

**[Report 1941] / Medical Officer of Health, Liverpool City.**

**Contributors**

Liverpool (England). City Council.

**Publication/Creation**

1941

**Persistent URL**

<https://wellcomecollection.org/works/wtd24zaq>

**License and attribution**

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

PUBLIC HEALTH DEPARTMENT:

---

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING THE YEAR

— 1941 —

BY

W. M. FRAZER, O.B.E., M.D., M.Sc., D.P.H., BARRISTER-AT-LAW,

*Medical Officer of Health.*



LIVERPOOL

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

1942

## PRINCIPAL CONTENTS

---

	PAGES
VITAL STATISTICS ... ..	1—11
	(Appendices A, B, C, and E).
INFECTIOUS DISEASES ... ..	12—32
	(Appendix D).
MATERNITY AND CHILD WELFARE ... ..	33—43
TUBERCULOSIS ... ..	44—52
VENEREAL DISEASES ... ..	53—56
HOSPITALS SERVICE ... ..	57—63
SANITATION ... ..	64—72
FOOD INSPECTION ... ..	73—88
HOUSING ... ..	89—91

PUBLIC HEALTH DEPARTMENT,  
LIVERPOOL.

MY LORD MAYOR, LADIES AND GENTLEMEN,

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

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

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

The total number of births was 13,291, giving a birth-rate of 19·4 per 1,000 as contrasted with a figure of 19·9 for the previous year. The total number of deaths from all causes was 13,253, giving a general death-rate of 19·3 as compared with 17·1 in 1940. Infantile mortality showed a rate of 106 per 1,000 births.

The birth-rate of 19·4 per 1,000 is still higher than that of England and Wales, which is 14·2 per 1,000. Nine deaths occurred from puerperal fever as contrasted with seven in 1940, and the maternal mortality rate was 2·42 per 1,000 births.

There was a slight decrease in the number of deaths recorded from cancer, namely, 1,211, as compared with 1,279 in 1940. This is equivalent to a death-rate of 1·77 per 1,000 of the population. Owing to the outbreak of war, the operation of the Cancer Act, 1939, which was introduced to facilitate the diagnosis and treatment of all who are suffering or are suspected to be suffering from the disease has been postponed.



During the year an epidemic of paratyphoid B. fever occurred, full details of which appear on pages 17 to 24 of this Report.

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 1941.

Area (land and inland water)	...	...	...	...	27,321 Acres (43 sq. miles)
Live Births	...	...	13,291	Live Birth rate	19.4 per 1,000 of estimated population.
Deaths (all causes)	...	...	13,253	Death rate	19.3 per 1,000 of estimated population.
Deaths (under 1 year of age)	1,350			Infant Mortality rate	106 per 1,000 live births
Deaths from :—					
Seven principal Zymotic diseases	}	483	Zymotic death rate	}	0.70
Pulmonary Tuberculosis	}	699	Pulmonary Tuberculosis death rate	}	1.02
Other forms of Tuberculosis	}	147	Non Pulmonary Tuberculosis death rate	}	0.21
Respiratory diseases		2,112	Respiratory death rate	}	3.08
Cancer	...	1,211	Cancer death rate	}	1.77
					per 1,000 of the estimated resident population.
Maternal Deaths	...	32	Maternal Mortality rate	}	2.42 per 1,000 births.

## BIRTHS.

The number of live births recorded during the year 1941 was 13,291, equal to a rate of 19·4 per 1,000 of the estimated resident mid-year population. Of the total births, 6,810 were males, and 6,481 were females. The number of illegitimate live births was 809 or 6·2 per cent. of the total births, 410 being males and 399 females.

The birth-rate in the City of Liverpool was considerably above the average of the great towns, which was 14·7 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate was 14·2 per 1,000.

The number of still-births registered was 508 as shown in the table below. This represented 36·8 per thousand of the total (live and still) births registered and 0·74 per 1,000 of the estimated population.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total
Legitimate ...	6,400	6,082	12,482	247	230	477
Illegitimate ...	410	399	809	13	18	31
	6,810	6,481	13,291	260	248	508

## DEATHS.

The total deaths registered during the year numbered 13,253 (7,157 males and 6,096 females), equal to a death-rate of 19·3 per 1,000 of the estimated resident population. During the period since the commencement of the war the deaths of non-civilians were excluded for tabulation elsewhere. The death-rate for England and Wales was 12·9 and that of the great towns was 14·9.

The following table shows deaths at various age periods, expressed as a percentage of total deaths, for each year 1915 to 1941:—



Year	Under 5 years.	At Ages—Years.									
		5—	10—	20—	30—	40—	50—	60—	70—	80—	
1915 ...	% 33	% 2	% 4	% 4	% 7	% 9	% 12	% 13	% 12	% 4	100
1916 ...	30	3	4	5	6	9	12	14	13	4	100
1917 ...	29	3	4	5	7	9	12	14	13	4	100
1918 ...	29	5	6	8	8	9	11	12	9	3	100
1919 ...	25	4	5	7	8	9	12	13	13	4	100
1915-1919 (average)	29	3	5	6	7	9	12	13	12	4	100
1920 ...	33	2	4	5	7	9	11	13	12	4	100
1921 ...	33	2	4	5	6	9	11	13	12	5	100
1922 ...	28	2	4	5	6	9	12	15	14	5	100
1923 ...	30	2	4	5	6	9	12	14	13	5	100
1924 ...	29	2	4	4	6	8	12	15	15	5	100
1920-1924 (average)	30	2	4	5	6	9	12	14	13	5	100
1925 ...	28	2	4	4	5	9	12	15	15	6	100
1926 ...	28	2	3	5	6	9	12	15	14	6	100
1927 ...	25	2	3	5	5	9	12	16	16	7	100
1928 ...	25	2	4	5	5	9	12	16	16	6	100
1929 ...	23	3	3	5	5	9	12	16	17	7	100
1925-1929 (average)	26	2	3	5	5	9	12	16	16	6	100
1930 ...	20	3	4	5	5	9	14	17	16	7	100
1931 ...	23	2	3	5	5	8	12	17	18	7	100
1932 ...	22	2	3	5	5	8	13	17	17	8	100
1933 ...	21	2	3	5	5	8	13	17	18	8	100
1934 ...	20	2	3	5	6	8	12	18	18	8	100
1930-1934 (average)	21	2	3	5	5	8	13	17	18	8	100
1935 ...	17	2	3	5	5	8	13	19	20	8	100
1936 ...	16	2	3	5	5	7	14	19	21	8	100
1937 ...	17	2	2	5	5	7	13	19	21	9	100
1938 ...	16	1	3	4	5	7	13	20	22	9	100
1939 ...	13	1	3	4	4	7	14	21	23	10	100
1935-1939 (average)	16	2	3	5	5	6	13	20	21	9	100
1940 ...	14	2	3	4	5	8	14	21	20	9	100
1941 ...	15	2	4	5	6	8	13	20	19	8	100



## ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1940, and during 1941.

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

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

Years.	(a)	(b)	(c)	(d)	Total Deaths from Classes (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	19.2	13.5	20.2	10.0	62.9	1.4	100.0
1881-1890	14.1	12.7	23.2	9.4	59.4	2.0	100.0
1891-1900	9.3	10.8	24.6	12.7	57.4	2.9	100.0
1901-1910	8.6	10.6	21.8	12.0	53.0	4.3	100.0
1911-1920	7.9	10.9	27.3	8.9	55.0	5.5	100.0
1921-1930	6.6	10.7	25.0	6.9	49.4	8.4	100.0
1931-1940	5.6	8.1	15.7	5.2	34.7	10.9	100.0
1941	4.7	6.4	16.8	3.4	31.3	9.1	100.0

Death Rates per 1,000 Population.

Years.	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from Classes (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	5.2	3.6	5.7	2.8	17.3	0.4	28.5
1881-1890	3.6	3.2	5.9	2.4	15.1	0.5	26.1
1891-1900	2.2	2.7	5.9	3.0	13.8	0.7	23.9
1901-1910	1.9	2.2	4.5	2.5	11.1	0.9	20.0
1911-1920	1.3	1.9	4.7	1.6	9.5	1.0	18.1
1921-1930	0.9	1.4	3.3	0.9	6.5	1.1	13.6
1931-1940	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

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

Years.	(a)	(b)	(c)	(d)	Total Deaths from Classes (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1881-1890	69.0	88.0	104.0	85.7	89.1	125.0	91.0
1891-1900	42.0	75.0	104.0	107.2	79.3	175.0	84.0
1901-1910	36.0	61.0	79.0	89.3	64.3	225.0	70.0
1911-1920	26.0	50.0	83.0	56.7	56.0	250.0	67.0
1921-1930	17.1	40.0	58.8	36.8	38.5	280.0	47.7
1931-1940	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

### Deaths in Public Institutions.

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

The deaths in institutions during the year numbered 7,580, and included 1,303 persons who were non-residents in the city area.

### Infant Mortality.

The following table shows the deaths and death-rates of infants under one year of age for the year 1941 :—

					Infant Deaths.	Infant Death Rates.
All Infants	...	...	...	...	1,350	106 per 1,000 live births.
Legitimate Infants	...	...	...	...	1,240	104 „ legitimate live births.
Illegitimate Infants	...	...	...	...	110	137 „ illegitimate live births.



**Analysis of causes of Infant Mortality in successive quinquennia 1896-1940,  
and the year 1941. (A.)—Recorded Deaths.**

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respira- tory Diseases	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.	9 External Causes.
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	819
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	565
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	539
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	426
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	179
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	120
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	81
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	67
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691	84
1941	13,291	1,350	112	17	83	468	115	476	59

**(B.)—Death Rates per 1,000 Births.**

1896/1900	*33·4	189	12·7	6·2	22·1	32·0	57·1	51·0	7·3
1901/1905	33·4	172	13·0	5·5	21·2	29·3	43·7	48·1	4·7
1906/1910	32·2	149	13·6	3·9	17·4	26·6	33·0	46·7	4·6
1911/1915	29·3	137	11·6	3·1	12·8	26·1	32·5	43·1	3·8
1916/1920	24·9	116	11·1	2·0	10·9	28·4	18·8	42·0	1·8
1921/1925	25·1	100	10·2	1·9	5·5	26·6	17·1	36·1	1·2
1926/1930	22·1	94	10·2	1·1	4·2	26·7	17·4	31·1	0·8
1931/1935	20·5	89	10·1	0·9	4·2	23·1	13·4	35·3	0·8
1936/1940	19·4	77	7·0	0·9	6·4	17·9	8·8	32·9	1·0
1941	19·4	106	8·4	1·3	6·2	35·2	8·6	35·8	4·4

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



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

Years.	1 Birth Rates.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases.	6 Respira- tory Diseases.	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.	9 External Causes.
1896/1900	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1901/1905	100·0	91·0	102·3	89·3	95·0	91·5	76·5	94·0	65·7
1906/1910	93·0	78·6	107·1	62·9	78·6	83·1	57·8	91·0	63·0
1911/1915	87·0	72·5	91·9	50·0	57·9	81·5	56·9	84·0	52·1
1916/1920	76·0	61·4	87·4	32·2	49·3	88·7	32·7	82·0	25·5
1921/1925	75·1	54·9	80·3	30·6	24·9	84·7	29·9	70·8	16·4
1926/1930	66·2	49·7	80·3	17·7	18·9	83·5	30·4	60·9	11·0
1931/1935	61·4	47·2	79·5	14·8	18·9	72·2	23·4	69·2	10·4
1936/1940	58·1	40·7	55·1	14·5	29·0	55·9	15·4	64·5	13·7
1941	58·1	56·1	66·1	20·9	28·1	110·0	15·1	70·2	60·3

# CANCER.

During 1941 there were 1,211 deaths attributed to cancer, equivalent to a rate of 1.7 per thousand.

## DEATHS FROM CANCER AT VARIOUS AGE-PERIODS, 1941.

Organs Affected.	Males.	Females.	Number of Deaths.									All Ages
			At Ages—Years									
			Under 10	10-	25-	40-	50-	60-	70-	75-	80-	
Buccal Cavity	41	7	—	—	—	5	7	19	6	7	4	48
Stomach ...	190	116	—	—	10	30	67	110	44	29	16	306
Liver ... ..	6	21	—	—	—	3	3	11	4	3	3	27
Intestines ...	159	154	—	1	8	22	53	111	52	42	24	313
Lungs ... ..	125	27	—	—	4	17	45	64	12	9	1	152
Female Genital Organs	—	91	—	—	4	21	28	27	7	4	—	91
Breast ... ..	2	107	—	—	8	19	30	23	11	9	9	109
Skin ... ..	14	4	—	—	1	—	3	4	3	3	4	18
Other Organs...	97	50	3	2	12	14	22	39	30	16	9	147
	634	577	3	3	47	131	258	408	169	122	70	1,211

# METEOROLOGY.

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

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

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

**Difference from Average Quantities observed during the past 75 years.**

1941.	BAROMETER.		TEMPERATURE.		RAINFALL.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees F.	Degrees F.	Inches.	Inches.
January .....	...	0.042	...	5.9	...	0.085
February .....	...	0.386	...	1.6	0.888	...
March .....	...	0.018	...	0.9	1.031	...
April .....	0.060	...	...	2.8	...	0.142
May .....	...	0.028	...	2.6	...	0.157
June .....	0.091	...	...	0.1	...	1.617
July .....	0.015	...	0.9	...	...	1.122
August .....	...	0.139	...	2.2	0.395	...
September .....	0.252	...	2.5	...	...	1.968
October .....	0.264	...	2.5	...	...	0.405
November .....	0.005	...	0.7	...	...	0.323
December .....	0.314	...	3.9	...	...	1.804
Year's Totals .....	0.032	...	...	0.5	...	5.310

**Meteorological Statistics compiled at the Liverpool Observatory and Tidal Institute.**

1941.	Barometer. Mean.	Temperature. Mean.	RAINFALL.		Mean Humidity of the air (Complete Saturation 100%).
			Amount.	No. of days on which 0.01 in. or more fell.	
	Inches.	Degrees F.	Inches.		
January .....	29.883	33.8	2.161	14	87.4
February .....	29.537	38.7	2.650	16	85.3
March .....	29.878	41.3	2.799	15	78.8
April .....	29.963	43.7	1.512	11	73.2
May .....	29.941	49.4	1.850	11	71.7
June .....	30.085	57.3	0.441	2	76.1
July .....	29.958	61.2	1.602	9	76.3
August .....	29.786	57.6	3.465	18	80.9
September .....	30.224	58.7	0.720	7	82.0
October .....	30.147	52.3	2.929	17	81.9
November .....	29.882	44.7	2.319	16	84.2
December .....	30.177	44.7	0.874	13	83.3



# Monthly Analysis of Wind Observations during 1941.

Compiled from daily observations at 4 fixed hours (9, 13, 17, 21).

1941.	Force of Wind (Beaufort Scale.)*				Direction.							
	8 or over.	4-7	1-3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
January .....	...	62	52	10	26	21	40	12	1	1	7	6
February .....	...	69	38	5	10	7	20	16	5	14	20	15
March .....	...	56	58	10	9	14	23	15	9	13	18	13
April .....	...	68	46	6	6	38	18	4	3	8	29	8
May .....	...	40	70	14	17	11	18	6	6	5	32	15
June .....	...	36	59	25	7	12	10	4	3	6	29	24
July .....	...	35	65	24	5	2	2	2	9	8	41	31
August .....	1	71	38	14	5	2	6	1	5	19	49	23
September .....	...	28	57	35	...	1	22	23	6	1	23	9
October .....	1	56	58	9	21	6	13	11	11	9	27	17
November .....	...	47	56	17	8	6	23	26	10	4	20	6
December .....	...	57	45	22	2	1	2	11	8	16	37	25
Year's Total ...	2	625	642	191	116	121	197	131	76	104	332	192

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



## NOTIFICATION OF INFECTIOUS DISEASE.

The following is a list of the diseases notifiable in Liverpool during 1941:—

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

TABLE I.

MONTHLY NUMBERS OF NOTIFICATIONS OF INFECTIOUS DISEASES DURING 1941.

January	...	...	...	...	2,091
February	...	...	...	...	1,667
March	...	...	...	...	1,840
April	...	...	...	...	1,858
May	...	...	...	...	1,387
June	...	...	...	...	1,157
July	...	...	...	...	1,238
August	...	...	...	...	729
September	...	...	...	...	700
October	...	...	...	...	708
November	...	...	...	...	765
December	...	...	...	...	763
					14,903

TABLE II.

