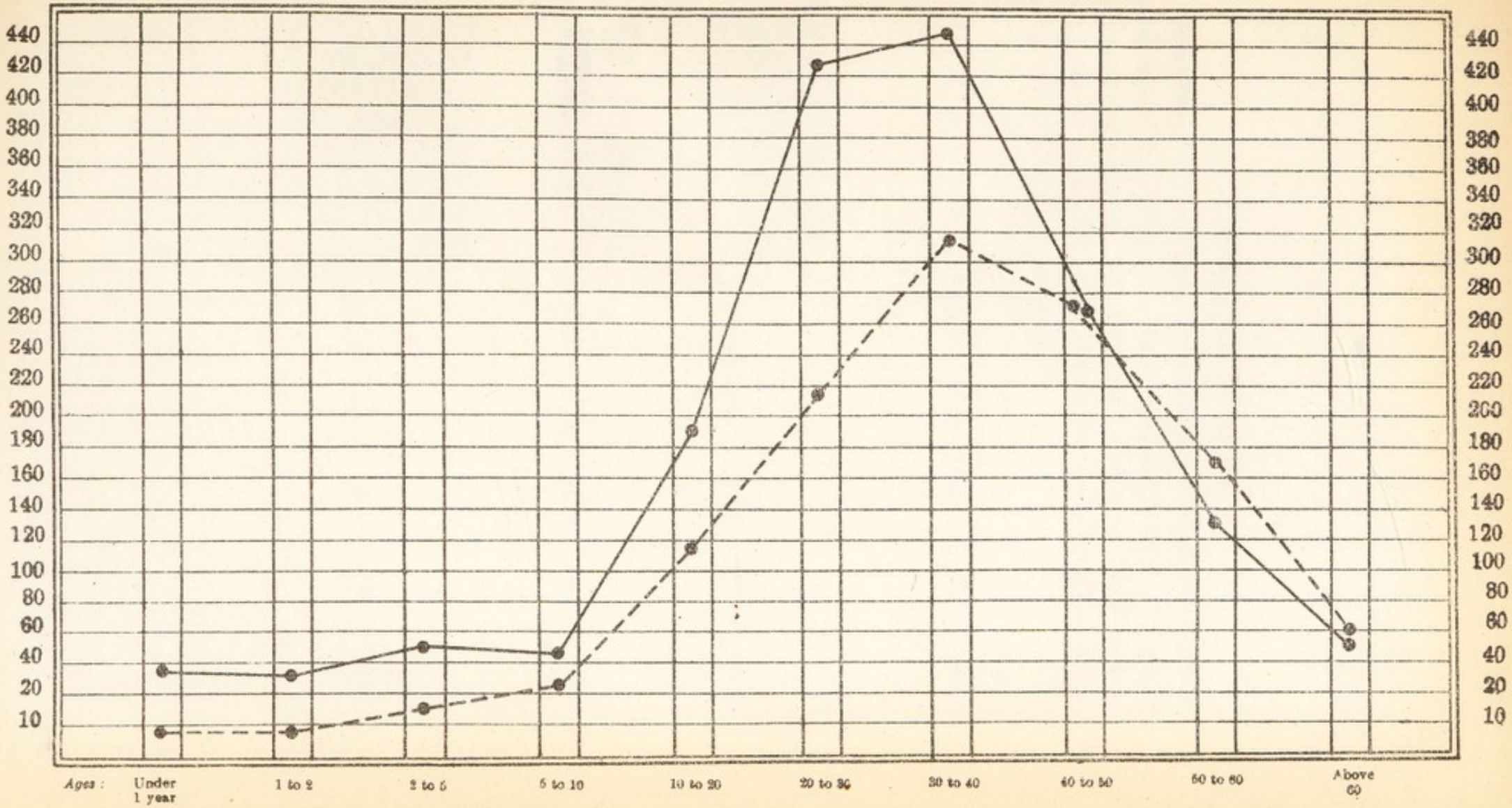
Comparative view of the average number of Deaths from Tubercular Diseases, other than Phthisis, at ten different age periods during four years (1895-8) shown in Red, the average for the preceding ten years (1885-1894), being shown in the Black dotted line.

CITY OF LIVERPOOL.





Comparative view of the average number of Deaths from Phthisis at ten different age periods. The black line refers to 1871 and the dotted line to 1907.



TUBERCULAR DISEASES.

These diseases are associated with insanitary surroundings, and with conditions of life which tend to lower the general health. Improved sanitation is accompanied by a diminished mortality from these forms of disease, as the accompanying table, which relates to the last four decades and the three years 1906-8, indicates :—

	1866 to 1875.	1876 to 1885.	1886 to 1895.	1896 to 1905.	1906-8.
Annual Average Death-rate per 100,000 of the population, at all ages, from all forms of Tuberculosis	430·8	349·8	309·8	247·2	218·8
Annual Average Death-rate per 100,000 of the population above 5 years of age from Phthisis ...	362·8	278·6	244·4	203·8	184·4
Annual Average Death-rate per 100,000 of the population below 5 years of age from : Tabes Mesenterica Hydrocephalus ... Other forms of Tuberculosis.	637·1	597·3	539·1	339·5	267·7

The Group of Tubercular Diseases includes Phthisis, Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis. They occasioned 1,670 deaths in the City of Liverpool during the year 1908.

DEATHS FROM PHTHISIS.

The number of deaths from Phthisis during the year was 1,288. The number of deaths during each of the preceding ten years, 1898-1907, has been as follows:—1,209, 1,313, 1,287, 1,302 1,347, 1,258, 1,282, 1,245 1,235 and 1,183.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	20	16	26	16	16	6	20	12	82	50	132
Exchange	23	9	37	16	20	10	17	4	97	39	136
Abercromby	28	8	18	2	12	7	12	5	70	22	92
Everton	64	27	33	18	22	17	28	25	147	87	234
Kirkdale	24	11	19	10	11	8	12	7	66	36	102
West Derby (West)	20	14	11	13	16	10	24	15	71	52	123
Toxteth	24	16	17	15	19	10	17	16	77	57	134
Walton	11	11	10	7	7	6	17	10	45	34	79
West Derby (East)	15	4	10	8	11	6	11	11	47	29	76
Wavertree	6	6	3	5	5	4	5	2	19	17	36
Sefton Park ... . (late Toxteth Rural)	7	1	2	3	4	5	2	2	15	11	26
Garston	1	3	4	5	2	3	3	5	10	16	26
Fazakerley	...	1	...	...	...	2	3	1	3	4	7
Hospitals (Residences outside the City)	24	7	14	3	13	5	14	5	65	20	85
City	267	134	204	121	158	99	185	120	814	474	1,288

Ages at Death.

Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
4	5	10	17	31	74	289	326	280	180	72	1288

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

DEATHS FROM OTHER TUBERCULAR DISEASES.

Viz.:—Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis.

DISTRICTS.	Tabes Mesenterica.		Hydrocephalus.		Other forms of Tuberculosis		Year.		
	M.	F.	M.	F.	M.	F.	M.	F.	T.
Scotland	5	5	3	4	7	7	15	16	31
Exchange	1	4	6	7	9	6	16	17	33
Abercromby...	2	1	2	4	2	3	6	8	14
Everton	7	8	13	6	20	16	40	30	70
Kirkdale	2	2	4	3	13	8	19	13	32
West Derby (West)	10	6	12	4	12	5	34	15	49
Toxteth	7	8	11	13	9	10	27	31	58
Walton	3	3	6	4	9	4	18	11	29
West Derby (East)	2	1	4	2	5	6	11	9	20
Wavertree	2	3	...	1	3	...	5	4	9
Sefton Park ... ... (late Toxteth Rural)	2	1	1	2	1	1	4	4	8
Garston	...	...	1	3	1	9	2	12	14
Fazakerley...	...	...	...	...	...	2	...	2	2
Hospitals (Residences outside the City)	3	2	...	1	8	7	11	10	21
City	46	44	63	54	99	84	208	182	390

Ages at Death.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
90	69	77	54	19	18	31	12	11	6	3	390

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

NOTIFICATION OF PHTHISIS.

The system of voluntary notification of those cases of consumption in which the services of the Health Department could be of use came into operation on 14th February, 1901, and has been continued with good results.

A special form upon which the notification can be made has been circulated amongst medical men, and in those cases in which the requirements of the Health Committee have been fulfilled, the usual notification fee has been paid. Since the inauguration of the system the number of notifications has been as follows :—

Year.	Males.	Females.	Total.
1901	1148	649	1797
1902	1469	730	2199
1903	1153	721	1874
1904	1068	641	1709
1905	1257	604	1861
1906	1257	662	1919
1907	1446	784	2230

During the year 1908, the cases reported numbered	2,160	
Of this number	115	were duplicates.
Leaving a total of.....	2,045	Cases.
Deaths from the Disease totalled	1,203	
Rooms, Bedding, &c., disinfected in	662	instances.
Bedding, &c., removed for special disinfection in	66	,,

It will be noted that only those cases are notified in which action on the part of the sanitary staff is needed; in many instances, the friends of the patient have themselves carried out disinfection under the guidance of their medical adviser.

Great advantage has attended the admission of patients to the Fazakerley Hospital (see page 277).

The age period at which the greatest number of cases were reported is from 25 years upwards, 1,056 males and 420 females being reported; 239 males and 135 females were reported between the ages of 15 and 25 years.

Total number of Males reported	1,373
Total number of Females reported	672

There were 139 cases of Tuberculosis other than of the lungs reported.

The occupations showing the largest number of cases were as follows:—

Labourers	603	Cases.
Firemen (Marine)	75	,,
Hawkers	39	,,
Seamen	54	,,
Carters	58	,,
Charwomen	37	,,
Domestic Servants	49	,,
Painters and Plumbers	23	,,
Bookkeepers	38	,,
Coal Dealers	22	,,

The following table of information for consumptive people was circulated through appropriate channels:—

1.—Consumption is a preventible disease which is caused by minute living germs, called "tubercle bacilli," which usually enter the body with the air breathed.

2.—The matter which consumptive people cough or spit up contains the germs of the disease in great numbers. If this matter is spat upon the floors, or the walls of any public or private place, or elsewhere, as

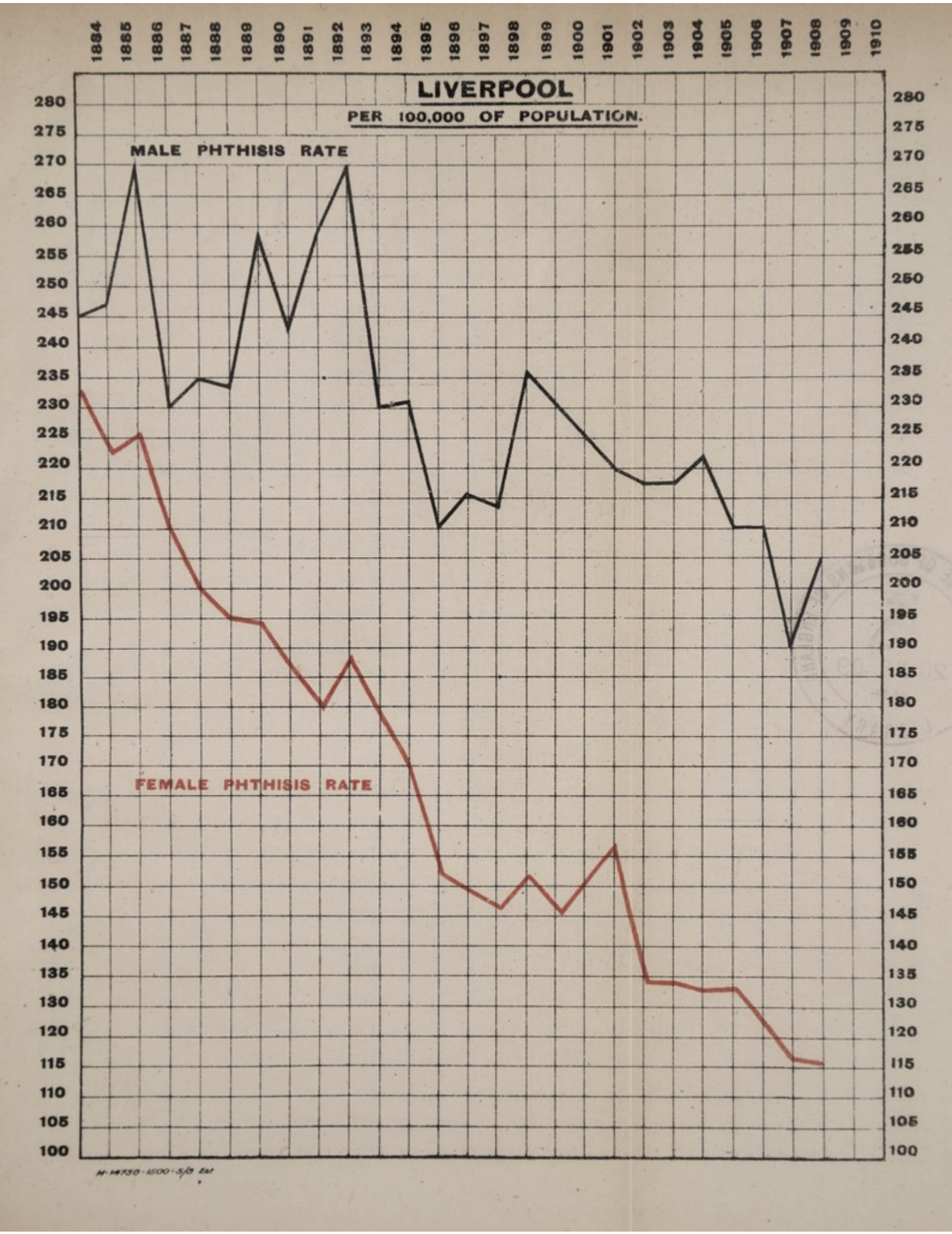
soon as it becomes dry the germs of the disease which it contains are blown about and float in the air, like any other minute particles of dust, and are inhaled by anybody breathing that air: or they may fall upon milk or other food, and gain access to the body with that food. These are the commonest ways in which the seeds of the disease enter the body of a healthy person.

3.—It is dangerous to sleep with or to live in close relationship with a consumptive, unless the patient is careful that what he coughs up is destroyed. A pocket bottle or a cup containing a little water and disinfectant should be used to spit in, so that the matter may not dry, and it should be emptied in the closet (not into the ashpit, or upon the footwalk or the roadway), and carefully washed afterwards with boiling water. If the consumptive prefers to use soft paper, linen or calico cloths or handkerchiefs to spit in, they should be thrown upon the fire and burnt forthwith. He should take care that his hands, face, and clothing do not become soiled with the matter coughed up. He should never swallow the expectoration: it is dangerous. When coughing he should always cover the mouth with the hand and turn the head aside.

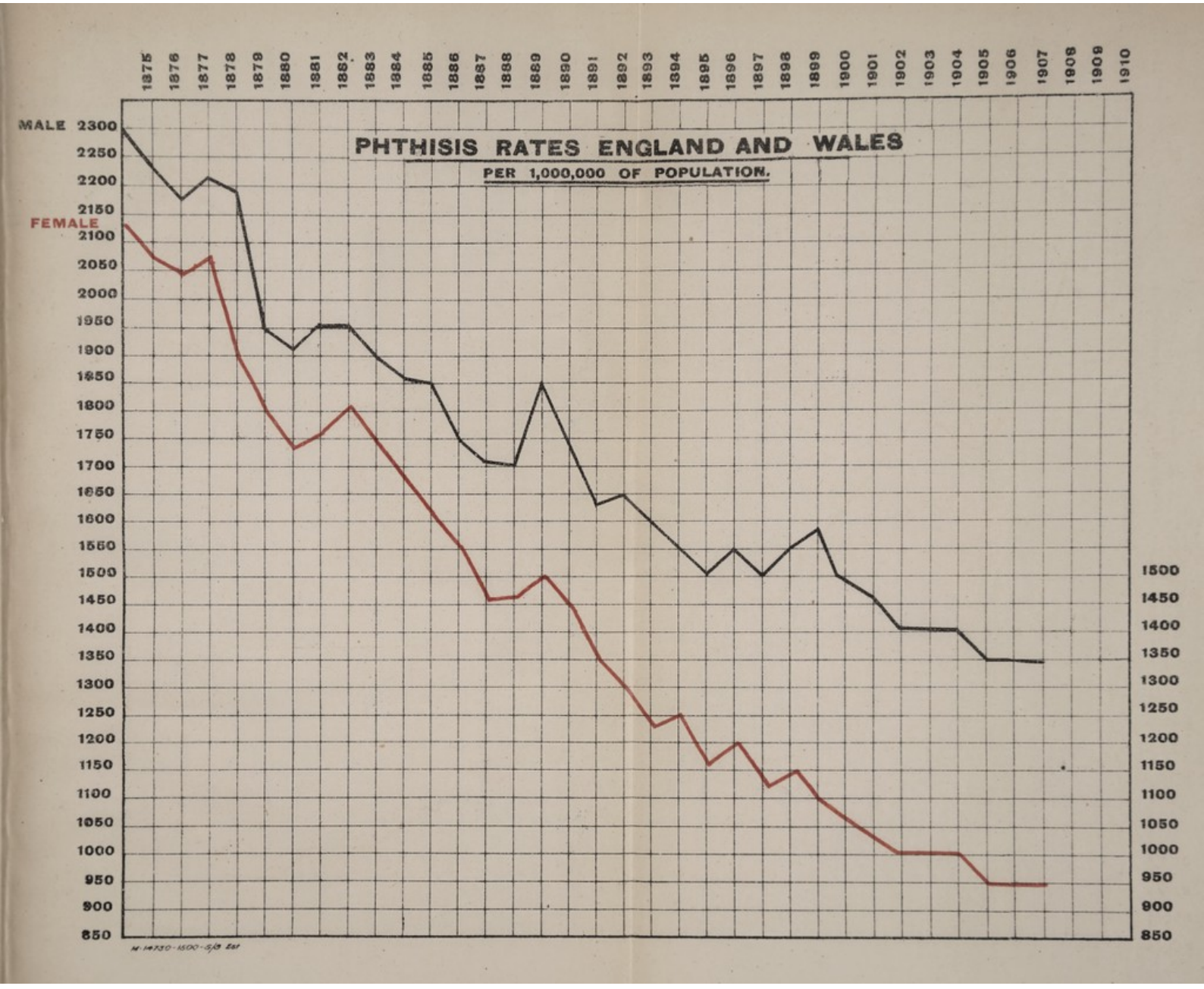
4.—A consumptive should sleep alone; the windows should always be wide open, except when dressing and undressing. The bed-clothing and personal underclothing should be boiled and washed separately from the clothing of other people.

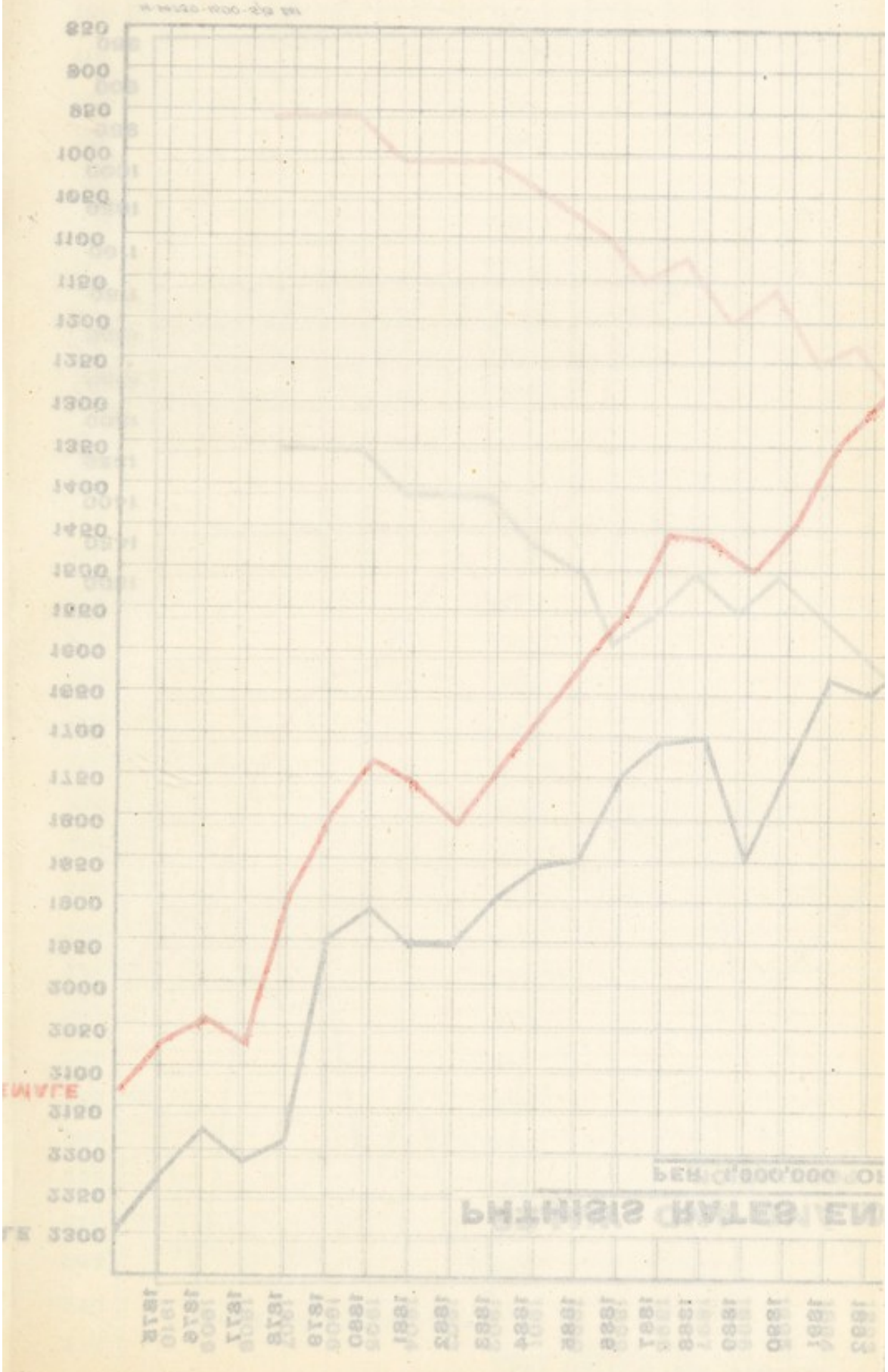
5.—Tubercle bacilli are not only the cause of ordinary consumption of the lungs, but they may also give rise to consumption of the bowels and other parts of the body, and therefore milk and other uncooked food should be carefully protected from the tubercle bacilli. If such food be kept in a place to which a consumptive patient of careless habits has access and who may spit upon the floor, the dry particles of the matter spat up may blow about with dust and find access to milk or other food, and in this way contaminate it. Mothers who are consumptive should not suckle their children.

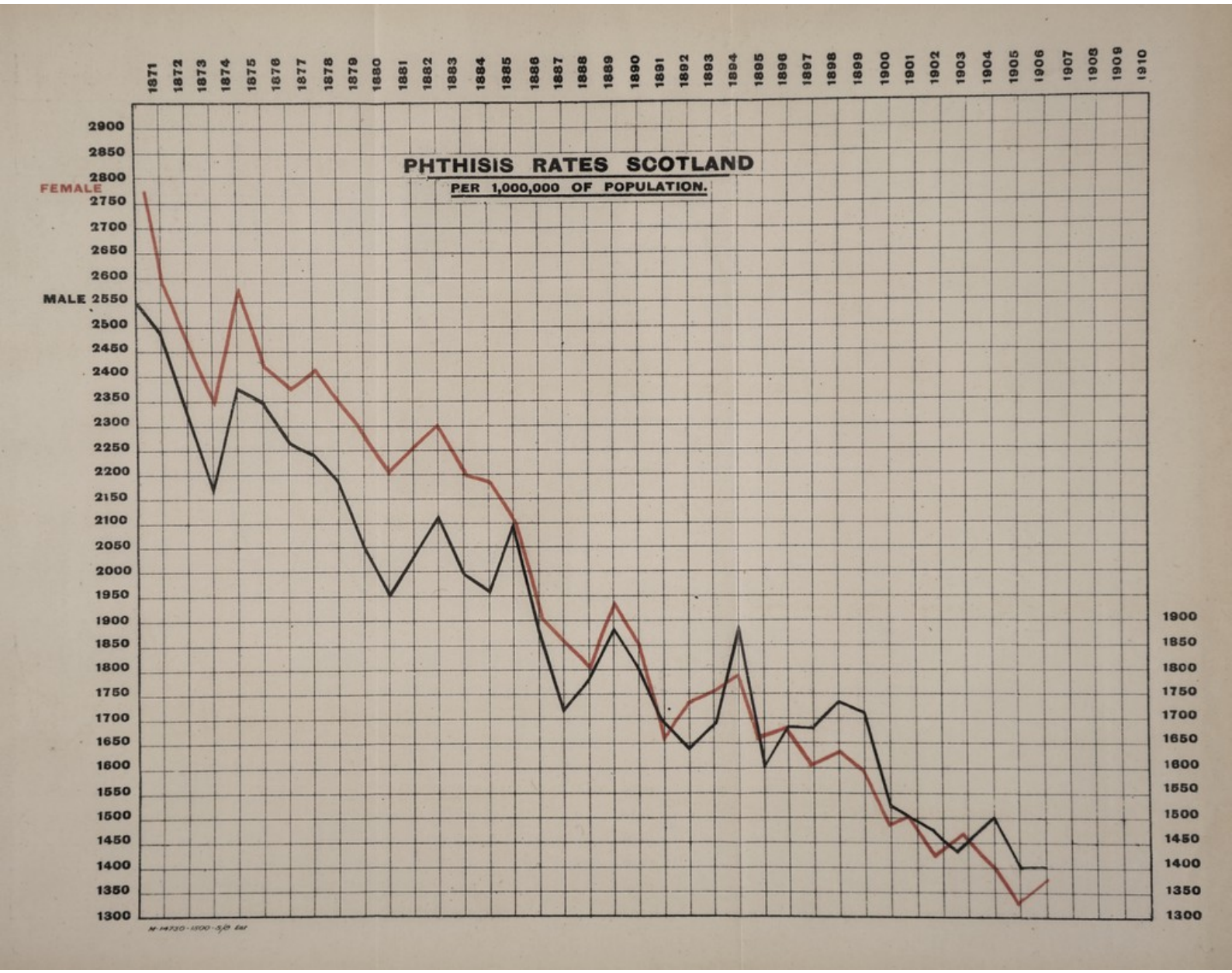
6.—Cows suffer from consumption, and the milk from consumptive cows is liable to contain the tubercle bacilli. Milk had better be boiled for a few seconds unless the consumer is sure that it comes from a healthy cow, and that it has not been exposed to danger of contamination

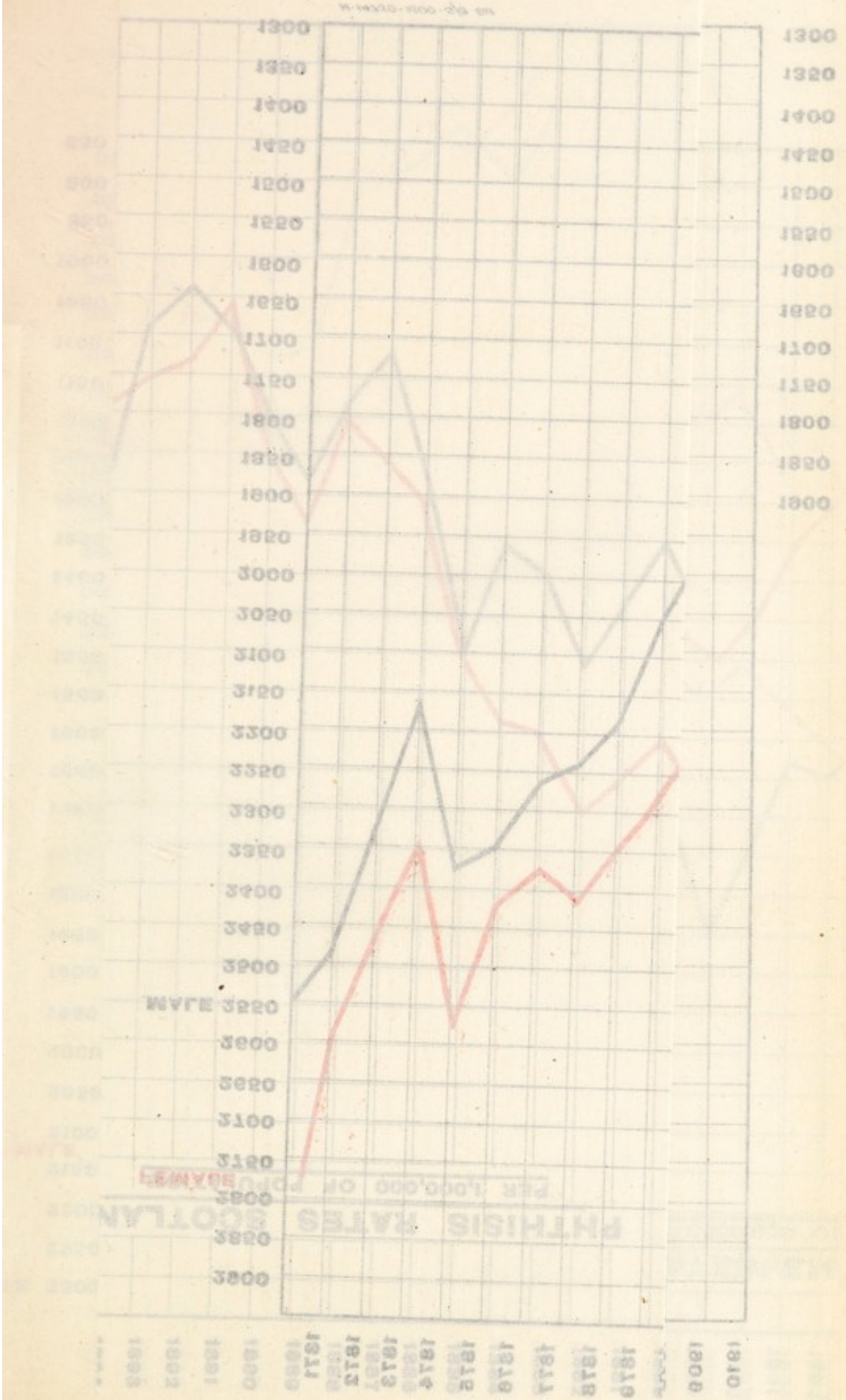

LIVERPOOL
PER 100,000 OF POPULATION.
MALE PHTHISIS RATE
FEMALE PHTHISIS RATE
1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910
280 275 270 265 260 255 250 245 240 235 230 225 220 215 210 205 200 195 190 185 180 175 170 165 160 155 150 145 140 135 130 120 115 110 105 100

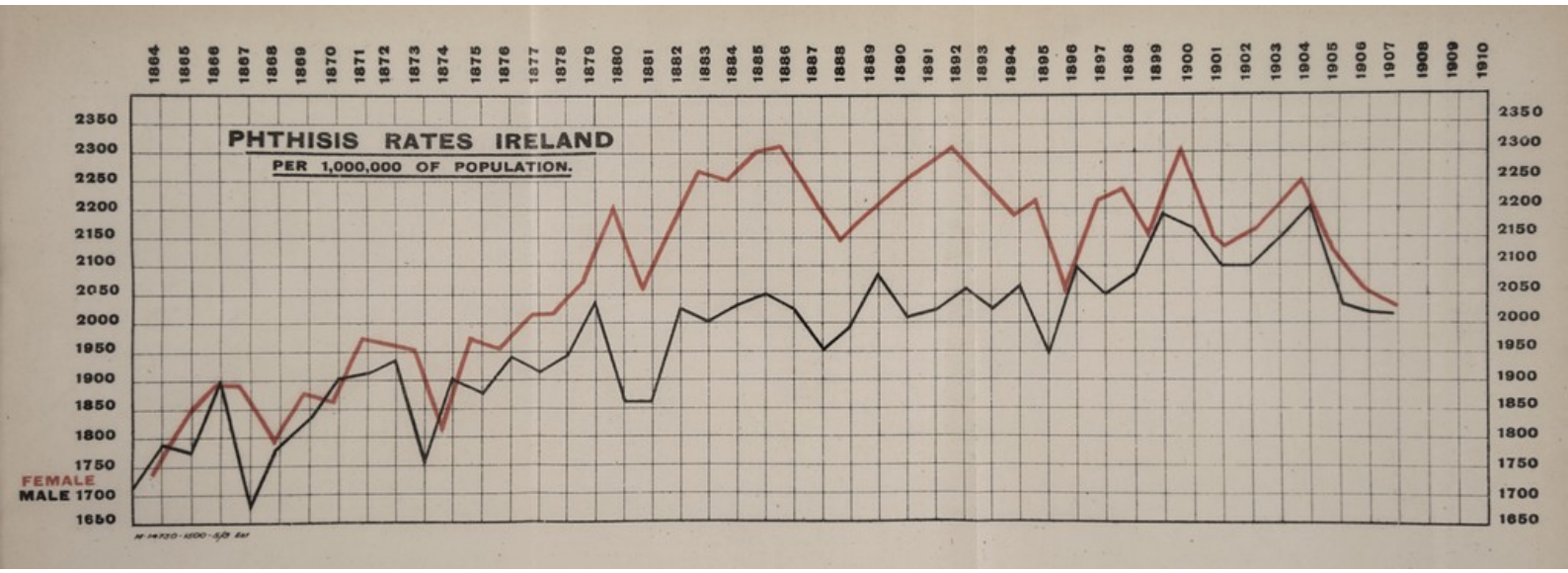
LIVERPOOL
MALE PHTHISIS RATE
FEMALE PHTHISIS RATE

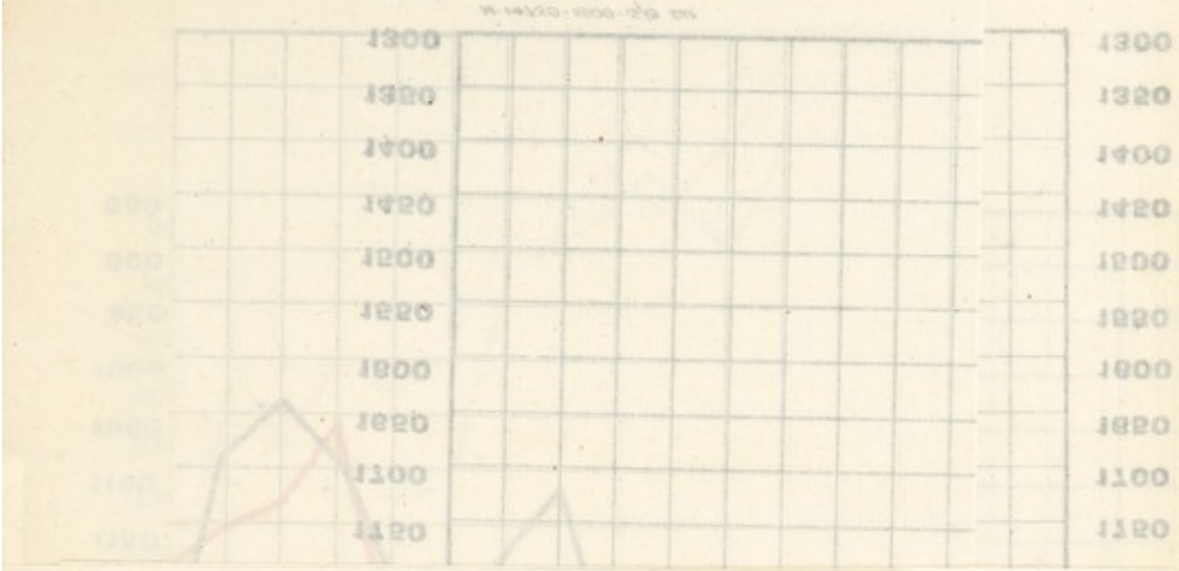

PHTHISIS RATES ENGLAND AND WALES
PER 1,000,000 OF POPULATION.
MALE
FEMALE
1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910
2300 2250 2200 2150 2100 2050 2000 1950 1900 1850 1800 1750 1700 1650 1600 1550 1500 1450 1400 1350 1300 1250 1200 1150 1100 1050 1000 950 900 850
1500 1450 1400 1350 1300 1250 1200 1150 1100 1050 1000 950 900 850

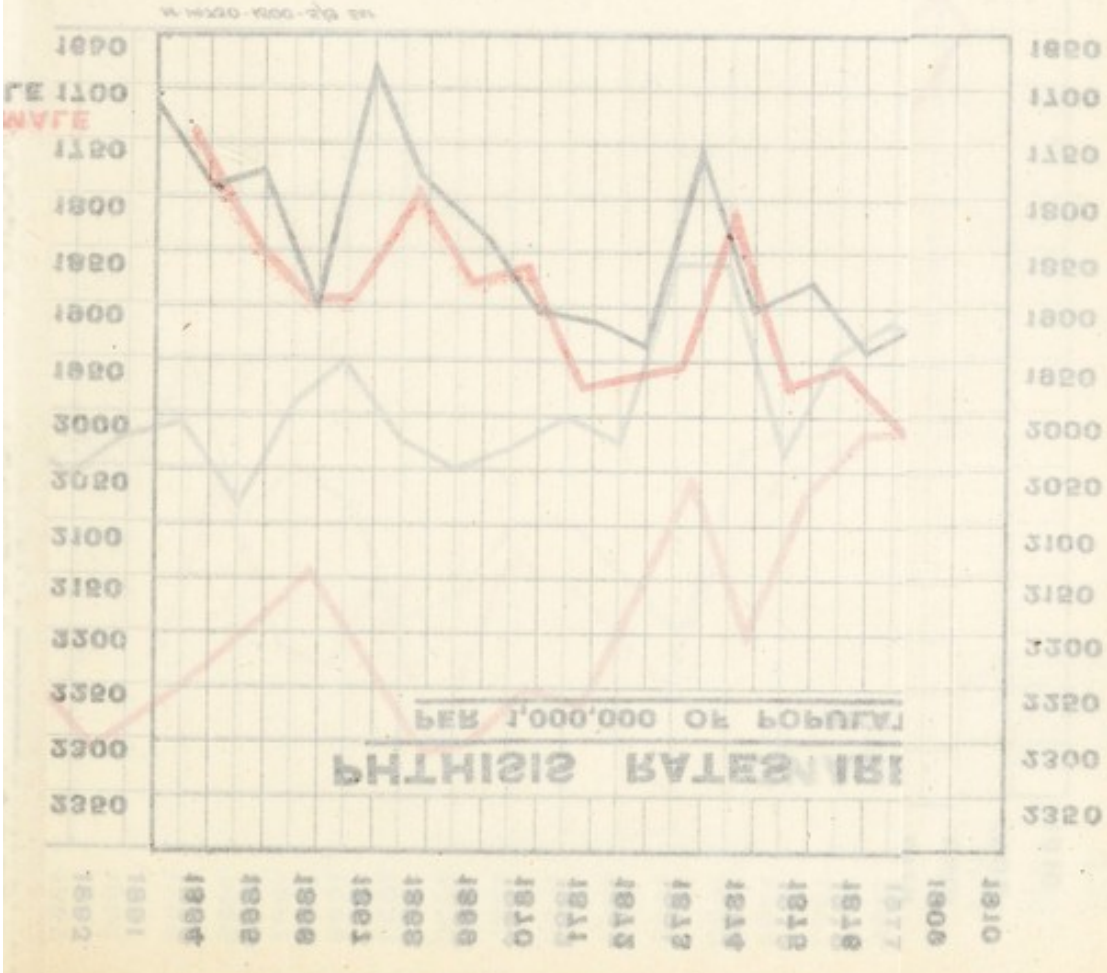



PHTHISIS RATES SCOTLAND
PER 1,000,000 OF POPULATION.
FEMALE
MALE
1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910
2900 2850 2800 2750 2700 2650 2600 2550 2500 2450 2400 2350 2300 2250 2200 2150 2100 2050 2000 1950 1900 1850 1800 1750 1700 1650 1600 1550 1500 1450 1400 1350 1300
1900 1850 1800 1750 1700 1650 1600 1550 1500 1450 1400 1350 1300




PHTHISIS RATES IRELAND
PER 1,000,000 OF POPULATION.
FEMALE
MALE
1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910
2350 2300 2250 2200 2150 2100 2050 2000 1950 1900 1850 1800 1750 1700 1650




PHTHISIS RATES IN
PER 1,000,000 OF POPULAT

afterwards. These precautions should be specially observed in the case of children.

7.—Consumption is a disease from which large numbers of patients recover if the rooms they occupy are always kept thoroughly well-ventilated, and clean and free from dust.

8.—Sunshine and fresh air destroy tubercle bacilli, and are the principal curative agents; the more sunshine and fresh air the consumptive patient gets, the more likely is he to recover.

9.—Sanitary improvements which have been carried out in the city with a view to admit more pure air and sunshine to dwellings, and to lessen overcrowding, have reduced the mortality from consumption to about one-half of what it was 30 years ago, but, to reduce it still further, the people must help themselves by keeping their rooms clean and well-ventilated, and by maintaining strictly temperate habits.

10.—Rooms that have been occupied by consumptives should be thoroughly disinfected and cleansed before they are again occupied, and the carpets and bedding should be disinfected; in fact, so far as these precautions are concerned, consumption may be regarded in precisely the same light as any other infectious disease.

11.—The Officers of the Health Department are always ready to do the necessary disinfection, both of rooms and of clothing, free of charge.

The accompanying diagrams illustrate the changes which have been taking place during the last twenty to thirty years:—

(*a*) In the City of Liverpool;

(*b*) In England and Wales;

(*c*) In Scotland;

(*d*) In Ireland.

It will be seen that with the exception of Ireland, the decline has been marked in both sexes, but much more so in the female than in the male.

ALCOHOLISM.

The diminution in the number of deaths from excessive drinking which has been apparent during the last few years has been still more marked in 1908. This in itself is a very gratifying feature, and is in part no doubt due to the diminution of the facilities for obtaining drink in the poorer parts of the City, parts which a glance at the map facing page will show to still have a very unnecessary number of licensed premises.

The total number of deaths certified by Coroner's Juries to be attributed to the result of excessive drinking is 112.

Seventy-one of these deaths occurred in the first six months of the year and 41 in the second six months. It is not improbable, therefore, that the great distress in the City which made itself apparent in the latter part of the year may have exercised some influence on this matter.

Satisfactory as this decline is, it is still deplorable enough.

In addition to the foregoing, six men and four women were fatally injured whilst under the influence of drink; one man hanged himself whilst in a state of intoxication; one man hanged himself whilst in a state of temporary insanity brought on by excessive drinking, and one man killed himself by jumping from a window whilst suffering from delirium tremens caused by excessive drinking. In the case of two deaths resulting from personal violence, both the persons who inflicted the injuries and the injured persons were under the influence of drink at the time.

"Alcoholism" is certified to be the cause of death of four men and one woman.

It has been erroneously claimed that alcohol is a necessary part of the food of the people. Those who put forward a claim of this kind have not perhaps considered that the long series of fatalities attending its use is a characteristic from which foods happily are free; indeed, it is inconceivable that means would not be found to restrict the sale of any article of food or of any drug which destroys an average of (extending over a great number of years) three lives a week in this City.

It has many times been pointed out that the number of deaths does not indicate the extent of the mischief caused by excessive drinking.

Perhaps the greatest of all harm is done by the squandering away of money on an article which, whilst unfitting the drinker for work, degrades him to a condition of poverty which means want of the necessaries of life to those dependent upon him. Many thousands of instances of cruelty to children are known to occur annually in this City owing to the neglect and brutality of parents usually reduced to poverty through wasting their money on drink. These children would be without clothes and without food were it not for the action of the charitable. That it is drink, and drink alone, which is so largely responsible for the indescribable misery of so many children is shown by the generally admitted circumstance that it is only when those responsible for them are under the influence of drink that the children are actually ill-used, and that bodily injury is inflicted upon them. The views of the Liverpool Society for the Prevention of Cruelty to Children have found expression in the following paragraph:—

> "It is difficult, satisfactorily, to account for the misery with which the Society comes in contact—particularly as of late this question has met with considerably divided opinion—but this Committee are unable to alter theirs, which has not been arrived at hastily, but is the outcome of years of experience, that the main and besetting cause is intemperance. They are fully alive to the fact that if all drunkenness ceased, degradation would still exist; but, with increased temperance and abstinence, the majority of the crime with which this Society deals would be lacking."

