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PUBLIC HEALTH DEPARTMENT.

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING THE YEAR

— 1947 —

BY

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Medical Officer of Health.



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PRINCIPAL CONTENTS

	PAGES
VITAL STATISTICS	1— 13
(Appendices A, B, C, and E)	
INFECTIOUS DISEASES	14— 24
(Appendix D)	
MATERNITY AND CHILD WELFARE	25— 33
TUBERCULOSIS	34— 46
VENEREAL DISEASES	47— 50
HOSPITAL SERVICE	52— 63
SANITATION	64— 99
FOOD INSPECTION	100—118
HOUSING	119—122

PUBLIC HEALTH DEPARTMENT,
LIVERPOOL.

MY LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to submit to you herewith my seventeenth Annual Report, relating to the health of the City of Liverpool. 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 total number of births was 19,904, giving a birth-rate of 26·4 per 1,000 as contrasted with a figure of 25·2 for the previous year. The total number of deaths from all causes was 10,122, giving a general death-rate of 13·5, as compared with 13·2 in 1946. The infantile mortality rate of 69 per 1,000 live births is little more than a quarter of those rates recorded at the beginning of the present century, having fallen from 81 in 1943.

The birth-rate of 26·4 per 1,000 is still considerably higher than that of England and Wales, which is 20·5 per 1,000. One death occurred from puerperal fever as contrasted with seven in 1945, and the maternal mortality rate was 0·83 per 1,000 births, the lowest ever recorded in Liverpool. Twenty years ago the comparable figure was 4·20 per 1,000 births. Further information is given on page 27.

The fall in still-birth rate has been pronounced and this rate is now 25·2 per 1,000 total births.

The number of deaths from infective diseases (including influenza) was 257. The low rate was due to two factors, first the great reduction in the number of cases and deaths from diphtheria, from which 12 persons died as against 25 in the previous year, which in itself was a record, a result due almost certainly to the extensive campaign of anti-diphtheria inoculation carried out in these two years, and secondly the almost complete absence of typhoid fever, from which no deaths occurred during the year.

During the past twenty or thirty years one of the most notable improvements in the health of Liverpool is the reduction of child

mortality, that is the deaths between one and five years of age. From the figures given in the table on page 11 it will be seen that the child mortality has fallen to less than one-tenth of the figures recorded in 1921. In some of the diseases, notably measles, whooping cough and other respiratory diseases the mortality has fallen to one-twentieth in that period.

The work of the Health Committee in relation to the hospitals terminated on 4th July, 1948, and accordingly a summary of what has been achieved is given on page 58. The City Council has also lost control of the main part of the Tuberculosis and Venereal Diseases Services which, under the operation of the National Health Service Act, 1946, have been transferred, with the hospitals, to the Regional Hospital Board.

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 1947.

Area (land and inland water)	...	...	...	...	27,321 Acres (43 sq. miles)
Population (Estimated by Registrar General)	...	...	...	...	753,340
Live Births	...	...	19,904	Live Birth rate	26.4 per 1,000 of estimated population.
Deaths (all causes)	...	...	10,122	Death rate	13.5 per 1,000 of estimated population.
Deaths (under 1 year of age)	1,367	Infant Mortality rate	69 per 1,000 live births		
Deaths from :—					
Seven principal Zymotic diseases	413	Zymotic death rate	0.54	} per 1,000 of the estimated population.	
Pulmonary Tuberculosis	599	Pulmonary Tuberculosis death rate	0.79		
Other forms of Tuberculosis	85	Non Pulmonary Tuberculosis death rate	0.11		
Respiratory diseases	1,642	Respiratory death rate	2.18		
Cancer	1,314	Cancer death rate	1.74		
Maternal Deaths	...	...	17	Maternal Mortality rate	0.83 per 1,000 births.

BIRTHS.

The number of live births recorded during the year 1947 was 19,904, equal to a rate of 26·4 per 1,000 of the estimated resident mid-year population. Of the total births, 10,284 were males and 9,620 were females. The number of illegitimate live births was 1,151 or 5·8 per cent. of the total births, 613 being males and 538 females.

The birth-rate in the City of Liverpool was considerably above the average of the great towns, which was 23·3 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate was 20·5 per 1,000.

The number of still-births registered was 514 as shown in the table below. This represented 25·2 per thousand of the total (live and still) births registered and 0·68 per 1,000 of the estimated population.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total
Legitimate ...	9,671	9,082	18,753	248	233	481
Illegitimate ...	613	538	1,151	19	14	33
	10,284	9,620	19,904	267	247	514

The following figures show not only an increase in the actual number of illegitimate births, but an increase in the proportion of illegitimate births when compared with 1938.

	Births.	Birth Rate.	Illegitimate Birth Rate per 1,000 population.	% of Total Births.	Total Illegitimate Births
1938	16,175	18·7	0·89	4·8	771
1942	13,729	20·5	1·30	6·3	871
1943	14,432	21·8	1·55	7·1	1,030
1944	15,412	23·1	1·91	8·3	1,274
1945	14,784	21·7	2·32	10·7	1,582
1946	18,528	25·2	1·84	7·3	1,351
1947	19,904	26·4	1·53	5·8	1,151

STILL-BIRTHS.

The following figures show the reduction in the numbers of still-births which have taken place in the City during the past twelve years and the corresponding rates per thousand of population and per thousand births. The latter rate is the more valuable as it expresses the proportion of

total births lost, the actual number of live births occurring varying from 17,347 in 1935 down to 13,291 in 1941 and up to 19,904 in 1947. It will be noted that there has been a marked and almost continuous fall in the still-birth rate throughout this period, thus constituting a considerable saving of life additional to that which has resulted from the infant mortality rate. The fall is 39 per cent. of the 1935 figure and the rate is now below 30 per thousand births, and it is probable that a further considerable reduction is still possible.

The causes of this reduction, which has also affected the country generally though not in the same degree, are somewhat obscure. The greater care of expectant mothers in the ante-natal clinics and the better obstetric services have undoubtedly contributed to this reduction, but there is some evidence to show that the better nutrition of expectant mothers of the labouring classes in war-time, together with diminished unemployment during this period, have also largely contributed.

The still-birth rate among legitimate babies was 25 per thousand and among illegitimate babies was 28 per thousand births.

Year.	-Registered Live Births.	Registered Still Births.	Total Births.	Still-births Rate per 1,000 population.	Still-births per 1,000 Live and Still Births.
1935.....	17,347	749	18,096	0.9	41.4
1936.....	17,403	708	18,111	0.8	39.1
1937.....	16,728	618	17,346	0.7	35.6
1938.....	16,175	639	16,814	0.7	38.0
1939.....	15,614	631	16,245	0.8	38.9
1940.....	15,016	519	15,535	0.7	33.4
1941.....	13,291	508	13,799	0.7	36.8
1942.....	13,729	552	14,281	0.8	38.6
1943.....	14,432	485	14,917	0.7	32.5
1944.....	15,412	492	15,904	0.7	30.9
1945.....	14,784	431	15,215	0.6	28.3
1946.....	18,528	539	19,067	0.7	28.3
1947.....	19,904	514	20,418	0.7	25.2

DEATHS.

The total deaths registered during the year numbered 10,122 (5,297 males and 4,825 females), equal to a death-rate of 13.5 per 1,000 of the estimated resident population. Since the commencement of the war the deaths of non-civilians are excluded.

The death-rate for England and Wales was 12.0 and that of the great towns was 13.0. The following table shows deaths at various age periods, expressed as a percentage of total deaths, for each year 1915 to 1947:—

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	7	13	19	21	9	100
1940 ...	14	2	3	4	5	8	14	21	20	9	100
1941 ...	15	2	4	5	6	8	13	20	19	8	100
1942 ...	14	1	2	4	5	7	14	22	22	9	100
1943 ...	14	1	2	3	5	7	13	22	23	10	100
1944 ...	12	1	2	4	4	7	13	23	24	10	100
1940-1944 (average)	14	1	3	4	5	7	13	22	22	9	100
1945 ...	13	1	2	3	4	7	13	22	23	12	100
1946 ...	16	1	2	3	3	6	12	21	24	12	100
1947 ...	15	1	2	3	4	6	11	20	25	13	100

ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1940, and during 1941, 1942, 1943, 1944, 1945, 1946 and 1947.

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
1931-1940	6,473	9,413	18,196	5,987	40,069	12,619	115,632
1941	623	846	2,226	447	4,142	1,211	13,253
1942	495	777	1,403	383	3,058	1,279	9,388
1943	238	773	1,856	399	3,266	1,337	9,719
1944	226	679	1,344	362	2,611	1,215	9,010
1945	200	701	1,620	435	2,956	1,230	9,523
1946	206	657	1,462	569	2,894	1,312	9,671
1947	222	684	1,677	599	3,217	1,314	10,122

Deaths expressed as a percentage of total deaths from all causes (Proportionate Mortality).						
1871-1880	19.2	13.5	20.2	10.0	62.9	1.4
1881-1890	14.1	12.7	23.2	9.4	59.4	2.0
1891-1900	9.3	10.8	24.6	12.7	57.4	2.9
1901-1910	8.6	10.6	21.8	12.0	53.0	4.3
1911-1920	7.9	10.9	27.3	8.9	55.0	5.5
1921-1930	6.6	10.7	25.0	6.9	49.4	8.4
1931-1940	5.6	8.1	15.7	5.2	34.7	10.9
1941	4.7	6.4	16.8	3.4	31.3	9.1
1942	5.3	8.3	14.9	4.1	32.6	13.6
1943	2.4	8.0	19.1	4.1	33.6	13.7
1944	2.5	7.5	14.9	4.0	28.9	13.5
1945	2.1	7.4	17.0	4.6	31.1	12.9
1946	2.1	6.8	15.1	5.9	29.9	13.6
1947	2.2	6.8	16.6	5.9	31.8	13.0

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 (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
1931-1940	0.7	1.1	2.1	0.7	4.7	1.5	13.7
1941	0.9	1.2	3.2	0.6	5.9	1.8	19.3
1942	0.7	1.1	2.1	0.6	4.5	1.9	14.0
1943	0.3	1.2	2.8	0.6	4.9	2.0	14.7
1944	0.3	1.0	2.0	0.5	3.9	1.8	13.5
1945	0.3	1.0	2.4	0.6	4.3	1.8	14.0
1946	0.3	0.9	2.0	0.8	3.9	1.8	13.2
1947	0.3	0.9	2.2	0.8	4.2	1.7	13.5

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

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
1931-1940	13.5	30.6	36.8	25.0	27.2	375.0	48.1
1941	17.3	33.3	56.1	21.4	34.1	450.0	67.7
1942	13.5	30.6	36.8	21.4	26.0	475.0	49.1
1943	5.8	33.3	49.4	21.4	28.3	500.0	51.6
1944	5.8	28.0	35.1	17.9	22.5	450.0	47.4
1945	5.8	28.0	42.1	21.4	24.8	450.0	49.1
1946	5.8	25.0	35.1	28.6	22.5	450.0	46.3
1947	5.8	25.0	38.6	28.6	24.3	425.0	47.4

INFANTILE MORTALITY.

The following table shows the deaths and death-rates of infants under one year of age for the year 1947:—

	Infant Deaths.	Infant Death Rates.
All Infants	1,367	69 per 1,000 live births.
Legitimate Infants	1,257	67 „ legitimate live births.
Illegitimate Infants	110	96 „ illegitimate live births.

In 1934 the infant death-rate for legitimate live births was 75 and for illegitimate live births 168, i.e. more than double that of the legitimately born infants.

Analysis of causes of Infant Mortality in successive quinquennia 1896-1945, and the years 1946 and 1947

(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 Extem- nal Causes
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	81
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	56
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	53
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	42
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	17
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	12
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	8
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	6
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691	8
1941/1945	71,648	5,512	341	71	403	1,704	548	2,193	13
1946	18,528	1,382	77	11	94	272	306	574	2
1947	19,904	1,367	93	19	56	304	315	525	3

(B.)—Death Rates per 1,000 Births.

1896/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0	7.7
1901/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1	4.4
1906/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7	4.4
1911/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1	3.3
1916/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0	1.7
1921/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1	1.7
1926/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1	0.7
1931/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3	0.7
1936/1940	19.4	77	7.0	0.9	6.4	17.9	8.8	32.9	1.1
1941/1945	21.3	78	4.8	1.0	5.6	24.1	7.7	30.7	1.1
1946	25.2	74	4.1	0.6	5.1	14.7	16.5	31.9	1.1
1947	26.4	69	4.7	0.9	2.9	15.3	15.8	26.4	2.2

*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.

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	95.9	91.5	76.5	94.0	6.6
1906/1910	93.0	78.6	107.1	62.9	78.6	83.1	57.8	91.0	6.6
1911/1915	87.0	72.5	91.9	50.0	57.9	81.5	56.9	84.0	5.5
1916/1920	76.0	61.4	87.4	32.2	49.3	88.7	32.7	82.0	2.2
1921/1925	75.1	54.9	80.3	30.6	24.9	84.7	29.9	70.8	1.1
1926/1930	66.2	49.7	80.3	17.7	18.9	83.5	30.4	60.9	1.1
1931/1935	61.4	47.2	79.5	14.8	18.9	72.2	23.4	69.2	1.1
1936/1940	58.1	40.7	55.1	14.5	29.0	55.9	15.4	64.5	1.1
1941/1945	63.8	41.3	37.8	16.1	25.3	75.3	13.5	62.0	2.2
1946	75.4	39.1	32.3	9.7	23.1	46.0	28.9	60.8	1.1
1947	79.0	36.5	37.0	14.5	13.1	47.8	27.7	51.8	2.2

CHILD MORTALITY.

Child mortality may be regarded as the deaths between 1 and 5 years of age. It has not received the same attention as has infant mortality, but its reduction has achieved a saving of life only slightly less than has been achieved by the reduction in infant mortality. The two cannot be dissociated as one of the elements in the reduction of child deaths has been the better health of infants which has continued into childhood.

In the tables on pages 10-11 the deaths of children aged 1 to 5 during the last 28 years in the City of Liverpool have been analysed into their major causes. The infantile deaths are shown in the first column for comparison. The first of these tables shows the actual deaths between 1 and 5 years of age and the principal causes of these deaths. The second table shows these expressed as index rates, that is, as a percentage of the figures under each heading, the corresponding deaths for 1920 being represented by 100. The reduction in child mortality has been *relatively* more rapid than the reduction in infantile mortality. It will be seen that in the first decade 1920-29 there was considerable fluctuation. In the infectious diseases—and the element of infection is represented in the causation of all the diseases tabulated—there is a certain periodicity, epidemics recurring at intervals of two years or more; the almost regular biennial beat of measles was entirely cut out during 1939, presumably due to the evacuation of so many children in the Autumn.

A very remarkable feature of this table is the very rapid fall in the later war and post-war years, i.e. from 1942 onwards, of the deaths from respiratory diseases, measles, whooping cough and scarlet fever, columns (d), (f), (g), and (j). There is little doubt that this is due to the increasing treatment of these diseases with first the sulphonamides and later penicillin—the antibiotic drugs; analysis of these figures by ages shows that the reduction began earliest in the end of the period of child life and progressed into younger and younger periods (third table). The saving in diphtheria mortality dates from the start of the intensive inoculation campaign in 1942.

From the figures at the foot of the second table it will be seen that whilst infant mortality was halved, child mortality from all causes and from "general diseases" was reduced to a tenth, whilst mortality from

respiratory diseases, measles and whooping cough was reduced to a twentieth, and scarlet fever, at ages 5-9, disappeared as a cause of death. The saving of child life in 1948 in comparison with 1920 is 1,283 per annum. The total saving of lives is of the order 15,000 over the whole period.

TABLE I.

Year.	Deaths under 1 year of age.	DEATHS, 1 YEAR AND UNDER 5 YEARS OF AGE.							
		Total, 1 year and under 5 years of age.	General Diseases (including T.B.).	Respiratory Diseases.	Digestive Diseases.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.
						Included in General Diseases.			
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1920	2,826	1,472	697	536	90	285	129	109	3
1921	2,339	1,488	610	474	221	250	135	51	1
1922	2,052	1,255	449	577	77	126	98	53	2
1923	2,058	1,321	577	478	117	247	85	57	2
1924	2,113	1,207	453	498	102	103	98	40	2
1925	1,935	1,456	706	480	144	280	139	68	6
1926	2,066	1,155	451	456	147	149	107	51	1
1927	1,781	1,206	517	481	99	248	75	55	
1928	1,789	1,038	467	369	101	131	161	55	
1929	1,822	1,404	677	518	112	326	110	75	
1930	1,544	756	346	251	65	113	38	78	
1931	1,740	1,062	535	368	67	253	87	74	
1932	1,646	890	486	251	59	227	74	85	
1933	1,655	944	474	287	84	234	53	79	
1934	1,418	799	438	231	40	174	109	77	
1935	1,445	561	269	176	35	110	34	66	
1936	1,311	540	307	148	19	116	65	58	
1937	1,371	579	289	176	43	92	59	61	
1938	1,189	508	264	153	28	77	60	64	
1939	1,098	247	88	82	25	—	14	39	
1940	1,257	522	234	147	25	88	9	63	
1941	1,350	658	279	182	25	15	67	88	
1942	1,039	258	126	50	10	16	9	38	
1943	1,171	208	80	60	15	8	21	21	
1944	884	184	79	33	12	6	11	16	
1945	1,068	185	71	46	16	5	12	13	
1946	1,382	158	66	29	8	13	6	16	
1947	1,367	189	78	41	15	8	32	6	

TABLE II.

INDEX FIGURES OF CHILD MORTALITY IN THE CITY OF LIVERPOOL DURING THE YEARS 1920-1947.

Year.	(a) 0-1.	(b) 1-5.	(c) General.	(d) Resp.	(e) Digest.	(f) Measles.	(g) Whooping Cough.	(h) Diph- theria.	(j) Scarlet Fever.
1920	100	100	100	100	100	100	100	100	100
1921	83	101	87	88	*246	88	104	47	54
1922	73	85	64	107	86	44	76	49	63
1923	73	90	81	89	130	87	66	52	80
1924	75	82	65	93	113	36	76	37	106
1925	68	99	101	90	160	98	107	62	185
1926	73	78	65	85	163	52	83	47	34
1927	63	82	74	90	110	87	58	50	11
1928	63	70	67	69	112	46	125	50	31
1929	64	95	97	97	124	114	85	69	66
1930	55	51	50	47	72	40	29	72	43
1931	62	59	76	69	74	89	67	68	11
1932	58	60	70	47	66	80	57	78	9
1933	59	64	68	54	93	82	41	72	51
1934	50	54	63	43	44	61	85	71	11
1935	51	45	39	33	39	32	29	61	6
1936	46	37	44	28	21	41	50	53	3
1937	49	39	41	33	48	32	46	56	17
1938	53	35	38	29	31	27	47	59	9
1939	39	17	13	15	28	0	11	36	3
1940	44	35	34	28	28	31	7	58	6
1941	48	45	40	34	28	5	52	81	17
1942	37	16	18	9	11	6	7	35	3
1943	41	14	11	11	16	3	9	19	—
1944	31	12	11	6	13	2	9	15	—
1945	38	12	10	9	18	2	9	12	—
1946	49	11	9	5	9	5	5	15	—
1947	49	11	11	8	17	3	25	6	—

*The years 1920 and 1922 had cold summers, 1922 being exceptionally wet, but 1921, in contrast, was an extremely hot, dry summer. The last outbreak of infantile diarrhoea occurred in 1921 and a serious anti-fly campaign was begun from 1922 onwards.

TABLE III.

CITY OF LIVERPOOL, 1921-1947.

DEATHS OF CHILDREN AT GIVEN AGES FROM WHOOPING COUGH,

BRONCHO-PNEUMONIA AND LOBAR PNEUMONIA.

				Under 1.	1 Plus.	2 Plus.	3 Plus.	4 Plus.	5-9.	Total Over 1.	Per cent.	
											Under 1.	Over 1.
WHOOPING COUGH.												
Average 1921-30	...			71	69	20	11	5	4	109	39	61
Average 1931-38	...			54	44	23	7	2	2	78	41	59
1939	...	...		21	9	2	3	—	1	15	58	42
1940	...	...		8	5	1	1	2	2	11	42	58
1941	...	...		57	43	13	8	3	3	70	45	55
1942	...	...		6	5	2	2	—	—	9	40	60
1943	...	...		25	8	3	1	—	—	12	68	32
1944	...	...		22	5	2	2	2	1	12	65	35
1945	...	...		25	7	3	1	1	1	13	66	34
1946	...	...		31	5	1	—	—	1	7	82	18
1947	...	...		42	20	6	5	1	—	32	57	43
BRONCHO-PNEUMONIA.												
Average 1921-30	...			325	217	66	20	13	20	336	49	51
Average 1931-35	...			303	129	36	18	6	13	202	60	40
Average 1936-40	...			225	69	21	6	5	7	108	68	32
1941	...	...		367	89	25	11	7	6	138	73	27
1942	...	...		224	14	6	2	3	2	27	89	11
1943	...	...		313	31	8	2	1	1	43	88	12
1944	...	...		187	12	5	2	—	3	22	89	11
1945	...	...		197	20	7	3	1	—	31	86	14
1946	...	...		220	19	2	—	—	2	23	90	10
1947	...	...		223	15	7	5	2	1	30	88	12
LOBAR PNEUMONIA.												
Average 1921-30	...			56	44	16	7	9	18	94	37	63
Average 1931-35	...			52	30	12	6	4	17	69	43	57
Average 1936-40	...			33	16	7	3	3	6	35	49	51
1941	...	...		43	15	7	3	1	3	29	60	40
1942	...	...		40	4	1	1	1	3	10	80	20
1943	...	...		43	5	3	1	1	2	12	78	22
1944	...	...		25	4	3	1	—	—	8	76	24
1945	...	...		53	5	4	1	1	—	11	83	17
1946	...	...		21	1	1	2	—	—	4	84	16
1947	...	...		25	3	—	—	—	—	3	89	11

CANCER.

There were 1,314 deaths recorded from cancer, as compared with 1,312 in 1946, this being equivalent to a death-rate of 1·7 per 1,000 of the population.

Progress continued to be made during the year with a view to implementing the terms of the interim arrangements made under the Cancer Act of 1939 and which had received the approval of the Ministry of Health in 1943. The Liverpool Cancer Control Organisation, to which the City Council has delegated the administration of these arrangements, and on which it is represented, extended to other areas in the neighbourhood its scheme for the co-ordination of facilities for the examination of persons suspected to be suffering from cancer and for the treatment of cases where the diagnosis of the disease is confirmed. It is hoped that eventually the scheme will serve a population of nearly two million persons.

DEATHS FROM CANCER AT VARIOUS AGE-PERIODS, 1947.

Organs Affected.	Males.	Females.	Number of Deaths.										All Ages.
			At Ages—Years										
			Under 10	10-	25-	40-	50-	60-	70-	75-	80-		
Buccal Cavity	31	8	—	1	1	2	3	8	13	5	6	39	
Stomach ...	176	130	—	—	8	22	67	99	48	44	18	306	
Liver ...	19	15	—	—	2	3	8	9	6	5	1	34	
Intestines ...	125	145	—	2	11	21	42	75	59	40	20	270	
Lungs ...	196	39	—	—	7	37	69	75	28	14	5	235	
Female Genital Organs	—	97	—	1	1	16	30	25	12	6	6	97	
Breast ...	—	130	—	—	6	25	29	34	16	14	6	130	
Skin ...	3	4	—	—	—	1	1	3	2	—	—	7	
Other Organs...	118	78	3	6	14	13	29	68	23	27	13	196	
	668	646	3	10	50	140	278	396	207	155	75	1,314	

CREMATION.

The number of cremations which took place at the Liverpool Crematorium during 1947 was 914, the highest number yet recorded.

NOTIFICATION OF INFECTIOUS DISEASE.

The following is a list of the diseases notifiable in Liverpool during 1947:—

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 1.

NUMBERS OF CASES OF INFECTIOUS DISEASES COMING TO NOTICE DURING 1947

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	2	—	2	4	—	3	—	1	4	17	17	100·0
Scarlet Fever ...	174	148	141	84	123	106	101	75	134	213	289	266	1854	748	40·3
Measles and German Measles...	371	399	565	602	1168	1093	696	406	80	89	95	154	5718	570	10·0
Diphtheria ...	29	22	37	19	29	33	30	23	36	36	38	37	369	358	97·0
Puerperal Pyrexia	25	11	15	21	34	16	21	37	28	23	21	22	274	260	94·9
Erysipelas ...	25	20	21	15	17	9	6	7	11	14	19	19	183	109	59·6
Cerebro-spinal Fever	7	1	14	14	6	3	7	4	3	5	2	6	72	70	97·2
Poliomyelitis and Polio-encephalitis	—	—	—	1	—	—	3	8	14	11	7	1	45	45	100·0
Ophthalmia Neonatorum ...	28	25	32	22	19	19	21	19	9	23	16	19	252	129	51·2
Pneumonia & Influenza Pneumonia	105	69	77	60	43	27	18	14	27	50	52	128	670	77	11·5
Malaria ...	10	6	2	2	4	1	3	3	1	3	3	1	39	25	64·1
Dysentery ...	11	5	1	13	28	3	21	25	26	23	20	44	220	215	97·7
Encephalitis Lethargica ...	—	—	1	—	—	—	—	—	—	—	—	—	1	1	100·0
Whooping Cough ...	402	278	308	254	222	122	94	76	48	19	26	15	1864	420	22·5
Anthrax ...	—	—	2	—	—	1	—	—	—	—	—	—	3	3	100·0
Chickenpox ...	27	16	14	19	16	17	11	9	5	15	21	21	191	107	56·0
TOTALS ...	1214	1000	1231	1128	1709	1452	1036	706	425	524	610	737	11772	3154	26·8

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.

