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REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

FOR THE YEAR

1952

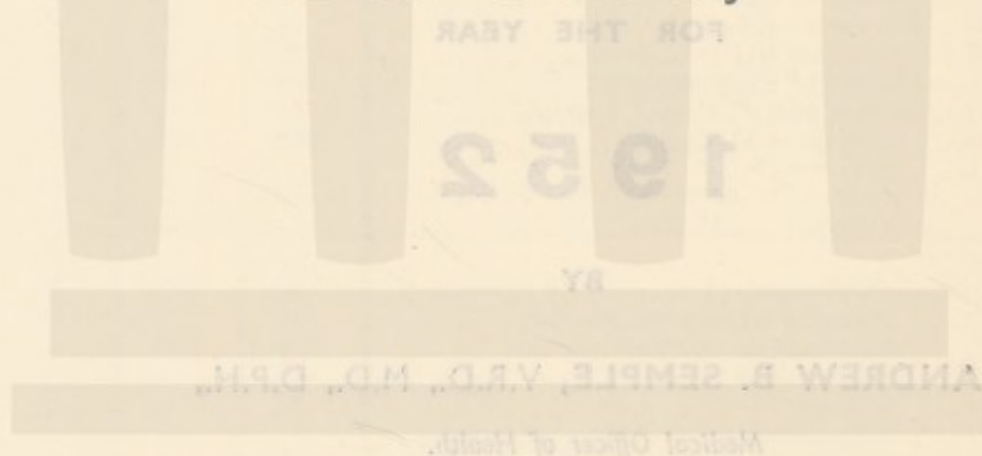
BY

ANDREW B. SEMPLE, V.R.D., M.D., D.P.H.,

Medical Officer of Health.



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MY LORD MAYOR, LADIES AND GENTLEMEN,

Throughout the year 1952, with which this report deals, Professor W. M. Frazer was Medical Officer of Health. He retired on the 6th March, 1953, after giving 21 years of arduous service to the Liverpool Corporation. During that long period he applied his penetrating intellect and administrative flair to many diverse communal health problems such as slum clearance, and to the creation of one of the finest municipal hospital services in the country. He did this not solely as a career, but also with a deep sense of duty in a sincere desire to prevent disease and promote health among the citizens of his native city. It is fitting, therefore, that the first words of this report should acknowledge his distinguished service to Liverpool and to public health.

This year the report includes a special contribution consisting of an account to the Ministry of Health on the working of the various services provided by the department under the National Health Service Act, 1946. This appears in the form of a special supplement at the end of this volume, and is a description of the progress made since July, 1948.

The Registrar-General estimated that the civilian population of the City at mid-year was 791,500, and this figure has been used in the calculation of certain statistics. The natural increase of the population, that is, the excess of births over deaths, during the year was 6,845. The total number of births in 1952 was 15,839, comprising 8,118 males and 7,721 females giving a birth rate of 20.0 per thousand of the population which is almost the same as the previous year when the figure was 19.9. The percentage of illegitimate births was also the same as 1951 being 5.5 per cent. of the total births.

The total number of deaths in 1952 was 8,994 giving a general death rate of 11.4 compared with 13.6 for 1951. It will be remembered that in 1951 the City experienced a severe influenza epidemic which caused the high death rate in that year. The death rate of 11.4 is more in keeping with the mortality experience of recent years. In England and Wales in 1952 the death rate was 11.3 and in the table facing page 2 in which the death rates of a number of large towns are

compared after adjustment for the age and sex of the populations, it will be seen that the Liverpool death rate compares favourably with other large cities.

The infant mortality rate was the same as in 1951, namely, 35 per 1,000 live births. The neo-natal rate (deaths in the first four weeks of life) rose from 20.3 to 22.5 per 1,000 live births. There was some reduction in the death rate among illegitimate infants. Although the infant mortality figure shows no change, this has been a hard won achievement and, to maintain this low figure in view of the many difficult social conditions still existing in Liverpool, can certainly not be regarded as unsatisfactory. There is still room for improvement, the infant mortality rate for England and Wales is 28 and that for the 160 great towns of the country being 31. We have reached the stage in Liverpool when education and training in child care must be intensified and made readily available to all expectant and nursing mothers if the infant mortality figure is to be reduced. The health visitor is the right person to do this and today her rôle is largely educational. I trust and hope that with the co-operation of my general practitioner colleagues we shall achieve, by means of team work by the health visitor and family doctor, a still further reduction in the infant mortality rate in the years to come.

Generally speaking, the year was a quiet one as far as infectious diseases were concerned. Towards the latter half of the year there was, however, a widespread prevalence of dysentery due to *Shigella sonnei* throughout the City. This mild but somewhat troublesome disease mainly affects children and has caused difficulties in day nurseries, nursery schools, and primary schools.

A new development in the after-care of poliomyelitis is particularly noteworthy, namely, the institution of swimming classes for persons suffering from the late effects of this disease. The classes have been organised by the Baths Department in close co-operation with the Health Department. Two classes have been held each week and these are proving so popular that the arrangement may have to be extended. My thanks are due to Mr. R. D. Bland, Manager and Engineer of the Baths and Washhouses Department, and to his Committee for their interest and assistance in this venture.

The Council's scheme for the ascertainment and prevention of Weil's disease (infective jaundice) in sewer workers has been continued. Although it has only been in operation for two years, and it is too early as yet to assess the results, no case of Weil's disease occurred in a sewer worker during the year.

Diphtheria immunisation has continued throughout the year and some 19,113 children were immunised or given a booster dose of diphtheria prophylactic. The percentages of the child population immunised are now—

0—5 age group ... 41.7 per cent.

5—15 age group ... 78.1 per cent.

In 1952, only 8 cases of diphtheria occurred in the City with 1 death as compared with 2,496 cases and 99 deaths in 1942. Since 1949 there has been a steady increase in the number of babies given primary immunisation and this is one of the most encouraging features in the department's work. Similarly, the figures for vaccinations have been maintained, being 8,325 in 1949 and 10,086 in 1952.

The incidence of tuberculosis as judged by 1,569 primary notifications received in 1952 compared with 1,531 in 1951 remains much about the same, but there has been a considerable reduction in the death rate from respiratory tuberculosis. Table V on page 58 shows that between 1949 and 1952 the figure has been halved. This has been largely brought about by development of advances in the medical and surgical treatment of respiratory tuberculosis in which the former municipal hospitals in this City have played a leading part. It is hoped that with the progress being made in B.C.G. immunisation, mass radiography and domiciliary visiting by the tuberculosis health visitors, that some decline in the incidence rate of this disease will follow. Although the number of contacts examined has increased during the year, 2.4 per case as compared with 2.2 per case in 1951, this is not yet satisfactory. The fact that tuberculosis is an infectious disease and that its control depends on examination of contacts, together with early case finding and some form of isolation of infected persons who act as a reservoir of infection in the community, is not yet fully appreciated.

SLUM CLEARANCE.

Normal progress in regard to slum clearance ceased in 1939, but recommenced in 1947 in the central areas of the City. Steady progress has been made and will be greatly increased as rehousing accommodation becomes available. During 1952, 524 houses were represented in Clearance Areas in addition to 92 individual unfit houses, with a view to Demolition Orders being made. Representations were also made in respect of 3 houses listed as Buildings of Architectural and Historic Interest under the Town and Country Planning Act, 1947. Under Section 3 of the Housing Act, 1949, it is permitted to make a Closing Order instead of a Demolition Order for the purpose of preserving these buildings.

FOOD PREMISES.

The prevention of contamination of food has been given special attention by the sanitary inspectors. Frequent visits were made to all food premises, advice given where necessary, and immediate action taken in respect of legislative infringements. The importance of personal hygiene in all processes connected with food has been emphasised and efforts made to ensure hygienic conditions in all food premises. Adequate facilities to encourage a high standard of personal cleanliness were insisted upon and every opportunity taken to teach food handlers the need for clean habits and the instinctive use of the facilities provided.

SMOKE ABATEMENT.

The encouraging results of smoke abatement during the year have enabled consideration to be given to intensifying the fight against industrial smoke pollution from another angle during the forthcoming year, when it is hoped to commence the development of a central area smokeless zone, and prior approval of all new fuel using plant.

WELFARE SERVICES.

Reference has been made in previous annual reports to the progress made in the provision of residential accommodation for aged persons in accordance with the City Council's scheme under the National Assistance Act. The specially planned model hostel in Aigburth Vale, which will accommodate fifty elderly persons is almost ready for occupation, whilst adaptations of a large house in Ullet Road, to accommodate fifty-five residents, are also nearing completion. Every step has been

taken to bring to the notice of elderly persons, especially those who live alone, the local authority and other services available for their well-being, and the good work continued during the year by the welfare visitors in their visits among the aged.

A review of the position in regard to the provision of temporary accommodation has been made, and measures with the object of restricting such provision within the true meaning of "temporary" have been introduced.

HOME HELP SERVICE.

The calls on this service have been changing somewhat in character. Formerly the demand came almost wholly for help in maternity cases, but latterly we have been experiencing an increasing number of calls from aged persons. Out of 2,035 cases assisted in 1952, no less than 883 were old age pensioners.

AMBULANCE SERVICE.

The demands for ambulance transport continued to be heavy and, despite difficulties, removals were carried out with the minimum delay. All possible steps have been taken to minimise any abuse of the Service.

MENTAL HEALTH SERVICE.

Steady progress has been made in the work of the Mental Health Service. 250 defectives now attend Occupation Centres as against 50 in 1948 and it is hoped, as soon as practicable, to develop this type of training by providing a new Centre in the north of the city. The serious shortage of accommodation in Mental Deficiency Institutions has continued and, at the end of the year, 73 defectives in Liverpool were urgently in need of admission.

RESEARCH.

During the period under review, a considerable amount of research work has been carried out. The use of Gamma Globulin in the prevention and attenuation of measles has been continued and is providing a boon to hospitals and general practitioners in this City.

The Maternity and Child Welfare Section have continued their investigation into virus infections during pregnancy, and a Ministry of Health survey of the growth of children under five years. Through-

out the year much work has been done by the Health Department for the North Wales, West Cheshire and South West Lancashire Cancer Research Committee. The City is undertaking the largest part of the enquiry of any of the co-operating local authorities, and during the year over 600 cases were investigated. This has greatly added to the work of the health visitors and senior medical staff, who scrutinise the results of each report. However, it is hoped that these enquiries will throw some light on certain aspects of the cancer problem in the Merseyside and North Wales Region. Arising out of this investigation, and the general interest in smoke abatement, and the lethal effects of fog, the Medical Officer of Health has been appointed a member of the Medical Research Council's special committee considering the effects of atmospheric pollution on the incidence of lung cancer.