The City Council have already given expression to their concurrence with a resolution of the Health Committee in the following terms:—

> "That the Health Committee begs respectfully to express its sense of the benefits resulting from the action of the Licensing Justices in diminishing the number of public-houses in the congested parts of the City; but the Committee desires respectfully to call the attention of the Licensing Justices to the injurious effects, poverty, sickness, and bad economic conditions, and loss inflicted upon the community by the continuance of the excessive and unnecessary number of public-houses in those areas which are specially dealt with by the Health Committee and by the Housing Committee of the City Council."

There was no dissentient in the City Council to the views which the resolution expresses, but if any person doubted the accuracy of the conclusions of the City Council on the subject, such doubt would very readily be set at rest by taking note in any district where public-houses are excessive and unnecessary of the condition of the squalid, dishevelled women who leave the public-houses, and he will receive further enlightenment if he notes in the case of one or two, or more if he wishes, what sort of homes they go to, what is the condition of the home, and what the condition of the children. He will then be perfectly satisfied that the evils of intemperance are not limited to the person consuming the liquor.

As a result of following to their homes very neglected children, who unfortunately are still so frequently to be seen about the streets, the Female Staff in many instances have been enabled to deal effectively with this form of neglect, which almost invariably is associated with the drunkenness of the mother.

A comparison of three Districts in regard to the general death-rate, the proportion of deaths due to excessive drinking, and the proportion of deaths which take place in Workhouses and Hospitals, shows what proportion of the population in times of sickness are dependent upon charitable aid.

	Population.	General Death-rate per 1,000.	Proportion of Deaths in Workhouses and Hospitals.	Proportion of Deaths due to Excessive Drinking.
Exchange	40,775	28·8	52·7 per cent.	1·8 per cent.
Walton	64,053	13·5	25·9 ,,	0·4 ,,
Wavertree	39,150	12·1	20·4 ,,	0·2 ,,

Some further aspects of the general question are alluded to on page 18 of last year's Report, where the question of infant mortality is briefly dealt with, and the maps facing page 272, showing the insanitary areas now being dealt with by the Housing Committee, deserve careful attention.

The circumstance that many of the broken down and unfortunate classes from various localities drift into the lodging-houses in Exchange District, and so pass on into Workhouses, will not be lost sight of.

CANCER.

The following table indicates the number of deaths from Cancer during the last five years, and the part of the body affected :—

DISEASE.	1904.			1905.			1906.			1907.			1908.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Cancer of Stomach and Bowels..	111	96	207	139	115	254	114	121	235	111	116	227	150	132	282
,, Liver	21	40	61	26	34	60	34	48	82	28	50	78	23	37	60
,, Urinary and Generative Organs	16	96	112	18	107	125	22	100	122	19	125	144	21	111	132
,, Breast	...	44	44	...	54	54	...	66	66	...	68	68	1	51	52
,, Head and Face	19	5	24	21	6	27	24	13	37	30	6	36	29	9	38
,, Tongue, Neck, and Throat.....	48	5	53	51	13	64	62	20	82	75	18	93	51	6	57
,, Other parts of the Body	16	16	32	15	6	21	20	14	34	10	9	19	14	7	21
,, Parts not specified ...	4	9	13	8	7	15	6	14	20	7	12	19	9	7	16
Total	235	311	546	278	342	620	282	396	678	280	404	684	298	360	658

FEVER AND DIARRHŒA MORTALITY.

The following table shows the death-rate per 1,000 of the population, and the number of deaths from Fever and Diarrhœa during the last twenty-six years:—

Year.	*Death Rate per 1,000 of Population from all causes.	Deaths from Diarrhœa.	Deaths from Fever.		
			Typhus.	Typhoid.	Continued.
1883	27·7	541	408	108	24
1884	26·6	841	77	112	16
1885	25·6	422	71	95	16
1886	26·1	781	47	140	11
1887	26·4	619	52	130	12
1888	23·1	431	32	125	4
1889	24·9	575	45	167	...
1890	27·5	468	23	99	1
1891	26·8	330	37	92	2
1892	24·4	415	18	111	2
1893	26·7	866	44	221	5
1894	23·1	503	50	248	7
†1895	24·8	1,108	24	197	4
1896	21·4	851	36	166	2
1897	22·8	1,482	23	145	5
1898	22·2	956	19	148	5
1899	24·1	1,158	13	182	4
1900	23·1	900	11	120	4
1901	21·6	1,269	14	154	3
‡1902	21·6	611	25	190	2
1903	19·8	657	57	108	...
1904	21·9	1,785	25	82	1
§1905	19·2	960	28	49	1
1906	20·2	1,298	8	85	1
1907	18·3	544	18	92	...
1908	18·5	630	10	73	2

* Calculated on corrected population as per Census Returns of 1891 and 1901.
† City Boundaries extended. ‡ Garston included. § Fazakerley included.

Mr. Plummer, M.A., F.R.A.S., Astronomer to the Mersey Docks and Harbour Board, has kindly furnished the following tables relating to Meteorological observations made by him at the Liverpool Observatory, Bidston:—

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

Latitude 53° 24′ 5″ N. Longitude 3° 4′ 20″ W.

Height above the Mean Level of the Sea 202 feet.

1908.	Barometer. Mean.	Temperature. Mean.	Rainfall.		Mean Monthly Humidity. Complete Saturation equal 100).
			Amount.	No. of days on which ·01 in. or more fell.	
	Inches.	Degrees.	Inches.		
January	30·105	37·6	1·532	15	85
February	30·050	42·2	1·855	20	87
March	29·820	40·3	2·923	20	80
April	29·970	43·8	3·368	13	72
May	29·983	54·6	2·911	19	74
June	30·083	57·1	1·982	10	75
July	29·985	60·1	3·685	14	76
August	29·968	58·3	2·400	17	77
September	29·907	56·3	2·730	15	77
October	30·099	53·9	1·824	14	84
November	29·995	45·8	1·867	15	85
December	29·842	40·2	1·825	18	89

Difference from the Average Quantities observed during the last 40 years.

1908.	Barometer.		Temperature.		Rainfall.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees.	Degrees.	Inches.	Inches.
January	0·170	...	...	1·7	...	0·662
February	0·118	...	1·0	...	0·134	...
March	...	0·072	...	1·9	1·165	...
April	0·072	...	...	3·5	1·757	...
May	0·018	...	2·8	...	0·996	...
June	0.091	...	...	0·4	...	0·048
July	0·038	...	...	0·7	0·999	...
August	0·054	...	...	2·2	...	0·588
September	...	0·042	0·7	...	...	0·176
October	0·227	...	4·3	...	...	1·764
November	0·097	...	2·6	...	...	0·762
December	...	0·032	0·3	...	...	0·749

Observations of Velocity of Wind.

1908.	Average Hourly Velocity for Month.	Maximum Hourly Velocity.	Date.	Minimum Hourly Velocity.	Date.
	Miles.	Miles.		Miles.	
January	19·4	52	Jan. 27	1	January 4, 20.
February	26·0	73	Feb. 22	1	February 2.
March	17·5	54	March 10	1	March 5, 18, 23, 26.
April	16·5	50	April 3	1	April 8, 9, 10, 25.
May	13·7	39	May 8, 18	1	May 2, 13, 19, 21, 23, 28.
June	14·0	38	June 11, 14	1	June 2.
July	13·0	37	July 9, 10	1	July 2, 3, 21, 22, 24, 26, [27, 29.
August	16·8	41	Aug. 11, 29, [31	1	August 23.
September	15·0	47	Sept. 1	1	September 12, 21, 24, 27.
October	12·9	31	Oct. 20	1	October 2, 4, 23, 31.
November	18·2	77	Nov. 22	1	November 13.
December	17·4	50	Dec. 11	1	December 6.

SANITARY ADMINISTRATION.

SANITARY ADMINISTRATION.

For the purpose of carrying out the requirements of the various Sanitary Acts of Parliament and the Orders, Bye-laws, and Regulations made thereunder, the following staff of the Medical Officer of Health's Department has been employed during the year:—

*Chief Sanitary Inspector	1
*Deputy Chief Sanitary Inspector	1
*Prosecuting Sanitary Inspectors	7
*Inspectors for General Sanitary Purposes	31
* ,, of Ashpits and Ashbins	2
*Female Inspectors for General Sanitary Purposes ...	20
*‖ ,, ,, of Midwives	1
* ,, Superintendent of Sterilized Milk Depôts ...	1
,, Assistants at Sterilized Milk Depôts ...	22
§Inspectors of Meat and Animals	4
¶ ,, under the Diseases of Animals Act ...	6
** ,, of Fish and Fruit	4
* ,, under the Sale of Food and Drugs Act ...	3
* ,, ,, Workshop and Shop Hours Acts	3
† ,, , Smoke	3
,, , Removing Patients and Infected Bedding and Disinfecting Infected Houses, &c.	11
*‡Superintendents of Ambulance and Disinfecting Staff	1
* ,, Disinfecting Apparatus	2
* ,, Wall Paper Stripping Staff ...	1
Men engaged on ,, ,, ,, ,, ...	18
*Chief Inspector of Common Lodging and Sub-let Houses	1
***Inspectors of Common Lodging and Sub-let Houses...	15
*Inspector of Canal Boats	1
* ,, Bakehouses	1
*Inspectors of Cowsheds and Milkshops	2
***Notice Servers	3
Clerical Staff	25

In every case Officers are selected for these positions, whose previous training and occupation have been such as to fit them for the special duties they are called upon to discharge Those marked * are required to hold the certificate of the Sanitary Institute of Great Britain or a Certificate equivalent thereto. ‖ Registered midwife, a fully qualified nurse, and holds diploma of London Obstetrical Society. § Butchers by trade; candidates are submitted to practical examination upon the lines

which have been indicated in the Report of the Royal Commission upon Tuberculosis. ¶ Five are also Port Sanitary Inspectors. ** Fishmongers by trade. † Hold Marine Engineers' First Class Certificates. ‡ Holds Certificate of St. John Ambulance Association. *** Several hold the Certificate of the Sanitary Institute, or an equivalent thereto.

At the commencement of the year Chief Inspector Dowzard and several others of the staff applied for and obtained superannuation after prolonged periods of service.

Consequent upon these retirements, Mr. D. B. Cowden was appointed Chief Inspector of Nuisances, and a number of promotions and additions to the staff took place, the additions being necessitated partly by retirements and partly by additional obligations being imposed upon the Committee's staff by various Acts of Parliament.

The number of occasions upon which the advice and assistance of the Health Department have been sought has increased during the year. These applications fluctuate slightly year by year; in 1904 they were 9,218; in 1905, 8,365; in 1906, 8,703; in 1907, 8,279; and in 1908, 8,575. As in former years, complaint in many cases was made to the Health Department only after repeated requests addressed to the persons causing or allowing the nuisance, or to agents or owners of property, had been ignored. Generally speaking, these complaints arise in connection with jerry-built property. A great deal of the time of the inspectors was taken up by these special examinations.

Requests to examine important public buildings and offices, as well as highly-rented dwelling-houses, have again been very numerous, and the application of the smoke test has in many cases brought to light defects in the drainage system. Requests for the application of the smoke test are frequent, and involve considerable time in carrying out.

What is well known as "insanitary property" is gradually diminishing in the city. A good deal of it, however, still remains, necessitating the frequent service of notices to abate nuisances. Owners would do well to demolish property such as this, and erect suitable habitations in their place. By thus co-operating with the Housing Committee, they would rid themselves of the annoyance of receiving notices, and remove centres of disease and degradation from the city.

The following table shows the number of nuisances found by routine inspection or on complaints, and the character of the proceedings taken to abate the nuisances, and the results:—

		1907.	1908.
Number of Complaints made by Inhabitants		8,279	8,575
,, Nuisances discovered on above complaints...		12,709	12,256
,, ,, ,, ,, house to house inspection ...		73,379	78,771
Total Nuisances ...		86,088	91,027
,, Notices issued	Owners	39,481	43,495
	Occupiers	1,579	1,599
Total Notices ...		41,060	45,094
,, Notes to Complainants		1,900	1,992
,, ,, sent to comply with notices		5,641	6,336
,, Re-inspections of Nuisances		161,719	150,652
,, Nuisances abated on re-inspection		83,378	81,660
,, Visits to Premises under observation ...		786	1,078
,, Incidental calls		50,276	36,150
,, Informations laid for nuisances		470	376
,, Fined		140	41
,, of Magistrates' Orders		246	203
,, Acquitted or Withdrawn		84	132
Amount of Fines and Costs . .		£123 19 3	£51 6 6

The nuisances dealt with comprise mainly—defective and choked drains, sink waste pipes and spouts; defective roofs; defective flagging and paving; defective water-closet basins, putty joints, walls, floors, seats and doors; defective or dirty cisterns; defective supply pipes; insufficient or no supply of water; defective chimney flues; offensive matter, animals or poultry on premises; also dirty floors, &c.

NUISANCE FROM STEAM WHISTLES.

Complaints were from time to time received of the nuisance and injury to health caused by the unnecessary blowing of steam whistles in various parts of the City, both in regard to unnecessary frequency as well as unnecessary duration. In all instances the persons causing this nuisance desisted from it when their attention was called to the provisions of the Steam Whistles Act, which gives the Health Committee full power to suppress this nuisance. The modified use of steam whistles for business purposes which the Health Committee have authorised meets every reasonable requirement.

WATER GAS.

The gas supplied to the City still contains very excessive quantities of carbon monoxide, indicating that water gas is largely supplied to certain districts. A deputation of the Health Committee waited upon the Gas Company, and the matter was discussed between the two bodies.

It is obvious, in view of the excessively poisonous character of some of the gas supplied, that every facility should be given to householders to have their gas fittings tested by the Corporation Lighting Department, and in the event of any officers of the Corporation Lighting Department finding that his advice in regard to the prevention of the escape of gas through defective fittings is not receiving attention, proceedings under the Public Health Act might be taken against the owners of the property.

WATER CLOSET CONVERSIONS AND NOTICES TO PROVIDE ADEQUATE ACCOMMODATION.

During previous years the Health Committee have taken action with a view to cause proper water-closet accommodation to be provided for insanitary houses situated in courts.

The result of the action, in many instances, led to the owners approaching the Housing Committee, and a mutual scheme resulted in great improvement to the houses in question. In the majority of instances, however, it is obvious that the only remedy is demolition, and the action of the Housing Committee is tending to effect this end.

Demolition, however, proceeds but slowly, and it is to be regretted that greater progress has not been made in the direction alluded to, notwithstanding that all of the necessities of the case are not met by such action.

	1907.	1908.
No. of Privies reported for conversion	2	6
„ converted	10	5
Notices	2	2
„ „ to provide separate accommodation for court houses	195	401

IMPROVED SANITARY ASHBINS SUBSTITUTED FOR ASHPITS, AND ASHPITS ABOLISHED.

	1907.	1908.
No. of defective Ashpits reported	2,917	3,376
„ Notices	3,159	4,124
„ Improved Sanitary Ashbins supplied	6,178	8,493
„ Ashpits abolished	3,443	4,854

The number of improved sanitary ash-bins supplied in place of old insanitary ashpits is 8,493. In addition, approximately, 1,072 improved bins have been placed in new property, making a total of 9,565 bins.

REFERENCES FROM OTHER DEPARTMENTS.

	1907.	1908.
Received from the Education Department ...	22,073	22,211
,, City Engineer	9,794	9,234
,, Water Engineer	2,477	2,005
,, Lodging-house Inspectors..	7,964	7,303

The references from the Education Department relate to school children said to be suffering from measles, whooping cough, ringworm, skin disease, neglect, &c.

The references from the other Departments mainly comprise insanitary conditions discovered by officers belonging to those departments, but with which it is not within their province to deal. The City Engineer's Department continues to report defects in private drains brought to light during the process of systematic flushing.

REFERENCES TO OTHER DEPARTMENTS.

A considerable number of conditions ascertained by the Sanitary Staff which did not come within the scope of the Health Department were referred to other departments to be dealt with :—

	1907.	1908.
Referred to City Engineer	10,310	10,598
, Building Surveyor...	2,074	2,164
,, Water Engineer	6,579	6,945
,, Education Department	25,095	26,261

The references to the Water Engineer comprise mainly, defective fittings, resulting in waste of water; also cases in which the supply was insufficient, owing to various causes.

References to the Education Department chiefly relate to children from infected houses who are attending school, or who are suffering from ringworm, ophthalmia, &c. (See page 163.)

HOUSE TO HOUSE VISITATION.

The following table indicates the results of the systematic house-to-house visitation by the District Male Staff:—

	1907.	1908.
Number of Inspections of Street Houses	46,223	49,633
,, Street Houses found Clean...	44,717	48,141
,, Apartments in Street Houses Examined	234,662	245,508
,, Inspections of Court Houses	3,029	3,611
,, Court Houses found Clean...	2,712	3,341
,, Apartments in Court Houses Examined ...	9,583	10,857
Total Number of Houses Examined	49,252	53,244

DIRTY HOUSES.

	1907.	1908.
Number of Dirty Street Houses Inspected	1,506	1,492
,, ,, Court ,, ,, ...	317	270
,, ,, Cellars Inspected	264	318
,, ,, Houses and Cellars Re-Inspected ...	1,886	1,782
,, ,, Houses and Cellars cleansed on Re-inspection	892	871
,, Notices to Owners to Cleanse Dirty Houses	2,100	2,040
,, Notices to Occupiers to Cleanse Dirty Houses	122	73
,, Notices to Owners to Whitewash Exteriors of Court Houses	1,109	1,054
,, Informations...	31	30
,, Fined	23	22
,, Acquitted or Withdrawn	8	8
Amount of Fines and Costs ...	£14 16 0	£13 13 6

INFECTED HOUSES.

	1907.	1908.
Number of Infected Street Houses (notified cases) ...	6,015	8,570
,, ,, Court ,, (,, ,,) ...	288	364
,, ,, Cellars (,, ,,) ...	80	69
,, visits to infected Houses and Cellars (notified cases)	8,155	9,462
,, ,, ,, ,, ,, (school cases)	10,980	11,515

EXAMINATION OF CELLARS AND CELLAR DWELLINGS.

	1907.	1908.
Number of Inspections of Street Cellars	11,869	13,118
,, Street Cellars found disused	298	514
,, ,, ,, used for Lumber, &c. ...	5,428	7,467
,, ,, ,, used as Kitchens	4,935	3,766
,, ,, ,, found illegally occupied ...	59	162
,, ,, ,, ,, legally ,, ...	1,149	1,209
,, Notices issued to Owners	112	242
,, ,, ,, Occupiers	65	145
,, Inspections of Court Cellars	571	1,248
,, Court Cellars found disused	56	90
,, ,, ,, used for Lumber, &c. ...	476	818
,, ,, ,, used as kitchens	38	307
,, ,, ,, illegally occupied	1	33
,, Informations against Street Cellar Owners	3	1
,, ,, ,, Court ,, ,,	2	1
,, Fined	3	1
,, of Informations against Street Cellar Occupiers	3	—
,, ,, ,, Court ,, ,,	2	2
,, Fined	1	1
Amount of Fines and Costs ...	£2 2 0	£0 5 0

The number of cellars filled in by the Health Committee, free of charge to the owners during the year is 4, and the total filled in during the last ten years is 363.

The total number of cellars let as separate dwellings at present upon the Register is 1,793.

About 5,379 people are at present housed in cellars.

Cellars occupied as dwellings must comply with certain requirements under the Liverpool Improvement Act of 1871, and the Public Health Act of 1875. The requirements of the Act specially relating to Liverpool have been summarised in the report for 1904.

Under the powers of the Liverpool Corporation Act of 1908, the occupation of cellars as separate dwellings, the floors of which are more than two feet below the ground, must cease after December 31st, 1912. All owners ceasing to use cellars as separate dwellings before that date will receive some compensation from the Corporation. The cellars, if suitable, may still be used in conjunction with the houses above for the ordinary purposes to which basements are put.

COURT AND ALLEY EXAMINATIONS.

	1907.	1908.
Number of Inspections of Courts and Alleys... ...	42,609	42,955
,, Closets inspected	85,280	86,684
,, ,, found Dirty, but cleansed by Officer's Instructions	37,296	38,667
,, Informations	—	—
,, Fined	—	—
Amounts of Fines and Costs	£0 0 0	£0 0 0

Special and systematic visits to courts and alleys are made with the object of ensuring the cleanliness of the domestic offices and the surface of the courts. The aim is to keep the courts and alleys uniformly clean throughout the week, and with this view the district inspectors are instructed that every tenant in each court is in turn to be held responsible for the cleanliness of the water-closets for a period of one week; the inspector records in his visiting book whose turn it is, and duly informs that tenant. Failing compliance with his requirements, an information is laid under a bye-law, made under the Liverpool Sanitary Act, 1846.

Under the Public Health Acts Amendment Act, 1890, somewhat similar proceedings may be taken.

The attention of the occupiers of court houses has been directed to these provisions by circular.

The courts and alleys continue to decrease in number, owing to the demolition of low-class property for the extension of business premises, or to the removal of insanitary property by the Housing Committee. The number of courts and alleys scheduled for inspection in 1890 was 2,165, in 1895 it had fallen to 1,660, in 1900 it was 1,195, in 1901 it was 1,159, in 1902 it was 1,074, in 1903 it was 1,042, in 1904 it was 976, in 1905 it was 927, in 1906 it was 857, in 1907 it was 825, and in 1908 it was 782, showing a diminution in eighteen years of 1,383 courts and alleys, of which 260 were demolished during the last five years.

In the months of July to September many of the water-closets were more frequently visited, and throughout the year all courts and alleys having covered entrances were specially washed and hosed down by the scavengers. Under the Liverpool Sanitary Act the exteriors of all courts and alleys require to be limewashed as often as may be necessary. The number of courts requiring limewashing in 1908 was 730, representing approximately 4,080 houses.

COMMON LODGING-HOUSES.

At the end of 1907 there were on the register a total (including emigration houses) of 451 lodging-houses, and at the end of 1908 the total number was 413, which furnished accommodation for 13,056 lodgers, besides 1,049 members of the keepers' families.

During the year 114 houses were given up and removed from the register, and 76 new houses added, leaving the number on the register 413.

In some of the better-class houses for men, separate cubicles are provided for each lodger, the price paid for them varying from 6d. to 1s. 6d. per night. These cubicles are much more appreciated than the ordinary accommodation provided.

The number of what are known as "model" lodging-houses, for men only, upon the register is 153, and these are registered to accommodate 6,571 lodgers, as well as 273 members of the keepers' families.

The term "model" appears now to be used as a trade designation to indicate premises used for the accommodation of one sex only.

There are also 25 registered model lodging-houses for the accommodation of women only. These have room for 809 lodgers, in addition to 39 members of the keepers' families.

The visits to lodging-houses are both by day and by night. The night visits are almost restricted to the lower districts and commoner class of house. The lodging and emigration houses of the better class, especially those provided only with single beds for each person, and with no more beds than are equivalent to the number of lodgers allowed, are only occasionally visited at night, unless special circumstances necessitate a closer supervision.

Houses which are not licensed either as lodging or sub-let houses are frequently visited by day when such a course is deemed expedient, in order to ascertain whether any grounds exist for putting these houses on the register.

There were 740 visits paid during the year to such houses.

Persons harbouring lodgers in unlicensed premises receive a notice to apply to have the rooms measured and licensed. There were 5 such notices issued during the year.

The number of day visits paid during the year was 20,579, and the night visits 1,082. During the preceding year the day visits were 21,348, and the night visits 1,237.

Twenty-eight informations were laid against keepers of common lodging-houses during the year for the following offences:—

	1907.	1908.
Not sweeping floors	28	12
Not washing floors	18	10
Overcrowding	24	5
Receiving lodgers in unlicensed rooms ...	11	1
Mixing sexes	3	—
Total	84	28

Convictions followed in 27 cases, the total amount of fines amounting to £4 19s. 0d., and ranging from 1s. and 1s. costs to 10s. and costs. During the preceding year there were 84 convictions, and the fines amounted to £22 4s. 6d.

One case was withdrawn.

The number of lodging-houses found dirty was 93; in each case notices were served to limewash and cleanse the premises. All the notices were complied with.

The Bye-laws require that every case of infectious sickness in a common lodging-house should be at once reported to the Medical Officer of Health. Thirty-one cases of infectious sickness occurred in lodging-houses; all the cases were removed to hospital immediately. In all cases the bedding

was removed to the disinfecting apparatus, and the rooms purified and cleansed. There were 19 deaths from non-infectious diseases in lodging-houses; 10 of the deceased persons belonged to the keepers' families, and 9 were lodgers.

The condition both of labour and lodging-accommodation of the Chinese was brought into prominence during the year 1907, and a Committee of Inquiry was appointed, which had several meetings and extended its investigations over several weeks.

The Chinese lodging-houses, which have for many years been visited regularly by day and by night, are exceedingly well kept, clean and orderly, notwithstanding that most of the properties are very old. Overcrowding is extremely rare. The Chinese, as a rule, pay every regard to sanitary requirements, and the children of the married Chinese are always well clad and cared for, and very kindly treated.

LODGING-HOUSES FOR WOMEN.

The demand for accommodation in these houses appears to have fallen off during recent years, and in consequence five houses were given up during the year. Four of these houses were converted into Men's Lodging-houses, and one registered as a "house let in lodgings."

In several houses structural alterations have been carried out with the view of improving the washing and sanitary accommodation.

A large lodging-house for women has been opened by the "Salvation Army." The premises are situated in Netherfield Road South, and are intended to accommodate working women, such as domestic servants, laundry workers, charwomen, and others. There is accommodation for 190 lodgers and 10 members of the staff. Special cubicles have been provided for lodgers who desire them. The charge per night varies from 4d. to 6d. The demand for accommodation in this establishment since the opening is increasing.

The question of the provision by the municipality of common lodging-houses for women was again mooted during the year, the suggestion being that an establishment for women run by the municipality would be free

from alleged objectionable features in connection with lodging-houses provided by religious or philanthropic bodies or by private enterprise. Careful investigation, however, showed that there was no special need for the establishment by the Corporation of any institution of the kind and that most of the existing lodging-houses were rarely if ever filled.

DECREASE IN COMMON LODGING-HOUSES.

The decrease in the number of "Common Lodging-houses" is due to the closing of houses used for the accommodation of navvies, who have left the town as the work on which they were engaged was completed; twenty-one houses of this type were given up, also a number of small houses which provided lodgings for emigrants. These houses were registered to meet the demand brought about by the increase in the emigration traffic during the years 1906-7. Last year there was a great falling off in this traffic, and in consequence seventeen of these houses were closed.

This diminution in the number of lodging-houses also accounts to a great extent for the decrease in the number of contraventions of the bye-laws, as it is generally the keepers of these smaller houses who are not only less careful in their management, but in some instances are willing to risk detection in contravening the bye-laws, for a slight gain in their profits.

IMPROVEMENTS IN SANITARY ACCOMMODATION.

The following is a list of houses where structural alterations have been carried out with the view of improving the kitchen and washing accommodation, as well as the sanitary arrangements:—

No. 140, Richmond Row.—Light and ventilation to cellar kitchen improved; trough closets removed; two new water-closets erected and three new wash-basins fixed.

No. 136, Richmond Row.—Trough closets removed; two new water-closets erected, and two new wash-basins fixed.

No. 188, Richmond Row.—Light and ventilation to cellar kitchen improved; trough closets removed, and two new water-closets erected.

No. 68, Roscommon Street.—Light and ventilation to cellar kitchen improved; three new water-closets erected, and three new wash-basins fixed.

No. 13, Salisbury Street.—Trough closets removed and three new water-closets erected.

No. 31, Everton Brow.—Trough closets removed and three new water-closets erected.

No. 25, Everton Brow.—Trough closets removed and three new water-closets erected.

No. 121b, Islington.—Trough closets removed, three new water-closets erected, and three new wash-basins fixed.

No. 165, Richmond Row.—Trough closets removed, three new water-closets erected, and two new wash-basins fixed.

No. 114, Soho Street.—Trough closets removed, two new water-closets erected, and two new wash-basins fixed.

During the year one large boarding-house, Boston House, for trans-migrants was taken over by the Canadian Pacific Railway and Steamship Company for their emigration traffic. Prior to the certificate of registration being granted the drainage was reconstructed, the old latrines were abolished, and new sanitary accommodation, with separate conveniences for both sexes, was provided. The interior of the house was painted throughout, and 150 single beds with new bedding were provided. As a result of these improvements the house is made a very comfortable one.

SEAMEN'S LICENSED LODGING-HOUSES.

The Corporation have made Bye-laws, with the sanction of the President of the Board of Trade, for the licensing of Seamen's Lodging-houses, under the Merchant Shipping (Fishing Boats) Act, 1883, Section 48.

Applications from the keepers of Registered Common Lodging-houses for licenses authorising the designation of such Registered Common Lodging-houses as Seamen's Licensed Lodging-houses, are infrequent, only seven such licensed lodging-houses now being on the register; these provide accommodation for 156 seamen.

One license was given up, and four new licenses were granted during the year.

The number of licenses granted since the adoption of the Seamen's Licensed Lodging-house Bye-Laws is 32.

It has not been found necessary to institute proceedings under the bye-laws in question.

Some years ago the holders of licenses to keep Seamen's Lodging-houses were authorised by the Board of Trade to board vessels and seek for lodgers, and while this privilege was granted there was an advantage in holding such a license, but that privilege being now withdrawn, it does not appear that there is any advantage to the keeper of a common lodging-house to have his premises registered as a Seamen's Lodging-house, and hence probably the small number upon the register.

SUB-LET HOUSES.

These are houses, certain rooms of which are let off to members of more than one family. The bye-laws provide for the registration and inspection in order to prevent overcrowding, and to ensure attention to cleanliness and sanitary requirements.

The number added to the register during 1908 was 440; the number cancelled owing to their being no longer sub-let was 234. The number returned as demolished was 262, making a total on the register on the 31st December, 1908, of 19,776, as against 19,832 at the close of the preceding year.

The number of visits paid to sub-let houses during the day was 95,183, and during the night 23,074, with the result of finding 915 rooms overcrowded. In addition to overcrowding, 188 cases of indecent occupation came under the notice of the inspectors, as against 243 last year; this offence is steadily diminishing. The character of the indecent occupation may be judged of from the following facts:—In 77

instances one man and two women were found in the same bedroom; in 70 instances two men and one woman; in 13 instances two men and two women; in 10 instances one man and three women; in 13 instances three men and one woman; in 1 instance one man and four women; in 3 instances two men and three women; and in 1 instance two men and four women. These cases appear to be the outcome of ignorance and indifference, and not of immoral intent. Under the bye-laws a number of persons have been fined for mixing sexes, and a number, who cannot be reached under the bye-law, cautioned by the inspectors.

Informations were laid against 1,340 chief tenants and lodgers (room-keepers) for breach of the bye-laws, viz.:—

Overcrowding	753
Floors not washed	244
Floors not swept	73
Not cleansing stairs, &c.	224
Mixing sexes	46
Total	1,340

Six cases were withdrawn, seven cases acquitted, and in fifteen cases the defendants had left the premises before the summonses could be served.

As the result of proceedings before the Stipendiary and other Magistrates, fines were inflicted as follows:—59 fined 1s. costs; 1 fined 1s. 6d. costs; 908 fined 1s. and 1s. costs; 203 fined 1s. 6d. and 1s. 6d. costs; 60 fined 2s. and 2s. costs; 34 fined 2s. 6d. and 2s. 6d. costs; 10 fined 5s. and 4s. 6d. costs; 35 fined 10s. and 4s. 6d. costs; 2 fined 20s. and 4s. 6d. costs; making a total of fines levied during the year of £177 5s. 6d. Offences against the bye-laws have been less than in the preceding year. There were 92 more inspections by night than in the preceding year; the day visits were 345 more.

Thirty-eight cases of overcrowding were in respect of premises in the recently incorporated district of Garston, compared with 50 last year.

Increased supervision results in fewer offences against the bye-laws, and a higher standard of cleanliness in the houses.

The regular and systematic visitation of these houses which has been carried out during the year has had a most beneficial effect in diminishing the number of cases of overcrowding and indecent occupation of bedrooms, and also in obtaining a higher standard of cleanliness. Cases arising from neglect to cleanse rooms, stairs and passages, are in a great many instances associated with drinking habits and the accompanying indifference to cleanliness and comfort.

The total number of offences against the bye-laws for this year was 1,340, being 405 less than the number last year, which was 1,745.

Overcrowding also shows a decrease, notwithstanding that closer attention and vigilance have been exercised. It is not an unusual thing for some of the younger inmates of the sub-let houses, on learning that the inspectors were visiting a certain street for the purpose of night inspection, to arouse the immediate vicinity by going into the street and making peculiar calls to warn the inmates of other houses. In order to prevent this a smaller number of houses are visited in one street at a time, and the night inspection continued in streets at a distance away. It is not uncommon for the inspectors to find inmates hiding themselves in the yards or outhouses, or trying to evade detection by leaving the premises by the back way. This is ascertained by one of the two inspectors engaged visiting the front entrance, the other being stationed at the rear of the premises.

The gradual diminution in overcrowding led the Health Committee in 1901 to amend the bye-laws relating to sub-let houses, and the City Council, with the sanction of the Local Government Board and on the recommendation of the Health Committee adopted amended bye-laws, which amongst other important provisions contained clauses providing that every lodger above 10 years of age shall have not less than 400 cubic feet of air space, and every person below 10 years of age shall have not less than 200 cubic feet, but if the room is used as a day-room as well as a bedroom, then every inmate must have at least 400 cubic feet. Under

the previous bye-law a space of 350 feet only was required, and two persons under twelve were regarded as one adult.

The new bye-laws came into operation on the 30th January, 1901. One result of these bye-laws—which required so relatively large an addition to the cubic space allowed for each lodger—was to put an entirely new definition upon the offence of overcrowding, and although the great majority of people quickly appreciated the effect of the new bye-laws, yet there was necessarily a considerable increase in the number of persons proceeded against for overcrowding amongst those who neglected to comply with the altered provisions.

The following table shows the number of sub-let houses on the register, the number of night visits for the detection of overcrowding, the number of convictions for overcrowding, and the percentage of convictions to the number of visits for the past eight years, *i.e.*, since the application of the new bye-laws:—

Year.	No. of Sublet Houses.	No. of night visits for detection of overcrowding.	No. of convictions for overcrowding.	Per centage of convictions to number of visits.
1901	18,917	17,863	1,351	7·56
1902	19,976	17,274	1,150	6·65
1903	21,719	18,438	1,264	*6·85
1904	22,488	17,886	1,148	6·41
1905	20,518	19,193	1,326	6·90
1906	19,714	18,838	920	4·88
1907	19,832	22,982	962	4·18
1908	19,776	23,074	738	3·19

The bye-laws as to houses let in lodgings, or occupied by members of more than one family, have been inserted in previous reports.

* This includes the added area of Garston.

The Building Surveyor has kindly supplied the following table :—

NUMBER OF HOUSES ERECTED AND TAKEN DOWN DURING THE YEAR ENDING DECEMBER, 1908.

DISTRICTS.	Number erected.	Number taken down
Scotland	3	211
Exchange	2	74
Abercromby	—	93
Everton	—	13
Kirkdale	—	8
West Derby (West)	22	—
Toxteth	228	40
Walton	516	3
West Derby (East)	369	3
Wavertree	421	1
Sefton Park	20	—
Garston..	246	1
Fazakerley	23	—
Totals	1,850	417

The City Engineer has kindly supplied the following :—

Number of cellars filled in and bricked up during 1908 4
" " " " the last 10 years ... 363

SEWER VENTILATION TO END OF 1908.

Number of 9-inch by 6-inch, 9-inch, 6-inch, 6-inch by 4-inch, 4-inch by 4-inch, 4-inch, and 3-inch Iron Pipe Ventilating Shafts 1,737
Number of Street Ventilating Manhole Covers and Gratings 6,629

CANAL BOATS.

The number of inspections of canal boats during the year was 5,621, and the condition of the boats and their occupants, as regards matters dealt with in the Acts and Regulations, is indicated by the following information:—

Eight boats, not registered by their present owners, were found to be used as dwellings. Written notices were sent to the owners in four cases, and four verbal notices were given. All the notices were complied with.

Eighteen boats were found without certificates on board. Notices were sent to the owners in 17 cases, and one verbal notice was given. Seventeen of the notices were complied with, and one boat has not been re-inspected.

Twenty-two boats were found without the registered number painted on both sides of the boat. Notices were sent to the owners in 20 cases, and two verbal notices were given. The omission has been rectified in each instance.

In 10 cases defective second bulkheads were reported. Notices were sent in nine cases, and one verbal notice was given. All were complied with. In one instance a boat, without second bulkheads, was found to be carrying offensive cargo, and a notice was served upon the owners to provide second bulkheads. In lieu of this, however, the owners had the boat thoroughly cleansed, and discontinued carrying offensive cargo.

In 16 boats the cabins required repainting. Notices were sent to the owners in each case, and 14 were complied with. Two boats have not been seen in the district since.

Dirty cabins were reported in 13 cases. In 11 cases verbal notice was given to the masters, and in others written notices were sent to the owners. In five cases the notices were complied with, and six not being complied with informations were laid against the masters, and small fines inflicted. The cabins were subsequently cleansed, except in two cases, where the boats have not been seen in the district since.

Besides the foregoing there were 74 instances of infringements of the Acts and Regulations, caused by leaky decks (32), general leaky condition of boat (4), broken lids to lockers (3), broken scuttle covers (7), defective ventilation (2), broken floors (3), no water casks on board (17), defective stoves (4), removal of bilge water (1), defective bed-berth (1). Sixty-nine notices were sent, and three verbal notices were given to the owners in respect of the above infringements. Seventy of the notices were complied with, and two have not been re-inspected.

Informations were laid in 13 cases, viz., dirty cabins (6), overcrowding (2), non-separation of sexes (5). In 10 cases fines were inflicted, varying from 1s. and 1s. costs to 10s. and 4s. 6d. costs, and in three cases the informations were dismissed, viz., non-separation of sexes (2), over crowding (1). The total amount of fines was £3 12s. 0d.

No case of infectious sickness occurred on the canal boats during the year.

The entire number of infringements of the Acts and Regulations referred to in the Report occurred on 129 boats, in several instances the offence being repeated on the same boat.

Twenty-four notices were sent to the Education Committee of 31 children living on canal boats and not attending any school.

The number of boats on the register is 603. Nineteen boats have been removed from the register, as it was ascertained that they had

been broken up. It is probable that other boats have been broken up or have left the district, but in the absence of definite evidence of this the boats remain on the register. During the year 26 new boats were registered, and seven re-registered on account of changes of owners, one re-registered on account of structural alterations, and 2 re-registered on account of change of owners and name of boat. All boats re-registered on account of change of owners or the name of the boat being changed, or on account of structural alterations, retain their original numbers. Copies of the registration certificate were issued to the owners of four boats, owing to the original ones being worn out.

In 1898 the Canal Boat Inspectors were appointed as Port Sanitary Inspectors—an appointment which authorised them to inspect all classes of boats, as a difficulty arose in regard to certain boats plying upon the canal which were not registered under the Canal Boats Acts, but which had been registered by the Board of Trade under the Merchant Shipping Act. Twenty-one visits were made to boats of this class, and all were found correct.

In 1903 the Port Sanitary Inspectors were appointed as Canal Boat Inspectors. This appointment authorised them to inspect canal boats which ply to and from the docks, and on the river. During last year these Inspectors made 656 visits, which are included in the foregoing report. The number of contraventions for which notices were served on the owners was 56 on 39 boats.

SMOKE NUISANCES.

Proceedings for the abatement of Nuisances caused by the emission of excessive smoke from factory chimneys or from steamers, were taken under the Liverpool Sanitary Amendment Act, 1854, sections 24 and 25, the Liverpool Improvement Act, 1882, section 77, and the Liverpool Corporation Act, 1902, section 57, with the following results:—

	1907.	1908.
Number of reports of excessive smoke from Manufactories ...	222	176
,, ,, ,, Steamers in river	259	262
,, ,, ,, ,, dock	27	24
Total	508	462

Admonished by the Health Committee or written to in respect to nuisances caused by the emission of excessive smoke:—

	1907.	1908.
Manufacturers	12	10
Steamship Owners	6	7
Total	18	17

	1907.		1908.	
Chief Inspector and Assistants gave M'facturers	391	Cautions	358	Cautions
,, ,, ,, Steamship Owners	99	,,	90	,,
Total... ...	490	,,	448	,,
Number of enquiries respecting Owners	450		438	

	1907.	1908.
Informations against Manufactories	210	168
,, ,, Steamers in river...	201	199
,, ,, ,, dock...	27	22
Total	438	389
Acquitted or withdrawn, Manufactories	6	4
,, ,, Steamer cases	5	2
Total	11	6

	1907.	1908.
Fined, Manufactories	204	164
,, Steamers	223	219
Total	427	383

	1907.	1908.
Amount of Fines, Manufactories ...	£437 18 0	£350 3 0
,, ,, Steamers ...	466 14 3	414 14 1
Total ...	£904 12 3	£764 17 1

It is the duty of the Police to deal with nuisances arising from the firing of domestic chimneys.

SMOKE INSPECTION.

The falling off in the number of reports relating to excessive smoke still continues, and is an indication of the additional care exercised by manufacturers and steamship owners.

The efforts made by manufacturers to diminish the emission of excessive smoke from the chimneys of their respective works has led them in several cases to adopt a form of mechanical furnace known as the "sprinkler," combined with a system of forced draught. Wherever such a combination has been installed it has caused a very fine, charred, gritty dust to be sent out from the chimney.

Unlike smoke, this dust cannot be seen while it is actually issuing from the chimney, and very careful observations have, therefore, to be taken by the Inspectors, so as to definitely determine the source from whence it comes.

In each case where a complaint has been made the source of the annoyance has been successfully traced, and various means have been adopted to prevent it, such as the provision of dust chambers and water-lutes in the flues, with appliances for frequent cleansing; but the most lasting benefit has accrued where the use of the type of furnace alluded to has been discontinued.

Complaints were from time to time received from residents of Cressington and Aigburth that an excessive and unnecessary quantity of smoke was emitted from tugs and steamers on the Mersey going to or coming from Garston.

Out of 262 cases of excessive smoke from Steamers in the river which were observed, 47 vessels were bound for foreign ports, the owners of one Steamer could not be traced, and three were towing other vessels in emergency, and consequently no proceedings were taken.

	1907.	1908.
Complaints received of smoke from defective house flues, and from low chimneys	141	139
Visits relating thereto	830	809
Chimneys raised in consequence of complaints	26	40
Flues altered and repaired	22	31
Attention promised	89	56
Referred to other departments	2	3
Frivolous complaints	1	9
Dust Screens provided	1	—
Total complaints dealt with... ...	141	139

The smoke in our atmosphere is entirely produced by the combustion of coal in domestic firegrates, steam boiler furnaces, and other furnaces used for manufacturing processes.

It is a common error to lay the blame of the pollution of the atmosphere by smoke entirely upon the factory chimney, and this is no doubt due to the fact that it is more easily noticeable than the individually small quantities of smoke which are emitted from the chimneys of dwelling-houses, and which reach a very large amount in the aggregate.

OFFENSIVE TRADES.

Applications for permission to carry on the following offensive trades were made during the year, and a report by the Medical Officer of Health on each application was submitted to the Health Committee:—

Premises.	Business.	Granted.	Refused.	Date, 1908.
72 and 74, Johnson St.	Tripe Boiling	—	1	May 28th
53, Commercial Road..	Gut Scraping	—	1	Nov. 19th
101, High Street (rear)	,, ,, ...	—	1	Nov. 26th
15a, Ford Street.....	Tripe Boiling.....	—	1	Dec. 17th
	Total.....	—	4	

In cases in which permission is granted, conditions are imposed requiring that the premises be put in proper order to the satisfaction of the City Engineer, Building Surveyor and Medical Officer of Health, that no public or private nuisance be caused, and that the business be discontinued whenever the Council shall so require.

The number of inspections of premises where offensive trades are carried on was 1,296, as against 1,540 in 1907.