Primary Vaccinations.

The numbers of primary vaccinations in Liverpool during the year 1946 and six previous years are given below:—

	1940.	1941.	1942.	1943.	1944.	1945.	1946.
1.—Number of children born	15,762	12,054	14,084	15,368	16,975	16,315	20,315
2.—Number of primary vaccinations.	9,466	7,227	8,984	10,012	10,901	9,982	11,601
3.—Number of exemption certificates granted.	1,889	1,206	1,237	1,492	1,711	1,450	1,311
4.—Number of certificates of insusceptibility sent.	119	56	86	102	53	48	1

Typhus Fever.

No case of typhus fever was reported during the year.

Anthrax.

Six cases of anthrax were treated during 1947 at the City Hospital, Fazakerley, and all recovered. Three of these patients resided outside Liverpool.

Six persons attended the hospital for investigation as suspected cases. None was suffering from anthrax.

Typhoid and Paratyphoid Fever.

During the year there occurred eight cases of typhoid fever, eight cases of paratyphoid "B" fever and one case of paratyphoid "A" fever. Six of the cases of typhoid fever were infected in Liverpool and two abroad; one being infected in the West Indies and the other in Port Said, the latter giving rise to one of the city cases. In three of the city cases the infection was traced to a carrier while the source of the infection in the other two was not traced. Of the eight cases of paratyphoid "B" fever, six were infected in Liverpool while the other two cases were admitted to Liverpool hospitals from outside districts. The case of paratyphoid "A" fever occurred in an airman who had been infected in India.

Port Cases of Typhoid Fever.

During the year 6 cases of typhoid fever were imported from overseas.

Register of Chronic Typhoid and Paratyphoid Excretors.

The following chronic excretors of typhoid or paratyphoid organisms are known and under observation. Bacteriological examination of faeces is carried out every three months.

Case Number.	Sex.	Age.	Disease.	Date of illness.	Date faeces last positive.
4	M.	59	Paratyphoid "B" fever.	July, 1941	Dec., 1947
6	F.	53	"	July, 1941	Dec., 1947
7	F.	46	"	July, 1941	Jan., 1948
8	F.	43	"	Aug., 1941	Dec., 1947
13	M.	37	Typhoid Fever.	Not known.	Jan., 1948

Since last year, case number 2, a paratyphoid "B" carrier, has been removed from the register, having ceased to excrete the organism.

Undulant Fever.

No case of undulant fever was reported during the year.

Diphtheria.

During 1947, 369 cases of diphtheria were reported, a case-rate of 0.5 per 1,000 of the population. Of these cases, 12 proved fatal, making a fatality rate of 3.2 per 100 cases and a mortality rate of 1.6 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.
2	—	2	3	1	2	2	...	—	—	...	...	...	12

AGES OF NOTIFIED CASES.

12	20	18	20	35	136	53	27	29	12	6	1	...	369
65%						35%							

PERCENTAGE FATALITY AT EACH AGE.

16.6	...	11.1	15.0	2.9	1.5	3.8	...	...	...	...	...	...	3.2
------	-----	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Scarlet Fever.

During 1947, 1,854 cases of scarlet fever were reported, a case-rate of 2.5 per 1,000 of the population. Of these cases, none proved fatal.

AGES AT DEATH.

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

AGES OF NOTIFIED CASES.

5	41	81	124	144	842	395	129	53	23	12	5	...	1,854
21.3%				45.4%		21.3%	11.9%						

PERCENTAGE FATALITY AT EACH AGE.

...	...	...	...	...	...	—	...	...	...	...	...	...	...
-----	-----	-----	-----	-----	-----	---	-----	-----	-----	-----	-----	-----	-----

Inoculation against Diphtheria.

TABLE IV.

NUMBER OF COMPLETED DIPHTHERIA INOCULATIONS.

Where or by whom inoculated.	1925-36	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
INOCULATION CLINICS :												
Carnegie	2533	237	196	104	64	452	1,503	205	81	32	—	—
Townsend Avenue	1748	183	197	151	167	1,006	2,287	688	468	385	559	476
Child Welfare Centres	650	1119	1792	1096	859	2,617	14436	8271	7717	8875	8343	8006
SCHOOLS :												
Public Elementary	23121	4855	6356	2978	1,738	2,503	7,926	12907	5430	6052	8409	5658
Residential	2692	382	389	137	156	1,021	39	378	253	408	209	51
Secondary	—	—	—	—	—	—	408	1235	154	718	244	—
MUNICIPAL HOSPITALS :												
Fazakerley	3479	150	182	124	113	66	111	69	76	68	43	17
Fever Hospitals—North, South and East	925	202	185	238	123	50	46	40	44	30	45	38
Alder Hey	698	148	152	121	76	47	131	120	77	61	42	24
Olive Mount	654	41	56	29	2	13	74	97	118	175	148	110
Other Municipal Hospitals	207	80	86	84	49	54	121	47	64	80	45	72
Miscellaneous	1216	19	4	5	8	1	45	19	6	—	11	8
Medical Practitioners	751	85	71	39	63	257	241	121	133	75	82	40
TOTALS	38674	7501	9666	5106	3,418	8,087	27368	24197	14621	16959	18180	14500

GRAND TOTAL 188,277

In addition to the above complete inoculations 990 previously inoculated children received a reinforcing injection either at school or at one of the inoculation clinics.

Age at date of inoculation.	1925 1926	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Under 1 year.	108	109	107	106	105	104	103	102	101	100	99	98	97	96	95	94
1 +	342	184	106	211	359	505	608	735	849	1006	1632	2886	2182	3552	2581	2222
2 +	335	219	154	116	340	461	524	604	711	854	2551	1181	1123	651	916	529
3 +	343	246	164	222	120	364	433	518	613	726	2492	1094	659	422	318	380
4 +	430	466	301	459	513	594	710	823	924	1076	1295	1124	585	600	543	210
5 +	1123	1345	1634	1511	2294	3044	3913	4733	5424	6254	7243	8274	1231	1284	2089	1942
6 +	1602	1583	1209	1563	2404	3204	3922	4591	5211	5718	6168	6442	570	1315	2019	1164
7 +	1220	1354	1222	842	1211	823	1110	584	442	659	2022	1511	500	484	1334	662
8 +	442	519	459	216	304	320	202	138	44	120	469	445	643	444	526	806
9 +	505	266	154	100	45	110	99	26	32	168	527	1550	593	684	994	280
10 +	353	170	122	100	103	96	95	45	63	154	1061	442	594	621	918	543
11 +	448	203	158	120	124	115	113	90	44	182	1134	1846	273	602	664	465
12 +	464	224	146	133	124	128	126	100	85	216	1385	2265	500	215	263	162
13 +	424	205	159	122	125	114	114	90	48	183	1236	2086	449	583	154	104
14 +	413	415	35	27	24	25	25	20	14	40	213	458	416	43	44	11
15 +	583	284	220	164	142	160	158	124	106	260	433	424	328	200	238	180
Totals	11415	12241	12221	6116	8548	12516	16666	21506	24418	30858	42361	52419	64624	76459	81818	114500

Ratio of inoculated to total population at end of year.

Total under 5 years of age 25584, being 35.1% of the population of this age.

Total 5-9 years of age 44545, being 66.4% of the population of this age.

Total 10-14 years of age 44926, being 64.7% of the population of this age.

TABLE VI.
DIPHTHERIA—COMPARATIVE INCIDENCE AMONG INOCULATED AND NON-INOCULATED CHILDREN
UNDER FIFTEEN YEARS OF AGE IN LIVERPOOL.

	1945.		1946.		1947.		Aggregate 1942/1947.
	Inoculated.	Not Inoculated.	Inoculated.	Not Inoculated.	Inoculated.	Not Inoculated.	
Number of child-years at risk ...	102,723*	90,337	110,824*	83,486	115,311*	86,179	586,547
Diphtheria cases	64	510	33	390	28	266	4,577
Annual rate of incidence per 1,000 child-years	0.62	5.64	0.30	4.67	0.24	3.08	7.80
Ratio	1 to 9.1		1 to 15.6		1 to 12.8		1 to 13.6
Diphtheria deaths	0	26	0	23	1	11	219
Annual rate of dying per 1,000 child-years	Nil	0.29	Nil	0.27	0.008	0.12	0.37
Ratio	—		—		1 to 15		1 to 71

* Consisting of (a) all children under 13 inoculated before the end of the previous year; (b) five-sixths of the children of 13 years and one-sixth of the children of 14 years inoculated before the end of the previous year; (c) three-quarters of the children inoculated during the first half of the year of risk and (d) one-quarter of the children inoculated during the last half of the year of risk.

Measles.

During 1947, 5,449 cases of measles were reported, representing a case-rate of 7·2 per 1,000 of the population. The number of deaths was 22, making a fatality-rate of 0·4 per 100 cases and a mortality-rate of 2·9 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.
11	5	1	1	1	2	—	1	—	—	—	—	—	22

AGES OF CASES.												
468	752	773	751	807	1,614	157	127					5,449

PERCENTAGE FATALITY AT EACH AGE.												
2·3	0·7	0·1	0·1	0·1	0·1	—	0·8					0·4

Whooping Cough.

During 1947, 1,864 cases of whooping cough came to the notice of the Health Department, a figure representing a case-rate of 2·5 per 1,000 of the population. Of these cases 74 proved fatal, corresponding to a death-rate of 9·8 per 100,000 of the population.

Number of Deaths from Whooping Cough at various Age Periods during 1947.							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+
42	20	6	5	1	—	—	74	56·8	27·0	8·1	6·8	1·3	—	—

Cerebro-spinal Fever.

TABLE VII.

CASES AND DEATHS DURING 1947 AND NINE PREVIOUS YEARS.

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Cases	76	70	468	453	201	83	58	47	48	72
Deaths	37	28	84	79	38	22	21	9	13	13
Fatality-rate per 100 cases	48·7	40·0	17·9	17·4	18·9	26·5	36·2	19·1	27·1	18·1

The fall in the fatality rate which has occurred in the last eight years is, in the main, due to the success of treatment with Sulphonamide drugs.

Poliomyelitis and Polioencephalitis.

During the year there occurred forty cases of poliomyelitis with two deaths and five cases of polioencephalitis also with two deaths. Of the cases of poliomyelitis, thirty-six were infected in the city and four outside the city; while all of the five cases of polioencephalitis were infected in the city. The following table gives the age distribution of the notified cases:—

Ages of notified cases.

Under 1 year.	— 1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	Total
3	3	1	2	3	9	10	2	11	1	—	45

Deaths from Influenza and other Respiratory Diseases.

TABLE VIII.

	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
1931-40 ...	1,762	15.1	2.1	36.8
1941... ..	2,226	16.8	3.2	56.1
1942... ..	1,403	14.9	2.1	36.8
1943... ..	1,856	19.1	2.8	49.1
1944... ..	1,344	14.9	2.0	35.1
1945... ..	1,620	17.0	2.3	40.3
1946... ..	1,462	15.1	2.0	35.1
1947... ..	1,675	16.5	2.2	38.6

Dysentery.

During 1947, 215 cases of bacillary dysentery were reported in the city—Newcastle 135, Sonne 43, and Flexner 37. In addition, there were 5 cases of amoebic dysentery contracted abroad.

MATERNITY and CHILD WELFARE.

Vital Statistics

Live births	...	19,904	Live birth rate	...	26·4
Still-births	...	514	Still-birth rate	...	0·7
Total births		...	20,418		

Infant Mortality rate	...	...	...	...	69
Neo-natal Mortality rate	...	...	...	...	27·1
Maternal Mortality rate	...	...	...	...	0·83

THE MIDWIFERY DEPARTMENT.

During the year, 290 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 1947 was 52 and 2 temporary, and 2 part-time temporary.

Midwifery cases	...	...	...	4,726
Maternity cases	...	...	...	344
				— 5,070

Statement of Notifications of Live and Still Births received during the year 1947.

	1947.			Still Births per cent of total.
	Live Births.	Still Births.	Total.	
Midwives (Municipal)	4,643	83	4,726	1·7
Do. (Independent)	707	13	720	1·8
Medical Attendants	1,278	36	1,314	2·0
Liverpool Maternity Hospital	2,422	84	2,506	3·3
Municipal Hospitals	10,474	301	10,775	2·8
Other Institutions	658	12	670	1·8
District Homes	1,363	13	1,376	0·9
	21,545	542	22,087	2·4

The number of still-births notified was 542, of which 145 were notified by midwives. Enquiries were made into the circumstances of all still-births.

Visits paid by Staff of the Midwifery Department.

Routine and special visits to midwives	...	...	...	...	1,528
Visits regarding claims for fees from medical practitioners for attendance in emergency cases	...	...	...	...	2,259
Visits in respect of ophthalmia neonatorum	...	...	...	...	6,241
Special visits (puerperal pyrexia, venereal diseases, etc.)	...	...	...	...	791

Medical Assistance.

Under the rules of the Central Midwives Board, midwives sought medical aid in 2,930 cases—2,264 mothers and 666 children.

Consultant Services.

The total number of occasions on which the services of a consultant obstetrician were requisitioned in connection with cases of puerperal pyrexia or complications during pregnancy was 5.

Prevention of Spread of Infection.

Seven 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, 1928 and 1939.

The number of cases of puerperal pyrexia notified during the year was 277. Of these, 245 were admitted to or occurred in hospitals, and 32 occurred in the practice of midwives, and in 7 cases nurses were provided.

Maternal Mortality.

The number of live and still births registered in the city, together with maternal deaths and maternal death-rates, are as follows:—

BIRTHS REGISTERED.				MATERNAL MORTALITY.					
Year	Live Births	Still Births	Total Births	Puerperal Sepsis		Other Puerperal Causes		Total	
				Deaths	Rate per 1,000 Total Births	Deaths	Rate per 1,000 Total Births	Deaths	Rate per 1,000 Total Births
1927	19,020	735	19,755	25	1.26	58	2.94	83	4.20
1928	19,120	816	19,936	19	0.95	45	2.26	64	3.21
1929	18,888	753	19,641	26	1.32	40	2.04	66	3.36
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	3.52
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
1941	13,291	508	13,799	9	0.68	23	1.74	32	2.42
1942	13,729	552	14,281	14	0.98	20	1.40	34	2.38
1943	14,432	485	14,917	12	0.80	22	1.47	34	2.27
1944	15,412	492	15,904	13	0.82	18	1.13	31	1.95
1945	14,784	431	15,215	7	0.46	16	1.05	23	1.51
1946	18,528	539	19,067	2	0.10	17	0.89	19	0.99
1947	19,904	514	20,418	1	0.05	16	0.78	17	0.83

The table above shows a very remarkable decline in maternal mortality during the past 20 years. It will be seen that this decline has affected both deaths from puerperal sepsis and also those from other causes. The death-rate from puerperal sepsis in Liverpool has normally been lower than in the country as a whole.

The decrease has been particularly rapid during the last three years and unquestionably this is due to the extending use of sulphone drugs and penicillin. The decline in other puerperal causes has been more consistent but has not reached the same degree. It is probable that the table as a whole shows a marked improvement in the care of both the expectant mother and of the patient in labour. This is an achievement of which the City can well be proud. Amongst the causes that are operative in the decline of deaths from other puerperal causes may, not improperly, be mentioned improved nutrition.

Special Investigation of Maternal Deaths.

As a result of inquiries it was found that 25 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 ...	15
Class II—Deaths not primarily due to pregnancy ...	10

Ophthalmia Neonatorum.

Inflammation of the eyes of the newly-born .

The number of cases brought to the notice of the department and treated during the year was 1,045, namely:—

Mild cases ...	1001
Severe cases ...	44
Cases brought forward from previous year ...	16
Loss of sight ...	—
Total ...	1061

During the year, 33 babies were admitted to City Hospitals.

Arrangements are made with the City Bacteriologist to examine the discharge from inflamed eyes in the newly-born.

No. of cases brought to the notice of the department.	Cases from which specimens were examined by the City Bacteriologist and at Hospital.	No. of cases of positive Gonorrhoea.	Percentage to total cases examined.	Percentage to total notifications.
1,045	43	11	25.6	1.0

Nursing Homes.

Two registrations were cancelled during the year. The nursing homes on the register at the end of the year numbered 17, the approximate number of beds being 198. Babies born in nursing homes numbered 952, including 9 twin births.

THE HEALTH VISITORS' DEPARTMENT.

Ante-Natal and Post-Natal Clinics.

Total number of centres at which ante-natal clinics are held	29
Number of clinic sessions held per week	68
,, ,, post-natal sessions held per week, separately from ante-natal	5
,, ,, new cases attending ante-natal clinics	27,040
Total attendance at ante-natal clinics	128,261
,, ,, ,, post-natal ,, ,, ,, ,,	6,689

Child Welfare Clinics.

Total number of centres at which child welfare clinics are held	24
Number of clinics sessions held per week	47
,, ,, new cases—Under 1 year of age	13,825
Aged 1-5 years	884
	14,709
Total attendances—under 1 year of age	113,119
Aged 1-5 years	14,866
	127,985

Statistics relating to Home Visits.

Visits to expectant mothers by health visitors	7,176
Number of births visited during the year	19,700
Re-visits to infants during the 1st year	92,525
,, ,, ,, aged 1 year to 5 years	104,027
Visits paid to homes of nurse children	588
Visits to children discharged from municipal hospitals ..	1,499

Visits to cases of Infectious Disease—

Visits to cases of measles (first visits, 7,094)	10,118
,, ,, ,, whooping cough (first visits, 52)	148
,, ,, ,, pneumonia	581
,, ,, ,, infantile diarrhœa	595
Enquiries into deaths due to diarrhœa	305

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

Defective vision	...	...	...	...	324
Otorrhœa	...	...	...	...	16
Orthopædic defects	...	...	...	...	168

Child Life Protection.

- (a) Number of persons receiving children for reward on the Register at the end of the year 1947 ... 45
- (b) Number of children on the Register:—
- | | | | | |
|---|-----|-----|-----|-----|
| (1) at the end of the year 1947 | ... | ... | ... | 49 |
| (2) who died during the year (in homes) | ... | ... | ... | nil |
| (3) „ „ „ „ „ (in hospitals) | ... | ... | ... | nil |
- (c) Proceedings taken during the year ... nil

Care of Illegitimate Children.

According to information available, the number of illegitimate children born alive in Liverpool during 1947 was 1,336, giving a rate of 1.79.

During the year, the City Council authorised the payment of increased grants to the voluntary organisations undertaking work in connection with unmarried mothers and illegitimate children.

Careful watch is kept over all illegitimate children by the Maternity and Child Welfare Department, and co-operation between the staff of that Department and the various voluntary workers is very close. A live register of all illegitimate children enables this surveillance to be continuous.

Neo-natal Mortality.

The number of neo-natal deaths amounted to 540, equal to a rate of 27.1 per thousand live births registered. Special enquiry was made into the deaths of all children who died within 28 days after birth.

Premature Infants.

Special accommodation is provided for 46 premature infants born in Broadgreen, Smithdown Road and Walton Hospitals. They are also admitted to cubicles in Alder Hey Hospital. A further unit is available at Mill Road Infirmary, thus the accommodation in premature baby wards is increased by 12 cots.

In addition to these arrangements, certain equipment is available for midwives in whose practices premature infants are born, in order to facilitate special care of such children at home.

It is hoped that when sufficient hospital accommodation has been provided, premature babies born in the district and requiring institutional treatment will be admitted. This will entail the provision of special transport arrangements.

On discharge from the municipal hospitals, information relating to the condition and feeding of premature children is forwarded to the Medical Officer of Health. This ensures an early visit to the home from a health visitor or midwife, whichever is more appropriate to individual needs, and continued care is given until the mother is able to look after the child herself.

Evidence points to maternal nutrition being an important factor in the causation of prematurity. With this in view, advice is tendered in the ante-natal clinics to expectant mothers on their feeding during pregnancy and every endeavour is made to get them to use the extra rations and vitamin preparations available for them.

Dental Clinics.

Total attendances at the 6 clinics ...	1,488
New cases	1,195
Ante-natal and post-natal mothers ...	1,122
Children	73

Day Nurseries.

The following nurseries were available for the children of women in employment or who, for domestic reasons, could not care for their children themselves:—

					Accommodation for
Banks Road Hut, Garston (19)	...	...	...	...	50 children
25, Derwent Road (13)	...	...	...	...	67 „
1, The Elms, Dingle (8)	...	...	...	...	36 „
18, Great George Square (1)	...	...	...	...	73 „
25, Grove Park, Lodge Lane (8)	...	...	...	...	58 „
12, Holly Road, Fairfield (7)	...	...	...	...	75 „
Mill Road Nurses' Home (6)	...	...	...	...	70 „
Orwell Road Hut, Kirkdale (4)	...	...	...	...	50 „
Salisbury Street Council School, Everton (3)	...	...	...	...	60 „
5/7, Swiss Road, Fairfield (6)	...	...	...	...	60 „
97/99, Upper Canning Street (8)	...	...	...	...	62 „
Wavertree Playground Hut (15)	...	...	...	...	50 „
262/264, Westminster Road, Kirkdale (4)	...	...	...	...	45 „

Infestation by Head Lice.

Since the receipt of Circular 2831, health visitors have given increased attention to infestation by head lice of children under the age of five years. Nursery Matrons and school nurses have been asked to refer to the health visitors those families from which lice-infested children have attended nurseries or schools.

It has always been the practice to examine children where the personal cleanliness of the family is in doubt, but it is not always easy to obtain the co-operation of the mother and older members of the family. Quite frequently mothers resent any examination being made of members of the family who are suspected of re-infesting the children who have been cleansed.

Between 1st January and 31st December, 1947, 402 children under the age of five years were found by the health visitors to be verminous. In all cases, advice was given as to cleanliness and 380 of the mothers (or guardians) agreed to carry out instructions as to disinfestation. In 96 cases, however, they preferred to go to a cleansing station. In a few instances, improvement was maintained, but a hard core is still unsatis-

factory. This is a problem which has engaged the attention of health visitors and school nurses for many years, and the difficulties in dealing with people who have no desire to be clean are increased by present conditions, such as soap rationing, inability to renew clothing owing to shortage of coupons, and to the fact that many women are engaged in work, whilst at the same time endeavouring to carry on their home duties. In such families, the children are frequently not well cared for, especially in regard to personal hygiene.

The heads of 126 mothers were cleansed—84 at home and 42 at cleansing stations.

TUBERCULOSIS.

Notification.

Public Health (Tuberculosis) Regulations, 1930.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD FROM THE 1ST JANUARY, 1947,
TO 31ST DECEMBER, 1947.

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.	
Respiratory—													
Males	7	23	23	23	79	102	176	130	140	92	33	828	1,049
Females	2	18	24	18	95	136	189	75	52	31	11	651	854
Non Respiratory—													
Males	4	19	20	10	15	7	18	3	3	6	1	106	123
Females	2	12	25	14	18	9	19	11	6	10	2	128	155

Out of a total of 1,479 primary notifications of respiratory tuberculosis 1,093 were received from private and 386 from hospital practitioners, whilst in the case of non-respiratory tuberculosis these figures are 88 and 146 respectively, forming a total of 234.

The number of primary notification of respiratory tuberculosis remains high and this is largely due to maintenance of efforts directed towards case finding.

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 (1,665) 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 available.

TABLE II

	Respiratory Tuberculosis.		Non-Respiratory Tuberculosis.		Totale.
	Males.	Females.	Males.	Females.	
Number of cases on the Notification Register ...	2,909	2,666	597	718	6,290
Number of established cases on the Dispensary Register	2,248	2,062	401	514	5,225
Difference	661	604	196	204	1,665

In Table III is given an analysis of the 1,665 persons whose names are on the notification register but are not on the dispensary register, according to the latest information concerning them.

TABLE III

Whereabouts Known.	Respiratory Tuberculosis.						Non-Respiratory Tuberculosis.						Totals.
	Males.			Females.			Males.			Females.			
	State of the Disease.						State of the Disease.						
	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	
Totals ...	15	222	424	15	194	395	16	109	71	18	91	95	1,665

Tuberculosis Clinics and Dispensary System.

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.	RESPIRATORY				NON-RESPIRATORY				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 ...	574	480	62	50	46	60	43	46	620	540	105	96	1,361
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	29	31	48	38	146
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	318	204	143	142	807
B.—CONTACTS examined during the year :—													
(a) Definitely tuberculous ...	1	3	4	4	—	—	—	—	1	3	4	4	12
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	—	—	—	—
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	53	176	254	263	746
C.—CASES written off the Dispensary Register as :—													
(a) Recovered ...	42	53	8	7	16	24	17	13	58	77	25	20	180
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) ...	—	—	—	—	—	—	—	—	371	380	397	405	1,553
D.—NUMBER OF CASES on Dispensary Register on Dec. 31st 1947 :—													
(a) Definitely tuberculous ...	2,070	1,901	178	161	221	337	180	177	2,291	2,238	358	338	5,228
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	29	31	48	38	146
1. Number of cases on Dispensary Register on January 1st, 1947 ...				4,857	2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years ...				31				
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" ...				538	4. Cases written off during the year as Dead (all causes) ...				60				
5. Number of attendances at the Clinics (including Contacts) ...				10,443	6. Number of Insured Persons under Domiciliary Treatment on the 31st December ...				1,33				
7. Number of consultations with medical practitioners :— (a) Personal ... (b) Other ...				11 3,440*	8. Number of visits by Tuberculosis Officers to homes (including personal consultations) ...				49				
9. Number of visits by Tuberculosis Visitors to homes of patients ...				19,245	10. Number of :— (a) Specimens of sputum, etc., examined (b) X-ray examinations made in connection with Dispensary work. ...				2,35 2,76				
11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above...				23	12. Number of "T.B. plus" cases on Dispensary Register on December 31st ...				1,63				

* In addition to 3,451 consultations, 1,820 reports concerning patients were sent to medical practitioners

TABLE V.