I wish to record my thanks to the Chairman and Members of the Health Committee for the courtesy and kindness with which they have considered the reports and recommendations made to them in the course of the year. I also desire to acknowledge the assistance given by other departments in providing certain information contained in this report. I am especially grateful to all the staff of the department, whose loyal service and efficient work this volume records.

I am,

Your obedient Servant,

ANDREW B. SEMPLE,

Medical Officer of Health.

CITY OF LIVERPOOL.

SUMMARY

OF

VITAL STATISTICS FOR 1952.

Area (land and inland water)	...	...	...	...	...	...	27,818 Acres
Population (Estimated by Registrar General)	...	...	...	...	...	...	791,500
Live Births	...	...	15,839	Live Birth rate	...	20.0 per 1,000 of estimated population.	
Deaths (all causes)	...	...	8,994	Death rate	...	11.4 per 1,000 of estimated population.	
Deaths (under 1 year of age)		562		Infant Mortality rate		35 per 1,000 live births	
Deaths from :—							
Seven principal Zymotic diseases	}	43	Zymotic death rate	}	0.05	per 1,000 of the estimated population.	
Pulmonary Tuberculosis	}	269	Pulmonary Tuberculosis death rate	}	0.34		
Other forms of Tuberculosis	}	36	Non Pulmonary Tuberculosis death rate	}	0.04		
Respiratory diseases		1,229	Respiratory death rate	}	1.55		
Cancer	...	1,591	Cancer death rate	}	2.01		
Maternal Deaths	...	7	Maternal Mortality rate	}	0.43 per 1,000 births		

BIRTHS.

The number of live births recorded during the year 1952 was 15,839, equal to a rate of 20·0 per 1,000 of the estimated resident mid-year population. Of the total births, 8,118 were males and 7,721 were females. The number of illegitimate live births was 876 or 5·5 per cent. of the total births, 442 being males and 434 females.

The birth rate in the City of Liverpool was considerably above the average of the great towns, which was 16·9 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate was 15·3 per 1,000

The number of still-births registered was 400 as shown in the table below. This represented 24·6 per thousand of the total (live and still) births registered and 0·50 per 1,000 of the estimated population.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total
Legitimate ...	7,676	7,287	14,963	199	173	372
Illegitimate ...	442	434	876	13	15	28
	8,118	7,721	15,839	212	188	400

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

	Births.	Birth Rate.	Illegitimate Birth Rate per 1,000 population.	% of Total Births.	Total Illegitimate Births.
1938	16,175	18·7	0·89	4·8	771
1942	13,729	20·5	1·30	6·3	871
1943	14,432	21·8	1·55	7·1	1,030
1944	15,412	23·1	1·91	8·3	1,274
1945	14,784	21·7	2·32	10·7	1,582
1946	18,528	25·2	1·84	7·3	1,351
1947	19,904	26·4	1·53	5·8	1,151
1948	17,695	22·3	1·27	5·7	1,009
1949	16,551	20·7	1·18	5·7	943
1950	16,110	20·1	1·21	6·0	968
1951	15,593	19·9	1·09	5·5	859
1952	15,839	20·0	1·11	5·5	876

STILL-BIRTHS.

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

TABLE SHOWING POPULATION, BIRTH-RATES, DEATH-RATES, ZYMOTIC DEATH-RATES, INFANT AND MATERNAL MORTALITY RATES OF 12 LARGE TOWNS
IN ENGLAND AND WALES FOR 1952.

	Birmingham	Bradford	Bristol	Cardiff	Kingston-upon-Hull	Leeds	Leicester	Liverpool	Manchester	Newcastle-upon-Tyne	Nottingham	Sheffield
Registrar Generals' estimated population for 1952	1,119,000	288,000	443,900	244,800	299,400	504,800	285,900	791,500	705,400	289,800	310,700	510,900
Comparability factor—												
(a) births	0.96	1.01	0.99	0.97	1.00	0.96	0.98	0.96	0.95	0.97	0.97	0.99
(b) deaths	1.12	0.97	0.97	1.06	1.14	1.07	1.01	1.19	1.11	1.09	1.08	1.07
Crude birth rate per 1,000 population ...	16.4	15.9	15.23	17.77	18.57	15.3	15.9	20.2	17.53	16.54	16.71	13.71
Birth rate as adjusted by factor ...	15.7	16.0	15.08	17.24	18.57	14.7	15.6	19.0	16.65	16.04	16.21	13.57
Crude death rate per 1,000 population ...	10.24	13.7	11.20	11.13	11.09	12.5	11.4	11.0	12.16	11.81	10.74	11.62
Death rate as adjusted by factor ...	11.47	13.2	10.86	11.79	12.64	13.4	11.5	13.2	13.50	12.87	11.60	12.43
Infantile mortality rate per 1,000 live births	26.8	33	21.45	28.49	39.75	30	24.2	35.5	34.28	29.21	28.13	23.98
Neonatal mortality rate per 1,000 live births	17.6	20	15.09	18.16	21.58	18.6	13.6	22.5	21.75	18.37	17.91	15.42
Stillbirth rate per 1,000 total births ...	19.6	30	20.86	25.09	24.05	23	19.0	24.6	27.45	26.40	22.59	20.01
Maternal mortality rate per 1,000 total births	0.80	0.84	1.01	0.02	0.53	0.76	0.86	0.43	0.71	1.016	0.38	0.70
Tuberculosis rates per 1,000 total population—												
(a) Primary notifications—												
Respiratory	1.11	0.86	1.311	1.275	1.00	0.94	1.34	1.98	1.02	1.484	1.38	1.159
Non-Respiratory	0.13	0.15	0.135	0.1716	0.14	0.19	0.12	0.17	0.13	0.221	0.09	0.125
(b) Deaths—												
Respiratory	0.25	0.23	0.205	0.33	0.30	0.22	0.32	0.34	0.38	0.328	0.32	0.225
Non-Respiratory	0.02	0.03	0.025	0.02	0.02	0.02	0.024	0.04	0.03	0.041	0.03	0.020
Death Rates per 1,000 Population from—												
*Cancer (all forms)	1.90	2.281	1.922	2.03	2.04	1.08	2.08	2.01	2.18	2.118	1.98	2.067
Typhoid & Paratyphoid Fever	0.00	0.00	0.00	0.008	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
Meningococcal Infections	0.01	0.003	0.002	0.008	0.01	0.002	0.0035	0.02	0.003	0.007	0.01	0.004
Scarlet Fever	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.002
Whooping Cough	0.01	0.00	0.002	0.004	0.00	0.00	0.007	0.01	0.01	0.003	0.01	0.002
Diphtheria	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.001	0.000	0.00	0.00
Influenza	0.03	0.04	0.050	0.04	0.03	0.05	0.024	0.07	0.03	0.028	0.03	0.041
Measles	0.00	0.003	0.00	0.004	0.01	0.01	0.007	0.01	0.01	0.003	0.00	0.002
Acute Poliomyelitis and Encephalitis ...	0.01	0.003	0.002	0.008	0.00	0.01	0.00	0.00	0.001	0.000	0.00	0.006
Acute Infectious Encephalitis	0.01	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.003	0.007	0.01	0.002
Smallpox	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
Diarrhoea (under 2 years)	0.02	0.02	0.0045	0.029	0.06	0.01	0.017	0.03	0.03	0.028	0.03	0.022
Diarrhoea (under 2 years) (per 1,000 live births)	1.26	1.52	0.30	1.61	0.34	0.90	1.098	1.70	1.78	1.669	1.54	1.570

*including Leukaemia and Aleukaemia.

of total births lost, the actual number of live births occurring varying from 17,347 in 1935 down to 13,291 in 1941 and up to 15,839 in 1952. It will be noted that there has been a marked and almost continuous fall in the still-birth rate throughout this period, thus constituting a considerable saving of life additional to that which has resulted from the infant mortality rate. The fall is 55 per cent. of the 1935 figure and the rate is below 25 per thousand births, and it is probable that a further considerable reduction is still possible.

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

The still-birth rate among legitimate babies was 24 per thousand and among illegitimate babies was 31 per thousand births.

Year.	Registered Live Births.	Registered Still Births.	Total Births.	Still-births Rate per 1,000 population.	Still-births per 1,000 Live and Still Births.
1935.....	17,347	749	18,096	0.9	41.4
1936.....	17,403	708	18,111	0.8	39.1
1937.....	16,728	618	17,346	0.7	35.6
1938.....	16,175	639	16,814	0.7	38.0
1939.....	15,614	631	16,245	0.8	38.9
1940.....	15,016	519	15,535	0.7	33.4
1941.....	13,291	508	13,799	0.7	36.8
1942.....	13,729	552	14,281	0.8	38.6
1943.....	14,432	485	14,917	0.7	32.5
1944.....	15,412	492	15,904	0.7	30.9
1945.....	14,784	431	15,215	0.6	28.3
1946.....	18,528	539	19,067	0.7	28.3
1947.....	19,904	514	20,418	0.7	25.2
1948.....	17,695	479	18,174	0.6	26.3
1949.....	16,551	358	16,909	0.4	21.2
1950.....	16,110	375	16,485	0.5	22.7
1951.....	15,593	396	15,989	0.5	24.8
1952.....	15,839	400	16,239	0.5	24.6

DEATHS.

The total deaths registered during the year numbered 8,994 (4,687 males and 4,307 females), equal to a death rate of 11.4 per 1,000 of the estimated resident population.