		1907.	1908.
Total No. of Visits to	Bone Boilers	147	126
,,	Fell Mongers	50	34
,,	Soap Boilers	238	233
,,	Fat and Tallow Melters	320	244
,,	Tripe Boilers	207	154
,,	Gut Scrapers	130	106
,,	Ham Cooking and Potted Meat Works	56	59
,,	Patent Manure Manufacturers ...	13	16
,,	Tanneries	115	89
,,	Knackers' Yards	123	141
,,	Paint and Resin Works	20	21
,,	Palm Oil Works	24	16
,,	Cotton Seed Oil Works	44	23
,,	Sulphuric Acid Works	23	20
,,	Liver Boilers	2	1
,,	Butter Substitute Manufacturers ...	20	11
,,	Preserved Skin Works	8	2
	Total...	1,540	1,296

KNACKERS' YARD, CARRUTHERS STREET.

THE ANIMAL SLAUGHTERING CO.

The Health Committee have licensed the above Company and premises to destroy carcases of animals affected with contagious disease in accordance with the Orders of the Board of Agriculture and Fisheries.

Carcases of diseased horses and cattle are destroyed under the supervision of an Inspector of the Public Health Department at the Knackers'



MASS OF FLY LARVÆ IN STABLE MANURE.
NATURAL SIZE.



MASS OF FLY LARVÆ SEPARATED FROM STABLE MANURE. NATURAL SIZE.

Yard, where specially tested iron pans with covered lids have been erected for the purpose. The carcases are placed in the tanks intact, sulphuric acid added, and steam applied until a temperature of 250° to 260° Fahr. is reached. An exhaust pipe conveys steam and all offensive odours to the furnace, thus preventing any nuisance arising.

Unsound meat is destroyed on these premises in a similar manner.

The carcases of horses which are destroyed on account of old age or minor complaints are also dealt with on these premises.

The following are the Returns for 1908:—

Horses Destroyed.	Horses taken in Dead.	Asses Destroyed.	Cows Destroyed.	Other Beasts.	TOTAL.
284	1,676	19	126	—	2,105

MARINE STORES.

	1907.	1908.
Number of Visits by District Sanitary Inspectors ...	1,406	1,424

(For visits by Workshop Inspectors, see page 143).

STABLES.

On the instructions of the Health Committee further investigation was undertaken by Mr. Robert Newstead, of the University of Liverpool, into the Life History of the Common House Fly. In view of the obvious mischief occasioned, the investigation was specially directed to the nuisance arising from stables, &c.

	1907.	1908.
Number of Visits to stables by District Sanitary Inspectors...	9,331	18,749
Number of midden-steads disinfected	—	3,137

RAILWAY CARRIAGES.

	1907.	1908.
Number of Carriages Inspected	1,056	1,690
,, found dirty	—	—

FEMALE SANITARY STAFF.

NOTIFICATION OF BIRTHS ACT, &c.

The Notification of Births Act, which provides for the notification of every birth within thirty-six hours of its occurrence, came into operation on 7th January this year, and has proved exceedingly valuable.

The Act has enabled the Female Staff to visit all suitable cases shortly after the attendance of the midwife has ceased.

From the date of it coming into force to the end of the year, 20,812 births were notified. This notification is in addition to, and does not take the place of, the obligation to register every birth. The District Registrars are invited to examine the records of notifications received, in order to ascertain that all births are registered in accordance with the Act. Furthermore, on each notification form, the words are printed in red, that "the Registrar must also be notified of the birth in the usual way." The Inspector have endeavoured to visit these cases within six weeks from the date of notification, and in the great majority of instances have been enabled to give advice and immediate assistance to mothers needing milk or clothing, &c. Delicate or neglected children have been frequently visited from an early age, and in numerous cases great improvement has been the result.

The advice given by the Inspectors is at the disposal of all requiring it, and help in this direction is increasingly sought, and is greatly appreciated.

The use of the long-tubed feeding bottle is becoming less common, and this, it may be stated, is chiefly owing to the fact that mothers are gradually realising the danger which this method of feeding entails.

Mothers, in all cases where it is thought advisable, are urged by the Inspectors to suckle their children, but in deserving cases where this method of feeding cannot be resorted to, owing to the lack of breast milk as a result of privation, a supply of fresh milk has been given to the mother, together with suitable advice as to the feeding of the infant.

The general character of the work of the Female Sanitary Staff has been conducted practically upon the same lines as in previous years, but so far as the routine house-to-house visitation is concerned, it will be seen

from the statistics that this has not occupied so much of their time as in previous years, owing to several new features which have been introduced into their work, and which are referred to later.

The visits paid to court houses and cellar dwellings have, as usual, been attended with good results. In many instances the occupants were found living under conditions which were not conducive to health, but in a number of these cases intemperance appears to be the prime cause of their unsatisfactory surroundings.

A systematic visitation has been made to the occupiers of Corporation dwellings, and on the whole a steady improvement is maintained amongst this class. Generally speaking, it is found that these people are more amenable to reason and advice than are those with whom they formerly associated, and this no doubt is owing to the improvement in their surroundings.

The statistics for the year, as in the previous year, show a decline in the number of deaths of infants. The births during the year entailed upwards of 20,000 visits, and in each the usual card of instructions relating to the proper feeding and care of the child was left with the mother. In a great number of instances, owing to special circumstances calling for further attention, it was found necessary to re-visit, and the visits of the Inspectors in these cases have been much appreciated.

A Conference of Medical Officers of Health and others was convened by the Home Secretary for the purpose of discussing some plan of investigation into the effects of the employment of women upon Infant Mortality. In order that the Inquiry should be conducted upon the same lines in different towns, a special form was devised in accordance with which the information sought should be tabulated. From these inquiries there have resulted for observation 167 specimen cases, and these were regularly visited once a month. These cases were divided into two classes, viz.:—working mothers, and mothers who stay at home. The supervision of these cases has been attended with benefit to the children, many of whom were found to be delicate.

The Notification of Births Act has proved a valuable auxiliary in carrying out the Inquiry as far as it has gone.

Of the 167 cases visited, 67 of the children belonged to working mothers, and of this number 11 died, whilst in the case of the non-working mothers, in which 100 cases were visited, only 7 died.

Considerable difficulty has been experienced by the Inspectors in obtaining the foregoing information, owing to the nomadic habits of the parents.

Summary of information obtained in respect of the foregoing cases:—

BIRTH ENQUIRIES FOR HOME SECRETARY.

	No. Visited.	Legitimate.	Illegitimate.	Dead.	Removed.	Completed 12 mos. and healthy.	Still under observation.
Mothers not industrially employed...	100	99	1	7	19	52	22
Mothers industrially employed...	67	58	9	11	6	26	24
Total	167	157	10	18	25	78	46

CAUSES OF DEATH.

Catarrh of Stomach	1
Convulsions	3
Meningitis	1
Bronchitis	1
Septic Condition of Umbilicus	1
Pneumonia	1
Consumption of bowels	1
Gastritis	2
Dropsy	1
Diarrhœa	2
Marasmus	1
Premature birth	2
Died at birth	1
	18

General improvement is a noticeable feature in the condition of the infants, and parents appear to exercise care in place of indifference and neglect in regard to their children.

Many cases, however, have come to light during the visits of the Inspectors, where mothers, owing to ignorance, intemperance, or neglectful habits, paid practically no attention to the care or feeding of their infants, the children often being given part of the food the parents themselves were taking, which in the majority of instances was unsuited to the requirements of the child. Instances also were found, principally amongst intemperate families, in which infants were given intoxicants, gin and beer for example, and in cases such as these the Inspectors find it necessary to keep the families under constant supervision.

Although exceptional cases from time to time arise which call for great attention and frequent visits, yet there is undoubtedly sufficient evidence to show that general improvement results from the work of the Inspectors.

In the case of illegitimate infants, where it is found that the mother is not in a position to provide for the wants of the child, suitable advice is offered regarding its welfare, &c.

Valuable assistance has been rendered, as in previous years, by Miss Whishaw, Sunny Bank, Arnside, in finding homes for forsaken or unwanted babies, and she has also been instrumental in finding suitable homes for young girls.

As in previous years, visits have been paid to families on behalf of the Police Aided Clothing Association, in order to ascertain the habits and circumstances of the parents, and inquiries have been continued in regard to cases of neglect reported by the Association's visitors.

Cases of neglect have been reported and sometimes removed to the Children's Shelter, and the necessary steps taken by the Society for the Prevention of Cruelty to Children to ensure better care and treatment of the children in future.

Cases of epidemic diarrhœa are from time to time reported from the Dispensaries by the Medical Officers, and in cases where poverty or other circumstances rendered it undesirable that the patient should be treated at home, provision has been made for their admission into the City Hospital, Fazakerley. Remarkable cures have been effected.

Cases of phthisis amongst children and adults which came under the notice of the Inspectors from various sources, and which were found to be in want of skilled treatment, were also assisted, and many of these cases were admitted to the City Hospital at Fazakerley. These patients derived great benefit from their stay in the hospital, and after discharge have been kept under observation for as long a period as thought necessary.

Many children recovering from illness, and those requiring change, have been assisted into the Convalescent Home at West Kirby, through the kindness of Miss Davis, who has charge of the "Rayner" cot, and the Summer Camp at Wallasey, whilst children mentally deficient have been helped into suitable homes.

Girls have been received into various training homes, and many others have had situations found them on leaving school.

Numbers of old people, and those who owing to infirmity or other causes were living in a dirty or verminous condition and were unable to take care of themselves, were induced to go into the workhouse or hospital.

Verminous persons, children and adults, have been taken to the Disinfecting Station at Charters Street and thoroughly cleansed. Their clothing, bedding, &c., have been disinfected, but in many instances these articles were destroyed and replaced by new. These cases are kept under observation, and instructions are given to responsible persons with a view to prevent a recurrence of their former condition.

Families and individuals needing the help of either the Charity Organisation Society or the Relieving Officer have been dealt with by reference in the usual way, whilst cases of illness in want of attention were referred to the Queen Victoria District Nursing Association.

Work in connection with the Lord Mayor's Unemployed Fund accounted for a great amount of the time of the Inspectors in visiting some 1,200 homes of applicants for relief. In the great majority of these cases relief in the form of food and clothing has been given, whilst in other instances work has also been provided. This latter means of assistance was the more satisfactory and the more appreciated.

Statistics relating to the work performed by the Female Sanitary Staff during the year will be found appended.

STATISTICS OF WORK DONE BY FEMALE SANITARY STAFF.

		1907.	1908.
Number of	Visits relative to Births notified	20,097	20,215
,,	Revisits ,, ,, ,, ,, ...	977	2,869
,,	Visits to School Cases	16,604	13,742
,,	Revisits ,, ,, ...	938	2,138
,,	Visits to underfed sick children	—	546
,,	,, to Schools	155	204
,,	References to Education Committee ...	9,290	8,547
,,	,, ,, District Sanitary Inspectors	1,407	812
,,	,, ,, Lodging-house Inspectors...	86	57
,,	,, ,, Central Relief Society ...	—	35
,,	,, ,, City Engineer	55	26
,,	,, ,, Water Engineer	91	30
,,	,, ,, The Shelter, Islington ...	169	153
,,	,, ,, Relieving Officer	—	6
,,	Sterilised Milk Depôt Visits	8	75
Number of	Street Houses visited	7,508	4,595
,,	Court ,, ,, ...	1,654	630
,,	Cellars	2,202	1,107
,,	Families found dirty	1,186	525
,,	Re-visits to Families	2,847	1,497
,,	Houses found dirty...	3,346	1,858
,,	Cellars ,, ,, ...	547	284
,,	Notices issued to cleanse dirty premises...	4	3
,,	,, ,, floors and woodwork	38	13
,,	Special Visits	2,002	5,554
,,	Police Aided Association Visits	228	151
,,	Central Relief Society Visits	10	—
,,	Visits *re* Diarrhœa Cases	469	255
,,	,, ,, ,, (fatal)	—	587
,,	Enquiries *re* Fire Guards	—	147
* ,,	Visits on behalf of Distress Committee...	—	1,200

* In addition to this number 582 visits were made by District Male Staff.

FACTORY AND WORKSHOP ACT, 1901.

BAKEHOUSES.

The sanitary control of Bakehouses is dealt with under the Factory and Workshop Act and Public Health Acts; the regulations prescribed were set out in the Annual Report for 1904.

By Section 133 of the Workshop Act, 1901, if any child, young person, or woman is employed in a bakehouse, the Medical Officer shall, on becoming aware thereof, give a written notice to His Majesty's Inspector of Factories.

Where any room or place used as a bakehouse is in such a state as to be, on sanitary grounds, unfit for use as a bakehouse, the occupier is liable on summary conviction to a fine not exceeding forty shillings.

Thirteen bakehouses were added to the Register during 1908, 3 are new ground-floor bakehouses for bread-bakers and confectioners; the remaining 10 are confectioners only.

During the year three plans were submitted and approved of for ground-floor bakehouses.

Number of	Bakehouses on Register, 31st December, 1908... ...	875
,,	Bakehouses added to Register during 1908	13
,,	Bakehouses struck off Register during 1908	9
,,	Visits paid to bakehouses	4,868
,,	Bakehouses found dirty (walls and ceilings)	497
,,	Notices issued for lime-washing	73
,,	Bakehouses lime-washed without notice	424

Number of Notices issued to repair drains and waste pipes ...	5
,, ,, ,, to repair defective floors, walls and ceilings	7
,, ,, ,, to cleanse floors, windows, areas, tables and troughs	6
,, ,, ,, for deficient ventilation	2
,, ,, ,, to supply water direct from main ...	1
,, ,, ,, to provide separate water-closet accommodation for the sexes	3
,, ,, ,, to cease to use as bakehouses places underground not in conformity with Act, 1901	2
Number of References to Government Factory Inspector... ...	21

All the above notices were complied with by the owners or occupiers.

UNDERGROUND BAKEHOUSES.

Underground bakehouses are dealt with by special provisions of the Factory and Workshop Act, 1901, which came into force on 1st January, 1904.

By an underground bakehouse is meant a bakehouse, any baking room of which is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room. The expression "baking room" means any room used for baking, or for any process incidental thereto.

Details of the requirements of these premises will be found in the Annual Report for 1905.

The number of underground bakehouses on the register at the end of the year was 187. Of this number 175 are in use, eight are unoccupied, and four have been structurally altered and occupied for other purposes. Since the passing of the Act in 1901, two hundred and thirty-eight underground bakehouses have ceased to be used for baking purposes.

Administration of the Factory and Workshop Act, 1901, in connection with FACTORIES, WORKSHOPS, WORKPLACES & HOMEWORK.

The following Tables are prepared by request of the Secretary of State :—

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries.)	135	80	—
Workshops ... ... (Including Workshop Laundries.)	16,080	1,778	18
Workplaces ... ... (Other than outworkers' premises included in Part 3 of this Report.)	922	242	3
Total	17,137	2,100	21

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

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness	761	741	—	2
Want of ventilation	91	86	—	—
Overcrowding	10	9	—	—
Want of drainage of floors	14	13	—	—
Other nuisances	1,058	1,020	—	8
†Sanitary accommodation (insufficient	52	46	—	3
†Sanitary accommodation (unsuitable or defective	537	532	—	8
†Sanitary accommodation (not separate for sexes..	54	49	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (S. 101)	2	2	—	—
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	73	73	—	—
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this Report).	19	19	—	—
Total	2,671	2,590	—	21

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

† Section 22 of the Pubiic Health Act Amendment Acts, 1890, has been adopted by the City Council. The standard of sufficiency and suitability of sanitary accommodation for persons employed in Factories and Workshops is in accordance with the Sanitary Accommodation Order of 4th February, 1903.

3—Home Work.

* NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.											Number of Inspections of Outworkers' premises.	OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.	Prosecutions.									
	Twice in the year.			Once in the year.														
	a Lists.	a Outworkers.		Lists.	a Outworkers.				Notices served on Occupiers as to keeping or sending Lists.	Failing to keep or permit inspection of Lists.	Failing to send Lists.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110).
		Contractors.	Workmen.		Contractors.	Workmen.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Wearing Apparel—																		
(1) Making, &c.	566	1,987	1,249	23	42	18	83	102	21	—	—	1,267	—	—	—	4	4	—
(2) Cleaning and Washing	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sacks	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and Upholstery	4	17	6	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—
Fur Pulling	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, &c.	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paper Bags	2	—	11	—	—	—	—	—	—	—	—	11	—	—	—	—	—	—
Boxmaking	2	6	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Basket Making	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electro-Plate	—	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cart gear	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Making of nets	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Processes incidental to above	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Total	574	2,060	1,269	23	42	18	83	102	21	—	—	1,287	—	—	—	4	4	—

* Several Employers give out work of more than one of the classes specified in column 1. The lists are included among those in column 2 against the principal class *only*, but the outworkers are assigned in columns 3 and 4 into their respective classes.

a The figures in columns 2, 3 and 4 are the *total* number of lists (received from employers who sent them both in February and August as required by the Act) and of the entries of names of outworkers in those lists. They are, therefore, double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name is often repeated.

4—Registered Workshops.

Workshops on the Register (S. 131) at the end of the year.	Number.
Workshops	3,561
Cooking Kitchens of Restaurants	368
Bakehouses	875
Total number on Register	4,804

5.—Other Matters.

Class.		Number.
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		23
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)	Notified by H.M. Inspector ...	200
	Reports (of action taken) sent to H.M. Inspector	200
Other...		121
Underground Bakehouses (S. 101)		
Certificates granted during the year		—
In use at the end of year		175

FACTORY AND WORKSHOP ACT, 1901.

The Inspectors appointed under the above Act for sanitary purposes have visited a large number of Workshops and Workplaces, the summary of which is appended:—

SUMMARY OF VISITS PAID TO WORKSHOPS AND WORKPLACES.

	1907.	1908.
Bakehouses	3,683	3,946
Bamboo Workers	5	7
Basket Makers	26	28
Blindmakers	—	9
Block Makers	10	9
Boot Makers	666	923
Bottlers	29	27
Box Makers	19	22
Brush Makers	42	40
Cabinet Makers and Joiners	831	1,007
Canned Goods	82	110
Cap Makers	21	15
Carvers and Gilders	74	108
Chair Makers	38	32
Chemists' Sundries Manufacturers	19	24
Coach Builders	59	106
Confectioners	54	74
Coopers	152	115
Cork Cutters	29	42
Cotton Sorters	97	152
Cycle and Bassinette Makers	89	106
Dentists	1	12
Dressmakers	879	1,247
Drysalters	59	58
Electricians	7	8
Engravers	61	71
Firewood Manufacturers	9	35
Fish Curers	19	25
Flag Makers	12	12
French Polishers	96	127
Furriers	15	18
Galvanisers	15	13
Glass Blowers	—	3
Ham Curers	—	1
Image Makers	14	9
Knitters	24	30
Laundries	965	1,054
Marble Masons	28	19
Marine Stores	570	631
Mattress and Bed Makers	9	41
Metal Polish Makers	9	10
Milliners	247	269
Mineral Water Manufacturers	12	7
Musical Instrument Makers	15	13
Opticians	—	3
Paint and Varnish Manufacturers	21	21
Paper Cutters, &c.	41	16
Photographers	49	72
Pickle and Sauce Manufacturers	66	46
Picture Framers	75	63
Pipe Mounters	14	9
Plumbers	89	108
Relief Stampers	3	1
Restaurants	803	922
Rubber Goods Manufacturers	34	16
Sack and Bag Makers	122	101
Saddlers	82	97
Sailmakers	22	22
Sausage Makers	—	5
Sign Writers	36	30
Smiths	445	601
Tailors	2,312	2,255
Tarpaulin Makers	28	62
Trunk and Portmanteau Makers	64	45
Umbrella Makers	32	30
Underclothing Makers	218	263
Upholsterers	157	191
Watchmakers and Jewellers	133	164
Wheelwrights	97	80
Wig Makers	14	13
Wire Workers	24	16
Various	259	213
Total	14,332	16,080

FACTORY AND WORKSHOP ACT, 1901.

FACTORIES.

Factories include all places in which mechanical power is used in aid of the manufacturing processes.

The 135 inspections of Factories referred to in the foregoing tables represent 67 Factories, which were inspected by the District Sanitary Inspectors principally as a result of complaints being received. The duty devolving upon the Health Department in connection with Factories is the enforcement of cleanliness and the provision of suitable and sufficient sanitary conveniences.

WORKSHOPS.

Workshops include any premises (not being Factories) in which manual labour is exercised by way of trade, or for purposes of gain in, or incidental to, the making, altering, repairing, finishing or adapting for sale of any article, and to or over which the employer of the persons working there has the right of access or control.

The Workshop Inspectors made 11,212 inspections of Workshops, and in 3,444 occasions the premises were found to be incorrect. The number of inspections in 1907 was 9,846. This does not include bakehouse workshops visited by the Bakehouse Inspector.

A large number of new workshops have been added to the Register. Fifty-three workrooms have been measured during the year, as compared with 185 in 1907.

WORKPLACES.

Workplaces include any place where work is done permanently, and where people assemble together to do work permanently of some kind or other. The kitchens of restaurants, &c., though they are not workshops, come within the meaning of the term "workplace."

922 visits were paid during the year to the kitchens of restaurants by the Workshop Inspectors; on 159 occasions the premises were incorrect. The number of visits in 1907 was 803. Attention is being particularly paid to the nuisance arising from the removal of swill, and the Inspectors make a practice of visiting the premises early in the day when the swill is generally removed.

The nuisances found were in most instances remedied on notices being served, but in several cases it was necessary to take further proceedings, with the result that fines amounting to £6 3s. 0d. were inflicted. The fines in the previous year amounted to £5 15s. 6d.

Several defects were found which could not be dealt with by this Department, and they were referred to the City Engineer, Water Engineer and the Building Surveyor.

HOME WORK.

In accordance with Section 107 of the Factory and Workshop Act, 597 lists of outworkers were received (298 in February and 299 in August) giving the names and addresses of 3,389 employees. The number of lists received in 1907 was 567, containing the names of 3,271 employees.

On examination of the lists they were found to contain 2,102 Workshops or Domestic Workshops already on the Register (994 in February and 1,108 in August). The other addresses, excepting those situated outside the City, were visited by the District Sanitary Staff, and in several instances the premises were found to be new workshops or Domestic Workshops, *i.e.*, where the work done constituted the sole or principal means of living of the family. These were placed on the Workshop Register, to be visited periodically by the Workshop Inspectors. The home work in 1,287 cases was found to be an additional source of income only.

LAUNDRIES.

In the course of an Inquiry into the circumstances of the Chinese resident in the City, it was reported that Chinese laundries have been established in Liverpool for a great number of years, and appear to be carried on with success. There are 43 of these laundries registered as workshops, which are periodically inspected by the Workshop Inspectors under the Factory and Workshop Act. They compare quite favourably with the ordinary English laundries, and are on the whole conducted in a more orderly fashion. Their numbers, however, appear to be diminishing.

FURNITURE REMOVERS' VANS.

	1907.	1908.
Number of Visits	110	219
,, Vans examined	75	177
,, found correct	59	153

In each case where the vans or wraps were found dirty, a notice was served on the owner to cleanse same.

SHOP HOURS ACTS, 1892—5.

The object of these Acts is to prevent the employment of young persons for such an excessive number of hours as will prejudice the health of these employees.

During 1908, under the above Acts there have been 6,363 visits paid to shops during the day, and 4,402 re-visits made after six o'clock; in 283 instances the hours were found to be incorrect, and in 634 instances a copy of the Act was not exhibited.

The persons concerned have generally evinced readiness to comply with the requirements of the Acts, and have thus lessened the difficulties in its administration. The number of occasions in which it was necessary to take proceedings during the last two years is small.

	1907.	1908.
Number of day visits to Shops	6,485	6,363
,, Shops found without copy of Act exhibited	554	634
,, copies of Act supplied	482	490
,, re-visits to Shops during day ...	298	162
,, Shops found incorrect	66	48
,, re-visits to Shops after 6 p.m... ...	2,202	4,402
,, Shops found incorrect	190	283
,, Informations for excessive hours ...	3	—
,, Convictions	3	—
,, Informations for not exhibiting Notice of Acts and Requirements as to hours of work	9	8
,, Convictions	9	5
Total number of Informations	12	8
,, ,, Convictions	12	5
Total Amount of Fines and Costs	£14 13 6	£6 7 0

SEATS FOR SHOP ASSISTANTS ACT, 1899.

The object of the Act is to provide seats for female assistants.

	1907.	1908*
Visits for the purposes of the Act	662	643
Found correct	584	592
Number of Informations	2	—
,, Convictions	2	—
Total Amount of Fines and Costs	£1 4 0	£0 0 0

Seats in each case were subsequently provided.

EMPLOYMENT OF CHILDREN ACT, 1903.

This Act is intended for the limitation and regulation of child labour, and affects children of school age, viz., 14 years of age and under. The Act prohibits a child being employed between the hours of 9 p.m. and 6 a.m., although these hours may be varied on the framing of bye-laws.

It contains clauses prohibiting children carrying burdens likely to cause them injury, and from being employed in any occupation likely to be injurious to their lives, limbs, health or education.

Another clause prohibits children who are working half-time under the Factory and Workshop Act from being employed in any other occupation.

There are other clauses relating to children engaged in street trading. These have already been dealt with by the Watch Committee, and are enforced by the Police.

	1907.	1908.
Number of Visits for the purposes of the Act ...	268	1,095
,, found incorrect	68	61
,, of Informations	53	17
,, of Convictions	48	13
Amount of Fines and Costs ...	£84 11 6	£23 13 0

The following Bye-laws have been sanctioned by the Home Secretary and are now in operation:—

The Mayor, Aldermen and Citizens of the City of Liverpool at a Meeting held in the Council Chamber, within the Town Hall, on the 3rd day of June, 1908, do hereby, in pursuance of the powers conferred upon them by the Employment of Children Act, 1903, make the following Bye-laws:—

Definition Clause.

Throughout these Bye-laws the following words and expressions shall have the meanings hereby respectively assigned to them unless such meanings be repugnant to or inconsistent with the context or subject matter in connection with which such words or expressions occur, namely:—

"Industrial work" means any work in which manual labour is exercised by way of trade, or for purposes of gain in making, altering, repairing, ornamenting, finishing, adapting for sale, or cleaning any article.

The expression "Shop" includes any premises or place where retail trade (including the business of a Barber) is carried on.

Employment of Children.

Limitation of Age.

1.—A child under the age of 11 years shall not be employed.

Employment of Children in delivery of Milk, sale of Newspapers, &c.

2. (1)—No child who is liable to attend school full time shall be employed during school term on weekdays, other than Saturdays, in

(*a*) delivering Newspapers, or Milk, except between the hours of 7 and 8-15 o'clock in the morning and 5 and 8 o'clock in the evening.

(*b*) taking Meals to any person or persons, except between the hours of 12 noon and 1-15 o'clock in the afternoon and 5 and 8 o'clock in the evening.

(*c*) nursing, or other domestic work, running errands, or in or about a Shop, except between the hours of 7 and 8-15 o'clock in the morning, 12-30 and 1-15 o'clock in the afternoon and 5 and 8 o'clock in the evening.

(*d*) carrying parcels or delivering goods except between the hours of 5 and 8 o'clock in the evening;

provided that no such child shall be employed for more than 3½ hours on any day as aforesaid.

(2) No such child being a boy under the age of 12 or a girl under 14 shall be employed during the school term on Saturday or on any day during the holidays for more than 6 hours, or being a boy between the

age of 12 and 14 for more than 8 hours, provided that no such child shall be employed on a weekday other than Saturday later than 8 o'clock in the evening or 9 on Saturdays.

Industrial work at home.

3.—(1) No child who is liable to attend school full time shall be employed during school term in any industrial work at home on weekdays, other than Saturday, except between the hours of 5 and 8 o'clock in the evening, nor for more than 5 hours on Saturday.

(2) No child who is exempt from attending School shall be employed in any industrial work at home for more than 4 hours without an interval of at least one hour, and no such child shall be so employed before the hour of 7 o'clock in the morning or after the hour of 8 o'clock in the evening, nor on Saturdays after the hour of 4 o'clock in the afternoon. Every such child employed under this paragraph shall be allowed for meals on weekdays, other than Saturdays, an absence from work between the said hours of not less than 1 hour for Breakfast, 1½ hours for Dinner, and 1 hour for Tea, and on Saturday 1 hour for Breakfast and 1 hour for Dinner.

(3) No child employed in any industrial work at home on any day shall be employed on the same day in any other occupation.

Employment in a shop of children not dealt with in Clause 2.

4.—(1) No child shall be employed, except as otherwise provided, in or in connection with any Shop before 8 o'clock in the morning or after 8 o'clock in the evening, provided that if on one day in the week the shop closes not later than 2 o'clock in the afternoon, employment may be continued on one other day in the same week (to be specified in a notice kept constantly affixed in the Shop) to 9 o'clock in the evening.

5.—No child shall be employed on Sunday except in the delivery of milk and between the hours of 7 and 9 in the morning and 3 and 4 in the afternoon.

Employment in a Barber's Shop.

6.—(1) No child under the age of 13 years shall be employed in lathering or in similar occupation in any barber's shop.

(2) No child liable to attend school full time shall during school term be employed in lathering or in a similar occupation in any barber's shop, except between the hours of 5-30 and 8-30 o'clock in the evening on weekdays, other than Thursday, on which day a

child shall not be employed as aforesaid at all, or on Saturday between the hours of 10 o'clock in the morning and 9 o'clock in the evening, with an interval of not less than 1½ hours for Dinner and 1 hour for Tea.

Employment on Licensed Premises, &c.

7.—No child shall be employed in or in connection with the sale of intoxicating liquor, either on licensed premises or in any registered club, or in billiard or bagatelle marking, or in selling programmes or other articles in or in shifting scenery on the stage of any theatre, or music hall, or in the kitchen of any hotel, cookshop, eating house, or refreshment room.

Employment in a place of public entertainment.

8.—No child employed in a place of public Entertainment in pursuance of a License under Section 3 of the Prevention of Cruelty to Children Act, 1904, shall be employed on the same day or days or the day following such employment in any other employment.

Agricultural employment.

9.—No child who is liable to attend school full time shall be employed in any Agricultural work on any day other than Saturday during the school term except between the hours of 6 and 8-30 in the morning and 5 and 8 in the evening in the months of April to September, and except between the hours of 7 and 8-30 in the morning and 5 and 7 in the evening in the months of October to March; or, in the holidays and on Saturdays, except between the hours of 6 in the morning and 6 in the evening.

APPENDIX.

Extracts from Employment of Children Act, 1903.

Section 1.—Any local authority may make byelaws—

Power to make byelaws for regulating the employment of children.

(i) prescribing for all children, or for boys and girls separately, and with respect to all occupations or to any specified occupation,—

(*a*) the age below which employment is illegal; and

(*b*) the hours between which employment is illegal; and

(*c*) the number of daily and weekly hours beyond which employment is illegal:

(ii) prohibiting absolutely or permitting, subject to conditions, the employment of children in any specified occupation.

General restrictions on employment of children.

Section 3.—(1) A child shall not be employed between the hours of nine in the evening and six in the morning: Provided that any local authority may, by bye-law, vary these hours either generally or for any specified occupation.

(2) A child under the age of eleven years shall not be employed in street trading.

(3) No child who is employed half-time under the Factory and Workshop Act, 1901, shall be employed in any other occupation.

(4) A child shall not be employed to lift, carry, or move anything so heavy as to be likely to cause injury to the child.

(5) A child shall not be employed in any occupation likely to be injurious to his life, limb, health, or education, regard being had to his physical condition.

(6) If the local authority send to the employer of any child a certificate signed by a registered medical practitioner that the lifting, carrying, or moving of any specified weight is likely to cause injury to the child, or that any specified occupation is likely to be injurious to the life, limb, health, or education of the child, the certificate shall be admissible as evidence in any subsequent proceedings against the employer in respect of the employment of the child.

Offences and penalties.

Section 5.—(1) If any person employs a child or other person under the age of sixteen in contravention of this Act, or of any bye-law under this Act, he shall be liable on summary conviction to a fine not exceeding forty shillings, or, in case of a second or subsequent offence, not exceeding five pounds.

(2) If any parent or guardian of a child or other person under the age of sixteen has conduced to the commission of the alleged offence by wilful default, or by habitually neglecting to exercise due care, he shall be liable on summary conviction to the like fine.

(3) If any person under the age of sixteen contravenes the provisions of any bye-law as to street trading made under this Act, he shall be liable on summary conviction to a fine not exceeding twenty shillings, and in case of a second or subsequent offence, if a child, to be sent to an industrial school, and, if not a child, to a fine not exceeding five pounds.

(4) In lieu of ordering a child to be sent under this section to an industrial school, a court of summary jurisdiction may order the child to be taken out of the charge or control of the person who actually has the charge or control of the child, and to be committed to the charge and control of some fit person who is willing to undertake the same until such child reaches the age of sixteen

years: And the provisions of sections seven and eight of the Prevention of Cruelty to Children Act, 1894, shall, with the necessary modifications, apply to any order for the disposal of a child made under this sub-section.

Limitation of time.

Section 7.—With respect to summary proceedings for offences and fines under this Act, and any bye-laws made thereunder, the information shall be laid within three months after the commission of the offence.

Power of officer of local authority to enter place of employment.

Section 8.—If it appear to any justice of the peace, on the complaint of an officer of the local authority acting under this Act, that there is reasonable cause to believe that a child is employed in contravention of this Act in any place, whether a building or not, such justice may by order under his hand empower an officer of the local authority to enter such place at any reasonable time, within forty-eight hours from the date of the order, and examine such place and any person therein touching the employment of any child therein.

Any person refusing admission to an officer authorised by an order under this section, or obstructing him in the discharge of his duty, shall for each offence be liable on summary conviction to a penalty not exceeding twenty pounds.

Definitions

Section 13.—In this Act—

The expression "child" means a person under the age of fourteen years:

The expression "guardian," used in reference to a child, includes any person who is liable to maintain or has the actual custody of the child:

The expressions "employ" and "employment," used in reference to a child, include employment in any labour exercised by way of trade or for the purposes of gain, whether the gain be to the child or to any other person:

The expression "local authority" means, in the case of the City of London, the mayor, aldermen, and commons of that city in common council assembled; in the case of a municipal borough with a population according to the census of nineteen hundred and one of over ten thousand, the borough council; and in the case of any other urban district with a population according to the census of nineteen hundred and one of over twenty thousand, the district council; and elsewhere the county council:

The expression "street trading" includes the hawking of newspapers, matches, flowers, and other articles, playing, singing, or performing for profit, shoe-blacking, and any other like occupation carried on in streets or public places.

MIDWIVES ACT, 1902.

The Midwives Act has worked harmoniously in Liverpool, and has resulted in a distinct improvement in the class of women practising midwifery.

There were at the close of 1908, 317 midwives certified under the Midwives Act. Of these, 276 held certificates from bodies approved by the Central Midwives Board, including those of C.M.B., and 41 were certified by the Board from the fact of their being in bona-fide practice prior to 1901.

Besides the foregoing, there are 20 women who are known to be practising midwifery although they are not certified under the Midwives Act. Of these, 11 hold certificates from training bodies recognised by the Board, but they are not certified, having failed to take advantage of the opportunities given them to be certified. The remainder hold no qualification, and several of these are very aged women.

It will be seen therefore that only 13 per cent. of the certified midwives are not certificated, whilst of the total number of women practising midwifery, namely, 337, only 2·6 per cent. are neither certified nor certificated. This represents a very small proportion of unqualified midwives.

Returning to the certified midwives, the table indicates how these women are engaged, viz. :—

	1905.	1906.	1907.	1908
Number in practice as midwives on their own account	166	159	166	173
Employed in public institutions as midwives, maternity nurses, &c.	21	34	53	45
Employed in private practice as maternity nurses under the direct supervision of a medical practitioner, or in other employment ...	174	102	84	99
Totals	361	295	303	317

The next table, giving the qualifications of the midwives resident in Liverpool for each of the past four years, shows that whilst the number of midwives holding their certificate as the result of the Central Midwives Board's examination has been increasing, the numbers of those certificated by other bodies have been declining. Naturally this is what would be expected, now that the only examination for midwives is that held by the Central Midwives Board. It would obviously be a great convenience if the Board would arrange to hold examinations in the large centres of population, and relieve candidates of the trouble and expense of travelling.

The following table gives the qualifications of the midwives resident in Liverpool, for the past four years, respectively, viz. :—

	1905.	1906.	1907.	1908
Central Midwives Board Examination	—	30	52	80
Ladies' Charity and Lying-in Hospital	153	120	110	106
London Obstetrical Society...	124	74	73	69
Rotunda Hospital, Dublin	8	7	7	6
Glasgow Maternity Hospital	5	4	3	3
Queen Charlotte's Lying-in Hospital	4	4	2	2
Manchester Maternity Hospital	3	2	3	2
National Maternity Hospital, Dublin	3	3	3	2
Coombe Lying-in Hospital, Dublin	2	3	3	4
St. Mary's Hospital, Manchester	1	1	1	1
Dundee Maternity Hospital	1	1	1	1
Royal Maternity Hospital, Edinburgh	1	1	5	—
In Bona-fide Practice prior to 31st July, 1901 ...	56	45	45	41
Totals	361	295	308	317

The Act has been the means of bringing the Medical Officer of Health and his Department into very close touch with midwives. Dr. Mussen, the Deputy Medical Officer, is charged specially with any inquiries resulting under the Act, and the detailed supervision and the visiting of the midwives is left in the main with Mrs. Adrian, a member of the Medical Officer s Female Sanitary Staff, who is herself a registered midwife.

With regard to the supply of midwives and the cost of training, there is no reason whatever to anticipate any shortage of trained and qualified women in Liverpool On the contrary, the facilities for training in large centres like Liverpool might be, and indeed ought to be, fostered by the authorities of districts in which any shortage is anticipated, by sending pupils to be trained. In this way the advantages of trained midwives for rural or semi-rural districts could be provided for.

Midwives are trained at the following Institutions in Liverpool, the approximate cost being about £15 15s. 0d. :—

Ladies' Charity and Lying-in Hospital.

Parish Infirmary, Brownlow Hill.

Walton Union Infirmary, Rice Lane.

Toxteth Infirmary, Smithdown Road, is an authorised institution, but does not at present train midwives.

In addition there are some private practitioners sanctioned by the Board by whom instruction can be given, and attendance at the necessary number of confinements arranged for through certain midwives. The approximate cost is 12½ guineas.

A total of 16,522 births were in 1908 attended by women, out of a total of 23,918 births during the year. Of these, 712 were attended by unregistered women, and many of these were emergency cases. Included in the 16,522 births, 2,387 were attended by midwives on the staff of the Ladies' Charity.

The extent of the practice of individual midwives varies very considerably, two midwives having each attended 400 cases in the year.

The number of births attended by the 173 midwives in private practice was 13,423, and the following table gives some detail as to the proportion of births attended by the various midwives, viz. :—

Midwives who attended over	400	cases each...		2
,, ,,	350	,, ...		2
,, ,,	300	,, ...		1
,, ,,	250	,, ...		4
,, ,,	200	,, ...		11

(The above-mentioned 20 midwives attended 5,433 cases.)

Midwives who attended over 150 cases each	10
,, ,, 100 ,, ...	20
(The above-mentioned 30 midwives attended 4,218 cases.)	
Midwives who attended over 50 cases each...	29
(The above-mentioned 29 midwives attended 2,103 cases.)	
Midwives who attended under 50 cases each...	70
(The above-mentioned 70 midwives attended 1,669 cases).	

The above averages 78 cases for each midwife.

The Act has been instrumental in stimulating the midwives to form a Midwives' Association, which is a useful body, as it enables the Medical Officer to get easily into touch with the midwives, and to emphasise the importance of adhering to the Rules of the Central Midwives Board. Gratis lectures are delivered by members of the Medical Staff of the Ladies Charity Hospital.

The midwives are visited periodically, especial attention being given to those who are less intelligent, or who from advancing years need a closer supervision.

The registers kept by the midwives have shown, year by year, a very marked improvement, and midwives are encouraged to report, for further investigation by the sanitary staff, any condition in connection with a house which may have an influence upon the health of the mother or child.

The birth of an infant before the arrival of the midwife is usually owing to delay in notifying the midwife. It appears, however, to be less frequent in the practice of a midwife devoting herself altogether to her practice than it is in the case of midwives who combine other duties such as domestic duties with their work.

Arrangements made for reporting serious ophthalmia work well, and in the St. Paul's Eye Infirmary a few beds are set aside for the reception of mother and infant.

Midwives have shown a great willingness to attend any case when summoned; as a consequence, many of them have to go without a fee. Two of the three Boards of Guardians in Liverpool have consented, under special circumstances, to give a midwife an emergency fee, but the third

Board of Guardians has declined to do so, holding that an application should be made by the parturient woman, or on her behalf, to the Relieving Officer. This Board does not realise the suddenness of the emergency. The Midwives' Association themselves endeavour to recover the fee from the patient and return it to the Guardians.

STILL BIRTHS.

The number of still births notified by midwives was 369, which is at the rate of 2·8 per cent. of the births attended by midwives in private practice. The prevalence of still births in the practice of midwives varies very much, the highest rate being 10 per cent., the lowest being 0·9 per cent., in the practice of midwives attending over 20 confinements per year. In no case does a midwife give a certificate of still birth unless she is present at the time of the birth; she is instructed that if the birth should take place before her arrival she must report the matter to the Coroner, who, upon inquiry, grants a certificate for the burial of the body. The Medical Officer of Health has arranged for still births to be received at the Mortuary, Ford Street, where, if the parent is unable to pay the fee the body is taken charge of and arrangements made for its burial.

The following figures give the months of pregnancy during which the still births took place, viz.:—

	1908.
Sixth month	41
Seventh month	79
Eighth month	69
Ninth month	166
Not specified	14
Total	369

In 12 cases the child was illegitimate.

MEDICAL ASSISTANCE.

The following table shows the complications for which medical assistance was required during each of the last three years:—

Abnormal Presentation—	1906.	1907.	1908.
Brow or Face Presentation	23	38	26
Occipito-posterior Presentation ...	20	7	19
Transverse Presentation	33	29	27
Breech Presentation	16	14	20
Foot Presentation	5	5	10
Cord Presentation	6	10	16
Placenta Prævia	2	9	14
Deformed Pelvis	48	69	65
Anti-partum Hæmorrhage	27	15	39
Post-partum Hæmorrhage	35	53	51
Retained Placenta or Membranes	64	74	78
Ruptured Perinæum	25	36	30
Multiple Births	12	1	6
Prolapse of Uterus	2	1	—
Malformation of Child	6	5	7
Death of Child	3	1	—
Abortion or Premature Birth	13	15	14
Septicæmia	2	1	—
Pyrexia	11	15	17
Epileptic Convulsions	1	2	—
Eclampsia	5	5	10
Ophthalmia	—	—	2
Obstructed Labour, Uterine Inertia, or requiring Instrumental Assistance ...	196	247	279
Various or not definitely specified	117	32	45
Total	672	684	775

Since the Act came into operation, the Health Committee have, on the advice of the Medical Officer of Health, consented to pay a fee of one guinea for every bona-fide case where emergency assistance had been rendered by a medical practitioner at the request of a midwife, and in which the fee could not be recovered either from the patient's friends or from the Boards of Guardians. Where part payment is made from these sources, the Health Committee have made up the balance. This arrangement has given general satisfaction, and there is no reason whatever to question the bona-fides of any application. The numbers of references to medical men vary slightly year by year. The total amount paid during each of the last three years has been :—

1908	£357	2	6
1907	213	9	0
1906	240	6	0

It is absolutely essential that remuneration shall be made in these cases, and provision should be made for payment of all such cases in any amendment of the Act.

The form of account on which payment is made is as follows:—

.....190

MIDWIVES' ACT, 1902.

THE CORPORATION OF LIVERPOOL.

Dr. to .....

.....

To rendering emergency assistance on.....190

to .....

of ..... Street,

on account of .....

at the request of.....

Certified Midwife.

£ : :

I am unable to recover the fee from the Patient or from the Poor Law Authorities.

(Signed).....

(Account to be rendered to Medical Officer of Health's Department.)

It may perhaps be worth mentioning that the Medical Officer of Health conferred with the members of the Liverpool Medical Institution when the Act was passed upon the question of the fee, since it was obvious that some emergencies would involve much greater time and anxiety than others, but the uniform fee was thought the best, as it would be impossible to make discriminations.

It must be remembered that this fee is for emergency assistance only, and it does not involve any subsequent attendance by the medical man. If he chooses to attend he has no additional claim upon the Health Committee.

It is also desirable that the circumstances in which midwives themselves, called to an emergency case, have to go without a fee, should receive due consideration, so that some recompense may be given to the midwife discharging that work.

It has happened that when the midwife has sent for emergency assistance, and part of the doctor's fee has been paid by the patient, there has not been enough money left to pay the midwife anything at all.