PATIENTS UNDER DISPENSARY TREATMENT AT THE END OF THE YEAR.

		Respiratory	Non-respiratory	Totals.	
INSURED PERSONS	Males	—	—	—	} 2
	Females	1	1	2	
NON-INSURED PERSONS	Male Adults	—	—	—	} 18
	Female Adults	10	—	10	
	Male Children*	1	2	3	
	Female Children*	1	4	5	
TOTALS ...		13	7	20	

* Under 15 years of age.

TABLE VI.

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

		Respiratory	Non-respiratory	Totals.	
INSURED PERSONS	Males	663	130	793	} 1524
	Females	576	155	731	
NON-INSURED PERSONS	Male Adults	92	31	123	} 970
	Female Adults	226	114	340	
	Male Children*	132	134	266	
	Female Children*	106	135	241	
TOTALS ...		1795	699	2494	

* Under 15 years of age.

Home Nursing.

The domiciliary nursing of both respiratory and non-respiratory cases continues to be carried out by the Liverpool Queen Victoria District Nursing Association. During the year, 97 respiratory and 22 non-respiratory cases were nursed in their homes, and to these cases 4,493 visits were paid. The Garston and Grassendale Nursing Association and the Woolton and District Society have dealt with cases outside the area supplied by the District Nursing Association.

General Remarks.

The City death rates for the year 1947 for respiratory and non-respiratory tuberculosis are 0·79 and 0·11 per 1,000 respectively, making a total of 0·90 per 1,000 for all forms of the disease; a figure almost identical with that of 1938, which was the lowest yet recorded for the city. An analysis of unnotified cases of tuberculosis is given in Table VIII.

In accordance with the requirements of the National Service (Armed Forces) Act, 1939, the Tuberculosis Officers have submitted 152 reports to the Ministry of Labour whilst a further 135 reports have been rendered under the Public Health (Tuberculosis) Regulations, 1940 (Men).

Ex-Service pensioners, about to undergo, or completing courses of residential treatment have been the subject of 505 reports to the Ministry of Pensions.

On July 5th, 1948, the National Health Service Act, 1946, becomes operative as a result of which the responsibility for the diagnosis and treatment of tuberculosis will be vested in the Liverpool Regional Hospital Board whilst the preventive and after-care aspects of the disease will be the concern of the local authority.

The Mass Radiography Centre, which is mainly employed in the early detection of tuberculosis, will also come under regional control whilst the work of the Tuberculosis Welfare Department in connection with the assessment and distribution of monetary allowances will be undertaken by the Ministry of National Insurance through the agency of the National Assistance Board.

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.

CONTACTS. The Tuberculosis Officers have examined 746 persons who were known to have been in contact with infectious cases of respiratory tuberculosis and found evidence of disease in 12 or 1·6 per cent.

Tuberculosis Welfare Department.

This Department is responsible for the assessment and distribution of financial allowances to patients suffering from Respiratory Tuberculosis, whose cases fulfil the requirements laid down in Memorandum 266/T of the Ministry of Health. A summary of cases dealt with is given below:—

Total number of applications from 1st January to 31st	
December, 1947	527

Number of above eligible for and granted allowances ...	371
---	-----

Number of above ineligible for and not granted allowances—

(a) on medical grounds	33
-------------------------------	----

(b) on grounds other than medical	123
--	-----

Total amount of allowances paid in the above period—£21,037 16s. 8d.

REHABILITATION.—The number of cases dealt with by the Tuberculosis Welfare Department continues to increase and close co-operation between this department and the Rehabilitation Department of the Ministry of Labour has been maintained.

Summary of cases dealt with during the year ending 31st December, 1947:—

Total cases referred by Ministry of Labour to Tuberculosis	
Officer	529

(a) Examined and found fit for light, part-time or	
full-time employment	422

(b) Not fit for employment	73
-----------------------------------	----

(c) Failed to attend for examination	19
---	----

(d) Certified as non-tuberculous	12
---	----

Letters sent by Tuberculosis Welfare Officer to patients	
offering advice and assistance to obtain suitable	
employment	440

Number availing themselves of this assistance and referred	
to Ministry of Labour	306

Actual number of patients reported by Ministry of Labour as placed in employment	204
Number of cases who obtained employment themselves ...	30
Total number of cases dealt with under Rehabilitation Scheme by Welfare Department	910

The Disabled Persons (Employment) Act, 1944.

During the past year the number of tuberculous persons placed in suitable employment has increased considerably as shown in the foregoing returns, and there is little difficulty in placing female cases as soon as they are sufficiently recovered to undertake either light or full-time employment.

There does not, however, appear to be the same opportunity for males to be placed in suitable light employment, probably due to the fact that the Ministry of Labour has not raised its quota of 3 per cent. of Disabled Persons to be engaged by employers and also because no other forms of employment have as yet been added to the two originally designated.

Despite this, a fair proportion of the males are re-engaged by their former employers and the number undertaking Rehabilitation Training Courses for the purpose of entering new trades or occupations has considerably increased.

Mass Radiography Centre.

In addition to its employment in routine "health survey" work the facilities afforded by the Mass Radiography Centre continue to be much appreciated by the medical practitioners of the city and have led to the discovery of many hitherto unsuspected cases of respiratory tuberculosis.

At the request of the Canadian Government intending migrants are all subjected to mass radiographic examination of the chest and it has been made possible to supply each subject with a miniature film, so spaced as to permit of its examination by means of projectors in the hands of the authorities concerned and thus saving the expense of large standard films. A similar service is about to be made available to the Australian Government.

In August, 1947, the new premises at Hood Street became available so that it was possible to transfer the General Tuberculosis Department, the Tuberculosis Welfare Department and the Mass Radiography Centre from their temporary quarters at the Chest Hospital, Mount Pleasant.

The new accommodation has been specially adapted for these services and particularly for mass radiographic work, the lay-out being such as to permit of large numbers of subjects being dealt with very expeditiously and with the minimum inconvenience to themselves.

ANALYSIS OF WORK OF MASS RADIOGRAPHY DEPARTMENT FOR THE YEAR
ENDING 31ST DECEMBER, 1947.

	Routine Cases		Doctors' cases		Totals		Grand Totals
	Male	Female	Male	Female	Routine Cases	Doctors' Cases	
Number of Miniature films taken ...	3,443	2,655	3,592	4,668	6,098	8,260	14,358
Abnormalities found :—							
Tuberculosis Active ...	9	12	155	171	21	326	347
Tuberculosis Inactive	94	52	115	129	146	244	390
Cardio vascular ...	11	15	35	57	26	92	118
Miscellaneous ...	92	42	411	308	134	749	883

NOTE.—As a full whole-time staff has not been available the unit has not yet attained maximum output.

Domiciliary Treatment.

At the end of the year, 1,763 patients remained under domiciliary treatment of whom 1,337 were persons insured under the National Health Insurance Act, and in receipt of treatment from their panel doctors and 426 were not insured and were under treatment of District Medical Officers or doctors of their own choice. The domiciliary reports received relating to insured persons numbered 413. Table VII shows the position at the end of the year.

TABLE VII.

PATIENTS UNDER DOMICILIARY TREATMENT AT THE END OF THE YEAR.

		Respiratory	Non-respiratory	Totals.
INSURED PERSONS	Males	841	25	866
	Females	442	29	471
NON-INSURED PERSONS	Male Adults ...	96	6	102
	Female Adults ...	259	17	276
	Male Children*	11	12	23
	Female Children*	20	5	25
TOTALS ...		1669	94	1763

* Under 15 years of age.

Co-operation.

During the year, 1,712 reports were rendered by the Tuberculosis Officers in respect of school children. Many cases have also been examined at the request of organisations such as the Liverpool Personal Service Society; Child Welfare Association; Maternity and Child Welfare Department, etc.

Summary of Treatment, etc., carried out in Sanatoria in connection with the working of the Tuberculosis Scheme.

Operations (Thoracic and other)..	684	Pneumoperitoneum (New Inductions)	155
Gold and other treatments ...	84	Pneumoperitoneum (Refills) ...	7,522
*Light Therapy (Exposures) ...	1,873	*X-ray Examinations (Films) ...	11,552
Artificial Pneumothorax (New Inductions)	237	" " (Screenings) ...	25,462
Artificial Pneumothorax (Refills)	16,819	Dental Treatment (Extractions)..	495
		" " (Fillings) ...	535
		" " (Miscellaneous) ...	151

* Includes cases referred by the Tuberculosis Clinics.

*The number of cases treated by light-therapy has been reduced by the use of "Calciferol" in the treatment of certain tuberculosis conditions of the skin.

Notification and Deaths.

During the year 80 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 VIII, and it is very satisfactory to note the co-operation of medical practitioners as evidenced by the very small percentage of cases in which notification has been forgotten or omitted. This is probably largely due to the steps taken to encourage early diagnosis and referred to in the previous Annual Report (1946).

TABLE VIII.

DISEASE.	Reasons for Non-notification of Persons who died within the City.						
	No. of Persons who died within the City.	No. of Cases not notified before death.	Diagnosis made at a Post-mortem Examination. (Includes Coroner's Cases.)	Diagnosis delayed owing to Clinical difficulties.	Doctor thought case had been notified by another Practitioner.	Notification forgotten.	Patient died before notification could be effected.
Respiratory Tuberculosis	599	53 8·84%	18 3·00%	11 1·83%	13 2·17%	3 0·50%	8 1·33%
Non-Respiratory Tuberculosis	85	27 31·76%	7 8·23%	16 18·82%	1 1·17%	— —	3 3·52%

Deaths from Tuberculosis.

The number of deaths from respiratory and non-respiratory tuberculosis in Liverpool from 1934 to 1947, together with the number of new cases notified and the death rates which prevailed in England and Wales are given in Tables IX and X where case rates for Liverpool are also shown.

TABLE IX.

DEATHS FROM RESPIRATORY 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.
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
1941.....	1,302	1·90	699	1·02	0·60
1942.....	1,370	2·04	653	0·97	0·54
1943.....	1,479	2·23	670	1·01	0·56
1944.....	1,441	2·16	597	0·90	0·52
1945.....	1,455	2·13	605	0·88	0·52
1946.....	1,478	2·01	579	0·79	0·46
1947.....	1,479	1·96	599	0·79	0·59

TABLE X.

DEATHS FROM NON-RESPIRATORY 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.
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
1941.....	305	0·44	147	0·21	0·13
1942.....	348	0·52	124	0·18	0·11
1943.....	335	0·51	103	0·15	0·11
1944.....	250	0·37	82	0·12	0·10
1945.....	248	0·36	96	0·14	0·10
1946.....	237	0·32	79	0·10	0·08
1947.....	234	0·31	85	0·11	0·09

TABLE XI.

AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1947.

Age Periods.	RESPIRATORY		NON-RESPIRATORY	
	Males.	Females.	Males.	Females.
0—	4	4	4	7
1—	4	3	9	7
5—	—	—	5	6
10—	1	4	5	2
15—	7	26	1	6
20—	12	34	2	5
25—	57	89	3	6
35—	58	42	2	2
45—	97	25	4	1
55—	64	11	5	1
65—	39	18	2	—
TOTALS ...	343	256	42	43

The accompanying table sets out the deaths from Tubercular Meningitis of residents in the City of Liverpool during the years 1915 to 1947, set out by ages at death and by sexes. These figures reveal a remarkable fall in the deaths from this cause in infancy and childhood.

Deaths from tubercular meningitis in early life ordinarily connote a severe primary infection, and it is broadly true to say that in early life the younger the age at which primary infection takes place the greater the liability to a severe and fatal form of the disease. The figures given would accordingly appear to indicate a marked reduction in early and massive infection in childhood years during the period in question. Two periods of considerable reduction took place, the first following the setting up of sanatoria under the Insurance Act, 1911, the second following the transfer of the hospitals and institutions of the West Derby Board of Guardians under the Local Government Act, 1929.

An increase followed the onset of war in 1939, and the mixing of populations in air-raid shelters and elsewhere during the air-raid years 1940-41, the total deaths attributed to tubercular meningitis rising from 47 to 85 during that period. The decline has continued since 1941.

The fall in mortality has been greatest in infancy and progressively diminishes up to 15 years of age, i.e., in 1947 the deaths under 1 year of age constituted only 9 per cent. of those in 1915, from 1 to 5 years 18 per cent., from 5 to 10 years 26 per cent., and from 10 to 15 years of age 40 per cent. of the 1915 figures.

TABLE XII.

DEATHS FROM TUBERCULOUS MENINGITIS. LIVERPOOL.

	Ages Below									Above	Total		Total Both Sexes
	1	2	3	4	5	10	15	20	25	25	M.	F.	
1915	33	28	13	9	10	23	10	8	4	3	81	50	141
1916	30	31	17	14	13	21	17	5	2	10	89	71	160
1917	18	19	16	11	11	32	16	12	2	11	78	70	148
1918	16	18	15	10	12	27	12	12	1	10	69	64	133
1919	18	10	12	8	6	25	9	1	1	5	49	46	95
1920	14	7	14	6	9	21	11	7	3	7	44	55	99
1921	22	33	14	3	5	15	12	8	5	6	67	56	123
1922	14	19	12	6	2	19	5	11	2	8	53	40	98
1923	12	23	10	13	4	18	5	7	2	4	44	54	98
1924	14	13	10	7	6	12	10	4	6	7	44	45	89
1925	10	10	11	9	10	16	7	7	7	4	51	40	91
1926	15	10	14	8	5	16	7	6	2	5	42	46	88
1927	13	15	6	9	5	17	5	7	—	7	46	38	84
1928	7	16	12	5	4	11	7	5	5	6	45	33	78
1929	18	14	11	7	3	20	9	10	1	6	45	54	99
1930	13	13	13	10	5	19	4	5	3	3	43	45	88
1931	11	9	12	9	8	13	8	6	1	4	37	44	81
1932	13	8	6	6	6	10	7	8	4	4	35	37	72
1933	8	7	3	7	5	11	7	5	3	5	29	32	61
1934	8	8	6	8	2	8	7	7	3	5	23	39	62
1935	3	10	4	8	6	5	3	7	3	5	34	20	54
1936	8	9	6	6	4	7	7	3	3	2	32	23	55
1937	6	8	2	6	2	8	6	6	2	5	26	25	51
1938	6	9	8	8	2	5	—	5	1	4	25	23	48
1939	11	8	4	2	—	9	7	3	—	3	25	22	47
1940	10	10	4	3	2	8	6	10	3	3	24	35	59
1941	9	12	11	9	5	16	6	10	5	2	44	41	85
1942	10	11	11	3	2	7	8	8	2	5	34	33	67
1943	5	5	4	3	4	7	5	7	2	2	26	18	44
1944	3	12	3	4	3	1	4	1	1	4	19	17	36
1945	4	7	5	5	5	12	6	6	1	2	27	26	53
1946	2	5	2	3	1	9	4	2	1	2	12	19	31
1947	3	5	1	5	—	6	4	2	1	3	13	17	30

VENEREAL DISEASES.

Treatment of venereal diseases is provided at the following clinics:—

Seamen's Dispensary—Males only.

Mill Road Infirmary—Females and infants..

Royal Infirmary—Males and Females.

Laurel House—Females only.

The Seamen's Dispensary and the Royal Infirmary are open all day for treatment of these diseases in the male. At Mill Road Infirmary, the Royal Infirmary and Laurel House treatment for females is provided at hours convenient to the greatest number of patients. All cases of venereal diseases requiring in-patient treatment are concentrated in the special wards at Belmont Road Hospital.

Periodic examinations of 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 of the various hospitals have referred numerous cases to the clinics for treatment, and ante-natal centres have sent many patients for diagnosis and treatment. A special clinic at the Royal Infirmary deals with late cases and their families. The sources of supply are the general wards, the ophthalmic and aural departments of general hospitals and hospitals for diseases of the eye, ear and throat.

The issue of contact slips to patients whose contacts were known to them resulted in 250 females and 82 males being examined.

The employment of an almoner and one male and two female welfare officers has proved of great value in connexion with the operation of Regulation 33B and with defaulting patients. The following are details of cases notified and dealt with during the year under this Regulation which expired on 31st December, 1947:—

Males

Only 5 Male Cases were notified during 1947. Of these, 4 were traced, 2 being in H.M. Prisons—Forms 1 accordingly passed on. A third was found to be under treatment at the Seamen's Dispensary for the condition of which he was notified as being suspect. The remaining case traced was found to be a defaulter from the Seamen's Dispensary. He was induced to return for further investigation and treatment, his wife being at the same time persuaded to report at Mill Road Clinic for investigation.

Females.

Total no. of Forms 1 received	...	...	...	...	...	90
Total no. of cases	...	...	...	...	...	77
Total no. of cases traced	...	...	...	...	...	35
Total no. of cases who reported at a clinic or to a Special Practitioner	...	...	...	...	...	27
Total no. not contacted or traced	...	...	...	...	...	42

Of this number, 5 were notified on two occasions, 1 on three occasions—all were included in the number who reported.

Of the total not contacted, or untraced, the majority were not fully named, i.e., a nickname or christian name only being supplied.

Many cases reporting for investigation repeatedly defaulted after being placed under treatment but, almost without exception, were brought back and received adequate treatment.

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

	Seamen's Dis- pensary. Males only.	†Royal Infirmary.		Mill Road Infirmary and †Belmont Road Hospital.		†Laurel House Females only.	TOTAL. Males and Females.
		Males.	Females.	Males.	Females.		
New cases ...	5,647	2,151	739	11	970	41	9,559
Old and new patients							
Total attendances	26,611	16,035	10,498	362	13,116	102	66,724
In-patient days ...	—	595	67	8,430	8,174	1,572	18,838

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

There was an increase in the number of new cases and in the number of attendances, but a decrease in in-patient days of treatment.

The incidence of early syphilis has decreased in both sexes during 1947 as shown in the following table:—

1941.		1942.		1943.		1944.		1945.		1946.		1947.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
584	139	567	260	507	279	417	278	509	315	655	331	481	248

The extra-mural activities of the welfare staff are shown in the sub-joined tables. In addition, patients are interviewed at the clinics with a view to helping them in their difficulties:—

TABLE A—showing response of defaulting patients as the result of letters from the Clinic Medical Officer:—

	Male.	Female.	Total.
Number of cases written to	543	894	1,437
Number of letters despatched	594	1,726	2,320
Cases reporting after receipt of letter	173	634	807
Number of letters returned from Dead Letter Office ...	66	85	151

TABLE B—showing response of defaulting patients, as the result of follow-up by home visiting:—

	Male.	Female.	Congenital.	Total.
Number of cases visited	150	523	27	700
Number of visits made	498	1,146	78	1,722
Cases attending following visits	64	241	26	331
Cases promising to attend but failing to do so ...	19	60	—	79
Cases removed, or not known at address given ...	29	120	1	150
Cases not contacted, i.e., No access, away from home, etc.	36	89	—	125
Cases refusing to attend	2	4	—	6
Cases removed to other districts and transferred for follow-up	—	9	—	9

From the tables on page 49 it will be seen that a moderate response to correspondence is achieved. Quite a number of patients delude themselves into believing that a rest from active treatment means they have been cured and that further attendance is unnecessary. This occurs in spite of a definite date for a return visit to the clinic having been fixed. By and large letters to this type of person are sufficient to bring about their return but to those who break off from actual treatment visits are necessary. Sometimes more than one visit is required and some still refuse point blank to return for treatment. Others promise to return but fail to do so. The most successful results come from visits to the parents of children suffering from congenital syphilis. Twenty-six out of twenty-seven were brought under treatment after default; one case could not be traced. A warning to parents that legal proceedings under the Children and Young Persons' Act, 1933 are contemplated, acts as a potent stimulus in refractory cases.

The following is a statement showing the number of cases treated and examinations carried out during 1947 at the Liverpool Remand Home for Girls:—

Number of examinations made	...	...	...	213
„ „ smears	...	...	...	398
„ „ cultures	...	...	...	53
„ „ Blood Tests (W.R.)	...	...	...	70

Cases of Venereal Diseases treated.

Gonorrhœa	...	...	...	...	...	8
Syphilis	...	...	...	...	...	1

Cases of Non-Venereal Disease treated.

Trichonomas Vaginalis infection	...	...	...	12
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SCABIES.

The Scabies Order, 1941, under the Emergency Powers (Defence) Regulations gives the Medical Officer of Health, where he is satisfied, upon information given, that a person is in a verminous condition, power to cause such a person to be medically examined in suitable premises and further give him or her notice that he must present himself at a place where suitable arrangements have been made for him or her to be disinfected.

The treatment of scabies consists in giving the patient a hot bath, applying a suitable remedy, such as a 25 per cent. emulsion of benzyl benzoate and disinfection of clothing.

At the close of 1941 scabies was becoming widely prevalent. There were then 4 cleansing stations available for the treatment of scabies. During 1941-42 the number of centres was raised to 14. As the result of this provision and the consequent improvement in the general situation the number of units has been reduced to seven and will be further reduced to 4 as a result of the return of the South Tuberculosis Dispensary to its proper use. The existing units are:—

(1) Stalisfield Avenue, Norris Green	...	...	2 Baths
(2) Carnegie Welfare Centre	...	...	2 „
(3) 50, Eldon Place	...	...	1 Bath
(4) South Tuberculosis Dispensary, Park Road	...	3 Baths	
(5) 71, Everton Road	...	...	4 „
(6) Clifton Street, Garston	...	...	2 „

The total number of baths thus provided is 14, against 31 in 1944.

The total number of cases of scabies thus dealt with in 1947 was 1,761 as against 10,090 in 1944 and 15,845 in 1943. The new cases now average 34 per week as against 104 per week in 1944 and 260 in 1943. The contacts of school children are followed up and adult or pre-school cases brought to light received treatment. It will be seen that these methods have been successful in combating the epidemic which seemed so formidable in 1942. The number of sessions held in the remaining clinics have been reduced proportionally to the reduced incidence.

INFECTIOUS HOSPITALS and SANATORIA.

During 1947 the hospital accommodation for infectious cases was as follows:—

City Hospital North (182 beds), South (110 beds), East (160 beds), Fazakerley (118 beds), Fazakerley Annexe (145 beds), total 715 beds. Fazakerley Sanatorium and Annexe (503 beds), Cleaver Sanatorium (220 beds), total 723 beds.

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 1947:—

DISEASES	Remaining Dec. 31st, 1946.	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.
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City Hospital North, Netherfield Road.

Scarlet Fever	33	282	7	322	—	3	290	29	—
Diphtheria	23	90	3	116	—	1	98	17	—
Other Diseases	10	240	10	260	—	8	231	14	3
Totals	66	612	20	698	—	12	619	60	3

City Hospital South, Grafton Street.

Scarlet fever	48	390	—	438	—	2	385	51	—
Measles	1	8	—	9	—	—	9	—	—
Whooping Cough	8	41	—	49	—	—	44	—	—
Other Diseases	—	17	—	17	—	2	14	—	—
Totals	57	456	—	513	—	4	452	51	—

DISEASES.			Remaining Dec. 31st, 1946.	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 East, Mill Lane, Old Swan.												
Scarlet Fever	...	...	27	78	8	113	—	4	89	20	—	—
Measles	...	...	—	184	34	218	—	8	185	16	2	9
Diphtheria	...	...	22	137	13	172	—	1	130	36	1	5
Other Diseases	...	...	47	426	78	551	—	10	490	31	3	20
Totals	...	...	96	825	133	1054	—	23	894	103	6	34

City Hospitals, Fazakerley.

Scarlet fever	...	...	32	194	6	232	—	3	210	18	—	1
Enteric fever group	...	...	—	13	11	24	—	—	20	4	—	—
Diphtheria	...	...	32	156	3	191	—	—	174	13	1	4
Measles	...	...	11	245	44	300	—	6	279	8	2	7
Whooping Cough	...	...	43	199	26	268	—	1	222	7	8	38
Other diseases	...	...	48	1151	151	1350	—	25	1117	103	20	105
Totals	...	...	166	1958	241	2365	—	35	2022	153	31	155

Fazakerley Sanatorium.

Tuberculosis	...	...	388	252	227	867	—	63	326	400	—	78
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Cleaver Sanatorium.

Tuberculosis	...	...	199	154	50	403	—	42	131	198	—	32
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Totals—All Isolation Hospitals and Sanatoria.

All Diseases	...	...	972	4257	671	5900	—	179	4444	965	40	3 2
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General and Children's Hospitals and other Institutions.
Statement of Admissions, Discharges, Births, Deaths, and Transfers.