The death rate for England and Wales was 11.3 and that of the great towns was 12.1. The following table shows deaths at various age periods, expressed as a percentage of total deaths, for each year 1920 to 1952:—

Year	Under 5 years.	AT AGES—YEARS.									
		5—	10—	20—	30—	40—	50—	60—	70—	80—	
	%	%	%	%	%	%	%	%	%	%	
1920 ...	33	2	4	5	7	9	11	13	12	4	100
1921 ...	33	2	4	5	6	9	11	13	12	5	100
1922 ...	28	2	4	5	6	9	12	15	14	5	100
1923 ...	30	2	4	5	6	9	12	14	13	5	100
1924 ...	29	2	4	4	6	8	12	15	15	5	100
1920-1924 (average)	30	2	4	5	6	9	12	14	13	5	100
1925 ...	28	2	4	4	5	9	12	15	15	6	100
1926 ...	28	2	3	5	6	9	12	15	14	6	100
1927 ...	25	2	3	5	5	9	12	16	16	7	100
1928 ...	25	2	4	5	5	9	12	16	16	6	100
1929 ...	23	3	3	5	5	9	12	16	17	7	100
1925-1929 (average)	26	2	3	5	5	9	12	16	16	6	100
1930 ...	20	3	4	5	5	9	14	17	16	7	100
1931 ...	23	2	3	5	5	8	12	17	18	7	100
1932 ...	22	2	3	5	5	8	13	17	17	8	100
1933 ...	21	2	3	5	5	8	13	17	18	8	100
1934 ...	20	2	3	5	6	8	12	18	18	8	100
1930-1934 (average)	21	2	3	5	5	8	13	17	18	8	100
1935 ...	17	2	3	5	5	8	13	19	20	8	100
1936 ...	16	2	3	5	5	7	14	19	21	8	100
1937 ...	17	2	2	5	5	7	13	19	21	9	100
1938 ...	16	1	3	4	5	7	13	20	22	9	100
1939 ...	13	1	3	4	4	7	14	21	23	10	100
1935-1939 (average)	16	2	3	5	5	7	13	19	21	9	100
1940 ...	14	2	3	4	5	8	14	21	20	9	100
1941 ...	15	2	4	5	6	8	13	20	19	8	100
1942 ...	14	1	2	4	5	7	14	22	22	9	100
1943 ...	14	1	2	3	5	7	13	22	23	10	100
1944 ...	12	1	2	4	4	7	13	23	24	10	100
1940-1944 (average)	14	1	3	4	5	7	13	22	22	9	100
1945 ...	13	1	2	3	4	7	13	22	23	12	100
1946 ...	16	1	2	3	3	6	12	21	24	12	100
1947 ...	15	1	2	3	4	6	11	20	25	13	100
1948 ...	12	1	1	3	4	7	12	21	26	13	100
1949 ...	9	1	1	3	4	6	12	22	28	14	100
1945-1949 (average)	13	1	2	3	4	6	12	21	25	13	100
1950 ...	8	1	1	3	3	6	12	22	29	15	100
1951 ...	7	—	1	2	3	6	11	22	31	17	100
1952 ...	7	—	1	2	3	6	12	22	30	17	100

ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1950, and during the years 1951 and 1952.

Years.	(a) Infective diseases (less Diarrhoea and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhoea).	Total Deaths from (a), (b), (c) & (d)	(e) Cancer.	Total Deaths from all causes.
1871-1880	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
1941-1950	2,645	6,987	15,728	4,328	29,723	13,265	98,347
1951	111	449	2,339	310	3,209	1,559	10,648
1952	91	305	1,229	292	1,917	1,591	8,994

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

Years.	(a)	(b)	(c)	(d)	Total Deaths from all causes.
1871-1880	19.2	13.5	20.2	10.0	100.0
1881-1890	14.1	12.7	23.2	9.4	100.0
1891-1900	9.3	10.8	24.6	12.7	100.0
1901-1910	8.6	10.6	21.8	12.0	100.0
1911-1920	7.9	10.9	27.3	8.9	100.0
1921-1930	6.6	10.7	25.0	6.9	100.0
1931-1940	5.6	8.1	15.7	5.2	100.0
1941-1950	2.6	7.1	15.9	4.4	100.0
1951	1.0	4.2	22.0	2.9	100.0
1952	1.0	3.4	13.7	3.2	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 (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
1941-1950	0.4	1.0	2.2	0.6	4.1	1.8	13.7
1951	0.1	0.6	3.0	0.4	4.1	2.0	13.6
1952	0.1	0.4	1.5	0.4	2.4	2.0	11.4

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

1871-1880	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1881-1890	69.0	88.0	104.0	85.7	89.1	125.0	91.0
1891-1900	42.0	75.0	104.0	107.2	79.3	175.0	84.0
1901-1910	36.0	61.0	79.0	89.3	64.3	225.0	70.0
1911-1920	26.0	50.0	83.0	56.7	56.0	250.0	67.0
1921-1930	17.1	40.0	58.8	36.8	38.5	280.0	47.7
1931-1940	13.5	30.6	36.8	25.0	27.2	375.0	48.1
1941-1950	7.0	27.0	38.4	21.1	23.7	455.0	48.0
1951	1.9	16.6	52.6	14.3	23.7	500.0	47.7
1952	1.9	11.1	26.3	14.3	13.9	500.0	40.0

Deaths in the various Wards of the City.

Abercromby	266	Netherfield	184
Aigburth	278	North Scotland	150
Allerton	137	Old Swan	447
Anfield	268	Princes Park	208
Breckfield	216	St. Anne's	116
Brunswick	151	St. Domingo... ..	221
Castle Street	3	St. Peter's	21
Childwall	197	Sandhills	146
Croxteth	453	Sefton Park East	254
Dingle	285	Sefton Park West	243
Edge Hill	260	South Scotland	146
Everton	256	Speke	138
Exchange	23	Vauxhall	45
Fairfield	273	Walton	374
Fazakerley	267	Warbreck	310
Garston	155	Wavertree	400
Granby	219	Wavertree West	196
Great George	68	West Derby	480
Kensington	227	Miscellaneous (No fixed	
Kirkdale	395	abode or resident out of	
Little Woolton	37	England and Wales) ...	167
Low Hill	207		
Much Woolton	107		8,994

INFANTILE MORTALITY.

The following table shows the deaths and death-rates of infants under one year of age for the year 1952:—

	Infant Deaths.	Infant Death Rates.
All Infants	562	35 per 1,000 live births.
Legitimate Infants	532	35 „ legitimate live births.
Illegitimate Infants	30	34 „ illegitimate live births.

Analysis of causes of Infant Mortality in successive quinquennia 1896-1950, and the years 1951 and 1952

(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.	Ext Cau
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	88
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	88
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	88
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	88
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	88
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	88
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,931	88
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	88
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691	88
1941/1945	71,648	5,512	341	71	403	1,704	548	2,193	88
1946/1950	88,788	5,034	311	47	213	1,109	963	2,226	88
1951	15,593	548	21	3	5	118	33	351	88
1952	15,839	562	25	2	5	97	30	294	88

(B).—Death Rates per 1,000 Births.

1896/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0	88
1901/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1	88
1906/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7	88
1911/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1	88
1916/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0	88
1921/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1	88
1926/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1	88
1931/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3	88
1936/1940	19.4	77	7.0	0.9	6.4	17.9	8.8	32.9	88
1941/1945	21.3	78	4.8	1.0	5.6	24.1	7.7	30.7	88
1946/1950	22.9	56	3.4	0.5	2.3	12.3	10.5	25.1	88
1951	19.9	35	1.3	0.2	0.3	7.6	2.1	22.5	88
1952	20.0	35	1.6	0.1	0.3	6.1	1.9	18.6	88

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

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

1896/1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1901/1905	100.0	91.0	102.3	89.3	95.0	91.5	76.5	94.0	77
1906/1910	93.0	78.6	107.1	62.9	78.6	83.1	57.8	91.0	80
1911/1915	87.0	72.5	91.9	50.0	57.9	81.5	56.9	84.0	81
1916/1920	76.0	61.4	87.4	32.2	49.3	88.7	32.7	82.0	85
1921/1925	75.1	54.9	80.3	30.6	24.9	84.7	29.9	70.8	84
1926/1930	66.2	49.7	80.3	17.7	18.9	83.5	30.4	60.9	80
1931/1935	61.4	47.2	79.5	14.8	18.9	72.2	23.4	69.2	84
1936/1940	58.1	40.7	55.1	14.5	29.0	55.9	15.4	64.5	77
1941/1945	63.8	41.3	37.8	16.1	25.3	75.3	13.5	62.0	86
1946/1950	68.7	29.4	26.9	8.0	10.6	38.5	18.3	48.8	89
1951	59.6	18.5	10.2	3.2	1.3	23.7	3.7	44.1	88
1952	59.9	18.5	12.6	1.6	1.3	19.0	3.3	36.4	80

CHILD MORTALITY.

TABLE I.

Year.	Deaths under 1 year of age.	DEATHS, 1 YEAR AND UNDER 5 YEARS OF AGE.							
		Total, 1 year and under 5 years of age.	General Diseases (including T.B.).	Respiratory Diseases.	Digestive Diseases.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.
	(a)	(b)	(c)	(d)	(e)	Included in General Diseases.			
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)
920	2,826	1,472	697	536	90	285	129	109	35
921	2,339	1,488	610	474	221	250	135	51	19
922	2,052	1,255	449	577	77	126	98	53	22
923	2,058	1,321	577	478	117	247	85	57	28
924	2,113	1,207	453	498	102	103	98	40	37
925	1,935	1,456	706	480	144	280	139	68	65
926	2,066	1,155	451	456	147	149	107	51	12
927	1,781	1,206	517	481	99	248	75	55	4
928	1,789	1,038	467	369	101	131	161	55	11
929	1,822	1,404	677	518	112	326	110	75	23
930	1,544	756	346	251	65	113	38	78	15
931	1,740	1,062	535	368	67	253	87	74	4
932	1,646	890	486	251	59	227	74	85	3
933	1,655	944	474	287	84	234	53	79	18
934	1,418	799	438	231	40	174	109	77	4
935	1,445	561	269	176	35	110	34	66	2
936	1,311	540	307	148	19	116	65	58	1
937	1,371	579	289	176	43	92	59	61	6
938	1,189	508	264	153	28	77	60	64	3
939	1,098	247	88	82	25	—	14	39	1
940	1,257	522	234	147	25	88	9	63	2
941	1,350	658	279	182	25	15	67	88	4
942	1,039	258	126	50	10	16	9	38	1
943	1,171	208	80	60	15	8	21	21	—
944	884	184	79	33	12	6	11	16	—
945	1,068	185	71	46	16	5	12	13	—
946	1,382	158	66	29	8	13	6	16	—
947	1,367	189	78	41	15	8	32	6	—
948	954	161	67	32	14	8	8	8	—
949	730	149	53	31	12	5	15	2	—
950	601	121	41	37	5	1	11	1	—
951	548	136	40	26	4	3	5	—	—
952	562	97	26	18	8	4	1	—	—

CANCER.