A Memorandum of the Central Midwives' Board has been issued on the subject of the difficulty experienced by midwives, and while it is obvious that the inaction of the County Councils and Boards of Guardians alluded to is to be deplored, yet at the same time it illustrates the necessity for removing any ambiguity as to their obligations. It again illustrates the need for Rural Authorities sending their prospective midwives to be properly trained, with a view to their being ultimately certified and practising in the district.

Contraventions of the Rules of the Central Midwives' Board have from time to time occurred, but they were none of them of so serious a nature as to need the intervention of the Board, all being dealt with by the Local Supervising Authority.

As illustrations may be mentioned:—

Neglecting to remove soiled linen.

Failing to attend for the full period of ten days.

Failing to obtain assistance for ophthalmia.

Failing to keep the bag in proper order.

Dirty house (home).

A complaint also was received by the Rabbi on two occasions of interference by midwives in cases of circumcision.

Other cases of a similar kind have arisen, but they do not call for special comment.

PUERPERAL FEVER.

The number of cases of Puerperal Fever notified to the Medical Officer of Health during the year was 52, of which 16 were fatal. This gives a death-rate of 0·6 per 1,000 births in the City, a rate that compares very favourably with that of England and Wales, which was 1·5 during 1907, and 2·0 for the previous ten years. Thirty-six cases were removed to hospital, viz., 4 to Toxteth Workhouse Infirmary, 6 to Brownlow Hill Infirmary, 4 to Mill Road Infirmary, 2 to Walton Workhouse Infirmary, 1 to the Royal Infirmary, and 19 to the City Hospital, Fazakerley.

All the cases were investigated, and 23 cases with 7 deaths were found to have occurred in the practice of midwives. This shows a considerable diminution as compared with last year, and may be accounted for by the attention given to the patient's temperature as well as the prompt medical aid called in at an early stage. In many cases where the midwife became anxious as to the condition of the patient advice was sought from the Medical Officer of Health, after which a visit was paid and arrangements made for the comfort of the patient. In two cases the symptoms did not appear until the midwife had ceased to attend the patient, namely ten days after the confinement, and the woman was apparently in her usual health.

Each midwife is instructed to take the temperature of her patients daily and to note them on charts provided for that purpose by the Corporation. She is thus enabled to realise by the use of the thermometer the necessity of seeking medical advice at an early stage.

Postcards are provided also for the purpose of immediately notifying to the Medical Officer of Health of any rise of temperature, with a quickening of the pulse, so that by this arrangement the patient receives attention at a much earlier stage of the disease.

VISITS TO MIDWIVES.

As in previous years the midwives have been visited periodically, the number of such visits during the year being 1,169; this number still shows an increase, as extra visits are being paid to bona-fide midwives, to those who were uninitiated in the use of either the thermometer or temperature chart (much time being spent in instructing them in this important branch of their work), and also to midwives who by their advanced age are becoming incapacitated, and therefore require greater attention.

The registers kept by the midwives show a still greater improvement both in the entering up of cases and in the information given, thus assisting the general enquiries made in each case, such as the patient's previous history and the condition of the house, surroundings, &c.

In the examination of bags and appliances it was found that the improvement was well maintained during the year, several new bags having been procured; the same improvement was observed in the general conduct of their practice.

The arrangements with reference to the reporting of dirty houses and bedding is much appreciated by the midwives as tending to the lessening of risk to patients; the prompt action taken by the Public Health Department has doubtless been the means of saving the lives of both mother and infant in several cases. In twelve instances the bedding was destroyed owing to its filthy condition, new bedding being provided by the Corporation.

Every opportunity is taken to bring the rules of the Central Midwives Board under the notice of the midwives, and to emphasise the importance of adhering to the provisions laid down by them.

These rules will remain in force until September 30th, 1909, when they may be further revised if it should be thought advisable to do so.

INFECTIOUS DISEASES AND OTHER MATTERS OF HYGIENE RELATING TO SCHOOLS.

In August Dr. Kingsford, the Assistant Medical Officer appointed to make enquiries into this branch of the Public Health work, left the Department to take up the duties of School Medical Officer under the Education Committee. The department has had to be rearranged, and it was decided that Dr. Mussen should take on Dr. Kingsford's duties so far as they related to infectious disease.

There has been a slight increase in the work of the department with regard to infectious disease owing to a considerable and unusual outbreak of scarlet fever and mumps. Measles and whooping cough were not unusually prevalent, though the cases were slightly in excess of the previous year.

The male sanitary staff continue as before to visit the homes where cases of infectious disease have occurred, other than communicable diseases which are visited by the female staff.

During the year teachers on the whole were more prompt in notifying cases of infectious disease, though in many cases there is still room for improvement. In two instances at least an epidemic of mumps could have been kept within bounds had proper care been taken to send home suspicious and even obvious cases of the disease.

Fear of losing attendances still weighs very greatly with some teachers, and leads to children whose symptoms are very suspicious being kept in school until the teachers are quite sure that the ailment is infectious. Obvious ill-health of the pupil is, however, always a proper reason for its exclusion from school, whatever the cause of illness may be.

The Education Code of 1903, Article 101, contained an exceedingly valuable provision, and provided that the absences of pupils on account of infectious sickness in their homes should not be deducted from the record of attendances. This clause, however, was withdrawn from subsequent codes, and the result is a tendency to minimise within dangerous limits the absences of the child.

During the year a clause in the Liverpool Corporation (General Powers) Bill, 1908, requiring parents of school children to notify the teacher or the Medical Officer of Health of the presence of infectious disease in the home of a scholar was thrown out by the Standing Committee of the House of Commons.

It is greatly to be deplored that the Committee of the House did not grant the powers sought, seeing that at least two of the diseases scheduled—measles and whooping cough—are two of the most serious and fatal diseases with which the department has to deal, and the powers at present in existence for controlling them are very inadequate.

Improvements have been made in the Sanitary Department with regard to visiting cases of non-notifiable disease, resulting in the saving of much delay in making the home enquiries.

The new rules with regard to the exclusion of children coming from infectious homes seem to have worked well, and the percentage of senior scholars attending is the highest on record, in spite of the outbreak of mumps and scarlet fever, which diseases show a greater incidence amongst senior scholars than do the other diseases.

The following tables show the age distribution and the monthly distribution of the school cases of infectious disease during the year:—

Table I.—* SCHOOL CASES (Infectious Diseases).

AGE DISTRIBUTION—January–December, 1908.

DISEASE.	Under 5.	Under 6.	Under 7.	Total Under 7.	Under 8.	Under 9.	Under 10.	Under 11.	Under 12.	Under 13.	13 and over.	Total 7 years and upwards.	Grand Total.
Scarlet Fever	175	401	398	974	325	235	201	201	185	125	140	1412	2386
Diphtheria	36	86	75	197	50	33	35	27	22	14	30	211	408
Measles	428	1203	751	2382	257	98	75	38	31	20	19	538	2920
Whooping Cough	368	983	523	1874	161	87	43	18	12	15	14	350	2224
Chicken-pox	139	448	366	953	150	99	51	30	20	21	17	388	1341
Mumps	220	799	744	1763	398	190	135	112	84	87	77	1083	2846
Totals	1366	3920	2857	8143	1341	742	540	426	354	282	297	3982	12125
Per cent. of those on Roll	24·4	28·2	19·7	23·2	9·1	5·1	3·8	3·1	2·6	2·1	2·1	4·0	9·1

Table II.—SCHOOL CASES (Infectious Diseases).

MONTHLY DISTRIBUTION—January-December, 1908.

DISEASE.	January.	February.	March.	April.	May.	June.	*July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever	101	104	142	179	219	255	204	191	281	234	245	231	2386
Diphtheria	22	27	29	24	40	42	23	24	33	47	50	47	408
Measles	418	538	615	384	372	358	47	14	28	47	57	42	2920
Whooping Cough	529	286	390	200	258	189	31	103	52	58	70	58	2224
Chicken-pox	176	135	128	119	147	109	9	23	99	158	121	117	1341
Mumps	88	114	220	264	303	470	54	71	253	293	401	315	2846
Totals	1334	1204	1524	1170	1339	1423	368	426	746	837	944	810	12125

* Holidays—July 3rd–August 10th.

With regard to the school buildings, which were fully reported upon two years ago, many of the older schools are still deficient in light and ventilation, and are still furnished with old types of seats and desks.

The sanitary offices of the schools are visited periodically by the sanitary inspectors, but closer attention on the part of the caretakers would be desirable.

The application of the Employment of Children Act has had a salutary effect in lessening the abuse of school children by working them for excessive and up till late hours.

The closer attention paid to the subject of Ringworm explains the large number of cases brought to notice (see page 169). The disease is extremely difficult to deal with, not only on account of the difficulty of recognising its nature, but because of the protracted course which it runs. Every child found to be suffering from Ringworm of the scalp should be excluded from school until certified by a medical man to be free from the disease. The plan of wearing a cap in school is generally unsatisfactory and objectionable.

Two cases of favus were detected in school during the year.

Impetigo.—This very common disease was frequently associated with a verminous condition, and necessitated a very large number of visits to the homes of the sufferers. The large number of cases of impetigo of the scalp, due to the presence of vermin, is deplorable, the condition being frequently associated with other evidences of gross neglect of the children at home. Many cases of this nature were referred to the Society for the Prevention of Cruelty to Children to deal with, and a few cases have been dealt with in the Police Court.

Thirty-eight schools are now being constantly visited by nurses from the Queen Victoria Nursing Association, the children's heads, and when necessary the clothing, being periodically examined by them. Their main attention, however, is given to the treatment of sores and various minor injuries. Many parents, unfortunately, refuse or neglect to carry out instructions given by the nurse. Examples are only too frequent in which every sense of parental responsibility or affection seem to be wanting.

The following is a list of schools closed during the year owing to the prevalence of Measles and other infectious diseases amongst the scholars:

Date of Notice.		School.	Department or Departments.	Nature of Disease.	Period of Closure.
1908. Jan.	7	Parkhill H. G.	Infant	Measles and Mumps	Until 20th Jan.
	7	Greenbank Road Council	,,	Measles, &c.	,, 20th Jan.
	18	Parkhill H. G.	,,	Measles and Mumps	,, 27th Jan.
	20	St. Francis Xavier's, Salisbury Street	,,	Measles and W. Cough	,, 3rd Feb.
	20	Greenbank Road Council	,,	Measles, &c.	Until 3rd Feb.
	22	St. Catherine's, Uxbridge Street	,,	Whooping Cough, &c.	,, 10th Feb.
	24	St. Oswald's, Old Swan	,,	Measles	,,
	24	St. Mary's, Edge Hill	,,	Whooping Cough	,,
Feb.	5	Granton Road Council	,,	Measles, &c.	Until 24th Feb.
	6	Walton R.C., Park Vale Road	,,	Whooping Cough	,, 2nd Mar.
	10	St. Anne's, Stanley	,,	Measles and W. Cough	,, 24th Feb.
	11	Walton National	,,	,,	Three weeks.
	12	St. John's, Clifton Road	,,	Measles	,,
	12	Broad Green Road Council	,,	,,	Until 2nd Mar.
	14	Birchfield Road Council	,,	,,	,, 9th Mar.
	24	St. Anne's, Stanley	,,	,,	,,
	26	Infant Orphan Asylum, Myrtle Street	,,	Scarlet Fever	One week.
	27	Walton Lane Council	,,	Measles	Until 9th Mar.
	27	St. Chrysostom's, Mill Road	,,	Mumps and W. Cough	,, 16th Mar.
	28	South Church of England	,,	Whooping Cough	,, 23rd Mar.
Mar.	13	St. Luke's, Colquitt Street	,,	Measles and W. Cough	Three weeks.
	27	SS. Matthew and James, Mossley Hill	,,	Whooping Cough	Until after Easter Holidays.
	30	St. James', St. James' Rd.	,,	Mumps	,,
	31	St. Mary's, Lower Milk Street	,,	,,	,,

Date of Notice.	School.	Department or Departments.	Nature of Disease.	Period of Closure.
April 6	Wavertree R.C., Chesnut Grove	Infant	Measles	Easter Holidays.
8	Holy Cross, Fontenoy Street	,, ...	Mumps	,,
May 21	St. Polycarp's, Gordon Street	,, ...	,,	Until 8th June.
21	Webster Road Council ...	,, ...	Measles and Ger. Measles	,,
26	Christ Church, Aughton ...	,, ...	Measles	,,
June 23	St. Vincent's, Norfolk Street	,, ...	Mumps	Until after Summer Holidays.
Nov. 18	St. Paul's, West Derby ...	,, ...	,,	Until 7th Dec.
23	St. Paul's, West Derby ...	Mixed	,,	,,

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Considerable attention has been paid during the year to the arrangements necessary to carry out successfully the Medical Inspection of School Children. The Medical Officer of Health, as Medical Officer to the Education Authority, recommended the Education Committee to commence the work of medical inspection of school children by the appointment of three medical inspectors. The whole time and undivided attention of each of these officers should be devoted to the work of the Education Committee, but it is not improbable that this number will subsequently need to be increased in order to meet adequately the requirements indicated in the Memorandum of the Board of Education. The limitation does in effect follow the suggestions made by the Board of Education.

There was at first some divergence of opinion as to the methods suggested, but ultimately the Education Committee of the City Council authorised arrangements based upon the recommendations of the Medical Officer of Health.

The work is now progressing very favourably, and has proved exceedingly valuable, not merely as a compilation of statistics, but leading to important ameliorative measures consequent upon visits paid to the homes of the children by the officers of the Health Department.

The staff of female inspectors engaged upon the ameliorative work at the homes has been increased, and the duties consequent upon the administration of this act are nothing new to the staff of the Health

Department generally, as may be seen from the fact that during last year some 22,211 references from the Education Department were dealt with by them. It will be appreciated, therefore, that so far as this aspect of the question goes, the work is not new.

The medical inspection of the school children imposed upon the Education Authority has caused an important addition to be made to the duties of the staff during the latter part of the year. The time of the Medical Inspectors is greatly saved by the help of tactful female assistants who not only lessen the clerical work but save time in the preparation of the children for the inspection, and in noting the condition as to their cleanliness, &c. No one could render such effective help as the female sanitary staff, as it is part of their duties to follow up in the homes such children as show evidences of communicable diseases (including verminous conditions) or neglect.

The arrangement which seemed to promise the best results was to re-divide the city into districts, taking into consideration as far as possible the position of the schools, and then for each inspector to assist at the medical inspection of the schools in her own district. Additions were made to the staff to meet these needs.

The staff continue as before to visit cases of communicable skin and eye conditions, and the following table shows the number of school cases visited during the last three years:—

	1906.	1907.	1908.
Ringworm	1,280	1,977	1,684
Itch	93	235	468
Sore Eyes	4,191	3,404	2,056
Sore Heads, Impetigo, Eczema, &c.	4,856	6,435	3,088
Other Skin Diseases			2,253
Verminous cases	—	4,550	643
Neglect cases			1,412
Total	10,420	16,601	11,404

Although most of these cases are reported from the Education Department, yet a very large number are referred to the office of the Medical Officer of Health by nurses and others who are more or less in daily contact with children, such as teachers, visitors, &c., and also by private individuals.

The homes are visited and the parents are given instructions as to cleanliness and general conditions, and where these instructions are carried out improvement usually results. In all cases, except the most simple, the parents are advised to seek medical assistance.

Where clothing has been found to be verminous, it is insisted that it shall be thoroughly cleansed and boiled. In a number of instances the dirty clothing was found to be worn out and almost useless. This was destroyed, and replaced by a new supply obtained through the agency of the Police Aided Clothing Association.

The Board draw attention to Section 13 of the Education (Administrative Provisions) Act, 1907, but this again is limited to children in public elementary schools.

There are various incidental ways of discovering verminous and neglected little children, such as on the occasion of visits paid under the Notification of Births Act or in cases in which neglected children observed in the streets are followed to their homes; but these incidents merely emphasize the importance and reveal the necessity for the powers now sought.

CARE OF CHILDREN.

It does appear to be the fact that numerous movements for protecting and improving the condition of poor children have emanated from Liverpool.

It was in Liverpool in 1883 that a society for the protection of children was first established, and which society has since then been actively engaged in beneficent work.

A number of years later, when the condition of neglected, ill-clad children upon the streets had forced itself upon the attention of everybody, a society was formed by the then Lord Mayor called the Police Aided Clothing Association This is an association maintained by voluntary gifts to provide clothing for ill-clad children in suitable cases, so that there should no longer be the spectacle, so degrading to Liverpool, of children running about the streets half-naked owing to the poverty of the parents.

The clothing is marked in such a way that it cannot be sold or pawned, and the term "Police Aided" is given to it from the assistance in this and other matters given by the police. The case of every ragged child found by the police or others is inquired into by the female staff of the Medical Officer of Health's Department, and the children are brought to a depôt where the work of clothing is supervised by charitable ladies.

The street trading of children is dealt with by the Head Constable.

FEEDING OF SCHOOL CHILDREN.

During the year the general question of the feeding of school children attending the elementary schools was discussed, and in order to obtain information on the subject a Special Committee of the City Council was appointed to enquire into the adequacy of the voluntary system of feeding those children whose parents are unable to provide them with sufficient food. The Medical Officer was instructed to arrange for an Inquiry into the subject, and to obtain medical assistance for the purpose. As the time in which to make the investigation was limited, 20 schools were selected involving about 19,000 children, chiefly of the poorer classes. These were further supplemented by 13 schools representing 13,000 children. The services of fifteen medical men were obtained to examine the children and report on the results, and valuable assistance was also given by the managers and teachers of the schools, whilst the Health Committee allowed the services of a number of their officers to be given during the course of the Inquiry. The following general observations were made on the reports submitted by the medical men engaged:—

It would appear that the number of meals supplied by voluntary aid equals, if it does not exceed, the number supplied by the Meals Committee.

It will be seen that improper and injudicious feeding is exceedingly common, and by no means restricted to the poorer classes.

Investigations carried out in the City, and extending over many years, in regard to infant feeding, indicate the highly encouraging results which followed on proper instructions and advice being given to mothers. There is no doubt whatever that when proper feeding of children is better understood very great advantages will result, this aspect of the question being by no means wholly associated with poverty. Habitual use of improper food produces every evidence of malnutrition. Education in the matter of feeding will save a great deal of this malnutrition, and will also avert much of the waste of food which takes place in the houses of the poorer classes. It may be pointed out that in the discussion at the City Council, which gave rise to this Inquiry being ordered, no mention whatever was made of the class of children who, perhaps above all others, require consideration, and that is the class who are not of the school age.

The purview of the City Council must, of course, embrace these children, and that their needs are not less than those of school children is sufficiently obvious.

In large numbers of cases children may be seen running home with their food, the object very frequently being to share it with the little brothers and sisters. This matter requires a very careful consideration, and will not be satisfactorily met by merely compelling the school child to consume its food upon certain premises. One illustration is worth giving—the K—— family. A little barefooted child, about five years of age, received her supply of bread and jam, and was followed home through the rain to the cellar in which she lived. The Medical Officer, on entering the cellar, found two other children who attended other schools, who had also arrived with their share of bread and jam, and the three of them were proceeding to divide the meal with two others who were not of school age. The mother stated that they did this when their father was out of work. Latterly he had been in hospital, but was returning to work the following day. She also stated that she had had thirteen children, seven of whom had died in infancy or early childhood.

The matter does not come within the scope of the reference from the City Council, but the Committee may feel disposed to dissociate itself from any suggestion that there are less responsibilities in connection with children below the school age than with those who are attending school.

A series of cases which give rise to reflections of a much less agreeable kind are those where the father is seen to be eating his meals while the children are looking on. It is difficult to account for this singular perversion of parental instinct, and it can only be classed with other cases of cruelty and neglect which from time to time receive the attention of the Society for the Prevention of Cruelty to Children.

There is an unfortunate but fairly widespread practice amongst many of the labouring classes in certain districts for the father to take his dinner first, and for the rest of the family to take theirs afterwards; moreover, it is exceedingly common in slovenly households for the food to be left strewn about practically the whole day.

With reference to the proposal to apply the Education (Provision of Meals) Act of 1906, there appears to be an impression that considerable time would be taken up in formalities, should it at any time be found necessary or advisable to make use of the provisions of the Act.

It will be noticed that no delay is involved in its application beyond what would arise in sending a communication to the Board of Education; practically the provisions of the Act are available at any time.

It must not be forgotten, however, that the Act safeguards Authorities against imposition, and some of the conditions would be more irksome upon parents than the system of inquiry connected with the present arrangements for voluntary feeding. No doubt these safeguards are inserted with a view to prevent an encroachment upon the province of legally constituted authorities upon whom the duty of relieving destitution devolves.

It remains to be added that apart from the information gained during the Inquiry which bears directly upon the Resolution of the Council, information of a very useful kind has been obtained, and the investigation has been attended with useful results in various directions, not least in disseminating knowledge on the question of proper feeding.

The visits were in many cases followed by great improvements in the homes.

POWERS IN REGARD TO CLEANLINESS OF CHILDREN.

The necessity for very special clauses in regard to cleanliness unfortunately is very great in Liverpool, as in some other cities, and Section 33 of the Corporation (General Powers) Act, 1908, is designed with the object of lessening the suffering of little children who are allowed by their parents and guardians to become filthy and verminous.

It will be observed that measures already exist for the free bathing and washing of the children, and also for disinfecting clothing infested with vermin.

The Corporation have a large and efficiently trained Female Staff (twenty-one in number) who are charged with the visitation of the poorer homes, but whose operations are less effective than they might be by reason of the want of fuller powers.

The Section will be of very great value in Liverpool.

With regard to the observations of the Local Government Board, it would appear that the great defect in the London clause is that it applies only to children attending school, in which category, as already stated, children would be better cared for, for the reasons explained, than those who are not attending school. The London Act, therefore, has no bearing on the question, as it leaves out of the beneficent scope of the clause the young children who are not attending school, and who are commonly in a worse condition than those who are. The Glasgow clauses furnish a clearer parallel, but these do not appear to be of equally wide application, as they apply only to school children.

FIREGUARDS.

During the early part of the year the sum of £250 was kindly placed at the disposal of the Health Committee for the purchase of fireguards, the wish of the donors being that fireguards should be distributed amongst poor people with large families who were unable to afford to purchase one.

The Head Constable was requested to give instructions to pawnbrokers and second-hand furniture dealers not to take these fireguards (marked L. C.) into pawn.

NOTICES TO MASTERS OF SCHOOLS.

The arrangements have been continued with the Education Committee that notice shall be sent to the Committee and postcards to the Head Masters of the various schools informing them when children from infected houses attend their schools. 12,947 cards were sent last year, as against 12,342 in the preceding year.

PUBLIC ELEMENTARY SCHOOLS.

In pursuance of the resolution of the Elementary Schools Management Sub-Committee, dated 13th July, 1903, and approved by the Education Committee on the 19th August, 1903, instructing the Medical Officer of Health to report upon the sanitary equipment, &c., of schools, 188 schools were fully reported upon.

Full Reports were printed by the Education Committee, and circulated to those interested.

One hundred and eighteen of these schools were re-examined in 1908, necessitating 377 visits and the service of 67 notices.

All the Public Elementary Schools in the City are visited once each fortnight and an examination made of the sanitary conveniences.

Ordinary visits made by Sanitary Inspectors, apart from special visits for the purposes of the Education Committee, reached the following numbers:—

	1907.	1908
No. of Visits to Schools	2,812	2,681
,, found incorrect	163	126
,, Water-closets and Latrines found dirty or defective	361	182
,, Notices issued for defects	166	175
,, ,, ,, dirty closets	10	3

THE AMBULANCE AND DISINFECTING STAFF.

The following table shows the number of patients removed to Hospitals during 1908, compared with the number removed during the preceding year, by Officers of the Ambulance Staff, and the Hospitals to which they were taken :—

City Hospital North, Netherfield Road.	City Hospital South, Grafton Street.	City Hospital, Park Hill.	Brownlow Hill.	City Hospital East, Mill Lane.	David Lewis Northern Hospital.	Royal Infirmary.	Smithdown Road.	Southern Hospital.	City Hospital, Fazakerley.	Port Sanitary Hospital.	Hahnemann Hospital.	St. Paul's Eye Ear & Hospital.	Fazakerley Annexe.	Total.
829	739	747	—	1014	19	20	—	2	1427	17	5	5	251	5,075

PRECEDING YEAR.

768	466	810	11	706	23	8	2	2	934	6	2	—	63	3,801

For the removal of patients to hospital, and for the removal of infected bedding, and its return after disinfection, an adequate ambulance staff is maintained. There are eight ambulances provided for the removal of infectious patients to hospital, and as far as possible one ambulance is reserved for each form of disease. In every case the ambulance is cleansed and disinfected in the following way each time it is used :—

The rugs in which the patient is wrapped are left for disinfection at the hospital to which the patient is taken. The interior of the ambulance (which is of smooth varnished wood) is sponged down with a strong solution of formaline. A clean disinfected rug is supplied before another patient is removed.

The ambulance attendants and disinfecting staff are provided with sufficient suits of overalls for their purposes.

Bedding and clothing, after disinfection, are returned home by a staff and conveyance entirely distinct from that which removed them in the infected state. In all cases where it is found desirable to destroy infected articles full compensation is paid, as provided for by the Public Health Act.

Details of the methods employed in regard to Smallpox and Typhus Fever have been given in previous Annual Reports, in which also the general procedure in disinfection has been explained.

INFECTED PREMISES STRIPPED AND DISINFECTED BY STRIPPING STAFF.

	1907.	1908.
Houses	6,589	8,238
Rooms Stripped or sprayed with solution of Perchloride of Mercury	19,687	26,098
,, Disinfected with sulphurous gas	6,743	8,040
Number of Notes to Owners after stripping and cleansing	2,322	2,665
,, Visits by Superintendent of Staff	1,957	2,005
,, Enquiries respecting disinfection	8,136	9,063

LIBRARY BOOKS.

Number of Library Books disinfected	2,619	1,270

THE DISINFECTING APPARATUS.

The number of articles disinfected at the various apparatus during the year amounted to 74,680, and consisted of the following articles:—

Date. 1908.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	315	76	2,250	1,160	3,801
February	490	132	3,207	1,352	5,181
March	473	102	2,961	833	4,369
April	449	80	3,016	1,334	4,879
May	697	115	4,711	2,330	7,853
June	532	74	3,337	1,538	5,481
July	566	118	3,486	1,838	6,008
August	591	157	3,526	942	5,216
September	541	110	6,872	950	8,473
October	646	97	8,324	1,214	10,281
November	694	72	4,217	1,968	6,951
December	545	77	4,096	1,469	6,187
Totals	6,539	1,210	50,003	16,928	74,680

The number of articles destroyed at the various apparatus during the year amounted to 1002, compensation being paid in conformity with the provisions of the Public Health Act. Details are as follows:—

Date. 1908.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	16	14	19	—	49
February	11	22	23	—	56
March	18	28	25	—	71
April	12	14	15	—	41
May	29	18	47	3	97
June	25	22	41	6	94
July	6	21	15	22	64
August	23	58	51	9	141
September	19	33	40	—	92
October	27	45	54	6	132
November	18	18	28	9	73
December	20	20	50	2	92
Totals	224	313	408	57	1,002

PRINCE'S DOCK MORTUARY.

The Mortuary at the Prince's Dock is for the reception of the bodies of persons who have been drowned, killed, &c., and upon which the Coroner desires to hold inquests. Bodies are taken to this Mortuary by the police, and when it may be necessary to make post-mortem examinations, any medical gentleman may have the assistance of an inspector on sending a communication to the Ambulance Superintendent, 54, Gascoyne Street.

BODIES REMOVED TO THE PRINCE'S DOCK MORTUARY.		
Number from River.	Number from City.	Total.
9	240	249

FORD STREET MORTUARY AND DISTRICT MORTUARIES.

BODIES REMOVED TO MORTUARIES.						
Green Lane.	Lark Lane.	Wavertree.	Ford Street.	Park Hill.	Smithdown Road.	Total.
—	1	—	173	—	—	174

The Mortuary in Ford Street is provided for the reception of bodies, which cannot be kept at the homes in which death had taken place, without injury to the health of the inmates. The address of the caretaker is 6, Pickering Street.

The District Mortuaries, it will be seen, are seldom used. For the convenience of juries, as well as for other reasons, it is preferable that bodies should be conveyed to the Central Mortuaries.

The method of transport of the bodies of persons killed, or found dead in the street, has been more adequately provided for.

Two alternative plans suggested themselves, one being that a hearse should be provided by the Health Committee, to be kept at some suitable depôt where it could be obtained upon receipt of a telephone message from the Police; the other, and better arrangement, was to authorise

the Head Constable to make arrangements with certain firms of undertakers in suitable parts of the City, to supply a hearse on short notice, together with a shell coffin, for these purposes.

This latter plan is expeditious, inasmuch as shorter distances have to be travelled by the hearse to the place where the body is lying; it is working well.

PROCEEDINGS UNDER THE DISEASES OF ANIMALS ACTS, 1894 TO 1903.

The duties of the Inspectors under the Diseases of Animals Acts, 1894 to 1903, are to visit cattle steamers, both foreign and cross-Channel, for the purpose of seeing that the provisions of the Foreign Animals Order, 1895, and the Animals (Transit and General) Amendment Order, 1904, are carried out.

Cattle steamers are examined as to fittings, ventilation, &c., and supervision is exercised in regard to cleansing and disinfection after animals are landed. Overcrowding or injury to animals is reported.

The Animals (Transit and General) Order compels the master of the vessel to slaughter all seriously-injured animals forthwith. Such animals are slaughtered on board the vessel, and the carcases removed to the abattoirs.

Cattle trucks and horse boxes are examined at railway stations, as to fittings, cleansing and disinfection, and the railway pens supervised.

Lairages and sale yards are visited to ascertain if they are cleansed and disinfected in accordance with the regulations of the City Council.

The Diseases of Animals Act relates in the main to certain diseases communicable amongst cattle, sheep and swine, and provides for the separation of diseased animals from healthy ones, for the disinfection and cleansing of vessels, trucks, &c., in which animals have been carried, and it defines the action to be taken to limit and prevent the extension of disease. It also deals with certain forms of disease communicable by animals to man.

The Board of Agriculture, under the powers of this Act, issue orders from time to time dealing with diseases of animals, or with their protection during transit. The Board also prescribes the manner under which animals may be imported or moved from place to place.

The Swine Fever Order, 1901, makes provision for the cleansing and disinfection of pig dealers' premises, and vehicles used by pig dealers, for the conveyance of swine from steamers through the City to pig dealers' premises.

The Sheep Dipping (North of England and Scotland) Order, which came into force on April 9th, 1906, provides that all sheep within the prescribed area, which includes Liverpool, shall be dipped twice during the year.

The Swine Fever (Movement from Ireland) Order of 1904 (No. 6866) provides that pigs brought from Ireland for slaughter shall be accompanied by a license, authorising such landing, issued by the Inspector of the Department of Agriculture and Technical Instruction for Ireland. The swine shall be marked by, and at the expense of, the owner, who resides in Ireland, by painting with an indelible composition of red colour, with a broad line down the back, and across the loins, not less than nine inches long; failing such the owner is liable to a penalty of £20. The Inspector of the Board in Ireland will not issue a license unless he is satisfied that the pig is properly marked. These pigs must only be moved for the purpose of slaughter.

No pigs have been landed in Liverpool from Ireland without being properly marked in accordance with the Order.

Some interest was aroused on a prosecution taking place in the Isle of Man for exporting diseased cattle to Liverpool, it being alleged that this was by no means the only instance where this was permitted. The subject was investigated, and although it was doubtful whether the allegations had any foundation in fact, yet the matter received the careful attention of the Local Government Board for the Isle of Man.

The accompanying table gives the statistics of the proceedings taken under the Acts or under the Orders of the Board of Agriculture :—

	1907.	1908.
Number of Visits and revisits to Railway Stations, including inspections made on Sundays ...	3,144	3,161
,, Inspections and reinspections of Pens ...	107,447	107,853
,, found clean	76,823	79,236
,, ,, dirty and cleansed before being used...	30,624	28,617
,, Inspections and reinspections of Trucks ...	48,809	48,928
,, found clean	42,710	41,444
,, ,, dirty and cleansed before being used ..	6,037	7,457
,, ,, leaving the City before being cleansed,	62	27
,, Inspections and reinspections of Horse Boxes	447	472
,, found clean	189	271
,, ,, dirty and cleansed before being used	239	183
,, ,, ,, not ,, ,, ,, ,,	19	18
,, Inspections and reinspections of Vessels ...	8,712	8,258
,, found clean	3,754	3,652
,, ,, dirty and cleansed before being used	4,873	4,507
,, ,, going to Sea before being cleansed, without cattle or cargo	85	99
,, Inspections and reinspections of Gangways...	9,060	8,770
,, found clean	7,453	6,925
,, ,, dirty and cleansed before being used...	1,607	1,845
,, Inspections and reinspections of Lairage and Sale Yards	5,655	5,280
,, found clean	3,474	3,360
,, ,, dirty and cleansed before being used...	2,181	1,920
,, Carts used to convey Pigs, inspected and reinspections	2,468	2,458
,, found clean	2,069	2,147
,, dirty and cleansed before being used.. ...	399	311
,, of visits to Manure yards and wharves ...	477	499

An information was laid under the Swine Fever (Movement from Ireland) Order, 1904, for removing 14 pigs from the Dock to the Abattoir without a license. A fine of 20s. and costs was inflicted.

INSPECTION OF SLAUGHTER-HOUSES, &c.	1907.	1908.
Number of Visits to Slaughter-houses made by Meat Inspectors	7,306	7,121
Number of Visits to Butchers' Shops made by Meat Inspectors	63,852	66,884
Number of Visits to Fish and Fruit Shops made by Fish Inspectors	59,415	56,873
Number of Visits to Fruit Shops made by Fruit Inspector	18,993	15,348

FOOD HAWKERS' PREMISES.

	1908.
Number of Visits made by District Sanitary Inspectors...	199

FISH PLATFORMS.

	1907.	
Number of Visits made by District Sanitary Inspectors...	20	31

POULTRY DEPOTS.

Number of Visits made by District Sanitary Inspectors...	444	486

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER-HOUSES, AND OF MEAT IMPORTED FOR SALE.

The number of fat cattle from local dairies slaughtered in the City during 1908 was 1,366, as compared with 1,548 in 1907.

The small number of cattle slaughtered in the City is probably due to the importation of States cattle, and also to the importation of frozen meat chiefly from the River Plate district.

There is a slight decrease in the number of sheep slaughtered, and a large increase in the number imported, as compared with the year 1907.

With regard to pigs, it will be noticed that there is a decrease in the number killed in the City, and a large decrease in the number imported.

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Abattoir.	3288	173679	—	17686	41604	47305	346329	1018	19811
Allerton Road, Wavertree ...	528	4527	...	39	126	...	...	...	...
Back Castle Street	232	78	...	1072	...	...	...	...	...
Back Commutation Row.....	...	...	...	...	...	...	...	...	...
Back Mount Vernon Green...	166	2124	562	2	...	...	...	...	...
Bevington Hill	529	71	...	306	...	...	...	...	...
Brecon Street.....	164	734	164	9	...	...	...	...	...
Copperas Hill.....	...	...	...	...	4824	...	...	...	...
Corlett Street	4	2220	773	...	1	...	...	...	...
Cotter Street	...	...	...	...	...	...	...	...	...
Carried forward	1623	9754	1499	1428	4951	47305	346329	1018	19811

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER HOUSES AND OF MEAT IMPORTED FOR SALE—*Continued.*

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Brought forward	1623	9754	1499	1428	4951	47305	346329	1018	19811
Derby Lane, Old Swan.....	...	594	241	...	1	...	...	...	...
Edgeware Street	95	328	75	...	...	...	...	...	...
Foley Street	...	...	...	...	6353	...	...	...	...
Frederick Street.....	20	2206	194	6	495	...	...	...	...
101, High Street, Wavertree..	1	...	...	1	...	...	...	...	...
105, High Street, Wavertree.	41	...	11	7	11	...	...	...	..
Norman Street	...	...	...	...	1479	...	...	...	. .
Peel Street	26	634	183	1	119	...	...	...	..
Prescot Road, Knotty Ash ...	2	733	198	16	41	...	...	...	...
Sandown Lane, Wavertree ...	59	179	...	2	...	...	...	...	...
Sidwell Street, Garston	128	179	...	7	228	...	...	...	...
Soho Street.....	...	...	...	...	2637	...	...	...	...
St. Mary's Road, Garston ...	6	58	8	2	14	...	...	...	...
Upper Milk Street.....	...	...	...	...	6088	...	...	...	...
West Derby Road, Tue Brook	176	1126	468	7	123	...	...	...	...
Total in Private Slaughter-houses	2177	15791	2877	1477	22540	...	...	...	...
Total in the City	5465	189470	2877	19163	64144	47305	346329	1018	19811

PRECEDING YEAR.

Total in Private Slaughter-houses	2631	18368	3318	2075	24047	...	...	...	...
Total in the City	6965	191854	3318	19628	68056	52808	331601	1197	31582

UNWHOLESOME MEAT, FISH, FRUIT, &c., SEIZED AND DESTROYED.

	DATE.—1908.	Beef.	Veal	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell fish.	Fruit.	Miscellaneous.
		Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags	Lbs.	
Markets.	St. John's	11057	82	382	196	3775	1307	204962	102	1694	11000 Oysters. 230 Eggs. 424 lbs. Venison.
	North Haymarket	...	...	...	...	...	...	...	...	80608	19480lbs. Pot'es.
Slaughter-Houses.	Abattoir	124579	9046	25836	26526	...	84	...	...	...	...
	Allerton Road	233	114	...	...	...	...	...	...	...	...
	Back Castle Street	27994	2761	239	...	...	...	...	...	...	...
	Back Mount Vernon Green	...	...	320	...	...	...	...	...	...	...
	Bevington Hill	23834	693	24	...	...	...	...	...	...	...
	Copperas Hill	130	...	...	2765	...	...	...	...	...	...
	Foley Street	...	...	...	312	...	...	...	...	...	...
	Norman Street	...	...	7	14	...	...	...	...	...	...
	Sidwell St., Garston	752	...	...	...	...	...	...	...	...	...
	Aigburth Road	8	...	...	...	...	...	...	...	...	...
	Albert Dock (Cold Storage)	10766	1064	1400	...	...	...	...	...	...	...
	Alexandra Dock	1602394	...	624	...	...	...	...	...	...	...
	Ashton Street	...	80	...	...	...	...	...	...	...	...
	Athol Street	380	...	...	...	...	...	...	...	...	...
	Bankfield Street	...	...	46	...	...	...	...	...	...	...
	Birkett Street	...	...	...	...	...	...	...	...	3032	...
	Boundary Street	...	...	...	190	...	...	12	...	...	...
	Breck Road	32	...	...	...	...	...	...	...	...	...
	Brocklebank Dock	106552	...	...	...	...	...	...	...	...	...
	Bronte Street	6623	...	...	...	...	...	...	...	...	...
	Carried forward...	1915334	13840	28878	30003	3775	1391	204974	102	85334	11000 Oysters. 230 Eggs. 424 lbs. Venison 19480lbs. Pot'es.

UNWHOLESOME MEAT, FISH, FRUIT, &c., SEIZED AND DESTROYED.—*Contd.*

DATE.—1908.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags	Lbs.	
Brought forward...1	915334	13840	28878	30003	3775	1391	204974	102	85334	11000 Oysters. 220 Eggs. 424 lbs. Venison. 19480lbs. Pot'es.
Brownlow Hill	...	...	20	...	5	...	...	...	...	...
Brunswick Place	16604	...	5165	...	...	...	...	...	...	...
Canada Dock	24004	...	...	...	...	...	...	...	...	5376lbs. Bacon.
Canning Place	...	...	...	...	...	6	...	...	...	...
Cazneau Street	...	...	...	...	...	104	...	...	2336	...
Chatsworth Street	...	...	...	1	...	...	...	...	...	...
Church Street.....	...	...	...	...	...	10	290	...	...	...
City Road	...	...	...	...	...	...	...	...	40	...
Cleveland Square	1018	123	1023	191	...	...	...	...	...	...
Cumberland Street	...	...	...	...	...	...	...	...	12900	...
Daulby Street.....	467	...	...	39	...	...	...	...	...	...
Deane Street	...	...	15	...	...	...	...	...	...	...
Derby Road.....	...	...	19635	...	...	...	...	...	...	...
Dove Street	...	...	20	...	...	...	...	...	...	...
Edge Hill Station	100	...	56	245	...	...	...	5	688	...
Elliot Street	...	...	...	...	30	...	272	...	...	...
Falkner Street	...	...	...	10	...	...	...	...	...	...
Fox Street	260	...	...	...	...	...	...	...	...	...
Gill Street	50	...	...	...	...	...	...	...	...	...
Gt. Charlotte Street	...	...	...	...	...	40	7878	...	470	...
Gt. Homer Street	1154	...	832	25	...	...	...	...	...	...
Carried forward...1	958991	13963	55644	30514	3810	1551	213414	107	101768	11000 Oysters. 220 Eggs. 424lbs. Venison. 19480lbs. Pot'es. 5376lbs. Bacon.

UNWHOLESOME MEAT, FISH, FRUIT, &c., SEIZED AND DESTROYED.—*Contd.*

DATE.—1908.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward...1	958991	13963	55644	30514	3810	1551	213414	107	101768	11000 Oysters. 230 Eggs. 424lbs. Venison. 19480 bs. Pot'es. 5376lbs. Bacon.
Gt. Howard Street.....	224	...	50	...	...	...	...	...	...	...
High Street.....	...	...	6	...	...	...	...	...	...	...
Houghton Street	...	...	...	...	96	...	...	3	...	...
King Street	...	...	...	...	...	...	...	...	2800	...
King's Dock	...	...	...	...	...	...	...	...	...	38640lbs. Bacon.
Lawrence Road	...	...	50	...	...	...	...	...	...	...
Lime Street Station	...	...	...	...	...	...	8780	...	...	...
London Road	166	...	93	...	...	...	...	...	...	...
Love Lane.....	...	...	...	...	...	...	...	...	277	...
Mill Street	28	...	77	...	...	...	...	...	...	...
Naylor Street	...	...	...	...	...	...	1062	...	...	...
Nelson Dock	...	...	...	120	...	...	...	...	...	...
North Street	...	...	...	...	...	...	...	...	...	2128lbs. Butter.
North Hill Street.....	24	...	20	...	...	...	...	...	...	...
Oakfield Road	638	...	...	...	...	...	...	...	...	...
Oldham Place.....	6438	...	...	...	...	...	...	...	...	...
Overbury Street	...	22	...	...	...	...	...	...	...	...
Paddington	23	...	...	...	...	...	...	...	...	...
Park Road	18	...	60	...	...	...	...	...	...	...
Parliament Street	20	...	31	...	...	...	...	...	...	...
Peter Street..... (Cold Storage)	40	...	12	...	...	...	...	...	...	10lbs. Venison.
Carried forward...1	966610	13985	56043	30631	3906	1551	223256	110	104845	11000 Oysters 230 Eggs. 434lbs. Venison. 19480lbs. Pot'es. 44016lbs. Bacon. 2128lbs. Butter.

UNWHOLESOME MEAT, FISH, FRUIT, &c., SEIZED AND DESTROYED.—*Contd.*

DATE.—1908.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward...1	966610	13985	56043	30634	3906	1551	223256	110	104845	11000 Oysters. 230 Eggs. 434lbs. Venison. 19480lbs. Pot'es. 44016lbs. Bacon. 2128lbs. Butter.
Pitt Street	...	...	793	40	...	...	1600	...	...	...
Preeson's Row	773	69	519	18	...	...	...	...	...	...
Prescot Road	100	...	...	200	...	...	...	...	...	...
Prince's Jetty.....	840	...	...	...	...	...	...	...	...	...
Queen Square	...	...	...	...	2	325	...	...	37955	...
Queen's Arcade	...	...	...	...	...	...	700	...	...	...
Rainford Gardens	...	...	...	...	...	...	...	...	4680	...
Ranelagh Street	...	...	...	...	...	23	...	...	...	100 Oysters.
Redcross Street	...	...	...	...	...	...	...	...	3200	...
Redfern Street ..... (Cold Storage)	5388	...	795	...	...	...	...	...	...	...
Regent Road ..... (Cold Storage)	12364	...	32460	...	...	149	...	...	...	...
Roberts Street	...	...	...	...	...	...	...	...	9818	...
Robson Street.....	6	...	...	...	...	...	...	...	...	...
Roe Street	...	...	...	...	...	...	5342	6	1194	...
Rose Street	...	...	...	...	514	471	32353	5	650	...
Russell Street	128	...	...	...	...	...	...	...	...	...
Sandhills Lane..... (Cold Storage)	...	...	9432	...	...	...	...	...	...	...
St. James Place	...	...	10	...	...	...	...	...	...	...
St. Oswald Street	...	...	24	...	...	...	...	...	...	...
Sir Thomas Street	...	...	...	...	...	...	...	...	12480	...
Scotland Road	555	...	436	6	...	...	...	...	...	...
Total.....1	986764	14054	100512	30898	4422	2519	263251	121	174822	11100 Oysters. 230 Eggs. 434lbs. Venison. 19480lbs. Pot'es. 44016lbs. Bacon 2128lbs. Butter.