Hospital or Institution.	Remaining 28/12/46	Admitted.	Trans- ferred to	Born.	Dis- charged.	Trans- ferred from	Died.	Remaining 27/12/47
Administered under the Poor Law Acts :—								
Belmont Road Institution ...	1,419	8,100	620	—	5,806	954	1,976	1,403
Kirkdale Homes ...	1,392	309	710	—	537	184	259	1,431
Olive Mount Children's Hospital ...	386	1,461	436	—	1,581	284	47	371
Cottage Homes, Fazakerley ...	414	149	129	—	245	38	—	409
Shaw Street Boys' Home ...	40	22	5	—	43	—	—	24
Seafield House (Greaves Hall) ...	84	15	1	—	12	3	—	85
Administered under the Public Health Act :—								
Walton Hospital ...	973	13,996	102	2,870	15,773	223	1,128	817
Alder Hey Hospital ...	646	6,900	104	—	6,462	260	500	428
Smithdown Road Hospital ...	732	10,228	61	2,707	11,899	403	760	666
Broadgreen Emergency Hospital ...	530	8,430	17	1,651	9,631	110	399	488
Mill Road Infirmary ...	148	3,239	15	2,830	5,965	57	54	156
TOTAL ...	6,764	52,849	2,200	10,058	57,954	2,516	5,123	6,278

NOTE.—Emergency Medical Service cases are included in above Return.

Staffing of the Hospitals.

The accompanying Table shows the staffs in the hospitals in 1948 compared with those in 1930. It will be seen that in total the numbers have more than doubled and that in several grades the increases are even more striking.

The various extensions and improvements in hospital services which have been mentioned earlier in the report account for a large part of this increase, for new departments obviously need new staff; moreover, a natural concomitant of the improvements has been that the hospitals have become more popular with the public, and this, in its turn, has led to a demand for still further staff.

It is instructive to note the number of grades of staff now employed which were not in existence in the City Hospitals in 1930. The second part of the Table shows the extent to which consultative medical services have been developed and, on the lay side, the titles of many of the new posts indicate the widening of service. The appointment of Almoners, for example, reflects an increased concern for the patient as a human being with private worries and problems, Catering Officers, Dietitians and Canteen Assistants make for a better food service, Ward Orderlies take some of the burden of domestic work formerly borne by nurses, the welfare as well as the work of cleaners is the responsibility of Domestic Supervisors, Occupational and other Therapists play their part in assisting patients' recovery. All these examples are milestones on the road by which the hospitals have travelled away from the limitations of the "poor-law."

But other factors quite apart from extensions of service have been involved. Perhaps the most important of these has been the reduction in hours of duty. In 1930 it was not uncommon for nurses, as well as domestic staffs, to work 56 hours or more per week; to-day 48 is the general rule. Linked with it are other improvements in staff conditions—longer holidays and less domestic work for nurses, for example. It should not be forgotten, also, that in 1930 a substantial amount of inmate labour was used which is no longer available owing to the disappearance of the former institutional aspect of some of the large hospitals.

Altogether it may be said that the increase in staffs in the 18 years under review is a matter for congratulation rather than concern. It reflects the City Council's progressive policy in hospital administration and points to improvements for patients and staff alike.

Numbers of Staff at City Hospitals and Institutions, 1930 and 1948.

	Medical.		Nursing.		Medical Auxiliary.		Admin., Clerical, etc.)		Other (Domestic, etc.)		Ward Orderlies.		Totals.		Rehabilitation, M.O's
	1930	1948	1930	1948	1930	1948	1930	1948	1930	1948	1930	1948	1930	1948	
Walton	7	18	218	423	9	35	18	46	320	570	—	7	572	1,099	21
Smithdown	4	17	90	308	2	37	12	36	225	424	—	37	333	859	11
Broadgreen	6	16	62	225	—	35	5	41	73	293	—	27	146	637	16
Mill Road	5	7	107	85	5	5	11	14	143	143	—	11	271	265	—
Alder Hey	5	15	180	228	11	30	10	34	132	308	—	46	338	661	1
Olive Mount	1	2	2	69	—	—	8	13	55	204	—	69	66	357	—
Belmont Road	1	6	89	378	2	10	15	37	159	487	—	38	266	956	5
Kirkdale	1	1	—	122	—	—	6	14	89	225	—	—	96	362	—
Cleaver Sanatorium	1	4	11	48	—	—	2	6	22	68	—	9	36	135	—
Fazakerley Sanatorium	5	7	76	71	—	5	4	17	88	217	—	51	172	361	1
Fazakerley Hospital	4	4	126	56	—	—	3	—	130	127	—	15	264	209	—
North	1	1	34	34	—	—	—	1	36	48	—	6	71	90	—
South	1	—	29	6	—	—	—	1	24	20	—	2	54	29	—
East	1	1	45	45	—	—	—	3	33	55	—	2	79	106	—
Seafeld (Gr. Hall)	1	1	2	14	—	—	3	3	44	10	—	—	50	28	—
TOTALS	44	100	1,071	2,112	29	157	97	266	1,573	3,199	—	320	2,814	6,154	55

NOTES.—1. Visiting Specialists not included (see separate Table).
2. Sparrow Hall staff included in Fazakerley Sanatorium, totals for both years.

Visiting Specialists.

	1930.		1948.	
	No.	Total Sessions per Week.	No.	Total Sessions per Week.
Surgeon	4	20	12	55
Orthopaedic Surgeon	2	4	7	21
Ophthalmic Surgeon	2	4	3	10
Obstetrician and Gynaecologist	2	19	3	15
Surgeon and Urologist	—	—	1	5
Oto-Rhinologist	1	2	2	11
Oto-Laryngologist	1	1	2	9
Physician	1	6	9	39
Paediatric Physician	—	—	1	3
Paediatrician	—	—	2	20
Psychiatrist	—	—	2	10
Radiologist	1	1	4	21
Anaesthetist	1	6	11	28
Dermatologist	2	—	2	15
Pathologist	—	—	4	30
V.D. Officer	—	—	1	10
Physician in charge Child Health Department	—	—	1	5
Dental Surgeon	2	10	5	17
Medical Refractionist	—	—	1	2
TOTALS	19	73	73	326

In addition a number of posts provided and provide for attendance "as required."

(A full-time appointment has been regarded at 10 sessions per week).

(Thoracic Unit, Broadgreen, not included).

MUNICIPAL HOSPITALS and INSTITUTIONS.

General Review of Hospital Services.

The handing over of the hospitals to the Regional Hospitals Board in July, 1948, provides a suitable moment to review the progress of the hospital and institutional services in the eighteen years since the date when the hospitals and institutions of the former West Derby Board of Guardians were transferred to the municipality, namely, April, 1930.

For the first seven months these transferred hospitals and institutions were managed by the Public Assistance Committee. From November, 1930, these were transferred to the management of the Hospitals and Port Health Committee which finally became the Health Committee in 1947. At first these transferred institutions—12 in number—included the Fazakerley Cottage Homes and the Boys' Home, Shaw Street, but on 1st April, 1938, these latter were transferred to the management of the Education Committee.

Under the provisions of the Local Government Act, 1929, it was within the power of the municipality to appropriate under the Public Health Acts, after representation to the Ministry of Health, suitable hospitals and institutions, the ownership of these then vesting in the Hospitals and Port Health Committee. The following hospitals were appropriated:—

<i>Hospital.</i>	<i>Date.</i>
Alder Hey Children's Hospital	1st April, 1932.
Mill Road Infirmary	1st June, 1932.
Cleaver Sanatorium	1st April, 1935.
Walton Hospital	1st April, 1935.
Smithdown Road Hospital	1st April, 1938.

DETAILS OF ADMISSIONS, DISCHARGES, ETC., AND WORK UNDERTAKEN AT THE MUNICIPAL HOSPITALS FOR PERIOD 1943 to 1947.

	WALTON HOSPITAL					SMITHDOWN ROAD HOSPITAL					MILL ROAD INFIRMARY					ALDER HAY HOSPITAL					BROADGREEN EMERGENCY HOSPITAL					BELMONT ROAD EMERGENCY HOSPITAL				
	1943	1944	1945	1946	1947	1943	1944	1945	1946	1947	1943	1944	1945	1946	1947	1943	1944	1945	1946	1947	1943	1944	1945	1946	1947	1943	1944	1945	1946	1947
*Admitted	16,390	16,406	14,870	15,836	15,996	8,223	8,292	9,725	10,579	10,228	—	—	—	720	3,239	8,371	9,139	8,409	8,156	8,900	7,368	9,652	9,425	9,815	8,430	7,371	8,411	8,614	7,929	8,100
*Transferred to	84	296	153	155	102	78	101	136	110	61	—	—	—	7	15	77	96	99	148	194	148	74	72	31	17	649	765	645	579	620
*Born	3,602	3,486	3,069	3,712	2,870	2,046	2,068	2,190	2,631	2,707	—	—	—	590	2,839	—	—	—	—	—	267	1,736	2,031	2,535	1,651	—	—	—	—	—
*Discharged	18,399	18,698	16,816	18,502	18,773	8,775	9,181	10,799	12,176	11,899	—	—	—	1,142	5,965	7,651	8,182	8,126	7,654	6,462	7,158	10,756	10,926	11,831	9,631	5,859	6,291	6,488	5,953	5,806
*Transferred from	286	275	246	209	223	614	603	469	485	405	—	—	—	10	57	344	431	251	309	280	95	221	160	132	110	638	927	790	902	954
*Died	1,477	1,165	1,009	1,149	817	934	669	637	705	700	—	—	—	17	54	487	347	434	495	509	383	364	384	506	399	1,446	1,902	1,976	1,829	1,976
Surgical Operations	6,119	6,476	6,175	5,541	5,873	3,019	2,736	2,965	3,440	3,591	—	—	—	253	1,431	2,239	3,075	3,095	3,466	2,724	3,406	4,177	4,627	5,836	5,611	—	—	—	—	—
Out-Patient Attendances	82,070	84,474	77,784	82,791	82,176	48,248	48,664	49,962	48,770	58,192	76,338	77,514	73,379	74,911	81,700	47,593	45,265	50,182	39,420	54,307	20,991	33,262	39,488	53,411	67,817	28,612	31,083	37,193	42,873	44,852
Pathological Examinations	28,895	26,191	25,513	32,774	35,953	53,225	57,290	45,631	45,443	51,717	—	—	—	9,411	16,302	19,861	17,274	19,703	22,928	24,847	14,677	19,132	16,482	23,993	29,542	—	—	7,506	7,795	10,014
Post-mortems	890	708	735	803	721	215	210	122	235	285	—	—	—	—	—	130	131	151	185	258	95	89	98	170	187	—	—	25	72	806
X-Ray Examinations (Radiographs)	23,528	26,752	28,231	36,128	37,674	14,823	16,126	17,110	17,987	22,616	—	—	—	2,291	2,231	15,282	17,220	18,452	17,869	17,489	19,694	27,467	32,241	37,908	44,094	—	—	—	—	1,308

*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.

NOTE.—Mill Road Infirmary statistics compiled from date of re-opening, viz. 1st October 1946, with the exception of O.P. attendances which are for the full years 1943-1947.

Belmont Road Hospital X Ray Department opened on 8th September, 1947.

STATE OF ALABAMA

COUNTY		TOWNSHIP		SECTION		ACRES		TAXES		REMARKS	
NAME	NO.	NAME	NO.	NAME	NO.	1898	1899	1900	1901	1902	1903
Barbour	1	Barbour	1	Barbour	1	100.00	100.00	100.00	100.00	100.00	100.00
Bibb	2	Bibb	2	Bibb	2	100.00	100.00	100.00	100.00	100.00	100.00
Blount	3	Blount	3	Blount	3	100.00	100.00	100.00	100.00	100.00	100.00
Bolivar	4	Bolivar	4	Bolivar	4	100.00	100.00	100.00	100.00	100.00	100.00
Bullock	5	Bullock	5	Bullock	5	100.00	100.00	100.00	100.00	100.00	100.00
Butler	6	Butler	6	Butler	6	100.00	100.00	100.00	100.00	100.00	100.00
Chilton	7	Chilton	7	Chilton	7	100.00	100.00	100.00	100.00	100.00	100.00
Choctaw	8	Choctaw	8	Choctaw	8	100.00	100.00	100.00	100.00	100.00	100.00
Clarke	9	Clarke	9	Clarke	9	100.00	100.00	100.00	100.00	100.00	100.00
Crawford	10	Crawford	10	Crawford	10	100.00	100.00	100.00	100.00	100.00	100.00
Crenshaw	11	Crenshaw	11	Crenshaw	11	100.00	100.00	100.00	100.00	100.00	100.00
Cullman	12	Cullman	12	Cullman	12	100.00	100.00	100.00	100.00	100.00	100.00
Dale	13	Dale	13	Dale	13	100.00	100.00	100.00	100.00	100.00	100.00
De Kalb	14	De Kalb	14	De Kalb	14	100.00	100.00	100.00	100.00	100.00	100.00
Elberton	15	Elberton	15	Elberton	15	100.00	100.00	100.00	100.00	100.00	100.00
Etowah	16	Etowah	16	Etowah	16	100.00	100.00	100.00	100.00	100.00	100.00
Fayette	17	Fayette	17	Fayette	17	100.00	100.00	100.00	100.00	100.00	100.00
Franklin	18	Franklin	18	Franklin	18	100.00	100.00	100.00	100.00	100.00	100.00
Gadsden	19	Gadsden	19	Gadsden	19	100.00	100.00	100.00	100.00	100.00	100.00
Gibson	20	Gibson	20	Gibson	20	100.00	100.00	100.00	100.00	100.00	100.00
Graham	21	Graham	21	Graham	21	100.00	100.00	100.00	100.00	100.00	100.00
Greene	22	Greene	22	Greene	22	100.00	100.00	100.00	100.00	100.00	100.00
Hale	23	Hale	23	Hale	23	100.00	100.00	100.00	100.00	100.00	100.00
Hamilton	24	Hamilton	24	Hamilton	24	100.00	100.00	100.00	100.00	100.00	100.00
Harris	25	Harris	25	Harris	25	100.00	100.00	100.00	100.00	100.00	100.00
Hatch	26	Hatch	26	Hatch	26	100.00	100.00	100.00	100.00	100.00	100.00
Henry	27	Henry	27	Henry	27	100.00	100.00	100.00	100.00	100.00	100.00
Hughes	28	Hughes	28	Hughes	28	100.00	100.00	100.00	100.00	100.00	100.00
Jackson	29	Jackson	29	Jackson	29	100.00	100.00	100.00	100.00	100.00	100.00
Jefferson	30	Jefferson	30	Jefferson	30	100.00	100.00	100.00	100.00	100.00	100.00
Lawrence	31	Lawrence	31	Lawrence	31	100.00	100.00	100.00	100.00	100.00	100.00
Lee	32	Lee	32	Lee	32	100.00	100.00	100.00	100.00	100.00	100.00
Letcher	33	Letcher	33	Letcher	33	100.00	100.00	100.00	100.00	100.00	100.00
Liberty	34	Liberty	34	Liberty	34	100.00	100.00	100.00	100.00	100.00	100.00
Limestone	35	Limestone	35	Limestone	35	100.00	100.00	100.00	100.00	100.00	100.00
Madison	36	Madison	36	Madison	36	100.00	100.00	100.00	100.00	100.00	100.00
Marengo	37	Marengo	37	Marengo	37	100.00	100.00	100.00	100.00	100.00	100.00
Marshall	38	Marshall	38	Marshall	38	100.00	100.00	100.00	100.00	100.00	100.00
Mayhew	39	Mayhew	39	Mayhew	39	100.00	100.00	100.00	100.00	100.00	100.00
Monroe	40	Monroe	40	Monroe	40	100.00	100.00	100.00	100.00	100.00	100.00
Montgomery	41	Montgomery	41	Montgomery	41	100.00	100.00	100.00	100.00	100.00	100.00
Morgan	42	Morgan	42	Morgan	42	100.00	100.00	100.00	100.00	100.00	100.00
Murphy	43	Murphy	43	Murphy	43	100.00	100.00	100.00	100.00	100.00	100.00
Nelson	44	Nelson	44	Nelson	44	100.00	100.00	100.00	100.00	100.00	100.00
Nett	45	Nett	45	Nett	45	100.00	100.00	100.00	100.00	100.00	100.00
Newton	46	Newton	46	Newton	46	100.00	100.00	100.00	100.00	100.00	100.00
Okfuskee	47	Okfuskee	47	Okfuskee	47	100.00	100.00	100.00	100.00	100.00	100.00
Ozark	48	Ozark	48	Ozark	48	100.00	100.00	100.00	100.00	100.00	100.00
Perry	49	Perry	49	Perry	49	100.00	100.00	100.00	100.00	100.00	100.00
Pike	50	Pike	50	Pike	50	100.00	100.00	100.00	100.00	100.00	100.00
Poinsett	51	Poinsett	51	Poinsett	51	100.00	100.00	100.00	100.00	100.00	100.00
Polk	52	Polk	52	Polk	52	100.00	100.00	100.00	100.00	100.00	100.00
Porter	53	Porter	53	Porter	53	100.00	100.00	100.00	100.00	100.00	100.00
Pratt	54	Pratt	54	Pratt	54	100.00	100.00	100.00	100.00	100.00	100.00
Price	55	Price	55	Price	55	100.00	100.00	100.00	100.00	100.00	100.00
Quitman	56	Quitman	56	Quitman	56	100.00	100.00	100.00	100.00	100.00	100.00
Randolph	57	Randolph	57	Randolph	57	100.00	100.00	100.00	100.00	100.00	100.00
Reelfoot	58	Reelfoot	58	Reelfoot	58	100.00	100.00	100.00	100.00	100.00	100.00
Rockwall	59	Rockwall	59	Rockwall	59	100.00	100.00	100.00	100.00	100.00	100.00
Rowan	60	Rowan	60	Rowan	60	100.00	100.00	100.00	100.00	100.00	100.00
Russell	61	Russell	61	Russell	61	100.00	100.00	100.00	100.00	100.00	100.00
Seminole	62	Seminole	62	Seminole	62	100.00	100.00	100.00	100.00	100.00	100.00
Sevier	63	Sevier	63	Sevier	63	100.00	100.00	100.00	100.00	100.00	100.00
Shannon	64	Shannon	64	Shannon	64	100.00	100.00	100.00	100.00	100.00	100.00
Shelby	65	Shelby	65	Shelby	65	100.00	100.00	100.00	100.00	100.00	100.00
St. Clair	66	St. Clair	66	St. Clair	66	100.00	100.00	100.00	100.00	100.00	100.00
St. Francis	67	St. Francis	67	St. Francis	67	100.00	100.00	100.00	100.00	100.00	100.00
St. James	68	St. James	68	St. James	68	100.00	100.00	100.00	100.00	100.00	100.00
St. John	69	St. John	69	St. John	69	100.00	100.00	100.00	100.00	100.00	100.00
St. Louis	70	St. Louis	70	St. Louis	70	100.00	100.00	100.00	100.00	100.00	100.00
St. Mary	71	St. Mary	71	St. Mary	71	100.00	100.00	100.00	100.00	100.00	100.00
St. Patrick	72	St. Patrick	72	St. Patrick	72	100.00	100.00	100.00	100.00	100.00	100.00
St. Peter	73	St. Peter	73	St. Peter	73	100.00	100.00	100.00	100.00	100.00	100.00
St. Vincent	74	St. Vincent	74	St. Vincent	74	100.00	100.00	100.00	100.00	100.00	100.00
Sumner	75	Sumner	75	Sumner	75	100.00	100.00	100.00	100.00	100.00	100.00
Tallapoosa	76	Tallapoosa	76	Tallapoosa	76	100.00	100.00	100.00	100.00	100.00	100.00
Tallmadge	77	Tallmadge	77	Tallmadge	77	100.00	100.00	100.00	100.00	100.00	100.00
Telford	78	Telford	78	Telford	78	100.00	100.00	100.00	100.00	100.00	100.00
Tennant	79	Tennant	79	Tennant	79	100.00	100.00	100.00	100.00	100.00	100.00
Terry	80	Terry	80	Terry	80	100.00	100.00	100.00	100.00	100.00	100.00
Thomson	81	Thomson	81	Thomson	81	100.00	100.00	100.00	100.00	100.00	100.00
Tipton	82	Tipton	82	Tipton	82	100.00	100.00	100.00	100.00	100.00	100.00
Townsend	83	Townsend	83	Townsend	83	100.00	100.00	100.00	100.00	100.00	100.00
Tracy	84	Tracy	84	Tracy	84	100.00	100.00	100.00	100.00	100.00	100.00
Travis	85	Travis	85	Travis	85	100.00	100.00	100.00	100.00	100.00	100.00
Trinity	86	Trinity	86	Trinity	86	100.00	100.00	100.00	100.00	100.00	100.00
Union	87	Union	87	Union	87	100.00	100.00	100.00	100.00	100.00	100.00
Unadilla	88	Unadilla	88	Unadilla	88	100.00	100.00	100.00	100.00	100.00	100.00
Upson	89	Upson	89	Upson	89	100.00	100.00	100.00	100.00	100.00	100.00
Van Buren	90	Van Buren	90	Van Buren	90	100.00	100.00	100.00	100.00	100.00	100.00
Van Hook	91	Van Hook	91	Van Hook	91	100.00	100.00	100.00	100.00	100.00	100.00
Van Meter	92	Van Meter	92	Van Meter	92	100.00	100.00	100.00	100.00	100.00	100.00
Van Rensselaer	93	Van Rensselaer	93	Van Rensselaer	93	100.00	100.00	100.00	100.00	100.00	100.00
Van Wert	94	Van Wert	94	Van Wert	94	100.00	100.00	100.00	100.00	100.00	100.00
Vanderburgh	95	Vanderburgh	95	Vanderburgh	95	100.00	100.00	100.00	100.00	100.00	100.00
Vandergrift	96	Vandergrift	96	Vandergrift	96	100.00	100.00	100.00	100.00	100.00	100.00
Vanderkirk	97	Vanderkirk	97	Vanderkirk	97	100.00	100.00	100.00	100.00	100.00	100.00
Vanderpool	98	Vanderpool	98	Vanderpool	98	100.00	100.00	100.00	100.00	100.00	100.00
Vanderweil	99	Vanderweil	99	Vanderweil	99	100.00	100.00	100.00	100.00	100.00	100.00
Vanderzant	100	Vanderzant	100	Vanderzant	100	100.00	100.00	100.00	100.00	100.00	100.00

THESE ARE THE NAMES OF THE TOWNSHIPS AND SECTIONS IN THE STATE OF ALABAMA, AND THE NUMBER OF ACRES IN EACH, AS REPORTED BY THE COMMISSIONERS OF THE LAND OFFICE, IN THE YEAR 1898.

The hospitals so transferred, with a bed accommodation of 9,892 beds, together with the five isolation hospitals and two sanatoria constructed by the municipality, formed the largest provincial hospital system in England. The policy of placing the institutions as well as the hospitals transferred from the Guardians, under the Hospitals Committee was a wise one. It permitted the gradual development of some of the institutions into hospitals and allowed for the maximum flexibility in their use. Considerable development had already been carried out by the West Derby Board of Guardians after the fusion of the former Select Vestry of Liverpool and the Toxteth Board of Guardians with it, notably by the development of Walton Workhouse into Walton Hospital at a cost of about one-quarter of a million pounds. The transferred institutions, notably Walton, Belmont Road and Kirkdale Homes, were among the largest in the country. The conversion of institution accommodation into hospital accommodation was necessarily accompanied by a reduction of authorised bed accommodation.

The result of the transference of the hospitals and institutions to the municipality led to a great reduction in the reluctance of the public to enter the former Poor Law buildings whether for sickness or maternity. A rapid increase in the number of patients admitted began to tax even the resources of so large a hospital system as that of Liverpool. It became apparent that the only way to cope with this increased user without a vast building scheme was to shorten the average length of stay. This in turn necessitated an increase in medical, nursing and technical staffs to carry through diagnosis and treatment in minimal time; the building of out-patient departments—partly for consultations, partly for continuation treatment, partly as buffers against unnecessary admissions; and the provision of all necessary facilities for diagnosis and treatment such as x-ray departments, pathological laboratories, pharmacies, operating theatres, and, finally, physiotherapy and occupational therapy departments for rehabilitation. The building of more Nurses' Homes to contain and train the additional and more highly trained nursing staffs needful to give effect to the policy just outlined became a first requirement.

The effects of this policy are set out in the figures given below relating to the years 1930 and 1947:—

TABLE I.

ADMISSIONS, BIRTHS AND DISCHARGES AND DEATHS.

	Transferred Hospitals and Institutions.		Sanatoria.		Isolation Hospitals.		All Hospitals and Institutions.	
	1930.	1947.	1930.	1947.	1930.	1947.	1930.	1947.
Admissions ...	38,492	52,678	1,084	406	7,346	3,865	46,922	56,949
Transfers to ...	3,845	2,066	120	277	345	394	4,310	2,737
Births ...	2,858	10,058	—	—	—	—	2,858	10,058
Discharges ...	25,018	57,666	991	457	6,621	4,006	32,630	62,129
Transfers from ...	4,773	2,478	7	105	865	74	5,645	2,657
Deaths ...	4,461	5,123	224	110	285	202	4,970	5,435

From the table it will be seen that the admissions increased by 10,000 per annum or 22 per cent. ; the births have increased by 7,200 per annum, an increase of 250 per cent. There has been a considerable reduction, on the other hand, in the admissions to sanatoria and isolation hospitals; this is due to a genuine reduction in the prevalence both of tuberculosis and of certain of the infectious diseases, notably so in the case of diphtheria following upon an intensive programme of inoculation in the prevention of this disease. There is, in fact, a saving of lives of about 1,100 per annum from tuberculosis and diphtheria alone, though this does not appear from the figures shown, when comparison is made of the deaths in the City from these two diseases in 1930 and 1947. The average length of stay in sanatorium has markedly increased *pari passu* with improvements in the treatment of tuberculosis.

