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PUBLIC HEALTH DEPARTMENT.

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING THE YEAR

— 1940 —

BY

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Medical Officer of Health.



LIVERPOOL

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PUBLIC HEALTH DEPARTMENT,
LIVERPOOL.

MY LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to submit to you herewith my tenth Annual Report, relating to the health of the City of Liverpool.

Owing to the war, and in order to comply with the Ministry of Health's circular on the subject, the report has been considerably curtailed. The various modifications suggested by the Minister have been carried out and the text has been limited to matters of special interest.

I desire to acknowledge figures and information for inclusion in the Report from the various Heads of Departments and also from the officers of the various voluntary hospitals and charitable institutions.

The estimated mid-year resident population for the year was 752,800 and the natural increase of births over deaths was 2,148.

The total number of births was 15,016, giving a birth-rate of 19.9 per 1,000 as contrasted with a figure of 19.0 for the previous year. The total number of deaths from all causes was 12,868, giving a general death-rate of 17.1 as compared with 13.3 in 1939. Infantile mortality showed a rate of 84 per 1,000 births.

The birth-rate of 19.9 per 1,000 is a slight increase over that of the previous year, and is still higher than that of England and Wales, which is 14.6 per 1,000. Seven deaths occurred from puerperal fever as contrasted with five in 1939, and the maternal mortality rate was 2.01 per 1,000 births.

There was a slight decrease in the number of deaths recorded from cancer, namely, 1,279 as compared with 1,289 in 1939. This is equivalent to a death-rate of 1.70 per 1,000 of the population. Owing to the outbreak of war, the operation of the Cancer Act, 1939, which was introduced to facilitate the diagnosis and treatment of all who are suffering or are suspected to be suffering from the disease has been postponed.

Upon the outbreak of war all cases of infectious disease in the Bootle Infectious Diseases Hospitals were evacuated to Liverpool hospitals and it became necessary to reorganise the hospital and public health services in accordance with the scheme laid down by the Ministry of Health.

I should like to be permitted to express my thanks to the Chairmen and Members of the Corporation Committees concerned with the Public Health Department for the courtesy and kindness with which they have considered the various suggestions and recommendations made to them.

I am,

Your obedient Servant,

W. M. FRAZER,

Medical Officer of Health.

CITY OF LIVERPOOL.

SUMMARY

OF

VITAL STATISTICS FOR 1940.

Area (land and inland water)	...	...	...	27,321 Acres (43 sq. miles)		
Resident Population (estimated at mid Year, 1940)	...	...	...	752,800		
Live Births	...	...	15,016	Live Birth rate ... 19.9 per 1,000 of estimated resident population.		
Deaths (all causes)	...	...	12,868	Death rate ... 17.1 per 1,000 of estimated resident population.		
Deaths (under 1 year of age)	1,257	Infant Mortality rate	84 per 1,000 live births.			
Deaths from :—						
Seven principal Zymotic diseases	}	473	Zymotic death rate	}	0.60	} per 1,000 of the estimated resident population.
Pulmonary Tuberculosis	}	761	Pulmonary Tuberculosis death rate	}	1.01	
Other forms of Tuberculosis	}	122	Non Pulmonary Tuberculosis death rate	}	0.16	
Respiratory diseases		1,508	Respiratory death rate	}	2.00	
Cancer	...	1,279	Cancer death rate	}	1.70	
Maternal Deaths	...	...	31	Maternal Mortality rate	}	2.01 per 1,000 births.

POPULATION.

The mid-year residential population for the year 1940 was estimated by the Registrar-General to be 752,800. This figure was used for the calculation of birth-rates in accordance with the Ministry of Health's Circular No. 1961.

During the year the deaths of non-civilians were excluded and the death-rates were calculated on the Registrar-General's estimated mid-year population.

Population, Births and Deaths.

The following table shows the population, births and deaths, with birth and death-rates, during the period 1931-1940:—

Year.	Estimated Mid-Year Population.	No. of Births.	Birth Rate per 1,000 of Population.	No. of Deaths.	Death Rate per 1,000 of Population.
1931	856,483	18,626	21·7	12,243	14·3
1932	852,146	18,149	21·3	11,370	13·3
1933	847,830	16,929	20·0	12,444	14·7
1934	843,538	17,593	20·9	11,319	13·4
1935	839,267	17,347	20·7	11,447	13·6
1936	835,018	17,403	20·9	11,183	13·4
1937	830,790	16,728	20·1	11,452	13·8
1938	826,584	16,175	19·6	10,638	12·9
1939	822,400	15,614	19·0	10,668	13·3
1940	752,800	15,016	19·9	12,868	17·1

NOTE.—The rates have been calculated upon the corrected populations based upon the Census Returns of 1931 and the Registrar-General's mid-1940 estimated resident population.

BIRTHS.

The number of live births recorded during the year 1940 was 15,016, equal to a rate of 19·9 per 1,000 of the estimated resident mid-year population. Of the total births, 7,776 were males, and 7,240 were females. The number of illegitimate live births was 691 or 4·6 per cent. of the total births, 355 being males and 336 females.

The birth-rate in the City of Liverpool was considerably above the average of the great towns, which was 16·0 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate was 14·6 per 1,000.

The number of still-births registered was 519 as shown in the table below. This represented 33·4 per thousand of the total (live and still) births registered and 0·69 per 1,000 of the estimated population.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total.
Legitimate ...	7,421	6,904	14,325	255	238	493
Illegitimate ...	355	336	691	8	18	26
	7,776	7,240	15,016	263	256	519

DEATHS.

The total deaths registered during the year numbered 12,868 (6,970 males and 5,898 females), equal to a death-rate of 17·1 per 1,000 of the estimated resident population. During the period since the commencement of the war the deaths of non-civilians were excluded for tabulation elsewhere. The death-rate for England and Wales was 14·3 and that of the great towns was 15·8.

The adjusted death-rate for Liverpool, i.e., the crude death-rate modified by the A.C.F. (areal comparability factor) was 19·4.

The Short List of Causes of Death appears in Appendix C, and fuller details as to the causes of death are set out in Appendix F.

The following table shows deaths at various age periods, expressed as a percentage of total deaths, for each year 1915 to 1940:—

Year	Under 5 years.	At Ages—YEARS.									
		5—	10—	20—	30—	40—	50—	60—	70—	80—	
1915 ...	% 33	% 2	% 4	% 4	% 7	% 9	% 12	% 13	% 12	% 4	100
1916 ...	30	3	4	5	6	9	12	14	13	4	100
1917 ...	29	3	4	5	7	9	12	14	13	4	100
1918 ...	29	5	6	8	8	9	11	12	9	3	100
1919 ...	25	4	5	7	8	9	12	13	13	4	100
1915-1919 (average)	29	3	5	6	7	9	12	13	12	4	100
1920 ...	33	2	4	5	7	9	11	13	12	4	100
1921 ...	33	2	4	5	6	9	11	13	12	5	100
1922 ...	28	2	4	5	6	9	12	15	14	5	100
1923 ...	30	2	4	5	6	9	12	14	13	5	100
1924 ...	29	2	4	4	6	8	12	15	15	5	100
1920-1924 (average)	30	2	4	5	6	9	12	14	13	5	100
1925 ...	28	2	4	4	5	9	12	15	15	6	100
1926 ...	28	2	3	5	6	9	12	15	14	6	100
1927 ...	25	2	3	5	5	9	12	16	16	7	100
1928 ...	25	2	4	5	5	9	12	16	16	6	100
1929 ...	23	3	3	5	5	9	12	16	17	7	100
1925-1929 (average)	26	2	3	5	5	9	12	16	16	6	100
1930 ...	20	3	4	5	5	9	14	17	16	7	100
1931 ...	23	2	3	5	5	8	12	17	18	7	100
1932 ...	22	2	3	5	5	8	13	17	17	8	100
1933 ...	21	2	3	5	5	8	13	17	18	8	100
1934 ...	20	2	3	5	6	8	12	18	18	8	100
1930-1934 (average)	21	2	3	5	5	8	13	17	18	8	100
1935 ...	17	2	3	5	5	8	13	19	20	8	100
1936 ...	16	2	3	5	5	7	14	19	21	8	100
1937 ...	17	2	2	5	5	7	13	19	21	9	100
1938 ...	16	1	3	4	5	7	13	20	22	9	100
1939 ...	13	1	3	4	4	7	14	21	23	10	100
1935-1939 (average)	16	2	3	5	5	6	13	20	21	9	100
1940 ...	14	2	3	4	5	8	14	21	20	9	100

ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1930, and during 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939 and 1940.

Years.	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from Classes (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	27,205	19,869	29,763	14,747	91,584	2,015	147,005
1881-1890	19,748	17,870	32,507	13,186	86,311	2,820	146,195
1891-1900	13,515	16,714	35,819	18,491	84,539	4,223	145,522
1901-1910	13,967	16,054	32,995	18,163	81,179	6,480	150,962
1911-1920	10,417	14,946	36,480	12,282	74,125	7,603	137,223
1921-1930	7,831	12,664	29,447	8,184	58,126	9,852	117,756
1931	947	1,153	2,742	658	5,500	1,128	12,243
1932	826	1,139	1,905	654	4,524	1,167	11,370
1933	808	1,157	2,466	729	5,160	1,232	12,444
1934	780	996	1,792	563	4,131	1,276	11,319
1935	560	935	1,879	654	4,028	1,311	11,447
1936	614	839	1,489	547	3,489	1,301	11,183
1937	578	796	1,819	589	3,782	1,292	11,452
1938	543	769	1,235	527	3,074	1,344	10,638
1939	285	746	1,181	480	2,692	1,289	10,668
1940	532	883	1,688	586	3,689	1,279	12,868

Deaths expressed as a percentage of total deaths from all causes (Proportionate Mortality).

Years.	(a)	(b)	(c)	(d)	Total Deaths from Classes (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	19.2	13.5	20.2	10.0	62.9	1.4	100.0
1881-1890	14.1	12.7	23.2	9.4	59.4	2.0	100.0
1891-1900	9.3	10.8	24.6	12.7	57.4	2.9	100.0
1901-1910	8.6	10.6	21.8	12.0	53.0	4.3	100.0
1911-1920	7.9	10.9	27.3	8.9	55.0	5.5	100.0
1921-1930	6.6	10.7	25.0	6.9	49.4	8.4	100.0
1931	7.7	9.4	22.4	5.4	44.9	9.2	100.0
1932	7.3	10.0	16.7	5.7	39.7	10.3	100.0
1933	6.5	9.3	19.8	5.9	41.5	9.9	100.0
1934	6.9	8.8	15.8	5.0	36.5	11.3	100.0
1935	4.9	8.2	16.4	5.7	35.2	11.5	100.0
1936	5.5	7.5	13.3	4.9	31.2	11.6	100.0
1937	5.0	6.9	15.9	5.1	33.0	11.3	100.0
1938	5.1	7.2	11.6	4.9	28.8	12.6	100.0
1939	2.7	7.0	11.1	4.5	25.2	12.1	100.0
1940	4.1	6.9	13.1	4.5	28.6	9.9	100.0

Death Rates per 1,000 Population.

Years.	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from Classes (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	5.2	3.6	5.7	2.8	17.3	0.4	28.5
1881-1890	3.6	3.2	5.9	2.4	15.1	0.5	26.1
1891-1900	2.2	2.7	5.9	3.0	13.8	0.7	23.9
1901-1910	1.9	2.2	4.5	2.5	11.1	0.9	20.0
1911-1920	1.3	1.9	4.7	1.6	9.5	1.0	18.1
1921-1930	0.9	1.4	3.3	0.9	6.5	1.1	13.6
1931	1.1	1.3	2.8	0.8	6.0	1.3	14.3
1932	0.9	1.3	2.2	0.7	5.1	1.3	13.2
1933	0.9	1.3	2.8	0.8	5.8	1.4	14.4
1934	0.9	1.1	2.1	0.6	4.7	1.5	13.1
1935	0.7	1.1	2.2	0.7	4.7	1.5	13.2
1936	0.7	1.0	1.7	0.6	4.0	1.5	12.9
1937	0.7	0.9	2.1	0.7	4.4	1.5	13.2
1938	0.6	0.9	1.4	0.6	3.5	1.5	12.3
1939	0.3	0.9	1.5	0.6	3.8	1.6	13.3
1940	0.7	1.2	2.2	0.8	5.0	1.7	17.1

Death-Rates expressed as a percentage of the rates experienced in 1871-1880 (Index Numbers).

Years.	(a)	(b)	(c)	(d)	Total Deaths from Classes (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1881-1890	69.0	88.0	104.0	85.7	89.1	125.0	91.0
1891-1900	42.0	75.0	104.0	107.2	79.3	175.0	84.0
1901-1910	36.0	61.0	79.0	89.3	64.3	225.0	70.0
1911-1920	26.0	50.0	83.0	56.7	56.0	250.0	67.0
1921-1930	17.1	40.0	58.8	36.8	38.5	280.0	47.7
1931	21.2	36.1	49.1	28.6	36.7	325.0	50.0
1932	19.2	36.1	38.6	25.0	29.9	325.0	46.3
1933	17.3	36.1	49.1	28.6	33.9	350.0	50.5
1934	17.3	30.5	36.8	21.4	27.2	375.0	46.0
1935	13.5	30.5	38.6	25.0	27.2	375.0	46.3
1936	13.5	27.8	29.8	21.4	23.1	375.0	45.3
1937	13.5	25.0	36.8	25.0	25.4	375.0	46.3
1938	11.5	25.0	24.6	21.4	20.2	375.0	43.1
1939	5.8	25.0	26.3	21.4	19.1	400.0	46.7
1940	13.5	33.3	38.6	28.6	28.9	425.0	60.0

Table showing the Annual Rate of Mortality per 1,000 and the total number of deaths at each of Twelve Age-Periods during the year 1940 in Liverpool.

1940.	Under 1 Year.	At Ages										All Ages.	
		1—	2—	5—	10—	20—	30—	40—	50—	60—	70—		80—
Rate of Mortality per 1,000 living at ages indicated	*84	18.1	6.0	3.1	2.8	3.9	6.0	10.8	24.2	60.7	136.5	329.2	17.1
Total Number of Deaths at each Age-Period ...	1,257	265	257	231	382	511	633	991	1,828	2,722	2,623	1,168	12,868
Estimated Resident Population ...	15,037	14,658	42,840	74,002	137,418	128,926	104,955	91,785	75,614	44,806	19,211	3,548	752,800

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

Deaths in Public Institutions.

In Liverpool the number of deaths which take place in Public Institutions is large—indeed more than half the total. This tends to show the proportion of people who in times of sickness have recourse to public and charitable institutions in the city, and no doubt also suggests that the institutions have a wide reputation and attract sufferers not only from within the city, but from a distance, as shown by the number of non-resident deaths.

The deaths in institutions during the year numbered 7,648, and included 1,063 persons who were non-residents in the city area.

Infant Mortality.

The following table shows the deaths and death-rates of infants under one year of age for the year 1940:—

					Infant Deaths.	Infant Death Rates.
All Infants	...	...	...	...	1,257	84 per 1,000 live births.
Legitimate Infants	...	...	...	...	1,178	79 „ legitimate live births.
Illegitimate Infants	...	...	...	...	79	116 „ illegitimate live births.

**Analysis of causes of Infant Mortality in successive quinquennia 1896-1935,
and the years 1936, 1937, 1938, 1939 and 1940. (A.)—Recorded Deaths.**

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respira- tory Diseases	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.	9 External Causes.
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	819
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	565
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	539
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	426
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	179
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	120
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	81
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	67
1936	17,403	1,311	149	14	83	270	142	622	13
1937	16,728	1,371	156	17	128	325	160	551	12
1938	16,175	1,189	122	12	106	266	128	508	15
1939	15,614	1,098	53	13	136	222	109	515	20
1940	15,016	1,257	93	18	66	374	159	495	24

(B.)—Death Rates per 1,000 Births.

1896/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0	7.3
1901/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1	4.7
1906/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7	4.6
1911/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1	3.8
1916/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0	1.8
1921/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1	1.2
1926/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1	0.8
1931/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3	0.8
1936	20.1	75	8.6	0.8	4.8	15.5	8.2	35.7	0.7
1937	19.3	82	9.3	1.0	7.6	19.4	10.1	32.3	0.7
1938	18.7	73	7.5	0.7	6.5	16.4	7.9	31.4	0.9
1939	19.0	71	3.4	0.8	8.7	14.2	7.0	33.0	1.3
1940	19.9	84	6.2	1.2	4.4	24.2	10.6	32.3	1.6

*In column 1 the rates indicate the number of births per 1,000 of the population.

(C).—Death Rates expressed as a percentage of the rates recorded in 1896-1900.

Years.	1 Birth Rates.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases.	6 Respira- tory Diseases.	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.	9 Externa Causes.
1896/1900	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1901/1905	100·0	91·0	102·3	89·3	95·0	91·5	76·5	94·0	65·7
1906/1910	93·0	78·6	107·1	62·9	78·6	83·1	57·8	91·0	63·0
1911/1915	87·0	72·5	91·9	50·0	57·9	81·5	56·9	84·0	52·1
1916/1920	76·0	61·4	87·4	32·2	49·3	88·7	32·7	82·0	25·5
1921/1925	75·1	54·9	80·3	30·6	24·9	84·7	29·9	70·8	16·4
1926/1930	66·2	49·7	80·3	17·7	18·9	83·5	30·4	60·9	11·0
1931/1935	61·4	47·2	79·5	14·8	18·9	72·2	23·4	69·2	10·4
1936	60·2	39·6	67·7	12·9	21·7	48·4	14·4	70·0	9·6
1937	57·8	43·5	73·2	16·1	34·4	60·6	17·7	63·3	9·6
1938	56·0	38·6	59·1	11·3	29·4	51·2	13·8	61·6	12·3
1939	56·9	37·5	26·8	12·9	63·9	44·4	12·3	64·7	17·8
1940	59·6	44·4	48·8	19·4	19·9	76·8	18·6	63·3	22·0

Deaths from Diabetes.

The following table shows the incidence of fatal cases of diabetes in Liverpool during the last six years:—

	Actual Numbers.			Rate per 100,000 population.	Ratio of males to females.
	Males.	Females.	Total.		
1935	18	60	78	9·0	0·30
1936	32	56	88	10·1	0·57
1937	37	66	103	11·9	0·56
1938	39	51	90	10·4	0·76
1939	52	84	136	17·0	0·62
1940	27	64	91	12·1	0·42

CANCER.

Deaths from Cancer.

During 1940 there were 1,279 deaths attributed to cancer, equivalent to a rate of 1.7 per thousand.

DEATHS FROM CANCER AT VARIOUS AGE-PERIODS, 1940.

Organs Affected.	Males.	Females.	Number of Deaths.									All Ages
			At Ages—Years									
			Under 10	10-	25-	40-	50-	60-	70-	75-	80-	
Buccal Cavity	58	11	—	—	—	4	6	32	14	7	6	69
Stomach ...	176	143	—	—	8	33	88	111	37	29	13	319
Liver ...	19	20	—	—	1	1	5	16	8	5	3	39
Intestines ...	156	132	—	—	11	27	67	101	35	24	23	288
Lungs ...	111	24	—	2	6	22	45	47	12	1	—	135
Female Genital Organs	—	122	—	1	1	30	40	40	4	2	4	122
Breast ...	—	101	—	—	7	18	26	23	11	5	11	101
Skin ...	11	3	—	1	—	1	4	2	2	—	4	14
Other Organs...	129	63	3	1	9	15	44	72	25	14	9	192
	660	619	3	5	43	151	325	444	148	87	73	1,279

METEOROLOGY.

The Director to the Liverpool Observatory and Tidal Institute, Bidston, has kindly furnished the following tables relating to Meteorological observations made by him at the Observatory, Bidston:

Latitude 53° 24' N. Longitude 3° 4' W.

Height above the Mean Level of the Sea, 202 feet.