NUMBERS OF CASES OF INFECTIOUS DISEASES COMING TO NOTICE DURING 1941,  
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 ...	3	1	2	—	2	42	251	203	51	9	1	—	565	528	95.3
Scarlet Fever ...	221	187	190	124	134	121	55	117	123	87	127	88	1574	687	43.6
Measles and German Measles...	834	607	763	612	660	338	189	102	64	54	34	48	4305	279	6.5
Diphtheria ...	352	245	310	180	223	168	159	228	242	209	421	301	3038	2933	96.5
Puerperal Pyrexia	30	29	28	30	15	12	15	21	9	21	25	20	255	237	93.3
Erysipelas ...	53	38	45	33	43	30	33	32	27	70	65	61	530	149	28.1
Cerebro-spinal Fever	52	89	72	50	56	36	17	23	13	13	18	14	453	428	94.5
Poliomyelitis and Polio-encephalitis	—	3	—	—	—	—	—	—	—	—	—	—	3	2	66.6
Ophthalmia Neonatorum ...	42	53	79	49	51	42	53	65	53	44	57	32	620	165	26.6
Pneumonia & Influenza Pneumonia	267	250	192	187	171	103	53	63	73	84	166	114	1723	522	30.3
Malaria ...	8	8	5	3	4	2	2	3	3	4	2	2	46	29	63.0
Dysentery ...	2	1	—	16	8	6	—	4	1	3	—	—	41	38	92.7
Encephalitis Lethargica ...	—	1	—	2	—	—	—	—	1	1	—	—	5	5	100.0
Whooping Cough ...	250	379	754	562	555	368	295	193	75	51	67	22	3571	357	10.0
Anthrax ...	1	—	—	—	—	1	—	—	—	—	1	—	3	3	100.0
Chickenpox ...	32	24	21	27	18	23	19	17	31	37	38	37	324	53	16.4
TOTALS ...	2147	1915	2461	1875	1940	1292	1141	1071	766	687	1022	739	17056	6417	37.6

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



## INFECTIOUS SICKNESS.

---

### Plague.

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

### Smallpox.

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

### Typhus Fever.

No case occurred in Liverpool during 1941, and no indigenous case has occurred in the city during the course of the past twenty-three years.

### Anthrax.

Five patients suffering from Anthrax came under treatment at the City Hospital, Fazakerley, during 1941, three of them Liverpool residents and one each from Bootle and Runcorn, respectively. All of them in the course of their employment handled hides or wool in one form or another.

In the course of the year, nine persons attended the hospital for investigation as suspected anthrax infection and one of these proved to be, in fact, suffering from that disease. The others were examples of simple boils and other local septic infections.

The usefulness of this section of anthrax control cannot be too strongly emphasised, since the early recognition of this disease has a vital effect upon its treatment. Employers, whether at the docks, in haulage, in tanneries, or in the circumstances where anthrax infection is a possibility, are urged to take every advantage of the facilities for diagnosis in the case of any person with a suspicious infection.

## Cases of Anthrax treated at Liverpool City Hospital, Fazakerley, during 1941.

Series No. continued from 1940.	Age.	Sex.	Occupation.	Days ill on admission.	Site of Infection.	Clinical Notes.	Serum injected daily. Each dose expressed in c.cs.	Complications.	Result.
91	33	F.	Hair spinner.	4	Left side of neck.	Swelling from ear to nipple level, with dysphagia and dysphonia. Heavy serum rash.	300 300 300 150	Nil.	Recovery
92	46	M.	Dock labourer.	5	Front of left forearm.	Serum rash.	100 50	Nil	Recovery
93	32	M.	Tanner's labourer.	3	Back of left hand.	Serum rash.	100 100	Nil.	Recovery
94	38	M.	Dock labourer.	4	Left side of neck.	Swelling from temple to clavicle, with dysphagia, dysphonia, dyspnoea. Heavy serum rash.	300 300 300 300	Nil.	Recovery
95	42	M.	Tanner's labourer.	5	Right side of neck.	Extensive swelling from above ear to clavicle, with dysphonia and dysphagia. Copious serum rash.	300 300 300	Nil.	Recovery

NOTE.—All serum was injected intravenously. Simultaneously, with the serum, 0.3 gms. Neokharsivan were given intravenously on the first day and 0.45 gms. on the third day of treatment. Nos. 91, 94, 95 received an additional 0.3 gms. Neokharsivan on the 4th day.



### Typhoid and Paratyphoid Fever.

During the year there occurred 6 cases of typhoid fever and 559 cases of paratyphoid fever. Of the latter, 520 comprised an outbreak which is described below.

TABLE III.  
TYPHOID AND PARATYPHOID FEVER.

Type.	Cases.		Deaths.	
	Male	Female	Male	Female
Typhoid Fever ... ..	—	6	—	—
Paratyphoid—A ... ..	—	—	—	—
Paratyphoid—B ... ..	211	348	4	4
Paratyphoid—C ... ..	—	—	—	—
Unclassified ... ..	—	—	—	—

The 6 typhoid cases represent a case-rate of 0.01 per 1,000 of the population. The 559 paratyphoid cases represent a case-rate of 0.81 per 1,000 of the population.

TABLE IV.  
TYPHOID AND PARATYPHOID FEVER.—AGE AND SEX DISTRIBUTION.

Age	Typhoid		Paratyphoid	
	Male	Female	Male	Female
Under 1 Year ... ..	—	—	—	—
1 + ... ..	—	—	9	2
2 + ... ..	—	—	36	21
5 + ... ..	—	—	35	39
10 + ... ..	—	—	33	59
15 + ... ..	—	2	57	71
20 + ... ..	—	2	21	93
30 + ... ..	—	—	8	22
40 + ... ..	—	1	7	11
50 + ... ..	—	1	4	20
70 + ... ..	—	—	1	—
TOTAL ... ..	—	6	211	348

#### Port Cases of Typhoid Fever.

During the year one case of typhoid fever was imported from overseas. This case is not included in Tables III and IV.

## EPIDEMIC OF PARATYPHOID B. FEVER IN LIVERPOOL AND DISTRICT.

On 9th June, 1941, was notified the first of a series of cases of paratyphoid B fever in an epidemic which affected Liverpool, Bootle, Crosby, Huyton and Roby, Litherland, St. Helens, Whiston and Widnes on the Lancashire side of the River Mersey, and Birkenhead, Wallasey, Bebington and Wirral on the Cheshire side. The number of cases in Liverpool alone was 520.

By the time that the history of the first twelve cases had been ascertained, it was apparent that a high proportion of the patients had eaten cake made by a local firm of manufacturing confectioners, who will be referred to as firm X. This high proportion was maintained throughout the epidemic so that out of 520 histories obtained, the products of this firm were noted on 286 occasions. It was at an early date, therefore, that the factory was visited.

The following is a summary of initial steps taken and the facts ascertained:—

1. An inquiry into the recent illnesses among the employees of the firm revealed that 3 girls who handled food were away with gastric symptoms. Two of these were found to be suffering from paratyphoid B fever with the organism present in the stools. One of these girls handled butter-cream which was used for filling cakes and not heat-treated subsequently. The dates of onset of their illnesses, however, were such as to lead to the conclusion that they were all cases in the epidemic and not the originators.

2. Instructions were given to the firm as to steps to be taken to improve cleanliness with particular reference to the washing of hands after visits to the water closet. Advice was given to reduce the handling of food to a minimum. An experienced Health Visitor was detailed for duty in the factory to supervise the cleanliness of the staff and to make daily inquiry into cases of illness.

3. Arrangements were made for the submission for examination of blood from all engaged in handling raw materials and finished products. In due course 195 blood samples were examined and 52 showed sufficiently



high titres to indicate further examination of the persons concerned. Of these 52 cases 8 were found to be excreting paratyphoid bacilli in their faeces.

4. A meeting was held with the Medical Officers of Health of neighbouring districts in which cases were occurring.

5. A circular letter was sent to all Liverpool Medical Practitioners asking them to view with suspicion cases of gastric disturbance of unknown origin.

6. The Ministry of Health were kept informed of what was taking place.

### **Firm X**

Firm X are manufacturers of a large variety of cakes and pastries in new premises equipped with modern machinery. The products are mixed "creams," mixed tarts, plate tarts, slab cakes, custards, scones and buns, and veal and ham and meat pies. The total output of the factory is 450,000 items of confectionery a week, of which one-fifth are cream filled. Firm X works in commercial association with a firm of bread-bakers under which the confectionery made by the former is sold in the shops of the latter. In this way the confectionery of Firm X reaches the public through 107 shops situated in Liverpool.

The staff numbers 220, of whom about 200 are young women and boys. Changes of staff are frequent and a high proportion of the food handlers are little above school-leaving age. The heads of the several departments are male confectioners of long experience. In spite of an adequate provision of modern wash-hand basins and water closets, the cleanliness of the staff left much to be desired. Supervision of the methods of cleanliness practically did not exist.

The manipulation of food ingredients, both in the course of manufacture and of the finished products, was excessive. Fortunately, baking is the terminal process in the manufacture of most of the items. The main risks are associated with (a) filling with synthetic cream, butter cream, jam, etc.; (b) decoration of fancy cakes; and (c) sorting and dispatch.

The staff possess a canteen where they can purchase cooked meats, but apart from tarts little of the produce of the factory is sold there.



On the other hand, employees are allowed to purchase weekly 4s. worth of confectionery manufactured in the bakery, and most of them take advantage of this privilege.

### **Cream Fillings.**

There are two cream fillings not subjected to heat after handling, namely, synthetic cream and butter cream. The synthetic cream is obtained from two sources (a) Cream received by passenger train ex-Euston from manufacturers in London to an amount approximating 240 gallons per week, and (b) a mixture made on the premises from three fats originating in ground nuts to an amount approximating 250 gallons per week. Usually these creams are mixed in roughly equal proportions before use. This mixture is "whipped," decanted into stainless steel cream-bins of 3-gallons capacity, and conveyed to the various departments where it is required.

Cream filling is performed by three techniques (a) Savoy bag, (b) a metal cylinder holding a quart fitted with a hand-operated plunger and a nozzle, the latter being plugged with a roll of paper when not in use, (c) layering with a spatula on to the surface of the cakes.

All three methods involve considerable handling and cake decorators habitually taste the cream on their hands.

Butter cream is prepared without heating by moistening icing sugar with a mixture of milk powder substitute and water. To this is added a compound cooking fat, cake margarine and vanilla essence. This mixture is beaten up in a whipping machine. Three times each week a batch of 260 lbs. is made and kept in a large wooden barrel, said to be sterilised before use by steam at 60 lbs. pressure. About half an ounce of butter cream goes to fill a cake.

A large number of girls are engaged in decorating cakes, and these operations involve considerable handling.

In preparation for dispatch, trays filled with cakes are loaded on to trolley bases and pushed to dispatch counters where a group of some ten girls select by hand various assortments according to branch shop orders. These assortments are loaded on to another series of trays for dispatch by vans to various shops. A dispatching girl does not adhere to a particular van or group of shops so that an infected

dispatch girl could distribute infection throughout the whole range of products and to all the shops. It will transpire subsequently that *B. paratyphosum* B. organisms were recovered from the stools of eleven of those who handled food in this factory during the period of this epidemic.

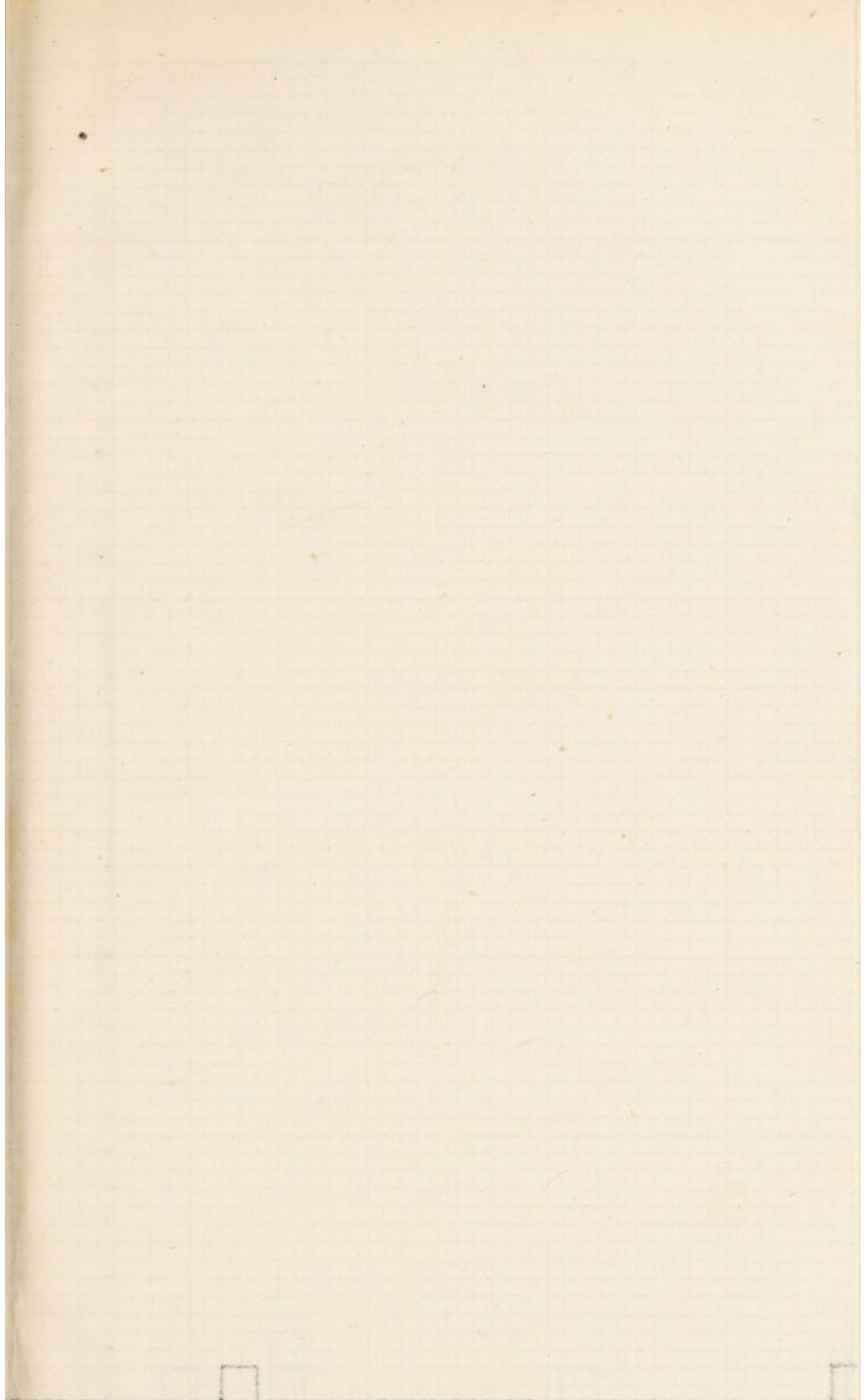
### **Bacterial Sampling.**

At the outset of this infection bacterial sampling of "cream" ingredients and finished synthetic cream was carried out, with the result that *bact. paratyphosum* B. organisms were recovered from two samples of synthetic cream received from the London source previously mentioned. In both cases the growth was sparse. An investigation carried out in London by the Ministry of Health and the Medical Officer of Health of the district concerned made it reasonably certain that this cream was not infected at the time of its manufacture or before dispatch. This conclusion was based mainly on the completely negative results of the examination of the London staff and also the fact that the output of this firm was 10,000 gallons per week, of which only 240 gallons came to the Liverpool firm X, and no other outbreak of paratyphoid B. fever was traceable to it. Subsequent inquiry at this end made it probable that the London cream was infected after its arrival at firm X, and the methods of sampling employed lent themselves to the possibility of contamination of this description. There is no doubt that there was an epidemic of paratyphoid fever among the employees of firm X, and that many opportunities arose for the infection of both raw materials and finished products.

### **Epidemic Pattern.**

A true picture of the epidemic cannot be obtained by consideration of the Liverpool cases alone. There were probably more than a thousand cases in and out of Liverpool traceable to this infected confectionery. It is for that reason that an investigation was carried out by the Ministry of Health. A description of the conclusions of that investigation is not yet available but it can be said that the first cases clearly associated with the outbreak occurred on May 24th and that between that date and June 18th 85 persons were affected, of which 46 belonged to Liverpool. The date of infection of the great bulk of the cases was about June 18th assuming a 12-day incubation period. It is probable that the first case among the staff of firm X was not discovered and



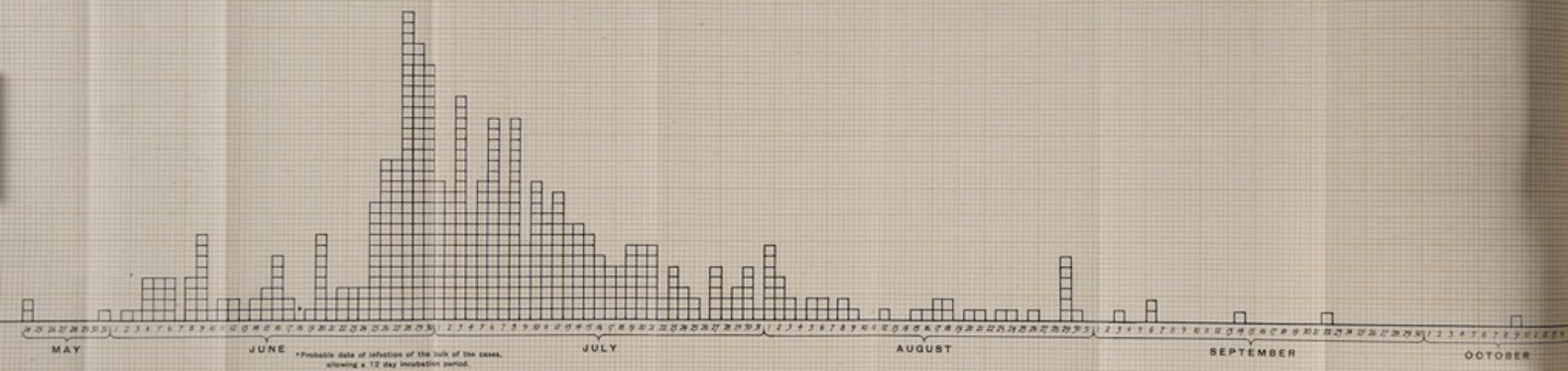


OCTOBER

1894-1895



PARATYPHOID B FEVER, 1941  
 DATES OF ONSET OF DEFINITE CASES



that the cases found were secondary to it. There is no reason to doubt that the infection spread from this firm and that the spread of illness among the staff of the firm intensified the amount of infection reaching the customers. A diagram of the Liverpool cases, with dates of onset, is appended.