TABLE II.

SPECIAL SERVICES GIVEN AT THE THREE GENERAL HOSPITALS,
ALDER HEY AND BELMONT ROAD HOSPITALS.

	1930.	1947.
Surgical operations ...	5,147	19,630
O.P. attendances ...	32,915	389,104
Pathological examinations ...	29,603	168,375
Radiographs ...	13,899	125,412

This Table shows the great change in the type of service rendered in the transferred hospitals. The number of surgical operations show an almost fourfold increase, the out-patient attendances a twelvefold increase, the radiographs a ninefold increase. The pathological examinations were not only much more numerous but completely altered in character and scope following upon the appointment of medical pathologists to the hospitals. The increase in surgery, radiography and out-patients' attendances was only made possible by the building up of highly qualified medical, nursing and technical staff.

The building up of this service, and especially of the out-patients' departments, enabled the greatly increased number of patients referred to the hospitals to be carried; without this build-up the number of hospital beds would have had to be greatly increased. The organisation set-up resulted in shortened length of stay and by the elimination of many unnecessary admissions to hospital by diagnostic and therapeutic facilities in the out-patients' department.

BUILDINGS CONSTRUCTED.

The buildings, mainly built for Poor Law purposes, which were taken over from the Board of Guardians were of very large size, but in many ways ill-adapted for hospital purposes. Considerable alterations were from time to time carried out, and additional buildings were also built for specific purposes, mainly in the brief period between the end of the economic crisis of 1930 and the onset of the war in 1939.

The first necessity was for an increase of accommodation for nurses; new nurses' homes were built at Walton and Fazakerley, very large extensions at Alder Hey and Smithdown Road, and lesser extensions at almost every other hospital. Increased medical staffs were accommodated almost entirely by adaptation of existing buildings. A new out-patient department was built at Mill Road Infirmary, and a combined admission and out-patient department with cubicle isolation was constructed at Alder Hey Hospital; re-arrangements of existing accommodation were made in Smithdown Road Hospital, Fazakerley and Cleaver Sanatoria. An out-patient department is now under construction at Walton Hospital.

Four blocks of isolation cubicles were built at Fazakerley Isolation Hospital and a new ward in the Fazakerley Annexe.

Cubicalisation of wards for isolation purposes with provision of necessary sterilisers has been carried out in Walton, Smithdown Road, Mill Lane Hospital, Alder Hey and Olive Mount Children's Hospitals and Belmont Road Skin Department.

Considerable technical departments, such as ten operating theatres (Walton 3, Smithdown Road 2, Fazakerley Sanatorium 2, Cleaver Sanatorium 1, Mill Lane Hospital 1, Fazakerley Isolation 1), Laboratories, Radiographic Departments (all the general hospitals and Sanatoria and also Belmont Road Hospital and Mill Road Infirmary have now well-equipped plants), Physiotherapy and Occupational Therapy departments were built up. A special therapy department for the treatment of lupus is in the skin department at Belmont Road.

Considerable improvements in engineering plants and in the equipment of laundries have been continuously in progress.

PROGRESS DURING THE WAR.

During the war considerable changes took place. Two blocks of hatted wards (each providing for 350 beds) were constructed at Alder Hospital and Broadgreen Sanatorium and the latter was taken over as a general hospital for war purposes. The destruction of two ward blocks and considerable damage to a large part of Mill Road Infirmary made it necessary for this altered user to be continued. This entailed a considerable adaptation of Broadgreen. A covered corridor was built to join up the ward pavilions, a maternity and out-patient department were provided by conversion of wards. The operating theatres were enlarged and remodelled and plans for three new theatres have now received ministerial approval; two of these will be of the most modern design and construction. In the meantime two ward blocks at Mill Road Infirmary have been rehabilitated and a third has been partially repaired. The whole forms an admirable maternity unit which has enabled the very large number of births in the post-war years to receive hospital care. Units for premature babies have been brought into operation in all the four large maternity units in the City hospitals.

Half a ward block at Fazakerley Sanatorium was destroyed by bombs. This has now been replaced by two new wards connected with the operating theatre used for thoracic surgery in tuberculous patients.

A war-time feature was the building up of specialised units for service patients including orthopaedic surgery (at Alder Hey Hospital), thoracic and facio-maxillary surgery (at Broadgreen Hospital), neurosurgery (at Walton Hospital), tropical diseases (at Smithdown Road Hospital), dermatology (at Belmont Road Hospital). Altogether a total of 45,397 service patients and 3,610 civilian casualties, received treatment in the Liverpool municipal hospitals during the war and post-war years. Casualties were received directly from Norway and from Dunkirk and to a lesser degree the Normandy landings.

It is worthy of record that, owing to the extensive precautions taken before the war, no serious damage was done by fire to any of the municipal hospitals and institutions. This is noteworthy when the extensive fire damage to other buildings in the City is reviewed.

The number of live births in the municipal hospitals during the year was 10,070, and there were 303 still-births, giving a total of 10,373. This total includes the births of children whose mothers reside outside Liverpool in the user agreement area. The work of the maternity units during the year ended 31st December, 1947, is shown in the following tables:—

Hospital.	Live Births.		
	1945.	1946.	1947.
Walton	3,197	3,721	2,879
Smithdown Road	2,205	2,640	2,719
Broadgreen	2,073	2,515	1,649
Mill Road	—	620*	2,823
Totals	7,475	9,496	10,070

* Mill Road Infirmary re-opened 1st October, 1946.

Hospital.	Live Births.	Still Births.	Total.
Walton	2,879	102	2,981
Smithdown Road	2,719	85	2,804
Broadgreen	1,649	52	1,701
Mill Road	2,823	64	2,887
Totals	10,070	303	10,373

SANITARY ADMINISTRATION.

During the year the district sanitary inspectors made 166,168 inspections and visits for the investigation and suppression of nuisances. The total number of nuisances reported was 67,938.

Complaints in many cases were made at the department only after repeated requests addressed to the persons causing or permitting the nuisance, or to the owner or agents of property, had been ignored. A great deal of the time of the inspectors is taken up by these special investigations.

Requests to examine important public buildings and offices, as well as dwellinghouses of high rateable value are numerous, and the application of the smoke test has in many cases brought to light defects in the drainage system of such premises.

During the year 47,731 complaints of nuisances were received as compared with 37,029 the previous year.

The number of notices served for the abatement of nuisances was 33,366 informal, and 13,445 statutory, 1,541 of the latter being served for the provision of dustbins.

In 443 cases legal proceedings were instituted at the City Court for failing to comply with notices served by the department under the Public Health Act, 1936, and the Liverpool Corporation Act, 1921.

Departmental References.

The co-operation which the Public Health Department received from other departments of the Corporation is fully appreciated, and as a result many sanitary defects are observed, and at once dealt with by the department. The number of references so received was 6,013, whilst the number of references to other departments was 4,472.

Infected Houses.

The following table shows the number of houses visited where notifiable infectious diseases have occurred, with the number of visits

made by sanitary inspectors to these houses, and to houses where cases of non-notifiable infectious diseases have been reported to the Health Department by the Education Department:—

Number of investigations relating to cases of infectious disease	...	...	...	...	...	...	...	8,206
Number of inquiries re contacts in respect of cases of infectious disease	...	...	...	...	...	...	...	141
Number of visits to infected houses	...	...	...	...	...	...	...	8,700
Number of visits to phthisis cases	...	...	...	...	...	...	...	1,022
Number of inquiries relating to suspected smallpox contacts								134

Closet Accommodation.

There still remain 87 privies and 75 pails on farms and outlying houses in the city where sewers are not reasonably available.

Drain Testing.

During the year, 1,381 drainage systems were tested, 196 by colour test of which 95 were positive and 101 negative, 404 by smoke rocket test, 158 were positive and 246 negative, 781 by smoke machine test of which 390 were positive and 391 negative. Where defects have been revealed by these tests, repairs have been carried out. In the case of tests of large important buildings and offices, as well as dwellinghouses of higher rateable value, the assistance of the City Engineer and Surveyor's Department has been utilised.

Factories and Workplaces Inspection.

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

All factories and workplaces are visited by 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.

Factories Act, 1937.

Part 1 of the Act.

1. INSPECTIONS for purposes of provisions as to health (including inspections made by Sanitary Inspectors).

Premises. (1)	M/c. Line No. (2)	Number on Register. (3)	Inspec- tions. (4)	Written Notices. (5)	Occupiers prosecuted. (6)	M/c. Line No. (7)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	1	2,409	2,060	239	—	1
(ii) Factories not included in (i) in which Section 7 is enforced by Local Authority	2	2,638	3,809	372	—	2
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding outworkers premises) ...	3	22	50	1	—	3
TOTAL ...		5,069	5,919	612	—	

2. Cases in which DEFECTS were found.

Particulars. (1)	M/c. Line No. (2)	Number of Cases in which Defects were found.				Number of Cases in which Prosecu- tions were instituted. (7)	M/c. Line No. (8)
		Found. (3)	Remedied. (4)	Referred To H.M. Inspector. (5)	Referred By H.M. Inspector. (6)		
Want of cleanliness (S.1)	4	55	55	2	2	—	4
Overcrowding (S.2) ...	5	—	—	—	—	—	5
Unreasonable temperature (S.3)	6	—	—	—	—	—	6
Inadequate ventilation (S.4)	7	4	4	—	—	—	7
Ineffective drainage of floors (S.6)	8	3	3	—	—	—	8
Sanitary Conveniences (S.7)—							
(a) Insufficient ...	9	31	23	—	6	—	9
(b) Unsuitable or defective ...	10	134	126	—	38	—	10
(c) Not separate for sexes	11	16	12	—	3	—	11
Other offences against the Act (not including offences relating to outwork)	12	279	268	15	4	—	12
TOTAL ...	60	522	491	17	53	—	60

Part VIII of the Act.

Outwork.

(Sections 110 and 111)

Nature of Work.	M/c. Line No.	No. of out- workers in August list required by Section 110(1)(c).	No. of cases of default in sending lists to the Council.	No. of prosecu- tions for failure to supply lists.	Section III.		Prosecu- tions.	M/c. Line No.
					No. of instances of work in unwhole- some premises.	Notices served.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wearing apparel—								
Making, etc.	13	101	—	—	—	—	—	13
Cleaning and washing	14	—	—	—	—	—	—	14
Household linen	15	—	—	—	—	—	—	15
Lace, lace curtains and nets	16	—	—	—	—	—	—	16
Curtains and furniture hangings	17	—	—	—	—	—	—	17
Furniture and upholstery	18	—	—	—	—	—	—	18
Electro-plate	19	—	—	—	—	—	—	19
File making	20	—	—	—	—	—	—	20
Brass and brass articles	21	—	—	—	—	—	—	21
Fur pulling	22	—	—	—	—	—	—	22
Iron and steel cables and chains	23	—	—	—	—	—	—	23
Iron and steel anchors and grapnels	24	—	—	—	—	—	—	24
Cart gear	25	—	—	—	—	—	—	25
Locks, latches and keys	26	—	—	—	—	—	—	26
Umbrellas, etc.	27	—	—	—	—	—	—	27
Artificial flowers	28	—	—	—	—	—	—	28
Nets, other than wire nets	29	—	—	—	—	—	—	29
Tents	30	—	—	—	—	—	—	30
Sacks	31	—	—	—	—	—	—	31
Racquet and tennis balls	32	—	—	—	—	—	—	32
Paper bags	33	—	—	—	—	—	—	33
The making of boxes or other re- ceptacles or parts thereof made wholly or partially of paper	34	—	—	—	—	—	—	34
Brush making	35	—	—	—	—	—	—	35
Pea picking	36	—	—	—	—	—	—	36
Feather sorting	37	—	—	—	—	—	—	37
Carding, etc., of buttons, etc.	38	—	—	—	—	—	—	38
Stuffed toys	39	—	—	—	—	—	—	39
Basket making	40	—	—	—	—	—	—	40
Chocolates and sweetmeats	41	—	—	—	—	—	—	41
Cosaques, Christmas crackers, Christmas stockings, etc.	42	—	—	—	—	—	—	42
Textile weaving	43	—	—	—	—	—	—	43
Lampshades	44	—	—	—	—	—	—	44
TOTAL ...	70	101	—	—	—	—	—	70

Outworkers, 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:—

The following statement shows the work undertaken during the year:—

Employers failing to keep list	Nil
Notices served for failing to keep or send list	Nil
Prosecutions for failing to send in list	Nil
Number of outworkers returns received	101
Number of returns indicating no outworkers employed	10
Number of returns referred to M.O.H. of districts outside City	59
Number of visits to premises	172
Number of instances of employment in unwholesome premises...	Nil
Number of notices served	Nil
Matters referred to H.M. Inspector of Factories:—	
Failing to affix abstract of the Factories Act, 1937 (Section 114)	17
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Act, 1936, and the Factories Act, 1937 (Notified by H.M. Inspectors. Reports of Action taken sent to H.M. Inspector)	53
Other reports to H.M. Inspector	5

Register of Workplaces (including Offices).

The number of workplaces on the register was 3,284. 1,105 visits were made to workplaces, and 2,705 in respect of offices. There were 205 defects, 164 of which were unsuitable or defective sanitary conveniences, 10 inadequate ventilation, and the remainder want of cleanliness, the defects not remedied at the end of the year being 27.

Rag Flock Acts, 1911 and 1928.

There is one factory in which rag flock is manufactured in this district, three visits have been made and five samples of rag flock have been taken, which were in accordance with the standard of cleanliness required by the rag flock regulations.

Twenty-one visits have been made to premises where rag flock was used, 36 samples were taken and were in accordance with the regulations.

The reports of the City Analyst on the 36 samples of rag flock submitted for analysis used in upholstery and bedding were as follows:—

1 contained under 5 parts of chlorine per 100,000 parts of flock.					
14 contained 5 and under 10 parts of chlorine per 100,000 of flock					
12	„	10	„	15	„
4	„	15	„	20	„
5	„	20	„	24	„

Bakehouses.

The number of bakehouses in use at the end of the year was 343, of which 103 were bakehouses without mechanical power, 13 being basement bakehouses, and 240 bakehouses with mechanical power, 27 being basement bakehouses. During the year 1,101 visits were made.

Number of occasions in which bakehouses were found incorrect	83
Number of Notices issued (informal)	20
Number of Notices issued (statutory)	63

Food and Drugs Act, 1938. Section 13, (1).

Bakehouses.	Defects.	
	Reported.	Remedied.
(a) Sanitary conveniences, dustbin, etc., within or communicating direct	3	3
(b) Drain inlet within the room	3	3
(c) Preparation rooms	32	31
(Walls, ceilings, floors, windows and doors in disrepair).		
Store rooms	10	9
(Walls, ceilings, floors, windows and doors in disrepair).		
(d) Preparation rooms	57	50
(Walls, ceilings, doors, windows require cleansing).		
Store rooms	16	15
(Walls, ceilings, doors, windows require cleansing).		
(e) Room used as sleeping apartment, etc.	—	—
(f) Preparation rooms	6	6
(Ventilation inadequate or not maintained).		
Store rooms	2	1
(Ventilation inadequate or not maintained.)		
(g) Accumulation of filth or refuse in the room	5	5
Floor not kept in a clean condition	6	6
(h) Cleanliness of persons employed in rooms not observed	2	2
Cleanliness of articles, utensils and apparatus not observed	7	7
(i) Supply of soap and towels insufficient or not provided... ..	13	13
Suitable washing basins not provided	1	1
<i>Sub-Section 2.</i>		
(b) Failure to prevent risk of contamination of food	8	8
TOTAL	171	160

Bread Vans.

Vehicles in which bread is conveyed are inspected with regard to cleanliness, at bakehouses, unloading at retail shops, and during the course of delivery to customers, resulting in a marked improvement in the standard of cleanliness due to the action of the Inspectors and the co-operation of manufacturers, but the desired standard with regard to the transport of bread is attained with difficulty owing to the number of worn out vehicles in use.

Many vehicles have been reconstructed in order to bring them into line with modern hygienic requirements, but the rate of replacement is retarded owing to the slow delivery of new vehicles.

No. of bread vans inspected	...	...	...	...	...	155
No. of bread vans found dirty	...	...	...	...	...	9
No. of dirty vans reinspected and found clean	...	...	...	...	...	9

Restaurants and Cafes.

All kitchens in connection with cafes and restaurants are regularly visited, particular attention being paid to the cleanliness of the premises and of the workers employed in the kitchen. There were 383 in use at the end of the year.

During the year 3,155 visits were made to refreshment houses of all types, which included cafes, restaurants, snack bars, and industrial canteens.

Notwithstanding the shortage and restriction of building material and equipment, appreciable progress has been made in improving the structural and hygienic standard of these premises, and several cafe and restaurant kitchens have been reconstructed as a result of appropriate action being taken by the department.

Number of occasions in which restaurants and cafes were found						
incorrect	...	...	...	...	...	142
Notices issued—Public Health Act, 1936:						
To owner	...				133	} 284
To occupier	...				70	
Notices issued—Food and Drugs Act, 1938:						
To owner	...				128	} 203
To occupier	...				156	

Restaurants and Cafes.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938, Section 13.</i>		
(a) Sanitary conveniences, dustbin, etc., within or communicating direct	6	3
(b) Drain inlet within or communicating direct	19	16
(c) Dining rooms	71	42
(Walls, ceilings, floors, etc., in disrepair).		
Kitchen	183	48
(Walls, ceilings, floors, etc., in disrepair).		
Food store	29	23
(Walls, ceilings, floors, etc., in disrepair.)		
(d) Dining rooms	72	49
(Walls, ceilings, windows, etc., require cleansing.)		
Kitchen	156	101
(Walls, ceilings, windows, etc., require cleansing.)		
Food store	35	31
(Walls, ceilings, windows, etc., require cleansing.)		
(e) Room used as a sleeping apartment or communicating direct...	1	1
(f) Dining room	13	6
(Ventilation not provided and maintained.)		
Kitchen	29	16
(Ventilation not provided and maintained.)		
Food store	14	9
(Ventilation not provided and maintained.)		
(g) Accumulation of refuse or filth within the rooms	23	23
Floors not kept in a clean condition	11	11
(h) Cleanliness of persons employed in rooms not observed	2	2
Cleanliness of articles, utensils and apparatus not observed	11	11
(i) Suitable and sufficient washing facilities not provided... ..	10	9
Supply of soap and towels insufficient or not provided... ..	1	1
Supply of hot and cold water insufficient or not provided	20	19
<i>Sub-Section 2 (b).</i>		
Failure to prevent risk of contamination of food	127	103
Cutlery, crockery and other accessories, cleanliness not observed...	12	12
Equipment defective, worn, requiring repair or renewal	71	37
Swill bin accommodation unsatisfactory	11	11
Storage of food : inadequate, unsatisfactory accommodation	11	7
Handling of food ; unsatisfactory methods used	1	1
<i>Public Health Act, 1936, Section 89.</i>		
(Sanitary accommodation.)		
Not provided for males	16	15
Insufficient for males	2	2
Not provided for females	2	1
Insufficient for females	—	1
Separate means of approach not provided	6	8
Screens, doors, fasteners, etc., defective or not provided	3	3
Lighting inadequate	3	4
Ventilation—		
Inadequate	34	7
Absence of intervening space	8	3
Floors, basins, seats, walls, etc., dirty or defective... ..	91	74
Flush to water closets defective or inadequate	2	2
Urinals—		
Defective, insanitary	2	1
Absence of or insufficient flush thereto	4	4
TOTAL	1,112	717

Licensed Premises.

2,172 visits were made to 696 licensed premises during the year, and it was found that a good standard of cleanliness had been maintained both with regard to the storage and sale of intoxicating liquor and the personnel employed.

The current restriction of building labour and materials has delayed many necessary improvements and repairs of a structural character in these premises, particularly with respect to inadequate sanitary accommodation for persons frequenting, which is unsatisfactory in 323 cases, as follows:—

Insufficient for males	...	...	...	6
Not provided for females	...	...	...	317

Appropriate notices were issued in cases where the undermentioned defects were observed:—

Licensed Premises.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938. Section 13 (1).</i>		
(a) Sanitary conveniences, dustbin, etc., within or communicating direct	6	3
(b) Drain inlet within or communicating direct	11	9
(c) Bars and Parlours	10	9
(Walls, ceilings, floors, etc., in disrepair.)		
Beer cellars...	18	11
(Walls, ceilings, floors, etc., in disrepair.)		
(d) Bars and parlours	83	68
(Walls, ceilings, windows, etc., require cleansing.)		
Beer cellars...	53	39
(Walls, ceilings, windows, etc., require cleansing.)		
(e) Room used as a sleeping apartment or communicating direct...	—	—
(f) Bars and parlours	6	6
(Ventilation not provided and maintained.)		
Beer cellars...	4	4
(Ventilation not provided and maintained.)		
(g) Accumulation of refuse or filth within the rooms	2	2
Floors not kept in a clean condition	1	1
(h) Cleanliness of persons employed in rooms not observed	—	—
(i) Cleanliness of articles, utensils and apparatus not observed	3	3
(i) Suitable and sufficient washing facilities not provided	2	1
Supply of soap and towels insufficient or not provided...	1	1
Supply of hot and cold water insufficient or not provided	10	8
<i>Sub-Section 2 (b).</i>		
Failure to prevent risk of contamination of food	1	1
Beer pipes	1	—
(Defective, worn, or cleanliness not maintained.)		
Stillage	—	—
(Defective, worn, or cleanliness not maintained.)		
Beer engine	—	—
(Defective, worn, or cleanliness not maintained.)		
Drip trays	2	2
(Defective, worn, or cleanliness not maintained.)		
Drainers, trays, sinks	5	3
(Defective, worn, or cleanliness not maintained.)		
Waste beer vessels uncovered or in an unsatisfactory condition	—	—

Licensed Premises.	Defects.	
	Reported.	Remedied.
Filters and funnels in an unsatisfactory condition...	—	—
Glasses—		
Not served in a clean condition ...	—	—
Unsatisfactory method of cleansing ...	—	—
<i>Public Health Act, 1936, Section 89.</i> (Sanitary Accommodation.)		
Not provided for males ...	2	1
Insufficient for males ...	1	—
Not provided for females ...	—	—
Insufficient for females ...	2	1
Separate means of approach not provided ...	6	6
Screens, doors, fasteners, etc., defective or not provided ...	22	22
Lighting inadequate ...	9	9
Ventilation—		
Inadequate ...	14	11
Absence of intervening space ...	39	26
Floors, basins, seats, walls, etc., dirty or defective ...	145	133
Flush to water closets defective or inadequate ...	16	16
Urinals—		
Defective, insanitary ...	14	9
Absence of or insufficient flush thereto ...	16	16
TOTAL ...	505	421

Offensive Trades.

During the year consent to establish was granted in two cases for the business of a tripe dresser and gut scraper, respectively. There were on the register of offensive trades in the city at the end of the year 69 businesses, which is four less than the number at the end of the preceding year.

Nature of Business.						Trade.
Blood boilers	...	...	...	...	...	—
Blood driers	...	...	...	...	...	—
Bone boilers	...	...	...	...	...	2
Fat extractors	...	...	...	...	...	8
Fat melters	...	...	...	...	...	6
Fellmongers	...	...	...	...	...	5
Glue makers	...	...	...	...	...	—
Gut scrapers	...	...	...	...	...	5
Rag and bone dealers	...	...	...	...	...	30
Size makers	...	...	...	...	...	—
Soap boilers	...	...	...	...	...	7
Tallow melters	...	...	...	...	...	—
Tripe boilers	...	...	...	...	...	6
TOTAL						69

The number of inspections during the year was	...	...	535
Number of special visits	...	...	15
Number of ordinary visits	...	...	200
Number of revisits	...	...	320
Number of applications to establish	...	...	2
Number of applications granted	...	...	2
Number of applications for renewal	...	...	9
Number of applications granted	...	...	9
Number of offensive trades discontinued and removed from the register	...	...	6
Number of nuisances found	...	...	31
Number of nuisances abated	...	...	31
Number of premises rat infested	...	...	—
Number of premises fly infested	...	...	—
Number of notices issued (informal)	...	...	—
Number of notices issued (statutory)	...	...	7

Fish Friers' Premises.

At the end of the year there were 404 fish friers' businesses within the city, and 1,371 visits were made, the result of inspections being as follows:—

Fish Friers.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938. Section 13 (1).</i>		
(a) Sanitary convenience, dustbin, etc., within or communicating direct	2	2
(b) Drain inlet within or communicating direct	3	3
(c) Preparation room (Walls, ceilings, floors, windows, etc., require cleansing.)	35	32
Shop (Walls, ceilings, floors, windows, etc., require cleansing.)	15	14
(d) Preparation room (Walls, ceilings, windows, etc., require cleansing.)	62	62
Shop (Walls, ceilings, windows, etc., require cleansing.)	14	14
(e) Room used as a sleeping apartment or communicating direct...	—	—
(f) Preparation room (Ventilation not provided and maintained.)	6	5
Shop (Ventilation not provided and maintained.)	1	1
(g) Accumulation of filth or refuse within the rooms	9	7
Floors not kept in a clean condition	5	5
(h) Cleanliness of persons employed in rooms not observed	—	—
Cleanliness of articles, utensils and apparatus not observed	3	2
(i) Suitable and sufficient washing facilities not provided... ..	5	4
Supply of soap and towels insufficient or not provided... ..	5	5
Supply of hot and cold water insufficient or not provided	37	33
<i>Sub-Section 2 (b).</i>		
Failure to prevent risk of contamination of food	2	2
Food refuse accommodation unsatisfactory... ..	2	2
Storage of food, unsatisfactory accommodation	1	1
Handling of food, unsatisfactory methods used	—	—
Equipment unsatisfactory, requiring repair or renewal	8	6
<i>Public Health Act, 1936.</i>		
Nuisances reported	113	93
TOTAL	328	293

Furniture Removers.