1940.	Barometer. Mean.	Temperature. Mean.	RAINFALL.		Mean Humidity of the air (Complete Saturation 100%).
			Amount.	No. of days on which 0·01 in. or more fell.	
	Inches.	Degrees F.	Inches.		
January	30·100	32·1	2·457	10	89·5
February	29·856	36·8	2·161	11	87·9
March	29·874	43·3	2·252	15	77·4
April	29·889	46·8	1·732	16	78·8
May	30·027	53·5	2·177	12	75·4
June	30·090	61·2	1·094	8	68·8
July	29·889	57·9	3·047	16	78·5
August	30·150	59·3	0·760	12	76·3
September	29·980	54·7	1·984	15	75·7
October	29·842	49·4	3·756	15	81·6
November	29·680	45·6	5·248	21	82·5
December	30·099	41·3	1·874	18	84·5

Difference from the Average Quantities observed during the last 74 years.

1940.	BAROMETER.		TEMPERATURE.		RAINFALL.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees F.	Degrees F.	Inches.	Inches.
January	0·175	...	...	7·7	0·210	...
February	...	0·072	...	3·5	0·411	...
March	...	0·023	1·1	...	0·498	...
April	...	0·013	0·2	...	0·076	...
May	0·058	...	1·5	...	0·168	...
June	0·097	...	3·8	...	...	0·986
July	...	0·054	...	2·4	0·308	...
August	0·223	...	...	0·6	...	2·305
September	0·011	...	...	1·5	...	0·731
October	...	0·038	...	0·3	0·417	...
November	...	0·197	1·6	...	2·601	...
December	0·240	...	0·6	...	...	0·829
Year's Totals	0·034	...	...	0·6	...	0·162

Monthly Analysis of Wind Observations during 1940.

Based on daily observations at four fixed hours.

1940.	Force of Wind (Beaufort Scale.*)				Direction.							
	8 or over.	4-7	1-3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
January	...	68	46	10	7	2	28	47	15	2	10	3
February	...	35	57	24	1	9	26	35	9	1	5	6
March	1	34	61	28	6	2	8	8	11	10	32	19
April	...	43	47	30	4	4	24	4	5	1	38	10
May	...	23	84	17	8	8	14	12	7	6	34	18
June	...	26	72	22	13	4	16	3	8	1	29	24
July	...	58	46	20	5	...	9	7	2	3	65	13
August	4	62	49	9	3	...	6	3	1	3	74	25
September	3	56	50	11	19	1	3	3	6	4	49	24
October	1	50	54	19	10	11	27	17	13	7	16	4
November	6	48	55	11	14	...	12	9	17	10	34	13
December	5	57	49	13	10	4	19	8	8	13	28	21
Year's Total ...	20	560	670	214	100	45	192	156	102	61	414	180

* Force 8 is a wind velocity of 38 m.p.h. or over, Forces 4-7 include winds of a velocity of 13-37 m.p.h., Forces 1-3 include winds of 3-12 m.p.h. and "Calm" denotes air movement of less than 3 m.p.h.

NOTIFICATION OF INFECTIOUS DISEASE.

The following is a list of the diseases notifiable in Liverpool during 1940:—

Anthrax	Paratyphoid Fever
Acute Poliomyelitis	Plague
Cerebro-spinal Fever	Pneumonia, Acute Influenzal
Cholera	Pneumonia, Acute Primary
Diphtheria	Polio-encephalitis, Acute
Dysentery	Puerperal Pyrexia
Enteric (Typhoid) Fever	(including Puerperal Fever)
Erysipelas	Relapsing Fever
Encephalitis Lethargica, Acute	Scarlet Fever or Scarlatina
Malaria	Smallpox
Measles	Tuberculosis (all forms)
Membranous Croup	Typhus Fever
Ophthalmia Neonatorum	Whooping Cough

TABLE I.

MONTHLY NUMBERS OF NOTIFICATIONS OF INFECTIOUS DISEASES DURING 1940.

January	...	...	...	...	627
February	...	...	...	...	757
March	...	...	...	...	1,160
April	...	...	...	...	1,070
May	...	...	...	...	1,144
June	...	...	...	...	1,231
July	...	...	...	...	1,726
August	...	...	...	...	1,715
September	...	...	...	...	2,072
October	...	...	...	...	3,526
November	...	...	...	...	2,526
December	...	...	...	...	1,987
					19,541

TABLE II.

NUMBERS OF CASES OF INFECTIOUS DISEASES COMING TO NOTICE DURING 1940,
AND NUMBERS ADMITTED TO HOSPITAL.

	January	February	March	April	May	June	July	August	September	October	November	December	TOTALS	Cases admitted to hospital	Per centage admitted to hospital
Smallpox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	1	—	10	5	4	9	—	8	3	4	2	1	47	38	80.8
Scarlet Fever ...	81	83	84	93	115	160	139	125	158	190	294	223	1745	768	44.0
Measles and German Measles...	42	160	247	176	274	704	1020	1382	1372	2401	2271	997	11046	1366	12.4
Diphtheria ...	86	88	110	99	124	147	106	171	130	298	486	352	2197	2118	96.4
Puerperal Fever ...	—	—	1	1	1	1	—	1	1	2	2	—	10	9	90.0
Puerperal Pyrexia	26	29	34	31	21	37	18	26	14	18	22	21	297	266	89.6
Erysipelas ...	29	21	38	26	33	43	37	31	34	58	61	48	459	157	34.2
Cerebro-spinal Fever	12	42	61	61	54	62	29	21	21	31	36	38	468	455	97.2
Poliomyelitis and Polio-encephalitis	1	—	—	—	2	—	1	1	—	—	1	1	7	7	100.0
Ophthalmia Neonatorum ...	50	50	71	54	70	72	62	81	50	55	53	43	711	107	15.0
Pneumonia & Influenza Pneumonia	220	214	323	166	87	90	58	75	85	154	123	130	1725	499	28.9
Malaria ...	4	4	6	17	17	13	10	69	124	28	25	18	335	200	59.7
Dysentery ...	2	—	1	1	—	—	—	2	2	2	—	4	14	12	85.7
Encephalitis Lethargica ...	1	—	1	—	—	2	—	—	1	3	—	—	8	7	87.5
Whooping Cough ...	31	28	25	18	10	30	19	41	45	82	135	129	593	83	14.0
Anthrax ...	—	—	1	1	1	1	—	—	—	1	—	—	5	5	100.0
Chickenpox ...	10	9	9	5	7	12	2	19	8	12	32	32	157	57	36.3
TOTALS ...	596	728	1022	754	820	1383	1501	2053	2048	3339	3543	2037	19824	6154	31.1

The numbers of patients admitted to hospital include the cases which occurred while in hospital.

INFECTIOUS SICKNESS.

Plague.

No case of plague occurred in the city during the year.

Smallpox.

No case of smallpox occurred in the city during the year.

Typhus Fever.

No case occurred in Liverpool during 1940, and no indigenous case has occurred in the city during the course of the past twenty-two years.

Anthrax.

During the year 1940, ten cases of Anthrax were under treatment at the City Hospital, Fazakerley, of which nine were resident in either Liverpool or Bootle, and one in Runcorn. All were directly or indirectly associated with infected material by reason of their employment in or about the docks, ships, or tanneries.

Cases 87 and 90 are of some interest. The former, a builder's labourer, was engaged in demolition work at the Government Wool Disinfecting Station, Love Lane, Liverpool, and it is probable that dust, which was disturbed in the course of his work, was the source of his infection. Similarly, Case No. 90 was a painter in a tannery and his work no doubt provoked the disturbance of dust which was, in all probability, the source of the infection.

In this period, nineteen persons attended at the hospital as suspected Anthrax for investigation. Two of these proved to be definite cases, and in consequence, treatment could be commenced promptly and a severe infection averted. The other cases proved to be conditions such as septic pimples, boils, abrasions and the like. Four persons who had handled the carcass of a cow dead from Anthrax infection, attended and were given prophylactic injections of serum.

It cannot be stressed too seriously that employers of labour, whether connected with the docks, transport, tanneries, wool factories, or any condition in which Anthrax infection is possible, should take advantage of these facilities for investigation. It may be a question of life or death to the patient, and no matter how trivial a pimple may seem, to

neglect examination of it implies a grave responsibility. The hospital would much rather see a score of "negative" cases than miss one case of Anthrax.

Cases of Anthrax treated at Liverpool City Hospital, Fazakerley, during 1940.

Series No. continued from 1939.	Age.	Sex.	Occupation.	Days ill on admission.	Site of Infection.	Clinical Notes.	Serum injected daily. Each dose expressed in c.cs.	Complications.	Result.
82	41	M.	Wool Operative.	3	Forehead.	Mild.	100 200 100	Nil.	Recovery
83	43	M.	Dock labourer.	5	Left cheek.	Moderately severe.	200 180 120 200	Nil.	Recovery
84	20	M.	Dock labourer	3	Back of neck.	Mild case, prompt response.	150	Nil.	Recovery
85	46	M.	Wool porter	5	Point of chin.	Severe with marked oedema.	250 200 200	Nil.	Recovery
86	32	M.	Dock labourer.	3	Between scapulae.	Severe, extensive horse collar swelling.	120 150 350 400 150	Deep necrosis and ulceration; recrudescence on third day.	Recovery
87	30	M.	Builder's labourer.	3	Right temple.	Mild.	200 200 100	Nil.	Recovery
88	16	M.	Lorry hand.	3	Right side of neck.	Mild.	150 200	Nil.	Recovery
89	38	M.	Lighter hand.	6	Left forearm, near cubital flexure.	Severe, marked oedema.	200 200 200 200 350	Deep ulceration.	Recovery
90	38	M.	Painter in tannery.	7	Back of neck.	Mild, prompt response.	200 200 100	Nil.	Recovery

NOTE.—All serum was injected intravenously. Simultaneously, with the serum, 0.3 mgms. Neokharsivan were given intravenously on the first day and 0.5 mgms. on the third day of treatment. Cases 86 and 89 received a third injection 0.3 mgms. Neokharsivan on the fifth day of treatment.

Typhoid and Paratyphoid Fever.

During the year there occurred 7 cases of typhoid fever and 40 cases of paratyphoid fever.

TABLE III.

TYPHOID AND PARATYPHOID FEVER.

Type.	Cases.		Deaths.	
	Male	Female	Male	Female
Typhoid Fever	6	1	—	—
Paratyphoid—A	1	—	—	—
Paratyphoid—B	15	24	—	—
Paratyphoid—C	—	—	—	—
Unclassified	—	—	—	—

The 7 typhoid cases (of which 4 were indigenous) represent a case-rate of 0·01 per 1,000 of the population. The 40 paratyphoid cases (35 of which were indigenous) represent a case-rate of 0·05 per 1,000 of the population.

TABLE IV.

TYPHOID AND PARATYPHOID FEVER.—AGE AND SEX DISTRIBUTION.

Age	Typhoid		Paratyphoid	
	Male	Female	Male	Female
Under 1 Year	—	—	—	—
1 +	—	—	—	—
2 +	—	—	1	4
5 +	—	—	4	4
10 +	—	—	1	4
15 +	1	—	6	4
20 +	2	—	1	7
30 +	2	1	2	—
40 +	—	—	—	1
50 +	1	—	1	—
70 +	—	—	—	—
TOTAL	6	1	16	24

Of these cases none proved fatal.

Port Cases of Typhoid Fever.

During the year six cases of typhoid fever were imported from overseas. None of these cases is included in Tables III and IV.

Undulant Fever.

Two cases of undulant fever were reported during the year. The source of infection was not traced.

Diphtheria.

During 1940, 2,197 cases of diphtheria were reported, a case-rate of 2.9 per 1,000 of the population. Of these cases, 134 proved fatal, making a fatality rate of 6.1 per 100 cases and a mortality rate of 17.8 per 100,000 of the population.

AGES AT DEATH.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
7	10	14	18	21	56	5	1	...	2	...	...	...	134

AGES OF NOTIFIED CASES.

29	92	153	222	229	839	317	165	99	37	10	3	2	2197
71%						29%							

PERCENTAGE FATALITY AT EACH AGE.

24.1	10.9	9.1	8.1	9.1	6.7	1.6	0.6	...	5.4	...	...	...	6.1
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Scarlet Fever.

During 1940, 1,745 cases of scarlet fever were reported, a case-rate of 2.3 per 1,000 of the population. Of these cases, 3 proved fatal, making a fatality-rate of 0.2 per 100 cases, and a mortality-rate of 0.4 per 100,000 of the population.

AGES AT DEATH.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
...	...	1	1	...	...	...	1	...	...	...	...	...	3

AGES OF NOTIFIED CASES.

15	67	104	135	161	734	296	122	64	29	10	6	2	1,745
27.5%				42.1%		17.0%	13.4%						

PERCENTAGE FATALITY AT EACH AGE.

...	...	0.9	0.8	...	...	...	0.8	...	...	...	...	...	0.2
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE VI.

[illegible]

TABLE VII.

DIPHTHERIA—COMPARATIVE CASE-RATES DURING 1933/40 AMONG THE INOCULATED AND NON-INOCULATED PERSONS IN LIVERPOOL.

Age.	NOT INOCULATED.					INOCULATED.										A.P.T.		
	Non-inoculated population at risk during 8 years 1933/40	Cases of diphtheria in non-inoculated persons during 1933/40	Case-rate per 1,000 p.a.	T.A.F.			M.T. Toxoid.			F.T.			A.P.T.					
				Inoculated population at risk during 8 years 1932/39	Cases of diphtheria during 1933/40	Case-rate per 1,000 p.a.	Inoculated population at risk during 8 years 1932/39	Cases of diphtheria during 1933/40	Case-rate per 1,000 p.a.	Inoculated population at risk during 7 years 1933/39	Cases of diphtheria during 1934/40	Case-rate per 1,000 p.a.	Inoculated population at risk during 5 years 1935/39	Cases of diphtheria during 1936/40	Case-rate per 1,000 p.a.			
Under 1	135,198	213	1·6	47	0	Nil	3	0	Nil	5	0	Nil	7	0	Nil			
1+	128,424	680	5·3	672	0	Nil	106	0	Nil	329	0	Nil	1,331	0	Nil			
2+	123,939	1,286	10·4	1,306	0	Nil	305	0	Nil	615	0	Nil	2,268	1	0·4			
3+	122,146	1,653	18·5	1,885	1	0·5	437	2	4·6	895	0	Nil	2,564	5	1·9			
4+	118,704	1,781	15·0	2,875	3	1·0	579	2	3·4	1,420	1	0·7	3,177	7	2·2			
5+	108,593	2,246	20·7	6,758	6	0·9	818	3	3·7	2,903	4	1·4	7,281	11	1·5			
6+	97,288	1,885	19·5	12,529	13	1·0	1,047	2	1·9	2,910	5	1·7	12,198	32	2·6			
7+	95,344	1,370	14·4	16,499	35	2·1	1,269	3	2·4	2,635	5	1·9	13,061	42	3·2			
8+	101,532	1,072	10·6	17,805	39	2·2	1,510	2	1·3	2,349	5	2·1	10,266	27	2·6			
9+	112,344	946	8·4	18,157	27	1·5	1,647	1	0·6	1,824	0	Nil	5,628	19	3·4			
Total under 10	1,143,512	13,132	11·5	78,533	124	1·6	7,721	15	1·9	15,885	20	1·2	57,781	144	2·5			
10+	5,347,064	5,746	1·7	83,126	98	1·2	17,247	13	0·8	421	1	2·4	2,539	10	3·9			

Inoculation against Scarlet Fever.

TABLE VIII.

NUMBER OF COMPLETED SCARLET FEVER INOCULATIONS.

Where or by whom inoculated.	1927-30	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
INOCULATION CLINICS:											
Carnegie	60	352	508	303	366	332	294	148	104	52	—
Townsend Avenue	—	—	395	323	313	315	244	127	85	63	4
MUNICIPAL HOSPITALS :											
Fazakerley	—	165	197	121	120	99	121	79	92	105	83
Fever Hospitals—North, South and East	—	15	57	7	10	16	26	52	40	48	44
Alder Hey	—	36	111	132	143	98	108	131	123	136	71
Olive Mount	—	—	11	34	61	33	25	38	55	29	7
Other Hospitals	—	—	—	—	—	29	86	71	76	71	54
RESIDENTIAL SCHOOLS	138	26	218	465	478	202	294	108	143	31	—
SCCELLANEOUS	269	178	191	74	45	—	—	—	—	—	—
MEDICAL PRACTITIONERS	15	75	129	105	94	93	57	40	33	21	7
TOTALS	482	847	1817	1564	1630	1217	1255	794	751	556	270
GRAND TOTAL 11,183											

In addition, 197 Schick tests were carried out, of which 26 were positive, and 182 Dick tests, of which 38 were positive.

Measles.

During 1940, 11,046 cases of measles were reported, representing a case-rate of 14·6 per 1,000 of the population. The number of deaths was 143, making a fatality-rate of 1·3 per 100 cases and a mortality-rate of 19·0 per 100,000 of the population.

DEATHS FROM MEASLES.

AGES AT DEATH.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
48	57	19	6	6	6	...	1	...	...	...	...	...	143
AGES OF CASES.													
1,005	1,576	1,666	1,612	1,369	3,364	154	300					11,046	
PERCENTAGE FATALITY AT EACH AGE.													
4.8	3.6	1.1	0.4	0.4	0.2	...	0.3					1.3	

Whooping Cough.

During 1940, 593 cases of whooping cough came to the notice of the Health Department, a figure representing a case-rate of 0.7 per 1,000 of the population. Of these cases 19 proved fatal, corresponding to a death-rate of 2.5 per 100,000 of the population.

Number of Deaths from Whooping Cough at various Age Periods during 1940.							Total Deaths all ages.	Deaths expressed as a Percentage of Total Deaths.						
under 1 year.	1+	2+	3+	4+	5+	10+		under 1 year.	1+	2+	3+	4+	5+	10+
8	5	1	1	2	2	—	19	42	26	5	5	11	11	—

Cerebro-spinal Fever.

TABLE IX.

CEREBRO-SPINAL FEVER—CASES AND DEATHS DURING 1940 AND
NINE PREVIOUS YEARS.

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Cases	57	76	64	69	69	94	94	76	70	468
Deaths	47	47	45	37	33	55	47	37	28	84
Fatality-rate per 100 cases	82.4	61.8	70.3	53.6	48.1	58.5	50.0	48.7	40.0	17.9

Encephalitis Lethargica.

TABLE X.

ENCEPHALITIS LETHARGICA—CASES AND DEATHS DURING 1940 AND
NINE PREVIOUS YEARS.

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
CASES :										
Acute ...	} 35	4	4	7	2	1	0	0	0	0
Chronic ...		17	26	23	23	22	16	18	6	8
DEATHS in										
Acute cases ...	} 26	2	1	4	0	0	0	0	0	0
Chronic cases ...		13	20	9	22	14	5	7	3	28
Fatality-rate per 100 acute cases ...	—	50·0	25·0	57·1	—	—	—	—	—	—

Acute Anterior Poliomyelitis (Infantile Paralysis).

TABLE XI.

ACUTE POLIOMYELITIS—CASES AND DEATHS DURING 1940 AND
NINE PREVIOUS YEARS.

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Cases ...	7	25	10	9	3	15	6	10	10	7
Deaths ...	4	11	3	3	0	1	0	3	1	1
Percentage of deaths to notified cases ...	57·1	44·0	30·0	33·3	—	6·7	—	30·0	10·0	14·3

Influenza and other Respiratory Diseases.

TABLE XII.

DEATHS FROM RESPIRATORY DISEASES (INCLUDING INFLUENZA).