### **Carriers.**

An important sequel of the outbreak is the number of chronic carriers resulting and the duration of the carrier condition. Out of 520 Liverpool cases, 12 chronic carriers arose. One of these cleared up by February, 1942, two more by June, 1942, but nine were still excreting paratyphoid bacilli in the faeces in July, 1942.

### **Hospital Accommodation.**

An epidemic of this magnitude throws a great strain on the hospital accommodation. All but half a dozen of the Liverpool cases were treated in hospital and, in addition, hospital accommodation was given to 96 cases from areas near to Liverpool. The normal accommodation at the Fazakerley Hospital was quickly exhausted and wards were opened at Mill Lane Hospital, Walton Hospital, Broadgreen Hospital and Smithdown Road Hospital. Very fortunately the number of deaths in this epidemic, unlike others of a similar kind, was very low, being 6, equivalent to a case-mortality of 11.5 per 1,000.

### **General Observation.**

The above paragraphs afford a general picture of this large epidemic of paratyphoid B. fever without going into too much detail. Actually the epidemic imposed a severe strain on the depleted war-time staffs of the Department and also on the hospital accommodation, although it took place during a period of cessation of air raids. House-to-house enquiries, visits to the factory, repeated interviews with Ministry of Health officials, and a vast amount of correspondence, continued over a period of several weeks, caused much upset to the general work of the Department. The Medical Officer of Health would like to refer, in this connection, to the work performed by Dr. B. T. J. Glover, Senior Assistant Medical Officer of Health, in tracing the origin of this outbreak and in supervising the administrative procedures required to be set on foot in order that the epidemic should be brought under control as rapidly as possible. That the epidemic did not assume even more



serious proportions was largely due to Dr. Glover's promptitude and efficiency in tracing the individuals through whom the disease was being spread. Thanks are also due to Dr. T. R. Robertson, Assistant Medical Officer of Health, for much wearisome detailed work. Two Sanitary Inspectors, G. M. Gadd and A. A. Short, and Miss M. Edwards a health visitor, devoted most of their time to the epidemic while it lasted and worked with care and efficiency.

Lessons of public health value can always be learnt from any large epidemic of this kind and there are certain general observations which should be made in connection with the paratyphoid epidemic in Liverpool in 1941. There is little doubt that the extensive proportions which this outbreak assumed were due to the methods of manufacture, involving much handling of foodstuffs, and to the lack of supervision of the cleanliness of the hands of the operatives. Unfortunately, the standard in these matters adopted by the firm in question is by no means an unusual one, and, indeed, lack of cleanliness in the operatives and overmuch handling of foodstuffs in the course of preparation or sale are grave defects in connection with food in this country in many hotels, restaurants, shops and factories. In many cases little attention is paid to the engagement of the right kind of staff or to the supervision of the hands, hair and clothing of persons engaged in the preparation or sale of foodstuffs. In modern factories and shops excellent facilities are provided for washing, and the usual notices are displayed in the lavatories; but, all too frequently, no supervision is exercised by the management to ensure that such facilities are properly used. The problem has two aspects, namely, the aesthetic and the hygienic. As regards the former, the consumer does not, fortunately for himself and his appetite, see the methods adopted in the preparation of his food, and if he purchases his confectionery from a modern and up-to-date factory or shop or dines in a handsomely-decorated restaurant he, no doubt, assumes that all is well—that is, if he thinks about the matter at all. If he happens to be a member of the staff of the local Public Health Department and has spent his day in inspecting food factories or the kitchens of hotels and restaurants he is not, perhaps, quite so easy in his mind.

The hygienic aspect is of still greater importance. Epidemics of the dimensions of the one to which this report refers are not very common



in this country, but it is unfortunate that they occur at all when they can be prevented by ordinary cleanliness. Every such large epidemic costs the community much in terms of disease and suffering and, in terms of money, scores of thousands of pounds; and it results in the production of "carriers" who may, in turn, form the starting points for further outbreaks. Smaller epidemics, spread by contaminated foodstuffs, are much more frequent, and few largely-populated areas escape this visitation for more than a year or two at a time. They are an indication that there has been some breakdown in the hygiene of food production, but they also provide a warning that the conditions necessary for the formation of a large and explosive outbreak of some serious infectious disease may be present, only requiring the employment of a carrier to provoke the epidemic.

All these dangers to the community are due to two main causes, which are (1) the lack of appreciation of the necessity for meticulous cleanliness in connection with persons who prepare food, and (2) the failure of the managers of food factories, in so many cases, to realize the importance of minimum handling of any foodstuffs which are to be sent out without further heating. Food factories should be organised so that, as far as possible, no handling at all takes place in the final stages of the preparation of the food. This, we are assured, is difficult and expensive, and there are certainly no legal powers available to enforce a standard of this kind. The large factory might do it and some attain a high standard of hygiene and cleanliness; but many factories producing large quantities of food each year are still content to continue with methods of handling their products which expose them and their consumers to constant danger. And the large factory is, of course, the potential originator of a great epidemic because of the quantity of food it produces and the wide distribution of its area of supply. It is, nevertheless, unfortunately true that many such factories, efficient as they are in production and in the distribution of their product, pay insufficient attention to the cleanliness of their operatives or the medical attention of the people they employ in the actual preparation of food.

In restaurants and shops similar conditions all too often apply, although on a much smaller scale. Here aesthetic considerations are important and it is gratifying to note the extent to which the machine-wrapping of bread, cakes and sweets, including chocolate, has now proceeded. This especially applies to sweets and chocolates. Seldom do we now see a hand, previously used for giving out change, being plunged into a jar of unwrapped sweets when it is the next customer's turn to be served. But what is unusual in the sweet trade is common enough still when cakes are being sold. Cakes of the various kinds are handled many times during the course of their preparation and still more frequently when they are exposed for sale in the shops. This is a condition of things which no one can regard as satisfactory, especially in these days when the public has become much more enlightened on the subject of the importance of hygiene in the preparation and sale of food and when, moreover, they have obtained information through the Press and wireless in regard to the dangers of epidemic disease spread by food.

### Undulant Fever.

No case of undulant fever was reported during the year.

### Diphtheria.

During 1941, 3,038 cases of diphtheria were reported, a case-rate of 4.4 per 1,000 of the population. Of these cases, 199 proved fatal, making a fatality rate of 6.5 per 100 cases and a mortality rate of 29.0 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.
13	7	22	26	33	76	13	4	...	2	1	2	...	199

#### AGES OF NOTIFIED CASES.

57	108	202	274	312	1141	446	239	174	54	23	6	2	3038
69%						31%							

#### PERCENTAGE FATALITY AT EACH AGE.

22.8	6.5	10.9	9.5	10.6	6.7	2.9	1.7	...	3.7	4.3	33.3	...	6.5
------	-----	------	-----	------	-----	-----	-----	-----	-----	-----	------	-----	-----



## Scarlet Fever.

During 1941, 1,574 cases of scarlet fever were reported, a case-rate of 2·3 per 1,000 of the population. Of these cases, 8 proved fatal, making a fatality-rate of 0·5 per 100 cases, and a mortality-rate of 1·1 per 100,000 of the population.

## AGES AT DEATH.

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

## AGES OF NOTIFIED CASES.

10	45	96	142	149	674	238	94	81	27	15	3	...	1,574
28·1%				42·8%			15·1%			14·0%			

## PERCENTAGE FATALITY AT EACH AGE.

10·0	2·2	...	1·4	0·7	0·4	...	...	...	...	...	...	...	0·5
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

## Inoculation against Diphtheria.

TABLE V.

## NUMBER OF COMPLETED DIPHTHERIA INOCULATIONS.

Where or by whom inoculated.	1925- 30	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
<b>INOCULATION CLINICS :</b>												
Carnegie ... ..	68	366	572	333	422	405	367	237	196	104	64	452
Townsend Avenue ... ..	—	—	381	340	354	368	305	183	197	151	167	1,006
Child Welfare Centres ... ..	—	—	—	—	—	198	452	1119	1792	1096	859	2,617
<b>SCHOOLS :</b>												
Public Elementary ... ..	—	153	3904	3895	4917	4001	6251	4855	6356	2978	1,738	2,503
Residential ... ..	437	123	264	681	433	323	431	382	389	137	156	1,021
<b>MUNICIPAL HOSPITALS :</b>												
Fazakerley ... ..	147	493	635	1264	434	239	267	150	182	124	113	66
Fever Hospitals—North, South and East ... ..	—	57	151	141	205	258	113	202	185	238	123	50
Alder Hey ... ..	—	62	121	132	122	98	163	148	152	121	76	47
Olive Mount ... ..	38	—	174	277	92	49	24	41	56	29	2	13
Other Municipal Hospitals ... ..	—	—	—	—	81	34	92	80	86	84	49	54
Miscellaneous ... ..	523	190	272	173	38	15	5	19	4	5	8	1
Medical Practitioners ... ..	15	99	173	135	123	128	78	85	71	39	63	257
TOTALS ... ..	1228	1543	6647	7371	7221	6116	8548	7501	9666	5106	3,418	8,087

GRAND TOTAL ... .. 72,452



TABLE VI.

Age at date of inoculation.	1925- 26	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	
Under 1 year	2	0	0	0	16	53	27	19	2	1	5	8	1	5	2	4	Total under 5 years of age at the end of 1941 : 6,269
1+	3	1	0	0	35	150	183	187	213	211	359	595	908	671	413	1,096	
2+	4	0	2	0	51	89	189	219	157	232	340	461	524	304	282	857	
3+	2	1	8	1	60	82	189	246	164	222	259	367	433	248	193	799	
4+	4	10	14	7	39	103	253	466	301	489	513	698	710	453	204	726	
5+	16	12	20	13	26	112	1,224	1,375	1,637	1,541	2,297	1,658	2,286	1,133	737	1,254	Total 5-9 years of age at the end of 1941 : 22,304.
6+	15	9	22	44	13	94	1,405	1,583	1,999	1,563	2,497	1,820	2,722	1,042	771	1,218	
7+	7	6	11	44	15	99	1,048	1,357	1,222	872	1,211	823	1,110	587	284	689	
8+	24	9	11	14	18	81	585	519	489	216	304	320	242	138	74	241	
9+	24	5	9	9	21	86	351	266	157	100	75	110	99	26	32	168	
10+	39	8	2	8	28	89	179	170	132	100	103	96	95	75	63	154	Total 10-14 years of age at the end of 1941 : 29,321.
11+	43	9	3	9	34	106	214	203	158	120	124	115	113	90	77	182	
12+	48	10	3	10	38	119	239	227	176	133	137	128	126	100	85	216	
13+	44	9	3	9	35	108	216	205	159	122	125	117	114	90	78	183	
14+	10	2	—	2	8	24	47	45	35	27	27	25	25	20	17	40	
15+	60	13	4	13	47	148	298	284	220	167	172	160	158	124	106	260	Total 15 years of age and over at the end of 1941 : 14,558.
Total	345	104	112	183	484	1,543	6,647	7,371	7,221	6,116	8,548	7,501	9,666	5,106	3,418	8,087	72,452

TABLE VII.

DIPHTHERIA—COMPARATIVE CASE-RATES DURING 1933/41 AMONG THE INOCULATED AND NON-INOCULATED PERSONS IN LIVERPOOL.

INOCULATED.															
Age.	NOT INOCULATED			T.A.F.			M.T. Toxoid.			F.T.			A.P.T.		
	Cases of diphtheria in non-inoculated persons during 1933/41	Case-rate per 1,000 p.a.	Inoculated population at risk during 9 years 1932/40	Cases of diphtheria during 1933/41	Case-rate per 1,000 p.a.	Inoculated population at risk during 9 years 1932/40	Cases of diphtheria during 1933/41	Case-rate per 1,000 p.a.	Inoculated population at risk during 8 years 1933/40	Cases of diphtheria during 1934/41	Case-rate per 1,000 p.a.	Inoculated population at risk during 6 years 1935/40	Cases of diphtheria during 1936/41	Case-rate per 1,000 p.a.	
Under 1	270	1·8	47	0	Nil	3	0	Nil	5	0	Nil	8	0	Nil	
1+	788	5·6	688	0	Nil	106	0	Nil	329	0	Nil	1,346	0	Nil	
2+	1,487	10·9	1,362	0	Nil	305	0	Nil	615	0	Nil	2,283	1	0·4	
3+	1,925	14·4	2,006	1	0·5	437	2	4·6	895	0	Nil	3,053	5	1·6	
4+	2,088	16·0	3,023	3	1·0	579	2	3·5	1,425	1	0·7	4,018	8	2·0	
5+	2,582	21·6	6,967	6	0·9	818	3	3·7	2,944	4	1·3	8,216	14	1·7	
6+	2,118	19·8	12,811	13	1·0	1,047	2	1·9	3,079	5	1·6	13,108	34	2·6	
7+	1,609	15·5	16,895	36	2·1	1,269	3	2·3	2,910	5	1·7	14,946	45	3·0	
8+	1,243	11·4	18,308	39	2·1	1,513	2	1·3	2,635	7	2·5	13,739	30	2·2	
9+	1,067	8·9	18,830	27	1·4	1,750	1	0·6	2,349	0	Nil	10,357	26	2·5	
Total under 10	15,177	12·1	80,937	125	1·5	7,827	15	1·9	17,186	22	1·3	71,074	163	2·3	
10+	6,654	1·1	108,104	113	1·0	20,262	13	0·6	2245	2	0·9	8,174	28	3·4	



## Inoculation against Scarlet Fever.

TABLE VIII.

NUMBER OF COMPLETED SCARLET FEVER INOCULATIONS.

Where or by whom inoculated	1927-30	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
<b>INOCULATION CLINICS:</b>												
Carnegie ... ..	60	352	508	303	366	332	294	148	104	52	—	—
Townsend Avenue ...	—	—	395	323	313	315	244	127	85	63	4	—
<b>MUNICIPAL HOSPITALS:</b>												
Fazakerley ... ..	—	165	197	121	120	99	121	79	92	105	83	53
Fever Hospitals—North, South and East ...	—	15	57	7	10	16	26	52	40	48	44	30
Alder Hey ... ..	—	36	111	132	143	98	108	131	123	136	71	46
Olive Mount ... ..	—	—	11	34	61	33	25	38	55	29	7	—
Other Hospitals ...	—	—	—	—	—	29	86	71	76	71	54	13
RESIDENTIAL SCHOOLS ...	138	26	218	465	478	202	294	108	143	31	—	—
MISCELLANEOUS ... ..	269	178	191	74	45	—	—	—	—	—	—	—
MEDICAL PRACTITIONERS	15	75	129	105	94	93	57	40	33	21	7	24
TOTALS ... ..	482	847	1817	1564	1630	1217	1255	794	751	556	270	166
GRAND TOTAL ... .. 11,349												

## Measles.

During 1941, 4,305 cases of measles were reported, representing a case-rate of 6·3 per 1,000 of the population. The number of deaths was 29, making a fatality-rate of 0·7 per 100 cases and a mortality-rate of 4·2 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.
14	12	3	...	...	...	...	...	...	...	...	...	...	29
AGES OF CASES.													
206	242	338	323	341	2,302	269	284					4,305	
PERCENTAGE FATALITY AT EACH AGE.													
6·8	5·0	0·9	...	...	...	...	...					0·7	

## Whooping Cough.

During 1941, 3,571 cases of whooping cough came to the notice of the Health Department, a figure representing a case-rate of 5·2 per 1,000 of the population. Of these cases 127 proved fatal, corresponding to a death-rate of 18·5 per 100,000 of the population.

Number of Deaths from Whooping Cough at various Age Periods during 1941.							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+
57	43	13	8	3	2	1	127	44·9	33·8	10·2	6·3	2·4	1·6	0·8

## Cerebro-spinal Fever.

TABLE IX.

CASES AND DEATHS DURING 1941 AND NINE PREVIOUS YEARS.