There were 1,591 deaths recorded from cancer, as compared with 1,559 in 1951, this being equivalent to a death-rate of 2.0 per 1,000 of the population.

DEATHS FROM CANCER AT VARIOUS AGE-PERIODS, 1952.

Organs Affected	Males	Females	Number of Deaths										All Ages
			At Ages—Years										
			Under 10	10-	25-	40-	50-	60-	70-	75-	80-		
Buccal Cavity	24	7	—	—	1	2	—	6	6	11	5	31	
Digestive Organs ...	351	326	—	2	15	47	115	196	124	109	69	677	
Respiratory System ...	291	55	—	—	9	29	116	117	42	23	10	346	
Female Genital Organs ...	—	102	1	—	2	10	22	35	16	8	8	102	
Breast ...	1	119	—	—	10	9	32	29	20	12	8	120	
Other Organs ...	175	89	4	12	14	25	44	72	45	31	17	264	
Leukæmia ...	27	24	7	3	7	8	4	12	6	4	—	51	
	869	722	12	17	58	130	333	467	259	198	117	1,591	

INFECTIOUS DISEASE.

The following is a list of the diseases notifiable in Liverpool during 1952:—

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
Food Poisoning (Food and Drugs Act, 1938)	Smallpox
Malaria	Tuberculosis (all forms)
Measles	Typhus Fever
Membranous Croup	Whooping Cough
Ophthalmia Neonatorum	

During the year, medical officers of the Health Department were called out in consultation on 19 occasions by general practitioners in the City to see doubtful cases of infectious disease.

TABLE I.

NUMBERS OF CASES OF INFECTIOUS DISEASE REPORTED DURING 1952,
AND NUMBERS ADMITTED TO HOSPITAL.

	January	February	March	April	May	June	July	August	September	October	November	December	TOTALS	Cases admitted to hospital	Percentage admitted
Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	1	—	2	—	—	—	1	1	2	1	—	—	8	8	100
Scarlet Fever ...	92	102	117	60	69	100	103	60	129	180	218	205	1435	433	30
Measles and German Measles...	949	1188	1580	1191	1259	1298	668	174	71	148	116	198	8840	560	6
Diphtheria ...	—	—	—	1	—	—	—	—	—	1	6	—	8	8	100
Puerperal Pyrexia...	44	66	73	78	62	64	67	53	66	74	55	76	778	721	92
Erysipelas ...	12	10	12	9	4	8	15	8	8	6	10	12	114	61	53
Cerebro-spinal Fever	7	6	6	7	5	2	2	2	3	6	3	5	54	53	98
Poliomyelitis and Polio-encephalitis	3	1	—	—	—	3	4	9	9	3	2	1	35	35	100
Ophthalmia Neonatorum ...	9	14	15	8	16	9	14	5	15	10	8	6	129	66	51
Pneumonia & Influenza Pneumonia	142	107	175	53	61	49	27	17	25	40	66	95	857	189	22
Malaria ...	3	4	1	2	—	3	7	—	3	3	1	—	27	15	55
Dysentery ...	11	47	16	31	38	14	9	2	7	28	41	56	300	227	75
Whooping Cough ...	134	108	142	184	191	211	184	247	275	241	371	343	2631	357	13
Anthrax ...	—	—	—	—	—	—	—	—	—	1	—	—	1	1	100
Chickenpox ...	7	22	31	13	3	2	3	6	4	4	5	9	109	38	34
Food Poisoning ...	3	1	8	5	1	3	9	8	2	2	1	10	53	28	52
TOTALS ...	1417	1676	2178	1642	1709	1766	1113	592	619	748	903	1016	15379	2800	18

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

Plague.

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

Smallpox.

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

Vaccination.

The number of vaccinations taking place in Liverpool during 1951 and 1952 were as follows:—

	<u>1951</u>	<u>1952</u>
Births	15,593	15,839
Number of primary vaccinations ...	9,385	8,240
Number of re-vaccinations	1,346	1,777
Number insusceptible	115	69
	<hr/> 10,846 <hr/>	<hr/> 10,086 <hr/>
Number vaccinated at clinics... ..	5,562	4,174
Number vaccinated by private doctors	5,284	5,912
	<hr/> 10,846 <hr/>	<hr/> 10,086 <hr/>

Typhus Fever.

No case of typhus fever was reported during the year.

Anthrax.

One case of anthrax was treated during 1952 at Fazakerley Hospital, and recovered.

Typhoid and Paratyphoid Fever.

During the year there occurred 4 cases of typhoid fever and 4 cases of paratyphoid "B" fever.

Register of Chronic Typhoid and Paratyphoid Excretors.

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

Case Number	Sex	Age	Disease	Date of illness
7	F.	51	Paratyphoid "B" fever	July, 1941
8	F.	48	"	Aug., 1941
13	M.	42	Typhoid Fever.	Not known
15	F.	57	Paratyphoid "B" fever	Oct., 1949

During the year three chronic carriers were removed from the carrier list having produced twenty negative specimens. All three cases had been admitted to hospital for treatment with terramycin and in two cases a course of this drug was given—the third case produced no positive specimens whilst in hospital. The reason for this is problematical, but it may be that as this carrier resided with another carrier, that some mixing or contamination of specimens had taken place at home when the pre-admission positive specimens were obtained.

Last year, the examination of contacts of carriers was begun, and this year the continuation of these examinations produced two further infected contacts. Further specimens from these contacts, however, proved to be negative.

The investigation was continued during the year into the case of those carriers of paratyphoid and typhoid fevers who had been crossed off the carrier list on the production of three negative specimens during previous years. In all, fourteen such "ex-carriers" were investigated and one was found to be still excreting paratyphoid bacilli. Three others, all females, were found to have had their gall bladders removed for one reason or another. Typhoid bacilli were not discovered in the gall bladder or in the contents of the gall bladder in two cases, but in the third case such bacilli were discovered.

There was a large outbreak of paratyphoid fever in the City in 1949 and many of those cases were discharged from hospital after producing three negative specimens. It was thought that some useful information might be yielded if a number of these cases were further investigated and, accordingly, twenty such cases were investigated—six specimens being obtained from each individual. In no case were typhoid bacilli discovered.

Immunisation against Diphtheria.

TABLE IV.

NUMBER OF DIPHTHERIA IMMUNISATIONS.

Where or by whom immunised.	1925-41	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	
IMMUNISATION CLINICS :												
Carnegie	3586	1503	205	81	32	—	—	—	—	—	—	
Townsend Avenue	3452	2287	688	468	385	559	476	534	436	296	159	
Child Welfare Centres	8133	14436	8271	7717	8875	8343	8006	9290	7783	5677	6283	
SCHOOLS :												
Public Elementary	41551	7926	12907	5430	6052	8409	5658	5510	3438	2787	2941	
Residential	4777	39	378	253	408	209	51	—	33	—	—	
Secondary	—	408	1235	154	718	244	—	—	—	71	—	
HOSPITALS :												
Fazakerley	4114	111	69	76	68	43	17	10	21	6	2	
Fever Hospitals—North, South and East	1723	46	40	44	30	45	38	33	3	—	—	
Alder Hey	1242	131	120	77	61	42	24	13	24	115	148	
Olive Mount	795	74	97	118	175	148	110	46	65	101	—	
Other Hospitals... ..	560	121	47	64	80	45	72	106	115	100	133	
Miscellaneous	1253	45	19	6	—	11	8	—	—	—	—	
Medical Practitioners	1266	241	121	133	75	82	40	688	1617	2066	2396	
TOTALS	72452	27368	24197	14621	16959	18180	14500	16230	13535	11219	12062	

GRAND TOTAL 252,634

In addition to the above immunisations, 7,802 previously immunised children received a reinforcing injection either at school or at one of the clinics.

TABLE V.

PERCENTAGE OF IMMUNISED CHILDREN AT VARIOUS AGE GROUPS.

Age at date of immunisation.	1925	1935	1939	1940	1941	1942	1943	1944	1945	1946	1948	1949	1950	1951	1952	Ratio of immunised to total population at end of year.
Under 1 year	193	193	5	2	4	42	17	1144	2930	3413	4535	2807	5483	4614	5187	4125
1 +	1937	908	338	413	1096	3632	3876	2885	3552	2531	2222	2876	1488	1989	2091	Total under 5 years of age 30,845, being 41.7% of the population of this age.
2 +	1744	524	304	141	857	2551	1181	1123	651	916	529	744	773	246	545	576
3 +	1601	453	248	193	399	2492	1094	687	732	317	380	376	509	245	192	381
4 +	2897	710	453	204	726	248	1124	589	609	573	210	394	415	314	331	150
5 +	9931	2286	1133	737	1254	3273	937	1231	1284	2089	1442	880	1403	1176	998	1568
6 +	11064	2722	1042	771	1218	2885	1442	510	1315	2019	1164	1293	908	867	1179	Total 5-9 years of age 47,860, being 70.9% of the population of this age.
7 +	6715	1110	587	284	689	2082	1514	800	159	1934	662	720	449	187	226	286
8 +	2590	242	138	74	241	1464	1495	643	774	386	806	769	351	307	163	196
9 +	1213	99	26	32	168	1054	1550	593	684	994	281	575	306	255	274	90
10 +	954	95	75	63	154	1061	1585	594	621	948	543	332	227	171	190	177
11 +	1198	113	90	77	182	1137	1876	550	602	667	465	293	63	194	177	126
12 +	1265	126	100	85	216	1585	2265	509	630	363	162	644	55	32	68	59
13 +	1152	114	90	78	183	1236	2086	419	583	314	107	32	43	95	29	44
14 +	252	25	20	17	40	219	473	416	73	244	22	38	50	56	26	14
15 +	1586	158	124	106	260	433	424	328	290	238	180	182	199	318	320	14
Totals.	46175	9666	5106	3488	8087	2736	2449	1699	18180	14500	16230	13535	11219	12062	11311	

Measles.

During 1952, 8,768 cases of measles were reported, representing a case-rate of 11.1 per 1,000 of the population. The number of deaths was 8, making a fatality-rate of 0.09 per 100 cases and a mortality-rate of 1.0 per 100,000 of the population.