	Yearly average number of deaths.	Percentage proportion to all deaths.	Respiratory death-rate per 1,000 population.	Death-rates compared with the 1871-80 death-rate called 100.
1871-80 ...	2,976	20.2	5.7	100
1881-90 ...	3,251	23.2	5.9	104
1891-1900 ...	3,582	24.6	5.9	104
1901-10 ...	3,299	21.8	4.5	79
1911-20 ...	3,648	27.3	4.7	83
1921-30 ...	2,904	24.7	3.5	61.4
1931... ..	2,397	19.6	2.8	49.1
1932... ..	1,905	16.7	2.2	38.6
1933... ..	2,466	19.8	2.8	49.1
1934... ..	1,792	15.8	2.1	36.8
1935... ..	1,879	16.4	2.2	38.6
1936... ..	1,489	13.3	1.7	29.6
1937... ..	1,591	13.9	1.8	31.6
1938... ..	1,235	11.6	1.4	24.6
1939... ..	1,181	11.2	1.4	24.6
1940... ..	1,688	13.1	2.2	38.6

Dysentery.

During 1940, 14 cases of bacillary dysentery were reported in the city, of which 5 cases were due to Flaxner's bacillus, 5 to Sonne's bacillus, and 4 were due to Amoebic Dysentery.

Diarrhoea and Enteritis.

TABLE XIII.

DIARRHOEA AND ENTERITIS—MORTALITY RATES DURING 1940 AND NINE PREVIOUS YEARS.

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Mortality rate per 1,000 births in year of record and preceding year ...	7.2	7.2	9.2	4.4	5.8	3.7	5.1	3.7	3.2	4.8

TABLE XIV.

SCHOOL CASES OF INFECTIOUS DISEASE DURING 1940

MONTHLY DISTRIBUTION.

DISEASE.	Jan.	Fe b.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Diphtheria ...	52	35	38	54	64	62	79	64	94	150	133	143	968
Scarlet Fever ...	44	35	27	35	62	68	76	41	65	75	107	112	747
Measles ...	7	22	38	62	135	138	358	230	310	257	186	168	1,911
Whooping Cough	—	1	—	2	—	4	4	1	5	9	10	13	49
Chickenpox ...	2	3	—	1	5	1	3	2	5	4	7	7	40
Mumps ...	—	—	—	1	—	—	—	2	—	—	1	2	6
TOTALS ...	105	96	103	155	266	273	520	340	479	495	444	445	3,721

MATERNITY and CHILD WELFARE.

Summary of Vital Statistics for 1940:—

Live births	...	15,016	Live birth rate	...	19·9
Still-births	...	519	Still-birth rate	...	0·7
		Total births	...	15,535	
Infant Mortality rate	...	...	...	...	84
Neo-natal Mortality rate	...	...	...	...	32·1
Maternal Mortality rate	...	...	...	...	2·01

The maternity and child welfare work in this city is very comprehensive. The whole scheme is designed to reduce maternal and infantile mortality and morbidity, and entails not only the harmonious and co-ordinated action of all officially engaged in it, but also active co-operation with all voluntary agencies, medical and social, whose efforts are directed towards the improvement and maintenance of public health.

The maternity and child welfare scheme operative in this city is given in outline in the following pages.

THE MIDWIFERY DEPARTMENT.

In this are included:

- i. The quarterly routine visiting of midwives in their own homes.
- ii. The investigation of all matters connected with the supervision of midwives under the Midwives Acts and the Rules of the Central Midwives Board.
- iii. The visiting of Lying-in Homes registered under the Liverpool Corporation Act, 1921, and Midwives and Maternity Homes Act, 1926, also visiting of Nursing Homes under Nursing Homes Registration Act, 1927, and the Public Health Act, 1936.

During the year, 191 midwives gave the required notice under section 10 of the Midwives Act, 1902, of their intention to practise midwifery in this city.

The number of municipal midwives at the end of 1940 was 55 and 1 temporary midwife.

During the year, the municipal midwives attended:—

Midwifery cases	...	...	...	...	4,564
Maternity cases	...	...	...	...	334

Notification of Live and Still-Births.

A total of 7,017 births (6,874 live births and 143 still-births) were attended by midwives during the year, which represented 44 per cent. of the total (live and still) births notified in the City. The total number of births which took place in institutions was 7,995 (7,613 live births=95·2%, 382 still-births=4·8%).

Statement of Notifications of Live and Still Births received during the year 1940.

	1940.			Still Births percent of total.
	Live Births.	Still Births.	Total.	
Midwives (Municipal)	4,558	106	4,664	2·3
Do. (Independent)	935	21	956	2·2
Medical Attendants	860	35	895	4·1
Liverpool Maternity Hospital.....	1,743	112	1,855	6·4
Transferred Institutions	5,308	242	5,550	4·6
Other Institutions	562	28	590	5·0
District Homes	1,381	16	1,397	1·2
	15,347	560	15,907	3·6

The number of still-births notified was 560*, of which number 143 were notified by midwives. Enquiries were made into the circumstances of all still-births, and the number of visits paid was 484.

Routine Visits to Midwives.

During the year, 1,293 visits were paid to the homes of practising midwives for the purpose of inspection, and for special enquiries relating to their work.

* The total number of registered still-births during the year 1940 was 519 (see page 3).

Medical Assistance.

Under the rules of the Central Midwives Board, a midwife must advise that medical assistance shall be called in where there is any abnormal circumstance connected with the confinement.

The following table gives the details of the complications for which medical aid was advised by midwives, the total number of medical records being 2,533.

Mother—

Obstructed labour, uterine inertia or requiring instrumental assistance	450
Ruptured perinæum	640
Ante-partum hæmorrhage	146
Pyrexia	155
Ante-natal treatment	50
Abortion or miscarriage	134
Post-partum hæmorrhage... ..	77
Retained placenta or membranes	37
Varicose veins—inflamed legs, etc. (not A.N.)	26
Abnormal presentation	13
Various	158
	1,886

Child—

Feebleness and prematurity	130
Ophthalmia	298
Other conditions in child	239
	667
Total	2,553

Claims for Fees from Medical Practitioners in Emergency Cases.

During the year, 2,211 visits and re-visits were paid in regard to these accounts.

During the year the total number of occasions on which the services of a consultant obstetrician in connection with cases of puerperal fever, puerperal pyrexia or complications during pregnancy were requisitioned was 6.

Four municipal midwives were suspended from practice in order to prevent the spread of infection.

Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926 and 1928.

The number of cases of puerperal pyrexia notified during the year was 307. Of these cases 268 were admitted to or occurred in hospitals, and 39 occurred in the practice of midwives, and in 12 cases nurses were provided.

Maternal Mortality.

TABLE SHOWING THE NUMBER OF LIVE AND STILL BIRTHS REGISTERED IN THE CITY, TOGETHER WITH MATERNAL DEATHS AND MATERNAL DEATH RATES, FOR THE YEARS 1930 TO 1940.

BIRTHS REGISTERED.				MATERNAL MORTALITY.					
				Puerperal Fever.		Other Puerperal Causes.		Total.	
Year.	Live Births.	Still Births.	Total Births.	Deaths.	Rate per 1,000 total births.	Deaths.	Rate per 1,000 total births.	Deaths.	Rate per 1,000 total (live and still) births.
1930	18,881	774	19,655	16	0·81	59	3·00	75	3·81
1931	18,626	722	19,348	20	1·03	35	1·81	55	2·84
1932	18,149	827	18,976	16	0·84	35	1·85	51	2·69
1933	16,929	680	17,609	29	1·65	31	1·76	60	3·41
1934	17,593	685	18,278	25	1·37	26	1·42	51	2·79
1935	17,347	749	18,096	29	1·60	30	1·66	59	3·26
1936	17,403	708	18,111	20	1·10	44	2·43	64	3·53
1937	16,728	618	17,346	10	0·58	30	1·73	40	2·31
1938	16,175	639	16,814	11	0·65	22	1·31	33	1·96
1939	15,614	631	16,245	5	0·32	24	1·54	29	1·86
1940	15,016	519	15,535	7	0·45	24	1·56	31	2·01

Special Investigation of Maternal Deaths.

Towards the end of 1928, a form of inquiry was issued by the Ministry of Health Maternal Mortality Committee, on which information in regard to every maternal death is collected from medical practitioners, hospitals, clinics, midwives and health visitors, and forwarded to the Ministry of Health.

As a result of these continued inquiries it was found that during the year 1940, 44 deaths occurred owing to pregnancy, child birth or concurrent diseases, such as heart disease or lung disease associated with pregnancy.

CLASS I:—DEATHS DIRECTLY DUE TO CHILDBEARING.									1940.
1.	Puerperal Sepsis.	...	...	...	...	...	...	...	8
2.	Toxaemia (not eclampsia)	...	...	...	...	...	...	...	2
3.	Eclampsia	...	...	...	...	...	...	...	3
4.	Haemorrhage	...	...	...	...	...	...	...	8
5.	Shock	...	...	...	...	...	...	...	5
6.	Embolism	...	...	...	...	...	...	...	2
7.	Ectopic gestation	...	...	...	...	...	...	...	0
8.	Dystocia	...	...	...	...	...	...	...	0
									—
									28
CLASS II:—DEATHS NOT PRIMARILY DUE TO PREGNANCY.									
1.	Pneumonia	...	...	...	...	...	...	...	3
2.	Cardiac disease	...	...	...	...	...	...	...	6
3.	Chronic renal disease	...	...	...	...	...	...	...	1
4.	Pulmonary Tuberculosis	...	...	...	...	...	...	...	2
5.	Unclassified	...	...	...	...	...	...	...	4
									—
									16

Ophthalmia Neonatorum.

Inflammation in the eyes of the newly-born.—The definition adopted for the purpose of dealing with this disease is that used in the rules

issued by the Central Midwives Board, governing the practice of midwives, namely, in the section relating to the child, "Inflammation of, or discharge from, the eyes, however slight." It is considered advisable, therefore, to include inflammation of all degrees of severity in the term "Ophthalmia Neonatorum." The following figures give some details as to the source of information and character of the cases dealt with during the year:—

The number of cases brought to the notice of the department during the year was 711, which consisted of:—

Mild cases	...	...	...	...	...	...	640
Severe cases	...	...	...	...	...	...	71
Total							711

These cases were dealt with as follows:—

Number treated in the homes by special nurse	...	...	253
„ attended at hospital as out-patients and treated by special nurse	...	...	94
„ admitted to hospital	...	...	20
„ treated by medical attendants and special nurse	...	...	87
„ treated by medical attendants alone	...	...	203
„ treated and cured in hospital	...	...	42
„ removed from district	...	...	12
			711
„ of cases brought forward from previous year	...	...	40
Total			751

Number of cases cured	...	...	724
„ died under treatment	...	...	4
„ under treatment at 31/12/1940	...	...	10
„ removed from district	...	...	12
„ sight lost	...	...	1
			751

In addition to the above, 22 cases notified were not cases of ophthalmia neonatorum.

Arrangements have been made with the City Bacteriologist to examine the discharge in every notified case of inflamed eyes in the newly-born. This enables a prompt verification of the disease to be determined.

No. of notifications.	Cases from which specimens were examined by the City Bacteriologist and at St. Paul's Hospital.	No. of cases of positive Gonorrhoea.	Percentage to total cases examined.	Percentage to total notifications.
711	44	9	20.5	1.3

The total number of visits and re-visits paid in respect of the above cases was 4,685. During the year 20 babies were admitted to the City Hospitals.

Nursing Homes.

During the year two applications for registration were received by the Town Clerk. After careful investigation of the premises and practices of the applicants, these were approved and registered by the Hospitals and Port Health Committee. Two registrations were cancelled throughout the year, one at the Keeper's own request and the other because of damage by enemy action.

The Nursing Homes on the register at the end of the year numbered 30, the approximate number of beds being 253. Babies born in Nursing Homes numbered 547, including 8 twin births.

Visits of the Staff of the Midwifery Department to Special Cases.

These cases are not classifiable in any of the sections so far considered and include visits to women suffering from venereal disease, visits paid to cases of puerperal pyrexia and puerperal sepsis, cases of weaning, maternal mortality, etc. Such visits during 1940 numbered 403.

THE HEALTH VISITORS' DEPARTMENT.

This work is carried out by a staff of trained health visitors and comprises the following:—

- (1) Attendance at Maternity and Child Welfare Centres.
- (2) Home visiting under the Public Health Act, 1936.

(3) Special visits to cases of—

- (a) Measles, whooping cough and pneumonia.
- (b) Infantile diarrhoea.

(4) Other special visits in connection with matters relating to health and welfare.

Ante-Natal Clinics.

Experience has shown that conditions productive of a high rate of mortality among mothers point also to a high rate of morbidity, which is, unfortunately, not calculable by available statistics. Among the arrangements for the care and supervision of expectant motherhood ante-natal clinics have a prominent place.

In Liverpool there are 23 centres at which 59 ante-natal clinics are held weekly. Of these clinics, 16 are under the auspices of the Liverpool Maternity Hospital, two are held at the Royal Infirmary, four at Walton Hospital, five at Mill Road Infirmary, three at Smithdown Road Hospital, three are administered by the Child Welfare Association, and the remaining 26 by the Maternity and Child Welfare Sub-Committee. At the ante-natal clinics, specialised examination is provided, for the most part, by consultant obstetricians

Demonstrations and talks to mothers are held at the ante-natal clinics in rotation.

Patients in need of treatment are referred to private medical practitioners or, if necessary, to a suitable hospital. Milk is provided for expectant mothers on a doctor's order.

Expectant mothers come to the clinics from many sources, as will be seen by the following table:—

Number of voluntary attendances	...	...	...	4,299
„ sent by midwives	...	...	...	4,037
„ recommended by friends	...	...	...	1,362
„ of return cases	...	...	...	3,620
„ sent by medical practitioners	...	...	...	1,476
„ „ health visitors	...	...	...	165
„ „ hospitals	...	...	...	668
„ „ relieving officers	...	..	...	40

Total attendances—

Under 1 year of age	...	...	...	...	...	79,514
Aged 1-5 years	...	...	...	...	...	26,944
						106,458

There are 19 centres at which 48 sessions are held per week, and the attendances amounted to 57 per cent. of the births notified.

The Health Visitors' Work carried out in the Homes.

Visiting in the homes is carried out under the Public Health Act, 1936, and are continued periodically, whether the child attends a clinic or not. Notes are made on the general progress and children are referred for appropriate treatment for defects, when required.

All notified cases of measles, whooping cough and pneumonia nursed at home are visited by members of the health visiting staff. Appropriate assistance is given, either in the actual nursing of the child or in arranging for its efficient isolation from other members of the family.

During 1940, 415 children under five years of age were referred for special treatment to the school medical department as follows:—

Defective vision	...	...	...	...	...	247
Otorrhœa	...	...	...	...	...	60
Orthopædic defects	...	...	...	...	...	108

Statistics relating to Home Visits.

Visits to expectant mothers by health visitors	...	...	11,533
--	-----	-----	--------

Visits under the Notification of Births Act, 1915, and Public Health Act, 1936.

Number of births visited during the year	...	...	15,429
Re-visits to births during the year	...	...	61,298
„ infants of 1 year to 5 years of age	...	...	67,364

Visits paid to homes of nurse children under the Public Health Act, 1936, and Children and Young Persons Act, 1932

...	...	...	...	...	...	903
-----	-----	-----	-----	-----	-----	-----

*After-care visits to children under one year of age
discharged from Municipal Hospitals—*

Visits to 425 cases from Alder Hey Hospital	1,130
„ 128 cases from Olive Mount Hospital	355

Visits to cases of infectious disease, etc.—

Visits to cases of measles (first visits, 11,779)	17,294
„ „ „ „ whooping cough (first visits, 36)	103
„ „ „ „ pneumonia	825
„ „ „ „ infantile diarrhoea	362

Child Life Protection.

**Administration of Children and Young Persons Act, 1932, and Public
Health Act, 1936, Sections 206 to 220.**

(a) Number of persons receiving children for reward on the Register at the end of the year 1940	54
(b) Number of children on the Register.	
(1) at the end of the year	86
(2) who died during the year (in homes)	3
(3) in hospitals	nil
(4) on whom inquests were held during the year..	nil
(c) Proceedings taken during the year	nil

Neo-natal Mortality.

During the year the number of deaths of children of Liverpool residents under 28 days old (Neo-natal Deaths) amounted to 482, equal to a rate of 32 per 1,000 live births registered.

Special enquiry was made into the deaths of all these newly-born children, i.e., those under 28 days old.

Deaths from Diarrhoea and Enteritis.

Results of Enquiry.

Enquiries were made into the 150 deaths of children under 2 years of age recorded during the year 1940. In a few instances, the parents could not be traced. In 22 cases, there was a prominent history of wasting or marasmus; in 21 there were respiratory complications; congenital abnormality accounted for 2 deaths, in 13 cases the infant was known to have been premature and in 21 other cases there was

associated disease. In 5 instances where death was ascribed to enteritis there was no diarrhoea.

Eleven deaths were of infants under 28 days old (neo-natal deaths), the ages being as follows:—

Under 7 days	...	...	...	...	...	nil
7 days and under 14 days	...	...	...	...	...	1
14 days and under 21 days	...	...	...	...	...	7
21 days and under 28 days	...	...	...	...	...	3

Acute intestinal infections are uncommon at these early ages when the child is usually breast-fed.

Social Conditions.—Eleven of the children who died were illegitimate. In 32 cases the home conditions and storage of food were unsuitable.

Methods of feeding.—Classified according to feeding, the cases were:

Entirely breast-fed	...	...	...	...	...	19
Breast and artificial feeds at time of death	...	...	...	...	...	4
*Previously breast-fed, but artificially fed at time of death...	...	...	...	...	...	105
Artificially fed entirely	...	...	...	...	...	8
No history obtainable or inadequate information	...	...	...	...	...	14

*41 of these cases were breast-fed for one month or less.

Carnegie Welfare Centre.

Child welfare clinics are held on three afternoons per week, and two ante-natal clinics are held each week.

The Observation Wards were closed during 1940.

Dental Clinics.

Seven Dental Clinics are held weekly for expectant mothers, nursing mothers and children up to five years of age. Six of these clinics are municipal and one is a voluntary clinic.

Attendances at all clinics—

New cases	...	...	...	...	...	620
Ante-natal and post-natal mothers	...	...	...	...	...	1,398
Children	...	...	...	...	...	110
Number of extractions...	...	...	...	...	...	3,486
Total attendances	...	...	...	...	...	1,766

Voluntary Day Nursery.

The Adam Cliff Day Nursery re-opened in July, 1940, with accommodation for 35 children. During the remainder of the year the total number of admissions was 1,414.

TUBERCULOSIS.

Notification.

Public Health (Tuberculosis) Regulations, 1930.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD FROM 1ST JANUARY, 1940,
TO 31ST DECEMBER, 1940:—

TABLE I.

Age-periods.	Notifications on Schedule A.											Total Notifica- tions on Form A. (includ- ing dupli- cates.)	
	Number of Primary Notifications of New Cases of Tuberculosis.												
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-		Total Primary Notifica- tions.
Pulmonary—													
Males	2	12	16	15	63	109	197	142	144	66	23	789	956
Females	2	10	6	14	98	125	135	64	37	23	8	522	655
Non-Pulmonary—													
Males	6	26	24	13	25	10	12	5	3	7	1	132	150
Females	6	21	13	17	26	24	17	10	3	2	3	142	168

Out of a total of 1,311 primary notifications of pulmonary tuberculosis 906 were received from private and 405 from hospital practitioners, whilst in the case of non-pulmonary tuberculosis these figures are 102 and 172 respectively, forming a total of 274.

The Notification and Dispensary Registers.

In Table II is shown the number of cases on the notification and dispensary registers at the end of the year, the difference (2,837) between the figures for the respective registers representing the number of patients who, for various reasons, discontinued public treatment under this authority before reaching the "cured" stage. A few notified cases are also included in which the patients have refused to make use of the treatment facilities which are available.