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
Cases ... ..	76	64	69	69	94	94	76	70	468	453
Deaths ... ..	47	45	37	33	55	47	37	28	84	79
Fatality-rate per 100 cases ... ..	61·8	70·3	53·6	48·1	58·5	50·0	48·7	40·0	17·9	17·4



### Encephalitis Lethargica.

TABLE X.

CASES AND DEATHS DURING 1941 AND NINE PREVIOUS YEARS.

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
CASES :										
Acute ... ..	4	4	7	2	1	0	0	0	0	0
Chronic ... ..	17	26	23	23	22	16	18	6	8	5
DEATHS in										
Acute cases ... ..	2	1	4	0	0	0	0	0	0	0
Chronic cases ... ..	13	20	9	22	14	5	7	3	28	25
Fatality-rate per 100 acute cases ... ..	50·0	25·0	57·1	—	—	—	—	—	—	—

### Acute Anterior Poliomyelitis (Infantile Paralysis).

TABLE XI.

CASES AND DEATHS DURING 1941 AND NINE PREVIOUS YEARS.

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
Cases ... ..	25	10	9	3	15	6	10	10	7	3
Deaths ... ..	11	3	3	0	1	0	3	1	1	0
Percentage of deaths to notified cases ... ..	44·0	30·0	33·3	—	6·7	—	30·0	10·0	14·3	—

## Deaths from Influenza and other Respiratory Diseases.

TABLE XII.

	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

## Dysentery.

During 1941, 39 cases of bacillary dysentery were reported in the city, of which 32 cases were due to Flexner's bacillus and 7 to Sonne's bacillus. In addition there were two cases of Amoebic dysentery.

## Diarrhoea and Enteritis.

TABLE XIII.

MORTALITY RATES DURING 1941 AND NINE PREVIOUS YEARS.

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
Mortality rate per 1,000 births in year of record and preceding year ...	7·2	9·2	4·4	5·8	3·7	5·1	3·7	3·2	4·8	3·9



TABLE XIV.  
SCHOOL CASES OF INFECTIOUS DISEASE DURING 1941.  
MONTHLY DISTRIBUTION.

DISEASE.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Diphtheria ...	109	88	85	83	81	87	87	105	148	170	194	188	1,425
Scarlet Fever ...	60	83	68	77	53	60	37	53	59	62	55	55	722
Measles ...	227	291	375	364	242	128	71	17	18	22	2	33	1,790
Whooping Cough ...	50	116	203	142	74	51	47	18	11	5	13	7	737
Chickenpox ...	18	9	11	12	12	6	12	3	33	19	14	18	167
Mumps ...	2	2	13	4	18	9	10	1	7	36	20	42	164
TOTALS ...	466	589	755	682	480	341	264	197	276	314	298	343	5,005

## MATERNITY and CHILD WELFARE.

### Summary of Vital Statistics for 1941.

Live births	...	13,291	Live birth rate	...	19·4
Still-births	...	508	Still-birth rate	...	0·7
Total births		...	13,799		
Infant Mortality rate	...	...	...	...	106
Neo-natal Mortality rate	...	...	...	...	34·3
Maternal Mortality rate	...	...	...	...	2·42

### THE MIDWIFERY DEPARTMENT.

In this are included:

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

During the year, 180 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 1941 was 54 and 1 temporary midwife.

During the year, the municipal midwives attended:—

Midwifery cases	...	...	...	...	3,340
Maternity cases	...	...	...	...	249

### Notification of Live and Still-Births.

A total of 5,010 births (4,867 live births and 143 still-births) were attended by midwives during the year, which represented 42 per cent.



of the total (live and still) births notified in the City. The total number of births which took place in institutions was 6,387 (6,045 live births = 94·7%, 342 still-births = 5·3%).

**Statement of Notifications of Live and Still Births received  
during the year 1941.**

	1941.			Still Births per cent of total.
	Live Births.	Still Births.	Total.	
Midwives (Municipal) .....	3,288	91	3,379	2·7
Do. (Independent) .....	736	32	768	4·2
Medical Attendants .....	627	20	647	3·0
Liverpool Maternity Hospital.....	1,507	97	1,604	6·0
Municipal Hospitals .....	4,183	227	4,410	5·1
Other Institutions .....	355	18	373	4·8
District Homes .....	843	20	863	2·3
	11,539	505	12,044	4·2

The number of still-births notified was 505\*, of which number 143 were notified by midwives. Enquiries were made into the circumstances of all still-births, and the number of visits paid was 414.

**Routine Visits to Midwives.**

During the year, 1,711 visits were paid to the homes of practising midwives for the purpose of inspection, and for special enquiries relating to their work.

**Medical Assistance.**

The following table gives the details of the complications for which medical aid was advised by midwives under the rules of the Central Midwives Board, the total number of medical records being 1,941.

\* The total number of registered still-births during the year 1941 was 508 (see page 2).

*Mother—*

Obstructed labour, uterine inertia or requiring instrumental assistance ... ..	220
Ruptured perinæum ... ..	454
Ante-partum hæmorrhage ... ..	110
Pyrexia ... ..	108
Ante-natal treatment ... ..	54
Abortion or miscarriage ... ..	134
Post-partum hæmorrhage ... ..	58
Retained placenta or membranes ... ..	29
Varicose veins—inflamed legs, etc. (not A.N.) ... ..	20
Abnormal presentation ... ..	69
Various ... ..	174
	<hr/>
	1,430

*Child—*

Feebleness and prematurity ... ..	129
Ophthalmia ... ..	223
Other conditions in child ... ..	159
	<hr/>
	511
	<hr/>
Total ... ..	1,941

**Claims for Fees from Medical Practitioners in Emergency Cases.**

During the year, 2,087 visits and re-visits were paid in regard to these accounts.

During the year the total number of occasions on which the services of a consultant obstetrician in connection with cases of puerperal fever, puerperal pyrexia or complications during pregnancy were requisitioned was 1.

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



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

The number of cases of puerperal pyrexia notified during the year was 255. Of these cases 237 were admitted to or occurred in hospitals, and 37 occurred in the practice of midwives, and in 27 cases nurses were provided.

**Maternal Mortality.**

TABLE SHOWING THE NUMBER OF LIVE AND STILL BIRTHS REGISTERED IN THE  
CITY, TOGETHER WITH MATERNAL DEATHS AND MATERNAL DEATH RATES,  
FOR THE YEARS 1931 TO 1941.

BIRTHS REGISTERED.				MATERNAL MORTALITY.					
				Puerperal Fever.		Other Puerperal Causes.		Total.	
Year.	Live Births.	Still Births.	Total Births.	Deaths.	Rate per 1,000 total births.	Deaths.	Rate per 1,000 total births.	Deaths.	Rate per 1,000 total (live and still) births.
1931	18,626	722	19,348	20	1·03	35	1·81	55	2·84
1932	18,149	827	18,976	16	0·84	35	1·85	51	2·69
1933	16,929	680	17,609	29	1·65	31	1·76	60	3·41
1934	17,593	685	18,278	25	1·37	26	1·42	51	2·79
1935	17,347	749	18,096	29	1·60	30	1·66	59	3·26
1936	17,403	708	18,111	20	1·10	44	2·43	64	3·53
1937	16,728	618	17,346	10	0·58	30	1·73	40	2·31
1938	16,175	639	16,814	11	0·65	22	1·31	33	1·96
1939	15,614	631	16,245	5	0·32	24	1·54	29	1·86
1940	15,016	519	15,535	7	0·45	24	1·56	31	2·01
1941	13,291	508	13,799	9	0·68	23	1·74	32	2·42

### Special Investigation of Maternal Deaths, 1941.

As a result of inquiries it was found that during the year 1941, 41 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.

---

1. Puerperal Sepsis.	...	...	...	...	...	...	...	4
2. Toxaemia (not eclampsia)	...	...	...	...	...	...	...	5
3. Eclampsia	...	...	...	...	...	...	...	4
4. Haemorrhage	...	...	...	...	...	...	...	6
5. Shock	...	...	...	...	...	...	...	1
6. Embolism	...	...	...	...	...	...	...	3
7. Ectopic gestation	...	...	...	...	...	...	...	1
8. Dystocia	...	...	...	...	...	...	...	1
								<hr/> 25

---



---

CLASS II:—DEATHS NOT PRIMARILY DUE TO PREGNANCY.

---

1. Pneumonia	...	...	...	...	...	...	...	3
2. Cardiac disease	...	...	...	...	...	...	...	5
3. Chronic renal disease	...	...	...	...	...	...	...	1
4. Pulmonary Tuberculosis	...	...	...	...	...	...	...	1
5. Unclassified	...	...	...	...	...	...	...	6
								<hr/> 16

---



---

### Ophthalmia Neonatorum.

*Inflammation in the eyes of the newly-born.*

The number of cases brought to the notice of the department during the year was 620, which consisted of:—

Mild cases	...	...	...	...	...	...	502
Severe cases	...	...	...	...	...	...	118
							<hr/>
Total	...	...					620
							<hr/>



These cases were dealt with as follows:—

Number treated in the homes by special nurse ... ..	212
„ attended at hospital as out-patients and treated by special nurse ... ..	45
„ admitted to hospital ... ..	30
„ treated by medical attendants and special nurse	153
„ treated by medical attendants alone ... ..	146
„ treated and cured in hospital ... ..	19
„ removed from district ... ..	15
	<hr/>
	620
„ of cases brought forward from previous year...	10
	<hr/>
Total ... ..	630
	<hr/>
Number of cases cured ... ..	594
„ died under treatment ... ..	13
„ under treatment at 31/12/41 ... ..	8
„ removed from district ... ..	15
„ sight lost ... ..	0
	<hr/>
	630
	<hr/>

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

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

No. of notifications.	Cases from which specimens were examined by the City Bacteriologist and at St. Paul's Hospital.	No. of cases of positive Gonorrhoea.	Percentage to total cases examined.	Percentage to total notifications.
620	50	13	26.0	2.1

The total number of visits and re-visits paid in respect of the above cases was 4,311. During the year 30 babies were admitted to the City Hospitals.

### **Nursing Homes.**

During the year no applications for registration were received by the Town Clerk. Six registrations were cancelled throughout the year, three because of damage by enemy action, and three did not wish to continue.

The Nursing Homes on the register at the end of the year numbered 24, the approximate number of beds being 172. Babies born in Nursing Homes numbered 387, including 1 twin birth.

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

These cases are not classifiable in any of the sections so far considered and include visits to women suffering from venereal disease, visits paid to cases of puerperal pyrexia and puerperal sepsis, cases of weaning, maternal mortality, etc. Such visits during 1941 numbered 500.

### **THE HEALTH VISITORS' DEPARTMENT.**

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

- (1) Attendance at Maternity and Child Welfare Centres.
- (2) Home visiting under the Public Health Act, 1936.
- (3) Special visits to cases of (a) Measles, whooping cough and pneumonia, (b) Infantile diarrhoea.
- (4) Other special visits in connection with matters relating to health and welfare.

### **Ante-Natal Clinics.**

In Liverpool there are 22 centres at which 52 ante-natal clinics are held weekly. Of these clinics, 16 are under the auspices of the Liverpool Maternity Hospital, two are held at the Royal Infirmary, four at Walton Hospital, four at Mill Road Infirmary, three at Smithdown Road Hospital, three are administered by the Child Welfare Association, and the remaining 20 by the Maternity and Child Welfare Sub-Committee. At the ante-natal clinics, specialised examination is provided, for the most part, by consultant obstetricians



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

Number of voluntary attendances	...	...	...	5,458
„ sent by midwives	...	...	...	2,069
„ recommended by friends	...	...	...	1,132
„ of return cases	...	...	...	3,512
„ sent by medical practitioners	...	...	...	1,309
„ „ health visitors	...	...	...	150
„ „ hospitals	...	...	...	340
„ „ relieving officers	...	...	...	6

All ante-natal clinics (including municipal and voluntary clinics).

Total new cases	...	...	...	...	13,976
Total attendances...	...	...	...	...	67,681

*Post-natal examination of recently confined mothers.*—Mothers are encouraged to attend a clinic after the birth of the infant has taken place, for the purpose of examination to ascertain the existence of any morbid condition which might have occurred owing to the confinement.

#### **Child Welfare Clinics (for Children up to five years of age).**

The sources of admission to the child welfare clinics are similar to those of the ante-natal clinics, but mothers having once attended an infant clinic frequently attend as a matter of course with each succeeding child.

Children who have been seen by the doctor at a clinic are visited in order to ascertain if the doctor's instructions are understood and are being properly carried out.

The following figures give the number of children admitted to the various child welfare clinics in the city during the year:—

Under 1 year of age	...	...	...	...	7,559
Aged 1-5 years	...	...	...	...	532
					<hr/>
					8,091
					<hr/>

## Total attendances—

Under 1 year of age	...	...	...	...	...	62,724
Aged 1-5 years	...	...	...	...	...	16,184
						<hr/> 78,908 <hr/>

There are 18 centres at which 36 sessions are held per week, and the attendances amounted to 65 per cent. of the births notified.

**The Health Visitors' Work carried out in the Homes.**

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

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

During 1941, 372 children under five years of age were referred for special treatment to the school medical department as follows:—

Defective vision	...	...	...	...	...	219
Otorrhœa	...	...	...	...	...	37
Orthopædic defects	...	...	...	...	...	116

**Statistics relating to Home Visits.**

Visits to expectant mothers by health visitors	...	...	10,804
--	-----	-----	--------

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

Number of births visited during the year	...	...	13,115
Re-visits to births during the year	...	...	63,929
„ infants of 1 year to 5 years of age	...	...	74,476

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

...	...	...	...	...	...	651
-----	-----	-----	-----	-----	-----	-----



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

Visits to 172 cases from Alder Hey Hospital	...	...	469
„ 19 cases from Olive Mount Hospital...	...	...	69

*Visits to cases of infectious disease, etc.—*

Visits to cases of measles (first visits, 4,163)	...	...	7,331
„ „ „ „ whooping cough (first visits, 138)	...	...	424
„ „ „ „ pneumonia	...	...	1,049
„ „ „ „ infantile diarrhoea	...	...	218

**Child Life Protection.**

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

(a) Number of persons receiving children for reward on the Register at the end of the year 1941	...	...	43
(b) Number of children on the Register.			
(1) at the end of the year	...	...	65
(2) who died during the year (in homes)	...	...	3
(3) in hospitals	...	...	nil
(4) on whom inquests were held during the year..	...	...	nil
(c) Proceedings taken during the year	...	...	nil

**Neo-natal Mortality.**

During the year the number of deaths of children of Liverpool residents under 28 days old (Neo-natal Deaths) amounted to 437, equal to a rate of 34 per 1,000 live births registered. Special enquiry was made into the deaths of all these newly-born children, i.e. those under 28 days old.

**Deaths from Diarrhoea and Enteritis.**

**Results of Enquiry.**

Enquiries were made into the 112 deaths of children under 2 years of age recorded during the year 1941. In a few instances, the parents could not be traced. In 13 cases, there was a prominent history of

wasting or marasmus; in 15 there were respiratory complications; congenital abnormality accounted for 2 deaths; in 11 cases the infant was known to have been premature; and in 28 other cases there was associated disease. In 5 instances where death was ascribed to enteritis there was no diarrhoea.

### Dental Clinics.

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

Attendances at all clinics:—

New cases	...	...	...	...	574
Ante-natal and post-natal mothers	...	...	...	...	1,122
Children	...	...	...	...	70
Number of extractions	...	...	...	...	2,527
Total attendances	...	...	...	...	1,408

### War-Time Nurseries.

The following day nurseries were opened for the children of women war-workers:—

Address of Nursery.	Type.	Date opened.	Accommodation.
Leamington Road Council School...	Part-time	25.11.41	40 children, aged 2-5 years.
Banks Road Council School .....	Part-time	1.12.41	40 children, aged 2-5 years.
1, The Elms, Dingle ... ..	Full-time	1.12.41	36 children, aged 0-5 years.
262/4, Westminster Road, Kirkdale	Full-time	1.12.41	53 children, aged 0-5 years.



## TUBERCULOSIS.

### Notification.

Public Health (Tuberculosis) Regulations, 1930.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD FROM 1ST JANUARY, 1941,  
TO 31ST DECEMBER, 1941:—

TABLE I.

Age-periods.	Notifications on Schedule A.											Total Primary Notifica- tions.	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-		
<b>Pulmonary—</b>													
<b>Males .....</b>	4	17	7	12	49	90	175	139	109	93	20	715	842
<b>Females .....</b>	4	8	9	16	95	133	165	71	48	27	11	587	704
<b>Non-Pulmonary—</b>													
<b>Males .....</b>	6	26	29	15	21	14	28	9	4	3	—	155	182
<b>Females .....</b>	5	31	17	18	27	16	15	10	5	4	2	150	180

Out of a total of 1,302 primary notifications of pulmonary tuberculosis 850 were received from private and 452 from hospital practitioners, whilst in the case of non-pulmonary tuberculosis these figures are 82 and 223 respectively, forming a total of 305.