DEATHS FROM MEASLES.

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

AGES OF CASES.													
572	1221	1480	1451	1307	2613	71	53					8768	

PERCENTAGE FATALITY AT EACH AGE.													
0.7	0.2	0.1	—	—	—	—	—					0.09	

Whooping Cough.

During 1952, 2,631 cases of whooping cough came to the notice of the Health Department, a figure representing a case-rate of 3.3 per 1,000 of the population. Of these cases 5 proved fatal, corresponding to a death-rate of 0.6 per 100,000 of the population.

Number of deaths from Whooping Cough at various age periods during 1952.							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+
4	1	—	—	—	—	—	5	80.0	20.0	—	—	—	—	—

Cerebro-spinal Fever.

TABLE VI.

CASES AND DEATHS DURING 1952 AND NINE PREVIOUS YEARS.

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
Cases	83	58	47	48	72	47	39	49	53	54
Deaths	22	21	9	13	13	11	15	12	10	17
Fatality-rate per 100 cases	26.5	36.2	19.1	27.1	18.1	23.4	38.5	24.5	18.9	31.5

Poliomyelitis.

During the year there occurred 35 cases of poliomyelitis with one death. The following table gives the age distribution of the notified cases:—

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	Total
6	6	4	3	1	8	2	1	4	—	—	35

Deaths from Influenza and other Respiratory Diseases.

TABLE VII.

	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.
1871-1880 ...	2,976	20.2	5.7	100
1881-1890 ...	3,251	23.2	5.9	104
1891-1900 ...	3,582	24.6	5.9	104
1901-1910 ...	3,299	21.8	4.5	79
1911-1920 ...	3,648	27.3	4.7	83
1921-1930 ...	2,904	24.7	3.5	61.4
1931-1940 ...	1,762	15.1	2.1	36.8
1941-1950 ...	1,573	15.9	2.2	38.0
1951... ..	2,339	22.0	3.0	52.6
1952... ..	1,229	13.7	1.5	26.3

Dysentery.

During 1952, 300 cases of bacillary dysentery were reported in the city—Sonne 291, Flexner 3, and clinical diagnosis only, 6.

CREMATION.

The number of cremations which took place at the Liverpool Crematorium during 1952 was 1,814.

MATERNITY AND CHILD WELFARE.

VITAL STATISTICS.

Live births	...	...	15,839	Live birth rate	...	...	20 0
Still-births	...	...	400	Still-birth rate	...	...	0.5
Total births			...	...	...	16,239	
Infant Mortality rate			...	...	...	35	
Neo-natal Mortality rate			...	...	...	22.5	
Maternal Mortality rate			...	...	...	0.43	

THE MIDWIFERY SECTION.

During the year, 287 midwives gave the required notice under Section 15 of the Midwives Act, 1951, of their intention to practise midwifery in this city. The number of full-time municipal midwives at the end of 1952 was 51, with 3 part-time midwives. They attended:—

Midwifery cases	...	...	3,135
Maternity cases	...	...	640
			—
			3,775
			—

Emergency Midwifery Service.

33 Calls were made.

26 Blood transfusions were given.

Hospital Discharges of Patients before 14th day of Puerperium.

Number of patients discharged 6,667

Number of Visits paid by Domiciliary Midwives to Premature Infants beyond 14th day.

To Domiciliary Births	...	...	...	...	692
To Hospital Discharges	...	...	...	...	415
					—
					1,107
					—

Domiciliary Midwives Emergency Ambulance Service.

During the year domiciliary midwives were called out by Ambulance Service to 77 cases.

Cases of Investigation re Home Conditions were referred by Hospitals and Clinics.

The number of cases referred during the year was ... 1,686

**Statement of Notifications of Live and Still Births received
during the year 1952.**

	Live Births.	Still Births.	Total.	Still Births per cent. of Total.
Midwives (Municipal)	3,242	38	3,280	1·2
„ (Independent)	8	—	8	—
Medical Practitioners	1,006	20	1,026	2·0
Liverpool Maternity Hospital ...	2,688	81	2,769	2·9
Other Hospitals	9,591	283	9,874	2·9
District Homes	1,051	10	1,061	0·9
	17,586	432	18,018	2·4

The number of still-births notified was 432 of which 48 were notified by midwives. Enquiries were made into the circumstances of all still-births.

Visits paid by Midwifery Staff.

Routine and special visits to midwives	1,435
Visits regarding claims for fees from medical practitioners for attendance in emergency cases	845
Visits in respect of ophthalmia neonatorum	6,394
Special visits (puerperal pyrexia, etc.)	495

Medical Assistance.

Under the rules of the Central Midwives Board, midwives sought medical aid in 1,435 cases—1,028 mothers and 407 children.

Consultant Services.

The total number of occasions on which the services of a consultant obstetrician were requisitioned in connection with cases of puerperal emergencies or complications during pregnancy was 52.

Prevention of Spread of Infection.

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

Public Health (Notification of Puerperal Pyrexia) Regulations, 1951.

The number of cases of puerperal pyrexia notified during the year was 778. Of these, 72 occurred in the practice of midwives, and in 41 cases nurses were provided.

Maternal Mortality.

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

BIRTHS REGISTERED.				MATERNAL MORTALITY.					
Year.	Live Births.	Still Births.	Total Births.	Puerperal Sepsis.		Other Puerperal Causes.		Total.	
				Deaths.	Rate per 1,000 Total Births.	Deaths.	Rate per 1,000 Total Births.	Deaths.	Rate per 1,000 Total Births.
1930	18,881	774	19,655	16	0·81	59	3·00	75	3·81
1931	18,626	722	19,348	20	1·03	35	1·81	55	2·84
1932	18,149	827	18,976	16	0·84	35	1·85	51	2·69
1933	16,929	680	17,609	29	1·65	31	1·76	60	3·41
1934	17,593	685	18,278	25	1·37	26	1·42	51	2·79
1935	17,347	749	18,096	29	1·60	30	1·66	59	3·26
1936	17,403	708	18,111	20	1·10	44	2·43	64	3·52
1937	16,728	618	17,346	10	0·58	30	1·73	40	2·31
1938	16,175	639	16,814	11	0·65	22	1·31	33	1·96
1939	15,614	631	16,245	5	0·32	24	1·54	29	1·86
1940	15,016	519	15,535	7	0·45	24	1·56	31	2·01
1941	13,291	508	13,799	9	0·68	23	1·74	32	2·42
1942	13,729	552	14,281	14	0·98	20	1·40	34	2·38
1943	14,432	485	14,917	12	0·80	22	1·47	34	2·27
1944	15,412	492	15,904	13	0·82	18	1·13	31	1·95
1945	14,784	431	15,215	7	0·46	16	1·05	23	1·51
1946	18,528	539	19,067	2	0·10	17	0·89	19	0·99
1947	19,904	514	20,418	1	0·05	16	0·78	17	0·83
1948	17,695	479	18,174	3	0·16	11	0·60	14	0·77
1949	16,551	358	16,909	4	0·24	5	0·29	9	0·53
1950	16,110	375	16,485	1	0·06	6	0·36	7	0·42
1951	15,593	396	15,989	2	0·12	8	0·50	10	0·62
1952	15,839	400	16,289	—	—	7	0·43	7	0·43

The Maternal Mortality rate for Liverpool is lower than that for the country as a whole. As will be seen by the above Table, there has been a remarkable decline in the number of maternal deaths during the past twenty years both from Puerperal Sepsis and from other Puerperal causes. This is an achievement of which the City may well be proud.

Special Investigation of Maternal Deaths.

As a result of inquiries it was found that 15 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	9
Class II—Deaths not primarily due to pregnancy	6

Ophthalmia Neonatorum.

(Inflammation of the eyes of the newly-born.)

Number of cases notified during the year	129
Number of cases brought to the notice of the Department (including cases notified during the year)	719
Mild cases	665
Severe cases	54
Number of cases in which vision was lost	0
Number of cases in which vision was impaired	0
Number of cases still under treatment at the end of the year	5
Number of cases admitted to hospital for special treatment	4
Home visits by Ophthalmic Nurses	762
Visits to cases of Ophthalmia Neonatorum	719
Visits to cases of chronic inflammation	19
Visits to cases brought forward from the previous year ...	24

Arrangements are made with the City Bacteriologist to examine the discharge from inflamed eyes in the newly-born, namely:—

No. of cases brought to the notice of the department.	Cases from which specimens were examined by the City Bacteriologist and at Hospital.	No. of cases of positive Gonorrhoea.	Percentage to total cases examined.	Percentage to total notifications.
762	142	4	2·8	0·5

Nursing Homes.

The nursing homes on the register at the end of the year numbered 12, the approximate number of beds being 176. Babies born in nursing homes numbered 391, including 2 twin births.

THE HEALTH VISITORS' SECTION.

Ante-Natal and Post-Natal Clinics.

Total number of centres at which ante-natal clinics are held	23
Number of clinic sessions held per week	38
„ „ new cases attending ante-natal clinics	6,480
Total attendance at ante-natal clinics	35,377
„ „ „ post-natal „	1,166

Child Welfare Clinics.

Total number of centres at which child welfare clinics are held	23
Number of clinic sessions held per week	41
„ „ new cases—Under 1 year of age	8,490
Aged 1-5 years	495
Total attendances—Under 1 year of age	75,138
Aged 1-2 years	8,584
2-5 years	6,324

Statistics relating to Home Visits.

Visits to expectant mothers by health visitors	7,301
Number of births visited during the year... ..	15,100
Re-visits to infants during the 1st year	92,033
„ „ „ aged 1 to 5 years	139,038
Visits to children discharged from hospitals	2,301

Visits to cases of Infectious Disease—

Visits to cases of measles	10,099
„ „ „ „ infantile diarrhoea	73
Enquiries into deaths due to diarrhoea	30

Children under five years of age were referred for special treatment to the School Health Department as follows:—

Defective vision	345
Otorrhœa	—
Orthopædic defects	247

Care of Illegitimate Children.

During the year, the City Council continued the payment of grants to the voluntary organisations undertaking work in connection with unmarried mothers and their babies.

Co-operation between the staff of the Maternity and Child Welfare Department and the various voluntary workers was maintained. A live register of all illegitimate children enables this surveillance to be continuous.

Neo-natal Mortality.