84 visits were made to the premises of furniture removers, and 102 vans inspected, and were found to be in a clean condition.

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 28 licensed employment agencies on the register.

Railway Carriages and Fish Arrivals.

Complaints are occasionally received from passengers directing attention to the dirty condition of railway carriages. These carriages are from time to time inspected, and if they are found in an unclean condition the railway company concerned is informed, and the matter receives prompt attention. During the year 33 visits were made to railway stations, 208 inspections made of railway carriages, and 234 inspections of fish arrival platforms.

Shops Acts, 1912 to 1938, and Young Persons Employment Act, 1938.

Part 1.

ENFORCEMENT.

Enforcement of the provisions of these enactments has been maintained daily by visitation of shops and other premises to which the Acts relate, by Inspectors employed full time in carrying out duties in connection with the closing hours of shops, the employment of shop assistants and young persons, and the arrangements for maintaining the health and comfort of shop workers, together with the employment of young persons in certain occupations not regulated by the Shops or Factories Acts.

In the pre-war period the administration of the Shops Acts was most effectively secured by systematic shop to shop visits throughout the city, each Inspector being responsible for a particular district; and by means of this routine inspection any contravention or failure to give proper effect to statutory provisions, was quickly detected and suitably dealt with.

ROUTINE INSPECTION.

Whilst every opportunity has been taken during the year to carry out routine inspection, this work has been greatly impeded owing to shortage of staff, together with increased duties undertaken by the inspectorate under other legislation affecting shops, including the Public Health Act,

1936, the Food and Drugs Act, 1938, and the Rats and Mice (Destruction) Act, 1919.

WELFARE ARRANGEMENTS.

Among the statutory provisions affecting shops, those dealing with the arrangements for the health and comfort of shop workers, laid down in the Shops Act, 1934, are of first importance, and particular care has been taken to secure improvements in many shops where for various reasons a satisfactory standard has not been maintained. Statutory notices have been served on owners and occupiers of shops in all such cases reported by the Inspectors, but considerable delay in compliance therewith is occasioned where structural work is involved by reason of necessary procedure in connection with the issue of building licences and for permits for materials which are subject to control and in short supply. This delay involves additional visits by Inspectors, when otherwise the time could be devoted to routine inspection.

FOOD SHOPS.

Strict attention has been given to the cleansing of shop premises, particularly in the case of food shops, and as a result a general improvement in the standard of cleanliness has been secured. Occupiers of the larger shops require little encouragement to maintain their premises and equipment in a satisfactory condition, but there is room for further improvement in the large number of small general shops, in many of which a single room serves as both shop and storeroom for a wide variety of food and non-food goods.

The need for systematic routine visitation is emphasised in the case of food shops, in order to ensure that adequate measures are taken and maintained to prevent risk of contamination of food in accordance with the provisions of Section 13, of the Food and Drugs Act, 1938. Interviews with the Directors and Managers of larger firms dealing in confectionery have taken place to invite their co-operation for improving, where possible, the methods of disposal and handling of food in their shops, and in all cases the Inspector's suggestions were welcomed for careful consideration.

Active steps have also been taken with regard to the provision of an adequate supply of running hot water in food shops for the use of

persons employed therein, with the result that in many shops not previously provided with this facility, suitable gas or electric heaters, fixed above a conveniently placed washing basin or sink, have been installed for this purpose; and with the present improvement in the delivery of water heaters at comparatively low cost, and designed to provide at will a constant supply of hot or boiling water, the unsatisfactory arrangements found in some shops, of heating water in a bucket or other vessel on a gas ring, is not accepted.

The restoration of war-damaged shops and the re-opening of shops long closed has continued during the year, and the additional shopping facilities thus provided for the convenience of the general public, has also further improved the appearance of the public thoroughfares in the city.

ADMINISTRATION IN PRACTICE.

Whilst it is the practice for Inspectors to insist on strict observance of the various provisions of the Shops Acts, it is appreciated that legislation of such complex nature in its application to the widely varied and changing conditions affecting shop life, is not always fully understood by shopkeepers. On this account Shops Inspectors consider it an important part of their duty to assist shopkeepers where necessary to clearly understand the law and advise them as to the proper method to give effect to statutory requirements. This practice, together with the willing co-operation of the great majority of shopkeepers, has contributed to the maintenance of satisfactory administration of the Shops Acts in this city.

Where contraventions or any failure to comply with the provisions of the Shops Acts are reported, other than contraventions for which action by statutory notice is prescribed, it is the custom to issue a warning letter in the first case, requesting the offender to avoid a repetition of the offence in order to obviate the necessity for further proceedings, and this course in most cases obtains the desired result.

CLOSING HOURS.

There has been a striking change in the hours of business in the retail distributive trades compared with the pre-war period. The earlier general closing hours in operation under Defence Regulations for the winter period each year since 1939 (6.0 p.m. each day in Liverpool),

resulted in voluntary earlier evening closing of shops during the remainder of the year, when shops could lawfully remain open until 9.0 p.m. on Saturday and 8.0 p.m. on other evenings. Voluntary closing of shops at an hour much earlier than those fixed by existing law has continued and is now generally accepted as a permanent practice and many shops close at 5.0 p.m. or 5.30 p.m. each day, with benefit to persons employed or engaged therein.

There has also been a change in the hours of business in mixed shops which are entitled to keep open for certain transactions on the weekly half-holiday and on Sunday. Prior to the war, such shops remained open all day on the half-holiday and on Sunday, whereas many are now entirely closed on the weekly half holiday, or only open for a short period in the late afternoon, and are closed after 1.0 p.m. on Sunday. Shopkeepers and assistants alike appreciate the greater opportunities for relaxation from business which this custom affords.

GOWERS COMMITTEE OF ENQUIRY.

These changes have been recognised and taken into account by the Committee of Enquiry appointed on 1st January, 1946, to enquire into the provisions of the Shops Acts, and presided over by Sir Ernest Gowers, whose interim report published in April, 1947, relating to the closing of shops, recommended earlier evening closing hours than those now fixed by law.

The Gowers Committee also recommended changes in the law relating to, *inter alia*, transactions exempted from the provisions of the Shops Acts as to closing hours, and as to trading elsewhere than in shops. Judgment of the Courts in relation to these matters have severely criticized the construction of some provisions of the Shops Acts which have not clearly conveyed the intention of Parliament and have led to confusion in the application of law.

VISITATION ON WEEKLY HALF-HOLIDAY, IN THE EVENING AND ON SUNDAY.

Systematic visitation of shops throughout the city is carried out on the weekly half-holiday with respect to the closing of shops and the weekly half-holiday for shop assistants and young persons, and in the evening with regard to general closing hours. Regular inspections are also carried out on Sunday in connection with closing hours and the employment of persons.

The voluntary earlier closing hours previously referred to have a direct relation to the reduction in the number of offences reported for trading after the closing hour and the employment of shop assistants. The actual weekly hours of employment of young persons are also thereby reduced and in the great majority of shops, are well below the permitted normal maximum of 44 hours in the 14-16 years age group, and 48 hours in the 16-18 years age group, prescribed by the Shops Act, 1934.

The offences reported during the year have therefore related chiefly to failure to exhibit various prescribed notices in shops, and to keep records of the employment of young persons; and records of the employment of persons in shops on Sunday and the compensatory holidays to which they are thereby entitled. Such offences have been due to carelessness only and have been quickly rectified and seldom repeated.

YOUNG PERSONS (EMPLOYMENT) ACT, 1938. PART 1.

For reasons previously given it has not been possible to complete the survey of the city to ascertain the extent of employment of young persons in occupations regulated by the Part 1 of the Young Persons (Employment) Act, 1938. In addition to the number of young persons engaged as messengers and lift attendants at buildings in the Central Area of the city, which has been surveyed for this purpose, there are various places of employment scattered throughout the city, including small businesses concerned in the collection, transport and delivery of goods, where young persons may be employed, which unlike shops, are not readily distinguished by signs or appearance. Inspection of districts street by street will eventually permit a complete record to be compiled of all premises and employments affected by this Act.

The employment of young persons in places of public entertainment is regulated either by the Shops Acts or by Part I of the Young Persons (Employment) Act, 1938, according to the nature of their work, and the employer is entitled to adopt the provisions of either of these Acts; the large majority of employers have elected to apply the provisions of the Shops Acts to all young persons.

In connection with the administration of the various Acts to shop premises 1,577 notices have been issued, and 3,900 inspections made in respect of these notices, as follows:—

Act.	Notices issued.		Re-inspections after service of notice.
	Preliminary.	Statutory.	
Public Health Act, 1936	802	396	2,969
Food and Drugs Act, 1938	—	72	249
Shops Act, 1934, Section 10	—	267	535
Rats and Mice (Destruction) Act, 1919	—	40	147

THEATRES, CINEMAS, ETC.

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 379 evening visits were paid, a day inspection is also made so that closer attention may be given to the examination of the sanitary conveniences. In 49 cases minor defects were observed, and these were remedied on the attention of the managers being called thereto.

PARTICULARS OF VISITS AND RE-INSPECTIONS.

Approximate number of shops in the city—19,200.

Registration.				Contraventions.		
				Acts.	Reported.	Remedied
Retail shops inspected	...	...	1,624	1912 and 1913 Acts.		
Assistants employed.				Half-holiday closing	15	15
Young persons—Male	...	...	258	Mixed trades notice	31	31
Female	...	...	679	Closing notice		
Adults—Male	...	...	1,090	(Alt. W.H.H.)	15	15
Female	...	...	2,383	Assistants' Half-holiday	8	8
Wholesale shops inspected	...	...	123	Intervals for meals	—	—
Young persons employed—Male	...	...	28	Seats for female assistants	6	6
Female	...	...	3	Assistants' half-holiday		
Adults employed—Male	...	...	142	notice	146	146
Female	...	...	9			
Visits re Half-holiday Closing.				1928 Act.		
Visits to shops after 1 p.m.	...	...	24,201	Evening closing	30	30
				Mixed trades notice		
Visits re Evening Closing.				(C.O.)	16	16
Visits to shops—				1934 Act.		
After 7 p.m.	...	...	6,780	Hours of employment of		
After 8 p.m.	...	...	521	young persons	—	—
After 9 p.m.	...	...	1,281	Night employment of		
After 9.30 p.m.	...	...	224	young persons	—	—
After 10 p.m.	...	...	51	Record of hours of em-		
				ployment of young		
Visits re Sunday Closing.				persons	93	93
Visits to shops on Sunday	...	...	1,620	Abstract of provisions of		
				1934 Act (Forms H		
				and J) ...	65	65
				Notices as to seats for		
				female assistants		
				(Form K)	111	111
				Other notices (A-Z)	4	4
Re-visits (General).				Section 10.		
Closing hours and notices	...	...	59	Ventilation	5	5
Sunday closing and notices	...	...	66	Temperature	—	—
Sunday employment of persons	...	...	76	Sanitary conveniences	235	122
Assistants' statutory half-holiday and				Lighting	4	4
notice	...	...	190	Washing facilities	77	45
Compensatory holidays	...	...	7	Facilities for taking meals	3	1
Intervals for meals	...	...	1			
Seats for female assistants	...	...	6	1936 Acts.		
Employment of young persons	...	...	110	Closing of shops on		
Notices—Shops Act, 1934	...	...	216	Sunday	9	9
Welfare arrangements	...	...	1,800	Mixed Shops' Notice		
				(Form I)	94	94
				Record of Sunday		
				employment	35	35
Public Health Acts.				TOTALS	1,002	855
No. of nuisances reported	...	...	3,015			
No. of nuisances abated	...	...	2,867			
No. of conveniences limewashed	...	...	—			
No. of nuisances outstanding	...	...	148			

Common Lodging Houses.

At the commencement of the year there were on the register 19 Lodging Houses providing accommodation for 1,185 lodgers.

19 applications were received from persons for the renewal of registration as keepers, which were granted for a further period of twelve months.

35 verbal notices for infringements of the byelaws were given to registered keepers during the year.

22 notices were served under the Byelaws relating to Common Lodging Houses in respect of choked drains, verminous bedding and beds, floors unswept and not washed, windows requiring cleaning, and dirty condition of ceilings and walls, rooms, staircases and landings.

Inspection of Common Lodging Houses.

Number of houses on register at 31st December, 1947 (males only)	...	...	...	...	...	...	...	16
Number of houses on register at 31st December, 1947 (females only)	...	...	...	...	...	...	...	3
Number of lodgers allowed (males)	...	...	...	...	...	...	...	1,051
Number of lodgers allowed (females)	...	...	...	...	...	...	...	134
Number of day visits	...	...	...	...	...	...	...	619
Number of nocturnal visits	...	...	...	...	...	...	...	24

Seamen's Lodging Houses.

At the commencement of the year there were 32 Seamen's Lodging Houses on the register. 3 applications were received from persons for licences to keep a Seamen's Lodging House, and schedules of works necessary to be carried out in order to comply with the byelaws have been sent to the keepers concerned.

The keepers of 15 Seamen's Lodging Houses have been licensed, and applications were received for renewal of 10 licences, which were granted.

10 houses have ceased to be used as Seamen's Lodging Houses, including 8 lodging houses which were closed owing to the repatriation of Chinese seamen.

At the end of the year there were 24 Seamen's Lodging Houses on the register.

Number of Houses.	Nationality of Seamen.	Number of Seamen allowed.
6	British	563
4	Chinese	301
6	Arab	127
1	Somalis	10
2	Europeans	106
2	Indian	173
1	South American	14
1	Norwegian	50
1	West Indian	90
24		1,434

Number of inspections	602
Number of nocturnal inspections	10
Number of houses in which contraventions of byelaws were found	26
Number of contraventions of the byelaws	613
Number of contraventions abated	395
Number of verbal notices	14
Number of statutory notices issued	16

Houses Let-in-Lodgings.

Number of houses visited	1,093
Number of inspections	3,562
Number of houses found dirty	302
Number of houses found cleansed on revisit	302
Number of verbal notices... ..	101
Number of preliminary notices issued	556
Number of statutory notices issued	339
Number of nuisances found	2,193
Number of nuisances abated	1,945

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 2,042, and the condition of the boats and their occupants as regards matters dealt with in the Act and Regulations is indicated in the following table:—

TABLE I.

Boats on register, 1st January, 1947 ...	...	...	...	402
New boats registered ...	...	...	...	9
Boats removed from register ...	...	...	...	—
Boats on register, 31st December, 1947 ...	...	...	...	411

Contraventions occurred on 35 boats, of which number 10 were registered by other Authorities.

TABLE II.

Nature of Contraventions.	Reported.	Remedied.
Unregistered boats used as dwellings ...	2	2
No certificate on board or certificate of registration not legible...	3	3
Leaky decks ...	14	14
Defective stove or stove pipes ...	3	3
Cabins requiring re-painting ...	13	12
Registration authority and number not painted on boat ...	—	—
Registering, lettering, etc., not legible ...	13	12
Defective wooden cupboards ...	2	2
TOTAL ...	50	48

TABLE III.

NUMBER AND TYPES OF BOATS REGISTERED, 31ST DECEMBER, 1947.

Motor-propelled boats	...	...	...	...	86
Motor-towed boats	...	...	...	...	46
Steam-propelled boats	...	...	...	...	63
Steamed-towed boats	...	...	...	...	121
Horse-drawn boats	...	...	...	...	95
Total	...	...	...	...	411

Written notices were issued to owners in 35 instances, of these notices 33 have been complied with. No informations were laid during the year against owners or masters for infringement of the Acts 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 197 inspections during the year, and 23 contraventions were discovered, which were subsequently dealt with. These figures are included in the foregoing table.

TABLE IV.

DETAILS OF VISITS TO CANAL BOATS PLYING ON CANAL.

230 boats were visited, these being registered as follows:—

At Liverpool	...	...	...	...	120
At Wigan	...	...	...	...	1
At Manchester	...	...	...	...	10
At Runcorn	...	...	...	...	25
At Chester	...	...	...	...	7
Not registered and not used as dwellings	...	...	...	...	67

All were "wide" boats, 70 being steam-towed, 64 motor-propelled, 10 steam-propelled, 63 motor-towed, and 23 horse-drawn.

The number of inspections of these 230 boats was 1,845, and the population comprised 326 men, no women or children; a total of 326 persons, the sexes and ages being as follows:—

TABLE V.

POPULATION OF CANAL BOATS.

Men	...	...	...	...	...	326
Women	...	...	...	...	...	—
Children	...	...	...	...	...	—

distributed as under:—

Males over 14 years of age	...	...	326
Males over 5 years and under 14 years	...		—
Males under 5 years	...	...	—
Females over 12 years of age	...	...	—
Females over 5 years and under 12 years			—
Females under 5 years	...	...	—

NOTE.—Males on attaining the age of 14 years, and females 12 years, living on canal boats, become adults, and are recorded as such in the above table.

No children of school age were found on canal boats during the year, and no families were found on a boat on the canal who had not a home ashore in addition to that on board.

The Hydrogen Cyanide (Fumigation) Act, 1937.

Official notice has been received in respect of 5 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937, 4 dwelling-houses and one warehouse were satisfactorily fumigated under the supervision of the sanitary inspectors.

Court and Alley Inspections.

434 inspections were made of courts and alleys, and 778 inspections of water-closets used in common, visits being made fortnightly by sanitary inspectors to ascertain whether these common water-closets are kept in a clean condition.

Prohibition of Sale of Verminous Furniture, Etc.

Under Section 83 of the Liverpool Corporation Act, 1936, 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 so infested.

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

Removal of Remains.

Under the terms of licences issued from the Home Office the sanitary inspectors supervised the exhumation and reinterment of 11 bodies during the year.

Miscellaneous.

STABLES.—Stables within the city are systematically inspected by the 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 2,614, the number found occupied was 405, and the number disused 645.

The manure depots are situated in close proximity to the North Corporation destructor, and visits are made to them to see that the manure which has been received from the stables in the centre of the city is frequently removed so as to avoid the possibility of breeding places for flies. During the year 24 visits were made to manure depots.

MARINE STORES.—During the year 29 visits were paid to 6 marine stores, and in no cases were nuisances found.

PARKS.—Fortnightly visits are paid 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. 139 visits were made and in three instances they were found to be incorrect, the necessary action was taken to remedy the defects.

POULTRY DEPOTS.—23 poultry depots were visited fortnightly, and in six instances they were found to be in an unclean condition. The necessary steps were immediately taken by the occupiers to cleanse the premises.

SCHOOLS.—1,152 visits were made to schools, and in 81 instances defects were found. The necessary steps were immediately taken to have the defects remedied.

SUMMARY OF PROSECUTIONS.

Act.	Section.	No. of Informations.	Penalties.	Costs.	Magistrate's Orders.
			£ s. d.	£ s. d.	
Public Health Act, 1936 ...	75	43	18 10 0	2 0 0	—
Public Health Act, 1936 ...	94	315	224 0 0	22 10 0	172
Public Health Act, 1936 ...	95	32	103 0 0	0 8 0	—
Liverpool Corporation Act, 1921... ..	468	46	39 0 0	1 4 0	—
Shops Act, 1912	—	21	6 15 0	—	—
Shops Act, 1928	—	24	13 5 0	—	—
Shops Act, 1934	—	3	3 0 0	0 10 0	—
Shops (Sunday Trading Restriction) Act, 1936 ...	—	2	0 10 0	—	—
Liverpool Corporation Act, 1921... ..	451	7	2 5 0	—	—
TOTALS	—	493	£410 5 0	£26 12 0	172

Cases withdrawn 1

Cases dismissed 1

Summonses not served 8

RODENT CONTROL.

Rats and Mice (Destruction) Act, 1919.

The Infestation Order, 1943, S.R. & O. 680, as amended by
S.R. & O. 847.

The importance of securing adequate rodent control in the city needs no emphasis, for it is recognised that the presence of a high rat and mouse population would be a potential danger to the health and well-being of the public.

During the late war, the Government expressed grave concern at the enormous toll taken by rats and mice on essential food and on other

commodities in the country produced and imported under great difficulties. In consequence, local authorities were required to intensify their efforts for the destruction of rodents, and in 1943 a national campaign was inaugurated to achieve this end.

It will be seen, therefore, that in addition to rodent control being necessary to safeguard the health of the people, it is also important from an economic aspect, especially during the present world food shortage.

Active measures have been taken for many years in Liverpool to ensure the destruction of rats and mice and to bring to the notice of the public the necessity of reducing the rat and mouse population to the lowest possible dimensions.

There is a special reason for the constant campaign against rodents in Liverpool, namely, the possibility of the spread of plague, a disease which may be brought into the port on ships arriving from foreign countries, and the department is ever watchful in this direction.

Notwithstanding the many calls upon the services of the department during the war, a special campaign for the destruction of rats and mice was commenced in accordance with the proposals of the Ministry of Food. The functions of the Minister of Agriculture and Fisheries under the Rats and Mice (Destruction) Act, 1919, as amended by the Minister of the Crown (Minister of Health) Rats and Mice Destruction Order, 1922, except so far as exercisable in rural districts, had been transferred to the Minister of Food by the Minister of the Crown (Minister of Food) Order, 1942.

A Preliminary Survey of the conditions of infestation within the City was carried out to determine the steps necessary to secure effective rat and mouse control. The Survey was commenced on the 22nd July, 1943, and completed on the 30th September, 1944, and during this period the considerable total of 217,487 buildings and lands were inspected.

The major infestations, as may be expected, were principally found in industrial and commercial buildings within the dockside wards and central area. Infestations within the middle belt of the city were generally of a minor degree and mainly in dwelling-houses, of which the source of infestation in many cases was believed to have been from the

sewer via defective drains. The infestations on the outskirts were also, for the most part, minor in character, and chiefly confined to gardens of dwelling-houses, especially those where poultry are kept.

A report on the conditions on each infested site was made, relating to:

- (a) Location of the site.
- (b) Description of the premises or land.
- (c) The degree, extent and duration of the infestation.
- (d) The species of rats present, to assist in the investigation of the source of the infestation and treatment required.
- (e) Probable source of infestation.
- (f) Conditions derogatory to securing effective rodent control, such as unprotected food and food waste and lack of environmental hygiene.
- (g) Unnecessary accumulations and harbourages for rodents.
- (h) Steps taken by the occupier to deal with the infestation. Type of treatment employed, period of application, and whether adequate or not.
- (i) Works of rat or mouse proofing required to prevent infestation :
 - (1) Immediate. (2) Following disinfection.

Whereas the principal method employed by the rat-catching staff hitherto had been one of trapping, it was apparent that to considerably reduce the rodent population as speedily as possible it would be necessary to use poisons on a scale heretofore unknown in the city.

Moreover, it is acknowledged that the underlying principle of scientific rodent destruction is to deal with all infested buildings and lands within the area of infestation by collective and concerted action at one and the same time, and is known as "Block Control." Therefore the treatment required to remedy each infestation was prescribed to an arranged timetable and included within a block scheme.

Generally, it is found that occupiers of buildings and lands affected show readiness to participate in prearranged schemes, but recalcitrant persons were served with a notice under the provisions of the Rats and

Mice (Destruction) Act, 1919, and the Infestation Order, 1943, in order to obtain the desired result.

Whilst the Preliminary Survey was proceeding, a planned attack was formulated to remedy surface infestations found, and concurrent with the survey, operations for the destruction of rodents on the block system of control were commenced in the Sandhills Ward from a point on the Bootle boundary and proceeded southwards and eastwards throughout the city.

Having regard to the fact that rats and mice, particularly the former, are not respecters of the boundaries of local authorities' districts, co-ordinated action was arranged with the Bootle Health Department, who were engaged on a similar campaign within their borough, and concerted treatment of infestations on the boundary of the districts was carried out, and a like arrangement was made with other contiguous authorities as the campaign proceeded.

The Preliminary Survey revealed 5,876 buildings and lands (excluding sewers) to be rat infested, 300 rat and mouse infested, and 1,461 mouse infested. The number of block schemes designed to cover these infestations was 264.

A re-survey of premises which had been reported non-infested was carried out during the formulation of the block schemes within the areas concerned and also during the process of treating infested sites, in accordance with the principles of block control. As a result thereof, an additional 2,864 sites were found to have become rat infested, 153 rat and mouse infested, and 357 mouse infested, making a total of 11,011.

1,315 reinfestations also occurred, so that the number of infestations and reinfestations found during the special campaign was 12,326.

Infestations found subsequent to the Preliminary Survey, together with reinfestations, were either included in the original block schemes or in supplementary schemes, of which 225 were formulated.

To enable the work of rodent destruction to be carried out as quickly as possible, it was necessary to engage additional labour, which was

mainly obtained from the local Labour Exchange. The persons engaged were generally unskilled in this class of work, and all received training in the modern scientific methods of rodent destruction, which included the recommendations of the Infestation Division of the Ministry of Food. It was not, however, until June, 1944, that the peak number of rodent exterminators engaged at any one time was reached, when 54 operators were employed.

At the end of 1946, all infestations found during the campaign, with the exception of one railway station, which was being dealt with by a private contractor, had been remedied, with an estimated kill, by the department's staff alone, of 113,875 rats, and in addition, 10,397 mice had been caught.