### The Notification and Dispensary Registers.

In Table II is shown the number of cases on the notification and dispensary registers at the end of the year, the difference (2,814) 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

	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Totals.
	Males.	Females.	Males.	Females.	
Number of cases on the Notification Register ...	2,469	2,257	797	801	6,324
Number of established cases on the Dispensary Register	1,499	1,303	384	324	3,510
Difference ... ..	970	954	413	477	2,814

In Table III is given an analysis of the 2,814 persons whose names are on the notification register but are not on the dispensary register, according to the latest information concerning them.

TABLE III

	Pulmonary Tuberculosis.						Non-Pulmonary Tuberculosis.						Totals.
	Males.			Females.			Males.			Females.			
	State of the Disease.						State of the Disease.						
Whereabouts Known.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	
Totals ... ..	28	210	732	52	217	685	34	158	221	51	220	206	2,814

### 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.	PULMONARY.				NON-PULMONARY				TOTAL.				GRAND TOTAL	
	Adults.		Children		Adults.		Children		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts):														
(a) Definitely tuberculous ...	455	336	28	36	48	66	64	53	503	402	92	89	1,086	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	39	28	9	7	83	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	552	194	83	70	899	
B.—CONTACTS examined during the year :—														
(a) Definitely tuberculous ...	—	2	—	—	—	—	—	—	—	2	—	—	2	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	—	—	—	—	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	21	45	74	68	208	
C.—CASES written off the Dis- pensary Register as :—														
(a) Recovered ...	75	33	13	6	20	16	14	14	95	49	27	20	191	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) ...	—	—	—	—	—	—	—	—	573	239	157	138	1,107	
D.—NUMBER OF CASES on Dis- pensary Register on Dec. 31st														
(a) Definitely tuberculous ...	1,334	1,065	148	136	165	238	236	188	1,499	1,303	384	324	3,510	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	39	28	9	7	83	
1. Number of cases on Dispensary Register on January 1st ...				3,765	2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years ...				378					
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" ...				729	4. Cases written off during the year as Dead (all causes) ...				729					
5. Number of attendances at the Dispensary (including Contacts) ...				9,179	6. Number of Insured Persons under Domiciliary Treatment on the 31st December				835					
7. Number of consultations with medical practitioners :— (a) Personal ...				6	8. Number of visits by Tuberculosis Officers to homes (including personal con- sultations) ...				555					
(b) Other ...				2,801*										
9. Number of visits by Nurses or Health Visitors to homes of patients ...				17,253	10. Number of :— (a) Specimens of sputum, etc., examined (b) X-ray examinations made in con- nection with Dispensary work. ...				1,934 1,409					
11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above...				4	12. Number of "T.B. plus" cases on Dis- pensary Register on December 31st ...				1,516					

\* In addition to 2,801 consultations, 1,916 reports concerning patients were sent to medical practitioners.

### General Remarks.

The city death rates for the year 1941 for pulmonary and non-pulmonary tuberculosis are 1.02 and 0.21 per 1,000 respectively, making a total of 1.23 per 1,000 for all forms of the disease. The comparable rate for 1940 was 1.17. An analysis of unnotified cases of tuberculosis is given in Table VIII.

The Tuberculosis Officers continue to carry out the examination of certain recruits to the Forces in accordance with the requirements of the National Service (Armed Forces) Act, 1939, and 504 reports have been submitted to the Ministry of Labour. A further 828 reports have been rendered in accordance with the requirements of the Public Health (Tuberculosis) Regulations, 1940.

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

**RADIOLOGY.** During the year, 1,409 cases have been the subject of radiological examination in connection with diagnostic work at the Tuberculosis Clinics. Investigation or treatment at the sanatoria has also entailed 2,807 radiographs and 5,193 screenings.

**LIGHT THERAPY.** In accordance with existing arrangements 5,552 treatments by Ultra Violet Rays were carried out at Belmont Road Hospital. The conditions treated included Lupus Vulgaris, Lupoid Acne and Tubercular Cervical and Mesenteric Glands, etc.

**CONTACTS.** The Tuberculosis Officers have examined 210 persons who were known to have been in contact with infectious cases of pulmonary tuberculosis and found evidence of disease in 2, or 0.95 per cent. The number of children examined in connection with contact work is reduced by evacuation.



TABLE V.

PATIENTS UNDER DISPENSARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males ... ..	2	2	4	8
	Females ... ..	4	—	4	
NON-INSURED PERSONS	Male Adults ... ..	8	1	9	80
	Female Adults ... ..	36	9	45	
	Male Children* ... ..	11	6	17	
	Female Children* ... ..	4	5	9	
TOTALS ...	... ..	65	23	88	

\* Under 15 years of age.

TABLE VI.

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

		Pulmonary.	Non-pulmonary.	Totals.	
INSURED PERSONS	Males ... ..	323	88	411	708
	Females ... ..	200	97	297	
NON-INSURED PERSONS	Male Adults ... ..	76	32	108	816
	Female Adults ... ..	153	71	224	
	Male Children* ... ..	95	171	266	
	Female Children* ... ..	77	141	218	
TOTALS ...	... ..	924	600	1524	

\* Under 15 years of age.

## Home Nursing.

The domiciliary nursing of both pulmonary and non-pulmonary cases continues to be carried out by the Liverpool Queen Victoria District Nursing Association in accordance with the existing agreement. During the year, 72 pulmonary and 46 non-pulmonary cases were nursed in their homes, and to these cases 4,028 visits were paid. The Garston and Grassendale Nursing Association and the Woolton and District Nursing Society have dealt with cases outside the area supplied by the District

Nursing Association. The calling-up of young women for the Services has left many sick parents unattended at home and has increased the demand for sanatorium beds.

### Domiciliary Treatment.

At the end of the year, 1,150 patients remained under domiciliary treatment of whom 835 were persons insured under the National Health Insurance Act, and in receipt of treatment from their panel doctors and 315 were not insured and were under the treatment of District Medical Officers or doctors of their own choice. The domiciliary reports received relating to insured persons numbered 726. Table VII shows the position at the end of the year.

TABLE VII.

PATIENTS UNDER DOMICILIARY TREATMENT AT THE END OF THE YEAR.

		Pulmonary.	Non-pulmonary.	Totals.
INSURED PERSONS	Males ... ..	563	12	575
	Females ... ..	236	24	260
NON-INSURED PERSONS	Male Adults ...	104	11	115
	Female Adults ...	165	17	182
	Male Children*	6	5	11
	Female Children*	4	3	7
TOTALS ...	... ..	1078	72	1150

\* Under 15 years of age.

### Co-operation.

During the year, 994 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, etc.

### Silicosis and Asbestosis Scheme (1931).

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



### Dental Treatment.

A considerable amount of dental work is carried out at the Sanatoria, the following operations having been performed during 1941:—

Extractions under anæsthesia	...	...	...	333
Fillings and scalings	...	...	...	89
Miscellaneous	...	...	...	99
				—
Total	...			521
				—

### Special Treatment.

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

Artificial Pneumothorax (New inductions)	...	78
Artificial Pneumothorax Refills	...	5,156
Cases treated by Gold Injections	...	193
„ „ „ other methods	...	69
Thoracic Operations, including Phrenicectomy, Thoracoscopy, Bronchography, Thoracoplasty, etc.		26
Laryngological Operations	...	4
Other Operations	...	8
		—
Total	...	5,534
		—

### Notification and Deaths.

During the year 100 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.

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.
Pulmonary Tuberculosis	699	49 7.0%	12 1.7%	7 1.0%	15 2.1%	9 1.3%	6 0.9%
Non-Pulmonary Tuberculosis .....	147	51 34.7%	14 9.5%	24 16.3%	3 2.0%	5 3.4%	5 3.4%

### Deaths from Tuberculosis.

The number of deaths from pulmonary tuberculosis and from non-pulmonary tuberculosis in Liverpool from 1931 to 1941, 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 PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1931.....	2,358	2.75	989	1.15	0.74
1932.....	2,005	2.33	969	1.14	0.69
1933.....	2,279	2.63	1,009	1.19	0.69
1934.....	1,903	2.20	867	1.03	0.63
1935.....	1,697	1.96	812	0.97	0.60
1936.....	1,645	1.90	713	0.85	0.58
1937.....	1,555	1.79	684	0.82	0.58
1938.....	1,378	1.59	666	0.81	0.53
1939.....	1,213	1.47	647	0.81	0.54
1940.....	1,311	1.73	761	1.01	0.59
1941.....	1,302	1.90	699	1.02	0.60



TABLE X.

## DEATHS FROM NON-PULMONARY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1931.....	719	0·84	164	0·19	0·15
1932.....	672	0·77	170	0·20	0·15
1933.....	654	0·75	148	0·17	0·13
1934.....	585	0·67	129	0·15	0·13
1935.....	502	0·58	123	0·15	0·11
1936.....	445	0·51	126	0·15	0·11
1937.....	388	0·45	112	0·13	0·11
1938.....	386	0·45	103	0·12	0·10
1939.....	317	0·38	99	0·12	0·09
1940.....	274	0·36	122	0·16	0·11
1941.....	305	0·44	147	0·21	0·13

TABLE XI.

## AGE PERIODS OF DEATH FROM TUBERCULOSIS DURING 1941.

Age Periods.	PULMONARY.		NON-PULMONARY.	
	Males.	Females.	Males.	Females.
0—	3	2	6	6
1—	6	9	31	20
5—	—	—	11	10
10—	3	5	3	5
15—	21	48	11	11
20—	26	59	6	6
25—	60	81	4	4
35—	82	47	2	1
45—	94	18	2	—
55—	83	21	4	3
65—	28	3	—	1
TOTALS ...	406	293	80	67

## VENEREAL DISEASES.

The Clinics operated by the Corporation during 1941 were:—

Seamen's Dispensary—Males only.

Mill Road Infirmary—Females only.

Royal Infirmary—Males and Females.

Edge Lane Hospital—Females only.

Sparrow Hall Hospital—Males and Females.

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 Edge Lane Hospital treatment for females is provided each day at hours convenient to the greatest number of patients. On the 10th December, 1941, a new clinic, designed to meet war-time needs, was opened at Sparrow Hall Hospital, staffed by existing personnel from the other Corporation Clinics.

All cases of venereal diseases requiring in-patient treatment are now concentrated in the special wards at Belmont Road Hospital. Periodic examinations of the children born and apparently free from disease are arranged. Infected parents are encouraged to attend the clinics until cure is accomplished. Further pregnancies are supervised and prophylactic treatment for congenital syphilis is given throughout.

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



services that the large numbers of women and their families who would otherwise not be treated for this hidden scourge can come under proper treatment.

The following table summarises the work of the Clinics for the year 1941 :—

	Seamen's Dispensary. Males only.	†Royal Infirmary.		†Mill Road Infirmary and Belmont Road Hospital.		†Edge Lane Medical Home. Females only.	Sparrow Hall.		TOTAL Males and Females
		Males.	Females.	Males.	Females.		Males.	Females.	
New cases ... ..	3,763	842	249	186	490	116	1	1	5,648
Old and new patients									
Total attendances	36,304	12,667	4,780	3,878	11,482	—	3	1	69,115
In-patient days ...	—	—	—	11,812	6,161	5,745	—	—	23,718

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

There was an increase in the number of new patients (5,648 in 1941 compared with 5,097 in 1940), and an increase in in-patient days of treatment (23,718 and 23,297 respectively), also in the number of attendances (69,115 and 67,011 in 1941 and 1940).

Laboratory services for the diagnosis and control of treatment are provided at the City Laboratories, the Thompson Yates Laboratory of the University and the Mill Road Infirmary Laboratory. At the City Laboratory, Wassermann reaction tests are done three times weekly, rapid diagnosis obviating delay in treatment.

### Seamen's Dispensary.

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

majority of the patients are seamen, other classes of occupation are also dealt with. Excellent results have been recorded both in the treatment of gonorrhœa and of syphilis, and special schemes of treatment particularly suited to the needs of the seafaring population have proved efficient.

During the year under review, 5,935 cases have been advised and treated, of whom 3,763 reported for the first time. Of these, 1,416 were found not to be suffering from venereal disease. The classification of the cases dealt with at the Seamen's Dispensary for the first time during the year, and also for the five previous years, was as under:—

	1936	1937	1938	1939	1940	1941
Syphilis ... ..	203	224	199	224	333	535
Soft chancre ... ..	103	109	141	105	173	208
Gonorrhœa ... ..	850	939	866	845	1,281	1,604
Non-Venereal Cases ... ..	840	986	1,088	898	1,097	1,416
Total ... ..	1,996	2,258	2,294	2,072	2,684	3,763

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

Syphilis ... ..	18·8%
Soft chancre ... ..	9·4%
Gonorrhœa ... ..	71·8%



## City of Liverpool.

## Deaths from Venereal Disease.

Years	SYPHILIS.					LOCOMOTOR ATAXY.					GENERAL PARALYSIS OF INSANE.					TOTAL VENEREAL DISEASE.				
	AT AGES—YEARS.																			
	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.	Under 1	1—	40—	All Ages.
1915	43	9	10	62	...	1	10	11	...	10	25	35	43	20	45	108	43	20	45	108
1916	36	5	1	42	...	1	13	14	...	12	23	35	36	18	37	91	36	18	37	91
1917	25	12	3	40	...	3	16	19	...	27	43	70	25	42	62	129	25	42	62	129
1918	37	17	13	67	...	1	19	20	...	34	42	76	37	52	74	163	37	52	74	163
1919	38	6	4	48	...	4	12	16	...	22	34	56	38	32	50	120	38	32	50	120
1920	48	8	5	61	...	3	10	13	...	18	24	42	48	29	39	116	48	29	39	116
1921	41	7	9	57	...	1	16	17	...	18	35	53	41	26	62	127	41	26	62	127
1922	31	7	10	48	...	2	16	18	...	27	29	56	31	36	55	122	31	36	55	122
1923	39	5	2	46	...	2	15	17	...	18	29	47	39	25	46	110	39	25	46	110
1924	29	8	6	43	...	1	15	16	...	15	31	46	29	24	52	105	29	24	52	105
1925	24	3	8	35	...	...	18	18	...	12	20	32	24	15	46	85	24	15	46	85
1926	25	...	13	38	...	3	14	17	...	4	25	29	25	7	52	84	25	7	52	84
1927	14	5	16	35	...	3	11	14	...	8	32	40	14	16	59	89	14	16	59	89
1928	10	6	12	28	...	1	12	13	...	7	29	36	10	14	53	77	10	14	53	77
1929	10	3	20	33	...	1	15	16	...	6	20	26	10	10	55	75	10	10	55	75
1930	10	3	28	41	...	2	9	11	...	7	18	25	10	12	55	77	10	12	55	77
1931	5	9	26	40	...	1	7	8	...	3	16	19	5	13	49	67	5	13	49	67
1932	6	3	21	30	...	1	9	10	...	8	24	32	6	12	54	72	6	12	54	72
1933	4	11	26	41	...	...	20	20	...	7	21	28	4	18	67	89	4	18	67	89
1934	8	4	25	37	...	...	2	2	...	6	21	27	8	10	48	66	8	10	48	66
1935	7	4	36	47	...	...	10	10	...	6	18	24	7	10	64	81	7	10	64	81
1936	4	6	41	51	...	...	14	14	...	4	19	23	4	10	74	88	4	10	74	88
1937	4	5	39	48	...	1	10	11	...	3	20	23	4	9	69	82	4	9	69	82
1938	8	6	44	58	...	...	13	13	...	1	15	16	8	7	72	87	8	7	72	87
1939	3	5	55	63	...	...	8	8	...	...	19	19	3	5	82	90	3	5	82	90
1940	2	2	48	52	...	1	14	15	...	4	8	12	2	7	70	79	2	7	70	79
1941	4	6	48	58	...	...	10	10	...	4	12	16	4	10	70	84	4	10	70	84

## INFECTIOUS HOSPITALS and SANATORIA.

During 1941 the hospital accommodation for infectious cases was as follows:—

City Hospitals North (187 beds), South (101 beds), East (174 beds), Fazakerley (160 beds), Fazakerley Annexe (155 beds), Sparrow Hall (150 beds), total, 927 beds; Fazakerley Sanatorium (182 beds), Cleaver Sanatorium (200 beds), total, 382 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 1941:—

DISEASES	Remaining Dec. 31st, 1940.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.
City Hospital North, Netherfield Road.										
Scarlet Fever ... ..	28	58	15	101	—	28	73	—	—	—
Diphtheria ... ..	120	437	12	569	—	90	366	91	3	22
Other Diseases ... ..	9	96	30	135	—	9	120	6	—	—
Totals ... ..	157	591	57	805	—	127	559	97	3	22
City Hospital South, Grafton Street.										
Scarlet fever ... ..	19	261	6	286	—	2	247	35	—	2
Diphtheria ... ..	—	—	4	4	—	—	4	—	—	—
Measles ... ..	—	28	—	28	—	—	28	—	—	—
Other Diseases ... ..	2	32	1	35	—	3	31	1	—	—
Totals ... ..	21	321	11	353	—	5	310	36	—	2



DISEASES.	Remaining Dec. 31st, 1940.	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 ... ..	41	146	—	187	—	12	171	3	—	1
Enteric Fever ... ..	—	73	—	73	—	11	60	—	1	2
Diphtheria ... ..	125	787	—	912	—	59	674	138	11	41
Other Diseases ... ..	8	266	—	274	—	14	236	16	2	8
Totals ... ..	174	1,272	—	1,446	—	96	1,141	157	14	52

City Hospitals, Fazakerley.										
Scarlet fever ... ..	24	277	56	357	—	24	302	29	2	2
Enteric fever group ...	3	229	82	314	—	83	220	10	—	1
Diphtheria ... ..	330	1,071	368	1,769	—	216	1,237	252	16	64
Measles ... ..	—	28	8	36	—	5	27	3	—	1
Whooping Cough ... ..	—	140	28	168	—	42	109	—	6	17
Other diseases ... ..	70	747	180	997	—	140	759	66	10	32
Totals ... ..	427	2,492	722	3,641	—	510	2,654	360	34	117

\* These admissions include Fazakerley Isolation Hospital—1,008 cases, Fazakerley Annexe—826 cases and Sparrow Hall Hospital—658 cases.