The number of neonatal deaths amounted to 356, equal to a rate of 22.5 per thousand live births registered. Special enquiry was made into the deaths of all children who died within 28 days after birth.

Premature Infants.

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

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

Dental Treatment of Expectant and Nursing Mothers and Pre-School Children.

The arrangements for the treatment of Maternity and Child Welfare patients was in general similar to the preceding year. The staff available was still the equivalent of 7/11ths of one full-time officer.

Two changes of note took place during the year, namely, arrangements for the provision of dentures by the Authority and that in November the School Health Service became responsible for the carrying out of dental treatment during the latter part of the year.

The School Health Staff began to expand at the end of the year, and there is, therefore, hope that more facilities will be available for nursing mothers and children under five years of age.

Statistical Report.

The Ministry of Health requires that the statistical report of dental treatment for Maternity and Child Welfare cases shall be furnished in the form which follows:

(a) NUMBERS PROVIDED WITH DENTAL CARE.

	Examined	Needing Treatment	Treated	Made Dentally
Expectant and Nursing Mothers	2,556	* 2,553	2,276	—
Children under Five	265	262	255	—

(b) FORMS OF DENTAL TREATMENT PROVIDED.

	Extractions	Anaesthetics		Fillings	Sealings or Scaling and gum treatment	Silver Nitrate Treatment	Dressings	Radiographs	Dental provision	
		Local	General						Complete	Partial
Expectant and Nursing Mothers	10,312	20	2,036	—	220	—	—	—	79	—
Children under five	646	—	221	—	—	—	—	—	1	—

*In addition to this figure, 378 women were seen by the Clinic Doctor and referred to the Dental Office requiring dental treatment, but did not keep appointments made for examination.

Radiographs, when required, have been carried out at the request of the Maternity and Child Welfare department by the radiologists of the local hospitals, and the Medical Officer would like to take this opportunity of expressing his thanks to the dental consultants at these hospitals, not only for their co-operation in arranging X-ray examinations but also for their readiness to advise the dental officers regarding the treatment of patients suffering from abnormal conditions who have attended the maternity clinics from time to time.

Day Nurseries.

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

					Accommodation for
Banks Road Hut, Garston (19)	...	...	...	...	50 children
25, Derwent Road (13)	...	...	...	...	67 „
1, The Elms, Dingle (8)	...	...	...	...	36 „
18, Great George Square (1)	...	...	...	...	74 „
25, Grove Park, Lodge Lane (8)	...	...	...	...	58 „
12, Holly Road, Fairfield (7)	...	...	...	...	74 „
Mill Road Nurses' Home (6)	...	...	...	...	70 „
Orwell Road Hut, Kirkdale (4)	...	...	...	...	50 „
Salisbury Street Council School, Everton (3)	...	...	...	...	63 „
5/7, Swiss Road, Fairfield (6)	...	...	...	...	60 „
97/99, Upper Canning Street (8)	...	...	...	...	62 „
Wavertree Playground Hut (15)	...	...	...	...	50 „
262/264, Westminster Road, Kirkdale (4)	...	...	...	...	45 „
1, Rose Lane, Mossley Hill (18)	...	...	...	...	42 „
36, Upper Parliament Street (8)...	...	...	...	...	50 „

Infestation by Head Lice.

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

It has always been the practice to examine children where the personal cleanliness of the family is in doubt, but it is not always easy to obtain the co-operation of the mother and older members of the family.

Between 1st January and 31st December, 1952, 350 children under the age of five years were found by the health visitors to be verminous. In all cases, advice was given as to cleanliness and 262 of the mothers (or guardians) agreeing to carry out instructions as to disinfection. In 88 cases, however, they preferred to go to a cleansing station. In a few instances, improvement was maintained, but a hard core is still unsatisfactory. This is a problem which has engaged the attention of health

visitors and school nurses for many years, and the difficulties in dealing with people who have no desire to be clean are increased by present conditions, and to the fact that many women are engaged in work, whilst at the same time endeavouring to carry on their home duties. In such families, the children are frequently not well cared for, especially in regard to personal hygiene.

The heads of 96 mothers were cleansed—96 at home and none at cleansing-stations.

Number of families still needing constant supervision—262.

In addition to the above figures, 61 adults were cleansed at the cleansing station, referred from:—

Hospitals.
Factories.
Large Stores.
Doctors.
Welfare Visitor.

Out of this number 6 were over the age of 60 years. In these cases a Health Visitor has always been in attendance during cleansing.

THE DOMESTIC HELP SERVICE.

The Domestic Help Service provided by the Local Authority was started in October, 1945, with a staff of two officers and eleven Domestic Helps. The subsequent growth of the Service is illustrated in the following table:—

Year.	Total Applications Granted.		Average Number of Daily Helps Employed Weekly.	Total Visits Paid.	Visiting Staff.	Clerical Staff.
	Emergency.	O.A.P.				
1945	38	42	16	206	1	1
1946	292	148	33	1,344	1	1
1947	426	210	44	1,902	1	2
1948	639	255	56	2,659	2	2
1949	944	447	87	3,707	3	2
1950	1,114	482	81	5,234	3	2
1951	1,079	710	92	5,617	3	2
1952	1,152	883	106	5,516	3	2

The emergency service is provided each day for a limited period to patients suffering from acute illness. Maternity cases come within this classification and advance arrangements are made for this service whenever possible thus avoiding delay when the need arises.

The following is a summary of maternity cases assisted since 1949:—

Year.	Pre-Maternity.	Maternity.	Post-Maternity.	Total.
1949	39	251	191	481
1950	55	295	195	545
1951	51	285	197	533
1952	58	307	203	568

The slight increase since 1949 has been partly due to the financial benefits derived from confinement in hospital, and it is felt that the proposed increase in the maternity attendance allowance will influence more mothers to be confined in their own homes.

In contrast to this gradual rise, the Old Age Pensioners' service has shown a marked increase throughout the years as it became more

widely known and appreciated. In December, 1952, 351 old persons were receiving Domestic Help for one or two mornings per week on a semi-permanent basis and the numbers show a weekly rise. Help is given to aged persons who are without other assistance and the duties performed include shopping, housework, taking the patient to hospital, etc. In many cases the Domestic Helps have provided curtains, bedding and other furnishings for their patients from either their own homes or those of their friends.

Several applicants for this service are younger persons who are suffering from tuberculosis or heart disease in need of help for their heavier housework. Help is supplied in such cases but for a limited period only (usually three months), during which time the patient is asked to make private arrangements. This is particularly applicable where the patient can afford to pay for private assistance.

Visits are paid to all applicants before the service is supplied and emergency cases are visited at least once while the Domestic Help is present. It is desirable that pensioners on continuous service should be visited at three monthly intervals, but this is not always possible and depends largely on the urgency of the calls for emergency help.

The following is a summary of maternity cases assisted since 1950:-

Year	1st Maternity	Maternity	2nd Maternity	Year
1951	181	151	38	1949
1952	185	192	52	1950
1953	197	192	51	1951
1954	208	207	58	1952

The slight increase since 1950 has been partly due to the financial benefits derived from confinement in hospital and it is felt that the proposed increase in the maternity attendance allowance will influence more mothers to be confined in their own homes.

In contrast to this gradual rise, the Old Age Pensioners' service has shown a marked increase throughout the years as it becomes more

WELFARE SERVICES.

The main functions of the Welfare Services include:--

- (a) The provision of:
 - (i) residential accommodation for persons who by reason of age, infirmity or any other circumstances are in need of care and attention which is not otherwise available to them;
 - (ii) temporary accommodation for persons who are in urgent need thereof, being need arising in circumstances which could not reasonably have been foreseen or in such other circumstances as may in any particular case be determined.
- (b) Welfare arrangements for blind, partially sighted, deaf, dumb and other handicapped persons.
- (c) Registration and inspection of disabled persons' and old persons' homes.
- (d) Removal to suitable premises of persons in need of care and attention.
- (e) Protection of movable property of persons admitted to hospital or to accommodation provided under Part III of the National Assistance Act, 1948.
- (f) The burial or cremation of the dead where no other person is making suitable arrangements therefor.

Residential Accommodation.

During the year the number of local authority beds at Westminster House was reduced to 980, the number of beds reserved for the use of Regional Hospital Board patients remaining the same at 330, so that the total bed complement at the establishment is 1,310. Westminster House is still very much overcrowded and it will be some considerable time before this overcrowding is relieved to any appreciable extent.

One new small hostel for old people, "Brookfield", Archway Road, Huyton, was brought into use in January and provides accommodation for 19 residents. The completed adaptations at New Grafton House

allowed for 18 more residents to be admitted. Work was begun on the construction of a new hostel at Aigburth for 50 residents, on the adaptation of 54, Ullet Road, for 55 residents, and also at "Beechley", to provide for 27 additional residents. Considerable progress had been made on these projects by the end of the year.

The total accommodation available for use on the 31st December, 1952, was as follows:—

Westminster House	...	...	980	beds
New Grafton House	...	...	88	„
Moreno House	...	...	36	„
Lismore	...	...	33	„
New Parkfield House	...	...	27	„
Park House	...	...	21	„
Brookfield	...	...	19	„
Beechley	...	...	16	„
				„
Total				1,220 „
				„

RESIDENTIAL ESTABLISHMENTS.

STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS.