UNWHOLESOME MEAT, FISH, FRUIT, &c., SEIZED AND DESTROYED.—*Contd.*

DATE. 1908.	Beef.	Veal	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward...1	986764	14054	100512	30898	4422	2519	263251	121	174822	11100 Oysters. 230 Eggs. 434lbs. Venison. 19480lbs. Pot'es. 44016lbs. Bacon. 2128lbs. Butter.
Soho Street	42	...	70	343	...	...	...	...	...	...
Springfield Street	25	...	...	...	...	...	...	...	...	...
Stanley Street	...	...	...	...	...	...	...	...	159904	...
Sussex Street	...	...	...	50	...	...	...	...	...	...
Temple Court	...	...	...	...	...	...	...	...	78050	...
Temple Street.....	...	...	...	1525	...	...	...	...	...	...
Trowbridge Street	14572	...	...	5215	...	...	...	...	...	...
Upper Milk Street.....	...	...	...	242	...	...	...	...	...	...
Upper Parliament Street.	...	...	16	...	...	...	...	...	...	...
Vernon Street	...	...	...	...	...	...	...	...	900	...
Victoria Street	...	...	...	644	...	...	...	...	19130	...
Walton Road	...	...	...	32	...	...	...	...	...	...
Wapping	...	...	...	...	...	...	114	...	...	...
Wavertree Road	52	...	30	...	...	...	...	...	...	...
Wellington Dock	14000	...	...	...	...	...	...	...	...	...
West Derby Road	64	...	56	230	...	...	...	...	..	...
William Henry Street ...	114	...	148	20	...	...	...	...	...	...
Whitechapel	...	...	...	...	144	...	...	...	...	...
Whitefield Road.....	...	...	20	...	...	...	...	...	...	...
Total 2	015633	14054	100852	39199	4566	2519	263365	121	432806	11100 Oysters. 230 Eggs. 434lbs. Venison. 19480lbs. Pot'es. 44016lbs. Bacon. 2128lbs. Butter.

The total amount of Meat, Fish and Fruit, &c., found to be unfit for human food is equivalent to—

	Tons.	Cwts.	Qrs.	Lbs.
Meat	988	9	2	4
Fish	117	11	1	25
Fruit	201	18	1	2

and this does not include Fish removed as refuse by Officers of the Cleansing and Scavenging Department under the City Engineer.

The great bulk of this material was not exposed for sale, and did not require a Justices' order for its destruction.

Over 700 tons of beef were part of a cargo which had gone bad in consequence of a breakdown in the refrigerating apparatus of the vessel.

The quantity of fish seized includes both fresh fish and salt fish which had become tainted during transit or storage, a regrettable waste of food.

Fish and fruit unfit for human food are removed by the Corporation carts to the Manure Wharf, and there mixed with stable and other light refuse and sold for agricultural purposes. The Wharf is situated on the canal bank, and the manure is loaded into canal boats for conveyance to its destination. The whole of the operation is supervised by officers of the Health Committee.

EXPORT OF HAMS TO ARGENTINA, UNITED STATES, AND PHILIPPINE ISLANDS.

Towards the close of 1907 it was announced that the Government of Argentina proposed to establish a rigid system of inspection of all hams imported into that country. Exporters in this country regarded this decision with some apprehension, as likely to interfere with the importation into Argentina of hams and bacon prepared in this country.

A form of certificate however was devised which met the requirements of the Consul General for Argentina, and received the approval of this Government. This form of certificate has been signed by the Medical

Officer, and has tended so far to remove the apprehended difficulty by giving an assurance of the excellence of the materials and the fitness of the premises on which they are prepared.

A copy of the Regulations issued by the Local Government Board appeared in the Report for 1907.

A declaration and certificate are also now required in connection with the exportation of meat foods to the United States of America and the Philippine Islands.

The regulations made by the Local Government Board are precisely the same as those made in the case of Argentina, with the following addition :—

The Medical Officer of Health of the district or other certifying officer designated by the Board is required to keep himself informed, by personal enquiry and in other available ways, as to steps taken to ensure that all meat foods prepared or packed for export to the United States and the Philippine Islands are solely the product of animals which, on adequate ante-mortem and post-mortem inspection, have been found free from disease and suitable for human food.

ANIMALS SMOTHERED AND INJURED IN TRANSIT ON BOARD SHIP.

Beasts.	Sheep.	Pigs.	Number found good.	Number found bad.	Weight of bad lbs.
14	65	162	174	67	7,635

Police proceedings in respect to meat, poultry, fruit, etc., were as follows :—

	1907.	1908.
Number of informations in respect of diseased poultry ...	1	1
,, ,, ,, ,, meat ...	12	4
,, ,, ,, unsound fruit ...	1	1
,, ,, ,, ,, fish ...	3	—
,, ,, ,, ,, butter ...	—	1
Total number of Informations	17	7
Number Fined	15	6
,, Sent to Prison	—	—
,, Withdrawn or Dismissed	2	1
Amount of Fines and Costs	£60 6 0	£20 15 1

	1907.	1908.
Number of carcases seized during the year by Medical Officer of Health and Inspectors under section 116 of the Public Health Act, 1875 ..	272 Cattle 174 Calves 335 Sheep 178 Pigs. 34 Goats	229 Cattle 183 Calves 871 Sheep 247 Pigs 35 Goats
Total ...	993	1,565
* Number of such carcases condemned by Justices under section 117 of the Public Health Act, 1875	3	2
Number of carcases so seized in consequence of the animal having suffered from Tuberculosis	142 Cattle 4 Calves 54 Pigs	110 Cattle 5 Calves 76 Pigs
Total ...	200	191

Of the 110 Tuberculous Cattle condemned, 22 came from local shippons, 1 from the Isle of Man, and 87 from Ireland and other places. Of the 76 Pigs, 18 came from local piggeries, and the remainder principally from Cheshire and Ireland.

* The remainder were dealt with under a Local Act, which does not require a Justices' Order.

GLANDERS AND FARCY.

The Health Committee have made regulations under the Diseases of Animals Act and the Glanders and Farcy Orders of 1896 and 1907 which have been circulated amongst the horse-owners in the city. Accompanying these regulations were notices indicating the means of combating the disease and the necessary precautions to be taken.

The following table indicates the number of affected animals during the years 1906 and 1907. It will be noted that in 1908 the city was entirely free from the disease, this being the first year since the Order came into force that no cases have occurred.

Year.	No. of Cases.
1906	2
1907	1
1908	—

Immediate notification of actual or suspected cases of Glanders is received either from the owner, police, or the Veterinary Surgeon who may be called in to the case, or from the Horse Slaughterer's yard (there is only one in the city).

In further reference to Glanders and Farcy, it may be mentioned that the Veterinary Superintendent has caused the lungs of all horses sent to the Knacker's yard to be submitted to examination, and he is able to report that no case of contagious disease has been found to exist.

This precaution is taken to ensure owners being immediately notified of the existence of the disease, which may be in a latent state, and also

to protect the public from unscrupulous persons who may not conform to the requirements of the act.

Lungs Examined.	Glandered.	Not Affected.
1,873	—	1,873

In addition to the above examination of lungs, the various sale-yards throughout the city were visited and 5,136 horses examined. With the exception of three cases of parasitic mange, the animals were found to be free from disease and in a healthy condition.

EXAMINATION OF CATTLE AND SHEEP.

At the Liverpool Cattle Market during 1908, the following numbers of animals were inspected by Veterinary Surgeons of the Corporation :—

Cattle	50,606
Sheep	343,497
Calves	3
Other Animals	42

No cases of infectious disease were found.

LIVERPOOL PARASITIC MANGE ORDER, 1908.

Under this Order Veterinary examinations are made of all animals suspected of being affected with Parasitic Mange, and in the case of affected animals they are immediately isolated and kept under observation until the disease has entirely disappeared. Thorough disinfection of the premises, harness, utensils, feeding troughs, &c., is carried out under the supervision of Inspectors of the Medical Officer of Health.

The following table gives the number of examinations made and animals affected, &c. :—

Number of Animals and Carcases examined.	Affected.	Died or Slaughtered.	Recovered.
521	85	42	43

ANTHRAX.

There were six cases of anthrax in animals reported during the year. In five of the cases the carcases were found in shippons, and one at the knacker's yard. In this latter case the carcase had been sent from outside the city.

A portion of the carcase was in each case submitted to Professor Sir Rubert Boyce, who certified that the animals from which they were taken were affected with anthrax.

The shippons where cases occurred were immediately cleansed and disinfected, all the manure burned, and samples of foodstuffs were in each case submitted for bacteriological examination, with the result that no Anthrax bacilli were found present.

Details of previous cases of Anthrax appear in the Annual Report of 1906.

SWINE FEVER ORDER.

With a view to facilitate the trade in the import of pigs from Ireland, and in order to fulfil the obligations of the Board of Agriculture, certain premises have been scheduled by the Health Committee to which pigs may be licensed, viz. :—

Stanley Cattle Market; pens at South end of the East side of the Nelson Dock; pens at East side of the Collingwood Dock; pens at South-west side of the Collingwood Dock; pens at South end of Prince's Pierhead.

The exigencies of the import trade appear to be met by this arrangement, the pigs being re-licensed after sorting at the places named. Objection to the arrangement was raised on the grounds that these premises were used for market purposes. An investigation was made into the matter, but it was found desirable, on the whole, that the arrangement should continue.

PIGGERIES.

There were 28 applications made during the year to keep pigs, of which 18 were transfers. The remaining 10 which were new applications involving 75 pigs were granted. Three hundred and eighty visits were paid to piggeries during the year. Two informations were laid, and the fines and costs amounted to £1 9s. 0d.

RABIES.

In conformity with the requirements of the Board of Agriculture, reports were sent to the Board in respect of three suspected cases of rabies. Bacteriological examination was made in all the cases, and *post mortem* examinations were made by the Veterinary Inspectors. There were no signs that any of the animals had been affected with rabies. Two live dogs reported by the Police Authorities as being suspected cases of rabies were examined on 9th July by the Veterinary Inspector, who certified that the animals were not affected with rabies.

DAIRIES, COWSHEDS AND MILKSHOPS

There is no change in the method of procedure respecting the licensing of cowsheds and the registration of dairies, milkshops and milkstores.

STATISTICS RESPECTING COWSHEDS.

	1908.
Number of applications to keep cows on premises not previously licensed	3
,, ,, granted	2
,, cows applied for on above applications	52
,, ,, granted	51
,, applications in abeyance pending alterations	1
,, ,, for transfer to fresh tenants of cowsheds previously licensed	5
,, ,, granted	51
,, ,, in abeyance	2
,, ,, refused	1
,, ,, to keep more cows than the number for which the license was originally granted	5
,, ,, granted	5
,, additional cows applied for	39
,, ,, granted	39
,, Cowsheds on the register 31st December, 1907 ..	462
,, ,, ,, ,, ,, 1908 ...	466
*Number of cows licensed to be kept within the city area	6,768

* These cows produce approximately 17,000 gallons of milk daily. Probably at least an equal quantity of milk comes into the City daily by road and rail.

COWSHED INSPECTION.

	1907.	1908.
Number of Inspections of Cowsheds	4,297	4,042
,, found Incorrect	82	100
,, of Informations	8	3
,, Fined	7	3
,, Withdrawn	1	—
Amount of Fines and Costs	£10 0 0	£7 8 6

Seventy notices have been issued to occupiers directing their attention to contraventions of the regulations.

Number of cowsheds in the city during the years 1899 to 1908 inclusive, together with the number of cows licensed to be kept, and the number of applications for new cowsheds:—

Years.	Cowsheds.	Cows.	Applications.	
1899 ...	434 ...	5,851 ..	2	
1900 ...	437 ...	5,905 ...	5	
1901 ...	443 ...	5,909 ...	6	
1902 ..	442 ...	6,068 ...	16	Incorporation of Garston
1903 ...	447 ...	6,214 ...	12	
1904 ...	449 ...	6,359 ...	7	
1905 ...	456 ...	6,426 ...	17	Incorporation of Fazakerley
1906 ...	466 ...	6,666 ...	7	
1907 ..	462 ...	6,734 ...	11	
1908 ...	466 ...	6,768 ...	3	

MILKSHOPS.

	1908.
Number of Applications for registration	*134
,, ,, granted	129
,, ,, in abeyance	4
,, ,, refused	—
,, ,, withdrawn	1
Number of Milkshops on the register at the end of 1904	790
,, ,, ,, ,, 1905	789
,, ,, ,, ,, 1906	826
,, ,, ,, ,, 1907	846
,, ,, ,, ,, 1908	814

DAIRIES AND MILKSHOPS INSPECTION.

	1907.	1908.
Number of Inspections of Dairies and Milkshops	7,737	7,083
,, found incorrect	77	59
,, of Informations	15	10
,, Fined	14	10
,, Withdrawn	1	—
Amount of Fines and Costs	£20 6 0	£16 11 6

Seventy-one caution notices have been issued to occupiers of milkshops for contraventions of the Regulations.

* One hundred and seven of these applications were transfers.

LEAVELOOKERS' VISITS TO SHIPPONS FOR THE PURPOSE OF EXAMINING COWS.

No. of Visits	No. of Examinations of Cows.	No. found Healthy.	No. found ill.	No. referred to the Veterinary Surgeon.
1,801	22,913	22,768	145	144

ICE CREAM MAKERS AND VENDORS.

The usual inspections have been made of the premises utilised by the street traders solely for manufacturing ice cream.

The dwellings which these street traders occupy have also been kept under observation, and in no instance during the past year has it been found that ice cream has been made or stored in or about these dwellings.

A systematic inspection has also been made of shopkeepers' premises which are used for the manufacture and sale of ice cream.

	1907.	1908.
Number of premises under Inspection	786	850
,, visits made	2,395	2,344
,, caution notices issued	23	24
,, Informations	3	1
,, Fined	3	1
Amount of Fines and Costs	£2 8 6	£0 9 6

TUBERCULOSIS AND THE MILK SUPPLY.

The Third Interim Report of the Royal Commission on Tuberculosis recently issued contains the following conclusions, viz. :—

"Tuberculosis involving the udder is comparatively common in cows, and in such cases their milk always contains tubercle bacilli, and is therefore dangerous for human beings consuming it. It was, however, undecided what is the danger, if any, attaching to the milk of tuberculous cows in which the udder presents no evidence of disease. We therefore took the opportunity of making a number of observations and experiments bearing on this point. The experiments were made with the milk of cows which had contracted the disease in the natural way.

"In natural tuberculosis in the cow, cases which show such obvious symptoms of the disease as emaciation and cough should be considered separately from the cases in which there are no such signs and in which the disease is to be recognised during life only by means of the injection of tuberculin.

"The experiments which we have carried out with regard to the infectivity of the fæces of tuberculous cows were dictated by knowledge of the fact that dirt of various kinds from cows and the cow-shed is almost constantly present in milk as it reaches the consumer. Cows suffering from extensive tuberculosis of the lungs must discharge considerable numbers of bacilli from the air passages in the act of coughing, and some of the bacilli thus expelled may find their way into the milk. But our experiments indicate that the excrement of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as much more dangerous than the matter discharged from the mouth or nostrils. We have found that even in the case of cows with slight tuberculous lesions tubercle bacilli in small numbers are discharged in the faeces, while as regards cows clinically tuberculous our experiments show that faeces contain large numbers of living and virulent tubercle bacilli."

These conclusions indicate very definitely the necessity for further legislation for the whole country upon the lines of the Liverpool Corporation Act of 1900.

The Liverpool and District Cowkeepers' Association have done very valuable work in improving the milk supply of the City.

LIVERPOOL CORPORATION ACT, 1900.

The number of actual or suspected cases of tuberculosis in cattle again shows a very considerable diminution on previous years, thus bearing out the fact that by a thorough examination and constant supervision the ravages of this disease amongst cattle may be successfully combated.

The examination of cows and cowsheds within the city has been duly carried out throughout the year, and all cases of sickness amongst the cattle are reported by the Leave-lookers. In cases where the cows are reported to be suffering from any disease of the udder, or any other disease likely to be inimical to the public health, the Medical Officer of Health directs that the animal be submitted to Veterinary examination and reported upon. Should clinical symptoms of tuberculosis of the udder be in evidence, the cow is either removed from the shippon for slaughter or kept strictly isolated pending a definite conclusion of the case, the milk, of course, being either thrown away or boiled and used only as food for swine.

The following is a table showing the number of visits which it was necessary for the Veterinary Inspectors to make to shippons within the city boundary.

Year.	No. of Visits to Town Shippons.	No. of Cases notified by Owners.	No notice given.	No. of Cows examined.	No. of Cows not affected.	No. of Cows Suspicious of Tuber-culosis of the Udder.	No. of Convictions for Offences under the Act.
1901	40	—	—	59	32	27	—
1902	12	—	—	13	7	6	1
1903	61	27	34	121	97	24	7
1904	305	168	137	665	595	70	12
1905	239	176	63	298	241	57	1
1906	198	172	26	225	211	14	—
1907	188	137	51	238	235	3	—
1908	171	121	50	255	252	3	—
Totals..	1214	801	361	1874	1670	204	21

MILK SUPPLIED FROM OUTSIDE THE CITY BOUNDARIES.

Under the Liverpool Corporation Act, 1900, Inspectors systematically visit various places supplied with milk from the country, including the railway stations and hospitals, and there take samples. These samples are then submitted to bacteriological examination. Should they be found to contain tubercle bacilli (the germs of consumption), the Veterinary Superintendent or his Assistant, accompanied by the Medical Officer of Health or his representative, and furnished with an Order signed by a magistrate resident within the county from which the milk is consigned (as prescribed by the Act), visits the farm or dairy and examines the stock therein. The cowsheds from which the affected supplies have been derived are situated in the counties of Cheshire, Lancashire, Shropshire and Denbighshire, the first named being the largest dairy district in the United Kingdom.

The country shippons generally are found to be much inferior (from a sanitary point of view) to those within the City of Liverpool, and although, owing to the passing of the Liverpool Act, they have been greatly improved, there are many which are in a most unsatisfactory condition. In a number of cases farmers have expressed their approval of the beneficial results of the inspections made by the Liverpool Authorities owing to the consequent improvements made in the premises by the landlords.

The cattle also are neither so good, nor are they kept in the same cleanly condition, as those of the city.

The accompanying photographs illustrate town and country cowsheds.

When tuberculosis of the udder is suspected the necessary proceedings are taken as prescribed by the act. They are similar in principle to those adopted within the city. Samples of milk are also taken from suspected animals, and submitted to a further bacteriological test to verify the diagnosis of the case. In the meantime the animals are isolated, and the milk dealt with as in the city.

It is not possible in all cases to find evidence of disease of the udder in the herd, the explanation usually being that the animals have been sold during the time which elapses between the taking of the sample in Liverpool and the visit of the Corporation officials to the farm.

Affected animals are usually disposed of for slaughter, but, it is to be regretted they are occasionally found to have been sold as milking cows, and, as a natural consequence, upon going into other herds would be likely to further disseminate the disease.

The following table gives statistical details concerning visits to farms outside the city boundary:—

Year.	No. of Visits to Farms.	No. of Shippons Examined.	No. of Cows Examined.	No. of Cows Suspicious of Tuberculosis of the Udder	No. of Convictions for Offences under the Act.	No. of Orders Prohibiting the Sale of Contaminated Milk within the City.
1901	18	40	351	20	1	4
1902	22	66	760	18	3	3
1903	15	32	364	10	3	2
1904	18	39	604	19	1	5
1905	10	20	266	9	4	1
1906	14	25	391	10	6	1
1907	13	31	462	7	1	1
1908	12	31	568	5	3	1
Totals ...	122	284	3766	98	22	18

Local Authorities in Rural Districts are often negligent in regard to the supervision of cowsheds. In every district, Bye-laws should be made and enforced in accordance with the Parliamentary powers given with this object.

Although the application of the act involves a considerable amount of time and expense on the part of the Liverpool Corporation and its officials, the result is that the city is protected to a great extent from the evils which follow an impure milk supply. The Local Authorities of many surrounding districts have also become alive to the necessity of insisting upon better sanitation of farms and cowsheds, and the farmers themselves in many instances show a willingness to be advised as to the best methods to adopt to keep their cattle and shippons in the most healthy and sanitary condition.

As a result of several combined meetings of the National Health Society and the National League for Physical Education and Improvement the following recommendations in regard to the supervision of the milk supply have been agreed upon:—

1.—That the periodical veterinary inspection of all cows, the milk of which is being offered for sale for human consumption, should be made compulsory throughout the United Kingdom.

(*a*) That the inspectors appointed under the provisions of Resolution 1 shall be qualified Fellows or Members of the Royal College of Veterinary Surgeons.

(*b*) It is desirable that, wherever possible, the Inspector should not be engaged in private practice.

(*c*) That the veterinary inspection should be not less frequent than quarterly, and should be undertaken by the County Councils and County Boroughs.

(*d*) That the Board of Agriculture should be urged to schedule Tuberculosis and make it a notifiable disease in the case of milch cows.

(*e*) That all forms of udder disease in milch cows should be made notifiable by the owner, and that the sale of milk from cows so affected should be prohibited by law, except on the certificate of the appointed veterinary inspector that the disease is not tuberculous nor of a character likely to affect the wholesomeness of the milk.

(*f*) That milch cows showing symptoms of tuberculosis (which may include cases of mammary tuberculosis) shall not be kept in the same field or premises with other milch cows.

(*g*) That the sale of milk for human consumption from clinically tuberculous cows should be prohibited by law, and that such milk should only be used for the feeding of other animals after effective sterilization.

2.—That it should be compulsory upon all Local Authorities to make and enforce Regulations under the Dairies, Cowsheds, and Milkshops Order (1885).

That a Bill be drawn up for the purpose of empowering the County Councils to supervise the execution of the Regulations and to take over and execute the powers of defaulting Authorities and charge the expenses to defaulting districts.

3.—That for the present system of Registration a system of annual licenses to Dairymen and their premises be substituted, such licenses to be granted and renewed only if the premises are kept in sanitary condition.

4.—That throughout the Amended Dairies, &c., Order, and the Regulations made under it, the responsibility of carrying out all structural alterations be placed upon the owner.

5.—That all Local Authorities be empowered to cause samples of milk intended for human food to be examined bacteriologically as well as chemically.

6.—That special provision be made to empower all Local Authorities to deal with the offence of the sale of Tuberculous Milk upon the basis of the Manchester, Sheffield, and Liverpool Clauses, but with such modification as may be necessary to prevent overlapping by different Local Authorities.

The County Councils to be empowered to take all necessary action in case of default.

7.—That the addition of preservatives constitutes adulteration, and, as shown by the Departmental Report (p. xxvii., 117), such addition is not necessary for the conservation of Normal Milk, produced, collected, and distributed under proper sanitary conditions.

No. 1.



View of a country cowshed, from which Tubercular Milk was sent to Liverpool. Premises are without light, inadequately ventilated, and no provision is made for proper drainage.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY

No. 2.



Another view of the same premises, showing defective condition of yard pavement, and ill-kept manure heap.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY

No. 3.



View of a country cowshed, showing defective condition of yard, with pools of liquid manure.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY

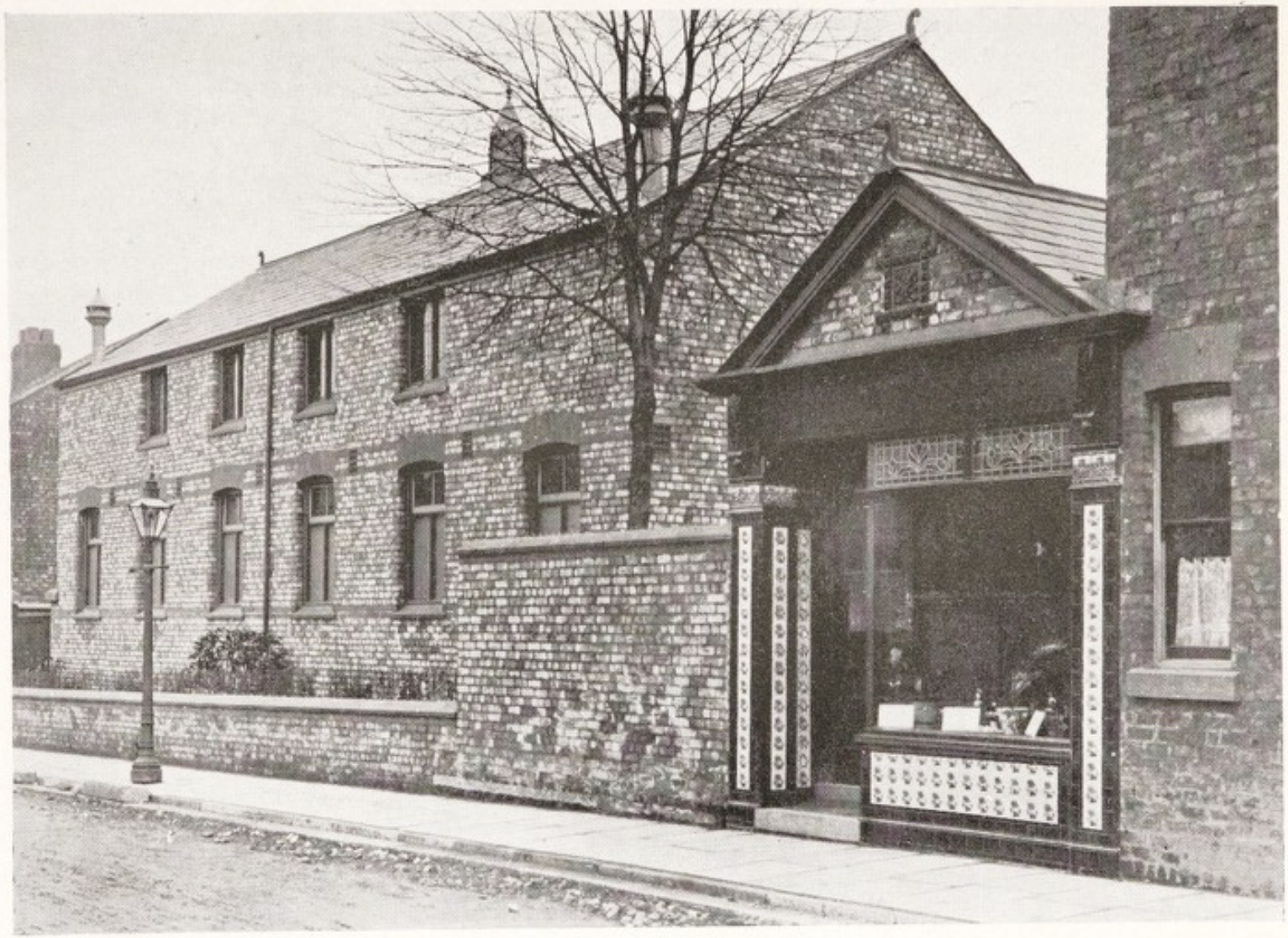
No. 4,



Another view of cowshed No. 3, showing ill-kept condition of yard.


ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY

No. 1.



A LIVERPOOL COWSHED.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY

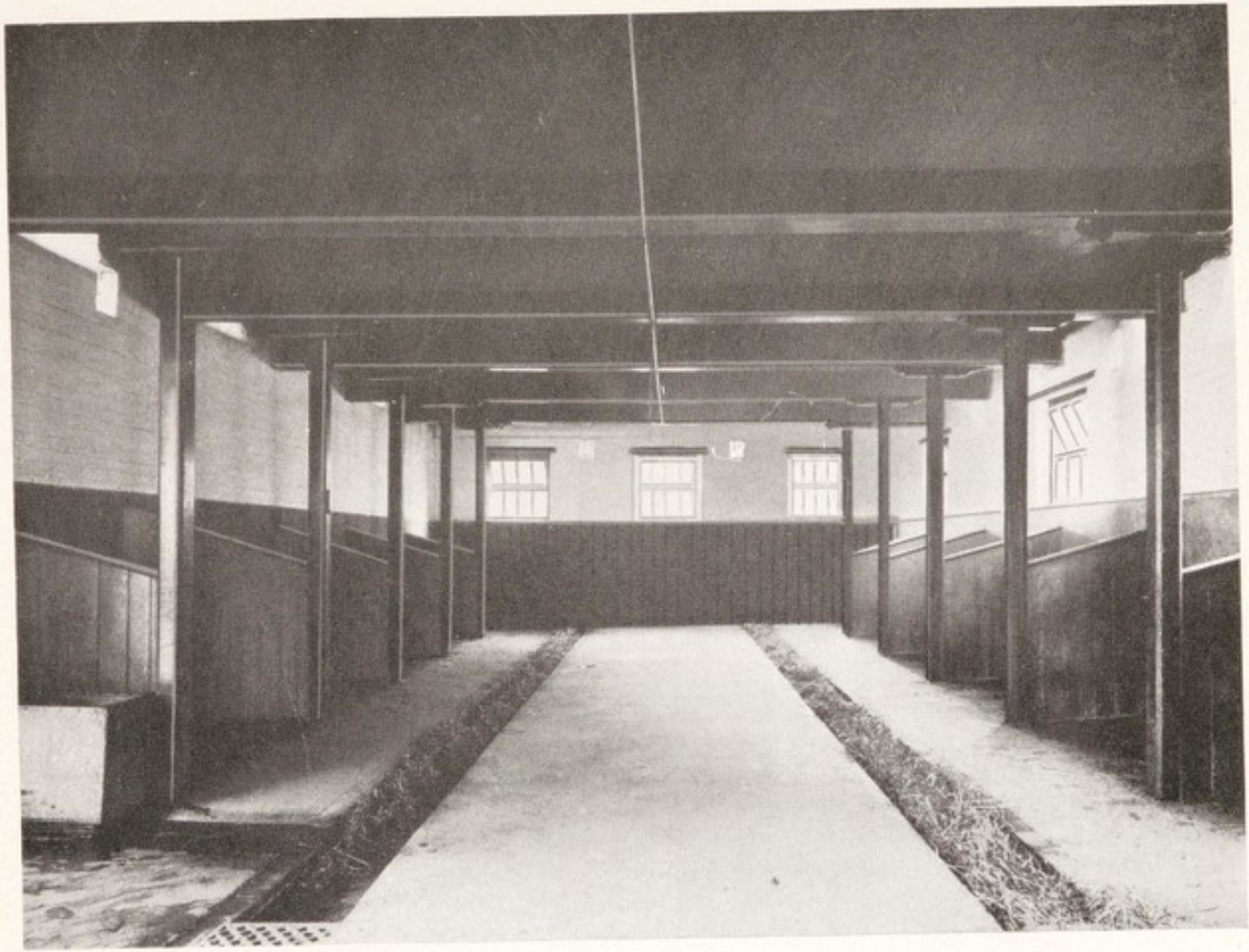
No. 2.



INTERIOR OF A LIVERPOOL COWSHED.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 00
LIBRARY

No. 3.



INTERIOR OF ANOTHER LIVERPOOL COWSHED.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 00
LIBRARY

MILK DEPÔTS.

The objects and work of the Milk Depôts have been explained in detail in the Report for 1906.

At these establishments a preparation is made from pure cows' milk so as to make it resemble human milk as closely as possible. This preparation is intended for the use of infants whose mothers are unable to suckle them, and who, but for it, would receive altogether unsuitable and deleterious food.

The problem of finding a complete substitute for the milk of a healthy mother has not been solved, and probably never will be solved, but when artificial feeding becomes necessary it is obviously important that the best possible substitute for mothers' milk should be available.

Great pains are taken to see that the milk is properly used; careful instructions are given, and the infants are visited either at their homes or are seen at the Depôts.

The expenditure and income of the Depôts since their establishment is shown on the appended table.

Since the initiation of the scheme in 1901, 14,555 infants have been fed upon humanised milk supplied either at the Milk Depôts or through dairies, the average age at the commencement of such feeding being three months and three-quarters; very few (834) were, from one cause or another, admitted after twelve months of age.

In the great majority of instances the infants thrived, increasing in weight and remaining perfectly healthy, notwithstanding that on admission they were as a rule in very indifferent health.

The rate of mortality amongst infants feeding on the humanised milk bears a highly favourable comparison with the rate of infant mortality throughout the City.

Customers on books, December 31st, 1907	373
Admitted January 1st, 1908, to December 31st, 1908...	1,505
Total number of customers supplied	1,878

Supplied from Depôts	1,147
Supplied from Dairies.....	731
	1,878

Average age on admission during the year, $3\frac{3}{4}$ months.

Of the 938 children admitted to the Depôts, 572 were ill or delicate on admission, many not being expected to live.

Of these 572, 355 improved markedly in health, 88 showed little or no improvement, 80 died and 49 received the milk only casually or for too short a period to gauge the effect.

Total number of children under 12 months supplied from Depôts:—

On books December 31st, 1907	139
Admitted during year 1908	1,029*
	1,168

Of these, 68 died, the cause of death being:—

Marasmus	25
Convulsions	20
Diarrhœa	10
Bronchitis	3
Pneumonia	4
Consumption and Inflammation of Bowels	2
Measles	1
Whooping Cough	1
Dentition	2
	68

Only 10 of these infants could be regarded as healthy on admission; 58 were ill on admission, and of these, 8 received the milk irregularly.

Total number of children over 12 months supplied from Depôts:—

On books December 31st, 1907	42
Admitted during year 1908	48
	90

Nine of these children died from the following causes, 8 being very ill on admission:—

Marasmus	4
Bronchitis	1
Pneumonia	1
Whooping Cough	1
Diarrhœa	1
Dentition	1
	9

* Including 309 fed by supplying the mothers with milk in cases where it was found that through lack of nourishment they were unable to nurse their infants.

Number of customers discharged during year 1908.....	1,361
Reasons for discharge:—	
In a satisfactory condition	814
Milk said not to agree	146
Children ill—Doctor ordered change of food	171
Children dead	119
One basket only supplied to	65
Removed into Hospitals or Workhouse	13
No reason obtainable for discharge	33
Total.....	1,361

Of the 814 discharged in a satisfactory condition, 387 were of an age to take more general food; 71 children progressed well, but left the town; 213 were cases in which, owing to the milk provided for the mother, the natural supply proved sufficient and breast feeding was continued.

In 26 cases the parents were irregular in their payments, and their circumstances not being such as to justify the provision of the milk free of charge the supply was discontinued.

Twenty-six mothers obtained a few baskets to supplement the natural supply, which was then found to be sufficient.

Of the 146 infants with whom the milk was said not to agree, 121 (85 per cent.) were ill or very delicate on admission; in many cases various other foods had been unsuccessfully tried before sterilised milk was used.

Of the 171 discharged ill, 124 (72 per cent.) were suffering from illness or were delicate on admission.

Of the 119 who died, 106 (89 per cent.) were ill or delicate on admission, in many cases beyond the hope of recovery.

Great difficulty is still experienced with regard to the cleansing of the bottles, owing to the fact that the customers cannot be prevailed upon to rinse them after use. As a result of this neglect, the bottles have on many occasions to be twice boiled and left for a week, or even longer, exposed to the air before being rendered fit for use.

The necessity for greater care in this direction is frequently urged on the customers served direct from the Depôts, and in some cases the bottles have to be sent back to the homes to be rinsed.

The greatest trouble arises in connection with the customers served through agents; these have been visited, and also communicated with by letter, and temporary improvement has been shown.

It has, however, been found necessary to affix a label to each basket daily, so that the customers may be impressed with the necessity for greater care on their part.

Number of infants fed on sterilized milk since operations were started in 1901, to December 31st, 1908 14,555

Approximate average age, $3\frac{3}{4}$ months.

Number under 12 months	13,695
Number over 12 months	860
Number of infants who have died	842

Of these 842 there were—

Ill when admitted	611
Irregular customers	73
Healthy and properly fed	158

Of the 158 who were healthy and properly fed, the causes of death were:—

Convulsions	34
Diarrhœa	30
Bronchitis	16
Pneumonia	18
Phthisis	1
Marasmus	5
Dentition	5
Inflammation of Stomach and Bowels	6
Whooping Cough	3
Blood Poisoning	1
Disease of Throat	2
Croup	1
Meningitis	3
Anæmia	2
Various other causes	31
Total	158

The infants fed on sterilized milk have been supplied as follows:—

Netherfield Road	Depôt	2,554
Earle Road	Do.	1,964
Park Road	Do.	1,789
Cazneau Street	Do.	2,361
Boaler Street	Do.	285
Hornby Street	Do.	172
Total supplied from Depôts		9,125
,, supplied from Dairies		5,430
		14,555

The 1,505 customers admitted during the year have been supplied as follows:—

DEPOTS.	Under 12 Months.	Above 12 Months.	Adults and Children above 2 years	Total.
52, Earle Road	251	13	4	268
251, Netherfield Road	192	9	6	207
37b, Park Road	159	14	3	176
47, Cazneau Street	160	3	3	166
107, Boaler Street...	90	7	2	99
53a, Hornby Street	38	2	1	41
	890	48	19	957
From Dairies	520	21	7	548
Total	1410	69	26	1505

Expenditure and Income for years 1901 to 1908.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wages and Clothing	277 11 9	856 4 3	1,093 9 9	1,112 4 7	1,102 2 1	1,091 12 0	1,122 13 7	1,155 9 5
Rents	79 5 6	141 18 1	128 4 1	143 9 2	151 16 3	170 2 3	176 8 3	164 0 1
Rates and Taxes)								
Water Rent)	20 13 4	46 15 6	65 9 0	55 19 5	63 19 11	64 17 8	64 13 1	68 8 10
Lighting	39 10 4	100 17 7	79 16 6	66 16 4	84 0 11	67 11 5	62 0 5	65 17 9
Fuel	3 12 0	18 6 10	30 8 7	33 2 4	31 4 11	27 6 6	33 2 8	34 7 5
Printing and Stationery	1 19 0	6 2 4	19 11 1	14 1 5	14 18 10	6 17 11	4 13 7	5 16 3
Advertising	...	...	...	...	13 9 4	...	...	...
Disbursements	7 3 6	12 18 9	12 13 6	14 1 6	21 7 6	34 16 8	35 17 9	36 8 8
Cleaning Premises, Windows, &c.	3 10 0	10 10 0	29 0 10	14 0 0	...	17 0 0	20 7 6	29 10 6
Travelling and Inspection Expenses	2 16 2	—	27 12 4	...	...	...	...	...
Stores (Milk, &c.)	303 19 10	1,427 2 10	1,604 12 1	1,527 13 8	1,449 11 1	1,148 6 11	1,198 16 6	1,230 8 2
Telephone Rent	3 8 0	6 16 0	13 16 10	13 12 0	13 12 0	13 12 0	13 12 0	13 12 0
Furniture, Fittings & Repairs	333 8 3	84 16 5	9 9 11	7 7 6	43 15 8	15 13 10	24 2 8	36 17 6
Machinery	215 18 1	673 14 1	120 0 10	42 11 5	6 5 10	9 2 1	5 7 0	3 4 10
Bottles, Stoppers, &c.	425 19 0	459 16 8	645 9 0	255 9 1	351 1 9	252 6 8	266 15 2	265 10 6
Building Repairs, Alterations, &c.	275 12 0	278 8 5	74 0 10	29 16 5	43 6 4	41 3 8	22 14 4	21 0 10
Horsing Vans, and Hire of Float	5 12 0	179 16 0	267 13 3	300 6 11	238 3 5	242 7 3	263 2 5	250 9 2
Electric Light Installation	...	27 16 7	10 5 9	...	...	...	...	...
Insurance	...	2 18 7	2 9 3	2 16 3	2 16 3	2 16 3	2 16 3	2 11 0
Medical Attendance—Scalding Case	...	...	25 0 0	0 10 6	...	...	...	...
	1,999 18 9	4,334 18 11	4,259 3 5	3,633 18 6	3,631 12 1	3,205 13 1	3,317 3 2	3,383 12 11
Sale of Milk	518 0 2	1,534 13 7	2,230 11 1	1,676 0 6	1,644 7 9	1,250 5 7	1,196 16 7	1,154 13 4

SALE OF FOOD AND DRUGS ACT.

Under the Sale of Food and Drugs Act, and under its various amendments, details are provided to safeguard the honest trader from fraudulent competition, and to safeguard the public from fraud, imposition and danger, in regard to food and drugs.

Apart from the addition to food or drugs, of ingredients, or of colouring matters injurious in themselves, with a view to conceal the inferior quality of the article, the offence is dealt with of adding materials, in themselves harmless, but which fraudulently increase the bulk or lower the quality of the article sold. The main object of the Act is expressed in Section 6 of the original Act, which is as follows:—

> "No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser. . . ."

Most of the routine action taken in regard to the analysis of food and drugs is to prevent infringements of this clause.

It is obvious that some amongst the many articles used for food are of very much greater consequence than others, not necessarily because greater quantities of them are consumed, but because they are peculiarly liable either to adulteration or contamination. Milk, for example, constitutes the chief and perhaps the only food for very large numbers of infants, and of sick persons; it is not unreasonable, therefore, that exceptional attention should be given to it.

Further reference to milk analyses will be found on pages 234 and 235.

Analyses under the Sale of Food and Drugs Act are of two kinds, namely, chemical and bacteriological. These two forms of analyses are entirely separate and distinct in their objects, and in their methods; the method of chemical analysis is applicable to the ordinary articles of food comprised under the term of "groceries," and also to milk, butter, preserved fruits, tinned meats, cheese, &c., and drugs. The bacteriological method is applicable chiefly, and most usefully, to milk. It is also adopted in regard to other food stuffs of animal origin, a list of them being given in the table of articles examined (page 231).

Great care is necessary in procuring samples, and in submitting them for analysis, or very misleading results will ensue.

Samples of beer procured under the Sale of Food and Drugs Act during the year were found to contain arsenic. Fortunately the contamination was confined to one source. The sale of the beer was stopped, and placed under official seal, until the whole quantity, about 450 gallons, was discharged into the sewers, in the presence of the Inspector. The seller of the beer was convicted under the Act and a penalty of £10 and costs was imposed.

All samples of food or drugs are taken either by, or under the superintendence of, Inspectors of the Health Department. It is of the greatest consequence that trained and practised persons should be employed for this purpose. It is necessary from time to time to employ women or young lads as agents, to go into the shop to ask for the articles, and as soon as the agent receives them, the Inspector enters the shop and completes the formalities which the Act requires.

In order to minimise the cost of proceedings under the Act, care must be exercised in the class of article purchased. Only a few purchases are made of those articles which are not likely to be adulterated, and which, experience shows, when they are taken for analysis, are almost invariably found to be genuine. On the other hand, when enterprising firms, seeking new fields for adulteration and profit, place suspicious articles on the market, it becomes necessary, sometimes, to take a considerable number of the articles before the fraud can be detected and checked.

The use of preservatives in food is a matter of importance to the consumer; such preservatives as boracic acid and salicylic acid are apt to stop the processes of digestion, and to do injury to young children and delicate people. The Departmental Committee appointed in 1899 to consider the question of the use of colouring matters and preservatives in food, came to very definite conclusions upon these points.

Any member of the public is entitled, under the Act, to have samples analysed upon payment to the analyst of a fee of 10s. 6d.

Considerable interest has been aroused as to the legality of the sale of patent still whisky as pot still whisky, but the question has not yet been settled.

Summary of Samples submitted for Analysis from January 1st, 1908, to December 31st, 1908, and other Statistical Details.