#### Fazakerley Sanatorium.

Tuberculosis ... ..	104	238	58	400	—	—	157	182	—	61
---------------------	-----	-----	----	-----	---	---	-----	-----	---	----

#### Cleaver Sanatorium.

Tuberculosis ... ..	179	137	62	378	—	7	116	201	1	54
---------------------	-----	-----	----	-----	---	---	-----	-----	---	----

#### Totals—All Isolation Hospitals and Sanatoria.

All Diseases ... ..	1,062	5,051	910	7,023	—	745	4,937	1,033	52	308
---------------------	-------	-------	-----	-------	---	-----	-------	-------	----	-----

## General and Children's Hospitals and other Institutions.

## Statement of Admissions, Discharges, Births, Deaths, and Transfers.

Hospital or Establishment.	Remaining 28/12/40	Admitted.	Trans- ferred to	Born.	Dis- charged.	Trans- ferred from	Died.	Remaining 27/12/41
<b>Administered under the Poor Law Acts :—</b>								
Belmont Road Institution ...	1,599	9,630	633	15	7,702	769	1,812	1,594
Kirkdale Homes ...	1,363	242	590	—	300	187	394	1,314
Olive Mount Children's Hospital ...	261	1,773	339	—	1,799	242	65	267
Cottage Homes, Fazakerley ...	427	68	239	—	199	162	—	373
Shaw Street Boys' Home ...	41	14	8	—	33	—	—	30
Seafeld House (Greaves Hall) ...	98	9	—	—	21	—	—	86
<b>Administered under the Public Health Acts :—</b>								
Walton Hospital ...	1,195	16,054	205	2,409	16,745	309	1,773	1,036
Mill Road Infirmary ...	432	3,006	62	468	3,206	91	276	395
Alder Hey Hospital ...	403	8,284	83	—	7,173	230	637	730
Smithdown Road Hospital ...	708	7,276	152	1,211	7,417	506	863	561
Broadgreen Emergency Hospital ...	71	308	3	—	247	—	8	127
<b>TOTAL</b> ...	<b>6,598</b>	<b>46,664</b>	<b>2,314</b>	<b>4,103</b>	<b>44,842</b>	<b>2,496</b>	<b>5,828</b>	<b>6,513</b>
<b>CASUAL WARDS—</b>								
Belmont Road ...	4	1,337	—	—	1,341	—	—	—
(Closed 1st December, 1941)								

NOTE.—Emergency Medical Service cases are included in above Return as from 22nd February, 1941, Figures for Mill Road are shown to week end preceding evacuation, viz., 26/4/41.  
Figures for Broadgreen Emergency Hospital from date functioning as a General Hospital, viz., 4/10/41.



## MUNICIPAL HOSPITALS and INSTITUTIONS.

---

### General Review of Hospital Services.

**STRUCTURAL WORK.** During 1941, structural work was undertaken only if it was essential for the casualty services. Major schemes were undertaken at Alder Hey and Broadgreen Emergency Hospitals in connection with the building of hutment extensions for the accommodation of patients; the former was completed. These additional wards were planned by the Ministry of Health and the expenditure incurred will be a charge on the Emergency Medical Service.

The extension of certain ancillary departments at both hospitals in continuance of the policy of upgrading, described in the Annual Report for 1939 was also carried out. During the second half of the year Broadgreen Emergency Hospital functioned as a general hospital.

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

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

In the last quarter of the year there was again a sharp rise in the incidence of cases of diphtheria, but all the cases were admitted promptly to various City hospitals. An epidemic of paratyphoid B. fever occurred during the year, a full report on which appears on pages 17 to 24.

**EMERGENCY MEDICAL SERVICES.** The organization of the Emergency Medical Service was extended during the year, additional specialists, remunerated on a sessional basis by the Ministry of Health, being

attached to the casualty receiving hospitals. Special centres, organized for the treatment of complex types of disease and injury, were established and accommodated in the municipal hospitals.

The casualty services, having devoted considerable time to rehearsals and to the completion of their detailed arrangements, were further tested during the year. In the earlier part of 1941 numerous air raid casualties were treated. The casualty receiving hospitals were able to deal effectively with all the calls made on their services, and the successful co-ordination of the hospitals and other branches of the casualty services rewarded the staffs for the time spent in practices. The modern treatment of injuries calls for co-operation between the clinical, radiographic, pathological and other branches of the hospital services, a demand which the municipal hospitals were quite competent to fulfil.

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

The nursing staffs of hospitals were supplemented by the Civil Nursing Reserve, comprising trained nurses, assistant nurses and nursing auxiliaries and their usefulness further increased. The training of probationer nurses continues on fairly normal lines. Some consideration was given to the salaries of trained staffs, and recommendations for salary increases were submitted and subsequently approved. Conscription caused the departure of several members of the male staff



during the year but the training of substitutes made it possible to maintain all the essential services.

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

**MATERNITY CASES.** Post-natal patients from Walton and Smithdown Road Hospitals continued to be transferred to the Hydropathic Hospital, Southport. A further provision for cases was also made at Rosefield Hall, Southport in the Spring of 1941. This arrangement relieved the pressure on the lying-in accommodation at Walton. The units at Southport were staffed by Walton Hospital.

**TUBERCULOSIS.** Adult cases of tuberculosis were admitted mainly to the Sanatoria at Fazakerley and Heswall and to the tuberculosis unit at Walton Hospital. Cases of tuberculosis in children were admitted to the William and John Jones Convalescent Home, Rhyl. Despite the loss of sanatorium beds by the change in user of Broadgreen Sanatorium, in-patient treatment was provided reasonably expeditiously in all appropriate cases.

**INFECTIOUS DISEASES.** The main problem of the year was caused by the epidemic of diphtheria in the last quarter of 1941 but it was possible to admit all the cases notified to the department. Full use was made of the accommodation at the Fazakerley Group of Hospitals, City Hospital East and Olive Mount Hospital. Some cases were also admitted to the general hospitals and to Alder Hey, this policy being necessitated by the need for restrictions in the use of City Hospital North and City Hospital South owing to the vulnerability of the areas in which these hospitals are situated.

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

DETAILS OF ADMISSIONS, DISCHARGES, ETC., AND WORK UNDERTAKEN AT THE FIVE MUNICIPAL HOSPITALS FOR PERIOD 1937 to 1941.

	WALTON HOSPITAL				SMITHDOWN ROAD HOSPITAL.				MILL ROAD INFIRMARY.				ALDER HEY HOSPITAL.				Broadgreen Emergency Hospital.
	1937	1938	1939	1940	1941	1937	1938	1939	1940	1941	1937	1938	1939	1940	1941	1941	
*Admissions	16,816	16,995	14,149	14,018	16,209	9,413	9,594	8,191	7,937	7,276	9,540	10,024	9,155	8,857	3,081	10,023	1,986
*Transferred to	149	195	151	160	205	180	223	153	103	152	169	169	146	164	66	179	—
*Born	2,817	2,848	2,334	2,196	2,409	1,651	1,670	1,504	1,597	1,211	1,525	1,603	1,409	1,458	482	—	—
*Discharged	17,294	17,478	14,801	14,105	16,745	9,430	9,514	8,308	8,066	7,417	10,070	10,496	9,638	9,370	3,211	8,692	1,913
*Transferred from	497	484	538	266	309	687	727	759	496	506	406	384	473	334	102	757	—
*Died	2,001	1,972	1,776	1,604	1,773	1,195	1,164	1,031	962	868	784	797	746	699	278	735	58
Surgical Operations	5,279	5,468	3,639	4,932	5,580	1,698	1,729	1,793	2,668	2,810	3,144	3,900	3,744	3,631	1,277	2,179	727
Out-Patient Attendances	65,216	66,850	62,112	59,799	67,412	39,375	37,733	38,971	43,866	41,713	89,254	85,501	94,941	91,420	58,071	41,744	3,772
Pathological Examinations	27,102	30,098	27,363	25,377	27,742	15,397	20,611	30,288	31,557	38,769	23,607	25,226	23,461	21,917	8,219	26,195	—
Post-mortems	1,167	1,067	1,043	1,000	962	79	76	84	88	137	174	191	183	198	51	215	—
X-Ray Examinations (Radiographs)	23,788	22,328	21,435	22,278	23,441	8,477	8,079	9,426	8,885	9,343	13,166	14,708	17,924	17,706	7,829	11,650	4,451

\* 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 to date of evacuation, viz:—4.5.41, with the exception of O.P. attendances which are for the full year.



## **SANITARY ADMINISTRATION.**

---

During the year, sanitary inspectors made 87,669 inspections and visits for the investigation and abatement of nuisances. 14,237 complaints of nuisances were received as compared with 18,936 the previous year. The total number of nuisances reported was 20,740, and out of this number 2,034 nuisances were outstanding at the end of the year. The number of notices served for the abatement of nuisances was 12,870 informal, and 6,931 statutory, 2,433 of these being served for the provision of dustbins.

In 128 cases legal proceedings were instituted at the City Court for failure to comply with notices served by this department under the Public Health Act, 1936, and other enactments.

### **Departmental References.**

The co-operation which the Public Health Department receives from other departments of the Corporation is fully appreciated, whereby many sanitary defects are brought to notice and dealt with immediately. The number of references received from other departments was 1,943, whilst the number of references to other departments was 5,612.

### **Infected Houses.**

The sanitary inspectors made 15,007 investigations relating to cases of infectious disease, resulting in 14,271 visits to infected houses, and 450 visits to phthisis cases. There were also 12 inquiries made in respect to suspected smallpox contacts.

### **Drain Testing.**

During the year 354 drainage systems were tested, 60 by colour test, of which 25 were positive and 35 negative; 105 by smoke rocket test, of which 58 were positive and 47 negative; 189 by smoke machine test, of which 97 were positive and 92 negative. Where defects have been revealed by these tests, repairs have been carried out. In the case of tests of important buildings and offices, as well as dwelling-houses of higher rateable value, the assistance of the City Engineer's Department has been utilised.

## Factories and Workplaces Inspection.

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

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

### Register of Factories, Section 8 (3).

The total number of factories (including bakehouses) on the register at the end of the year was 5,252.

With mechanical power	...	...	2,614
Without mechanical power...	...	...	2,638

During the year, 3,396 visits were made to factories, 864 in consequence of special complaints to the department, 2,532 in the course of ordinary routine inspection. During these visits 269 defects were found, in respect of which 172 informal notices were issued on owners or occupiers, the defects not remedied at the end of the year being 39.

### Register of Workplaces (including Offices).

The number of workplaces on the register at the end of the year was 3,061.

During the year, 1,214 visits were made to workplaces, 284 in respect of offices. There were 28 defects, 13 of which were unsuitable or defective sanitary conveniences, 3 inadequate ventilation, and the remainder want of cleanliness. All defects were remedied during the year.

### Rag Flock Acts, 1911 and 1928.

Five visits to two factories in which rag flock is manufactured and 44 visits to premises where rag flock was used, were made, 34 samples of rag flock being taken, all of which were in accordance with the standard of cleanliness required by the rag flock regulations.

### Bakehouses.

The number of bakehouses in use at the end of the year was 339, of which 109 were without mechanical power, 14 of these being basement,



and 230 with mechanical power, of which 27 were basement bakehouses. 1,012 visits were made to bakehouses. 36 informal notices were issued in respect of want of cleanliness, all of which were complied with.

### **Restaurants and Café Kitchens.**

All kitchens in connection with cafés and restaurants are regularly visited, particular attention being paid to the cleanliness of the premises and of the workers employed in the kitchens. There were 321 in use at the end of the year. 481 visits were made to restaurant and café kitchens, 19 informal and 6 statutory notices being issued in respect of want of cleanliness, unsuitable or defective sanitary conveniences, accumulation or deposit of refuse in rooms, all of which were complied with.

### **Licensed Premises.**

During the year, 421 visits were made to licensed premises and it was found that the conditions under which beer is stored and sold are satisfactory on the whole. Measures have been taken to maintain a good standard of cleanliness.

### **Offensive Trades.**

There were on the register of offensive trades at the end of the year 113 businesses, and 351 visits were made to these premises.

### **Fish Friers' Premises.**

At the end of the year there were 455 fish friers' premises within the city, and 2,224 visits were made to see that the requirements of the byelaws were carried out.

### **Shops Acts, 1912 to 1938.**

Visitation of shops throughout the City for the purposes of administration of the Shops Acts, has been limited owing to the increasing duties performed in connection with the administration of Food Control Orders by Shops Inspectors, who are appointed as Enforcement Inspectors under the authority of the Ministry of Food.

Where circumstances have permitted, combined enquiries under the Shops Acts and Food Control have been made, and in addition, routine inspection of shops has been carried out.

It has been found that the requirements of the Shops Acts with respect to the employment of shop assistants and young persons, and the hours of closing, have been generally carried out in a very satisfactory manner by shopkeepers, who have additional responsibilities in connection with Food Control.

Under an Order in Council, dated 10th October, 1941, adding Regulation 60AB and 60AC to the Defence (General) Regulations, 1939, the general evening closing hours for shops, namely, 9.0 p.m. on the "late" (Saturday), and 8.0 p.m. on the other days in the week, during the period beginning with the first Sunday in November in any year, and ending with the first Sunday in March in the succeeding year, were curtailed to 7.30 p.m. on the "late" day, and 6.0 p.m. on the other days of the week.

In accordance with the power given to the local authority by Regulation 60AB, the Liverpool (Hours of Closing) Order, 1941, made by the City Council on 29th October, 1941, further curtailed the general evening closing hour on the "late" day to 6.0 p.m. during the above-mentioned period in any year.

These Orders do not affect the obligation of shopkeepers to close on the weekly half-holiday.

No contraventions were reported during the period of restricted evening trading hours, and it was found that many shops were closed before the hour specified in the Orders.

In accordance with the requirements of the Public Health Act, 1936, Section 205, enquiries have been made by a female inspector, in addition to her other duties, with reference to the employment of women after child-birth, and in this connection 248 visits have been made to factories within the City to ensure that the appropriate requirements of the Act are complied with.

### **Particulars of Visits and Inspections.**

The total number of visits to shops during the year was 81,910, and 22 special complaints were investigated under the various enactments. The number of shops registered was 1,587.



In connection with the closing of shops on the weekly half-holiday, 74,580 visits were made, 687 with respect to evening closing, whilst the visits on Sunday amounted to 5,056.

Re-visits in connection with contraventions numbered 415, calls incidental to the Shops Acts were 827, and 3 premises were visited respecting nuisances dealt with under the Public Health Act.

19 informations for contraventions of the Shops Acts were laid against 16 defendants who were convicted, the fines inflicted amounting to £9 10s. 0d. and the costs awarded were 13s. 6d.

Warning letters were sent in 25 instances with regard to minor offences.

### **Food Control.**

The total number of visits made by Enforcement Inspectors during the year was 13,248, and 339 complaints were investigated, of these 207 were found to be justified. The number of cases in which informations were laid was 111, and of these 5 were withdrawn. The fines totalled £213 10s. 0d. and the costs allowed were £6 19s. 0d.

### **Premises, etc., controlled by Byelaws and Regulations.**

#### **Common Lodging Houses.**

At the commencement of the year 1941, there were on the register 39 lodging houses providing accommodation for 2,305 lodgers. During the year 16 houses were removed from the register of which 12 were voluntary and 4 as the result of the premises being demolished. Two applications were received from persons for registration as keepers, and 38 applications were received from persons for the renewal of registration as keepers, of which number all were granted for a further period of twelve months. In 146 cases informal action was taken for infringements of the byelaws relating to defects in sanitary fittings and pavings, windows requiring cleansing or reglazing, verminous bedding, choked wastepipes, gullies and water closet basins, floors not swept or washed, and slops not emptied. In all cases the requirements were complied with. No informations were laid against keepers. There were on the register 21 houses accommodating 1,178 males, and 4 accommodating 220 females. The number of day visits to these houses was 1,448.

### **Seamen's Lodging Houses.**

Since the commencement of the present war there has been a marked increase in the number of Seamen's Lodging Houses in the city. These houses do not come within the definition of common lodging houses as defined in Section 235, Public Health Act, 1936. In all cases the accommodation provided is paid for by the shipping companies or the allied governments employing the men.