Establishment	Remaining 31/12/51	Admitted	Discharged	Died	Remaining 31/12/52
Westminster House ...	938	346	201	168	915
New Grafton House ...	67	47	28	—	86
Moreno House ...	29	11	7	1	32
Lismore ...	22	31	20	1	32
New Parkfield House	25	7	6	—	26
Park House ...	21	12	11	1	21
Brookfield ...	—	29	11	1	17
Beechley ...	15	10	12	1	12
TOTAL ...	1,117	493	296	173	1,141

In addition to the numbers of residents in the establishments belonging to the City Council, a number of Liverpool residents are maintained in establishments administered by other local authorities and by voluntary organisations. The income of each resident is supplemented

appropriately by the City Council to enable him (or her) to pay the agreed charge for maintenance. The following table gives the details:—

**PERSONS MAINTAINED IN ESTABLISHMENTS PROVIDED BY OTHER LOCAL
AUTHORITIES AND BY VOLUNTARY ORGANISATIONS.
STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS.**

Authority or Organisation	Remaining 31/12/51	Admitted	Discharged	Died	Remaining 31/12/52
Catholic Blind Asylum, Liverpool	19	4	4	—	19
Herefordshire County Associa- for the Blind	1	—	—	—	1
Jewish Blind Home, Surrey ...	1	—	—	—	1
Manchester and Salford Society for the Blind	1	—	—	—	1
North Regional Association for the Blind	1	—	1	—	—
David Lewis Colony for Epileptics	5	—	—	1	4
Langho Colony for Epileptics ...	22	4	3	1	22
Maghull Homes for Epileptics ...	49	9	4	2	52
St. Elizabeth's Home for Epilep- tics, Much Hadham	2	1	—	—	3
Cotebrook Home for Cripples ...	1	—	—	—	1
Turner Memorial Home	19	3	1	1	20
Salvation Army Home, Liverpool	18	3	2	1	18
Salvation Army Home, Bootle ...	8	1	—	—	9
Salvation Army Home, Penketh...	2	—	—	1	1
Methodist Home for the Aged ...	14	—	3	—	11
Home for Deaf Women, Barrow- ford	1	—	—	—	1
Home for Deaf Women, Bath ...	1	—	—	—	1
Ernest Ayliffe Home for the Deaf, Leeds	—	1	—	—	1
Church Army Home, Bootle ...	2	5	2	—	5
Church Army Home, Lowestoft...	1	—	—	1	—
Home for Aged Jews, Liverpool...	18	3	4	—	17

Authority or Organisation.	Remaining 31/12/51.	Admitted.	Discharged.	Died.	Remaining 31/12/52
Convent of the Good Shepherd, Liverpool	8	—	—	—	8
"Maryland," Formby	—	1	—	—	1
Redcross Home, Portmadoc ...	—	2	1	—	1
Cheshire Foundation Home, Liss	—	1	—	—	1
W.V.S. Home, Liverpool... ..	5	3	4	—	4
52/4 Croxteth Road, Liverpool ...	—	9	—	—	9
British Legion Home, Yorks. ...	2	3	—	1	4
Cumberland County Council ...	1	—	—	—	1
Flintshire County Council ...	1	—	—	—	1
Lancashire County Council ...	2	—	1	—	1
Lincolnshire County Council ...	1	—	—	—	1
West Riding County Council ...	1	—	—	—	1
Bootle Corporation	1	—	—	—	1
Bristol Corporation	1	—	—	—	1
Manchester Corporation	1	—	1	—	—
Portsmouth Corporation	1	—	—	—	1
Southport Corporation	1	—	—	—	1
TOTAL	212	53	31	9	225

Temporary Accommodation.

The provision of temporary accommodation for persons becoming homeless for one reason or another continued to be a serious problem during the year, and it was still necessary to retain the use, for this purpose, of the premises at 100, Walton Village, which had been brought into emergency use during 1950. The Liaison Sub-Committee, which deals with this problem, and on which are co-opted officials from various Corporation Departments, the National Assistance Board and interested voluntary bodies, meets at regular intervals and the knowledge of all concerned about individual families is pooled with the object of speeding-up their rehabilitation.

The following table shows the numbers of persons admitted to and discharged from the temporary accommodation during the year:—

TEMPORARY ACCOMMODATION PROVIDED UNDER SECTION 21 (1) (b)
OF THE NATIONAL ASSISTANCE ACT.

Establishment	Remaining 31/12/51	Admitted	Discharged	Remaining 31/12/52
Lower Breck Road ...	149	1,038	1,057	130
100 Walton Village ...	26	160	154	32
TOTAL ...	175	1,198	1,211	162

Home Visits.

The following table includes details of the number of requests for assistance received during the year and the numbers of domiciliary visits and re-visits made by the Welfare Visitors.

Requests for advice and help:—

(a) Telephone ...	598
(b) Letters ...	629
(c) Personal application ...	283

No. of visits paid (including 133 visits to handicapped persons) ... 1,969

No. of re-visits (including 20 re-visits to handicapped persons) ... 6,368

No. of persons admitted to:—

(a) residential accommodation ...	506
(b) hospital ...	66

No. of persons referred to Housing Department for exchange of accommodation ... 5

No. of talks by Welfare Visitors to Old Age Pensioners' Clubs ... 3

In the exercise of the duty of providing protection for property of persons admitted to hospitals, etc., and also in connection with the effects of persons dying with no known relatives, officers of the Welfare Services Section made 1,263 visits and re-visits during the year.

Mobile Meals.

In 1951 approval was given by the Ministry of Health for a service of mobile meals to be operated under Section 28 of the National Health Service Act, 1946. The service is intended for the benefit of sick persons whose needs cannot otherwise be satisfactorily met, and may also apply where such provision is judged to be necessary to prevent a breakdown in the health of others who, by reason of disability or age, are unable to make satisfactory provision for themselves in the way of adequate and regular meals. The service, which was inaugurated in December 1951, is still being maintained on an experimental basis in one defined area of the City; approximately 40 mid-day meals being provided on each of three days a week. In this matter the Department has the kind co-operation of the Women's Voluntary Services whose members act as servers of the meals.

Registration of Disabled Persons' and Old Persons' Homes.

These homes, whether run for reward or not, must be registered by the City Council, and it is an offence for any person to carry on a registerable but unregistered home. Four homes were registered during the year and other applications are under consideration.

Welfare of Handicapped Persons.

The City Council has power, under Section 29 of the National Assistance Act, 1948, to make arrangements for promoting the welfare of persons who are blind, deaf or dumb, or substantially or permanently handicapped by illness, injury or congenital deformity. The Minister of Health has directed local authorities to exercise their powers in the care of blind persons. The Council's scheme under Section 29 of the Act provided that they should employ as their agents, for the purpose of that section, local voluntary organisations interested in the welfare of blind and partially-sighted persons.

During 1952, 193 applicants for admission to the register of blind persons were examined by ophthalmic surgeons. Of these, 151 were found to be blind. In accordance with the wishes of the Minister of Health, an observation register is being maintained of partially-sighted persons to whom will be extended those parts of the welfare services for the blind as may be appropriate.

The following table shows the number of registered blind persons in Liverpool:—

Age	Males	Females	Total
0	—	2	2
1	2	1	3
2	3	5	8
3	—	1	1
4	—	—	—
5—10	12	5	17
11—15	7	11	18
16—20	13	12	25
21—30	45	24	69
31—39	48	43	91
40—49	99	81	180
50—59	141	114	255
60—64	81	89	170
65—69	76	111	187
70 and over ...	215	452	667
TOTALS ...	742	951	1,693

There are facilities in Liverpool for the employment of suitable blind persons in workshops, and over 100 employees are engaged in the trades of brush-making, basket-making, mat-making, etc. The valuable co-operation of the Ministry of Labour and National Service is appreciated in all matters affecting the employment of blind persons.

At the present time 8 blind persons are employed as Home Workers in the following occupations:—

- 1 Braille Copyist.
- 4 Machine Knitters.
- 3 Musicians and Music Teachers.

Ministry of Health Circular 32/51.

The Ministry of Health approved of the Council's Schemes for the provision of welfare services for persons who are deaf or dumb and also the general classes of handicapped persons. Steps are now being taken with the object of compiling registers of these classes of handicapped persons.

Removal to Suitable Premises of Persons in Need of Care and Attention.

Section 47 of the National Assistance Act, 1948, as amended by the National Assistance (Amendment) Act, 1951, provides for the removal to suitable premises of persons in need of care and attention. The following is a résumé of action taken during the year in regard to six cases under this Section.

(a) NATIONAL ASSISTANCE ACT, 1948.

- 1 J.McC. A man, aged 81 years, who was of poor physical capacity living in insanitary conditions. His wife was ill and unable to care for him, and the condition of the house was causing a nuisance to neighbouring householders. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three months, and he was admitted to hospital. Four months later he was transferred to an establishment administered by a charitable organisation.

(b) NATIONAL ASSISTANCE (AMENDMENT) ACT, 1951

- 2 A.E. A man, aged 71 years, of poor physical capacity and creating insanitary conditions in the house. The condition of this person and his physical disabilities were such that he was causing a nuisance to the other occupants. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three weeks. The order was carried into effect and the man was removed to hospital where he died about two months later.
- 3 B.G. A woman, aged 81 years, who was of poor physical capacity and living in insanitary conditions. The condition of her person was that she was causing a nuisance to neighbouring householders. An order was obtained for her compulsory removal, the period mentioned being for not exceeding three weeks. The order was carried into effect and the woman was removed to hospital. Three months later she was transferred to an establishment administered by a charitable organisation.
- 4 G.N. A man, aged 60 years, who was of poor physical capacity and living in insanitary conditions. He lived with a relative who was in employment and unable to care for him. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three weeks. The order was carried into effect and the man was removed to hospital. He was still a patient at the end of the year.

5 J.B. A man, aged 74 years, who was of poor physical capacity and living in insanitary conditions. His wife was ill and unable to care for him and the condition of the house was such that it was liable to cause a nuisance to neighbouring householders. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three weeks. The order was carried into effect and the man was removed to hospital, where he died five days later.

6 J.L. A man, aged 73 years, who was of poor physical capacity and living in insanitary conditions. His wife was very feeble and unable to care for him. The condition of the house was such that it was causing a nuisance to neighbouring householders. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three weeks. The order was carried into effect and the man was removed to hospital. He was still a patient at the end of the year but subsequently returned home.

MENTAL HEALTH SERVICE.

The Mental Health Section has continued to provide the following types of service to the community:—

- (a) Initial visiting and care of people reported as mentally ill;
- (b) Legal and other procedure in connection with admissions to mental and mental deficiency hospitals;
- (c) Ascertainment and supervision and training of mental defectives;
- (d) Provision of pre-care and after-care measures.

These form only part of the communal provision for mental health as hospital and clinic treatment are, of course, functions of the Regional Hospital Boards. A close co-operation with these bodies is thus necessary for the well being of the patient.

Several factors have prevented the year under review from being one of outstanding progress. It has not been possible, for example, to open the needed new Occupation Centre. The serious shortage of hospital accommodation has also continued. But there has been a steady development of duties already initiated and the details which follow will show that in an unobtrusive fashion a great deal of useful work is being done.

ADMINISTRATION.

The service is under the direction of the General Purposes and Mental Health Sub-Committee which consists of 18 members of the Health Committee. Meetings are held monthly. At 31st December the following were the staff employed:—

Medical—Assistant Medical Officer of Health.