A. Refers to samples which were found to be adulterated or below statutory limits to a material extent.

B. Refers to trivial or doubtful cases

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated. A.	Adulterated. B.		Number taken.	Number genuine.	Adulterated. A.	Adulterated. B.	Number caut'nd.	Information.
—	—	—	—	Almonds (ground)	4	4	—	—	—	—
1	1	—	—	Arrowroot	8	8	—	—	—	—
—	—	—	—	Ammoniated Tincture of Quinine	1	1	—	—	—	—
2	2	—	—	Baking Powder	21	21	—	—	—	—
—	—	—	—	Barley	10	10	—	—	—	—
1	1	—	—	Beef Suet	1	—	1	—	—	—
4	4	—	—	Beer	99	91	8	—	—	1
—	—	—	—	Boracic Acid Ointment	1	1	—	—	—	—
3	3	—	—	Brandy	7	7	—	—	—	—
17	17	—	—	Bread	2	2	—	—	—	—
206	194	12	—	Butter	62	51	10	1	—	6
—	—	—	—	Buttermilk	1	—	1	—	1	—

SUMMARY OF SAMPLES, &c.—*Continued.*

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		A.	B.				A.	B.		
—	—	—	—	Calf's Foot Jelly	1	1	—	—	—	—
2	2	—	—	Camphorated Oil	4	3	—	1	—	—
—	—	—	—	Cassia (Ground)	2	2	—	—	—	—
1	1	—	—	Capers	—	—	—	—	—	—
—	—	—	—	Carbonate of Soda	1	1	—	—	—	—
2	2	—	—	Castor Oil	—	—	—	—	—	—
—	—	—	—	Cayenne Pepper	3	3	—	—	—	—
3	3	—	—	Cheese	12	11	—	1	—	—
2	2	—	—	Chlorodyne	—	—	—	—	—	—
—	—	—	—	Cinnamon (ground)	3	3	—	—	—	—
—	—	—	—	Cloves	5	5	—	—	—	—
—	—	—	—	Cocoa	18	18	—	—	—	—
1	1	—	—	Coffee	41	41	—	—	—	—

1	1	—	—	Coffee and Chicory	5	5	—	—	—	—
2	2	—	—	Coffee and Chicory Essence	2	2	—	—	—	—
—	—	—	—	Compound Liquorice Powder	1	1	—	—	—	—
3	3	—	—	Condensed Milk	9	9	—	—	—	—
32	32	—	—	Confectionery	27	26	1	—	1	—
4	4	—	—	Cod Liver Oil	1	1	—	—	—	—
—	—	—	—	Cornflour	5	5	—	—	—	—
4	2	1	1	Cream	22	6	9	7	1	2
—	—	—	—	Cream of Tartar	13	12	—	1	—	—
—	—	—	—	Crushed Linseed	3	3	—	—	—	—
1	1	—	—	Custard Powder	3	3	—	—	—	—
—	—	—	—	Currie Powder	1	1	—	—	—	—
1	—	1	—	Essence of Shrimps	—	—	—	—	—	—
5	5	—	—	Flour	9	9	—	—	—	—
10	10	—	—	Flour (self-raising)	7	7	—	—	—	—
4	4	—	—	Gin	9	9	—	—	—	—
—	—	—	—	Ginger	18	18	—	—	—	—

SUMMARY OF SAMPLES, &c.—*Continued.*

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		A.	B.				A.	B.		
3	3	—	—	Glycerine	—	—	—	—	—	—
—	—	—	—	Ground Nutmegs	1	1	—	—	—	—
5	4	—	1	Honey	—	—	—	—	—	—
2	2	—	—	Ice Cream Powders	2	2	—	—	—	—
6	6	—	—	Jams, Marmalade and Jellies	28	26	—	2	—	—
3	3	—	—	Kidneys	—	—	—	—	—	—
2	2	—	—	Lard	34	30	4	—	—	5
1	1	—	—	Lard Compound	—	—	—	—	—	—
1	1	—	—	Lemonade Powder	—	—	—	—	—	—
6	6	—	—	Lobster (Tinned)	—	—	—	—	—	—
—	—	—	—	Margarine	19	19	—	—	—	—
4	2	1	1	Meat Extract	1	1	—	—	—	—
2	2	—	—	Meat Pies	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—*Continued.*

1	1	—	—	Medicated Food	—	—	—	—	—	—
13	6	3	4	Medicine (prescriptions)	2	1	1	—	—	—
145	124	12	9	Milk	761	592	114	55	13	80
1	1	—	—	Mincemeat	—	—	—	—	—	—
—	—	—	—	Mixed Spice	13	12	—	1	—	—
2	2	—	—	Mustard	3	3	—	—	—	—
1	1	—	—	Nut Oil	—	—	—	—	—	—
2	1	—	1	Meat (Tinned)	3	2	—	1	—	—
—	—	—	—	Oat Meal	2	2	—	—	—	—
2	2	—	—	Olives	—	—	—	—	—	—
1	1	—	—	Olive Oil	2	2	—	—	—	—
4	4	—	—	Oysters	—	—	—	—	—	—
—	—	—	—	Pea Flour	1	1	—	—	—	—
5	5	—	—	Pepper	20	20	—	—	—	—
15	14	1	—	Pickles	—	—	—	—	—	—
—	—	—	—	Potted Lobster	3	1	2	—	—	2
—	—	—	—	Potted Shrimps	5	3	2	—	—	—
24	22	1	1	Preserved Fruit and Vegetables	2	1	1	—	—	1

SUMMARY OF SAMPLES, &c.—*Continued.*

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		A.	B.				A.	B.		
6	3	1	2	Proprietary Food	—	—	—	—	—	—
1	1	—	—	Rabbit (Tinned)	—	—	—	—	—	—
1	1	—	—	Rice	5	5	—	—	—	—
2	2	—	—	Rum	9	6	1	2	2	1
9	9	—	—	Salmon (Tinned)	1	1	—	—	—	—
4	4	—	—	Sauce...	—	—	—	—	—	—
—	—	—	—	Sausage	3	2	1	—	—	1
—	—	—	—	Seidlitz Powders	6	6	—	—	—	—
—	—	—	—	Shelled Shrimps	1	1	—	—	—	—
1	1	—	—	Sherbet	—	—	—	—	—	—
—	—	—	—	Shrimp Paste	1	1	—	—	—	—
—	—	—	—	Spiced Beef	1	1	—	—	—	—
1	1	—	—	Suet Pudding	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—*Continued.*

2	2	—	—	Sugar	18	12	—	6	—	—
—	—	—	—	Syrup	2	2	—	—	—	—
—	—	—	—	Tartaric Acid	10	9	—	1	1	—
2	2	—	—	Tea	29	29	—	—	—	—
12	10	—	2	Temperance Beverages	29	6	5	18	—	1
1	1	—	—	Vinegar	6	6	—	—	—	—
6	4	—	2	Whiskey	22	22	—	—	—	—
7	7	—	—	Wines and Cordials (alcoholic)	21	19	1	1	—	1
—	—	—	—	Yeast...	5	5	—	—	—	—
—	—	—	—	Zinc Ointment	2	2	—	—	—	—
618	561	33	24		1515	1255	162	98	19	101

2,133 samples were submitted for chemical analysis during the year 1908.

	1907.	1908.
Number of Informations for Adulterated Food and Drugs ...	94	96
,, ,, for giving a False Warranty ...	3	2
,, ,, ,, Label ...	1	—
,, ,, for selling milk with no name and address on can	—	—
,, ,, obstructing Inspector	—	1
,, ,, for refusing to sell	1	—
,, ,, for offences under Margarine Act ...	2	2
Total Number of Informations—Food and Drugs Acts ...	101	101
Number Fined	64	64
Withdrawn on payment of costs	26	26
Acquitted or Withdrawn without costs...	11	11
Amount of Fines and Costs	£230 15 7	£238 13 0

The amount of fines for offences under the Sale of Food and Drugs Act have slightly increased during the past twelve months as compared with the preceding twelve months. The increase in the total amount is due to one or two heavier penalties. The average amount imposed per conviction during the year is £3 14s. 7d., against £3 5s. 10½d. for the previous year.

Summary of Samples in which legal proceedings were instituted during the year January 1st, 1908, to December 31st, 1908, together with result.

No. Informations.	Nature of Samples.	Nature of Offences.	Result of Legal Proceedings.				
			No. of Convictions.	No. withdrawn on paym'nt of costs.	No. dismiss'd and withdrawn without costs.	Fines.	Costs.
						£ s. d.	£ s. d.
29	Milk	Deficient in cream	14	12	3	22 15 0	21 0 0
8	,,	Deficient in cream and adulterated with water	6	1	1	9 0 0	5 17 0
1	,,	Deficient in cream and adulterated with borates	1	—	—	1 0 0	1 7 0
1	,,	Deficient in cream and coloured with a yellow coal tar dye.	1	—	—	3 0 0	0 17 0
26	,,	Adulterated with water	19	4	3	43 2 6	21 2 0
4	,,	Adulterated with borates	1	3	—	1 0 0	3 7 0
1	,,	Adulterated with water and coloured with a yellow tar dye	1	—	—	3 0 0	0 17 0
1	,,	For issuing a false warranty	—	—	1	—	—
1	,,	Obstructing Inspector in the discharge of his duty	1	—	—	5 0 0	0 16 6
3	Skimmed Milk	Adulterated with water	3	—	—	9 0 0	2 16 0
1	,,	Adulterated with borates	1	—	—	2 0 0	0 17 0
3	Machine Skimmed Milk	Adulterated with water	3	—	—	5 0 0	3 1 0

SUMMARY OF SAMPLES IN WHICH LEGAL PROCEEDINGS WERE INSTITUTED—*Continued.*

						£ s. d.	£ s. d.
1	Sterilized Milk	Deficient in cream	—	1	—	—	0 15 0
2	Cream	Adulterated with borates	1	1	—	1 0 0	1 19 0
3	Butter	Adulterated with foreign fat	3	—	—	12 0 0	2 16 0
1	„	Containing an excessive quantity of water	—	1	—	—	0 15 0
1	Margarine	Exposing for sale margarine containing over ten per cent. of butter fat	1	—	—	1 0 0	0 6 6
1	„	Exposing for sale margarine unlabelled	1	—	—	—	2 19 6
4	Lard	Adulterated with paraffin wax	1	—	3	5 0 0	2 19 0
1	„	For issuing a false warranty	1	—	—	—	15 15 0
1	Bitter Beer	Adulterated with arsenic	1	—	—	10 0 0	2 19 0
1	Sausage	Adulterated with borates	—	1	—	—	0 15 0
1	Raspberry Cordial	Adulterated with salicylic acid	1	—	—	2 0 0	0 17 0
1	Ginger Wine.....	Adulterated with salicylic acid	—	1	—	—	0 15 0
1	Jamaica Rum	For selling Demerara Rum	1	—	—	0 1 0	0 17 0
1	Potted Lobster	Adulterated with foreign fish and bread	—	1	—	—	0 15 0
1	, ...	Adulterated with foreign fish and coloured with a red coal tar dye	1	—	—	2 0 0	0 17 0
1	Preserved Peas	Adulterated with copper	1	—	—	3 0 0	0 17 0
101			64	26	11	£139 18 6	98 14 6

DETAILS OF SAMPLES OF MILK OBTAINED FOR CHEMICAL ANALYSIS.

	1907.	1908.
Number of Samples purchased on Week-days in Town..	321	379
,, Informations	40	50
,, Samples taken at Railway Stations on Week-days...	251	193
,, Informations	13	5
,, Samples purchased on Sundays in Town ...	115	136
,, Informations	19	20
,, Samples taken at Railway Stations on Sundays	124	138
,, Informations	2	2
,, Samples taken at City Hospitals	62	40
,, Informations	3	2
,, Samples taken at Corporation Milk Depôts...	18	20
,, Informations	—	—

MARGARINE ACT.

	1907.	1908.
Number of Visits to Wholesale Dealers in Margarine ...	1292	774
,, Visits to Shops	11540	7098
,, Informations	2	2
,, Fined	1	1
Amount of Fines and Costs ...	£1 2s. 0d.—£4 6s. 0d.	

SPECIAL EXAMINATIONS.

The following samples were submitted during 1908 for special examination:—

Nature of Sample	No. of Samples.	Nature of Sample.	No. of Samples.
Liquid Soap	8	Milk	2
Filter Cloth	1	Vomit	1
Sand	2		

INVESTIGATION INTO METHODS OF CONTROL OF BUTTER SUPPLY.

A Select Committee of the House of Commons was appointed in March, 1906, to consider whether any, and if so what, further legislation is required in order to secure the better conduct and control of the trade in butter and butter substitutes.

The Committee sanctioned in regard to milk-blended butter a standard of 24 per cent. of water. This is unfortunate, and will unquestionably result in great loss to the poorer sections of the community, who will be buying water when they are under the impression that they are buying butter. It is most undesirable that any fancy names should be allowed for butter substitutes, all of which should be classed as margarine, in the interests of the consumers.

The Butter and Margarine Act, 1907, is the outcome of the recommendations of this Select Committee. The Act came into force on January 1st, 1908. Certain provisions of the Act are set forth in the Annual Report for 1907.

FERTILISERS AND FEEDING STUFFS ACT, 1906.

On 1st January, 1907, a Fertilisers and Feeding Stuffs Act, which replaced the old Act of 1893, came into operation.

Under it the City Analyst was appointed official agricultural analyst, and the three inspectors under the Sale of Food and Drugs Act were appointed official samplers.

A certain remuneration was agreed to in respect of the work done under the Act.

The following table shows the number of samples procured during the year:—

Nature of Sample.	No. of Samples.	Nature of Sample.	No. of Samples.
Decorticated Cotton Cake Meal	1	Thompson's Plant, Vine, and Vegetable Manure	1
Linseed Cake Meal	2	Indian Meal	1
Molassine Meal	1	Oil Cake Meal.....	2
Nutted Oil Cake.....	1		
Clay's Fertilizer.....	1	Total.....	10

BACTERIOLOGICAL EXAMINATIONS AND ANALYSES.

The Bacteriological Analyses comprise:—

1. The Examination of food-stuffs of various kinds.

2. The daily and monthly examination of the water supplied to the City.

3. The examination of suspected cases of rabies, anthrax, tuberculosis, &c.

4. The examination of rats taken on shipboard and in the town for the presence or absence of plague.

5. The examination for diagnostic purposes in suspected cases of diphtheria, typhoid fever, sputum and suspected cases of plague.

The general bacteriological condition of foodstuffs and water is ascertained, comprising experiments for the determination of—

(*a*) The presence of organisms.

(*b*) The number of organisms.

(*c*) The kind of organism.

All samples undergo routine examination for the presence of specific organisms indicating dirt or sewage contamination (*Bacillus coli communis* and allied forms, *Bacillus enteritidis sporogenes* and allied forms).

In addition special experiments are conducted to determine the presence or absence of tubercle bacilli.

The total number of food-stuffs examined bacteriologically during 1907 was 1,043, a detailed list of which follows:—

SUMMARY OF FOOD-STUFFS.

Sample.	No.	Sample.	No.
Butters	24	Meat Extract	9
Cheese	8	,, Pies	28
Cockles	16	,, Potted	14
Cocoa and Milk	1	,, Tinned	54
Coffee and Chicory Essence	1	Milks	528
Coffee and Milk	2	Mincemeat	2
Condensed Milk	42	Mussels	25
Cream	13	Oysters	31
Cream Cheese	3	Periwinkles	14
Disinfectants	3	Polony	8
Dripping	1	Sand	2
Fish Paste	20	Sauces	18
,, Potted	4	Sausage	2
,, Tinned	83	Soups	15
Fruits, Preserved	18	Sterilized Milk	6
Ice Cream	6	Syrup	2
Jams	11	Treacle	2
Jellies	5	Vegetable Extract	1
Lemon Curd	10	Water	2
Margarine Cheese. . ..	1		
Marmalade	8	Total	1,043

SUMMARY OF ALL EXAMINATIONS.

Foodstuffs	1,043
Waters	601
Typhoids	419
Diphtherias	162
Rats	1,946
Miscellaneous	76
Total	4,247

In addition to the above-mentioned, a very large number of bacteriological examinations were made during the year 1908 of suspected tubercular, typhoid and diphtheria cases for the Medical Practitioners, the total number of such examinations amounting to 1,505.

MILK ANALYSES FOR THE YEAR.

528 milks were examined for the presence of—

1. The *Bacillus tuberculosis.*
2. The *Colon bacillus.*
3. The *Bacillus enteritidis sporogenes*, or allied forms.
4. Other bacteria.

The *Bacillus tuberculosis* indicates that the animals from which the milk was taken were tubercular, or that the pails into which the milk was received or the hands of the milker were infected from previous contact with a diseased cow or person.

The *Colon bacillus* indicates contamination with dirt of an intestinal origin, or that the cow was suffering from inflammation of the udder.

The *Bacillus enteritidis sporogenes* indicates dust or intestinal contamination.

Experiments were made at the latter portion of the year to standardise the milks by ascertaining at what dilution the *Colon bacillus* vanishes.

The term "negative" indicates that the inoculated guinea pigs died before the test for tubercule had had time to be completed.

Presence of the Bacillus Tuberculosis.

Of the 528 samples examined for tubercle, 25 guinea pigs died before the tubercular test was complete; 30 of the milk samples were not inoculated and are included under those returned negative, guinea pigs at this time of the year being extremely difficult to obtain.

Of the 437 remaining samples, 15 proved tubercular, of which 10 were railway-borne milks and 5 taken in the town. 4 of the 5 samples included in town are from an uncertain source.

The percentage this year is therefore:—Railway-borne, 3·67; Town, 1·94.

It is a very serious matter that tubercle is so widespread in milk when it is remembered that one tubercular cow may be the means of infecting the milking utensils, the hands of the milker, and, in consequence, even the teats of the other healthy animals. Regulations dealing with infected animals cannot therefore be too stringent.

Table showing the number of samples of milk examined Bacteriologically for Tubercle Bacilli from 1896 to 31st December, 1908.

Year.	Total Number of Samples Taken.	Town Samples.		Country Samples.	
		No. taken.	Tubercular.	No. taken.	Tubercular.
1896	119	83	4	36	5
1897	150	63	4	87	5
1898	112	84	7	28	5
1899	352	167	1	185	15
1900	560	255	4	305	5
1901	566	254	2	312	20
1902	595	213	1	382	32
1903	582	231	2	351	19
1904	571	201	4	370	37
1905	560	212	1	348	14
1906	530	209	3	321	22
1907	451	194	4	257	14
1908	528	256	5	272	10
Totals.....	5,676	2,422	42	3,254	203

TABLE SHOWING (A) SAMPLES OF MILK DRAWN DIRECT FROM SEPARATE COWS, (B) SAMPLES OF MIXED MILK, TOGETHER WITH OTHER PARTICULARS RELATING TO SAMPLES OF MILK TAKEN FOR BACTERIOLOGICAL EXAMINATION FROM JANUARY 1ST, 1901, TO DECEMBER 31ST, 1908.

YEAR.	TOWN.						COUNTRY.						Total number of Samples taken during the Year.
	Samples.			Tubercular.			Samples.			Tubercular.			
	A Direct fromCows, taken in routine practice.	B Mixed Milk from Town Cows.	Total.	A. Direct from Cows.	B Mixed Milk.	Total.	A Direct from Suspected Cows.	B Mixed Milk from Country Cows.	Total.	A Direct from Cows.	B Mixed Milk.	Total.	
1901	215	39	254	2	—	2	15	297	312	2	18	20	566
1902	180	33	213	1	—	1	30	352	382	6	26	32	595
1903	203	28	231	2	—	2	7	344	351	1	18	19	582
1904	163	38	201	2	2	4	16	354	370	4	33	37	571
1905	196	16	212	1	—	1	10	338	348	1	13	14	560
1906	143	66	209	3	—	3	14	307	321	1	21	22	530
1907	90	104	194	3	1	4	5	252	257	2	12	14	451
1908	141	115	256	1	4	5	5	267	272	1	9	10	528
Totals.....	1331	439	1770	15	7	22	102	2511	2613	18	150	168	4383

Detailed Table showing particulars of Samples of Milk for 1908.

\+ Signifies that the Bacilli is present.
— Signifies that the Bacilli is absent.

1908	RAILWAY. No.	RAILWAY. Colon Bacilli. c.c. 1	c.c. ·1	c.c. ·01	c.c. ·001	RAILWAY. B. Ent. Sporog.	RAILWAY. Total.	TOWN. No.	TOWN. Colon Bacilli. c.c. 1	c.c. ·1	c.c. ·01	c.c. ·001	TOWN. B. Ent. Sporog.	TOWN. Total.	HOSPITAL. No.	HOSPITAL. Colon Bacilli. c.c. 1	c.c. ·1	c.c. ·01	c.c. ·001	HOSPITAL. B. Ent. Sporog.	HOSPITAL. Total.	STERILIZED MILK DEPOT. No.	STERILIZED MILK DEPOT. Colon Bacilli. c.c. 1	c.c. ·1	c.c. ·01	c.c. ·001	STERILIZED MILK DEPOT. B. Ent. Sporog.	STERILIZED MILK DEPOT. Total.	Total No. per M'th.	NEGATIVE. R	T	H	D	Total No.	TUBERCULAR. R	T	H	D	Total No.	
January.	8	—	—	—	—	+ in 1 case		12	—	—	—	—	—		1	—	—	—	—	—		—	—	—	—	—													January.
	1	+	—	—	—			2	+	—	—	—	—		1	+	—	—	—	—		—	—	—	—	—												
	13	+	+	—	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	+	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	+	+		24	—	—	—	—	—	—	14	1	+	+	+	—	—	3	—	—	—	—	—	—	41	4	—	—	—	4	—	1	—	—	1	
February.	3	—	—	—	—	—		21	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												February.
	—	—	—	—	—			1	+	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	—	—			7	+	+	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	2	+	+	+	—			1	+	+	+	—	—		—	—	—	—	—	—		—	—	—	—	—												
	5	+	+	+	+	—	11	1	+	+	+	+	—	31	1	+	+	+	+	—	1	—	—	—	—	—	—	43	2	1	—	—	3	—	1	—	—	1	
March.	8	—	—	—	—	+ in 2 cases		22	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												March.
	—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—				*								
	1	+	+	—	—			1	+	+	—	—	—		—	—	—	—	—	—		3	+	+	—	—												
	4	+	+	+	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	7	+	+	+	+		20	1	+	+	+	+	—	24	3	+	+	+	+	—	3	2	+	+	+	+	—	5	52	1	11	—	—	12	—	—	—	—	—	
April.	4	—	—	—	—	—		3	+	—	—	—	+ in 1 case		—	—	—	—	—	—		—	—	—	—	—												April.
	5	+	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	6	+	+	—	—			4	+	+	—	—			—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	+	—			6	+	+	+	—			1	+	+	+	—	—		—	—	—	—	—												
	3	+	+	+	+	—	19	8	+	+	+	+		21	—	—	—	—	—	—	1	—	—	—	—	—	—	41	3	2	—	—	5	—	—	—	—	—	
May.	—	—	—	—	—	—		5	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												May.
	1	+	—	—	—			1	+	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—				*								
	1	+	+	—	—			2	+	+	—	—	—		1	+	+	—	—	—		—	—	—	—	—												
	—	—	—	—	—			2	+	+	+	—	—		2	+	+	+	—	—		—	—	—	—	—												
	18	+	+	+	+	—	20	12	+	+	+	+	—	22	2	+	+	+	+	—	5	—	—	—	—	—	—	47	—	19	—	—	19	—	3	1	—	4	
June.	—	—	—	—	—	+ in 1 case		—	—	—	—	—	—		—	—	—	—	—	—		2	—	—	—	—												June.
	1	+	—	—	—			3	+	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	—	—			1	+	+	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	—	—	—	—	—			2	+	+	+	—	—		—	—	—	—	—	—		—	—	—	—	—												
	7	+	+	+	+		9	16	+	+	+	+	—	22	5	+	+	+	+	—	5	2	+	+	+	+	—	4	41	—	—	—	—	—	—	—	—	—	—	
July.	—	—	—	—	—	+ in 1 case		5	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												July.
	1	+	—	—	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	—	—			1	+	+	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	+	—			—	—	—	—	—	—		1	+	+	+	—	—		—	—	—	—	—												
	—	—	—	—	—		3	19	+	+	+	+	—	25	1	+	+	+	+	—	2	—	—	—	—	—	—	29	—	—	—	—	—	1	—	—	—	1	
August.	—	—	—	—	—	—		—	—	—	—	—	+ in 1 case		—	—	—	—	—	—		—	—	—	—	—												August.
	—	—	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	2	+	+	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	—	—	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	18	+	+	+	+		20	10	+	+	+	+		10	—	—	—	—	—	—	—	—	—	—	—	—	—	30	—	—	—	—	—	3	—	—	—	3	
September.	1	—	—	—	—	+ in 7 cases		9	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												September.
	—	—	—	—	—			4	+	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	10	+	+	—	—			3	+	+	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	3	+	+	+	—			—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—												
	16	+	+	+	+		30	1	+	+	+	+	—	17	7	+	+	+	+	—	7	5	+	+	+	+	—	5	59	—	—	4	—	4	—	—	—	—	—	
October.	2	—	—	—	—	+ in 2 cases		28	—	—	—	—	+ in 3 cases		—	—	—	—	—	—		—	—	—	—	—												October.
	—	—	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	—	—			1	+	+	—	—			—	—	—	—	—	—		—	—	—	—	—												
	—	—	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	19	+	+	+	+		22	1	+	+	+	+		30	—	—	—	—	—	—	—	—	—	—	—	—	—	52	2	6	—	—	8	1	—	—	—	1	
November.	—	—	—	—	—	+ in 11 cases		—	—	—	—	—	+ in 1 case		—	—	—	—	—	—		—	—	—	—	—												November.
	1	+	—	—	—			1	+	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	—	—	—	—	—			2	+	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	—	—	—	—	—			3	+	+	—	—			—	—	—	—	—	—		—	—	—	—	—												
	26	+	+	+	+		27	15	+	+	+	+		21	3	+	+	+	+	—	3	—	—	—	—	—	—	51	—	—	—	—	—	3	—	—	—	3	
December.	—	—	—	—	—	+ in 2 cases		—	—	—	—	—	+ in 1 case		—	—	—	—	—	—		—	—	—	—	—												December.
	—	—	—	—	—			—	—	—	—	—			—	—	—	—	—	—		—	—	—	—	—												
	3	+	+	—	—			2	+	+	—	—			—	—	—	—	—	—		—	—	—	—	—												
	1	+	+	+	—			1	+	+	+	—			—	—	—	—	—	—		—	—	—	—	—												
	6	+	+	+	+		10	16	+	+	+	+		19	8	+	+	+	+	—	8	5	+	+	+	+	—	5	42	—	—	—	—	—	1	—	—	—	1	
Ttl.	215	195	185	139	126	27	215	256	154	138	114	99	7	256	38	37	36	35	30	—	38	19	17	17	14	14	—	19	528	12	39	4	—	55	9	5	1	—	15	Ttl.

NOTE.—*These figures include a number of Milks which were not inoculated owing to scarcity of guinea-pigs.

Table showing the percentage of distribution of the B. Coli and B. Enteritidis Sporogenes.

Source.	No.	Absent in 1 c.c.		Present in 1 c.c. but Absent in ·1 c.c.		Present in ·1 c.c. but Absent in ·01 c.c.		Present in ·01 c.c. but Absent in ·001 c.c.		Present in ·001 c.c.		B. Enteritidis Sporogenes.			
												Present.		Absent.	
		Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.
Railway borne Milks	215	26	12	10	4	40	18	13	5	127	5	17	7	198	92
Town Milks	256	105	41	12	4	24	9	15	5	100	39	7	2	249	93
City Hospitals	38	1	2	1	2	1	2	4	10	31	81	—	—	—	—
Sterilized Milk Depôts	19	2	10	—	—	3	15	—	—	14	73	—	—	—	—

The above table is exceedingly interesting for it shows that less care is taken in handling the country milk, and therefore that contamination much more frequently occurs.

RESULTS OF ANALYSES OF BUTTER, CREAM, CONDENSED MILKS, CHEESE, MEAT PIES, TINNED FISH, TINNED MEATS and SHELL FISH.

Butter.—Twenty-four samples were analysed and the colon bacillus was absent in all cases. B. enteritidis sporogenes was also absent.

Cream.—Thirteen samples were analysed, seven of which contained the colon bacillus in 1 c.c., one in ·01 c.c., and one in ·001 c.c.; the remaining three samples were tinned, and were found to be sterile.

Condensed Milks.—Forty-two samples were examined, and in no case were they found to be sterile. There is no doubt that condensed milk is an unsatisfactory product. Bacteria are usually present, and the milk which was originally condensed might have contained various products of the decomposition of bacteria. These products are subsequently masked by the large quantity of sugar present, but their irritant properties are not destroyed. In one sample the colon bacillus was found in ·001 c.c. B. enteritidis sporogenes was absent in all samples.

Cheese.—Eight samples in all were examined, and the colon bacillus was found in each sample. B. enteritidis sporogenes was present on three occasions.

Meat Pies.—Twenty-eight samples were submitted for examination. The colon bacillu and B. enteritidis sporogenes were found to be absent in all samples.

Tinned Fish.—A large number of samples of tinned fish, amounting to 83 in all, were most carefully analysed, and all were found to be sterile. In addition to the above-mentioned, 20 samples of fish paste were also analysed, and these again were found to be sterile.

Tinned Meats.—Fifty-four samples of tinned meats, fourteen of potted meats, and nine of meat extract, were examined; the majority of these samples proved sterile.

Shell Fish.—As in the case of milk and milk products, several kinds of shell fish are eaten for the most part uncooked; they are in consequence liable to convey infection if they become contaminated with

pathogenic bacteria. Contamination may occur in the transit and storing of the fish, but more especially in the collecting ground. Therefore, as in previous years, a series of samples were submitted to careful analysis, and evidence of contamination was found in most of the samples.

B. enteritidis sporogenes was found on 28 occasions, and the colon bacillus on 32. The total number of shell fish submitted was:—Mussels, 25; oysters, 31; periwinkles, 14; cockles, 16; total, 86.

Ice Cream.—Six samples of ice cream were sent for analysis, and the colon bacillus was found in each sample in 1 c.c., ·1 c.c., ·01 c.c., and ·001 c.c.

The total number of foodstuffs examined bacteriologically up to 1908 are as follows:—

1896	122
1897	162
1898	311
1899	505
1900	1,067
1901	1,055
1902	1,097
1903	1,061
1904	1,107
1905	1,147
1906	1,075
1907	1,028
1908	1,043

Plague Observations and Rats.—During the year a careful watch has been kept over the rats in the ships entering the port, and over those found in warehouses, and various parts of the town. This has been done on account of the well-known fact that rats suffer from plague, and that they assist to spread the disease.

By the systematic examination of these rats we may be put in a position to forestall cases of plague.

Total number of rats examined during the year:—

Town	309
Port	1,637
Total	1,946

City Hospitals.

During the year the Fever Hospitals have, as heretofore, availed themselves of the facilities of the Municipal Bacteriological Laboratories, and numerous specimens have been submitted for examination.

SUMMARY.

Cases of Diphtheria	162
,, Typhoid	419
Miscellaneous	2
Total	583

DIPHTHERIA.

Positive	18	
Negative	20	
Suspicious	9	
Mixed growth (non-diphtheritic)	39	
Streptococci	27	
Staphylococci	26	
Indeterminate Cocci	18	
No growth	5	
	——	162

TYPHOID.

Positive	208	
Negative	193	
Indefinite	18	
	——	419

MISCELLANEOUS.

Cerebro-Spinal Fluid, Uterine Curettings, no malignant disease	2

SPECIAL EXAMINATIONS.

The following shows the number of special examinations which have been made:—

Rabies	3
Anthrax	49
Tubercle	10
Actinomycosis	2
Inflammation	2
Miscellaneous	8
Total	74

ANTHRAX.

The following specimens were examined for Anthrax:—

Nature of Specimen.	Total Number.	B. Anthracis.	
		Present in.	Absent in.
Ears	11	2	9
Spleen	7	2	5
Wool	5	1	4
Meals	13	—	13
Oil Cake	4	—	4
Hay	5	—	5
Hair and Dust	2	—	2
Chilian Chopped Hay	2	—	2
Total	49	5	44

The following specimens were examined for Actinomycosis, Tubercle, Mastitis, etc.:—

Nature of Specimen.	Total Number.	Present in.	Absent in.
Tubercle—			
Udder	9	5	4
Bacon Rib	1	—	1
Actinomycosis—			
Udder	2	2	—
Inflammation—			
Udder	1	1	—
,,	1	1	— G.P. died before examination was completed.

Nature of Specimen.	Number.	Result of Examination.
Dogs Heads	3	Not Rabies.
Mice	2	1. Mouse Favus. 2. Not Mouse Favus.
Pig's Lung	1	Pneumonia.
Cow's Pleura	1	Carcinoma of Gland.
Gland	2	1. Hæmolymph 2. Normal.
Pork	1	No evidence of Trichinae found.
Soil	1	Normal.

WATER ANALYSES.

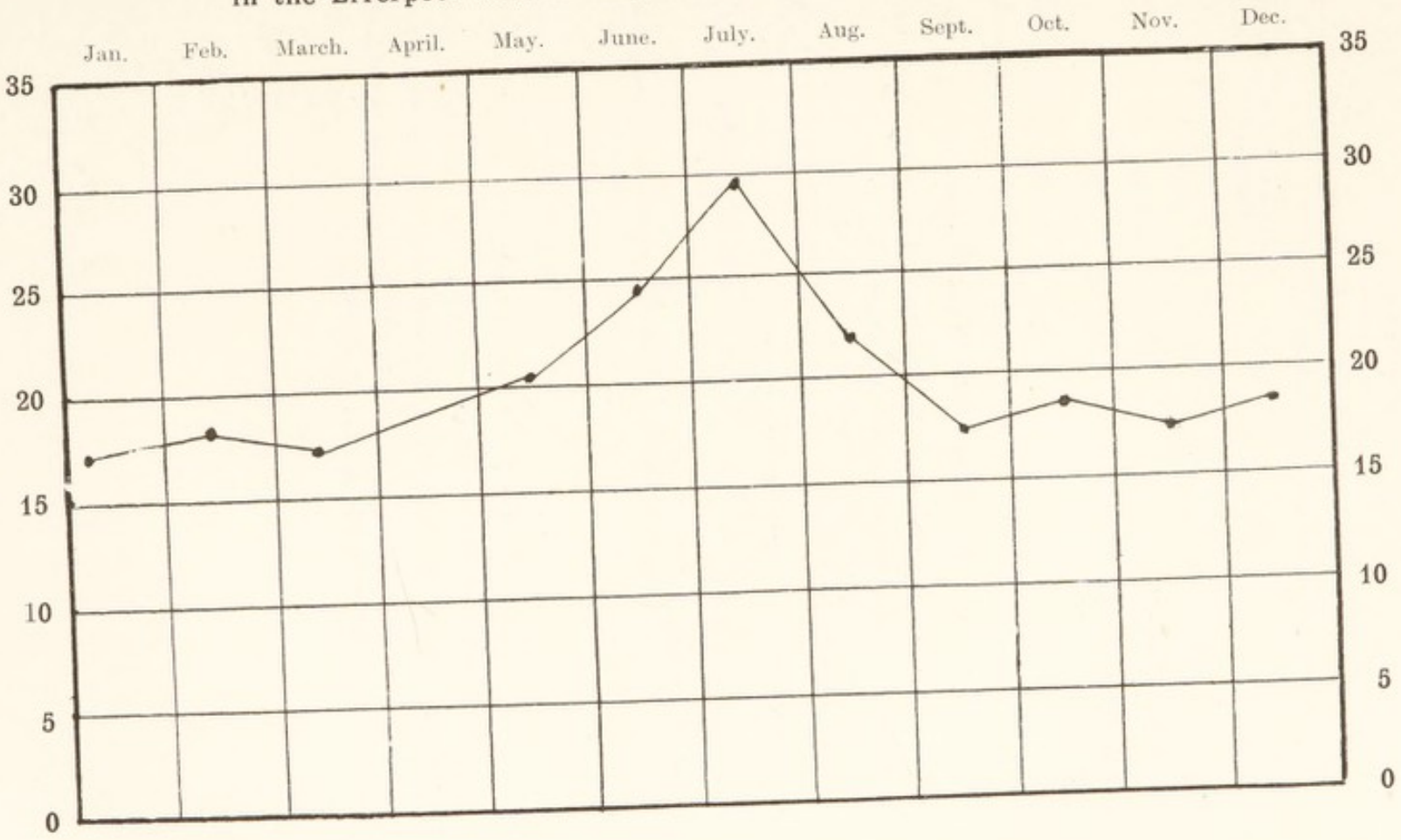
The quality of the water supplied to Liverpool, as indicated by the following examinations, shows that its very great bacterial purity is well maintained for the year 1908. The samples analysed have been divided into Daily and Monthly Analyses.

DAILY.

The samples this year have been taken from the main tap in the Johnston Laboratories, the average number of bacteria being 19. The B. enteritidis sporogenes was absent in all cases, and the colon bacillus was only found in a few samples during the month of July in the quantity of water examined, viz., 100 c.c.

The following diagram illustrates the variation in the total number of bacteria per month during the year:—

Diagram illustrating Monthly average variation in the total number of Bacteria in the Liverpool Main Water, based on 365 Daily Examinations.



MONTHLY.

A.—Prescot Samples of Filtered Water.

	Average No. of Bacteria.	No. of Examinations made.
Vyrnwy Water...	12	9
Rivington Water	10	10
Mixing Well	30	10
New Reservoir...	26	10

B.—Samples of Well Water.

A very careful watch has, as in the preceding years, been kept upon the quality of the water derived from the wells.

	Average No. of Bacteria.	No. of Examinations made.
Dudlow Lane Well	28	10
George Holt Well	42	9
John Holmes Well	63	1

Special Examinations.

One hundred and seven special examinations have been made this year of the water from the Rivington Watershed, and further series have, as in the previous year, also been specially investigated, attention being particularly directed to the nature of the deposit.

CLEANSING AND SCAVENGING.

CLEANSING AND SCAVENGING.

The washing of streets, courts, back passages, &c., and the improvement in scavenging have been extended during the past year with beneficial results.

During the summer season the street washing was continued:—

233 streets were washed once a week,
299 streets ,, ,, twice a week,
57 streets ,, ,, three times a week, and
203 streets ,, ,, periodically,

and all passages and tunnel entrances to courts were also regularly washed.

Owing to the defective planning of many minor streets and the absence of adequate back passages some difficulties have yet to be overcome before the collection and removal of domestic refuse can be regarded as satisfactory. The concessions which have been made by the Health Committee for the substitution of sanitary ashbins for the old insanitary ashpits have resulted in a distinct sanitary advantage.

The following is a statement of the number of improved sanitary ashbins which were fixed at the 31st December, 1908:—

In properties assessed at over £10 per annum and new properties	26,267
In properties of £10 assessment and under	21,920
Total	48,187

The number of brick ashpits has been reduced from 65,000 to approximately 37,000.

Under the Bye-laws now in force, all newly-constructed houses must be provided with suitable ashbins.

All private, domestic and office drains are flushed by the City Engineer's Staff twice a year, and there can be no question that a more frequent and very thorough flushing would be attended with great advantage.

The City Engineer has kindly supplied the following tables, which indicate the operations carried out by the Cleansing Staff under his control:—

TABLE No. 1.

NIGHT SERVICE

FOR EMPTYING COURT, &c., ASHPITS AND MIDDENS.

Middens have been practically abolished in the Old City, and consequently the operations of the night service are limited to the removal of domestic and office refuse from the neighbourhood of the Exchange, where it is impracticable to perform the work during business hours.

In the year 1900 an Improved Sanitary Ashbin was introduced, and 2,390 of these Bins have now been fixed for the use of Courts.

Notices Received.	Collections from Ashpits, etc.	Quantity of Ashes Collected.	Quantity of Refuse Deposited at Chisenhale Street Depot.	Average Working Staff per night.				Analysis of Work.		Average quantity removed from each Ashpit at each Collection
				Ashpit Men.	Wharf Men.	Carts.	Horses.	Loads per Man per Night.	Loads per Cart per Night.	Cart Loads.
No.	No.	Loads.	Loads.	No.	No.	No.	No.			
147	1,884	1,360	1,360	3·0	1·0	1·0	1·0	1·48	4·43	·72

TABLE No. 2.

SERVICE FOR THE COLLECTION AND REMOVAL OF DRY ASHPIT ASHES.

The number of notices received to empty ashpits during the year 1908 was 0·35 per cent. of the total collections.

The number of brick ashpits within the City is approximately 37,000.

From the year 1898 to the 31st December, 1908, Improved Sanitary Ashbins have been fixed as follows:—

In properties of over £10 assessment, and new properties	26,267
In properties of £10 assessment and under	21,920
	48,187

During this period the number of brick ashpits has been reduced from approximately 65,000 to 37,000.

In premises unsuitable for fixture bins, 25,000 loose bins have been provided.

During the year 1908 each ashpit was emptied on an average 14·10 times. The total quantity of refuse collected was 50,969 loads, or 0·09 of a load from each ashpit at each collection.

Notices Received.	Total Collections from Ashpits.	Dry Ashes.									Average Daily Working Staff.			Analysis of Work.		Average quantity removed from each Ashpit at each Collection
		Quantity of Refuse Removed.	Depots at which Refuse was Deposited.								Ashpit Men.	Carts and Wagons.	Horses.	Loads per Man per day.	Loads per Cart per Day.	
			Chisenhale Street.	Rathbone Road Destructor.	Smithdown Road Destructor.	St. Domingo Destructor.	Lavrock Bank Destructor.	Garston Destructor.	Sandhills.	Various Tips, &c.						
No.	No.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads	Loads.	Loads.	Loads.						Loads.
1,872	528,543	50,969	6,379	3,765	7,831	10,317	7,700	2,287	2,833	9,857	141·79	34·67	29·39	1·15	4·71	·09

TABLE No. 3

SERVICE FOR THE COLLECTION AND REMOVAL OF BELL-CART AND BIN ASHES.

The Bell-cart service provides for the daily removal of domestic refuse from shops, business premises, and dwelling-houses where no provision is made for the storage of this description of refuse. This service has to be conducted within limited hours of the morning to suit the convenience of occupiers, and the exigencies of business.

Quantity of Bell-Cart and Bin Ashes Collected.	Depôts at which Refuse was Deposited.								Average Number of Carts Employed per day.	Average Quantity of Refuse Collected per day.
	Chisenhale Street.	Sandhills.	Rathbone Road Destructor.	Garston Destructor.	Smithdown Road Destructor.	Lavrock Bank Destructor.	St. Domingo Destructor.	Various Tips, &c.		
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	No.	Loads.
83,839	34,438	1,328	7,088	2,299	12,058	14,661	11,221	746	84·32	267·85

TABLE No. 4.

SERVICE FOR FLUSHING AND CLEANSING TROUGH WATER-CLOSETS, &c.

The frequent flushing of trough water-closets is a sanitary measure, this type of closet being provided principally in the more densely-populated areas of the City.

A large number of the public urinals and trough water-closets are also cleansed and disinfected twice daily during the Summer season, and once daily during the remaining part of the year.

Underground Urinals.	Overground Urinals.	Trough Water-Closets.	Average Working Staff per day.	
			Trough W. C. Men.	Urinal Men.
No. and Stalls.	No. and Stalls.	No.	No.	No.
26—214	158—523	1,175	24·44	16·65

TABLE No. 5.

SERVICE FOR THE CLEANSING OF STREETS, COURTS, AND PASSAGES, AND COLLECTION OF REFUSE.

Total Quantity of Refuse Collected.	Depôts at which Refuse was Deposited.					Average Daily Staff.				Average Number of Loads Removed Daily per Cart.
	Chisenhale Street.	Sandhills.	Wavertree.	Destructors.	Various Tips, &c.	Sweeping Machines.	Average Number of Men Employed.	Carts.	Horses.	
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Per day.	Per day.	No.	No.	No.
59,230	21,361	7,488	4,622	7,207	18,552	5·30	463	58·63	63·93	2·98

TABLE No. 6.

CLEANSING AND REMOVAL OF REFUSE FROM STREETS, COURTS, AND PASSAGES ON SUNDAYS.

On Sunday mornings a number of the principal streets in the central parts of the City are cleansed, and, as a sanitary measure, the domestic refuse in certain districts of the City is also collected.

Street Sweepings.											Average Daily Staff.	
Removed.			Depôts where Deposited.									
			Chisenhale Street.		Sandhills.		Wavertree.		Tips.			
Saleable Refuse.	Unsaleable Refuse.	Total.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Men.	Horses.
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	No.	No.
2,051	1,517	3,568	1,435	1,149	564	295	52	—	—	73	255	37·19

TABLE No. 7.