TABLE II

	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Totals.
	Males.	Females.	Males.	Females.	
Number of cases on the Notification Register ...	2,506	2,299	834	891	6,530
Number of established cases on the Dispensary Register	1,549	1,254	446	444	3,693
Difference	957	1,045	388	447	2,837

In Table III is given an analysis of the 2,837 persons whose names are on the notification register but are not on the dispensary register, according to the latest information concerning them.

TABLE III

	Pulmonary Tuberculosis.						Non-Pulmonary Tuberculosis.						Totals.
	Males.			Females.			Males.			Females.			
	State of the Disease.						State of the Disease.						
Whereabouts Known.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	
Totals	36	196	725	44	202	799	23	154	211	39	205	203	2,837

Tuberculosis Clinics and Dispensary System.

During 1940 the Tuberculosis Officers have conducted 3,005 consultations either at the Tuberculosis Clinics, or in the patients' homes, in addition to which 1,257 other reports on cases have been rendered to medical practitioners.

A statistical summary of the work of the Tuberculosis Clinics, so far as all cases on the dispensary registers are concerned, is given in Table IV, and in addition there are included a few statistics of a general nature.

TABLE IV.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY				TOTAL.				GRAND TOTAL.	
	Adults.		Children		Adults.		Children		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts):														
(a) Definitely tuberculous ...	488	326	22	23	42	65	57	54	530	391	79	77	1,077	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	32	20	18	7	72	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	590	213	116	104	1,023	
B.—CONTACTS examined during the year:—														
(a) Definitely tuberculous ...	1	4	—	1	—	—	1	1	1	4	1	2	8	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	—	—	—	—	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	17	47	58	58	180	
C.—CASES written off the Dispensary Register as:—														
(a) Recovered ...	86	41	18	15	28	27	29	23	114	68	47	38	267	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) ...	—	—	—	—	—	—	—	—	607	260	174	162	1,203	
D.—NUMBER OF CASES ON Dispensary Register on Dec. 31st														
(a) Definitely tuberculous ...	1,369	1,098	180	156	174	237	272	207	1,549	1,254	446	444	3,693	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	32	20	13	7	72	
1. Number of cases on Dispensary Register on January 1st ...				4,253	2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years ...								361	
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" ...				929	4. Cases written off during the year as Dead (all causes) ...								810	
5. Number of attendances at the Dispensary (including Contacts) ...				10,779	6. Number of Insured Persons under Domiciliary Treatment on the 31st December								1,286	
7. Number of consultations with medical practitioners:—					8. Number of visits by Tuberculosis Officers to homes (including personal consultations) ...								686	
(a) Personal ...				11										
(b) Other ...				3,005*										
9. Number of visits by Nurses or Health Visitors to homes of patients ...				18,112	10. Number of:—									
					(a) Specimens of sputum, etc., examined								2,392	
					(b) X-ray examinations made in connection with Dispensary work. ...								1,364	
11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above... ..				6	12. Number of "T.B. plus" cases on Dispensary Register on December 31st ...								1,504	

* In addition to 3,005 consultations, 1,257 reports concerning patients were sent to medical practitioners

General Remarks.

The city death rates for the year 1940 for pulmonary and non-pulmonary tuberculosis are 1.01 and 0.16 per 1,000 respectively, making a total of 1.17 per 1,000 for all forms of the disease: a regrettable return to the figure obtaining in 1934. An analysis of unnotified cases of tuberculosis is given in Table IX.

Examination of primary notification returns for Pulmonary Tuberculosis would appear to indicate the commencement of a rise in incidence which although expected is as yet little more than perceptible. Though it is at present too early to expect anything like reliable figures on which to base any conclusions it is, nevertheless, reasonable to anticipate that certain factors incidental to war time will have their bearing on the incidence and mortality of Tuberculosis. This incidence and mortality in the civilian population may be expected to be adversely affected by the following factors:—

- (1) Nutritional—Reduction of Proteins, Fats and Sugar in diet.
- (2) Physical—Fatigue due to overwork combined with blackout and inadequate ventilation.
- (3) Economic—Privation due to reduced income and, conversely, high wages in war production inducing tuberculous patients to return to work, against medical advice and before quiescence has been consolidated, with consequent disastrous results.

On the other hand, what may be termed the "service" population may be expected to produce many fewer cases of pulmonary tuberculosis than in the last war for the following reasons:—

- (1) Recruits for the Navy, Army and Air Force are selected lives, more particularly so as the operation of the Public Health Regulations, 1940 (see below) has led to close co-operation between medical boards and the tuberculosis services, thus tending to preclude the enlistment of actual or potential cases of tuberculosis.
- (2) Standards of nutrition and general hygiene are higher in the fighting services than amongst the civilian community during war.
- (3) Present conditions of warfare, so far as British forces are concerned up to the present, are much more "sheltered" than in

previous campaigns (e.g., absence of static warfare with the exposure incidental to trench life).

EXAMINATION OF RECRUITS.—For the purpose of precluding the enlistment of men suffering from tuberculosis the services of the tuberculosis officers are now at the disposal of the medical boards set up under the National Service (Armed Forces) Act, 1939. For this purpose the tuberculosis officers have examined 705 men and submitted appropriate reports at the request of the Ministry of Labour.

The Public Health (Tuberculosis) Regulations of 1940 also require the tuberculosis officers to furnish automatically certain reports giving particulars of all male persons, of ages specified from time to time, who are known to the tuberculosis department to be suffering, or have suffered, from tuberculosis and 343 such reports have been rendered.

AIR RAID SHELTERS. With a view to reducing the risk of spread of infection by open cases of pulmonary tuberculosis using public air raid shelters, appropriate instructions have been embodied in pamphlet form for distribution amongst all patients under supervision at the Tuberculosis Clinics.

MILK. It was not found necessary during the year to take any action under the Public Health (Prevention of Tuberculosis Regulations) 1925 or Public Health Act, 1936, Section 172.

RADIOLOGY. During the year 1,445 cases have been the subject of radiological examination at Walton Hospital in connection with diagnostic work at the Tuberculosis Clinics. Investigation or treatment at the sanatoria has also entailed 2,110 radiographs and 3,521 screenings.

LIGHT THERAPY. In accordance with existing arrangements 3,364 treatments by Ultra Violet Rays were carried out at Belmont Road Hospital. The conditions treated included Lupus Vulgaris, Lupoid Acne, Lupoid Cystosis and Tubercular Cervical and Mesenteric Glands.

CONTACTS. During the year the tuberculosis officers examined 188 persons who were known to have been in contact with infectious cases of pulmonary tuberculosis and found evidence of disease in 8, or 4.15 per cent. The number of children examined in connection with contact work was much reduced by evacuation.

WALTON HOSPITAL. This hospital has continued to receive tuberculosis cases, and the accommodation for female patients has been severely taxed. A considerable amount of active treatment has been afforded here and the surgical department in particular has given much valuable assistance in certain cases and a large number of phrenic nerve operations have been performed. Medical treatment has included the use of Gold Salts, Tuberculin, Plastic Beds, Transpulmin Calcium Gluconate, etc. All cases which are considered suitable for sanatorium treatment are transferred as soon as appropriate accommodation arises.

TABLE V.

PATIENTS UNDER DISPENSARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males	4	—	4	} 6
	Females	2	—	2	
NON-INSURED PERSONS	Male Adults	8	2	10	} 112
	Female Adults	46	5	51	
	Male Children*	8	17	25	
	Female Children*	12	14	26	
TOTALS ...		80	38	118	

* Under 15 years of age.

TABLE VI.

PATIENTS NOT NEEDING TREATMENT WHO WERE UNDER DISPENSARY SUPERVISION AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males	351	88	439	} 692
	Females	164	89	253	
NON-INSURED PERSONS	Male Adults	85	30	115	} 952
	Female Adults	198	71	269	
	Male Children*	122	202	324	
	Female Children*	95	149	244	
TOTALS ...		1015	629	1644	

* Under 15 years of age.

Home Nursing.

The domiciliary nursing of both pulmonary and non-pulmonary cases continues to be carried out by the Liverpool Queen Victoria District Nursing Association in accordance with the existing agreement. During the year, 89 pulmonary and 60 non-pulmonary cases were nursed in their homes, and to these cases 5,391 visits were paid. The Garston and Grassendale Nursing Association and the Woolton and District Nursing Society have dealt with cases outside the area supplied by the District Nursing Association.

Domiciliary Treatment.

At the end of the year, 1,286 patients remained under domiciliary treatment of whom 899 were persons insured under the National Health Insurance Act, and in receipt of treatment from their panel doctors and 387 were not insured and were under the treatment of District Medical Officers or doctors of their own choice. The domiciliary reports received relating to insured persons numbered 1,507. Table VII shows the position at the end of the year.

TABLE VII.

PATIENTS UNDER DOMICILIARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.
INSURED PERSONS	Males	551	20	571
	Females	297	31	328
NON-INSURED PERSONS	Male Adults ...	132	15	147
	Female Adults ...	189	21	210
	Male Children*	9	10	19
	Female Children*	8	3	11
TOTALS ...		1186	100	1286

* Under 15 years of age.

Co-operation.

During the year, 1,144 reports were rendered by the Tuberculosis Officers in respect of school children, and as a result of co-operation with the School Medical Department, a number of non-pulmonary cases were referred for treatment at the special orthopædic clinics.

Many cases have also been seen at the request of organisations, such as the Liverpool Personal Service Society, Child Welfare Association, etc.

Silicosis and Asbestosis Scheme (1931).

The tuberculosis officers continue to examine workmen under this scheme, and reports are rendered to the Chief Medical Officer (Silicosis and Asbestosis Scheme).

Dental Treatment.

A considerable amount of dental work is carried out at the Sanatoria, the following operations having been performed during 1940:—

Extractions under anæsthesia	...	...	...	559
Fillings and scalings	...	...	...	92
Miscellaneous	...	...	...	127

Special Treatment.

Summary of other special forms of treatment carried out at the Sanatoria during the year:—

Artificial Pneumothorax (New inductions)	...	69
*Artificial Pneumothorax Refills	...	5,808
Cases treated by Gold Injections	...	137
„ „ „ other methods	...	178
Thoracic Operations, including Phrenicectomy, Thoracoscopy, Bronchography, Thoracoplasty, etc.	...	32
Laryngological Operations	...	6
Other Operations	...	8

*Includes cases treated at Liverpool Chest Hospital.

After-Care.

The after-care arrangements in force are as follows:—

- (1) The periodic examination by the Tuberculosis Officers of all cases under public medical treatment.
- (2) Visits paid to patients in their homes by the Tuberculosis Visitors attached to the Tuberculosis Clinics.

(3) Visits paid to patients in their homes by the nurses of the Queen Victoria District Nursing Association and certain voluntary organisations.

(4) The reference of cases presenting peculiar difficulties to voluntary associations, such as the Child Welfare Association, the Personal Service Society, etc.

During the year Tuberculosis Visitors attached to the clinics and Sanitary Inspectors made 12,721 such visits. All these visits are the subject of reports to the Tuberculosis Officer concerned. The domiciliary visits of the nurses of the Queen Victoria District Nursing Association, to the number of 5,391, have already been referred to.

Non-Pulmonary Tuberculosis.

TABLE VIII

NON-PULMONARY TUBERCULOSIS DEATHS.

1940.	Tuberculous Meningitis.	Bones and Joints.	Abdominal.	Peripheral glands.	Other Organs.	Totals.
Males.....	7	7	4	1	6	25
Females	8	4	13	2	5	32
Children	43	4	6	1	11	65
Totals.....	58	15	23	4	22	122

Notification and Deaths.

During the year 69 persons within the city died from tuberculosis without notification having been effected prior to death. The result of enquiry into the reasons for such failure to notify are summarised in Table IX.

TABLE IX.

DISEASE.	Reasons for Non-notification of Persons who died within the City.								Inward Transferable deaths referred by the Registrar General.		TOTAL DEATHS (All Forms)
	No. of Persons who died within the City.	No. of Cases not notified before death.	Diagnosis made at a Post-mortem Examination.	Diagnosis delayed owing to Clinical difficulties.	Doctor thought case had been notified by another Practitioner.	Notification forgotten.	Patient died before notification could be effected.	Notified to Liverpool before death.	Not notified.*		
			Includes Coroner's Cases.								
Pulmonary Tuberculosis ...	60	37 5.6%	15 2.3%	4 0.6%	10 1.5%	4 0.6%	4 0.6%	91	7	758	
Non-Pulmonary Tuberculosis	114	32 28%	13 11.4%	10 8.7%	2 1.7%	3 2.6%	4 3.5%	8	0	124	

• A number of these cases may have been notified to the Authorities of the Areas in which death took place and the increase in Inward Transferable Deaths is, no doubt, due largely to the evacuation.

Deaths from Tuberculosis.

The number of deaths from pulmonary tuberculosis and from non-pulmonary tuberculosis in Liverpool from 1931 to 1940, together with the number of new cases notified and the death rates which prevailed in England and Wales are given in Tables X and XI where case rates for Liverpool are also shown.

The death rates for Liverpool 1932-1938 have been calculated upon the corrected populations as ascertained by the Census Returns of 1931 and the Registrar General's mid-residential estimate of population for 1940. The death rate for 1940 is calculated upon the Registrar General's estimated population for that year.

TABLE X.

DEATHS FROM PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1931.....	2,358	2.75	989	1.15	0.74
1932.....	2,005	2.33	969	1.14	0.69
1933.....	2,279	2.63	1,009	1.19	0.69
1934.....	1,903	2.20	867	1.03	0.63
1935.....	1,697	1.96	812	0.97	0.60
1936.....	1,645	1.90	713	0.85	0.58
1937.....	1,555	1.79	684	0.82	0.58
1938.....	1,378	1.59	666	0.81	0.53
1939.....	1,213	1.47	647	0.81	0.54
1940.....	1,311	1.73	761	1.01	0.59

TABLE XI.

DEATHS FROM NON-PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1931.....	719	0·84	164	0·19	0·15
1932.....	672	0·77	170	0·20	0·15
1933.....	654	0·75	148	0·17	0·13
1934.....	585	0·67	129	0·15	0·13
1935.....	502	0·58	123	0·15	0·11
1936.....	445	0·51	126	0·15	0·11
1937.....	388	0·45	112	0·13	0·11
1938.....	386	0·45	103	0·12	0·10
1939.....	317	0·38	99	0·12	0·09
1940.....	274	0·36	122	0·16	0·11

TABLE XII.

AGE PERIODS OF DEATH FROM TUBERCULOSIS DURING 1940.

Age Periods.	PULMONARY.		NON-PULMONARY.	
	Males.	Females.	Males.	Females.
0—	2	—	7	9
1—	3	2	11	18
5—	3	—	4	10
10—	3	6	5	3
15—	23	56	12	12
20—	50	65	4	2
25—	86	96	7	5
35—	73	52	1	2
45—	96	20	2	1
55—	72	13	1	4
65—	34	6	1	1
TOTALS ...	445	316	55	67

VENEREAL DISEASES.

The Clinics operated by the Corporation during 1940 were:—

Seamen's Dispensary—Males only.

Mill Road Infirmary—Males and Females.

Royal Infirmary—Males and Females.

Edge Lane Hospital—Females only.

The Seamen's Dispensary, Mill Road Clinic and the Royal Infirmary are open all day for treatment of these diseases in the male, while Mill Road Clinic is also open afternoon and evening for females; at the Royal Infirmary and Edge Lane Hospital treatment for females is provided each day at hours convenient to the greatest number of patients.

All cases of venereal diseases requiring in-patient treatment are now concentrated in the special wards at Mill Road Infirmary. Pregnant women suffering from these diseases are confined there and their own health and that of their new born infants is cared for under expert hands. Periodic examinations of the children born and apparently free from disease are arranged. Infected parents are encouraged to attend the clinics until cure is accomplished. Further pregnancies are supervised and prophylactic treatment for congenital syphilis is given throughout.

It is becoming increasingly realised that the infected unit is not the individual but the family and thus whole families are examined, and, if need be, treated as the result of one diagnosed case. The maternity wards in particular of the various hospitals have referred numerous cases to the clinics for treatment, while the ante-natal centres throughout the city have sent many patients for diagnosis and treatment. It is only by a greater development of this co-operation between the health services that the large numbers of women and their families who would otherwise not be treated for this hidden scourge can come under proper treatment.

The following table summarises the work of the Clinics for the year 1940:—

	Seamen's Dis- pensary. Males only.	†Royal Infirmary.		†Mill Road Infirmary Clinic.		†Edge Lane Medical Home. Females only.	TOTAL. Males and Females.
		Males.	Females.	Males.	Females		
New cases	2,884	804	197	685	428	99	5,097
Old and new patients							
Total attendances	27,369	12,735	5,430	9,370	12,107	—	67,011
In-patient days ...	—	—	—	11,081	5,871	6,345	23,297

† Beds for In-patients are reserved at these Institutions.

There was an increase in the number of new patients (5,097 in 1940 compared with 4,126 in 1939), and an increase in in-patient days of treatment (23,297 and 20,300 respectively), but a reduction in the number of attendances (67,011 and 80,155 in 1940 and 1939).

The intensive treatment for syphilis in the first year of infection which has been the routine at the Seamen's Dispensary since 1924 is now practised at all centres in the city. Since November, 1940, the scheme given below has been substituted for the former treatment by Neosalvarsan. The bismuth dosage has remained the same. The course lasts for six weeks, as shown below:—

Day	1	Centigms. Mapharside	4	Centigms. B	20
	4		6		20
	8		4		20
	11		6		20
	15		4		20
	18		6		20
	22		4		20
	29		6		20
	25		4		20
	32		6		20
	36		4		20
	39		6		20

An interval is given for three months and on return the blood is taken for a Wassermann test. All such cases have shown a negative Wassermann at this stage. A further course of six weeks' duration exactly the same as above is given, and a six months' rest from treatment is enjoined. A Wassermann test is taken and the course repeated. Wassermann tests of blood and spinal fluid are continued over a period of five years, and no case has relapsed either clinically or serologically in a period of fifteen years.

Laboratory services for the diagnosis and control of treatment are provided at the City Laboratories, the Thompson Yates Laboratory of the University and the Mill Road Infirmary Laboratory.

At the City Laboratory, Wassermann reaction tests are done three times weekly, rapid diagnosis obviating delay in treatment.

Seamen's Dispensary.

The primary function of this clinic is to provide free and expert treatment for seamen of all nations to act in an advisory capacity to medical officers of ships, ships' captains, and foreign consulates, and to provide a laboratory service for rapid diagnosis. Although the majority of the patients are seamen, other classes of occupation are also dealt with.

The staff consists of three part-time medical officers and four highly trained orderlies.

Excellent results have been recorded both in the treatment of gonorrhœa and of syphilis, and special schemes of treatment particularly suited to the needs of the seafaring population have proved efficient.

During the year under review, 3,314 cases have been advised and treated, of whom 2,884 reported for the first time. Of these, 1,097 were found not to be suffering from venereal disease.

The classification of the cases dealt with at the Seamen's Dispensary for the first time during the year, and also for the five previous years, was as under:—

	1935	1936	1937	1938	1939	1940
Syphilis	380	293	344	337	224	333
Soft chancre	131	115	135	160	105	173
Gonorrhœa	968	987	1,112	1,020	845	1,281
Non-Venereal Cases	780	840	986	1,088	898	1,097
	2,259	2,235	2,577	2,605	2,072	2,884

An analysis of the early cases of venereal disease cases met with at the clinic gives the following result:—

Syphilis	18·6%
Soft chancre	9·7%
Gonorrhœa	71·7%

City of Liverpool.
Deaths from Venereal Disease.