During the year, 25 seamen's lodging houses were inspected and the rooms measured to allow sleeping accommodation on the basis of 400 cubic feet of air space for each person. As the result of these inspections 10 houses were found to be overcrowded and the keepers concerned were informed. In all cases the overcrowding was abated. The number of visits made during the year was 616. In six cases additional sanitary accommodation and additional ablution facilities were asked for and readily provided.

### **The Hydrogen Cyanide (Fumigation) Act, 1937.**

Official notice has been received in respect of 13 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937. The number of dwelling-houses fumigated was 9 and 4 warehouses, each fumigation being supervised by the department and satisfactorily carried out.

### **Rats and Mice (Destruction) Act, 1919.**

It has not been found necessary to take any proceedings for non-compliance with the provisions of the Rats and Mice (Destruction) Act, 1919. During the year the district sanitary inspectors paid 58,232 visits to ascertain if premises were infested by rats. 47 premises were found rat infested owing to defective drains, or accumulation of rubbish or lumber. 7 notices were served upon the persons responsible for the abatement of the nuisance, and these have since been complied with. Rat catchers have paid 17,276 visits to premises for the purpose of ascertaining whether they were infested with rats, and in 947 instances evidence of rats was found. 10,744 rats were caught, of this number 10,684 were brown, and 60 were black. The City Bacteriologist examined 1,971 rats to ascertain if they were free from plague or other diseases, and the remainder were burnt.



### **Inspection of Air Raid Shelters.**

During the year 1941, 7,856 inspections were made of all types of shelters. Of these, 6,919 were found faulty, and reports have been submitted to the appropriate departments for remedial work to be carried out. The majority of the outstanding faults in Domestic Communal Surface Shelters are being automatically remedied during the strengthening process. In addition to the above inspections, 2,810 complaints have been investigated and reported upon. Investigations have also been made in respect of 3,869 applications for Morrison indoor shelters.

The sanitary conditions existing in the larger public shelters during the latter months of 1940 were deplorable, but these have been improved very considerably because of the installation of water-closets, wash-basins and water supply, mechanical ventilation and heating. The substitution of doors for canvas screening to sanitary conveniences has prevented serious nuisances arising. Since the general installation of such fittings as lighting, heating and bunks—particularly in surface shelters—much deliberate damage has been done by children and youths. The engagement of watchmen, together with additional supervision by the Police, has been necessary in many areas. Constant inspection is necessary to ensure that shelters are free from faults and in a usable condition. All damage found is immediately notified to the nearest Police Station.

During early morning and night visits bedding is examined, and from such examinations 1,387 bundles of bedding were found to be verminous, or dirty and likely to become verminous. These were disinfested by the Department and the shelters disinfected. The installation of wooden bunks with hessian coverings has led to infestation by bugs, which is very difficult to eradicate.

The cleansing of Public Shelters is carried out daily by the City Engineer and Surveyor, but the condition of many of the Domestic Communal Street Surface Shelters leaves much to be desired. This is due partly to the absence of doors and padlocks, and to the indifference of the persons allocated leaving the shelters unlocked. Constant inspections are necessary to prevent serious nuisances arising, and key-holders are being requested to cleanse and keep all shelters locked.

The conduct of persons who are now occupying public shelters for dormitory purposes has improved, particularly where shelter wardens are in attendance. It is, perhaps, worth mentioning that of 10 Public Shelters in use during 1941 an average of 1,630 persons were using them regularly every night, whereas, latterly, the same shelters are being used by 500 persons only.

The provision of Canteens staffed by voluntary workers is much appreciated, particularly in the early morning, when men can breakfast before proceeding to work.

### Ambulance and Disinfecting Department.

The staff of the Ambulance and Disinfecting Department is engaged in (1) the removal of cases of infectious disease to hospital by ambulance, (2) the disinfection of premises and articles exposed to infection, (3) the disinfestation of verminous houses and articles, (4) the supervision of the City mortuary. The number of cases of infectious disease removed to hospital was 6,470. The number of houses disinfected after infectious disease was 5,052, whilst the number of articles of bedding, clothing, etc., disinfected by steam after exposure to infectious disease was 128,694.

### DISINFESTATION OF PREMISES AND HOUSEHOLD EFFECTS.

*Premises.*—During the year, 2,327 Corporation houses and 202 Corporation tenements were inspected for vermin. It was found that 310 houses and 109 tenements were infested with bugs. In the table below is described the action taken in these cases.

### TREATMENT OF INFESTED PREMISES.

	Corporation Houses.		Non-Corporation Houses.
	Houses.	Tenements.	
Number treated ... ..	274	127	0
Awaiting treatment at the end of the year ...	53	9	0



### City Mortuary.

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

From the river ... ..	43
From the city ... ..	374

The number of still-births received during the year was 75.

### Cremation.

The number of cremations which took place at the Liverpool Crematorium during 1941 was 482.

### Smoke Abatement.

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

## INSPECTION OF FOOD.

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

TABLE I.

VISITS PAID TO PREMISES BY FOOD INSPECTORS.

Slaughter-houses.	Butchers' shops.	Fruit shops.	Fish & Fruit shops.	Food Hawkers' premises.	Jam factories.	Pickle factories.	Ice Cream premises	Food factories	Knackers' yards.	Total visits paid.
25	12,065	17,906	13,967	1,327	12	15	973	443	12	46,745

### Private Slaughter-houses.

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

### The City Abattoir.

During 1941, 160,278 animals of different kinds were slaughtered in Liverpool for human food. An analysis of this figure is given in Table II.

TABLE II.

NUMBER OF ANIMALS SLAUGHTERED IN LIVERPOOL FOR HUMAN FOOD.

	Bulls	Bullocks	Cows	Heifers	Calves	Sheep and Lambs	Swine	Horses
Public Abattoir ... ..	500	12,868	16,021	5,580	20,016	96,278	8,900	115
<b>TOTALS</b> ... ..	500	12,868	16,021	5,580	20,016	96,278	8,900	115



TABLE III.

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

Brought into the—	Beef.	Veal.	Mutton.	Lamb.	Pork.
Meat Market ... ..	35,977	8,958	2,365	92,591	19,412
TOTALS ... ..	35,977	8,958	2,365	92,591	19,412

In addition to the above, 11,080 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.
10,947	25	21,857	325,863	30,241

In addition to the above, 138,891 boxes and packages of imported meat and offal were dealt with in the meat market.

5,264 lbs. imported beef and 333 lbs. imported offal were destroyed for unsoundness, chiefly mould and brine damage.

#### Diseased Conditions.

The carcasses of 25,941 animals showed abnormal conditions, and a detailed examination was made in each case. During the year, 3,708 carcasses were rejected as being unfit for human food. Of these, 2,404 were destroyed at the abattoir and 1,304 were destroyed at knackers'

yards. A description of the diseased conditions found during 1941 which led to the total or partial destruction of carcasses is given in Table V.

TABLE V.

Disease.	No.	Disease.	No.
Abscess (total) ... ..	5	Moribund ... ..	2
„ (partial) ... ..	75	Nephritis Septic ... ..	15
Arthritis, Septic (total) ... ..	12	Parturient Fever ... ..	1
„ Simple (partial) ... ..	202	Pyæmia ... ..	3
Asphyxia ... ..	203	Peritonitis Septic ... ..	17
Contamination (partial) ... ..	74	Pneumonia ... ..	29
Decomposition (total) ... ..	192	Pleurisy ... ..	3
„ (partial) ... ..	179	Pleurisy (partial) ... ..	4
Distomatosis ... ..	52	Presternal Calcification (partial) ...	1
Dropsy ... ..	347	Septicæmia ... ..	5
Emaciation ... ..	10	Septic Mastitis ... ..	9
Enteritis ... ..	120	„ Metritis ... ..	8
Immaturity ... ..	4	„ Pericarditis ... ..	17
Injury (total) ... ..	8	Swine Fever ... ..	6
„ (partial) ... ..	295	Swine Erysipelas ... ..	2
Jaundice ... ..	34	Tuberculosis (total) ... ..	1221
Johnes Disease ... ..	16	„ (partial) ... ..	659
Joint Ill ... ..	10	Urticaria (partial) ... ..	10
Malignant Neoplasm ... ..	4	War Damage (total) ... ..	48
Melanosis (total) ... ..	1	„ (partial) ... ..	2
„ (partial) ... ..	1		

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.

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

TABLE VI.

Beef, Veal, Mutton, Pork.	Offal.	Fish.		Crabs, Lobsters, Oysters, Crayfish, Shrimps, Prawns, Scallops.	Cockles, Mussels, and Winkles.	Poultry.	Game.	Rabbits and Hares.	Fruit.	Vegetables.		Nuts, Cokernuts, Almonds, etc.	Canned Food- stuffs.	Eggs.	War Damaged. Provisions, Groceries, etc.
		Wet.	Dry.							Apples, Pears, Bananas, Oranges, Lemons, etc.	Potatoes, Cabbages, Sprouts, Onions, Turnips, etc.				
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bags.	Head.	Head.	Head.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	In tins 261 lbs In shell 73,800 eggs.	Lbs.
953,269	1,115,747	145,792	22,634	4,783	103	6,393	269	14,562	82,157	346,086	112	4,553	34,375		126,476

### **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 1941, 46 cows were slaughtered under this Order at the City Abattoir.

### **Slaughter of Animals Act, 1933.**

During the year, the following applications for licences as slaughtermen were received, namely: 3 for new licences, 8 for renewal of existing licences and 193 temporary licences for the slaughter of animals for the food of Mohammedans. In each case the licence was granted.

### **Food Control.**

#### **Defence (General) Regulations, 1939.**

Proceedings were instituted in 34 cases. £89 10s. 0d. was imposed in fines and £5 10s. 0d. in costs.



## 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 1940.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1941.
625	8	—	82	551

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

### Inspection of Dairies.

2,147 visits of inspection were paid to dairies. In 18 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 1940 were 2,612.

### Registration of Dairymen.

TABLE VIII.

REGISTERED DAIRYMEN.

Number of registered dairymen on Jan. 1st, 1941.	Applications for registration.	Applications refused.	Ceased to be dairymen.	Remaining on the register, Dec. 31st, 1941.
645	11	—	93	563

Of the 563 dairymen on the register at the end of the year, 12 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. 5 notices were sent to farmers outside the city drawing their attention to defects in milk churns. In every case the defects were remedied.

### The Licensing of Places for Keeping Cattle.

(*Liverpool Corporation Act, 1921.*)

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

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

TABLE IX.

REGISTRATION OF PREMISES ON WHICH MILCH COWS ARE KEPT.

	End of 1940.	End of 1941.
Number of licensed cowsheds... ..	187	165
Number of cows specified on the licences ... ..	3,644	3,189
Approximate average number of cows kept ...	2,700	2,489

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

961 visits of inspection were paid to cowsheds. Six 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.

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



## REGISTRATION OF PREMISES ON WHICH PIGS ARE KEPT.

	End of 1941.
Number of licensed piggeries ... ..	91
Number of pigs specified on the licences ... ..	3,678
Approximate average number of pigs kept ... ..	1,687

During the year, four new licences to keep pigs were applied for, involving the keeping of forty-eight pigs. These applications were granted. Two licences were transferred and three licences surrendered. 261 visits of inspection to piggeries were made, four piggeries visited were the subject of notices drawing the attention of the occupiers to contraventions of the Liverpool Corporation Act, 1921, and in every case the notice was complied with.

In farms situated in the outer districts of the city, premises registered for the keeping of milch cows may be used also for keeping store cattle.

At the end of 1941, 428 store cattle were kept on registered 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 1941.

Grade of Milk.	Quantity in Gallons.
Tuberculin-tested (Certified) ... ..	None
Tuberculin-tested ... ..	700
Tuberculin-tested (Pasteurised) ... ..	158
Accredited ... ..	6,529
Raw ungraded ... ..	7,487
Pasteurised under licence ... ..	24,530
Heat-treated to pasteurisation standard ... ..	10,266
Sterilized ... ..	6,763
Total ...	56,433

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 1941.

Produced from cows kept within the City.	Brought into the City by road.	Brought into the City by rail.
7,467 gallons	47,928 gallons	1,038 gallons

Total, 56,433 gallons.

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

### Graded Milk.

The daily quantity of graded milk consumed is given in Table 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	0	0	21	0
Producer and retail vendor ...	0	0	1	39	6
Retail vendor only ...	0	8	11	13	3

During the year the following changes in licence-holders took place, namely: The licences of one producer-retailer of Tuberculin Tested (Certified) milk; six producer-retailers, five producers only and six vendors of "Accredited" milk, were surrendered. Six vendors of Tuberculin Tested (Certified) Milk, and four vendors of Tuberculin Tested (Pasteurised) Milk ceased to trade in Graded Milk.



### 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 56,300 children were each supplied with a third of a pint daily. This number is approximately 67 per cent. of the children attending school. During the year, 159 samples were examined bacteriologically and chemically, and the results as a whole were satisfactory in view of war-time conditions. None of the samples was found to be tuberculous.

# THE CLEANLINESS OF MILK.

TABLE 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 1 ml.	Present in 1 ml.	Present in $\frac{1}{10}$ ml.	Present in $\frac{1}{100}$ ml.
A	16	Hospitals and Institutions.	15	1	12	0	2	2
B	12	Do.	12	0	10	2	0	0
C	9	Do.	6	3	3	1	3	2
D	7	Wholesale depot	6	1	5	0	0	2
E	15	Do.	14	1	13	0	2	0
F	10	Do.	5	5	4	0	2	4
G	5	Do.	5	0	4	0	0	1
H	5	Do.	0	5	0	0	0	5
TOTALS	79		63	16	51	3	9	16

TABLE XIV.

THE EXAMINATION OF ACCREDITED MILKS PRODUCED IN LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
	Satisfactory.	Unsatisfactory.	Absent in	Present in			
			1 ml.	1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
108	73	35	37	13	13	16	29
	67.6%	32.4%	34.2%	12.1%	12.1%	14.8%	26.8%

THE EXAMINATION OF ACCREDITED MILKS PRODUCED OUTSIDE LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.		PRESENCE OR ABSENCE OF COLIFORM BACILLI.				
	Satisfactory.	Unsatisfactory.	Absent in	Present in			
			1 ml.	1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
138	83	55	55	12	18	13	40
	60.1%	39.9%	39.9%	8.8%	13%	9.4%	28.9%



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 1 ml.	Present in			
					1 ml.	$\frac{1}{10}$ ml.	$\frac{1}{100}$ ml.	$\frac{1}{1000}$ ml.
January ...	8	6	2	3	1	1	2	1
February ...	1	1	0	0	0	1	0	0
March ...	15	13	2	7	3	5	0	0
April ...	4	4	0	1	1	1	1	0
May ...	3	3	0	3	0	0	0	0
June ...	1	0	1	0	0	0	0	1
July ...	9	0	9	0	0	0	0	9
August ...	6	3	3	0	1	0	1	4
September	7	1	6	0	1	0	1	5
October ...	7	3	4	1	0	0	1	5
November...	7	5	2	2	3	0	0	2
December...	2	0	2	0	0	0	0	2
TOTAL ...	70	39	31	17	10	8	6	29
		55.7%	44.3%	24.3%	14.3%	11.4%	8.6%	41.4%

### Ice Cream.

During the year, 973 visits of inspection were paid to the premises of ice cream vendors and makers. Twelve samples were examined and found satisfactory. In 75 per cent. the total count was under 10,000 organisms per c.c., and in 25 per cent. coliform bacilli were absent in 1 c.c.

## TUBERCULOUS MILK.

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

TABLE XVI.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk ... ..	99	7	7·07%
Ungraded raw milk ...	73	5	6·8%

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

TABLE XVII.

Kind of Milk.	Number of samples	Tubercle bacilli present.	Percentage tuberculous.
Graded milk ... ..	212	6	2·8%
Ungraded raw milk ...	367	45	12·3%

TABLE XVIII.

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 ...	124	75	11	2	13	6·5%
Cheshire ... ..	175	104	26	4	30	10·7%
Denbighshire ...	52	4	4	—	4	7·1%
Flintshire ... ..	16	—	4	—	4	25·0%
Shropshire ... ..	—	17	—	—	—	—
Cumberland ... ..	—	12	—	—	—	—
	367	212	45	6	51	8·8%



## THE ADULTERATION OF FOOD AND DRUGS.

During 1941, 6,810 samples of food and drugs were purchased or taken and submitted for examination. Of these samples 2,195 were formal samples and 4,615 were informal samples.