SERVICE FOR STREET WATERING.

In connection with Street Watering approximately 50 million gallons of Water were distributed during the season, in addition to which a large quantity was used for street washing.

Number of Days on which Carts were out during year.	Quantity of Water Distributed.		Average Daily Staff employed during the Season.		Average No. of Loads distributed Daily per Cart.
	Large Loads. Day.	Small Loads. Day.	Watermen.	Carts and Horses.	
151	125,446	21,925	23·90	25·79	32·21

In addition to the figures in the above table 8,718 loads of water were distributed on the drives of Newsham Park and Sefton Park.

DUST LAYING.

During the season 608,006 sq. yards Carriageways were treated with various Dust Laying Compositions.

TABLE No. 8.

REMOVAL OF GARBAGE FROM ABATTOIR.

Loads Removed during year.	Where Deposited.		
	Chisenhale Street.	Sandhills.	Collingwood Dock.
1,192	1,192	—	—

TABLE No. 9.

RETURN OF HORSE MANURE COLLECTED FROM FIRE STATIONS AND CORPORATION STABLES, AND DELIVERIES TO CHISENHALE STREET DEPÒT, &c.

Total Quantity dealt with during the year.	DEPÒTS AT WHICH MANURE WAS DEPOSITED.		
	Chisenhale Street.	Sandhills.	Wavertree.
Loads.	Loads.	Loads.	Loads.
1,987	1,389	285	313

Of the above 624 loads were collected by the Department from Fire Stations.

TABLE No. 10.

DESPATCHES OF MANURE AND REFUSE.

DEPÓTS.	Quantity of Saleable Refuse.				Quantity of Unsaleable Refuse.				Grand Total.	Average Daily Staff.	
	Street Sweepings	Mixture.	Ordinary Refuse to Farmers.	Total.	Sea.	Destructors.	Tips.	Total.	Tons.	Foreman.	Labourers
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.			
Chisenhale St., by Flats...	12,960	4,272	32,012	49,244	...	...	...	...	49,244	1	18
Sandhills by Rail ...	...	337	8,359	8,696	...	...	...	...	8,696	...	2
Wavertree do. ...	6,448	...	...	6,448	...	...	...	...	6,448	...	2
Chisenhale Street and Sandhills, *viâ* Collingwood Dock per Hopper Barges	...	...	...	...	24,042	...	...	24,042	24,042	...	2
Clinker per "Beta"	...	...	...	...	12,136	...	...	12,136	12,136	...	...
Charters Street Destructor.	...	...	...	...	...	58,744					
Rathbone Road ,, ...	...	...	...	...	...	11,883					
Smithdown Road ,, ...	...	...	...	...	...	26,879					
St. Domingo ,, ...	...	...	...	...	...	37,110	...	175,163	175,163	...	...
Garston ,, ...	...	...	...	...	...	8,056					
Lavrock Bank ,, ...	...	...	...	...	...	32,491					
Sundry Tips.....	...	...	3,495	3,495	...	...	35,891	35,891	39,386	...	6
Clinker to Tips	...	...	...	...	...	...	25,307	25,307	25,307	...	...
	19,408	4,609	43,866	67,883	36,178	175,163	61,198	272,539	340,422	1	30

The foregoing Table shows that not less than 340,422 tons of Town's refuse were disposed of during the year 1908, but this quantity does not represent the actual quantity collected and carted to the Wharves, as during the Winter months a proportion of the street sweepings is in a liquefied condition, and drains away before despatch of the refuse from the Wharves.

TABLE No. 11.

HORSES.

DAILY AVERAGE NUMBER EMPLOYED ON CLEANSING WORK.

Night Ashes.	Dry Ashes.	Bell Ashes.	Street Cleansing.	Sweeping Machines.	Markets.	Watering.	Abattoir.	Canals.	Destructors.	Various.	Total Daily Average.
1·0	28·72	77·86	58·63	5·30	1·43	12·33	1·23	1·52	7·81	2·50	198·33

TABLE No. 12.

AVERAGE DAILY STAFF OF MEN EMPLOYED.

General	9	Inspectors.	
	7	Timekeepers.	
	4	Clerks.	
	17	Total.	
Night Service.	1	Working Foreman.	
	3	Midden Men.	
	1	Wharf Man.	
	5	Total.	
Day Service.	23·0	Inspectors.	
	7·0	Watchmen.	
	10·57	Watermen.	
	263·75	Sweepers and Casual Men.	
	155 18	Cart Followers (Sweeping and Bell and Box Ashes).	
	56·23	Passage Men.	
	24·89	Washing.	
	11·09	Gully Men.	
	3.13	Washing Courts.	
	41·09	Trough Water Closet and Urinal Men.	
	69·0	Orderly Boys.	
	132·25	Ash Men.	
	10·0	Boat Men.	
	13·0	Hopper Barge Crew.	
	820·18	Total.	
Wharves, Depôts, &c.	1·	Foreman.	Chiseuhale St. and Sandhills.
	20·	Labourers.	
	2·	Labourers.	Waverlree.
	9·	Labourers.	Various Tips.
	2·	Labourers.	Collingwood Dock.
	31·	Total.	
	873·18	Grand Total.	

INSANITARY PROPERTY.

INSANITARY PROPERTY

The following tables show the progress of the work of the Housing Committee during the last three years so far as it is concerned with the removal of insanitary property under the Housing of the Working Classes Acts 1890-1903:—

Table 1.

Showing the number of houses dealt with during the year 1908, and indicating the action taken:—

			Courts.	Court houses.		Approx. No. of front houses.
Approximate number of insanitary houses existing on 1st January, 1908.			635	3663		1187
Proceedings authorised by the City Council during the year 1908, in regard to houses not previously referred to ...	Courts.	Court houses.			Front houses.	
"A" By Closing Orders ...	16	104			3	
"B" By schemes under the Housing of the Working Classes Act	—	—			—	
"C" Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	16	117			32	
"D" Dealt with by owners for private improvements ...	10	53			11	
Total No. dealt with during 1908	42	274			46	
Leaving for future consideration			593	3389		1141

Of the above 274 Court houses and 46 Front houses dealt with in the year 1908, 150 have been demolished, 121 rendered sanitary, 46 closed, and 3 are occupied.

Table 2.

Statement showing the number of houses dealt with during the year 1907, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1907.	No. of Houses.	Demolished.	Rend'red Sanitary.	In Schemes but still occupied	Closed.
"A" By Closing Orders	23	18	2	—	3
"B" By Schemes	14	—	—	4	10
"C" Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	21	—	21	—	—
"D" Alterations and improvements authorised on circular letter, or on action of Health Committee in asking for more closet accommodation.	55	14	41	—	—
Total	113	32	64	4	13

COURT HOUSES.

How Dealt With.	Total No. of Houses. dealt with.	Demolished.	Rend'red Sanitary.	In Schemes but still occupied	Closed.
"A" By Closing Orders	111	79	14	—	18
"B" By Schemes	54	—	—	14	40
"C" Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	67	17	38	—	12
"D" Alterations and improvements authorised on circular letter, or on action of Health Committee in asking for more closet accommodation.	60	26	34	—	—
Total	292	122	86	14	70
Less Houses included in Schemes, but also dealt with by Closing Orders.	5	—	—	5	—
Total No. of Court Houses dealt with during year 1907.	287	122	86	9	70

Table 3.

Statement showing the number of houses dealt with during the year 1906, and indicating the action taken:—

FRONT HOUSES.

Total No. of front houses dealt with during year 1906.	No. of Houses.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.
"A" Closing Orders.....	19	18	1	—	—
"B" By Schemes.....	102	10	—	84	8
"C" By Circular letter	72	13	59	—	—
Total	193	41	60	84	8

COURT HOUSES.

How Dealt With.	Total No. of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.
"A" Closing Orders	329	260	30	—	39
"B" By Schemes.....	517	129	—	310	78
"C" By Circular letter	170	99	71	—	—
Total.....	1,016	488	101	310	117
Less houses dealt with by Closing Orders, and included in Schemes ...	50	16	—	—	34
Total No. of Court Houses dealt with during the year 1906	966	472	101	310	83

Table 4.

SUMMARY.

Showing total number of houses dealt with during the years 1906, 1907 and 1908:—

FRONT HOUSES.

Year.	Total No. of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.	Pending.
1906	193	41	60	84	8	—
1907	113	32	64	4	13	—
1908	46	16	28	—	2	—
Total	352	89	152	88	23	—

COURT HOUSES.

Year.	Total No. of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.	Occupied.
1906	966	472	101	310	83	—
1907	287	122	86	9	70	—
1908	274	134	93	—	44	3
Total	1,527	728	280	319	197	3

The nett result shows that during the three years 1906, 1907 and 1908, 817 insanitary dwellings have been demolished, 220 have been closed and await demolition or reconstruction, and 432 have been reconstructed and rendered sanitary, making a total for the three years of 1,469 (excluding those in schemes but still occupied), dealt with as follows:—

1906	765
1907	387
1908	317
Total	1,469

RETURN OF HOUSES ERECTED 1896—1908

	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Under £12	7	95	63	4	...	222	85	201	258	78	243	115	...
£12 to £18 ...	...	...	...	821	436	558	590	363	284	394	547	609	418
	944	1,138	1,276	...	...	...	...	...	...	...	...	...	...
£18 to £25 ...	..	...	...	769	602	633	962	1,058	1,067	872	1,039	1,022	1,102
£25 to £35	204	389	539	607	402	441	323	706	449	638	422	444	195
£25 and upwards	44	34	99	157	133	109	101	125	116	204	202	152	135
	1,199	1,656	1,977	2,358	1,573	1,963	2,061	2,453	2,174	2,186	2,453	2,342	1,850

LIVERPOOL SANITARY AMENDMENT ACT, 1864.

Under the provisions of the above Act, the Medical Officer of Health certified that the following premises were unfit for human habitation, and ought to be demolished:—

The court known as No. 6 court in Hampton Street in the City of Liverpool.

The dwelling-houses numbered 3 and 4 in the said No. 6 court.

The court known as No. 8 court in Hampton Street aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 8 court.

The court known as No. 10 court in Hampton Street aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 10 court

The court known as No. 12 court in Hampton Street aforesaid

The dwelling-houses numbered 3 and 4 in the said No. 12 court

The court known as No. 14 court in HAMPTON STREET aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 14 court.

The court known as No. 16 court in HAMPTON STREET aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 16 court.

The court known as No. 2 court in CLIVE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 2 court.

The dwelling-houses numbered 30 and 32 in CLIVE STREET aforesaid, contiguous to No. 2 court in the said street.

The court known as No. 4 court in CLIVE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 4 court.

The dwelling-houses numbered 34, 36 and 38 in CLIVE STREET aforesaid, contiguous to No. 4 court in the said street.

The court known as No. 7 court in GORE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 7 court.

The dwelling-houses numbered 23 and 25 in GORE STREET aforesaid. contiguous to No. 7 court in the said street.

The court known as No. 4 court in STANHOPE STREET, in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 4 court.

The dwelling-houses numbered 84 and 86, contiguous to No. 4 court in STANHOPE STREET aforesaid.

The court known as No. 6 court in STANHOPE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 6 court.

The dwelling-houses numbered 88 and 90, contiguous to No. 6 court in STANHOPE STREET aforesaid.

The court known as No. 14 court in RATHBONE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 7, 8, 13 and 14 in the said No. 14 court.

The court known as No. 4 court in WAKEFIELD STREET in the City of Liverpool.

The dwelling-houses numbered 26 and 27 in the said No. 4 court.

The court known as No. 1 court in TORBOCK STREET in the City of Liverpool.

The dwelling-houses numbered 1 and 2 in the said No. 1 court.

The court known as No. 2 court in QUEEN ANNE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 4, 5 and 10 in the said No. 2 court.

The dwelling-houses numbered 6 and 12 in HARKER PLACE in the City of Liverpool, contiguous to No. 2 court in QUEEN ANNE STREET aforesaid.

The court known as No. 4 court in QUEEN ANNE STREET aforesaid.

The dwelling-houses numbered 2, 3, 6 and 9 in the said No. 4 court.

The court known as No. 18 court in Upper Milk Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 18 court.

The dwelling-houses numbered 44 and 46, contiguous to No. 18 court in Upper Milk Street aforesaid.

The court known as No. 1 court in Norris Street in the City of Liverpool.

The dwelling-house numbered 1 in the said No. 1 court.

The court known as No. 3 court in Norris Street aforesaid.

The dwelling-house numbered 1 in the said No. 3 court.

The court known as No. 1 court in Sumner Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 1 court.

The court known as No. 5 court in Back Portland Street in the City of Liverpool.

The dwelling-houses numbered 1, 3 and 4 in the said No. 5 court.

The court known as No. 1 court in Summer Gardens in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 1 court.

The dwelling-houses numbered 23 and 25, contiguous to No. 1 court in Summer Gardens aforesaid.

The court known as Sparling Place, St. Domingo Road, in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said Sparling Place.

SUPERVISION OF CORPORATION DWELLINGS.

During the year the number of tenements where sub-letting or overcrowding was suspected by the Manager of the Corporation tenements, and referred to the Medical Officer's Department for investigation, was 118.

Night visits were paid to these tenements, with the result that 14 tenements were found sub-let, of which 9 were also overcrowded. There were also 30 tenements found overcrowded, but not sub-let, *i.e.*, occupied by one family and their relations (or friends in some instances), and 14 cases of indecent occupation of sleeping rooms, viz. :—In 8 instances one man and two women were found in the same bedroom; in 1 instance one man and four women; in 2 instances two men and one woman; and in 3 instances two men and two women. The total number of tenements wherein the foregoing irregularities were found was 46. The remaining 72 were found correct.

The results of the night visits are communicated to the Manager of the Dwellings, who, where necessary, takes measures to abate the infringements.

APPLICATIONS FOR CORPORATION TENEMENTS. 1908.

Applications for houses in these buildings have been numerous, there being now about 2,170 tenements completed, all under the control of the Corporation.

These tenements are reserved for persons who have been dispossessed from their houses by any action of the Corporation, and only sober and well-conducted applicants are accepted.

Owing to a great number of the applicants stating that they were living in overcrowded houses, or insanitary cellars, the Housing Committee referred the applications to the Medical Officer of Health for investigation. These applications were dealt with by the Lodging House Inspectors, and in the event of there being any evidence of overcrowding, or illegal occupation of cellars, the application was marked accordingly, and returned to the Manager.

As the statements of many of the applicants were found to be incorrect, it was deemed necessary to make a closer investigation, and for this purpose night visits were paid in many cases.

The number of applications received and dealt with during the year was 519. In dealing with these applications, it was found that in 344 instances the circumstances of the applicant did not comply with the Committee's conditions. Of this number 93 applicants gave false addresses, and in 251 cases there was no evidence that the alleged overcrowding existed. Of the remaining 175 cases investigated, 47 were found to be cases of one family overcrowding a house or cellar, occupying an insanitary house, or illegal occupation of a cellar. These were dealt with under the Public Health Act and the Housing of the Working Classes Act. One hundred and twenty-eight were claims on account of alleged overcrowding occurring in sub-let houses, of which, in 61 cases, it was found that there was no overcrowding, or the alleged overcrowding was easily remedied by some of the occupants leaving the premises, or by re-arranging the sleeping apartments.

There were 67 cases of overcrowding found in sub-let houses, and in 61 of these instances informations were laid against the chief tenants, and convictions followed.

The total number of cases of overcrowding in ordinary dwellings, cellars, and sub-let houses, and illegal occupation of cellars, was 114, arising out of 519 applications investigated, and in 61 instances the applicants were allowed to rent a Corporation dwelling.

In a considerable number of cases the overcrowding was of very recent date and the offence had evidently been committed with the intention of qualifying for a Corporation house. For instance, in 18 cases the length of tenancy ranged from three days to three weeks.

In some cases the applicants were found to be drunk at the time of the visit of inquiry. Seven cases of drunkenness came under the notice of the Inspectors.

The total number of day visits paid during the year was 625, and 105 night visits were made, the total for the year being 730, from which it will be seen that a considerable amount of the Inspectors' time was taken up by investigating these applications.

The Corporation Surveyor has kindly supplied the following table:—

LIVERPOOL SANITARY AMENDMENT ACT, 1864.

INSANITARY PROPERTY.

INSANITARY PROPERTY PURCHASED, 1908.

Number of houses purchased by Housing Committee included in Reports referred by Council to Committee	22

INSANITARY PROPERTY DEMOLISHED, 1908.

Number of houses in respect of which Compensation for demolition was paid by Housing Committee included in Reports referred by Council to Committee	110

[NOTE.—The demolition of a great number of these houses has been accompanied by structural alterations to adjoining property, resulting in 12 "through" houses and 87 single houses being left standing. The term "through" houses signifies that two insanitary houses have been converted into one house and made sanitary by the introduction of through ventilation, with separate yard space and w.c. accommodation, whilst the single houses have also been somewhat similarly improved.]

HOUSING OF THE WORKING CLASSES ACT, 1890.

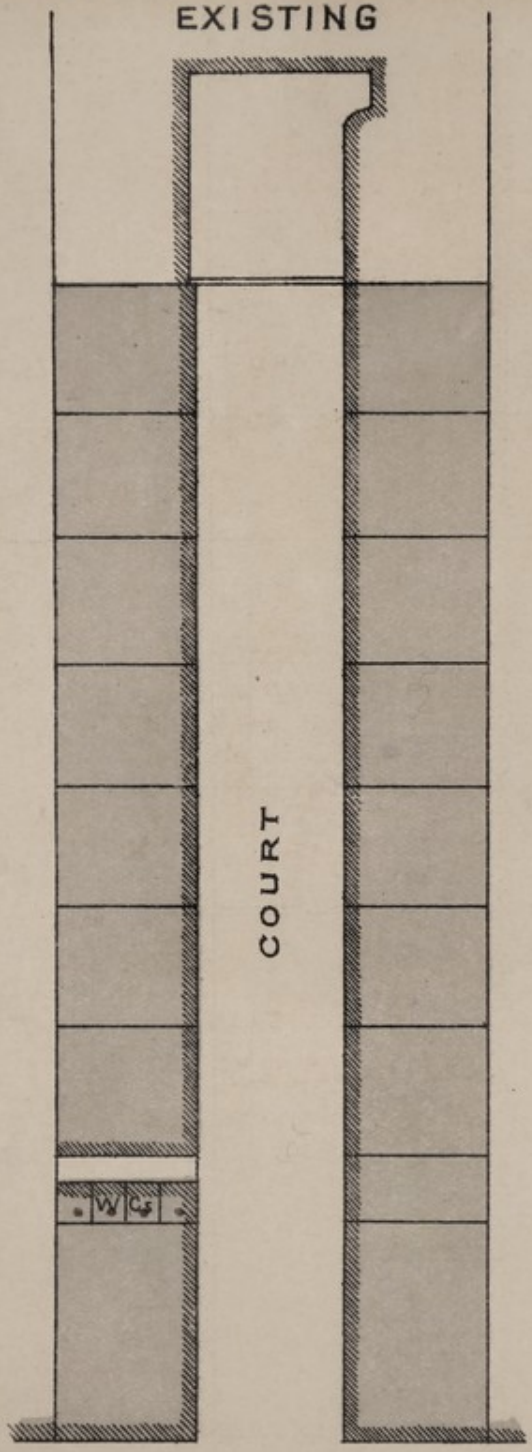
Number of houses purchased under various Improvement Schemes	99
Number of houses demolished under various Improvement Schemes	149

INSANITARY PROPERTY

NUMBER OF HOUSES reported under each PRESENTMENT from JANUARY, 1865, to JUNE, 1904 (both inclusive).

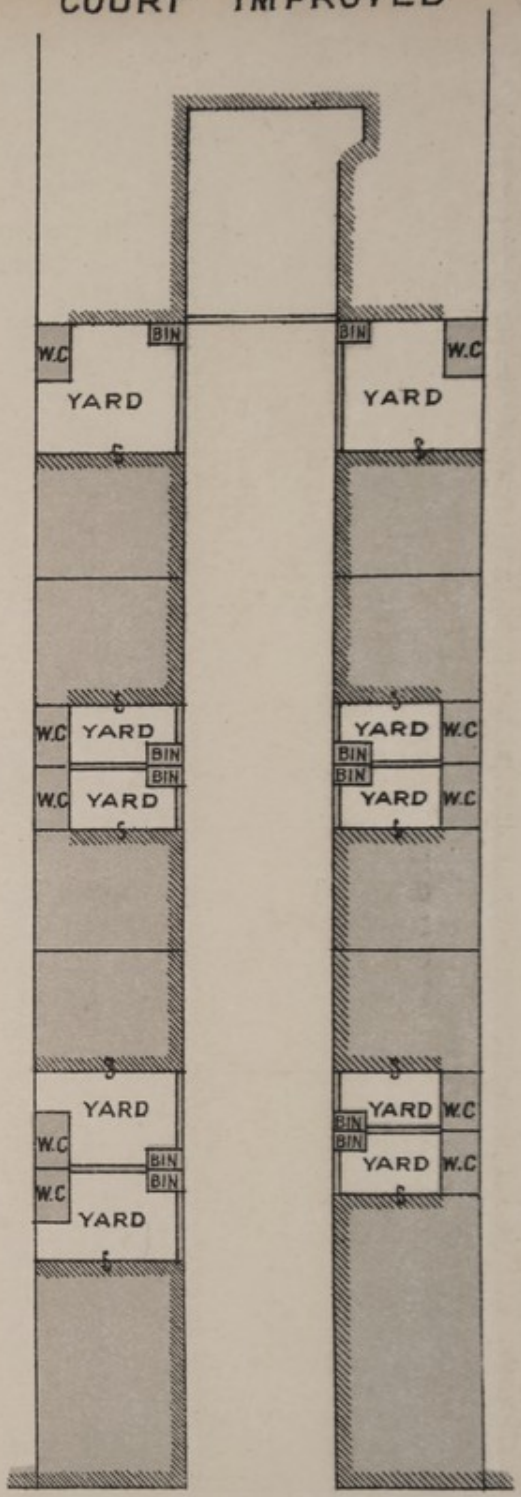
DATE.	PRESENTMENT.	HOUSES REPORTED.	YEAR.	DEMOLISHED.
January, 1865...	1st Presentment.	101		101
July, 1865...	2nd ,,	95		95
January, 1866...	3rd ,,	190		190
,, 1869...	4th ,,	61		61
October, 1871...	5th ,,	76		76
August, 1880...	6th ,,	43		43
April, 1884...	7th ,,	373		373
December, 1884...	8th ,,	629		629
March, 1889...	9th ,,	86	1889	98
April, 1890...	10th ,,	368	1890	208
,, 1891...	11th ,,	501	1891	221
August, 1894...	12th ,,	299	1892	422
March, 1896...	13th ,,	240	1893	323
January, 1897...	14th ,,	799	1894	69
October, 1898...	15th ,,	304	1895	307
December, 1899...	16th ,,	666	1896	137
July, 1901...	17th ,,	346	1897	605
—	—	—	1898	471
June, 1904...	18th ,,	363	1899	511
—	—	—	1900	586
—	—	—	1901	190
—	—	—	1902	345
—	—	—	1903	157
—	—	—	1904	111
—	—	—	1905	605
—	—	—	1906	545
—	—	—	1907	190
		—	1908	259
No. of houses reported upon by the Medical Officer of Health, and purchased privately under the power of Act of 1882—May 1885 to April, 1888		5,540 943		7,928 943
No. of houses included in Hornby Street and Upper Mann Street Areas		710		
No. of houses included in Burlington Street, Brassey Street, Beau Street, Bevington Street, Holly Street, Saltney Street, Frank Street and Grafton Street Areas..		1,011		
No. of houses reported on by Medical Officer of Health to Council, 1889-1904		930		
1905		166		
1906		297		
1907		162		
1908		122		
Total		9,881		8,971

COURT AS FORMERLY EXISTING



RATHBONE ST.

COURT IMPROVED



RATHBONE ST.

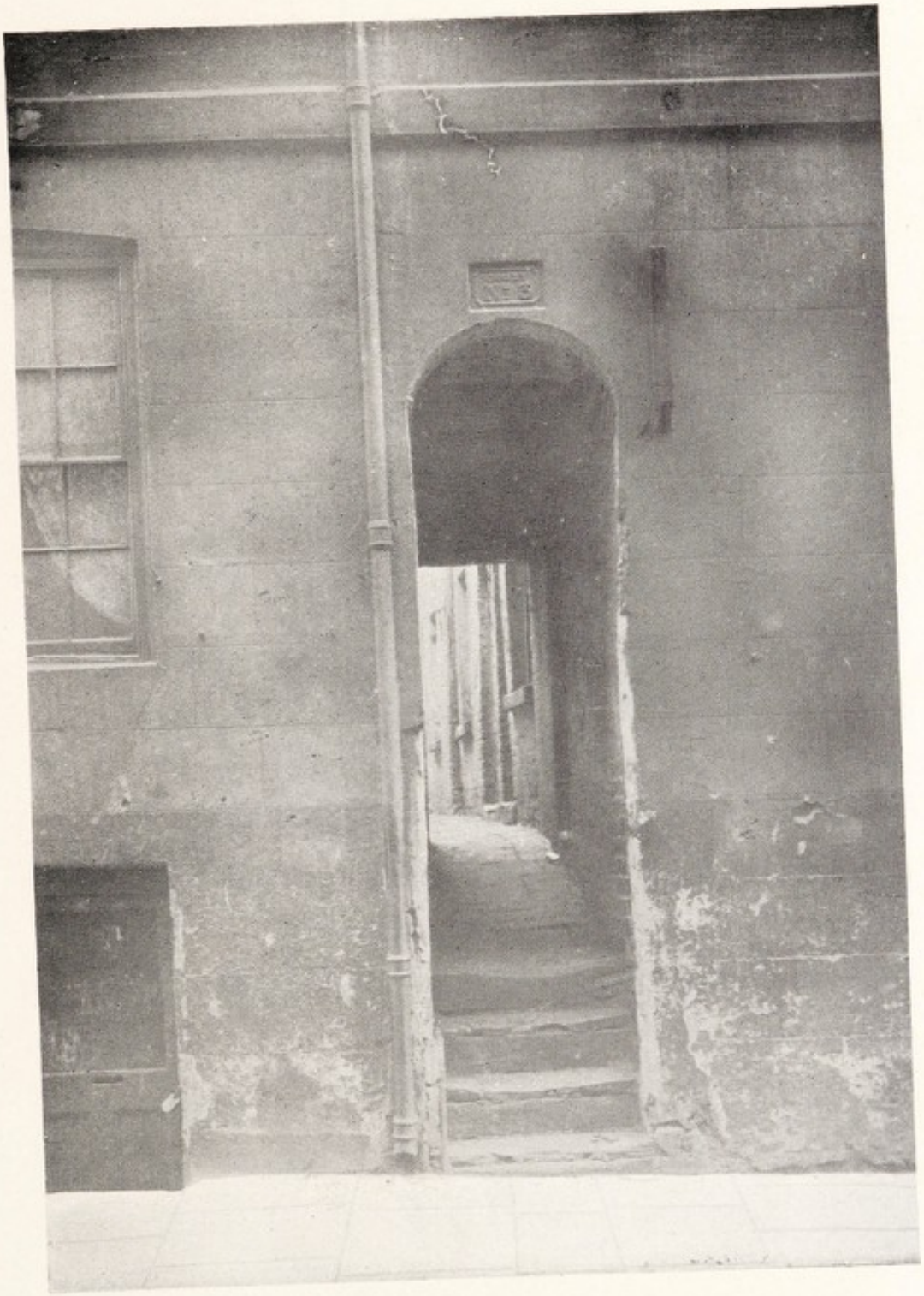
SCALE OF FEET.

10 5 0 10 20 30 40 50 60 70 80 90 100

014783-1500-6/9 EST.

EXISTING COURT AS FORMERLY

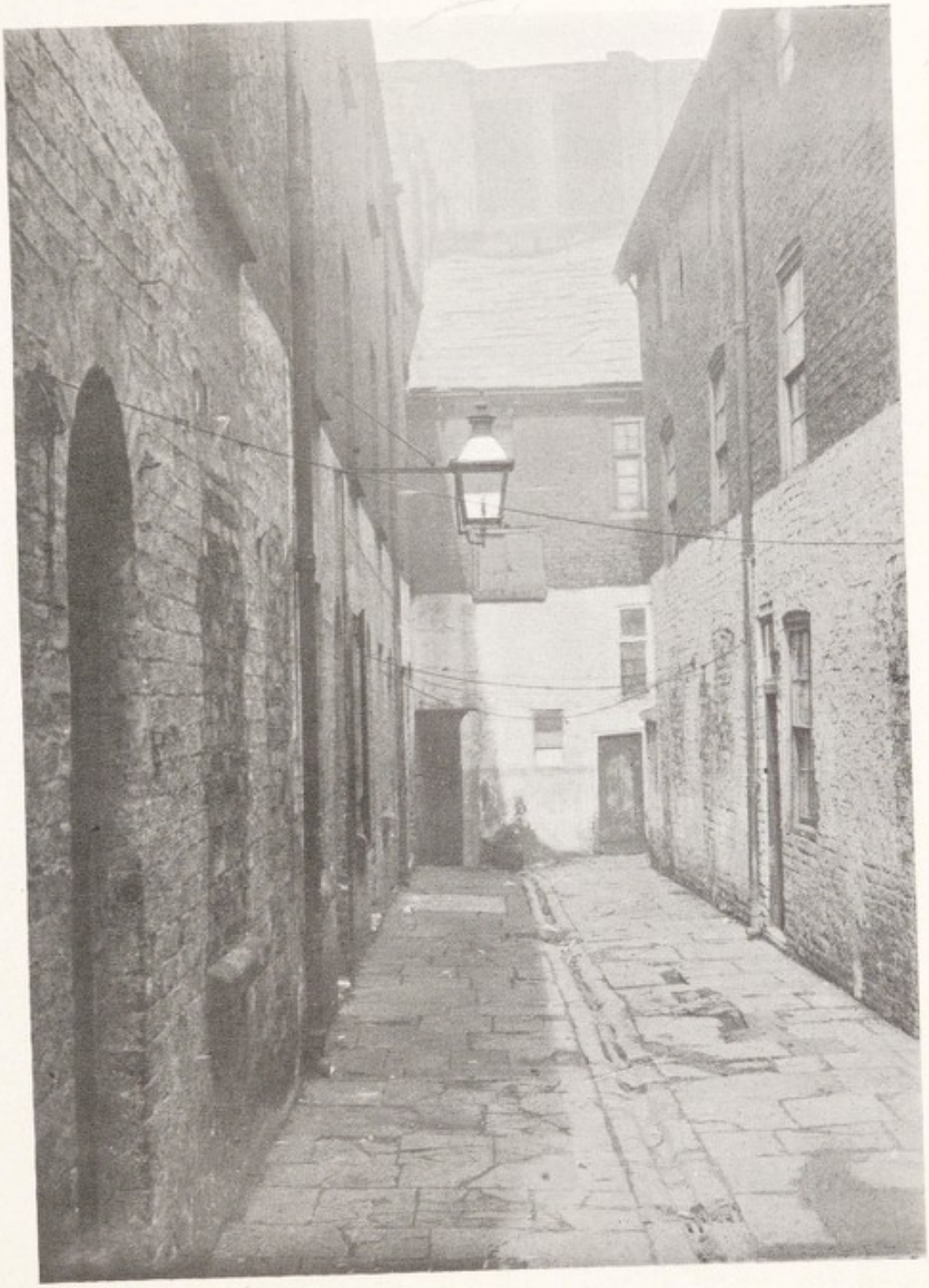
RATHBONE ST.



No. 3 COURT, Q..... STREET.

Showing long narrow tunnel entrance, in which the only entrance to the first two houses in the court is situated.

ROYAL COLLEGE OF SURGEONS IN IRELAND
LIBRARY
26 JUL 03



No. 3 COURT, Q..... STREET.

Long narrow court. All houses back-to-back and side-by-side with other insanitary houses. Approached by tunnel entrance, in which the only entrance to the first two houses in the court is situated. (This court is being dealt with under the Housing of the Working Classes Act.)

ROYAL SOCIETY OF ENGLAND
20 JUL 99
LIBRARY



INSANITARY PROPERTY.

View of part of Eldon Street, showing entrances to Nos. 5, 7, and 9 courts, each court containing a number of insanitary houses. (Included in Bevington Street Scheme.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND
28 JUL 09
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STANHOPE COTTAGES.

Block of Corporation Tenement Dwellings.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
LIBRARY



REAR OF THE CORPORATION TENEMENT DWELLINGS, STANHOPE STREET.

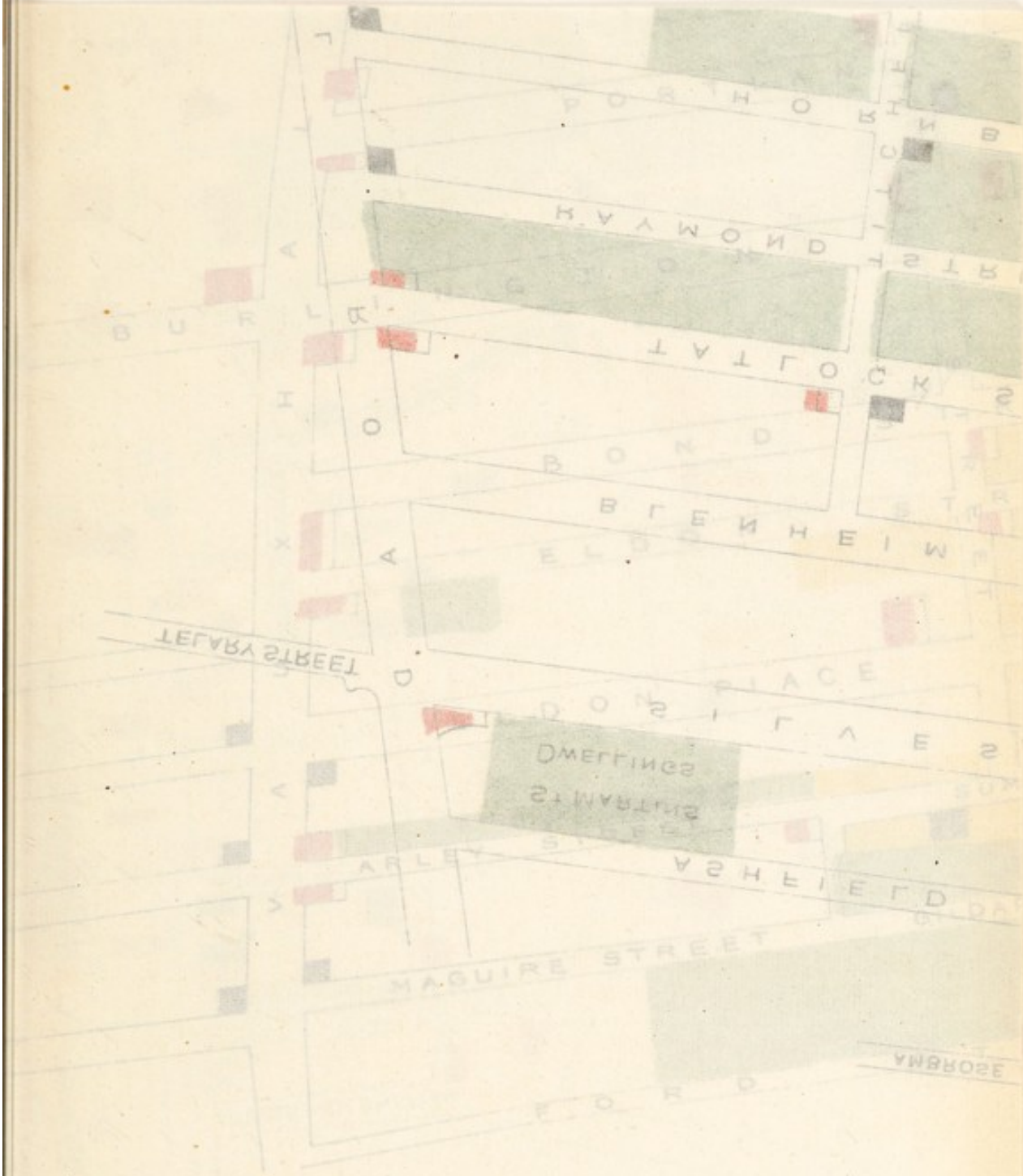
ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 JUL 09
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Maps showing a group of Insanitary Areas dealt with by the Corporation.

No. 1.

BLUE indicates Dwellings erected by the Corporation on Sites of Insanitary Property; **YELLOW** indicates Insanitary Areas now Scheduled for demolition; **RED** shows existing Licensed Premises; **BLACK**, those closed within recent years.




RAYMOND
TATLOCK
BOND
BRENHEIM
TELARA STREET
ASHFIELD
MAGUIRE STREET
AMBROSE

BLUE indicates Dwellings erected by the Corporation on Sites of Insanitary Property; RED shows existing Licensed Premises; BLACK, those closed within recent years.

N.º 2.



M 14641 - 1500 5/8 Est 5669

BLUE Indicates Dwellings
on Sites of Insanitary Property
Licensed Premises; BLACK, those

No 2.

HOUSING OF THE WORKING CLASSES ACT, 1890.

Return made to the Local Government Board, in pursuance of Sec. 44 of the Housing of the Working Classes Act, 1890, in respect of the year ended 31st March, 1909.

Buildings Unfit for Human Habitation.

Number of dwellings in respect of which representations were made to the Local Authority during the year:—	
(*a*) By the Medical Officer of Health	144
Number of dwelling houses in respect of which closing orders were made during the year	82
Number of dwelling houses ordered to be demolished by the Local Authority during the year (Sec. 33)	19

CITY HOSPITALS.

HOSPITAL ACCOMMODATION.

The question of the permanent closure of Parkhill Hospital engaged the attention of the Hospitals Committee during the month of February, 1907, and although it was obviously not safe at that time to close the Institution entirely, a considerable number of the beds were put out of commission, viz., 200, and the staff was correspondingly reduced. In September the question was again brought forward, but it was felt that whatever action might be desirable in the near future, the close of the year, when an increase of infectious sickness usually arises, was not an opportune time to come to any decision.

The Hospitals Committee, therefore, deferred in the meantime any further action in this direction, but again had the question before them in March of this year, when it was decided to put out of commission another 100 beds, retaining pavilions Nos. 9 and 12, containing 51 beds, in a state of preparedness so as to be ready for immediate use, if necessary. In May, owing to the need of accommodation for cases of measles and the increased prevalence of scarlet fever, it became necessary to open these two pavilions and to arrange for other pavilions to be re-opened in the following month. The number of beds in use at this hospital at the end of the year was 235.

At the present time the number of beds available in the various hospitals is as follows:—

City Hospital North	... ...	162 beds.
,, South	... ...	100 ,,
,, East	... ...	152 ,,
,, Parkhill	... ...	235 ,
,, Fazakerley	... ...	350 ,,
,, Fazakerley Annexe	...	160
		1,159

The approximate apportionment of beds is as follows, but the arrangement is modified as circumstances necessitate:—

Smallpox	160	beds.
Typhus Fever	20	,,
Typhoid Fever	100	,,
Scarlet Fever	639	,,
Diphtheria	80	,,
Measles	60	,,
Isolation	100	,,
		,,
	1,159	,,

The value of the hospitals, and the immense amount of useful work performed, is shown by the fact that no less than 6,213 pateints were treated within their walls, the great majority of these being cases of scarlet fever.

The tables which follow will show in detail a great deal of information relating to all of these cases, but it is of special interest to point out the much greater demands made by the public upon these institutions at the present time than formerly. The advantages of the hospitals are now so fully recognised by the public that the removal to hospital of their sick dependents is insisted upon, and claimed as a right. A few years ago, in cases similarly circumstanced, removal would never have been sought, and would even have been resisted.

The claims resulting from this enlightenment of the public cannot be met without expense, but it would be difficult to point to any example of necessary municipal expenditure in which the direct benefits, alike to the recipients and to the community, are so strongly marked.

The average duration of stay in hospital of patients whose treatment was completed during the year 1908 was as follows:—

Scarlet Fever Patients from	8 to 9 weeks.
Typhoid...	6 ,, 7 ,,
Typhus	4 ,, 5 ,,
Diphtheria	5 ,, 6 ,,

In many instances detention in hospital is very prolonged owing to the severity of the original illness, and the consequent slow convalescence of the patient.

Arrangements have been made between the Hospitals Committee and various Local Authorities to receive cases of infectious disease from districts beyond the City boundary, namely, Sefton Rural District,

Waterloo and Seaforth, Great Crosby, Little Crosby, Allerton, Childwall, and the Children's Convalescent Home, West Kirby.

Special cases have been received from several other districts during the course of the year, but no permanent agreement was arranged, and application was made in connection with each particular patient.

Arrangements have also been made to deal with any case of cholera, yellow fever, or plague which may arise in any of the neighbouring urban or rural districts. A suitable charge is made in each case.

In addition to the foregoing, the disinfection of bedding and clothing is also undertaken for the Sefton Rural District Council.

Steps have been taken by the Committee to render the training of probationer nurses more efficient. Probationers are received at some, but not all, of the city hospitals, and under the arrangements now arrived at, the system, which will include lectures, as well as practical and clinical instruction, will render the course of training a very full and complete one.

On the recommendation of the Health Committee, a scheme, approved by the Port Sanitary and Hospitals Committee, was adopted by the Council in September, 1907, by which 24 beds at the City Hospital, Fazakerley, were to be devoted to the treatment and experimental study of cases of Tuberculosis. This number will shortly be extended to 50. The structural completeness of this Hospital, the climatic and soil conditions obtaining, together with the exceptional facilities for laboratory work, appeared to render the Institution at Fazakerley particularly suited to this undertaking. Evidence is not yet available to show how far the disease has been permanently arrested in those patients who have been discharged from Hospital, but a system is adopted by which these patients shall present themselves at regular intervals for examination. Visits by Inspectors of the Health Department to the houses of patients result in a continued observance of those hygienic methods which the patients have acquired in Hospital, so far as their circumstances permit.
(See page 53.)

Further investigations in the bacteriology of epidemic diarrhœa have been made by the Medical Staff of the Fazakerley Hospital, working in conjunction with the hygienic laboratories of the University of Liverpool. The work done in this direction has been fully reported upon in the medical journals, and will prove an interesting contribution to our knowledge of the nature and method of spread of this disease. As in the case of typhoid fever, recrudescences of epidemic diarrhœa are liable to occur for some weeks subsequent to the primary attack. It has been the practice, in consequence, for Female Sanitary Inspectors to visit the homes of discharged children at sufficiently frequent intervals to enable them to give continued advice to the parents until the danger of relapse has disappeared. In practice this has proved a valuable adjunct to hospital treatment. It has been observed that of some 112 cases of infantile diarrhœa so far admitted to the Fazakerley Hospital, there have been none in which sterilised milk formed the only diet. Alleged cases of this kind have appeared, but strict enquiry has always elicited other factors which are known to be a source of probable infection in this disease.

The following is an analysis of the varieties of feeding in these 112 cases :—

Breast, supplemented with artificial foods	29
Bottle only, cow's milk	13
Artificial foods only...	41

(In six of these cases the food given was of a nature suited to the age and condition of the child; in the remaining cases the food was indiscriminate and unsuitable.)

Sterilised milk (combined with other foods, or improperly administered)	11
Not stated	18

In 11 further cases a condition of malnutrition and consequent wasting was observed in infants who were entirely breast-fed. These children were found, however, to be suffering from the ill-effects of a deficient supply of mother's milk (in quality or quantity), there being no evidence of epidemic diarrhœa.

INFECTIOUS DISEASE.

The following table shows the number and nature of cases of Infectious Disease coming under the notice of the Medical Officer of Health during the year 1908, including those reported under the Notification Act.