Years.	SYPHILIS.				LOCOMOTOR ATAXY.				GENERAL PARALYSIS OF INSANE.				TOTAL VENEREAL DISEASE.			
	AT AGES—YEARS.															
	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.
1915	43	9	10	62	...	1	10	11	...	10	25	35	43	20	45	108
1916	36	5	1	42	...	1	13	14	...	12	23	35	36	18	37	91
1917	25	12	3	40	...	3	16	19	...	27	43	70	25	42	62	129
1918	37	17	13	67	...	1	19	20	...	34	42	76	37	52	74	163
1919	38	6	4	48	...	4	12	16	...	22	34	56	38	32	50	120
1920	48	8	5	61	...	3	10	13	...	18	24	42	48	29	39	116
1921	41	7	9	57	...	1	16	17	...	18	35	53	41	26	62	127
1922	31	7	10	48	...	2	16	18	...	27	29	56	31	36	55	122
1923	39	5	2	46	...	2	15	17	...	18	29	47	39	25	46	110
1924	29	8	6	43	...	1	15	16	...	15	31	46	29	24	52	105
1925	24	3	8	35	...	...	18	18	...	12	20	32	24	15	46	85
1926	25	...	13	38	...	3	14	17	...	4	25	29	25	7	52	84
1927	14	5	16	35	...	3	11	14	...	8	32	40	14	16	59	89
1928	10	6	12	28	...	1	12	13	...	7	29	36	10	14	53	77
1929	10	3	20	33	...	1	15	16	...	6	20	26	10	10	55	75
1930	10	3	28	41	...	2	9	11	...	7	18	25	10	12	55	77
1931	5	9	26	40	...	1	7	8	...	3	16	19	5	13	49	67
1932	6	3	21	30	...	1	9	10	...	8	24	32	6	12	54	72
1933	4	11	26	41	...	...	20	20	...	7	21	28	4	18	67	89
1934	8	4	25	37	...	...	2	2	...	6	21	27	8	10	48	66
1935	7	4	36	47	...	...	10	10	...	6	18	24	7	10	64	81
1936	4	6	41	51	...	...	14	14	...	4	19	23	4	10	74	88
1937	4	5	39	48	...	1	10	11	...	3	20	23	4	9	69	82
1938	8	6	44	58	...	...	13	13	...	1	15	16	8	7	72	87
1939	3	5	55	63	...	...	8	8	...	...	19	19	3	5	82	90
1940	2	2	48	52	...	1	14	15	...	4	8	12	2	7	70	79

The increase in the deaths under the heading Syphilis is probably due to improved diagnosis in cardio-vascular cases.

INFECTIOUS HOSPITALS and SANATORIA.

During 1940 the hospital accommodation for infectious cases was as follows:—

City Hospital North	...	...	...	...	187 beds
„ South	...	...	...	...	101 „
„ East	...	...	...	...	174 „
„ Fazakerley	...	...	...	...	160 „
„ Fazakerley Annexe	...	...	...	...	155 „
„ Sparrow Hill	...	...	...	...	150 „
Fazakerley Sanatorium	...	...	...	...	182 „
Cleaver Sanatorium	...	...	...	...	200 „
					1309

The following tables, prepared by the medical staff of each of the city hospitals, show the number of patients admitted, the nature of the illness in each case and the results of treatment, during the year 1940:—

DISEASES											
	Remaining Dec. 31st, 1939.	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.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	
City Hospital North, Netherfield Road.											
Scarlet Fever	24	254	5	283	—	—	256	26	—	1	
Diphtheria	68	499	12	579	—	10	414	124	6	31	
Other Diseases	13	230	2	245	—	3	231	7	1	4	
Totals	105	983	19	1,107	—	13	901	157	7	36	

DISEASES.	Remaining Dec. 31st, 1939.	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	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.
City Hospital South, Grafton Street.										
Scarlet fever	—	50	8	58	—	1	38	19	—	—
Diphtheria	—	3	—	3	—	1	2	—	—	—
Measles	—	178	28	206	—	24	181	—	—	1
Observation cases ...	6	21	10	37	—	7	28	2	—	—
Totals	6	252	46	304	—	33	249	21	—	1

City Hospital East, Mill Lane, Old Swan.

Scarlet Fever	26	341	—	367	—	6	320	41	—	—		
Diphtheria	106	596	—	702	—	4	543	127	7	28		
Other Diseases	15	262	—	277	—	3	262	8	1	4		
Totals	147	1,199	—	1,346	—	13	1,125	176	8	32		

City Hospitals, Fazakerley.

Scarlet fever	48	280	34	362	—	22	314	24	—	2		
Enteric fever group ...	9	51	2	62	—	2	56	3	—	1		
Diphtheria	232	964	167	1,363	—	97	863	330	12	73		
Measles	3	259	21	283	—	14	264	—	—	5		
Whooping Cough	—	14	7	21	—	6	15	—	—	—		
Other diseases	142	1,000	104	1,246	—	82	1,057	70	15	37		
Totals	434	2,568	335	3,337	—	223	2,569	427	27	118		

* These admissions include Fazakerley Isolation Hospital—1,141 cases, Fazakerley Annexe—1,236 cases and Sparrow Hall Hospital—960 cases.

DISEASES.	Remaining Dec. 31st, 1939.	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	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.
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Fazakerley Sanatorium.

Tuberculosis	...	...	17	263	224	504	—	166	169	104	—	65
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Cleaver Sanatorium.

Tuberculosis	...	...	179	150	126	455	—	93	101	190	—	71
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Infectious Disease Hospitals and Sanatoria.
Statement of Admissions, Discharges, Deaths, and Transfers.

Hospital or Sanatorium.	Remaining Dec. 31st, 1939.	Admitted	Trans- ferred to	Dis- charged	Trans- ferred from	Died.	Remaining Dec. 31st, 1940.
City Hospitals, Fazakerley	434	2,568	335	2,569	223	118	427
City Hospital North	105	983	19	901	13	36	157
City Hospital East	147	1,199	—	1,125	13	32	176
City Hospital South	6	252	46	249	33	1	21
Fazakerley Sanatorium	17	263	224	169	166	65	104
Cleaver Sanatorium	179	150	126	101	93	71	190
TOTAL	888	5,415	750	5,114	541	323	1,075

**General and Children's Hospitals and other Institutions.
Statement of Admissions, Discharges, Births, Deaths, and Transfers.**

Hospital or Establishment.	Remaining Dec. 30th, 1939.	Admitted.	Trans- ferred to	Born.	Dis- charged.	Trans- ferred from	Died.	Remaining Dec. 28th, 1940.
Administered under the Poor Law Acts :—								
Belmont Road Institution ...	1,370	7,249	753	—	5,423	658	1,692	1,599
Kirkdale Homes ...	1,310	418	567	—	386	235	311	1,363
Olive Mount Children's Hospital ...	205	1,850	762	—	2,060	418	78	261
Cottage Homes, Fazakerley ...	382	54	235	—	148	95	1	427
Shaw Street Boys' Home ...	32	18	29	—	37	1	—	41
Seafield House (Greaves Hall) ...	223	2	—	—	124	2	1	98
Administered under the Public Health Acts :—								
Walton Hospital ...	796	14,018	160	2,196	14,105	266	1,604	1,195
Mill Road Infirmary ...	356	8,857	164	1,458	9,370	334	699	432
Alder Hey Hospital ...	241	6,612	134	—	5,306	727	551	403
Smithdown Road Hospital ...	595	7,937	103	1,597	8,066	496	962	708
TOTAL ...	5,510	47,015	2,907	5,251	45,025	3,232	5,899	6,527
CASUAL WARDS—								
Belmont Road ...	9	2,001	—	—	2,006	—	—	4

MUNICIPAL HOSPITALS and INSTITUTIONS.

The Hospitals and Institutions under the management of the Hospitals and Port Health Committee number 17, in addition to the Port Health Hospital at New Ferry. They may be classified as follows:

(a) Isolation Hospitals and Sanatoria, the property of the Liverpool Corporation prior to 1930	...	...	8
(b) Hospitals transferred under the Local Government Act, 1929, and subsequently appropriated	...	...	5
(c) Hospitals and other Institutions transferred under the Local Government Act, 1929, and not appropriated	...	...	4
Total			17

General Review of Hospital Services.

STRUCTURAL WORK. During 1940, structural work was undertaken only if it was essential for the casualty services. The major schemes were undertaken at Alder Hey and Broadgreen Emergency Hospitals where work was begun in connection with the building of hutment extensions for the accommodation of patients. These additional wards were planned by the Ministry of Health and the expenditure incurred will be a charge on the Emergency Medical Service.

Plans were also prepared for the extension of certain ancillary departments at both hospitals in continuance of the policy of upgrading, described in the Annual Report for 1939.

At Fazakerley Hospital, work was continued on the disinfectant unit.

The shelter programme was continued during the year and attention was given to the protection of casualty receiving units, telephone rooms and other essential parts of the hospitals and institutions.

NORMAL CIVILIAN WORK. During the year under review, heavy demands were made on the hospital accommodation for the treatment of normal civilian sickness. With the development of the Emergency Medical Service increased use was made of the outlying hospitals, which were used mainly for convalescent cases transferred from the City hospitals for completion of their cure. Under the Ministry of Health's schemes the staffing of these hospitals was steadily improved throughout the year in order that they would be able to play a larger part in the treatment of sickness and casualties.

In the last quarter of the year there was a sharp rise in the incidence of cases of diphtheria, but all the cases were admitted promptly to

various City hospitals. No other serious epidemic was encountered during the year.

In keeping with the policy of occupying only the safer parts of the hospital buildings considerable use was made of the out-patient departments.

EMERGENCY MEDICAL SERVICES. The organization of the Emergency Medical Service was extended during the year. Additional specialists, remunerated on a sessional basis by the Ministry of Health, were attached to the casualty receiving hospitals.

Special centres, organized for the treatment of complex types of disease and injury, were established and accommodated, without exception, in the municipal hospitals.

The casualty services, having devoted considerable time to rehearsals and to the completion of their detailed arrangements, were tested during the year. In the earlier part of 1940 some use was made of the hospital facilities for the reception of wounded service patients. Later in the year air raid casualties were treated.

The casualty receiving hospitals were able to deal effectively with all the calls made on their services, and the successful co-ordination of the hospitals and other branches of the casualty services rewarded the staffs for the time spent in practices. The improved staffing and equipment of the hospitals, representing the results of the policy adopted since the Local Government Act of 1929, enabled them to play an efficient part in the treatment of war casualties. The modern treatment of injuries calls for co-operation between the clinical, radiographic, pathological and other branches of the hospital services, a demand which the municipal hospitals were quite competent to fulfil.

STAFFS. The consultant medical staffs were strengthened by the additional appointments already mentioned. The establishments of resident medical staffs for the various hospitals were laid down by the Central Medical War Committee. In order to make the best use of the available medical manpower, and to provide useful training for prospective entrants to the services, newly-qualified practitioners were employed in the municipal hospitals to a much greater extent than in peace time. Considerably greater responsibilities were, consequently, borne by the senior resident medical officers, and the value of these officers was fully demonstrated. It is probable that, in the future, the appointment of such senior staffs in larger numbers than formerly will be an important step in the maintenance of an efficient hospital service.

The nursing staffs of hospitals were supplemented by the Civil Nursing Reserve, comprising trained nurses, assistant nurses and nursing auxiliaries. During the year their usefulness steadily increased and they became an integral part of the hospital staffs. The training of probationer nurses continues on fairly normal lines. Some consideration was given to the salaries of trained staffs, and recommendations for salary increases were submitted and subsequently approved. Conscription caused the departure of several members of the male staff during the year but the training of substitutes made it possible to maintain all the essential services.

Considerable credit is due to the hospital staffs for their work in connection with the treatment of casualties; the excellent results obtained are the best tribute to the enthusiasm and ability of the staffs concerned.

MATERNITY CASES. During the last quarter of 1940 arrangements were completed for the admission of post-natal patients from Walton Hospital to the Hydropathic Hospital, Southport. This arrangement relieved the pressure on the lying-in accommodation at Walton. The unit at Southport was staffed by Walton Hospital. Certain minor structural alterations were undertaken prior to the reception of patients, which began in November.

TUBERCULOSIS. Adult cases of tuberculosis were admitted mainly to the Sanatoria at Fazakerley and Heswall and to the tuberculosis unit at Walton Hospital. Cases of tuberculosis in children were admitted to the William and John Jones Convalescent Home, Rhyl.

Despite the loss of sanatorium beds by the change in user of Broadgreen Sanatorium, in-patient treatment was provided reasonably expeditiously in all appropriate cases.

INFECTIOUS DISEASES. The main problem of the year was caused by the epidemic of diphtheria in the last quarter of 1940 but it was possible to admit all the cases notified to the department. Full use was made of the accommodation at the Fazakerley Group of Hospitals, City Hospital East and Olive Mount Hospital. Some cases were also admitted to the general hospitals and to Alder Hey, this policy being necessitated by the need for restrictions in the use of City Hospital North and City Hospital South owing to the vulnerability of the areas in which these hospitals are situated.

AIR RAID PRECAUTIONS. Reference has already been made to certain of the arrangements made in connection with the casualty services. Fire precautions and decontamination arrangements received further attention during the year. Additional equipment was provided and the training of personnel continued.

DETAILS OF ADMISSIONS, DISCHARGES, ETC., AND WORK UNDERTAKEN AT THE FOUR MUNICIPAL HOSPITALS FOR PERIOD 1938 to 1940.

	WALTON HOSPITAL					SMITHDOWN ROAD HOSPITAL					MILL ROAD INFIRMARY.					ALDER HEY HOSPITAL.				
	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
*Admissions	16,094	16,816	16,995	14,149	14,018	9,777	9,413	9,594	8,191	7,937	9,407	9,540	10,024	9,155	8,857	8,935	10,023	9,713	7,855	6,612
*Transferred to	202	149	195	151	160	180	180	223	153	103	202	169	169	146	164	186	179	155	149	134
*Born	2,570	2,817	2,848	2,334	2,196	1,721	1,651	1,670	1,504	1,597	1,553	1,525	1,603	1,409	1,458	—	—	—	—	—
*Discharged	16,617	17,294	17,478	14,801	14,105	9,602	9,430	9,514	8,308	8,066	10,066	10,070	10,496	9,638	9,370	7,468	8,692	8,459	6,976	5,306
*Transferred from	507	497	484	538	266	830	687	727	759	496	353	406	384	473	334	1,157	757	762	1,000	727
*Died	1,943	2,001	1,972	1,776	1,604	1,284	1,195	1,164	1,031	962	821	784	797	746	699	578	735	658	515	551
Surgical Operations	4,345	5,279	5,468	3,639	4,932	1,308	1,698	1,729	1,793	2,668	3,110	3,144	3,900	3,744	3,631	2,612	2,179	2,327	2,063	2,308
Out-Patient Attendances	62,443	65,216	66,850	62,112	59,799	32,731	39,375	37,733	38,971	43,866	92,595	89,254	85,501	94,941	91,420	43,602	41,744	33,001	49,883	38,820
Pathological Examinations	28,742	27,102	30,098	27,363	25,377	14,619	15,397	20,611	30,288	31,557	24,914	23,607	25,226	23,461	21,917	20,085	26,195	31,600	21,686	20,718
Post-mortems	1,275	1,167	1,067	1,043	1,000	94	79	76	84	88	347	174	191	183	198	158	215	131	121	96
X-Ray Examinations (Radiographs)	23,717	23,788	22,328	21,435	22,278	8,549	8,477	8,079	9,426	8,885	11,975	13,166	14,708	17,924	17,706	9,944	11,650	13,327	10,838	12,243

* These figures correspond with the returns to the Ministry of Health and are made up to the last week-end of each year. This accounts for the slight variation between the figures returned by the respective Hospitals which are for the actual Calendar year.

SANITARY ADMINISTRATION.

During the year, sanitary inspectors made 142,373 inspections and visits for the investigation and abatement of nuisances. 18,936 complaints of nuisances were received as compared with 17,823 the previous year. The total number of nuisances reported was 46,144, and out of this number 2,778 nuisances were outstanding at the end of the year. The number of notices served for the abatement of nuisances was 24,170 informal, and 13,067 statutory, 17 of these being served for the abolition of ashpits, and 3,064 for the provision of dustbins.

In 109 cases legal proceedings were instituted at the City Court for failure to comply with notices served by this department under the Public Health Act, 1936, and other enactments.

Departmental References.

The co-operation which the Public Health Department receives from other departments of the Corporation is fully appreciated, whereby many sanitary defects are brought to notice and dealt with immediately. The number of references received from other departments was 29,167, whilst the number of references to other departments was 4,917.

Infected Houses.

The sanitary inspectors made 8,348 investigations relating to cases of infectious disease, resulting in 8,673 visits to infected houses, and 795 visits to phthisis cases. There were also 20 inquiries made in respect to suspected smallpox contacts.

Closet Accommodation.

There still remain 110 privies and 79 pails on farms and outlying houses in the city where sewers are not reasonably available.

Drain Testing.

Various methods have been employed to test drainage systems when suspected of being defective, and also to ascertain the cause of percolation of water into basements, etc.

During the year 622 drainage systems were tested, 123 by colour test, of which 32 were positive and 91 negative; 247 by smoke rocket test, of which 111 were positive and 136 negative; 252 by smoke machine test, of which 129 were positive and 123 negative. Where defects have been revealed by these tests, repairs have been carried out. In the case of tests of important buildings and offices, as well as dwelling-houses of higher rateable value, the assistance of the City Engineer's Department has been utilised.

Factories and Workplaces Inspection.

Factories Act, 1937, and Public Health Act, 1936.

Factories and Workplaces.—All factories and workplaces are visited by six inspectors appointed under the Act, the various premises being grouped in districts so as to secure the maximum number of visits in the minimum time.

Register of Factories, Section 8 (3).

The total number of factories (including bakehouses) on the register at the end of the year was 6,191.

With mechanical power	3,090
Without mechanical power...	3,101

During the year, 6,012 visits were made to factories, 1,094 in consequence of special complaints to the department, 4,918 in the course of ordinary routine inspection. During these visits 721 defects were found, in respect of which 220 informal notices were issued on owners or occupiers, the defects not remedied at the end of the year being 52.

Register of Workplaces (including Offices).

The number of workplaces on the register at the end of the year was 3,088.

During the year, 1,889 visits were made to workplaces, 862 in respect of offices. There were 156 defects, 32 of which were unsuitable or defective sanitary conveniences, 12 inadequate ventilation, and the remainder want of cleanliness. All defects were remedied during the year.

Outworkers. Factories Act, 1937, Sections 110 and 111.

In accordance with the provisions of the Act, outworkers' returns are received twice yearly, and the premises referred to in the returns are visited to ascertain whether work is carried on in any place which is, in the opinion of the District Council, injurious or dangerous to the health of the persons employed therein.

During the year 114 visits were made to premises by factory inspectors and no instances of employment in unwholesome premises were found.

Rag Flock Acts, 1911 and 1928.

Four visits to two factories in which rag flock is manufactured and 29 visits to premises where rag flock was used, were made, 23 samples of rag flock being taken, all of which were in accordance with the standard of cleanliness required by the rag flock regulations.

Bakehouses.

The number of bakehouses in use at the end of the year was 353, of which 118 were without mechanical power, 14 of these being basement, and 235 with mechanical power, of which 33 were basement bakehouses.

During the year, 1,465 visits were made to bakehouses.

120 informal and 12 statutory notices were issued in respect of want of cleanliness, unsuitable or defective sanitary conveniences, all of which were complied with.

Restaurants and Café Kitchens.

All kitchens in connection with cafés and restaurants are regularly visited, particular attention being paid to the cleanliness of the premises and of the workers employed in the kitchens.

There were 380 in use at the end of the year.

During the year, 1,108 visits were made to restaurant and café kitchens, 45 informal and 16 statutory notices being issued in respect of want of cleanliness, unsuitable or defective sanitary conveniences, accumulation or deposit of refuse in rooms, all of which were complied with.

Licensed Premises.

During the year, 1,266 visits were made to licensed premises and it was found that the conditions under which beer is stored and sold are satisfactory on the whole. Measures have been taken to maintain a good standard of cleanliness.