TABLE XIX.  
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.
82	Milk ... ..	Contained added water ... ..	82	£ s. d. 70 10 0	£ s. d. 90 3 6
8	Milk ... ..	Deprived of milk fat ... ..	8	9 0 0	13 1 0
1	Breakfast savouries	Contained preservative ... ..	1	2 0 0	1 1 0
1	Egg Powder ...	Was devoid of egg ... ..	1	4 0 0	1 1 0
1	Egg Substitute Powder	Giving a label which falsely described the powder.	Warranty defence successful.	—	—
1	Milk Powder ...	Was devoid of milk ... ..	1	10 0 0	1 1 0
1	Milk Substitute Powder.	Giving a label which falsely described the powder.	1	10 0 0	8 8 0
1	Liquid Egg Substitute.	Not of the nature, substance, or quality demanded.	Warranty defence successful.	—	—
1	Liquid Egg Substitute.	Giving a false warranty in writing in respect of liquid egg substitute.	1	10 0 0	1 1 0
1	Butter ... ..	Contained 60 per cent. of margarine ...	1	2 0 0	1 11 0
1	Whole Egg Equivalent.	Not of the nature substance, or quality, demanded.	Warranty defence successful.	—	—
1	Whole Egg Equivalent.	Giving a false warranty in writing in respect of whole egg equivalent.	1	5 0 0	3 3 0
1	Ground Ginger...	Contained preservative ... ..	1	2 0 0	1 1 0
1	Lemon Juice ...	Giving a label which falsely described the lemon juice.	1	15 0 0	1 1 0
3	Disinfectant ...	Unlawfully selling disinfectant... (Unregistered Vendors).	3	4 0 0	6 6 0
105			102	143 10 0	128 19 0
				£272 9 0	

### Fertilisers and Feeding Stuffs.

During 1941, 49 samples of fertilisers and feeding stuffs were submitted for analysis. It was not necessary to take legal proceedings

## Pharmacy and Poisons Act, 1933.

The Pharmacy and Poisons Act, 1933, regulates the sale of poisons. It is the duty of the Local Authority to carry out Part II of the Act, which deals with the registration of persons selling poisons mentioned in the Poisons List Confirmation Order, 1935. The number of names entered in the register is 440. Legal proceedings were taken against three unregistered vendors (see Table XIX).

## REPORT OF THE CITY BACTERIOLOGIST.

In 1941 the number of specimens examined amounted to 106,782, of which 10,974 were from outside authorities and 2,906 for the Armed Forces.

PLAGUE. None of the 3,626 rats examined was found infected with plague.

ANTHRAX. The Government disinfecting station submitted 162 specimens of hair and wool for examination. Of these 81 were untreated and 11 contained anthrax bacilli; 81 were treated and of these none was infected with anthrax.

Examinations made in the Bacteriological Department for the  
City of Liverpool during the year 1941.

Milk (fresh—liquid) ...	...	...	...	...	...	...	...	1,044
Foodstuffs ...	...	...	...	...	...	...	...	53
Water ...	...	...	...	...	...	...	...	1,006
Rats for plague bacilli	...	...	...	...	...	...	...	1,971
Swabs for diphtheria bacilli, etc.	...	...	...	...	...	...	...	57,991
Specimens for enteric	...	...	...	...	...	...	...	6,778
Cerebro-spinal fluid, etc. for pathogenic organisms	...	...	...	...	...	...	...	340
Sputum, etc., for tubercle bacilli	...	...	...	...	...	...	...	1,123
Exudates for anthrax bacilli	...	...	...	...	...	...	...	61
Miscellaneous specimens	...	...	...	...	...	...	...	250
								70,617



**Venereal Diseases :**

Serological tests ... ..	18,667
Other tests... ..	1,790
	<u>20,457</u>

**Port Health Authority :**

Wool and hair for anthrax bacilli ... ..	162
Rats for plague bacilli ... ..	1,655
Foodstuffs ... ..	11
	<u>1,828</u>

**Examinations made for Outside Authorities :**

Bacteriological ... ..	9,278
Venereal Diseases ... ..	1,696
	<u>10,974</u>

**Examinations made for the Armed Forces :**

Bacteriological ... ..	2,289
Venereal Diseases ... ..	617
	<u>2,906</u>

**SUMMARY.****LIVERPOOL :**

Specimens of water, milk, foodstuffs and infectious material ... ..	70,617
Venereal Diseases ... ..	20,457
Port Health Authority ... ..	1,828
	<u>92,902</u>

**OUTSIDE AUTHORITIES :**

Bacteriological ... ..	9,278
Venereal Diseases ... ..	1,696
	<u>10,974</u>

**ARMED FORCES :**

Bacteriological ... ..	2,289
Venereal Diseases ... ..	617
	<u>2,906</u>
	<u>106,782</u>

## HOUSING.

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

During the year, 653 houses were demolished and 3,707 persons re-housed.

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

Certificates have been issued under the above Acts in respect of 6 dwelling-houses which were not in all respects reasonably fit for human habitation.

### Houses Erected on Suburban Estates at 31st December, 1941.

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

Estates.	Non-Parlour.	Parlour.	TOTAL.
Dovecot Estate ... ..	2,331	686	3,017
Edge Lane Drive Estate ... ..	560	311	871
Elms House Estate ... ..	252	—	252
Fazakerley Estate ... ..	1,030	410	1,440
Finch Lane ... ..	54	—	54
Highfield Estate ... ..	—	618	618
King Street, etc., Garston ... ..	76	—	76
Knotty Ash Estate ... ..	389	263	652
Knowsley Estate ... ..	874	—	874
Larkhill Estate ... ..	476	1,834	2,310
„ „ (Flats) ... ..	90	120	210
Norris Green Estate ... ..	4,730	2,965	7,695
Pinehurst Road Estate ... ..	287	395	682
Ronald Street ... ..	78	—	78
Sparrow Hall Estate ... ..	*523	63	586
„ „ „ (Flats) ... ..	36	—	36
Speke (Banks Lane) Estate ... ..	286	—	286
Speke ... ..	728	667	1,395
„ (Flats) ... ..	—	8	8
Speke Road (Flats) ... ..	312	—	312
Springwood Estate ... ..	250	1,249	1,499
„ „ (Flats) ... ..	—	49	49
Walton-Clubmoor Estate ... ..	1,525	1,671	3,196
Woolton ... ..	416	73	489
Partly-developed Estates ... ..	—	554	554
Total within the area of the City ... ..	15,303	11,936	27,239
Huyton Farm Estate ... ..	937	79	1,016
Knowsley Estate ... ..	3,631	710	4,341
„ „ (Flats) ... ..	108	—	108
Total outside the City boundary ... ..	4,676	789	5,465
GRAND TOTAL ... ..	19,979	12,725	32,704

\*Including 12 experimental non-timber houses.



### Housing Statistics.

The total number of houses inspected during the year for housing defects under Public Health or Housing Acts was 3,116, and the number of inspections made for the purpose was 3,591.

Notices were served requiring defects to be remedied under the Public Health Act in respect of 13,124 houses. The number of dwelling-houses in which defects were remedied after service of formal notices was 6,945, and 5,301 defective dwelling-houses were rendered fit in consequence of informal action.

### Housing Act, 1936. Part IV. Overcrowding.

During the year 48,383 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, 1941 (excluding 20 houses built under the powers of the Housing Acts and subsequently sold).. 41,978

Number of houses built in the last two years under—

1.	Housing Act, 1936, Part III ...	...	...	...	130
2.	„ „ „ Part V ...	...	...	...	204

The following table shows the accommodation which has been provided in the Corporation's housing and rehousing schemes up to 31st December, 1941 :—

No. of rooms per dwelling (exclusive of bathroom, sculleries, etc.)	Number of Houses and Flats erected.					TOTALS.
	On Suburban Estates.			In Central Areas.		
	Houses.	Aged persons' cottages.	Flats.	Houses.	Flats.	
1	—	130	18	—	223	371
2	—	220	98	—	1,707	2,025
3	1,422	—	251	18	3,483	5,174
4	17,361	—	207	158	3,123	20,849
5	12,827	—	151	18	230	13,226
6	18	—	—	—	14	32
7	1	—	—	—	—	1
TOTALS ...	31,629	350	725	194	8,780	41,678







# APPENDIX A.

## CITY OF LIVERPOOL.

### Birth-Rates, Death-Rates, and Analysis of Mortality during the year 1941.

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 ... ..	14.2	0.51	12.9	0.00	...	0.03	0.00	0.06	0.07	0.19	5.1	59	
126 County Boroughs and Great Towns, including London ... ..	14.7	0.58	14.9	0.00	...	0.03	0.00	0.07	0.08	0.17	7.5	71	
148 Smaller Towns (Resident Populations 25,000 to 50,000 at Census 1931) ... ..	16.4	0.60	13.0	0.00	...	0.03	0.01	0.06	0.06	0.20	4.6	56	
London ... ..	8.9	0.33	16.3	0.01	...	0.02	0.00	0.04	0.03	0.15	6.8	68	
Liverpool ... ..	19.4	0.74	19.3	0.01	...	0.04	0.01	0.18	0.29	0.16	8.4	106	

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

Puerperal Sepsis,	Others	Total
0.48	1.75	2.23





## CITY OF LIVERPOOL.

Causes of, and ages at, Death during the year 1941.

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 .....	11487	1305	380	179	288	389	1050	3001	4895	14556
Uncertified .....	1766	45	50	49	202	277	526	467	150	—
1. Typhoid and Paratyphoid Fevers .....	8	—	1	1	2	2	2	—	—	9
2. Measles .....	29	14	15	—	—	—	—	—	—	30
3. Scarlet Fever .....	8	1	1	3	3	—	—	—	—	9
4. Whooping Cough .....	127	57	56	11	3	—	—	—	—	135
5. Diphtheria .....	199	13	29	59	89	4	4	1	—	225
6. Influenza .....	114	7	4	1	1	4	11	54	32	116
7. Encephalitis Lethargica .....	25	—	—	—	—	—	14	9	2	28
8. Cerebro-spinal Fever .....	79	11	16	11	12	8	6	11	4	89
9. Tuberculosis of Respiratory System .....	699	5	11	4	8	154	270	216	31	746
10. Other Tuberculous Diseases .....	147	12	33	18	29	34	11	9	1	164
11. Syphilis .....	58	4	—	—	—	3	5	34	12	65
12. General Paralysis of the Insane .....	16	—	—	—	—	—	7	6	3	16
13. Cancer .....	1211	—	1	—	2	3	98	540	567	1379
14. Diabetes .....	90	—	—	—	4	5	5	31	45	105
15. Cerebral Haemorrhage .....	703	—	—	—	—	2	21	201	479	782
16. Heart Disease .....	2413	—	—	1	8	29	134	592	1649	2590
17. Aneurysm .....	2	—	—	—	—	—	—	—	2	2
18. Other Circulatory Diseases .....	498	2	—	—	—	—	6	107	383	542
19. Bronchitis .....	988	58	11	4	4	6	30	306	569	1048
20. Pneumonia (all forms) .....	1013	410	136	22	12	8	54	203	168	1083
21. Other Respiratory Diseases .....	111	—	9	—	3	1	18	47	33	126
22. Peptic Ulcer .....	107	—	—	—	—	—	18	58	21	131
23. Diarrhoea, etc. ....	134	100	13	1	—	3	5	4	8	152
24. Appendicitis .....	29	—	1	—	4	4	6	9	5	35
25. Cirrhosis of Liver .....	9	—	—	—	2	—	—	7	—	11
26. Other Diseases of Liver .....	29	—	1	—	—	—	4	12	12	34
27. Other Digestive Diseases .....	139	15	6	3	5	3	12	29	66	157
28. Acute and Chronic Nephritis .....	251	—	2	1	3	6	32	101	106	273
29. Puerperal Sepsis .....	9	—	—	—	—	3	6	—	—	12
30. Other Puerperal Causes .....	23	—	—	—	—	7	16	—	—	26
31. Congenital Debility, Premature Birth, Malformations, etc. ....	483	476	3	2	2	—	—	—	—	543
32. Senility .....	290	—	—	—	—	—	—	10	280	325
33. Suicide .....	60	—	—	—	1	3	25	23	8	63
34. Other Violence .....	2274	59	52	77	243	332	622	613	276	2492
35. Other Defined Causes .....	865	104	28	8	49	41	134	222	279	1000
36. Causes Ill-defined or unknown.....	13	2	1	1	1	1	—	3	4	13
TOTALS .....	13253	1350	430	228	490	666	1576	3468	5045	14556





## APPENDIX C.

## CITY OF LIVERPOOL.

Infant Mortality during the year 1941.

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

CAUSE OF DEATH.								Under 1 Week.	1 Week and under 2 Weeks.	2 Weeks and under 3 Weeks.	3 Weeks and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths, under One Year.
All Causes.	{	Certified ... ..	291	43	43	43	420	296	300	166	123	1305					
		Uncertified ... ..	13	3	—	1	17	7	6	5	10	45					
Typhoid Fever ... ..								—	—	—	—	—	—	—	—	—	
Chicken-pox ... ..								—	—	—	—	—	—	—	—	—	—
Measles ... ..								—	—	—	—	—	1	2	7	4	14
Scarlet Fever ... ..								—	—	—	—	—	—	—	—	1	1
Whooping Cough ... ..								—	—	—	—	—	9	14	13	21	57
Diphtheria ... ..								—	—	—	—	—	6	1	3	3	13
Cerebro Spinal Fever ... ..								—	—	—	—	—	—	3	5	3	11
Influenza ... ..								—	—	—	—	—	1	—	4	2	7
Dysentery ... ..								—	—	—	—	—	—	—	1	—	1
Erysipelas ... ..								—	—	—	—	—	—	1	—	—	1
Pulmonary Tuberculosis ... ..								—	—	—	—	—	—	5	—	—	5
Tuberculous Meningitis ... ..								—	—	—	—	—	—	3	3	3	9
Other Tuberculous Diseases ... ..								—	—	—	—	—	1	—	2	—	3
Meningitis (not Tuberculous) ... ..								—	1	—	—	1	1	3	2	1	8
Convulsions ... ..								3	—	—	2	5	4	—	—	3	12
Bronchitis ... ..								—	—	—	3	3	19	19	11	6	58
Pneumonia (all forms) ... ..								8	3	7	12	30	113	145	64	58	410
Diarrhoea ... ..								—	—	—	—	—	—	—	—	—	—
Enteritis ... ..								1	—	4	3	8	34	34	19	5	100
Other Diseases of Stomach ... ..								—	—	—	—	—	3	—	1	—	4
Syphilis ... ..								—	—	—	—	—	3	—	1	—	4
Rickets ... ..								—	—	—	—	—	—	—	—	—	—
Suffocation ... ..								—	—	—	2	2	5	2	3	—	12
Injury at Birth ... ..								32	4	1	—	37	1	—	—	—	38
Atelectasis ... ..								36	3	—	—	39	—	—	—	—	39
Malformations ... ..								21	7	3	6	37	14	3	7	—	61
Premature Birth ... ..								175	21	21	7	224	30	4	—	—	258
Atrophy, Debility and Marasmus... ..								7	2	4	3	16	27	16	1	—	60
Other Causes ... ..								21	5	3	6	35	31	51	24	23	164
								304	46	43	44	437	303	306	171	133	1350

Net Births in the year	{	Legitimate	... 12,482
		Illegitimate	... 809

Net Deaths in the year of	{	Legitimate Infants	1,240
		Illegitimate Infants	110





## APPENDIX D.

## CITY OF LIVERPOOL.

## Notifiable Diseases (other than Tuberculosis) during the Year 1941.

DISEASE.	NUMBER OF CASES NOTIFIED.														Cases admitted to Hospital	TOTAL DEATHS
	At all Ages.	At Ages—Years														
		Under 1	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	65—			
Small-pox .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Scarlet Fever .....	1574	10	45	96	142	149	674	238	94	100	19	7	—	687	8	
Diphtheria .....	3038	57	108	202	274	312	1141	446	239	210	32	16	1	2933	199	
Enteric Fever (including Para-typhoid) .....	565	—	11	21	24	22	74	92	130	135	20	32	4	528	8	
Interperal Pyrexia.....	255	—	—	—	—	—	—	—	30	194	31	—	—	237	—	
Pneumonia .....	1723	162	137	121	71	47	111	43	149	245	210	337	90	522	303	
Cerebro-spinal Fever .....	453	47	27	33	25	19	50	38	49	84	39	36	6	428	79	
Polio-myelitis and Polioencephalitis ..	3	—	—	—	1	—	—	—	1	—	1	—	—	2	—	
Encephalitis Lethargica .....	5	—	—	—	—	—	—	—	1	1	1	2	—	5	25	
Dysentery .....	41	3	2	1	1	—	1	—	3	2	3	9	16	38	18	
Ophthalmia Neonatorum .....	620	620	—	—	—	—	—	—	—	—	—	—	—	165	—	
Erysipelas .....	530	9	7	3	5	2	8	10	28	102	102	183	71	149	10	
Malaria .....	46	—	—	—	—	—	—	—	5	25	7	9	—	29	3	
Eanthrax .....	3	—	—	—	—	—	—	—	—	—	1	2	—	3	—	
Measles .....	4305	206	242	338	323	341	2302	269	119	151	12	2	—	279	29	
Whooping Cough .....	3571	461	484	531	520	391	1138	30	6	8	2	—	—	357	127	
TOTALS .....	16732	1575	1063	1346	1386	1283	5499	1166	854	1257	480	635	188	6362	809	





## DEATHS REGISTERED DURING THE YEAR 1941