Year—1908.	FEVER.				Smallpox.	Scarlet Fever.	Measles.	Diphtheria.	Membranous Croup.	Puerperal Fever.	Erysipelas.	Anthrax.	Plague.	Total.
	Typhus.	Typhoid.	Simple.	Relapsing.										
January	6	33	...	...	...	202	705	68	4	5	95	...	...	1,118
February	3	24	...	...	...	209	752	82	2	...	75	...	...	1,147
March	2	36	...	...	...	273	944	76	2	5	52	1	...	1,391
April	1	37	...	...	2	341	567	72	2	4	63	...	...	1,089
May	3	47	1	...	...	405	616	82	2	4	73	1	...	1,234
June	1	28	...	...	1	427	571	87	1	3	50	...	...	1,169
July	...	40	1	...	...	400	101	68	...	1	56	...	...	667
August	1	26	...	...	4	377	51	56	1	2	87	...	...	605
September	1	37	1	...	...	478	65	70	1	6	64	...	...	723
October	2	46	...	...	...	413	81	111	...	7	89	...	1	750
November	1	46	...	...	...	385	112	111	2	6	82	...	2	747
December	...	47	...	...	...	385	88	115	2	9	68	1	...	715
Total	21	447	3	...	7	4,295	4,653	998	19	52	854	3	3	11,355
Removed to hospital	20	360	1	...	7	3,528	227	715	6	36	315	3	3	5,221

The number of patients removed to hospital includes those taken to general hospitals as well as those taken to the City Hospitals. (See page 176.)

THE INFECTIOUS DISEASE (NOTIFICATION) ACT

The number of notifications received by the Medical Officer under the above Act, during the past five years, were as follows:—

	1904.	1905.	1906.	1907.	1908.
January ...	576	632	803	527	407
February	624	592	583	403	395
March ...	573	712	634	381	449
April ...	556	633	410	412	535
May ...	609	827	365	454	650
June ...	679	862	409	437	631
July ...	491	643	335	352	624
August ...	487	606	368	391	541
September	629	810	475	476	684
October ...	839	1,068	674	476	668
November	846	1,101	655	593	653
December	704	938	550	472	651
	7,613	9,424	6,261	5,374	6,888

The diseases were specified as follows:—

	1904.	1905.	1906.	1907.	1908.
Smallpox	27	11	110	25	4
*Chickenpox	1,792	2,254	636	—	—
Scarlet Fever	2,995	4,299	2,765	2,727	4,242
Typhoid Fever	496	378	510	546	490
Typhus Fever	82	84	46	91	34
Continued Fever	36	19	29	16	18
Remittent Fever	1	—	2	—	1
Relapsing Fever	1	2	1	2	—
Fever	2	2	1	1	1
Puerperal Fever	67	79	116	69	63
Diphtheria	1,015	1,021	915	970	1,104
Membranous Croup	67	48	36	37	32
Erysipelas	1,030	1,225	1,087	847	896
‡Anthrax	2	2	7	15	3
†Cerebro-Spinal Fever	—	—	—	28	—
	7,613	9,424	6,261	5,374	6,888

* Not now notifiable.
† Scheduled as a notifiable disease for 6 months, from March, 1907.
‡ Scheduled as a notifiable disease for 3 years, from June, 1907.

NUMBER OF CASES REPORTED AND NUMBER REMOVED TO HOSPITALS, 1889-1908.

	Smallpox.		Scarlet Fever.		Typhoid.		Typhus.		Measles.	
	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.
1889 ..	9	8	1,832	533	670	302	158	124	3,175	104
1890 ...	2	2	3,520	938	506	296	103	87	4,013	152
1891 ..	21	21	1,176	448	588	350	175	156	2,262	160
1892 .	177	177	1,554	603	699	345	73	70	3,376	150
1893 ...	75	73	3,538	1,380	1,396	728	183	168	2,316	94
1894 ...	229	226	3,963	1,415	1,350	745	325	312	2,494	122
1895 ..	130	127	2,710	1,039	1,306	662	162	158	3,462	93
1896 ...	8	8	3,584	1,589	1,063	539	305	298	2,930	138
1897 ..	6	6	3,001	1,641	991	559	158	156	4,389	94
1898 ..	17	16	2,424	1,467	863	585	92	84	2,458	105
1899 ...	10	10	2,416	1,537	988	668	70	64	5,107	140
1900 ...	156	154	1,968	1,198	731	450	42	41	2,372	108
1901 ...	37	37	3,310	1,814	864	567	55	54	6,766	185
1902 ...	560	559	5,914	2,994	1,026	670	155	155	7,141	177
1903 ...	1,720	1,719	4,053	2,145	681	462	272	266	2,728	114
1904 ...	27	27	2,988	2,214	434	296	97	97	9,453	428
1905 ...	15	14	4,308	3,147	325	235	98	95	3,938	322
1906 ...	19	19	2,959	2,191	491	360	52	49	6,819	389
1907 ...	19	19	2,741	2,144	482	373	116	116	5,640	342
1908 ...	7	7	4,295	3,528	447	360	21	20	4,653	227

The following tables, prepared by the Medical Staff of each Hospital, show the number of patients, the nature of the illness, and the results, at each of the six hospitals during the year 1908.

CITY HOSPITAL NORTH, NETHERFIELD ROAD.

Visiting Physician, Dr. R. I. RICHARDSON.

Resident Physician, Dr. B. T. J. GLOVER.

Diseases.	Remaining Dec. 31st, 1907.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.	64	628	—	692	263	6	296	77	8	50	7·9
Enteric Fever.	29	139	—	168	—	—	126	22	2	20	14·4
Typhus Fever.	—	18	—	18	—	—	11	—	2	7	38·8
Diphtheria ...	—	3	—	3	—	—	1	—	1	2	66·6
Measles.....	—	6	—	6	—	3	2	1	—	—	—
Other Diseases	—	68	—	68	—	—	48	—	—	20	29·4
Isolation and Observation Cases. ...	10	14	—	24	—	—	21	3	—	—	—
Totals ...	103	876	—	979	263	9	505	103	13	99	11·3

SCARLET FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	220	268	117	15	7	1	—	628
No. of Deaths.....	29	12	8	1	—	—	—	50
Percentage of Deaths	13·2	4·7	6·8	6·6	—	—	—	7·9

ENTERIC FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	5	32	41	32	15	10	1	136
No. of Deaths.....	—	3	3	6	2	5	1	20
Percentage of Deaths	—	9·4	7·3	18·8	13·3	50·0	100·0	14·7

TYPHUS FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	—	2	7	4	1	4	—	18
No. of Deaths.....	—	—	1	3	1	2	—	7
Percentage of Deaths	—	—	14·3	75·0	100·0	50·0	—	38·9

OTHER DISEASES.

Disease.	Admitted.		Died.
Lobar Pneumonia	17	.....	3
Broncho-Pneumonia	4	.....	3
Bronchitis	2	.....	—
Empyema	3	.....	1
Enteritis	8	.....	—
Sub-acute Gastritis	5	.....	—
Carcinoma Ventriculi	1	.....	1
Meningitis	4	.....	4
Follicular Tonsillitis	4	.....	—
Pulmonary Tuberculosis	1	.....	1
Malaria	1	.....	1
Influenza	1	.....	—
Marasmus	1	.....	—
Chronic Pancreatitis	1	.....	1
Scabies	1	.....	—
Catarrh	3	.....	—
Urticaria	1	.....	—
Alcoholism	1	.....	—
Erysipelas	2	.....	2
Cerebral Thrombosis	1	.....	1
Delirium Tremens	1	.....	1
Renal Calculus	1	.....	—
Prolapsus Ani	1	.....	—
Miliary Tuberculosis	1	.....	1
Erythema	2	.....	—
Enteric Contacts	3	.....	—
Typhus Contacts	11	.....	—
	82		20

Death rate = 24·4 %.

CITY HOSPITAL SOUTH, GRAFTON STREET.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physician, Dr. W. SCARISBRICK.

Diseases.	Remaining Dec. 31st, 1907.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	50	609	—	659	397	—	186	50	3	26	4·2
Enteric Fever.....	29	89	—	118	—	—	95	14	—	9	10·1
Typhus Fever	—	2	—	2	—	—	1	—	—	1	50·0
Diphtheria	—	3	—	3	1	—	2	—	—	—	—
Measles	—	3	—	3	—	—	3	—	—	—	—
Other Diseases.....	—	53*	—	53	—	—	41	3	2	9	16·9
Isolation & Observation Cases	—	4	—	4	—	—	4	—	—	—	—
Totals	79	763	—	842	398	—	332	67	5	45	5·8

* Practically all of Class "Other Diseases" were in Isolation. Six were removed to General Hospitals.

SCARLET FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	198	241	150	12	7	1	—	609
No. of Deaths	13	6	6	1	—	—	—	26
Percentage of Deaths	6·5	2·4	4·0	8·3	—	—	—	4·2

ENTERIC FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	5	14	22	26	17	4	1	89
No. of Deaths.....	1	—	4	1	1	2	—	9
Percentage of Deaths..	20·0	—	18·1	3·8	5·8	50·0	—	10·1

TYPHUS FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	—	1	1	—	—	—	—	2
No. of Deaths.....	—	1	—	—	—	—	—	1
Percentage of Deaths	—	100·0	—	—	—	—	—	50·0

DIPHTHERIA.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	—	—	1	2	—	—	—	3
No. of Deaths	—	—	—	—	—	—	—	—

OTHER DISEASES.

Disease.	Admitted.	Died.
Malaise	21	—
Lobar Pneumonia	7	2
Broncho-Pneumonia	4	—
Phthisis	3	—
Cerebro-Spinal Meningitis	2	2
Febricula	2	—
Pleurisy	2	—
Pleuro-Pneumonia	1	—
Ptomaine-poisoning	1	—
Bronchitis	1	—
General Tuberculosis	1	1
Liver Abscess	1	—
Abdominal Tumour	1	—
Septic Endocarditis	1	1
Dysentery	1	—
Tubercular Meningitis	1	1
Cerebral Hæmorrhage	1	1
Scabies	1	—
Nephritis	1	1
	53	9

Mortality=16·9 %.

CITY HOSPITAL, PARK HILL.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physicians { Dr. C. O. STALLYBRASS, Dr. G. C. BARNES.

Diseases.	Remaining Dec. 31st, 1907.	Admitted during the year.	Transferred from other City Hospitals	Total under Treatment during the year.	Transferred to Convalescent Hospital	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever	93	611	177	881	54	611	199	4	17*	2·78
Enteric Fever	—	4	—	4	2	1	1	—	—	—
Diphtheria.....	14	54	—	68	3	46	12	2	8*	14·8
Measles	17	62	4	83	1	61	11	2	10*	16·1
Other Diseases	3	27	—	30	—	20	1	2	8*	29·5
Isolation and Observation Cases.....	2	11	2	15	—	6	9	—	—	—
Totals	129	769	183	1081	60	745	233	10	43*	5·5

* This column includes five deaths in those patients remaining from 1907—two from Measles, one from Scarlet Fever, one from Diphtheria, and one from Phthisis.

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total.
No. of cases.....	243	313	200	22	9	1	—	788
No. of deaths	10	4	2	—	—	—	—	16
Percentage of deaths.....	4·1	1·2	1·0	—	—	—	—	2·0

MEASLES.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	48	17	—	1	—	—	—	66
No of Deaths	7	1	—	—	—	—	—	8
Percentage of Deaths	14·5	5·8	—	—	—	—	—	12·1

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total.
No. of cases	23	17	9	4	1	—	—	54
No. of deaths	6	1	—	—	—	—	—	7
Percentage of deaths.....	25·8	5·8	—	—	—	—	—	12·9

OTHER DISEASES.

Disease	Admitted		Died
Acute Nephritis and Valvular Disease of Heart	1	.....	1 (within 24 hours).
Bronchitis	1	.....	—
Enteric Fever	4	.....	—
Epidemic Diarrhœa	1	.....	1
Erysipelas	1	.....	1
Lobar Pneumonia	1	.....	1
Malignant Endocarditis	2	.....	1 (within 24 hours).
Malaria	1	.....	—
Osteomyelitis and Pericarditis	1	.....	1
Otitis Media	1	.....	—
Phthisis and Acute Nephritis	1	.....	—
Quinsy	1	.....	—
Septicæmia, secondary to Infected Wound	1	.....	1
Simple Enteritis.....	1	.....	—
Tonsillitis	7	.....	—
Varicella	4	.....	—
Vincent's Angina	1	.....	—
Isolation	7	.....	—
For Observation	1	.....	—
	38		7

Mortality —18·4%.

CITY HOSPITAL EAST, MILL LANE, OLD SWAN.

Visiting Physician, DR. H. A. CLARKE.

Resident Physician, DR. A. E. HODGSON.

DISEASES.	Remaining Dec. 31st, 1907.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred, to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever...	56	511	1	568	97	—	368	73	8	30	5·8
Enteric Fever..	—	2	—	2	—	—	1	—	—	1	50·0
Diphtheria	21	434	2	457	—	—	366	38	24	53	12·2
Measles	1	17	—	18	—	—	14	—	2	4	23·5
Other Diseases.	2	97	—	99	—	—	72	11	6	16	16·4
Isolation and Observation Cases.....	—	18	—	18	—	—	18	—	—	—	—
Totals.....	80	1079	3	1162	97	—	839	122	40	104*	9·6

* Of the total deaths, 40, or 38·4 % took place within 48 hours of admission to Hospital.

SCARLET FEVER.

	AGE PERIODS							
	Under 5	5 –10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	154	188	136	31	1	—	1	511
No. of Deaths	22	6	2	—	—	—	—	30*
Percentage of deaths	14·2	3·1	1·4	—	—	—	—	5·8

* Eleven of these were cases of "Septic Scarlet Fever," sent into Hospital as "Diphtheria."

ENTERIC FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total.
No. of Cases.....	—	—	1	—	1	—	—	2
No. of Deaths.....	—	—	—	—	1	—	—	1
Percentage of Deaths..	—	—	—	—	100	—	—	50.

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	150	147	96	33	6	1	1	434
No. of Deaths.....	37	13	3	—	—	—	—	53*
Percentage of Deaths	24·6	8·8	3·12	—	—	—	—	12·2

*Twenty-four of these deaths took place within periods varying from ten minutes to 40 hours after admission to Hospital.

OTHER DISEASES.

Disease.	Admitted.		Died.
*Tonsillitis	56	.....	—
Septicæmia	9	.....	6
Laryngitis	4	.....	1
Chicken Pox	2	.....	—
Whooping Cough	2	.....	—
Cystitis	1	.....	—
Acute Glossitis	1	.....	—
Cellulitis.....	1	.....	—
Influenza	2	.....	—
Septic Pneumonia.....	1	.....	1
Broncho Pneumonia	1	.....	1
Lobar Pneumonia	1	.....	1
Syphilis	6	.....	—
Erysipelas	1	.....	—
Tuberculosis of Larynx	1	.....	—
Valular Disease of Heart	1	.....	1
Tabes Mesenterica	1	.....	1
Zymotic Enteritis	4	.....	3
Marasmus	1	.....	—
Intussusception: Peritonitis.....	1	.....	1
	97		16

Mortality = 16·4 %.

* This section comprises the cases which, sent in to Hospital as "Diphtheria," proved "Negative" on Bacteriological Examination.

CITY HOSPITAL, FAZAKERLEY.

Medical Superintendent, DR. C. RUNDLE.

Resident Physicians { DR. A. E. WILLIAMS. DR. H. R. MACINTYRE.

Diseases.	Remaining Dec. 31st., 1907.	Admitted during the year.	Transferred from other City Hospitals	Total under Treatment during the year.	Transferred to other City Hospitals	Discharged Cured	Remaining at end of year	Died within 48 hours of Admission	Total Deaths	Total Mortality per cent. of Admissions.
Scarlet Fever	129	1001	15	1145	92	827	187	12	40	3·99
Enteric Fever.....	3	5	—	8	—	3	1	1	4	80
Erysipelas	2	84	—	86	—	70	11	—	5	5·95
Diphtheria	37	177	2	216	2	149	51	3	14	7·9
Puerperal Fever	2	20	—	22	—	13	4	2	5	25
Phthisis.....	†25	58	—	83	—	*56	24	—	3	5·17
Measles	30	124	3	157	—	150	—	3	7	5·64
Other Diseases	17	156	34	207	7	124	22	13	53	33·9
Epidemic Diarrhœa.....	3	60	—	63	—	51	1	2	11	18·3
Isolation and Observation Cases	—	21	1	22	—	20	2	—	—	—
Totals	248	1706	55	2009	101	1463	303	33	142	8·32

† One case included in this column in the Report of 1907 was subsequently found to be suffering from Sarcoma of Lung and has been transferred to "Other Diseases" column.

* Disease apparently arrested.

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases.....	354	421	189	30	6	1	—	1002
No. of Deaths.....	23	17	—	—	—	—	—	40
Percentage of Deaths	6·49	4·03	—	—	—	—	—	3·99

ENTERIC FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	1	2	—	1	1	—	—	5
No. of Deaths	1	1	—	1	1	—	—	4
Percentage of Deaths	100	50	—	100	100	—	—	80.0

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	59	65	33	15	3	1	1	177
No. of Deaths	3	9	2	—	—	—	—	14
Percentage of Deaths	5·08	13·84	6·06	—	—	—	—	7·9

OTHER DISEASES.

Disease.	Admitted.	Died.
Acute Pulmonary Tuberculosis	3	2
Tuberculous Meningitis	2	2
Tuberculous Nephritis	1	1
General Tuberculosis	7	6
Tuberculosis of Mesentery and Lungs	1	1
Acute Tonsillitis	22	—
Suppurative Tonsillitis	1	—
Acute Lobar Pneumonia	3	2
Broncho-Pneumonia	8	6
Bronchitis	3	—
Scarlet Fever and Diphtheria	2	1
Scarlet Fever and Measles	2	1
Scarlet Fever and Enteric	1	1
Scarlet Fever and Whooping Cough	8	—
Scarlet Fever and Varicella	2	—
Varicella	6	—
Diphtheria and Measles	3	—
Whooping Cough and Measles	11	3

OTHER DISEASES—*Continued.*

Disease.	Admitted.	Died.
Whooping Cough	12	2
Rötheln	3	—
Cerebro-Spinal Fever	1	1
Meningitis	1	1
Hydrocephalus	1	1
Dyspeptic Diarrhœa	3	—
Gastro-Enteritis	3	—
Enteritis	3	—
Constipation	1	—
Suppurative Cholecystitis	1	1
Morbus Cordis	3	2
Pericarditis	1	1
Thrombosis of Veins	1	1
Congenital Defects	4	4
Addison's Disease	1	1
Anæmia	1	—
Marasmus	6	1
Debility	1	—
Malnutrition	3	—
Lymphadenitis	1	—
Adenitis	1	—
Parotitis	1	—
Retro-pharyngeal Abscess	1	—
Abscess of Breast	1	—
Empyema	1	1
Acute Nephritis	1	1
Wound of Skin	1	—
Erythema	1	—
Eczema	1	—
Eczema Intertrigo	1	—
Psoriasis	1	—
Carbuncle of Neck and Shoulder	1	1
Ringworm	1	—
Leprosy	1	—
Vulvitis	1	—
Ruptured Perineum	1	—
Premature Birth	1	1
Convulsions	1	1
	155	47

Mortality ... ... 30·3 %.

CITY HOSPITAL, FAZAKERLEY ANNEXE.

Medical Superintendent, DR. C. RUNDLE.
Resident Physician, DR. A. HIPWELL.

Diseases.	Remaining Dec. 31st, 1907.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	68	231	709	1008	13	874	109	—	*12	5·1
Diphtheria.....	9	—	1	10	—	10	—	—	—	—
Measles	—	5	1	6	—	1	5	—	—	—
Other Diseases.....	6	32	10	48	7	34	—	—	7	21·8
Isolation and Observation Cases	19	11	—	30	1	29	—	—	—	—
Totals	102	279	721	1102	21	948	114	—	19	—

* One death occurred in a transferred patient.

One case of Burns with Kötheln was dead on arrival at the Hospital and has not been included in the above returns.

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards.	Total.
No. of Cases	79	91	51	7	3	—	—	231
No. of Deaths	7	4	—	—	—	—	—	11
Percentage of Deaths	8·9	4·3	—	—	—	—	—	4·7

OTHER DISEASES.

Disease.	Admitted.	Died.
Chickenpox	12	—
Whooping Cough	18	3
Rubella	1	—
Cerebro-Spinal Meningitis	1	1
	32	4

Mortality ... ... 12·5 %

APPENDIX.

The following tables I, II, III, IV, V, and marked also A, B, C, D, E, are prepared pursuant to an instruction of the Local Government Board.

TABLE I.

Year.	Population estimated to Middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of non-residents registered in Public Institutions in the District.	Deaths of residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 year of age.		At all ages.						
		Number.	Rate.*	Number.	Rate per 1000 Births regist'd.	Number.	Rate.*				Number.	*Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1898.....	669243	22227	33·2	4111	184	15380	23·0	3812	527	...	14853	22·2
1899.....	674912	22488	33·3	4481	199	16861	25·0	4278	592	7	16276	24·1
1900.....	680628	22762	33·4	4247	186	16393	24·0	4257	616	8	15785	23·1
1901.....	686332	21980	32·0	4138	188	15493	22·5	4231	618	4	14879	21·6
†1902.....	710337	24283	34·2	3936	162	15994	22·5	4564	602	4	15396	21·6
1903.....	716810	23910	33·3	3815	159	14848	20·7	4549	685	77	14240	19·8
1904.....	723430	24278	33·5	4780	196	16524	22·8	4587	673	35	15886	21·9
‡1905.....	733714	24350	33·2	3762	154	14849	20·2	4908	746	28	14131	19·2
1906.....	739180	24123	32·6	4194	173	15745	21·3	4985	744	60	15061	20·3
1907.....	746144	23654	31·7	3438	145	14408	19·3	4984	732	46	13722	18·3
Averages for years 1898-1907.	708073	23405	33·0	4090	174	15649	22·1	4515	653	27	15023	21·2
1908.....	753203	23891	31·7	3403	142	14663	19·4	5319	733	76	14,006	18·5

* Rates in Columns 4, 8, and 13 calculated per 1000 of estimated population. † Garston included. ‡ Fazakerley included.

Note.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Area of District in acres (exclusive of area covered by water) - 16,619.

Total population at all ages.....704,134 — At Census of 1901.
Number of inhabited houses .....126,835 — At Census of 1901.
Average number of persons per house .....5·5 — At Census of 1901.

A

A—*Continued.*

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
Parish Workhouse, Brownlow Hill.	County Asylums.	Cancer Hospital.
Royal Infirmary.		Epileptic Hospital.
Children's Infirmary.		Leyfield Poor Law Schools.
Consumption Hospital.		Grove Mount Home.
Hahnemann Hospital.		Branch Workhouse, Luton Street.
Eye and Ear Infirmary.		,, Everton.
David Lewis Northern Hospital.		Cottage Homes, Fazakerley.
Stanley Hospital.		Walton Gaol.
Royal Southern Hospital.		Skin Diseases Hospital.
Mill Road Infirmary.		Accident Hospital, Garston.
Hospital for Women.		Samaritan Hospital.
City Hospital North.		Olive Mount Hospital.
,, South.		
,, Parkhill.		
,, East.		
,, Fazakerley.		
Walton Workhouse.		
Belmont Road Workhouse.		
Toxteth Workhouse.		
Highfield Infirmary.		
Turner Memorial Home.		
St. Augustine's Home.		
Kirkdale Home.		
House of Providence.		
St. Joseph's Home.		
Home for Incurables.		
Tuebrook Villa Asylum.		
Nursing Homes.		

The three Union Workhouses are situated within the District.

TABLE II.

Names of Localities.	1.—Scotland District.				2.—Exchange District.				3.—Abercromby District.				4.—Everton District.			
Year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1898	53192	2111	1825	460	43505	1310	1557	316	53256	1633	1242	245	117647	4304	2729	807
1899	53121	2125	1865	509	42951	1278	1634	314	52950	1695	1258	229	118940	4328	3143	880
1900	53049	2166	1830	521	42405	1332	1549	347	52645	1633	1303	252	120904	4442	2896	846
1901	52934	2044	1694	455	41831	1180	1299	285	52301	1565	1099	245	121953	4216	2902	819
1902	52876	2225	1745	492	41332	1216	1432	298	52004	1757	1155	220	122964	4627	2735	731
1903	52834	2267	1578	489	41332	1230	1244	261	51742	1713	1141	227	123521	4342	2656	768
1904	52763	2237	1732	577	41780	1275	1456	369	51445	1652	1065	220	123549	4444	2947	949
1905	52692	2170	1661	493	41674	1234	1311	297	51149	1715	1008	214	123741	4413	2471	705
1906	52621	2137	1633	528	41619	1227	1304	319	50855	1664	1032	201	123940	4422	2770	897
1907	52549	2098	1466	428	41168	1176	1278	295	50562	1709	929	161	123952	4307	2449	648
Averages of Years 1898 to 1907.	52863	2158	1703	495	41959	1245	1406	310	51891	1673	1123	221	122111	4384	2769	805
1908	52478	2058	1524	432	40775	1139	1181	284	50272	1820	947	194	122970	4219	2587	678

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

B

TABLE II.—*continued.*

Names of Localities.	5.—Kirkdale District.				6.—West Derby (West) District.				7.—Toxteth District.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1898	68472	2377	1368	408	83670	3099	1783	538	106396	3493	2308	626
1899	68801	2361	1578	434	84907	3086	1841	566	106268	3545	2678	711
1900	69132	2408	1552	470	85924	3019	1836	507	106393	3429	2496	681
1901	69410	2292	1438	448	86882	2921	1736	522	105922	3356	2349	632
1902	69798	2396	1494	402	87751	2986	1729	450	105636	3671	2421	630
1903	69984	2352	1301	338	88295	2996	1640	463	105532	3405	2141	573
1904	70271	2468	1573	528	89111	2902	1712	526	105399	3586	2380	685
1905	70310	2324	1381	405	89689	2891	1566	419	105290	3436	1935	509
1906	70450	2323	1373	378	90081	2853	1657	439	105162	3415	2299	614
1907	70492	2278	1315	357	90184	2758	1520	376	105033	3328	1954	487
Averages of Years 1898 to 1907.	69712	2358	1437	416	87649	2951	1702	480	105703	3466	2296	614
1908	70536	2249	1421	330	89902	2749	1488	354	104905	3272	1926	460

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

B—*Continued.*

TABLE II.—*continued.*

Names of Localities.	8.—Walton District.				9.—West Derby (East) District.				10.—Wavertree District.				11.—Sefton Park District (late Toxteth Rural).			
Year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1898	50230	1639	736	200	41677	1024	684	139	21402	588	297	97	27336	649	324	79
1899	51779	1686	873	273	42454	1035	697	169	22746	704	372	114	28340	645	330	87
1900	53376	1754	855	245	43245	1161	749	155	24174	820	396	115	29381	598	315	63
1901	54977	1742	824	270	44016	1162	763	192	25670	888	411	147	30436	614	364	74
1902	56379	1897	887	250	44872	1302	721	146	27304	962	399	118	31579	603	397	93
1903	58032	1912	812	228	45736	1426	718	177	29018	980	414	116	32489	630	296	56
1904	59501	1898	986	298	46568	1479	791	216	30840	997	486	151	33441	664	389	92
1905	61127	2075	870	218	47428	1503	749	169	32774	1101	453	124	34530	654	374	62
1906	62043	1971	909	242	48112	1491	875	211	34832	1101	488	140	35079	689	342	62
1907	63017	2014	892	218	49212	1536	777	159	36018	994	393	99	37219	663	341	51
Averages of Years 1898 to 1907.	57046	1858	864	244	45332	1312	752	173	28477	913	411	122	31983	641	357	72
1908	64053	2154	874	189	52130	1606	845	178	39150	1099	476	115	37708	686	344	48

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

B—*Continued.*

TABLE II.—**B**—*Continued.*

Names of Localities.	12.—Garston District.			
Year	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.
	a.	*b.*	*c.*	*d.*
1898	16133	485	280	91
1899	16544	530	268	92
1900	16966	544	268	91
1901	17398	562	340	104
1902	17842	641	277	69
1903	18295	657	290	79
1904	18762	676	369	124
1905	19739	716	299	84
1906	20530	710	339	94
1907	22570	690	367	145
Averages of Years 1898 to 1907...	18478	621	309	97
1908	23848	744	339	82

Names of Localities.	13.—Fazakerley District.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.
	a.	*b.*	*c.*	*d.*
1898—1899	Statistics not available			
1900	1753	36	14	4
1901	1887	39	14	5
1902	2085	63	24	4
1903	2919	85	34	11
1904	3292	100	33	13
1905	3571	118	53	10
1906	3856	120	40	12
1907	4168	103	41	4
Averages of Years 1900 to 1907...	2941	83	32	8
1908	4476	96	54	11

Note.—Population corrected as per Census Returns of 1891 and 1901.

C

TABLE III.

Cases of Infectious Disease notified during the Year 1908.

Notifiable Disease.	Cases Notified in whole District.							Total Cases notified in each Locality.														Public Institutions (Workhouses and Hospitals).	Emigrants, Seamen, &c., passing through the City.	No. of Cases removed to Hospital from each Locality.														Public Institutions (Workhouses and Hospitals).	Emigrants, Seamen, &c., passing through the City.
	At all Ages.	At Ages—Years.						Scotland.	Exchange.	Abercromby.	Everton.	Kirkdale.	West Derby (West).	Toxteth.	Walton.	West Derby (East).	Wavertree.	Sefton Park (late Toxteth Rural).	Garston.	Fazakerley.			Scotland.	Exchange.	Abercromby.	Everton	Kirkdale	West Derby (West).	Toxteth.	Walton.	West Derby (East).	Wavertree.	Sefton Park (late Toxteth Rural).	Garston.	Fazakerley.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.																																
Small-pox	7	...	...	...	1	6	...	...	...	(W) 2	(H) (W) ...	...	...	(H-H) ...	(W) ...	(H) ...	...	(W) ...	...	(H) (H) ...	...	5	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	5
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	208	40	404	394	95	63	2	58	30	35	236	78	127	96	161	19	74	49	13	5	12	5	55	30	29	192	58	82	71	96	3	53	26	5	5	11	4
Membranous croup	19	4	10	5	...	...	...	2	...	2	6	3	2	...	2	1	...	1	...	...	...	...	1	...	...	1	...	1	...	2	...	...	1	...	...	...	...
Erysipelas	854	31	37	74	95	575	42	81	58	47	235	40	87	67	90	35	32	6	24	....	29	3	10	2	4	26	4	5	18	6	...	...	...	...	...	6	6
Scarlet fever	4295	95	1751	2138	199	111	1	260	156	102	1048	383	505	625	534	237	175	107	70	11	64	18	233	139	85	934	326	397	508	389	171	129	62	55	9	63	18
Typhus fever	21	...	1	7	7	6	...	11	2	2	2	...	3	1	...	...	...	...	...	...	...	...	10	2	2	2	...	3	1	...	...	...	...	...	...	...	...
Enteric fever	447	...	39	149	112	147	...	62	37	22	90	37	43	40	31	11	13	6	7	1	14	33	26	13	7	56	22	26	14	16	3	6	...	1	...	4	29
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	3	...	...	2	...	1	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Puerperal fever	52	...	...	...	20	32	...	11	3	...	9	4	2	9	8	1	...	3	2	...	...	...	8	1	...	7	3	1	5	6	1	...	2	1	...	...	...
Anthrax	3	...	...	...	...	3	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...
Plague	3	...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Tuberculosis	2184	21	72	233	374	1476	8	414	379	186	358	128	153	354	72	59	27	22	9	3	...	20	7	5	4	15	6	7	13	9	3	2	...	...	...	...	...
Totals	8886	191	2314	3002	903	2423	53	902	666	400	1985	673	923	1213	898	363	321	194	125	20	119	84	353	193	132	1234	429	523	631	524	181	190	91	62	14	84	62

(H) The localities in which the Isolation Hospitals are situated.
(W) The localities in which Workhouses are situated.
* Notification voluntary since February, 1901.

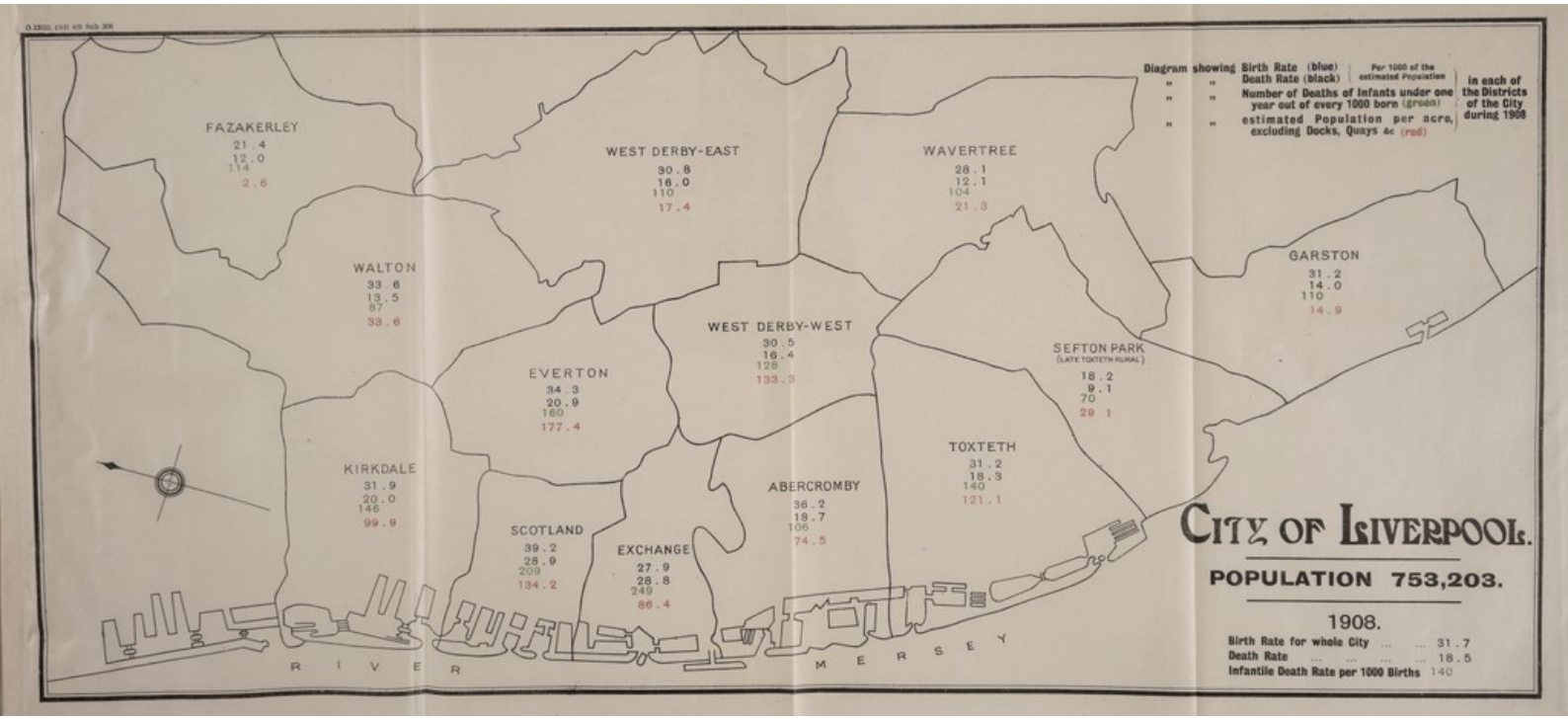
D

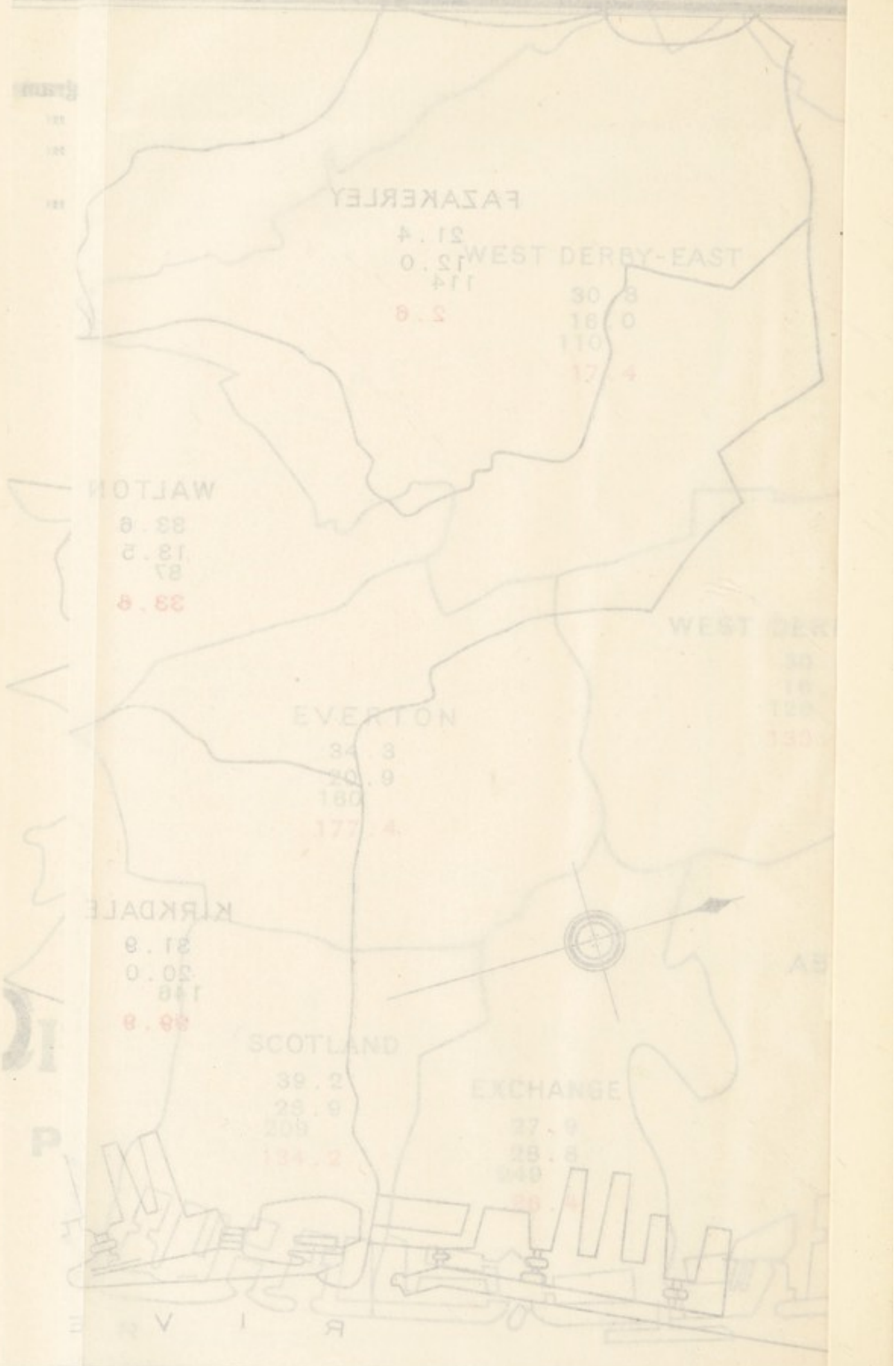
TABLE IV.

Causes of, and ages at, Death during Year 1908.

Causes of Death.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Residents" belonging to Localities, whether occurring in or beyond the District.												Total Deaths whether of Residents or Non-Residents in public Institutions in the District
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Scotland	Ex-change.	Aber-cromby.	Ever-ton.	Kirkdale	West Derby. (West).	Toxteth.	Walton.	West Derby. (East).	Waver-tree.	Sefton Park.	Garston.	Fazaker-ley.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	248	44	189	14	...	1	...	41	15	7	67	38	15	20	15	11	13	3	3	...	50
Scarlet fever	210	8	122	70	6	4	...	30	12	6	50	28	24	21	13	13	6	4	2	1	178
Whooping-cough	342	129	206	7	...	...	...	30	18	16	89	43	48	54	14	13	9	2	6	...	58
Diphtheria and membranous croup	130	11	76	38	3	2	...	6	7	7	31	18	11	16	9	10	2	10	3	...	81
Croup	9	1	7	1	...	...	...	...	1	...	2	2	2	2	...	...	...	...	...	...	1
Fever (Typhus)	9	...	1	1	2	5	...	4	2	1	1	...	1	...	...	...	...	...	...	...	9
Fever (Enteric)	65	...	4	16	10	35	...	4	10	3	9	10	5	8	6	5	1	1	3	...	55
Fever (Other continued)	1	...	...	1	...	...	...	...	..	1	...	...	...	...	...	...	...	...	...	...	1
Epidemic influenza	136	4	5	...	6	71	50	8	3	7	22	19	11	21	8	10	10	8	9	...	11
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
*Diarrhœa	878	640	212	5	2	12	7	171	94	44	169	97	91	85	43	35	18	6	22	3	89
*Enteritis	152	...	88	9	6	26	23	23	17	5	34	13	14	18	8	9	6	2	2	1	29
*Puerperal fever	16	...	...	...	4	12	...	2	3	...	3	1	2	1	2	...	...	1	1	...	12
Erysipelas	23	6	2	1	...	14	...	3	3	5	3	2	2	3	...	2	...	...	...	...	14
Other septic diseases	83	14	11	21	9	27	1	10	6	4	13	6	6	14	3	5	6	6	4	...	39
Phthisis (Pulmonary Tuberculosis)	1214	4	15	45	193	932	25	133	136	93	236	103	126	135	79	76	36	26	28	7	666
Other tubercular diseases	371	87	139	70	30	42	3	31	33	14	71	33	49	58	29	20	9	8	14	2	179
*Cancer, malignant disease	594	...	1	2	6	428	157	36	35	34	93	56	78	89	61	48	26	20	15	3	305
Bronchitis	1542	305	156	18	7	525	531	169	132	113	331	179	152	207	76	79	41	29	31	3	445
Pneumonia	1356	315	362	64	47	449	119	178	119	90	241	129	156	206	73	57	39	33	31	4	426
Pleurisy	43	...	12	...	4	16	11	8	3	2	8	6	3	4	4	2	2	1	...	...	31
Other diseases of Respiratory organs	193	22	44	8	6	79	34	48	12	12	28	25	10	24	6	8	11	8	...	1	21
Alcoholism and Cirrhosis of liver	182	...	...	1	...	158	23	12	22	23	29	19	20	24	10	12	6	2	2	1	82
Venereal diseases	41	36	2	...	...	3	...	5	4	5	12	2	2	7	...	2	1	1	...	...	5
Premature birth	418	418	...	...	...	...	...	39	32	24	64	31	53	63	31	34	26	5	12	4	33
Diseases and accidents of parturition	41	...	...	...	7	34	...	4	3	1	5	4	5	5	2	6	2	3	1	...	15
Heart diseases	1007	...	15	45	52	599	296	104	100	81	154	95	102	136	67	56	49	35	24	4	441
Accidents	525	97	89	56	27	200	56	66	74	46	96	57	53	69	13	18	10	7	14	2	303
Suicides	60	...	...	...	6	53	1	5	6	6	8	4	6	6	5	3	5	4	2	...	22
All other causes	4116	1215	363	147	85	1176	1130	353	279	297	718	401	441	630	297	311	142	119	110	18	1717
All other causes	14,006	3356	2121	640	518	4904	2467	1524	1181	947	2587	1421	1488	1926	874	845	476	344	339	54	5319

*See notes at back.


Diagram showing Birth Rate (blue) Death Rate (black) Per 1000 of the estimated Population
" " Number of Deaths of infants under one year out of every 1000 born (green)
" " estimated Population per acre, excluding Docks, Quays &c (red)
in each of the Districts of the City during 1908
FAZAKERLEY
21.4
12.0
114
2.6
WEST DERBY-EAST
30.8
16.0
110
17.4
WAVERTREE
28.1
12.1
104
21.3
WALTON
33.6
13.5
87
33.6
GARSTON
31.2
14.0
110
14.9
WEST DERBY-WEST
30.5
16.4
128
133.3
EVERTON
34.3
20.9
160
177.4
SEFTON PARK
(LATE TOXTETH RURAL)
18.2
9.1
70
29.1
KIRKDALE
31.9
20.0
146
99.9
TOXTETH
31.2
18.3
140
121.1
ABERCROMBY
36.2
18.7
106
74.5
SCOTLAND
39.2
28.9
209
134.2
EXCHANGE
27.9
28.8
249
86.4
RIVER MERSEY
CITY OF LIVERPOOL.
POPULATION 753,203.
1908.
Birth Rate for whole City 31.7
Death Rate 18.5
Infantile Death Rate per 1000 Births 140



F

DEATHS REGISTERED IN THE CITY OF LIVERPOOL,

DURING THE YEAR ENDING SATURDAY, 26TH DECEMBER, 1908.

| CAUSE OF DEATH. | SEX. | | AGE—BELOW | | | | | | | | | | | | | | | | | | | DISTRICTS. | | | | | | | | | | | | | | | | | | |