During these visits 243 defects were found, 86 informal and 26 statutory notices were issued in respect of unsuitable urinals or want of flushing to urinals, insufficient, unsuitable or want of sanitary conveniences for the use of the persons frequenting the premises, also inadequate provision for the cleansing of glasses. 204 defects were not remedied at the end of the year, of which number 189 required structural alterations, 170 of which were carried forward from the previous year, the carrying out of which has been retarded with the outbreak of hostilities.

Offensive Trades.

There were on the register of offensive trades at the end of the year 130 businesses, which is the same number as at the end of the preceding year. 2,540 visits were made to these premises. 92 informal and 16 statutory notices were issued chiefly in connection with cleansing of walls, floors, sanitary conveniences, etc., all of which were complied with.

Fish Friers' Premises.

At the end of the year there were 537 fish friers' premises within the city, and 1,336 visits were made to see that the requirements of the byelaws were carried out. 169 informal notices were issued chiefly in connection with cleansing of floors, walls and ceilings, apparatus, and sanitary conveniences, all of which were complied with.

Furniture Removers.

63 visits were made to the premises of furniture removers, and 119 vans were inspected, three of which were found dirty, and steps were at once taken to have them cleaned.

Employment Agencies.

These premises are controlled by byelaws made under the Liverpool Corporation Act, 1927, and visits are made from time to time to ascertain that the requirements of the byelaws are being carried out. There are at present 38 licensed employment agencies on the register.

Railway Carriages and Fish Arrivals.

During the year 159 visits were made to the main line railway stations within the city to ascertain if the railway carriages and fish arrival platforms were in a clean condition. All were found to be clean.

Shops Acts, 1912 to 1938.

The normal routine visitation of shops throughout the City for purposes connected with the administration of the Shops Acts, and the keeping of a register of shops has been considerably restricted owing to the increased duties performed by Shops Acts Inspectors, who are appointed as Enforcement Officers under the authority of the Minister of Food in connection with the administration of Food Control Orders and Regulations, made from time to time by the Minister.

Visits to shops have been made the occasion of combined enquiries under the Shops Acts and Food Control Orders as the circumstances demanded. As a general rule shopkeepers have carried out the requirements of the Shops Acts in a satisfactory manner, and notwithstanding the additional demands made upon shopkeepers and their staffs by Food Control requirements, the employment of shop assistants and young persons in the distributive trades has conformed well with the provisions of the various enactments.

During the period beginning 17th November, 1940, the general evening closing hours for shops, namely, 9.0 p.m. on the "late" day (Saturday) and 8.0 p.m. on other days in the week, were curtailed to 7.30 p.m. on the "late" day and 6.0 p.m. on other days in the week, by the operation of Defence Regulation 60A. The Liverpool (Hours of Closing) Order, 1940 (No. 2), made by the City Council on 4th December, under the above Regulation, further curtailed the general evening closing hour on the "late" day from 7.30 p.m. to 6.0 p.m., and by this means shops were required to close at 6.0 p.m. on every day in the week. The obligation of shopkeepers to close their shops at 1.0 p.m. on the weekly half-holiday was not affected thereby.

During the operation of restricted trading hours many shops of all kinds closed before the compulsory closing hour, and on the shorter days some shops were closed at 5.0 p.m. No contraventions were reported during this period.

Enquiries with reference to the prohibition of the employment of women after child-birth have been made by a female inspector in accordance with the requirements of the Public Health Act, 1936, Section 105, in addition to her other duties, 140 visits having been made to factories within the City to ensure that the necessary requirements of the Act are complied with.

Particulars of Visits and Inspections.

SHOPS ACTS.

The total number of visits to shops under the Shops Acts during the year was 170,051, and 208 special complaints were investigated under the various enactments. The number of shops registered during the year was 3,063. In connection with weekly half-holiday closing, 100,578 visits were made and 47,071 visits with respect to evening closing, whilst the visits on Sunday amounted to 17,527. Re-visits in connection with contraventions totalled 1,186, calls incidental to the Shops Acts were 390, and 28 premises were visited concerning nuisances dealt with under the Public Health Acts.

Informations were laid in 32 cases, 27 defendants being convicted, and 5 discharged with a caution, the fines inflicted amounting to £13 15s. 0d. and the costs awarded were £1 19s. 0d.

Warning letters were sent in 302 instances for minor offences.

Food Control.

The total number of visits made by Enforcement Inspectors during the year was 13,026, and 252 complaints were investigated, of these 101 were found to be justified, and 151 not justified.

The number of cases in which informations were laid was 137, and of these 2 were withdrawn, 11 discharged with a caution, and fines imposed in 124 cases. The fines totalled £259 5s. 0d. and the costs allowed were £2 6s. 0d.

Picturedromes.

At the request of the Licensing Justices, officers of the Public Health Department systematically visit all picturedromes and theatres to see that the means provided for the ventilation of the auditorium are in use, attention also being directed to the condition of the sanitary

conveniences, provision of seats for the attendants, the general cleanliness of the premises, and the water supply. During the year there were 389 night visits, a day inspection being also made so that closer attention may be given to the examination of the sanitary conveniences. In 17 cases minor defects were observed and these were remedied on the attention of the managers being called thereto.

Premises, etc., controlled by Byelaws and Regulations.

Common Lodging Houses.

At the commencement of the year 1940, there were on the register 41 lodging houses providing accommodation for 2,751 lodgers. During the year 3 houses were removed from the register of which all were voluntary.

During the year 38 applications were received from persons for the renewal of registration as keepers, of which number all were granted for a further period of twelve months.

In 55 cases informal action was taken for infringements of the byelaws relating to defects in sanitary fittings and pavings, windows requiring cleansing or reglazing, verminous bedding, choked wastepipes, gullies and water closet basins, floors not swept or washed, and slops not emptied. In all cases the requirements were complied with.

No informations were laid against keepers during the year.

There were on the register 38 houses accommodating 2,193 males, and 7 accommodating 353 females. The number of day visits to these houses was 950.

Inspection of Houses Let-in-lodgings.—On the 1st January, 1940, there were 14,266 houses on the register. During the year 48 houses were removed owing to demolition.

The number of visits made during the year was 2,735, in 48 instances the floors and staircases were found dirty, and on revisiting were found to have been cleansed.

Canal Boats.

Public Health Act, 1936. Part X. Sections 249 to 258.

The Leeds and Liverpool Canal Company are the proprietors of the only canal having direct communication with Liverpool, and the length of the waterway within the city, exclusive of the locks which lead to the docks, is about three miles.

The number of inspections of canal boats during the year was 1,288, and the condition of the boats and their occupants as regards matters dealt with in the Act and Regulations is indicated as follows:—

The number of boats on the register on January 1st, 1940, was 388, 7 new boats were registered during the year, and 5 removed from the register, leaving at the end of the year a total of 390 boats. 53 contraventions were observed, 39 boats being involved, of which 9 were registered with other authorities, 38 of the contraventions were remedied. No informations were laid during the year against owners or masters for infringements of the Act or Regulations. No case of infectious sickness was reported as having occurred during the year on any canal boat visiting the district.

The inspectors of the Port Health Authority made 425 inspections during the year, and 34 contraventions were discovered, which were subsequently dealt with.

200 boats plying on the canal were inspected, which were registered as follows:—141 at Liverpool, 16 Runcorn, 13 Manchester, 1 Wigan, 8 Chester, and 1 Northwich. 20 boats were not registered (not used as dwellings).

All were "wide" boats, 79 being steam towed, 67 motor propelled, 29 motor towed, and 25 horse drawn. The number of inspections of these boats was 843 and the population comprised 358 men and 2 women. No children of school age were found on canal boats, and no families were found on a canal boat who had not also a home ashore.

The Hydrogen Cyanide (Fumigation) Act, 1937.

Official notice has been received in respect of 28 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937. The number of dwelling-houses fumigated was 35, each fumigation being supervised by the department and satisfactorily carried out.

Co-operation of Civil, Navy, Army, and Air Force Authorities in Sanitary Matters.

In consequence of Ministry of Health Circular W.2, 776 inspections have been made of Military and Air Force camps and billets, and nuisances have been dealt with by the department. Officers commanding

have been advised of all matters appertaining to the health and comfort of their personnel.

Liverpool Corporation (General Powers) Act, 1930.

Section 27.

The above section provides for the adequate lighting of common staircases in tenement buildings.

All staircases in tenement buildings have been inspected, and it was found that in every instance the staircases were adequately lighted.

Inspection of Stables and Removal of Manure.

Stables within the city are systematically visited by the district sanitary inspectors, constant attention being paid to the frequent removal of manure and to general sanitation.

The total number of visits to stables during the year was 6,683, the number occupied was 638, and the number disused 889. 70 visits were made to the manure depots which are situated in close proximity to the North Corporation destructor, to see that the manure received from the stables in the centre of the city is frequently removed so as to avoid the possibility of fly infestation therefrom.

Special Visits.

Marine Stores.—There are 50 marine stores which are used for the collection and storage of rags, bones, and other materials. Fortnightly visits are paid by the district sanitary inspectors to ascertain that accumulations of offensive rags or bones are not stored for longer periods than is necessary, and that no nuisance is allowed to emanate from their storage.

During the year 590 visits were paid and in 21 cases nuisances were found and the necessary steps taken for their abatement.

Parks.—Fortnightly visits are paid by sanitary inspectors to all public sanitary conveniences within parks and gardens throughout the city to ascertain if they are kept in a clean condition and in good repair. During the year, 1,107 visits were paid and in 22 instances they were found to be incorrect. The necessary action was taken to remedy the defects.

Poultry Stores.—There are 40 poultry stores for fattening and killing of poultry, and these are visited fortnightly by the district sanitary inspectors to ascertain that the premises are kept in a clean state, and that no accumulations of manure are allowed to remain upon the premises. 290 visits have been paid, and in 4 instances nuisances were found and steps taken to have them abated.

Elementary Schools.—All elementary schools throughout the city are visited once fortnightly by the district sanitary inspector to ascertain if the sanitary conveniences are kept in a clean condition, all drains clear and in good repair. During the year 3,138 visits were made and in 36 instances defects were found. The necessary steps were immediately taken to have the defects remedied.

Movable Dwellings.

Under Sections 268 and 269 of the Public Health Act, 1936, provision is made for the licensing by the local authority of sites for the erection or stationing of movable dwellings, or alternatively for the licensing of such dwellings themselves, subject to specified conditions, and under certain conditions, it is illegal to occupy any such dwelling without either the dwelling or site being licensed as aforesaid. During the year no caravans were found to be illegally occupied.

Court and Alley Inspections.

Inspection of courts and alleys within the city is rapidly decreasing owing to the demolition of insanitary property. At present only 11 of the 35 wards contain courts and alleys in which water closets are used in common by different families residing within the court. Weekly visits are paid by the district sanitary inspector to ascertain whether these common water closets are kept in a clean condition, each tenant in turn being held responsible for keeping the water closet in a clean condition during the week.

4,228 inspections were made of courts and alleys, and 8,521 inspections of water closets. 1,838 water closets were found in a dirty condition and on re-inspection were found cleansed.

Prohibition of Sale of Verminous Furniture, Etc.

Under Section 83 of the Liverpool Corporation Act, 1936, it is provided that no dealer shall sell or expose for sale any second-hand

furniture, mattress, bed linen or similar articles if the same are to his knowledge infested with bed bugs or if by taking reasonable precautions he could have known the same to be infested.

1,089 visits have been paid to premises by the district sanitary inspectors, and no infringements were observed.

Public Health Act, 1936, Section 154.

Restrictions on Sale, Etc., by Persons Collecting or Dealing in Rags, Old Clothes, or Similar Articles.

Observations were kept by the district sanitary inspectors on persons who collect or deal in rags, old clothes, or similar articles. One infringement was observed, one dealer being summoned for selling or delivering an article to a child under 14 years of age. The dealer was fined 5s. and 2s. 6d. costs.

Merchandise Marks Act, 1926.

Under Section 2 of the Merchandise Marks Act, 1926, Orders in Council may be made prohibiting the sale or exposure for sale in the United Kingdom any imported goods of any class or description unless they bear the indication of origin. Under this section Orders have been made relating to the marking of the following imported products:—

Bacon and ham, butter, currants, dead poultry, dried eggs, eggs in shell, fresh apples, frozen or chilled salmon or sea trout, honey, malt products, oat products (namely—groats, oat-flour, oatmeal, and rolled oats), raisins, raw tomatoes, sultanas.

4,551 visits were made by sanitary inspectors to retail shops and hawkers to ascertain that the provisions of the Act were being observed. In 47 instances the marking was found to be incorrect and the offenders were cautioned.

Removal of Remains.

Under the terms of licenses issued from the Home Office the district sanitary inspectors supervised the exhumation and re-interment of 790 bodies during the year.

Rats and Mice (Destruction) Act, 1919.

It has not been found necessary to take any proceedings for non-compliance with the provisions of the Rats and Mice (Destruction) Act, 1919.

During the year the district sanitary inspectors paid 80,297 visits to ascertain if premises were infested by rats. 149 premises were found rat infested owing to defective drains, or accumulation of rubbish or lumber. 29 notices were served upon the persons responsible for the abatement of the nuisance, and these have since been complied with.

Rat catchers have paid 24,782 visits to premises for the purpose of ascertaining whether they were infested with rats, and in 1,914 instances evidence of rats was found. 9,876 rats were caught, of this number 9,711 were brown, and 165 were black. The City Bacteriologist examined 1,802 rats to ascertain if they were free from plague or other diseases, and the remainder were burnt.

Liverpool Corporation Act, 1936.

During the year, 75 registrations were issued for ice cream and 21 for preserved meat.

The Licensing of Places for Keeping Cattle.

(Liverpool Corporation Act, 1921.)

In the following table is a summary of the register of licences in respect of pigs.

REGISTRATION OF PREMISES ON WHICH PIGS ARE KEPT.

	End of 1940.
Number of licensed piggeries	90
Number of pigs specified on the licences	3,664
Approximate average number of pigs kept	1,990

During the year, six new licences to keep pigs were applied for, involving the keeping of forty-three pigs. These applications were granted. Two licences were transferred. 274 visits of inspection to piggeries were made. Seven piggeries visited were the subject of notices

drawing the attention of the occupiers to contraventions of the Liverpool Corporation Act, 1921, and in every case the notice was complied with.

In farms situated in the outer districts of the city, premises registered for the keeping of milch cows, may be used also for keeping store cattle. At the end of 1940, 456 store cattle were kept on registered premises.

Ambulance and Disinfecting Department.

The staff of the Ambulance and Disinfecting Department is engaged in (1) the removal of cases of infectious disease to hospital by ambulance, (2) the disinfection of premises and articles exposed to infection, (3) the disinfestation of verminous houses and articles, (4) the supervision of the City mortuary. The number of cases of infectious disease removed to hospital was 6,319.

The number of houses disinfected after infectious disease was 3,640, whilst the number of articles of bedding, clothing, etc., disinfected by steam after exposure to infectious disease was 137,902.

DISINFESTATION OF PREMISES AND HOUSEHOLD EFFECTS.

Premises.—During the year, 3,352 Corporation houses and 721 Corporation tenements were inspected for vermin. It was found that 398 houses and 365 tenements were infested with bugs. In the table below is described the action taken in these cases.

TREATMENT OF INFESTED PREMISES.

	Corporation Houses.		Non-Corporation Houses.
	Houses.	Tenements.	
Number treated	398	381	0
Awaiting treatment at the end of the year ...	26	33	0

Of the 779 Corporation houses and tenements disinfested, 430 were vacant at the time of treatment and 349 were occupied.

City Mortuary.

During the year the number of bodies removed to the mortuary was:—

From the river	27
From the city	362

The Eaton Street Mortuary is used for the reception of stillbirths. The number received during the year was 116.

Cremation.

The number of cremations which took place at the Liverpool Crematorium during 1940 was 466.

Smoke Abatement.

In accordance with national policy, industrial smoke abatement practice has been discontinued. The West Lancashire and Cheshire Regional Smoke Abatement Committee have suspended their operations for the duration of the war.

INSPECTION OF FOOD.

A numerical summary of the visits paid to premises by the food inspectors is given in Table I.

TABLE I.

VISITS PAID TO PREMISES BY FOOD INSPECTORS.

Slaughter-houses.	Butchers' shops.	Fruit shops.	Fish & Fruit shops.	Food Hawkers' premises.	Jam factories.	Pickle factories.	Ice Cream premises	Food factories	Knackers' yards.	Total visits paid.
178	14,072	20,902	19,001	2,698	29	59	2,264	653	20	59,876

Private Slaughter-houses.

There are 4 private slaughter-houses in the city at which, during the year, 40 animals were slaughtered.

The City Abattoir.

During 1940, 337,653 animals of different kinds were slaughtered in Liverpool for human food. An analysis of this figure is given in Table II.

TABLE II.

NUMBER OF ANIMALS SLAUGHTERED IN LIVERPOOL FOR HUMAN FOOD.

	Bulls	Bullocks	Cows	Heifers	Calves	Sheep and Lambs	Swine	Horses
Public Abattoir ...	993	13,967	18,314	4,320	29,597	234,022	36,400	—
Private Slaughter-houses ...	—	—	—	—	—	—	40	—
TOTALS ...	993	13,967	18,314	4,320	29,597	234,022	36,440	—

TABLE III.

CARCASES OF ANIMALS (HOME-KILLED) BROUGHT INTO LIVERPOOL FROM OTHER DISTRICTS.

Brought into the—	Beef.	Veal.	Mutton.	Lamb.	Pork.
Meat Market	1,359	158	2,946	18,356	3,213
Factories, Shops, etc. ...	—	—	—	—	—
TOTALS	1,359	158	2,946	18,356	3,213

In addition to the above, 1,210 boxes or packages of home-killed offal were dealt with in the meat market.

A large number of carcasses of imported meat, both frozen and chilled, pass through the meat market. The figures for 1940 are given in Table IV.

TABLE IV.

CARCASES OF IMPORTED (FROZEN AND CHILLED) MEAT PASSING THROUGH THE CITY MEAT MARKET.

Beef.	Veal.	Mutton.	Lamb.	Pork.
34,063	—	160,046	730,773	11,565

In addition to the above, 328 cuts of beef and 106,729 boxes and packages of imported meat and offal were dealt with in the meat market.

6,513 lbs. imported beef and 143 lbs. imported offal were destroyed for unsoundness, chiefly mould and brine damage.

Diseased Conditions.

The carcasses of 45,573 animals showed abnormal conditions, and a detailed examination was made in each case.

During the year, 3,981 carcasses were rejected as being unfit for human food. Of these, 2,773 were destroyed at the abattoir and 1,208 were destroyed at knackers' yards.

A description of the diseased conditions found during 1940 which led to the total or partial destruction of carcasses is given in Table V.

TABLE V.

DISEASES FOR WHICH CARCASSES WERE TOTALLY OR PARTIALLY DESTROYED
AS INDICATED IN THE TABLE.

Disease.	No.	Disease.	No.
Abscess (total)	4	Joint Ill	25
„ (partial)	74	Malignant Neoplasm	3
Anthrax	—	Moribund	47
Arthritis, Septic (total)	38	Nephritis Septic	17
„ Simple (partial)	310	Pyæmia	8
Asphyxia	306	Peritonitis Septic	22
Bact. Necrosis (total)	1	Pneumonia	58
Caseous Lymphadenitis	1	Pleurisy	4
Contamination (total)	75	Pleurisy (partial)	7
„ (partial)	59	Presternal Calcification (partial) ...	1
Decomposition (total)	35	Septicæmia	7
„ (partial)	211	Septic Mastitis	15
Distomatosis	121	„ Metritis	8
Dropsy	250	„ Pericarditis	5
Emaciation	149	Swine Fever	76
Enteritis	270	Swine Erysipelas	2
Gangrene	1	Tuberculosis (total)	956
Immaturity	55	„ (partial)	498
Injury (total)	10	Urticaria (partial)	11
„ (partial)	353	War Damage (total)	145
Jaundice	54	„ (partial)	96
Johnes Disease	5		

In addition to the number of carcasses totally destroyed because diseased conditions made them unfit for human food, a number of organs with localised disease were condemned. A summary is given in Table VI.