These totals relate to surface infestations only, and do not include rats destroyed in sewers by the rodent exterminators of the City Engineer and Surveyor's department.

Preventative measures and works of proofing were carried out and approved by the sanitary inspectors during or following the work of rodent destruction, as the occasion warranted, in a total of 3,315 buildings and lands. The works, amounting to 12,945 items, comprised *inter alia*, amending defective drains, protection of food, food waste and water storage, the abolition of unnecessary harbourages, the removal of rubbish, protection of doors, windows, ventilators and other openings in walls and roofs of buildings, provision of rat guards, elevation of poultry houses and sheds clear of ground, and works of internal proofing considered necessary to prevent infestation by rats or mice.

The practice of providing free assistance to occupiers of private dwelling-houses has been continued, but with regard to other infested buildings and lands there has been a change of procedure. Since the commencement of the campaign, the occupiers of premises other than private dwellings, who desire the department's assistance for the destruction of rodents, are required to sign an undertaking to reimburse the local authority for the expenditure incurred thereby. The demand for such assistance is appreciable and 3,308 undertakings have been received from occupiers.

Although the main drive for the destruction of rats and mice in the city was completed at the end of 1946, it is considered necessary, as a means of maintaining effective rodent control, to

- (a) Continue systematic periodic inspection of buildings and lands within the 10 dockside wards, central area, and in other places where rodents are likely to be found.
- (b) Investigate all complaints received concerning rats and mice.
- (c) Prescribe appropriate treatment to remedy infestations in the form of block control, and to assist occupiers as required towards the destruction of rodents.

Rodent Control During 1947.

During the year 1947, the Rodent Exterminators made 61,624 visits to buildings and lands, survey and operational, under the provisions of the Rats and Mice (Destruction) Act, 1919, and the Infestation Order, 1943, and Sanitary Inspectors also made, in conjunction with other matters, 100,486 inspections under this Act and Order. 3,251 complaints of rodents were received and were duly investigated by the Rodent Exterminators.

3,101 buildings and lands were found to be infested by rats or mice, and 57 formal notices were served upon persons who had failed to take the necessary steps for the destruction of rats and mice or who had failed to take adequate measures for preventing buildings or lands in their occupation from becoming infested with these vermin.

2,639 buildings and lands were disinfested from rodents and 14,543 rats were collected. Of this number 11,676 were caught in traps and 2,867 dead rats were collected following poisoning operations. 11,770 were "brown" (*Rattus Norvegicus*) and 2,773 were "black" (*Rattus Rattus*). *This total includes brown rats caught in sewers by the rodent exterminators employed by the City Engineer and Surveyor's Department, and collected from the several depots used for this purpose. In addition, 4,121 mice were collected following trapping and poisoning operations.

975 rats were sent to the City Bacteriologist for examination and found to be free from plague, and the remainder were burnt.

It is estimated using the appropriate formula for calculating the kill, that the total of 18,005 rats were destroyed as the result of poisoning operations during the year. The total rats destroyed by trapping and poisoning are calculated to be 29,681.

Table I shows the type of building or land found infested by rats or mice and the number disinfested.

Table II summarises the operational details in connection with the destruction of rats and mice in surface infestations.

Table III indicates the total poison baits in ounces consumed by rodents within infested buildings or lands, and the estimated number of rats destroyed by poisoning.

Table IV indicates the number of species of rats and mice collected from buildings, lands and sewers.

Table V indicates the total rats destroyed by trapping and poisoning during the year 1947.

Table I

SUMMARY INDICATING THE EXTENT TO WHICH BUILDINGS AND LANDS WERE FOUND INFESTED BY RATS OR MICE AND THE NUMBER DISINFESTED DURING THE YEAR 1947.

Description of Buildings and Lands.	Infestations.			*Re-infestations.			Category.			Species.		Buildings
	Rats.	Rats and Mice.	Mice.	Rats.	Rats and Mice.	Mice.	Reservoir.	Major Primary.	Minor Secondary.	Black.	Brown.	
Allotments ...	1	...	...	...	...	...	...	...	1	...	1	1
Bakehouses ...	6	...	2	3	...	1	...	...	12	...	9	9
Camps ...	...	...	...	1	...	...	...	...	1	...	1	1
Churches, Chapels, etc. ...	5	...	4	2	...	...	...	...	11	...	7	7
Clinics ...	1	...	3	1	...	6	...	...	11	...	2	6
Clubs ...	3	...	2	...	...	1	...	...	6	...	3	3
Dairies ...	3	...	...	...	...	...	...	...	3	...	3	3
Derelict Buildings ...	7	...	...	1	...	...	...	...	8	...	8	7
Dwelling-houses ...	1,312	8	273	232	2	36	...	...	1,863	15	1,539	1,674
Factories—Food ...	10	...	...	19	...	1	...	3	27	10	22	28
Factories—Non-Food ...	95	3	17	83	5	13	...	...	216	37	150	188
Farms ...	1	...	...	...	...	...	...	...	1	...	1	1
Garages ...	11	1	...	3	...	...	...	...	15	1	14	13
Government Buildings ...	2	...	...	3	...	1	...	...	6	...	5	7
Hospitals ...	4	...	1	2	1	6	...	...	14	...	7	9
Hotels—Residential ...	...	...	1	1	...	...	...	...	2	...	1	1
Institutions: Homes ...	3	...	...	3	...	...	...	...	6	...	6	3
Land, Banks, etc. ...	230	...	...	2	...	...	...	...	232	...	232	148
Land, Bombed Sites ...	16	1	...	6	...	...	...	...	23	...	23	33
Marine Stores ...	...	...	...	2	...	...	...	...	2	...	2	2
Markets—Food ...	1	...	...	...	...	...	...	...	1	...	1	1
Offices ...	33	1	9	24	...	7	...	...	74	27	31	51
Parks, Recreation Gardens ...	...	...	...	2	...	...	...	...	2	...	2	2
Piggeries ...	...	...	...	1	...	...	...	...	1	...	1	1
Places of Public Entertainment ...	4	1	1	2	...	2	...	...	10	...	7	9
Poultry Stores ...	1	...	...	...	...	...	...	...	1	...	1	1
Public Buildings ...	2	...	...	1	...	1	...	...	4	1	2	2
Public Houses ...	12	...	1	9	...	...	...	...	22	4	17	16
Railway Sidings ...	2	...	...	...	...	...	...	...	2	...	2	2
Railway Stations ...	1	...	...	1	...	...	...	...	2	...	2	2
Refreshment Houses ...	19	...	8	18	1	1	...	...	47	3	35	30
Refuse Destructor ...	...	...	...	1	...	...	...	...	1	...	1	1
Refuse Tips ...	...	...	...	1	...	...	...	...	1	...	1	1
Schools ...	9	...	8	11	4	9	...	...	41	...	24	24
Shops—Food ...	70	1	7	31	...	4	...	1	112	1	102	88
Shops—Non-Food ...	74	4	17	50	2	16	...	...	163	10	120	134
Slaughter-Houses ...	...	...	...	1	...	...	...	...	1	...	1	1
Stables ...	16	...	...	7	...	...	...	...	23	11	12	20
Store Sheds ...	1	...	...	...	...	...	...	...	1	1	...	1
Warehouses—Food ...	32	1	2	26	3	1	...	...	65	25	38	54
Warehouses—Cotton ...	4	...	...	1	...	...	...	...	5	5	...	4
Warehouses—General ...	27	1	2	25	...	3	...	...	58	25	31	50
TOTAL ...	2,018	22	358	576	18	109	...	4	3,097	176	2,467	2,639

N.B.—The Buildings and Lands disinfested include 160 infestations remedied which were outstanding at the end of 1946.

* Re-infestations refer to sites previously infested since the Preliminary Survey of 1943.

Table II

SUMMARY OF OPERATIONAL DETAILS IN CONNECTION WITH THE DESTRUCTION OF RATS AND MICE IN SURFACE INFESTATIONS DURING THE YEAR 1947.

Description of Buildings and Lands.	Infestations.			Re-infestations.			Category.			Species.		Lands disinfested.				RODENT DESTRUCTION BY LOCAL AUTHORITY.																				
	Rats.	Rats and Mice.		Rats.	Rats and Mice.		Reservoir.	Major Primary.	Minor Secondary.	Black.	Brown.	Total disinfested.	By Local Authority.	By Occupier.	By Proofing.	Method employed.			POISONING.					TRAPPING.			How disposed.			Species.		Poisoning and Trapping.				
																Poisoning.	Baiting and Trapping.	Trapping.	Ounces.			Dead Rats collected.	Dead Mice collected.	Estimated Rats killed by Poisoning.	Back Break Traps.										Cage Traps.	Traps.
																			Total Poison Bait laid.	Total Rats taken.	Rats caught.				Mice caught.	Rats caught.	Rats caught.	Mice caught.								
																			Rats sent to City Bacteriologist.	Rats burnt.	Mice burnt.				Black.	Brown.	Total Rats collected.	Total Mice collected.	Estimated Rats killed—Poisoning and Trapping.							
factories	105	3	17	102	5	14	...	3	243	47	172	216	173	43	...	100	63	10	4,761	1,931	909	53	4,323	806	105	62	52	29	82	1,747	187	826	1,003	1,829	187	5,243
warehouses	63	2	4	52	3	4	...	...	128	55	69	108	63	45	...	35	23	5	2,970	1,054	1,017	33	2,460	965	179	8	5	38	75	1,920	250	1,156	819	1,995	250	3,438
shops	144	5	24	81	2	20	...	1	275	11	222	222	169	53	...	109	40	11	2,711	1,013	398	74	2,236	543	227	12	66	134	84	935	435	387	632	1,019	433	2,837
dwelling-Houses	1,312	8	273	232	2	36	...	...	1,863	15	1,539	1,674	1,325	349	...	1,023	74	228	5,200	2,450	271	100	5,129	629	941	3	3	114	108	798	1,155	23	883	906	1,155	5,755
Other Buildings and Lands	394	4	40	109	6	35	...	...	588	48	465	419	266	36	117	167	68	31	4,500	1,842	272	173	3,866	968	836	10	82	1,085	110	1,222	2,094	361	971	1,332	2,094	4,926
TOTAL	2,018	22	358	576	18	169	...	4	3,097	176	2,467	2,639	1,996	528	117	1,434	277	285	20,142	8,290	2,867	433	18,005	3,911	2,288	95	208	1,400	459	6,622	4,121	2,773	4,308	7,681	4,121	22,219

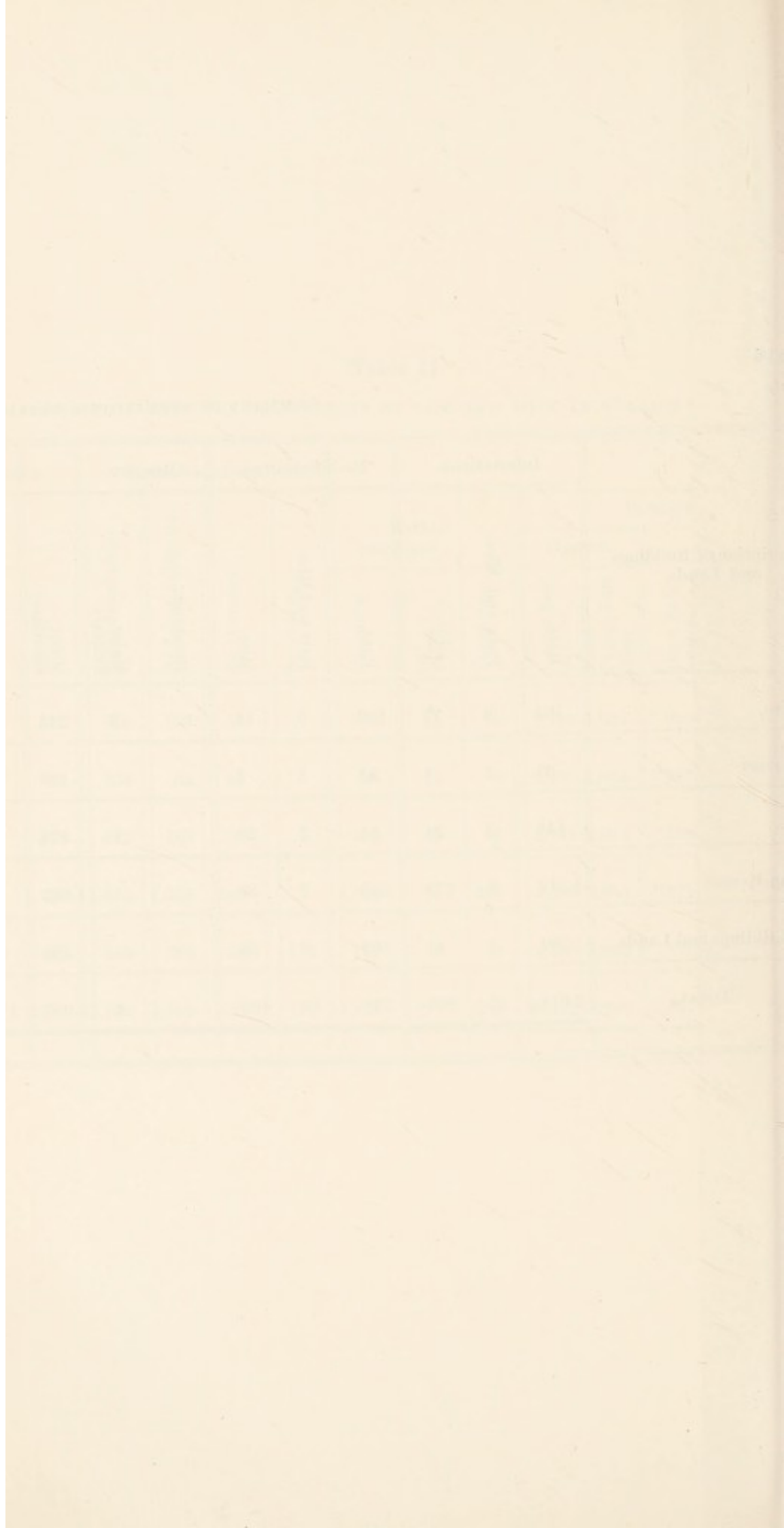


Table III

TOTAL POISON BAITS IN OUNCES CONSUMED BY RODENTS WITHIN INFESTED BUILDINGS OR LANDS, AND ESTIMATED NUMBER OF RATS DESTROYED BY POISONING.

Arsenic.	Zinc Phosphide.	Barium Carbonate.	Red Squill.	Alpha-Naphthyl-Thiourea	Dead Rats collected.	Estimated Rats destroyed.
1,186	4,122	43	2,886	53	2,867	18,005

Table IV

NUMBER AND SPECIES OF RATS AND MICE COLLECTED, EXAMINED AND DESTROYED IN THE CITY OF LIVERPOOL DURING THE YEAR 1947.

	Buildings and Lands.			Sewers.		Total Examined.		Total Burnt.		Total Rats.	Total Mice.
	Rats Black.	Rats Brown.	Mice.	Rats Black.	Rats Brown.	Rats.	Mice.	Rats.	Mice.		
January	168	312	534	—	607	99	—	988	534	1,087	534
February	187	405	377	—	391	74	—	909	377	983	377
March	129	426	448	—	413	65	—	903	448	968	448
April	187	227	451	—	478	61	—	831	451	892	451
May	362	339	392	—	614	73	—	1,242	392	1,315	392
June	352	410	200	—	638	51	—	1,349	200	1,400	200
July	190	315	249	—	692	72	—	1,125	249	1,197	249
August	235	291	254	—	477	38	—	965	254	1,003	254
September ...	189	317	301	—	781	71	—	1,216	301	1,287	301
October	195	539	321	—	628	96	—	1,266	321	1,362	321
November	175	390	314	—	957	183	—	1,339	314	1,522	314
December	404	337	280	—	786	92	—	1,435	280	1,527	280
Grand Total	2,773	4,308	4,121	—	7,462	975	—	13,568	4,121	14,543	4,121

Table V

TOTAL RATS DESTROYED BY TRAPPING AND POISONING DURING THE YEAR 1947.

Trapping.	Poisoning.		Estimated Total Rats Destroyed.
Rats caught.	Dead Rats Collected.	Estimated Rats destroyed : Not Found.	
11,676	2,867	15,138	29,681

DISINFECTING & DISINFESTATION 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 4,405. The number of houses disinfected after infectious disease was 4,414, whilst the number of articles of bedding, clothing, etc., disinfected by steam after exposure to infectious disease was 59,004.

DISINFESTATION OF PREMISES AND HOUSEHOLD EFFECTS.

Premises. 7,705 Corporation houses and 3,655 Corporation tenements were inspected for vermin. 1,176 houses and 1,487 tenements were infested with bugs, and the table below describes the action taken in these cases.

	Corporation Houses.		Non-Corporation Houses.
	Houses.	Tenements.	
Verminous Furniture Treated—			
Families 614			
Number treated	1,154	1,448	0
Awaiting treatment at the end of the year ...	45	123	0

Treatment of manure middensteads and dumps for fly prevention—
number treated 5,968.

City Mortuary.

The number of bodies removed to the mortuary was:—

From the river	6
From the city	424

Water Supply.

The following particulars have been kindly supplied by the Water Engineer.

The water supply in the area over the past year has been satisfactory, both in quantity and quality.

Bacteriological examinations are made regularly by the City Bacteriologist, these routine examinations being carried out both in the City and at Prescot Storage Reservoirs—the results of the chemical analyses have all been satisfactory.

The waters are not liable to plumbo-solvent action.

The supplies both from Rivington and Lake Vyrnwy are treated by slow sand filtration and chlorination, and further chlorination is carried out at Prescot Storage Reservoirs.

There are no parts of the area dependent upon standpipes for a supply.

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.
—	11,168	15,851	12,747	3,180	34	33	2,944	297	2	46,256

Private Slaughter-houses.

There are 4 private slaughter-houses in the city at which, during the year, no animals were slaughtered.

The City Abattoir.

252,430 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	Goats.
Public Abattoir	377	23,211	26,910	5,081	48,962	146,044	1,008	823	14
TOTALS	377	23,211	26,910	5,081	48,962	146,044	1,008	823	14

TABLE III.

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

Brought into the—	Beef.	Veal.	Mutton.	Lamb.	Pork.
Meat Market	2,108	4,572	20	560	732
TOTALS	2,108	4,572	20	560	732

In addition to the above, 1,825 boxes or packages of home-killed offal were dealt with in the meat market.

TABLE IV.

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

Beef.	Veal.	Mutton.	Lamb.	Pork.
15,299	644	127,600	357,565	1,185

In addition to the above, 260,581 boxes and packages of imported meat and offal were dealt with in the meat market.

3,089 lbs. of imported beef were destroyed for unsoundness, chiefly bone taint, mould and brine damage, and 3,095 lbs. of imported offal were destroyed, chiefly for decomposition.

Diseased Conditions.

The carcasses of 74,148 animals showed abnormal conditions, and a detailed examination was made in each case, 2,573 carcasses being rejected as unfit for human food. Of these, 1,908 were destroyed at the abattoir and 665 were destroyed at knackers' yards. A description of the diseased conditions found during 1947 which led to the total or partial destruction of carcasses is given in Table V.

TABLE V.

Disease.	No.	Disease.	No.
Abscess (total)	4	Malignant Neoplasms	7
„ (partial)	125	Mastitis (partial)	12
Anaemia (total)	1	Melanosis (total)	1
Arthritis, Septic (total)	6	„ (partial)	8
„ Simple (partial)	36	Moribund	1
Asphyxia	268	Nephritis Septic	16
Caseous Lymphadenitis	—	Parturient Fever	—
„ (partial)	—	Pyæmia	7
Contamination (partial)	10	Peritonitis Septic	9
Decomposition (total)	1	Peritonitis (partial)	17
„ (partial)	3	Pneumonia	3
Distomatosis	52	Pleurisy	5
Dropsy	147	Pleurisy (partial)	73
„ (partial)	1	Presternal Calcification (partial)	2
Emaciation	1	Sarcoma	1
Enteritis	259	Septicæmia	7
Foot and Mouth Disease (total)	—	Septic Mastitis	6
Gangrene (total)	—	„ Metritis	6
Gastritis (total)	—	„ Pericarditis	7
Immaturity	1	Swine Fever	—
Injury (total)	5	Swine Erysipelas	1
„ (partial)	234	Tuberculosis (total)	1,014
Jaundice	64	„ (partial)	1,161
Johnes Disease	5	Uræmia (total)	—
Joint Ill	3	Urticaria (partial)	2
Lymphadenoma (total)	—		

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.

Quantities of Food Materials Condemned as being unfit for Human Food.

TABLE VI.

Beef, Veal, Mutton, Pork.	Offal.	Fish.		Crabs, Lobsters, Oysters, Crayfish, Shrimps, Prawns, Scallops.	Cockles, Mussels, and Winkles.	Poultry. Fowls, Ducks, Geese, Turkeys, etc.	Game. Partridges, Grouse, etc.	Rabbits and Hares.	Fruit. Apples, Pears, Bananas Oranges, Lemons, etc.	Vegetables. Potatoes, Cabbages, Sprouts, Onions, Turnips, etc.	Nuts, Cokernuts, Almonds, etc.	Canned Food- stuffs.	Dried Fruit.
		Wet.	Dry.										
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bags.	Head.	Head.	Head.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
747,874	1,363,370	420,426	133,164	11,336	132	1,582	1,314	1,137	277,522	556,880	5,199	338,761	10,926

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 1947, 40 cows were slaughtered under this Order at the City Abattoir.

Slaughter of Animals Act, 1933.

The following applications for licences as slaughtermen were received, namely: one original licence, 6 for renewal of existing licences and 195 temporary licences for the slaughter of animals for the food of Mohammedans. In each case the licence was granted.

Salvage of Foodstuffs.

In addition to the ordinary examination and classification of foodstuffs submitted for inspection very many requests have been received from the Ministry of Food Salvage organisation, to examine and classify large and varied consignments of doubtful foodstuffs, a report being issued to the Ministry on each consignment. The origin of this type of foodstuffs being damaged ships, Army, Navy and Air Force Depots, surplus Ships' Stores, damaged goods in warehouses, etc.

For this purpose each consignment is on examination divided and classified as follows:—

- (a) Fit for retail trade.
- (b) Made fit for human food by reconditioning, and used for catering or manufacturing purposes.
- (c) Made fit for animal feeding by reconditioning.
- (d) Suitable for industrial purposes only.

THE SUPERVISION OF COWSHEDS, DAIRIES AND MILKSHOPS.

Registration of Dairies.

TABLE VII.

(Milk and Dairies Order, 1926.)

Number of registered dairies at the end of 1946.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1947.
512	6	—	9	509

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

Inspection of Dairies.

1,122 visits of inspection were paid to dairies. In 11 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 1946 were 1,433.

Registration of Dairymen.

TABLE VIII.

Number of registered dairymen on Jan. 1st, 1947.	Applications for transfer of registration.	Applications refused.	Ceased to be dairymen.	Remaining on the register, Dec. 31st, 1947.
526	17	—	11	515

Of the 515 dairymen on the register at the end of the year, 6 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. 2 notices were sent to farmers outside the city drawing their attention to defects in milk churns. In each 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 IX is a summary of the register of licences in respect of milch cows and pigs.

TABLE IX.

LICENSING OF PREMISES ON WHICH MILCH COWS ARE KEPT.

	End of 1946.	End of 1947.
Number of licensed cowsheds... ..	140	129
Number of cows specified on the licences	2,785	2,579
Approximate average number of cows kept	2,142	1,798

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

771 visits of inspection were paid to cowsheds. Seventeen 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.

LICENSING OF PREMISES ON WHICH PIGS ARE KEPT.

	End of 1947.
Number of licensed piggeries	88
Number of pigs specified on the licences	3,455
Approximate average number of pigs kept	1,015

Five new licences to keep pigs were applied for, involving the keeping of thirty-six pigs. These applications were granted. Thirteen licences were surrendered. 292 visits of inspection to piggeries were made, three 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 licensed for the keeping of milch cows may be also used for keeping store cattle. At the end of 1947 458 store cattle were kept on licensed premises.

The Daily Supply of Milk to Liverpool.

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

TABLE X.

DAILY CONSUMPTION OF MILK DURING 1947.

Grade of Milk.								Quantity in Gallons.
Tuberculin-tested (Certified)	...	...	...	...	...	...	...	70
Tuberculin-tested	...	...	...	...	...	...	...	1,346
Tuberculin-tested (Pasteurised)	...	...	...	...	...	...	...	6,995
Accredited	...	...	...	...	...	...	...	4,326
Raw ungraded	...	...	...	...	...	...	...	1,068
Pasteurised under licence	...	...	...	...	...	...	...	49,444
Heat-treated to pasteurisation standard	...	...	...	...	...	...	...	2,960
Sterilized	...	...	...	...	...	...	...	5,998
Total								72,207

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

TABLE XI.

DAILY SOURCE OF MILK DURING 1947.

Produced from cows kept within the City.	Brought into the City by road.	Brought into the City by rail.
5,394 gallons	63,560 gallons	3,253 gallons

Total, 72,207 gallons.

Graded Milk.

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

TABLE XII.

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	4	0	34	0
Producer and retail vendor	1	0	4	24	11
Retail vendor only ...	1	10	167	1	0

The following changes in licence-holders took place, namely: Two new licences were granted to producers of Tuberculin Tested milk. One hundred and twelve new licences were granted to vendors of Tuberculin Tested (Pasteurised) Milk. The licence of one producer-retailer of "Accredited" milk was not renewed.

During 1947, 57 visits were made to Pasteurising establishments during the pasteurisation of milk. Temperatures on recording instruments were checked and in five instances the instruments required adjustment. In each case this was done and upon re-examination the plant was found to be operating correctly.

THE CLEANLINESS OF MILK.

TABLE XIII.

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 $\frac{1}{100}$ ml.	Present in $\frac{1}{100}$ ml.
A	36	Hospitals and Institutions.	34	2	31	5
B	21		19	2	14	7
C	12	Do.	9	3	4	8
D	11	Do.	10	1	9	2
E	12	Produced in City	12	0	11	1
F	9		6	3	6	3
G	3	Do	3	0	2	1
H	1	Do	1	0	1	0
Various	152	Wholesale depot	107	45	100	52
TOTALS	257		201	56	178	79

During the year there has been an intensive effort to encourage cow-keepers to produce cleaner milk, and the results summarised in Tables XIV and XV show that this effort met with success. Accredited milk and Tuberculin Tested milk produced within the City is considerably cleaner than that sent in from outside areas.

TABLE XIV.

THE EXAMINATION OF ACCREDITED MILKS PRODUCED IN LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.	
			Absent in	Present in
	Satisfactory.	Unsatisfactory.	$\frac{1}{100}$ ml.	$\frac{1}{100}$ ml.
693	606	87	515	178
	87.5%	12.5%	74.3%	25.7%

THE EXAMINATION OF ACCREDITED MILKS PRODUCED OUTSIDE LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.	
			Absent in	Present in
	Satisfactory.	Unsatisfactory.	$\frac{1}{100}$ ml.	$\frac{1}{100}$ ml.
25	19	6	17	8
	76%	24%	68%	32%

TABLE XV.

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.	
		Satis- factory.	Unsatis- factory.	Absent in $\frac{1}{100}$ ml.	Present in $\frac{1}{100}$ ml.
January ...	38	37	1	30	8
February ...	37	36	1	27	10
March ...	36	31	5	25	11
April ...	38	33	5	26	12
May ...	36	29	7	21	15
June ...	35	24	11	13	22
July ...	37	26	11	15	22
August ...	37	15	22	10	27
September	37	23	14	10	27
October ...	37	32	5	21	16
November ...	35	28	7	20	15
December ...	31	30	1	23	8
TOTAL ...	434	344	90	241	193
		79.3%	20.7%	55.6%	44.4%

TABLE XVI.

EXAMINATION OF HEAT TREATED MILKS FROM PLANTS IN THE CITY.

Class of Milk.	Number Tested.	Appropriate Test.	Number of Samples.	
			Passed.	Failed.
Pasteurised... ..	601	Phosphatase ... Methylene Blue	601 590	— 11
Heat Treated	176	Phosphatase ... Methylene Blue	176 172	— 4
Sterilised	157	Phosphatase ... Methylene Blue	157 157	— —
Tuberculin Tested (Pasteurised)	119	Phosphatase ... Methylene Blue	119 115	— 4
TOTAL	1,053	Phosphatase ... Methylene Blue	1,053 1,034	— 19

TUBERCULOUS MILK.

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

TABLE XVII.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk	620	8	1·3%
Ungraded raw milk ...	356	15	4·2%

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

TABLE XVIII.

Kind of Milk.	Number of samples	Tubercle bacilli present.	Percentage tuberculous.
Graded milk	181	2	1·1%
Ungraded raw milk ...	97	5	5·1%

TABLE XIX.

THE SITUATION OF AREAS OUTSIDE 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 ...	1	89	—	—	—	—
Cheshire	82	74	5	2	7	4·4%
Denbighshire ...	9	—	—	—	—	—
Flintshire	5	—	—	—	—	—
Shropshire	—	6	—	—	—	—
Cumberland	—	12	—	—	—	—
	97	181	5	2	7	2·5%

The Provision of Milk for School Children.

Pasteurised milk only is supplied to school children under the Milk Marketing Board's Scheme. During March some 99,219 children were each supplied with a third of a pint daily. This number is approximately 95 per cent. of the children attending school. During the year, 93 samples were examined bacteriologically and chemically, and the results as a whole were highly satisfactory, all samples satisfied the methylene blue and phosphatase tests and none was found to be tuberculous.

THE ADULTERATION OF FOOD AND DRUGS.

During 1947, 4,920 samples of food and drugs were purchased or taken and submitted for examination. Of these samples, 479 were formal samples and 4,441 were informal samples.

TABLE XX.

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 convictions.	Fines.	Costs.
11	Milk	Contained added water...	11	£ s. d. 33 0 0	£ s. d. 11 11 0
4	Milk	Deprived of Milk Fat ...	4	15 0 0	3 3 0
1	Malt Vinegar ...	Contained 25% of artificial Vinegar ...	1	5 0 0	1 1 0
1	Pork Sausages ...	Deficient in Meat to extent of 10% ...	—	Warranty	Proved.
1	Beef Sausages ...	Deficient in meat to extent of 24% ...	1		
1	Cod Liver Oil B.P.	Not of British Pharmacopœia quality ...	1	5 0 0	1 1 0
1	Glycerine of Thymol	Devoid of Glycerine ...	1	3 0 0	1 1 0
1	Jelly making compound	Giving with the compound a label which falsely described such food ...	1	—	1 5 0
1	Meat Paste ...	Deficient in meat to extent of 18% ...	—	Dismissed.	No costs.
1	Disinfectant ...	Unlawfully selling a fluid containing 14% of phenols ...	1		
1	—	Obstructing an Inspector in the course of his duty ...	1	3 0 0	2 2 0
			1	2 0 0	—
24	—		22	69 0 0	22 5 0
				£91 5 0	

Fertilisers and Feeding Stuffs Act,

During 1947, 60 samples of fertilisers and feeding stuffs were submitted for analysis. It was not necessary to take any 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 781. Legal proceedings were taken against one unregistered vendor. See Table XX.

Ice Cream.

There is not at present any legal standard for the chemical quality of ice cream and different makes vary considerably in the amount of fat and sugar which they contain.

On May 1st, 1947, the Ice Cream (Heat Treatment, etc.) Regulations became operative. The regulations require *inter alia* that the ingredients of ice cream, other than a complete cold mix, shall be heat treated after being mixed and cooled until the freezing process is begun. A complete cold mix, that is a mixture capable of being manufactured into ice cream with no addition except that of water, need not be heat treated. All other mixtures must be raised to a temperature of not less than 150°F. for 30 minutes or 160°F. for not less than 10 minutes. The mixture must then be cooled to not more than 45°F. with 1½ hours and kept at that temperature until frozen for sale.

Ice cream must be protected from contamination by dust or dirt at all times, and not offered for sale unless it has been kept at or below a temperature of 28° F. If the temperature of the ice cream exceeds 28°F. at any time after it has been heat treated and frozen, then it may not be offered for sale until it has been subjected again to heat treatment.

The premises, plant and utensils of all makers and vendors of ice cream, are regularly inspected and during the year, 2,944 visits were made to ensure cleanliness of methods of manufacture.

In March, 1947, the Medical Research Council in conjunction with the Ministry of Health recommended that the methylene blue test could be adapted for the purpose of defining 4 grades of bacterial cleanliness of ice cream, in the relative degrees of cleanliness, No. 1 being highest standard. Grade 1 is specified where the time taken for complete decolorization of methylene blue takes $4\frac{1}{2}$ hours or more; Grade 2 where time is between $2\frac{1}{2}$ -4 hours; Grade 3—time is $\frac{1}{2}$ -2 hours; Grade 4—0 hours, i.e., reduction takes place at the end of the pre-incubation period.

During the year 186 samples of ice cream were taken. The results of examination were as follows. In 58 samples, the bacterial count was less than 10,000 per c.c.; in 51 B.Coli was absent in 1/10 c.c. whilst 77 samples contained B.Coli in 1/10 c.c. but not in 1/100 c.c. In regard to the methylene blue test carried out on 159 samples out of the total number taken, 46 samples qualified for Grade 1; 21 for Grade 2; 17 for Grade 3; 75 for Grade 4.

In view of the complete results of examination—presence or absence of B.Coli, bacterial count, methylene blue tests, it will be realised that the definition of the grades 1-4 may require alteration with further experience, but for the present may be adopted as a working basis.

Examinations made for other Hospitals and Local Authorities

Bacteriological	9,947
Venereal Diseases	6,882
	16,829

SUMMARY.**LIVERPOOL :**

Specimens of water, milk, foodstuffs and infectious material	37,293
Venereal Diseases	32,199
Port Health Authority	2,610
	72,102

OUTSIDE AUTHORITIES :

Bacteriological	9,947
Venereal Diseases	6,882
	16,829
Total	88,931

HOUSING.

Owing to the terms of the Ministry of Health Circular 1866 dated 8th September, 1939, normal progress in regard to slum progress has ceased. During the year 485 houses were demolished, and 644 persons rehoused.

Landlord and Tenant (War Damage) Amendment Act, 1941.

Two houses were inspected during the year under the above enactment. One application for examination under the Act was made by landlords and one certificate of fitness was issued. One application for examination under the Act was made by a tenant, and it was found on examination that the dwellinghouse had not been repaired so as to be deemed reasonably capable of being used for housing purposes.

Defence (General) Regulations, 1939. (Regulation 68AA).

One application was received for a licence to re-open a house included in confirmed clearance orders, under the above regulations. 30 applications were received for the renewal of licences for the temporary re-occupation of houses included in confirmed clearance orders. All applications were granted.

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

Certificates have been issued under the above Acts in respect of 119 dwelling-houses which were not in a reasonable state of repair. 18 applications were received from landlords for a report that the premises were deemed to be in a reasonable state of repair, and all these applications were granted.

The Housing (Declaration of Unfitness) Regulations, 1947.

The above regulations were made by the Minister of Health on 1st April, 1947, to be used in connection with the powers and duties of the

Local Authority under paragraph 9 of the Fifth Schedule to the Town and Country Planning Act, 1944.

During the year one (Declaration of Unfitness) Order was made. The dwelling-house included in the order being unfit for human habitation and not capable at reasonable expense of being rendered fit.

Number of dwelling-houses included	...	...	...	...	35
Number of persons occupying the dwelling-houses	...	...	...	...	156

Houses Erected on Suburban Estates at 31st December, 1947.

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

Estates.					Non-Parlour.	Parlour.	TOTAL.
Cantril Farm	...	...	...	...	342	—	342
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	...	...	...	...	539	63	602
" " " (Flats)	...	...	...	...	36	—	36
Speke (Banks Lane) Estate	...	...	...	...	286	—	286
Speke	...	...	...	...	1,054	758	1,812
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	...	...	...	...	467	96	563
Partly-developed Estates	...	...	...	...	—	554	554
Total within the area of the City					16,038	12,042	28,080
Brook House	...	...	...	...	211	142	353
Huyton Farm Estate	...	...	...	...	937	79	1,016
Knowsley Estate	...	...	...	...	4,076	768	4,844
" " (Flats)	...	...	...	...	108	—	108
Total outside the City boundary					5,332	989	6,321
GRAND TOTAL					21,370	13,031	34,401

In addition there are 137 flats attached to shops and maintenance depots on various estates.

The number of houses inspected for housing defects under Public Health or Housing Acts was 314, and the number of inspections made for the purpose was 489.

Notices were served requiring defects to be remedied under the Public Health Act in respect of 34,946 houses. The number of dwelling-houses in which defects were remedied after service of formal notices was 15,747, and 14,489 defective dwelling-houses were rendered fit in consequence of informal action.

Housing Act 1936, Part IV. Overcrowding.

76,024 visits were made to houses in connection with the overcrowding provisions of the Housing Act.

Houses Owned by the Local Authority.

Total number of houses and flats owned by the Local Authority at 31st December, 1947 (excluding 20 houses built under the powers of the Housing Acts and subsequently sold, and 3,418 temporary bungalows) of these, 254 houses and flats are under the control of the County Borough of Bootle 43,412

Number of houses built in the last two years under—

1.	Housing Act, 1936, Part III	Nil
2.	„ „ „ Part V	889

The following table shows the accommodation which has been provided in the Corporation's housing and rehousing schemes up to 31st December, 1947.

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	—	222	370
2	—	220	96	—	1,817	2,133
3	1,445	—	251	18	3,046	4,760
4	18,545	—	207	158	3,313	22,223
5	13,325	—	151	18	277	13,771
6	12	—	—	—	18	30
7	1	—	—	—	—	1
TOTALS ...	33,328	350	723	194	8,693	43,288

In addition there are 137 flats over shops or attached to maintenance depots and 7 cottages acquired in the purchase of building sites.

Rentals.

The weekly rentals of flats (including rates), range from 2/10d. for a bed living room flat to 12/- for a five bedroom flat. The inclusive weekly rentals of houses vary between 9/1d. for the non-parlour type, and 25/6d. per week for houses with garages, and for Aged Persons Cottage Flats 4/- and 5/6d. per week.

General Statistics.

Area of City	27,321 acres
Number of inhabited houses at 31st December, 1947	192,627
Number of structurally separate dwellings occupied (1931 Census)...	173,938
Rateable value	£6,728,491
Sum represented by a Penny Rate	£25,906

APPENDIX A.

CITY OF LIVERPOOL.

Birth-Rates, Death-Rates, and Analysis of Mortality during the year 1947.

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.	
	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.
England and Wales	20·5	0·50	12·0	0·00	0·00	0·01	0·00	0·02	0·01	0·09	5·8	41
126 County Boroughs and Great Towns, including London	23·3	0·62	13·0	0·00	0·00	0·02	0·00	0·03	0·01	0·09	8·0	47
148 Smaller Towns (Resident Populations 25,000 to 50,000 at Census 1931)	22·2	0·54	11·9	0·00	0·00	0·02	0·00	0·02	0·01	0·08	3·7	36
London	22·7	0·49	12·8	0·00	0·00	0·01	0·00	0·02	0·01	0·08	4·8	37
Liverpool	26·4	0·68	13·5	0·00	0·00	0·03	0·00	0·10	0·01	0·05	7·9	69

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

Puerperal Sepsis,	Others	Total.
0·26	0·91	1·17

A HISTORY

CITY OF LIVERPOOL

Third Edition, Revised and Enlarged by
 England and Wales, London, 1880.

Population		Area		Water	
1880	1871	Sq. Miles	Sq. Yds.	Sq. Miles	Sq. Yds.
454,000	380,000	11.5	3,048,000	1.5	4,014,000
The City of Liverpool, including the Dock and the Waterfront					
454,000	380,000	11.5	3,048,000	1.5	4,014,000
The Dock and the Waterfront					
100,000	80,000	2.5	6,600,000	0.5	1,312,000
The Dock and the Waterfront, including the Dock and the Waterfront					
100,000	80,000	2.5	6,600,000	0.5	1,312,000

The material of this work is derived from the Census of 1880, and is published by the Registrar-General of England and Wales.

APPENDIX B.

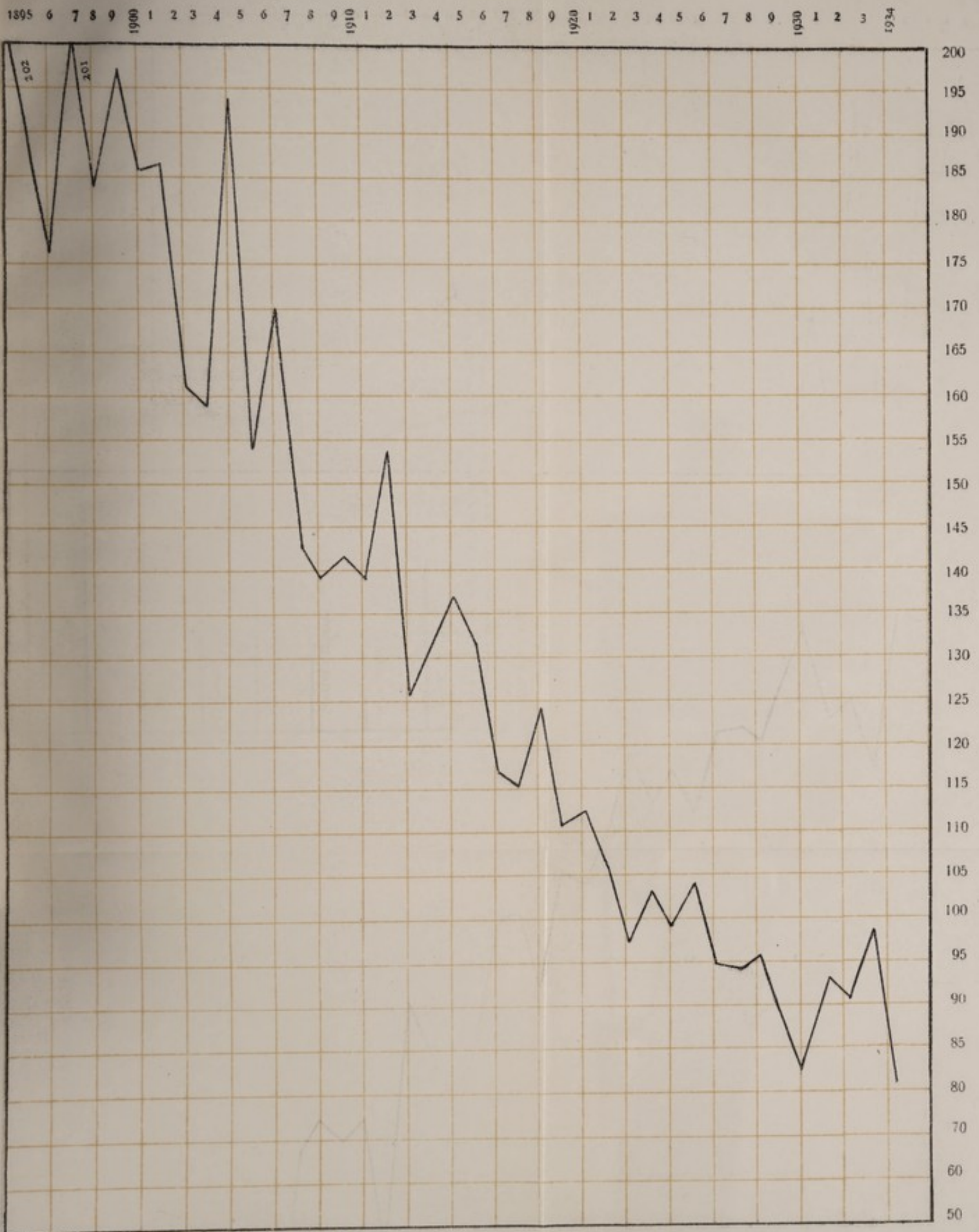
CITY OF LIVERPOOL.

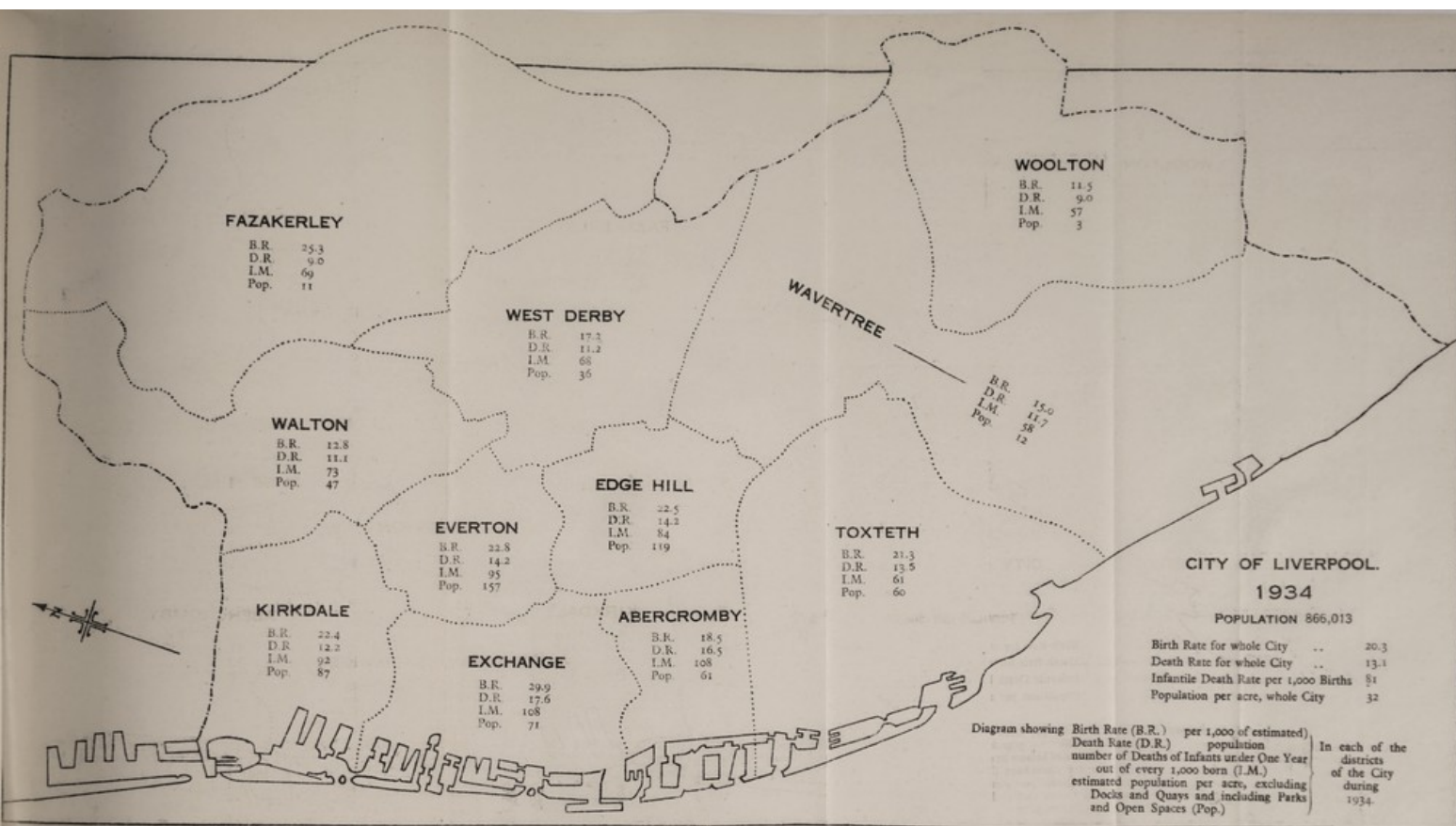
Causes of, and ages at, Death during the year 1947.

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	10115	1365	136	53	107	212	804	2394	5044	11387
{ Uncertified	7	2	—	—	1	1	—	1	2	7
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—
2. Measles	22	11	6	2	2	1	—	—	—	26
3. Scarlet Fever	—	—	—	—	—	—	—	—	—	1
4. Whooping Cough	74	42	26	6	—	—	—	—	—	81
5. Diphtheria	12	2	2	4	4	—	—	—	—	13
6. Influenza	35	4	2	—	2	—	1	12	14	36
7. Encephalitis Lethargica	21	—	—	—	2	—	7	4	8	23
8. Cerebro-spinal Fever	13	7	4	—	—	1	1	—	—	17
9. Tuberculosis of Respiratory System	599	8	6	1	5	79	246	197	57	643
10. Other Tuberculous Diseases	85	11	11	5	18	14	13	11	2	111
11. Syphilis	36	5	—	—	—	—	4	18	9	43
12. General Paralysis of the Insane	5	—	—	—	—	—	4	1	—	6
13. Cancer	1314	—	1	1	3	8	104	542	655	1532
14. Diabetes	60	—	—	—	—	2	4	14	40	65
15. Cerebral Haemorrhage	614	—	—	—	—	1	15	167	431	678
16. Heart Disease	2107	—	—	1	1	22	98	456	1529	2305
17. Aneurysm	2	—	—	—	—	—	—	1	1	2
18. Other Circulatory Diseases	802	1	—	—	—	1	11	154	635	869
19. Bronchitis	901	40	6	1	—	3	31	287	533	960
20. Pneumonia (all forms)	638	248	25	7	3	10	24	131	190	700
21. Other Respiratory Diseases	103	16	2	—	1	1	15	30	38	117
22. Peptic Ulcer	87	—	—	—	—	—	10	43	34	104
23. Diarrhoea, etc.	325	296	9	1	—	1	5	4	9	395
24. Appendicitis	20	—	—	2	3	3	3	6	3	21
25. Cirrhosis of Liver	9	—	—	—	—	—	1	7	1	10
26. Other Diseases of Liver	44	3	—	—	—	4	7	10	20	59
27. Other Digestive Diseases	124	16	2	1	2	3	16	32	52	150
28. Acute and Chronic Nephritis	158	2	—	—	3	9	23	47	74	179
29. Puerperal Sepsis	1	—	—	—	—	—	1	—	—	2
30. Other Puerperal Causes	16	—	—	—	—	1	15	—	—	20
31. Congenital Debility, Premature Birth, Malformations, etc.	547	525	6	1	4	7	3	1	—	650
32. Senility	458	—	—	—	—	—	—	—	458	493
33. Suicide	59	—	—	—	—	5	21	25	8	65
34. Other Violence	269	39	12	10	23	14	46	54	71	308
35. Other Defined Causes	559	91	15	10	32	23	74	140	174	707
36. Causes Ill-defined or unknown.....	3	—	1	—	—	—	1	1	—	3
TOTALS	10122	1367	136	53	108	213	894	2395	5046	11394

CITY OF LIVERPOOL.

INFANT MORTALITY PER 1,000 BIRTHS, 1895-1934.





DEATHS REGISTERED DURING THE YEAR 1947