TABLE VI.

NUMBER OF ORGANS DESTROYED ON ACCOUNT OF DISEASE, EXCLUSIVE OF ORGANS
DESTROYED IN CARCASSES TOTALLY CONDEMNED.

Disease.	No.	Disease.	No.
HEADS AND TONGUES :—		HEARTS :—	
Abscess	252	Abscess	50
Actinomycosis	98	Contamination	810
Contamination	428	Decomposition	3,231
Decomposition	3,989	Melanosis	2
Injury	15	Pericarditis	447
Melanosis	—	Tuberculosis	2,889
Tuberculosis	4,299		
		SPLEENS :—	
LUNGS :—		Abscess	21
Abscess	228	Decomposition	240
Congestion	2,944	Peritonitis	15
Decomposition	3,749	Tuberculosis	1,462
Emphysema	21		
Melanosis	5	STOMACHS :—	
Pneumonia	1,507	Abscess	23
Pleurisy	707	Peritonitis	14
Tuberculosis	3,856	Tuberculosis	1,451
Unclassified Cystic Conditions...	1,533		
		KIDNEYS :—	
LIVERS :—		Abscess... ..	26
Abscess	473	Cysts	73
Cavernous Angioma	664	Cirrhosis	18
Cirrhosis	996	Decomposition	60
Distomatosis	20,425	Nephritis	26
Decomposition	4,262	Tuberculosis	1,492
Fatty Infiltration	20		
Melanosis	6	UDDERS :—	
Necrosis	24	Abscess	34
Parasitic	272	Actinomycosis	27
Peritonitis	305	Decomposition	4
Tuberculosis	3,021	Mammitis	1,558
Unclassified Cystic Conditions...	1,003	Tuberculosis	157
		INTESTINES :—	
		Abscess	21
		Johnes Disease	5
		Peritonitis	14
		Tuberculosis	1,635

Calves Infected with Tuberculosis.

The following table summarises the number of carcasses inspected and condemned during the year.

TABLE VII.

CARCASSES INSPECTED AND CONDEMNED.

	Cattle, excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs.
Number killed	19,280	18,314	29,597	234,022	36,440
Number inspected	19,280	18,314	29,597	234,022	36,440
ALL DISEASES EXCEPT TUBERCULOSIS.					
1. Whole carcasses condemned ...	9	129	329	1,118	232
2. Carcasses of which some part or organ was condemned ...	9,115	12,311	65	9,310	6,601
3. Percentage of number inspected affected with disease other than tuberculosis	47·32%	67·92%	1·33%	4·45%	18·75%
TUBERCULOSIS ONLY.					
1. Whole carcasses condemned ...	29	812	19	—	96
2. Carcasses of which some part or organ was condemned ...	402	2,640	6	—	2,350
3. Percentage of number inspected affected with tuberculosis	2·23%	18·84%	0·08%	—	6·71%

Quantities of Food Materials Condemned.

The quantities of food materials condemned as being unfit for human food are given in Table VIII.

TABLE VIII.

FOOD MATERIALS CONDEMNED AS BEING UNFIT FOR HUMAN FOOD.

Beef, Veal, Mutton, Pork.	Offal.	Fish.		Crabs, Lobsters, Oysters, Crayfish, Shrimps, Prawns, Scallops.	Cockles, Mussels, and Winkles.	Poultry.	Game.	Rabbits and Hares.	Fruit.		Vegetables.	Nuts, Cokernuts, Almonds, etc.	Canned Food- stuffs.	Eggs.	War Damaged. Provisions, Groceries, etc.
		Wet.	Dry.						Apples, Pears, Bananas Oranges, Lemons, etc.	Potatoes, Cabbages, Sprouts, Onions, Turnips, etc.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bags.	Head.	Head.	Head.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	In tins 1,134 lbs In shell 101,772 eggs.	Lbs.
838,465	1,004,534	125,986	17,410	1,456	101	7,862	97	17,521	309,080	187,920	17,050	225	23,050		19,366

Public Health (Meat) Regulations, 1924.

These Regulations are based on the recommendations of the Departmental Committee on Meat Inspection, and are designed to secure more adequate inspection of animals slaughtered in this country as well as improvements in the handling, transport and distribution of meat.

Under Part III of the Regulations the authority of the Minister of Health was obtained for the marking of meat slaughtered in the City with the words "City of Liverpool Inspected and Passed".

The design of the mark was approved by the Minister and eight of the Food Inspectors were specially authorised by the Minister to use the mark.

The mark has been used on a number of carcasses and cuts of meat, thereby showing that such meat was obtained from animals which were free from disease and was sound, wholesome and fit for the food of man.

The Tuberculosis Order, 1938.

This Order aims at the destruction of cows suffering from tuberculosis in a form that is a source of danger to human beings and to other animals. During 1940, 64 cows were slaughtered under this Order at the City Abattoir.

Slaughter of Animals Act, 1933.

During the year, the following applications for licences as slaughtermen were received, namely: 6 for new licences, 5 for renewal of existing licences and 252 temporary licences for the slaughter of animals for the food of Mohammedans. In each case the licence was granted.

THE SUPERVISION OF COWSHEDS, DAIRIES AND MILKSHOPS.

Registration of Dairies.

TABLE IX.

(*Milk and Dairies Order, 1926.*)

Number of registered dairies at the end of 1939.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1940.
669	12	—	56	625

(22 dairies were transferred from one owner to another.)

Inspection of Dairies.

2,612 visits of inspection were paid to dairies. In 21 instances infringements of the Milk and Dairies Order, 1926, were found. In every case the notice of requirements was complied with at once. The corresponding visits for 1939 were 3,162.

Registration of Dairymen.

TABLE X.

REGISTERED DAIRYMEN.

Number of registered dairymen on Jan. 1st, 1940.	Applications for registration.	Applications refused.	Ceased to be dairymen.	Remaining on the register, Dec. 31st, 1940.
706	34	—	95	645

Of the 645 dairymen on the register at the end of the year, 20 were milk-hawkers who, having no premises of their own, are registered at the dairy from which they obtain their supplies and where they store their utensils.

Conveyance and Distribution of Milk Churns.

Observations were made at railway stations and other distributing centres to ensure that Sections 28 and 29 of the Milk and Dairies Order, 1926, relating to the marking, construction and cleanliness of milk churns, were complied with. 8 notices were sent to farmers outside the city drawing their attention to defects in milk churns. In every case the defects were remedied.

The Licensing of Places for Keeping Cattle.

(Liverpool Corporation Act, 1921.)

Under Sections 475 to 483 of the Liverpool Corporation Act, 1921, every person who keeps cattle is required to hold a licence from the Corporation both in respect of himself and also in respect of the premises.

In Table XI is a summary of the register of licences in respect of milch cows.

TABLE XI.

REGISTRATION OF PREMISES ON WHICH MILCH COWS ARE KEPT.

	End of 1939.	End of 1940.
Number of licensed cowsheds... ..	199	187
Number of cows specified on the licences	3,817	3,644
Approximate average number of cows kept	2,671	2,700

(10 licences were transferred from one person to another.)

1,118 visits of inspection were paid to cowsheds. Ten of the cowsheds visited were the subject of notices drawing the attention of the occupiers to contraventions of the Liverpool Corporation Act, 1921. All the notices were complied with, and no prosecutions were necessary nor was any licence forfeited because premises were not properly kept.

A summary of the register of licences in respect of the keeping of pigs and cattle other than milch cows is given on page 76.

The Daily Supply of Milk to Liverpool.

The quantity of milk consumed in Liverpool daily is as follows:—

TABLE XII.

DAILY CONSUMPTION OF MILK DURING 1940.

Grade of Milk.									Quantity in Gallons.
Tuberculin-tested (Certified)	...	...	...	...	...	...	...	...	90
Tuberculin-tested	...	...	...	...	...	...	...	...	650
Tuberculin-tested (Pasteurised)	...	...	...	...	...	...	...	...	410
Accredited	...	...	...	...	...	...	...	...	11,200
Raw ungraded	...	...	...	...	...	...	...	...	8,280
Pasteurised under licence	...	...	...	...	...	...	...	...	11,560
Heat-treated to pasteurisation standard	...	...	...	...	...	...	...	...	5,150
Sterilized	...	...	...	...	...	...	...	...	6,460
Total									43,800

The relative quantities of milk produced within the city or brought into the city by road or by rail are as follows:—

TABLE XIII.

DAILY SOURCE OF MILK DURING 1940.

Produced from cows kept within the City.	Brought into the City by road.	Brought into the City by rail.
8,100 gallons	32,100 gallons	3,600 gallons
Total, 43,800 gallons.		

The growth of road transport during recent years has led to increased difficulties in sampling.

Graded Milk.

The daily quantity of graded milk consumed is given in Table XII.

TABLE XIV.

PRODUCERS AND VENDORS OF GRADED MILK IN LIVERPOOL.

Nature of licence or licences.	Tuberculin Tested (Certified) Milk	Tuberculin Tested Milk	Tuberculin Tested (Pasteurised) Milk	Accredited Milk	Pasteurised Milk.
Producer only ...	0	0	0	26	0
Producer and retail vendor ...	1	1	1	45	6
Retail vendor only ...	6	8	15	19	3

During the year the following changes in licence-holders took place, namely; 2 new licences were issued to producers only of "Accredited" milk. The licences of 3 producer-retailers and one vendor of "Accredited" milk were surrendered.

The Provision of Milk for School Children.

Pasteurised milk only is supplied to school children under the Milk Marketing Board's Scheme. During April some 29,504 children were each supplied with a third of a pint daily. This number is approximately 56 per cent. of the children attending school. During the year, 185 samples were examined bacteriologically and chemically and the results as a whole were satisfactory in view of war-time conditions. None of the samples was found to be tuberculous.

THE CLEANLINESS OF MILK.

TABLE XV.

EXAMINATION OF SAMPLES OF TUBERCULIN TESTED MILK.

Supplied by	Number of Samples	Where taken	METHYLENE BLUE REDUCTION TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.			
			Satisfactory.	Unsatisfactory.	Absent in 1 ml.	Present in 1 ml.	Present in $\frac{1}{10}$ ml.	Present in $\frac{1}{100}$ ml.
A	22	Hospitals and Institutions.	22	0	16	0	3	3
A	9	Child Welfare Centres.	9	0	5	2	2	0
B	7	Do.	6	1	5	0	0	2
C	12	Hospitals and Institutions	11	1	8	3	0	1
F	9	Do.	9	0	4	2	2	1
D	8	Wholesale depot	7	1	8	0	0	0
E	18	Do.	18	0	13	2	3	0
G	2	Do.	2	0	1	0	0	1
H	4	Do.	2	2	0	0	0	4
I	4	Do.	4	0	3	0	0	1
J	1	Do.	1	0	0	1	0	0
K	1	Milkshop in city	1	0	0	0	1	0
L	1	Do.	1	0	0	1	0	0
*M	6	Farm in city ...	5	1	3	1	1	1
TOTALS	104		98	6	66	12	12	14

* Tuberculin Tested Milk (Certified) bottled on the farm.

TABLE XVI.

THE EXAMINATION OF ACCREDITED MILKS PRODUCED IN LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
	Satisfactory.	Unsatisfactory.	Absent in	Present in			
			1 ml.	1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
151	92	59	35	22	16	27	51
	60.9%	39.1%	23.2%	14.5%	10.6%	17.9%	33.8%

THE EXAMINATION OF ACCREDITED MILKS PRODUCED OUTSIDE LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
	Satisfactory.	Unsatisfactory.	Absent in	Present in			
			1 ml.	1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
160	107	53	66	26	20	13	35
	66.9%	33.1%	41.3%	16.2%	12.5%	8.1%	21.9%

TABLE XVII.

EXAMINATION OF SAMPLES OF UNGRADED AND UNTREATED MILK
PRODUCED IN LIVERPOOL.

Month.	Number of Samples	METHYLENE BLUE REDUCTION TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
		Satisfactory.	Unsatisfactory.	Absent in 1 ml.	Present in			
					1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
January ...	5	5	0	3	0	1	1	0
February ...	15	12	3	11	0	2	2	0
March ...	6	6	0	3	0	2	1	0
April ...	7	4	3	2	0	3	1	1
May ...	15	8	7	3	1	3	3	5
June ...	5	1	4	0	1	1	0	3
July ...	18	6	12	2	0	4	1	11
August ...	19	4	15	0	1	2	4	12
September	21	7	14	2	3	2	4	10
October ...	12	6	6	2	0	1	2	7
November...	9	5	4	3	1	2	2	1
December...	20	17	3	4	3	4	7	2
TOTAL ...	152	81	71	35	10	27	28	52
		53.3%	46.7%	23.0%	6.6%	17.8%	18.4%	34.2%

Ice Cream.

During the year, 2,264 visits of inspection were paid to the premises of ice cream vendors and makers. Fifty-five samples were examined and found satisfactory. In 38·2 per cent. the total count was under 10,000 organisms per c.c., and in 34·5 per cent. coliform bacilli were absent in 1 c.c.

TUBERCULOUS MILK.

**The Examination for Tuberculosis, of Milk produced
within the City.**

TABLE XVIII.

THE EXAMINATION FOR TUBERCULOSIS, OF MILK PRODUCED WITHIN THE CITY.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk	166	12	7·3%
Ungraded raw milk ...	151	10	6·7%

**The Examination for Tuberculosis, of Milk produced in Areas
outside the City.**

TABLE XIX.

THE EXAMINATION FOR TUBERCULOSIS, OF MILK PRODUCED IN AREAS OUTSIDE
THE CITY.

Kind of Milk.	Number of samples	Tubercle bacilli present.	Percentage tuberculous.
Graded milk	236	9	3·8%
Ungraded raw milk ...	244	23	9·4%

THE ADULTERATION OF FOOD AND DRUGS.

TABLE XX.

THE SITUATION OF AREAS WITHOUT THE CITY FROM WHICH MILK SAMPLED
FOR TUBERCULOSIS WAS DERIVED.

County.	Description of Milk.		Number of Tuberculous samples.		Tubercle bacilli present.	Percentage tuberculous.
	Ungraded.	Graded.	Ungraded.	Graded.	Totals.	
Lancashire ...	58	97	7	2	9	5·8%
Cheshire ...	131	100	13	5	18	7·8%
Denbighshire ...	46	4	2	2	4	8·0%
Flintshire ...	9	1	1	—	1	10·0%
Shropshire ...	—	21	—	—	—	—
Westmorland ...	—	12	—	—	—	—
Montgomeryshire	—	1	—	—	—	—
	244	236	23	9	32	6·6%

THE ADULTERATION OF FOOD AND DRUGS.

During 1940, 8,555 samples of food and drugs were purchased or taken and submitted for examination. Of these samples 4,598 were formal samples and 3,957 were informal samples.

TABLE XXI.
OFFENCES UNDER THE FOOD AND DRUGS ACT, 1938, AND THE PHARMACY AND
POISONS ACT, 1933.

Number of informations laid.	Nature of Sample.	Nature of Offence.	RESULT OF LEGAL PROCEEDINGS.		
			Number of convic- tions.	Fines.	Costs.
37	Milk	Contained added water	37	£ s. d. 43 0 0	£ s. d. 40 19 0
10	Milk	Deprived of milk fat	10	6 0 0	11 0 6
1	Glauber's Salt B.P.	Not of British Pharmacopœia quality ...	1	—	1 1 0
1	Lard	Consisted of fats other than lard ...	Warranty defence successful.	—	—
1	Pork Sausages ...	Deficient in meat to extent of 14 per cent.	„	—	—
1	Beef Sausages ...	Deficient in meat to extent of 15 per cent.	„	—	—
1	Pork Sausages ...	Giving a false warranty in writing in respect of the pork sausages.	1	5 0 0	0 14 6
1	Beef Sausages ...	Deficient in meat to extent of 14 per cent.	1	1 0 0	1 1 0
3	Beef and Pork Sausages.	Contained preservatives... ..	3	5 10 0	3 3 0
1	Potted Beef ...	Contained 20 per cent. of Cooked Wheat Filler.	1	—	1 1 0
1	Ling-fish ...	Sold as Codfish	1	1 0 0	2 2 0
1	Ointment ...	Contained Red Oxide of Mercury ... (unlabelled)	1	5 0 0	2 2 0
59			56	66 10 0	63 4 0
				£129 14 0	

Fertilisers and Feeding Stuffs.

During 1940, 91 samples of fertilisers and feeding stuffs were submitted for analysis. It was not necessary to take legal proceedings

Pharmacy and Poisons Act, 1933.

The Pharmacy and Poisons Act, 1933, regulates the sale of poisons. It is the duty of the Local Authority to carry out Part II of the Act, which deals with the registration of persons selling poisons mentioned in the Poisons List Confirmation Order, 1935. The number of names entered in the register is 443. Legal proceedings were taken against one unregistered vendor (see Table XXI).

REPORT OF THE CITY BACTERIOLOGIST.

In 1940 the number of specimens examined amounted to 93,354, of which 6,706 were for outside authorities and 1,206 for the Armed Forces.

Plague.—None of the 3,318 rats examined was found infected with plague.

Anthrax.—The Government disinfecting station submitted 407 specimens of hair and wool for examination. Of these 203 were untreated and 34 contained anthrax bacilli; 204 were treated and of these none was infected with anthrax.

Examinations made in the Bacteriological Department for the
City of Liverpool during the year 1940.

Milk (fresh—liquid)	...	...	...	...	...	...	...	1,131
Foodstuffs	...	...	...	...	...	...	...	89
Water	...	...	...	...	...	...	...	959
Rats for plague bacilli	...	...	...	...	...	...	...	1,780
Swabs for diphtheria bacilli	...	...	...	...	...	...	...	55,022
Specimens for enteric	...	...	...	...	...	...	...	1,244
Cerebro spinal fluid, etc., for pathogenic organisms	...	...	...	...	...	...	...	611
Sputum, etc., for tubercle bacilli	...	...	...	...	...	...	...	1,456
Exudates for anthrax bacilli	...	...	...	...	...	...	...	79
Miscellaneous specimens	...	...	...	...	...	...	...	1,076
								63,447

Venereal Diseases :

Serological tests	...	...	...	...	...	...	...	18,294
Other tests	...	...	...	...	...	...	...	1,711
								<u>20,005</u>

Port Health Authority :

Wool and hair for anthrax bacilli	...	...	...	...	...	...	...	407
Rats for plague bacilli	...	...	...	...	...	...	...	1,538
General specimens	...	...	...	...	...	...	...	43
Foodstuffs	...	...	...	...	...	...	...	2
								<u>1,990</u>

Examinations made for Outside Authorities :

Bacteriological	...	...	...	...	...	...	...	5,259
Venereal Diseases	...	...	...	...	...	...	...	1,447
								<u>6,706</u>

Examinations made for the Armed Forces :

Bacteriological	...	...	...	...	...	...	...	1,009
Venereal Diseases	...	...	...	...	...	...	...	197
								<u>1,206</u>

SUMMARY.**LIVERPOOL :**

Specimens Water, Milk, Foodstuffs and Infectious Material...	63,447
Venereal Diseases	20,005
Port Health Authority	1,990

OUTSIDE AUTHORITIES :

Bacteriological	5,259
Venereal Diseases	1,447

ARMED FORCES :

Bacteriological	1,009
Venereal Diseases	197
	<u>93,354</u>

HOUSING.

Owing to the state of emergency caused by the War, and the terms of Ministry of Health Circular No. 1,866, dated September 8th, 1939, normal progress in regard to slum clearance has ceased.

During the year, 631 houses were demolished and 3,214 persons re-housed.

Re-conditioning by Owners.

Works were completed in respect of 4 houses, and certificates under Section 51 of the Housing Act, 1936, have been issued.

Increase of Rent and Mortgage Interest (Restrictions) Acts, 1920/1939.

Certificates have been issued under the above Acts in respect of 17 dwelling-houses which were not in all respects reasonably fit for human habitation.

Housing of the Working Classes.

Re-housing Schemes.

During 1940, the following flats erected on sites in the central areas of the City were completed:—

St. Domingo Road	...	...	154 Flats
St. Oswald Street	...	...	60 „
Portland Gardens	...	...	110 „
Total	...		<u>324 Flats</u>

Housing Schemes.

In the year 1919 the Housing Committee commenced to erect houses in the suburbs, and under the Housing Acts of 1919, 1923, 1924 and 1925 had erected 27,225 houses and 423 flats on suburban estates up to the end of 1940.

The following tables give details relating to the suburban districts where houses have been erected, and to situations of dwellings provided in the central areas of the city.

Houses Erected on Suburban Estates at 31st December, 1940.

(Including houses erected on the outskirts for slum clearance purposes.)

Estates.	Non-Parlour.	Parlour.	TOTAL.
Dovecot Estate	2,331	686	3,017
Edge Lane Drive Estate	560	311	871
Elms House Estate	252	—	252
Fazakerley Estate	1,030	410	1,440
Finch Lane	54	—	54
Highfield Estate	—	618	618
King Street, etc., Garston	76	—	76
Knotty Ash Estate	389	263	652
Knowsley Estate	874	—	874
Larkhill Estate	476	1,834	2,310
" " (Flats)	90	120	210
Norris Green Estate	4,730	2,965	7,695
Pinehurst Road Estate	287	395	682
Ronald Street	78	—	78
Sparrow Hall Estate	511	63	574
" " " (Flats)	36	—	36
Speke (Banks Lane) Estate	286	—	286
Speke	728	665	1,393
" (Flats)	—	8	8
Speke Road (Flats)	312	—	312
Springwood Estate	250	1,249	1,499
" " (Flats)	—	49	49
Walton-Clubmoor Estate	1,525	1,671	3,196
Woolton	416	73	489
Partly-developed Estates	—	554	554
Total within the area of the City	15,291	11,934	27,225
Huyton Farm Estate	937	79	1,016
Knowsley Estate	3,631	710	4,341
" " (Flats)	108	—	108
Total outside the City boundary	4,676	789	5,465
GRAND TOTAL	19,967	12,723	32,690

In addition to the above, there are 8 flats erected over shops on various suburban estates.

During the period (1919-1940) 27,513 houses have been erected by private enterprise within the area of the city, and of these 4,294 were eligible for subsidy under the Housing Acts of 1923 and 1924.

During the same period, 5,545 dwellings (including houses with shops attached) have been erected in the central areas of the city.

Housing Statistics.

The total number of houses inspected during the year for housing defects under Public Health or Housing Acts was 5,022, and the number of inspections made for the purpose was 15,714.

696 dwelling-houses were inspected and recorded under the Housing Consolidated Regulations, 1925 and 1932.

Notices were served requiring defects to be remedied under the Public Health Act in respect of 25,367 houses. The number of dwelling-houses in which defects were remedied after service of formal notices was 12,815, and 10,290 defective dwelling-houses were rendered fit in consequence of informal action.

Housing Act, 1936. Part IV. Overcrowding.

During the year 60,554 visits were made to houses in connection with the overcrowding provisions of the Housing Act, the name and address of the Medical Officer of Health was not inscribed in 114 rent books, whilst the necessary summary of Sections 58, 59 and 61 of the Housing Act, and the number of persons permitted to occupy the house, was not inserted in 178 rent books.

Houses Owned by the Local Authority.

Total number of houses and flats owned by the Local Authority
at 31st December, 1940 (excluding 20 houses built under
the powers of the Housing Acts and subsequently sold).. 41,297

Number of houses built in the last two years under—

1.	Housing Act, 1936, Part III ...	...	...	...	4,496
2.	„ „ „ Part V ...	...	...	...	1,545

The following table shows the accommodation which has been provided in the Corporation's housing and rehousing schemes up to 31st December, 1940 :—

No. of rooms per dwelling (exclusive of bathroom, sculleries, etc.)	Number of Houses and Flats erected.					TOTALS.
	On Suburban Estates.			In Central Areas.		
	Houses.	Aged persons' cottages.	Flats.	Houses.	Flats.	
1	—	130	18	—	223	371
2	—	220	96	—	1,687	2,003
3	1,422	—	251	18	3,314	5,005
4	17,349	—	207	158	2,983	20,697
5	12,827	—	151	18	212	13,208
6	18	—	—	—	14	32
7	1	—	—	—	—	1
TOTALS ...	31,617	350	723	194	8,433	41,317

Rentals.

The weekly rentals of flats (including rates), range from 2/9½ for a bed living room flat to 11/- for a five bedroom flat. The inclusive weekly rentals of houses vary between 8/3 for the non-parlour type, and 19/5 for the parlour type, and 23/6 per week for houses with garages.

General Statistics.

Area of City	27,321 acres.
Estimated Population	752,800
Number of inhabited houses at 31st December, 1940	200,112
Number of structurally separate dwellings occupied (1931 Census)...	173,938
Rateable value	£6,938,940
Sum represented by a Penny Rate	£24,080

APPENDIX A

CITY OF LIVERPOOL.

Vital Statistics of the Whole District during 1940 and 5 previous years.

YEAR.	Population estimated to Middle of each year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NET DEATHS BELONGING TO THE DISTRICT.			
		Uncor- rected Number.	Net.						Under 1 year of age.		At all ages.	
			Number.	Rate.	Number.	Rate.	of Non- residents registered in the District.	of Resi- dents not registered in the District.	Number.	Rate per 1000 Net Births.	Number.	Rate.
1935.....	839267	17998	17347	20·7	12288	14·6	1170	329	1445	83	11447	13·6
1936.....	835018	18398	17403	20·9	12118	14·5	1290	355	1311	75	11183	13·4
1937.....	830790	18051	16728	20·1	12388	14·9	1298	362	1371	82	11452	13·8
1938.....	826584	17536	16175	19·6	11591	13·9	1287	334	1189	73	10638	13·9
1939.....	822400	16544	15614	19·0	11085	13·5	1288	417	1098	71	10668	13·3
1940.....	752800	15687	15016	19·9	13446	*17·8	1063	485	1257	84	12868	*17·1

* Calculated on a mid-year resident population.

CITY OF LIVERPOOL

Vital Statistics of the Whole District during 1940 and 5 previous years.

Year	Population estimated to middle of each year.	Births		Total Deaths Registered in the District.		Transfers into and out of the District.		Net Change in Population during 1 year of year.
		Number	Rate	Number	Rate	Into District	Out of District	
1940	829,987	17,068	20.7	17,288	21.0	1,170	528	1,440
1939	828,018	16,938	20.6	16,118	19.5	1,900	505	1,395
1938	830,760	16,521	20.1	15,388	18.5	1,998	643	1,355
1937	828,534	16,735	20.2	15,591	18.8	1,287	504	1,390
1936	827,460	16,844	20.3	15,083	18.2	1,728	413	1,600
1935	825,840	16,987	20.6	14,468	17.5	1,063	480	1,307

* Calculated on a mid-year resident population.

APPENDIX B.

CITY OF LIVERPOOL.

Birth-Rates, Death-Rates, and Analysis of Mortality during the year 1940.

England and Wales, London, 126 County Boroughs and Great Towns, and 148 Smaller Towns. (Provisional Figures)

	Rate per 1,000 Population.		Annual Death-Rate per 1,000 Population.									Rate per 1,000 Live Births.		Percentage of Total Deaths.			
	Live Births.	Still-births.	All Causes.	Typhoid and Paratyphoid Fevers.	Small-pox.	Measles.	Scarlet Fever	Whooping Cough.	Diphtheria.	Influenza.	Diarrhoea and Enteritis (under two years).	Total Deaths under one year.	Certified by Registered Medical Practitioners.	Inquest Cases.	Certified by Coroner after P.M. No Inquest.	Uncertified Causes of Death.	
England and Wales ...	14·6	0·55	14·3	0·00	...	0·02	0·00	0·02	0·06	0·32	4·6	55	}				
126 County Boroughs and Great Towns, including London ...	16·0	0·64	15·8	0·00	...	0·02	0·00	0·02	0·07	0·29	5·9	61					
148 Smaller Towns (Resident Popula- tions 25,000 to 50,000 at Census 1931)	15·7	0·55	12·8	0·00	...	0·02	0·00	0·02	0·05	0·30	4·4	54		Not available.			
London	13·7	0·44	17·8	0·00	...	0·01	0·00	0·00	0·01	0·18	5·8	50					
Liverpool	19·9	0·68	17·1	0·00	...	0·19	0·00	0·02	0·17	0·23	4·8	84	86·9	4·5	2·9	5·7	

Infant mortality rates (provisional) for England and Wales are as follows: per 1,000 Total Births ...

Puerperal Sepsis,	Others	Total
0·52	1·64	2·16

CITY OF LIVERPOOL.

Birth-Rate, Death-Rate, and Analysis of Mortality during the year 1948.

England and Wales, London, 126 County Boroughs and Great Towns, and 148 Smaller Towns.

Rate per 1,000 Live Births.	Annual Death-Rate per 1,000 Population.										Rate per 1,000 Population.	
	Infants	Children	Adults	Men	Women	Boys	Girls	Infants	Children	Adults	Male	Female
55	4.0	0.22	0.08	0.02	0.00	0.02	0.00	14.3	0.52	14.5	14.5	14.5
51	3.8	0.20	0.07	0.02	0.00	0.02	0.00	15.2	0.51	15.0	15.0	15.0
51	4.1	0.20	0.02	0.02	0.00	0.02	0.00	13.8	0.52	15.7	15.7	15.7
50	3.8	0.18	0.01	0.00	0.00	0.01	0.00	17.3	0.44	15.7	15.7	15.7
54	4.8	0.22	0.17	0.02	0.00	0.13	0.00	17.1	0.61	19.3	19.3	19.3

and mortality rates (provisional) for England and Wales are as follows: per 1,000 Total Births ...

CITY OF LIVERPOOL.

Causes of, and ages at, Death during the year 1940.

Causes of Death.	NET DEATHS AT VARIOUS AGES, OF "RESIDENTS," WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.									Total Deaths in Liverpool District, whether of "Residents" or "Non-Residents."
	At all ages.	AT AGES—YEARS.								
		Under 1	1—	3—	5—	15—	25—	45—	65—	
All Causes { Certified	12164	1238	360	114	268	410	1107	3529	5138	13931
Uncertified	704	19	24	24	92	92	191	183	79	—
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	1
2. Measles	143	48	76	12	6	1	—	—	—	149
3. Scarlet Fever	3	—	1	—	1	1	—	—	—	3
4. Whooping Cough	19	8	6	3	2	—	—	—	—	20
5. Diphtheria	134	7	24	39	61	1	2	—	—	161
6. Influenza	180	3	4	2	1	4	26	68	72	189
7. Encephalitis Lethargica	28	—	—	—	—	—	14	11	3	29
8. Cerebro-spinal Fever	84	19	16	7	11	8	10	11	2	101
9. Tuberculosis of Respiratory System ...	761	2	4	1	12	194	307	201	40	824
10. Other Tuberculous Diseases	122	16	21	8	22	30	15	8	2	143
11. Syphilis	52	2	—	—	1	—	9	32	8	61
12. General Paralysis of the Insane	12	—	—	—	—	1	5	6	—	12
13. Cancer	1279	—	1	1	1	5	96	642	533	1436
14. Diabetes	91	—	—	1	—	—	4	42	44	101
15. Cerebral Haemorrhage	802	—	—	—	—	—	17	244	541	860
16. Heart Disease	3405	1	2	—	14	43	160	996	2189	3591
17. Aneurysm	5	—	—	—	—	—	—	5	—	5
18. Other Circulatory Diseases	495	—	—	—	1	2	2	129	361	525
19. Bronchitis	462	50	3	—	5	5	30	145	224	479
20. Pneumonia (all forms)	947	323	123	15	18	11	70	223	164	1024
21. Other Respiratory Diseases	99	1	4	2	2	2	13	51	24	107
22. Peptic Ulcer	134	—	—	—	—	1	20	73	40	148
23. Diarrhoea, etc.	174	133	16	2	2	1	6	7	7	184
24. Appendicitis	48	—	—	—	10	8	5	15	10	52
25. Cirrhosis of Liver	11	1	—	—	—	—	—	5	5	11
26. Other Diseases of Liver	55	1	—	—	—	1	4	19	30	61
27. Other Digestive Diseases	164	24	6	1	2	3	18	50	60	182
28. Acute and Chronic Nephritis	267	4	—	1	5	13	31	107	106	282
29. Puerperal Sepsis	7	—	—	—	—	—	7	—	—	8
30. Other Puerperal Causes	24	—	—	—	—	3	21	—	—	30
31. Congenital Debility, Premature Birth, Malformations, etc.	499	495	3	—	1	—	—	—	—	560
32. Senility	286	—	—	—	—	—	—	13	273	306
33. Suicide	75	—	—	—	—	3	23	32	17	78
34. Other Violence	1139	24	39	34	148	125	271	324	174	1204
35. Other Defined Causes	849	95	35	9	34	36	111	248	281	990
36. Causes Ill-defined or unknown.....	13	—	—	—	—	—	1	5	7	14
TOTALS	12868	1257	384	138	360	502	1298	3712	5217	13931

CITY OF LIVERPOOL.

Infant Mortality during the year 1940.

Net Deaths from stated Causes at various Ages under One Year.

CAUSE OF DEATH.							Under 1 Week.	1 Week and under 2 Weeks.	2 Weeks and under 3 Weeks.	3 Weeks and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under One Year.
All Causes.	Certified	...	...	...	...	...	309	52	76	37	474	235	235	170	124	1238
	Uncertified	...	...	...	...	...	5	—	2	1	8	4	6	—	1	19
Typhoid Fever	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Chicken-pox	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Measles	...	...	...	...	...	...	—	—	—	—	—	2	9	16	21	48
Scarlet Fever	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Whooping Cough	...	...	...	...	...	...	—	—	—	—	—	2	1	3	2	8
Diphtheria	...	...	...	...	...	...	—	—	—	—	—	2	1	1	3	7
Cerebro Spinal Fever	...	...	...	...	...	...	—	—	—	—	—	4	4	7	4	19
Influenza	...	...	...	...	...	...	—	—	—	—	—	—	1	2	—	3
Dysentery	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Erysipelas	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis	...	...	...	...	...	...	—	—	—	—	—	—	—	1	1	2
Tuberculous Meningitis	...	...	...	...	...	...	—	—	—	—	—	—	2	6	2	10
Other Tuberculous Diseases	...	...	...	...	...	...	—	—	—	—	—	—	2	1	2	5
Meningitis (not Tuberculous)	...	...	...	...	...	...	—	—	1	—	1	1	1	2	1	6
Convulsions	...	...	...	...	...	...	5	1	—	—	6	1	—	1	2	10
Bronchitis	...	...	...	...	...	...	—	1	4	1	6	16	14	10	4	50
Pneumonia (all forms)	...	...	...	...	...	...	8	5	11	8	32	82	90	65	54	323
Diarrhoea	...	...	...	...	...	...	—	—	—	—	—	2	1	—	2	5
Enteritis	...	...	...	...	...	...	—	2	5	4	11	38	46	22	11	128
Other Diseases of Stomach	...	...	...	...	...	...	—	1	—	—	1	1	2	—	—	4
Syphilis	...	...	...	...	...	...	—	—	—	—	—	2	—	—	—	2
Rickets	...	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—
Suffocation	...	...	...	...	...	...	—	—	—	—	—	2	4	1	—	7
Injury at Birth	...	...	...	...	...	...	29	4	2	2	37	—	—	—	—	37
Atelectasis	...	...	...	...	...	...	33	1	2	—	36	2	1	—	—	39
Malformations	...	...	...	...	...	...	23	10	6	5	44	14	5	2	—	65
Premature Birth	...	...	...	...	...	...	195	20	39	15	269	27	6	1	—	303
Atrophy, Debility and Marasmus...	...	...	...	...	...	...	9	1	1	1	12	9	9	—	—	30
Other Causes	...	...	...	...	...	...	12	6	7	2	27	32	42	29	16	146
							314	52	78	38	482	239	241	170	125	1257

Net Births in the year { Legitimate ... 14,325
 { Illegitimate ... 691

Net Deaths in the year of { Legitimate Infants 1,178
 { Illegitimate Infants 79

APPENDIX E.

CITY OF LIVERPOOL.

Notifiable Diseases (other than Tuberculosis) during the Year 1940.

DISEASE.	NUMBER OF CASES NOTIFIED.														Cases admitted to Hospital	TOTAL DEATHS
	At all Ages.	At Ages—Years														
		Under 1	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	65—			
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Scarlet Fever	1745	15	67	104	135	161	734	296	122	85	14	12	—	768	3	
Diphtheria	2197	29	92	153	222	229	839	317	165	128	15	6	2	2118	134	
Enteric Fever (including Para-typhoid)	47	—	1	—	2	2	8	5	11	14	2	2	—	38	—	
Puerperal Fever	10	—	—	—	—	—	—	—	—	6	4	—	—	9	7	
Puerperal Pyrexia	297	—	—	—	—	—	—	—	17	238	42	—	—	266	—	
Pneumonia	1725	162	158	144	71	50	95	43	111	251	177	347	116	499	279	
Cerebro-spinal Fever	468	63	38	36	26	21	50	42	46	71	32	36	7	455	84	
Poliomyelitis and Polioencephalitis ..	7	—	—	—	—	1	—	2	2	2	—	—	—	7	1	
Encephalitis Lethargica	8	—	—	—	—	—	—	—	—	—	3	5	—	7	28	
Dysentery	14	2	2	—	—	—	—	—	2	5	2	1	—	12	7	
Ophthalmia Neonatorum	711	711	—	—	—	—	—	—	—	—	—	—	—	107	—	
Erysipelas	459	6	3	3	5	3	8	14	21	68	66	196	66	157	5	
Malaria	335	—	—	—	—	—	—	—	32	194	67	42	—	200	9	
Anthrax	5	—	—	—	—	—	—	—	—	1	3	1	—	5	—	
Measles	11046	1005	1576	1666	1612	1369	3364	154	111	151	31	7	—	1366	143	
Whooping Cough	593	98	81	86	102	87	133	4	—	1	—	—	1	83	19	
TOTALS	19667	2091	2018	2192	2175	1923	5231	877	640	1215	458	655	192	6097	719	

CITY OF LIVERPOOL
Notifiable Diseases (other than Tuberculosis) during

DISEASE.	Persons of German Nationality.						
	All Ages.	Under 15.	15-24.	25-44.	45-64.	65-74.	75 and over.
Scarlet fever	—	—	—	—	—	—	—
Dysentery	175	15	87	504	6,120	601	7,781
Typhoid	2107	20	62	103	1,022	2,220	4,017
Enteric fever (including Typhoid)	22	—	1	—	62	2	65
Enteric fever	16	—	—	—	—	—	—
Enteric fever	207	—	—	—	—	—	—
Enteric fever	1722	105	188	144	6,071	6,450	7,742
Enteric fever	466	63	23	26	3,022	7,21	10,200
Enteric fever	7	—	—	—	—	—	—
Enteric fever	8	—	—	—	—	—	—
Enteric fever	14	2	2	—	—	—	—
Enteric fever	211	71	—	—	—	—	—
Enteric fever	40	0	2	2	60	60	60
Enteric fever	22	—	—	—	—	—	—
Enteric fever	5	—	—	—	—	—	—
Enteric fever	1046	100	127	100	1,000	1,000	1,000
Enteric fever	5	0	2	2	2	2	2
TOTALS	1000	200	200	200	200	200	200

DEATHS REGISTERED DURING THE YEAR 1940