Administrative and Clerical—1 Senior Administrative Assistant, 1 Senior Authorised Officer, 1 Administrative Assistant, 8 Clerks and Typists.

Visiting—9 Duly Authorised Officers, 5 Female Visitors, 1 Removals Officer.

Occupation Centres—3 Supervisors, 1 Supervisor Industrial Class, 7 Assistant Supervisors, 3 Trainees, 9 Domestic Staff.

The staff shows a reduction of 2 (1 Duly Authorised Officer and 1 clerk) as compared with last year.

In November Dr. T. L. Begg, M.B., Ch.B., D.P.H. was appointed Assistant Medical Officer of Health to fill the vacancy caused by the departure of Dr. F. Y. McKendrick.

CO-ORDINATION WITH HOSPITAL SERVICES.

The following work has been done on behalf of Hospital Management Committees:—

(a) Number of visits paid to defectives on licence from Institutions	...	...	...	...	...	...	504
(b) Copies of After-care reports sent to hospitals	...	...	...	...	...	...	2,814
(c) Visits to patients—Walton Hospital Psychiatric Clinic	...	...	...	...	...	...	491

It has been decided to withdraw the services of the officer who was specially seconded to the Walton Hospital Clinic and to absorb the work done for this hospital in the ordinary departmental organisation.

VOLUNTARY ASSOCIATIONS.

Friendly relations exist with the various voluntary bodies in the City whose activities impinge upon the field of mental health and, in particular, with the Merseyside branch of the National Association of Parents of Backward Children.

As a result of the enthusiasm of this Association's members a Short-stay Home for defectives was opened in May at Orchard Dene, Rainhill. The opening ceremony was performed by the Chairman of the Health Committee. Details of the work of Orchard Dene will be found later in this report.

TRAINING OF MENTAL HEALTH WORKERS.

An evening course of training organised by the department was completed in March. Visiting officers and supervisory staffs of Occupation Centres maintained a good record of attendance and many other social workers were present from time to time.

Assistant Supervisors at Occupation Centres continue to be drawn from people appointed as Trainee and are given a period of training of 12 months upwards.

TRANSPORT.

The stationing of a car at the Mental Health Service has continued to be a great convenience.

**Prevention, Care and After-Care Duties under Section 28 of
National Health Service Act.**

Persons referred for care and after-care during the year	...	615
Visits and interviews	... ..	3,692
Persons under active supervision on 31.12.52	... ..	1,091
Persons referred for employment	... ..	173
Posts found...	... ..	60

This work continues to occupy a large proportion of the visiting officers' time. A notification is received of each person discharged from a mental hospital and an initial visit is paid to the home as soon as possible.

If the patient wishes visits continue as long as it may seem desirable, sometimes over a considerable period. It is difficult to assess the value of this type of work in terms of statistics but there is no doubt that useful work is being done. It is felt also that there has been in the past year a little more appreciation on the part of patients, though too often the Service is taken very much for granted.

In very many cases in which ex-patients are leading useful normal lives in the community, some credit must be attributed to the visiting, procuring of allowances, finding of employment and accommodation and not least, to the very fact that a sympathetic listener is available to share personal problems.

EMPLOYMENT.

The chief positive measure of rehabilitation undertaken by the department is the allocation of an officer to deal solely with employment problems. The justification for this service, which is additional to those of the Ministry of Labour and Youth Employment Bureau, lies in its essential personal approach. In particular, the Employment Officer discusses with prospective employers the limitations of the people referred as well as their abilities, and the patients thus avoid the disheartening experience of obtaining work and not being able to cope with it. The number of posts obtained has again increased as compared

with previous years despite the relatively high incidence of unemployment on Merseyside. 27 posts found were for people who were mentally ill and 33 for mental defectives.

The types of employment found were as follows:—

Labourers, etc.	...	...	...	24	Delivery boy	...	...	...	1
Bakers	...	...	...	2	Firewood bundler	...	...	...	1
Motor Drivers	...	...	...	2	Postman (temp.)	...	...	...	1
Clerks	...	...	...	3	Domestics	...	...	...	9
Assemblers	...	...	...	3	Canteen Assistant	...	...	...	1
Porters	...	...	...	2	Assistant Cashier	...	...	...	1
Laundry Hand	...	...	...	1	Clothes presser	...	...	...	2
Scaler	...	...	...	1	Factory Hands	...	...	...	2
Security man	...	...	...	1	Hand sewer	...	...	...	1
Farm hand...	...	...	...	1	Silk spinner	...	...	...	1

Duties undertaken under Lunacy Act, 1890, and Mental Treatment Act, 1930.

1,216 cases were notified under provisions of the Lunacy and Mental Treatment Acts as compared with 1,112 last year. The requests for the services of the Duly Authorised Officer in these cases were made as follows:—By general practitioners 499, hospitals 161, clinics 143, other Corporation departments 21, police 208, relatives 66, National Assistance Board 22, shipping cases 10, general public 14, Duly Authorised Officers 24, other sources 48.

The following was the action taken following notification and visiting:—

Admitted to Hospital (Section 20 Lunacy Act)	...	...	...	...	...	561
(270 subsequently certified under Section 16).						
Referred to J.P. (Section 14 Lunacy Act)...	...	...	...	...	...	103
Admitted to Hospital as voluntary patients	...	...	...	...	...	42
Admitted to Hospital as temporary patients	...	...	...	...	...	2
Admitted to Hospital under Criminal Justice Act	...	...	...	...	...	3
Admitted to Hospital other than Mental Hospitals	...	...	...	...	...	22
Referred to Psychiatric Clinics	...	...	...	...	...	88
Referred for pre-care	...	...	...	...	...	84
Referred to Welfare Department	...	...	...	...	...	118
No further action needed	...	...	...	...	...	147
Referred back to private doctor	...	...	...	...	...	26
Action deferred	...	...	...	...	...	8

The total admissions of Liverpool patients to Mental Hospitals during the year were as follows:—

Hospital.	Cases certified under Section 16 Lunacy Act.	Voluntary Cases.	Temporary Cases
Sefton General	94	11	—
Rainhill	218	293	2
Winwick	37	45	2
Deva	7	5	1
Ormskirk	7	1	—
Whiston	10	—	—
Birkenhead	1	1	—
Hospitals outside Liver- pool R.H.B. area ...	1	2	—
	375	358	5

Initial visits and removals continue to be carried out by the Duly Authorised Officers on a weekly roster system, two for day duty and one for night and week-end duty. When not engaged on these statutory duties the officers are able to carry out after-care and supervision work. They thus deal with all aspects of mental health work and this policy would appear to be preferable to that adopted by some Authorities of confining their duties to those under the Lunacy Act.

Duties undertaken under the Mental Deficiency Acts.

(a) *Ascertainment.*

183 new cases were ascertained as mentally defective during the year. 6 others were, after investigation, considered not to be defective within the meaning of the Mental Deficiency Acts. The sources of notification of those ascertained were as follows:—

	Boys	Girls
Sec. 57 (3) Education Act (ineducable)	47	38
Sec. 57 (4) Education Act (inexpedient)	1	2
Sec. 57 (5) Education Act (needing supervision after leaving school)	31	47
Police	1	—
Parents	1	1
Private Doctor	1	1
Children's Officer	5	1
National Assistance Board	1	1
Others	2	2

Of these cases 169 were placed under statutory supervision, including 28 where institutional care was recommended but not obtained, and 14 were admitted to mental deficiency hospitals.

Whatever the source of notification all children notified between the ages of 2 and 16 are referred to the Education Department who can then notify them in accordance with statutory procedure.

Outside these age limits the Assistant Medical Officer of Health examines and tests the cases and recommends whether they should be ascertained as defectives or not. A small number of children under the age of 2 are referred each year, usually because the parents wish to obtain admission of the child to an institution. It is not the department's policy to ascertain at such an early age in most cases but where severe defect is obviously present action has been taken.

All notifications are entered in the Ascertainment Register which is placed before the Committee each month for consideration of the recommendations made.

(b) *Supervision.*

A great deal of misunderstanding exists among parents about the supervision of defectives. If parents wish to rear a defective child at home there is no question of the department taking action to obtain admission to an institution, unless there is real cruelty or neglect on the parents' part.

Statutory supervision and training were instituted in order to help parents and to enable defectives to become as useful members of the community as their limited capacities allow. Thus the majority of defectives can live at home and a good proportion of these can attend Occupation Centres.

At 31st December, 1952, the numbers under supervision were:—

	MALES		FEMALES		TOTAL
	Over 16	Under 16	Over 16	Under 16	
Statutory Supervision ...	539	216	484	184	1,423
Guardianship ...	22	10	50	10	92
Voluntary Supervision ...	19	2	9	—	30
Totals ...	580	228	543	194	1,545

5,387 visits were paid to the homes of these defectives including visits paid on behalf of Management Committees to defectives on licence from institutions or with a view to licence being granted.

Supervision is often apt to be an unrewarding type of work but over a long period its value can be seen in its deterrent effect where there is a tendency to parental neglect and as a positive factor where families of defectives need advice and help. As an instance of this it may be mentioned that an officer has visited regularly to help a nervous mother who could not be relied upon to carry out medical treatment prescribed for a low-grade defective child.

The allocation of duties on a territorial basis means that officers get to know the families on their list and, in fact, often act as guide and help to the whole family. It is well to remember that supervision includes social work generally as well as mental health, and that a constructive attitude is adopted rather than an inquisitorial one.

(c) *Guardianship.*

Of the 92 cases under guardianship 20 received allowances, at a total cost of £484 for the year. A parent was the guardian in 54 cases, another relative in 19, Superiors of Convents in 19 and others in 5.

The policy has been continued of giving allowances to cover extra expense entailed by the condition or behaviour of defective children, e.g. extra laundry and clothing costs resulting from incontinence. Such an allowance can only be given if a child is placed under guardianship.

(d) *Training.*

The Committee has a statutory duty to provide facilities for the training and occupation of defectives and now has three Centres for this purpose, accommodating a total of 243 people (as compared with the 50 who were receiving training in 1948). The facilities have been improved during the year by the purchase of new equipment and appointment of additional staff but provision still falls short of requirements. There were 70 defectives on the waiting list for admission at 31st December, 1952.

Details of attendances, etc., were as follows:—

	Princes Road		Dovecot		Garston		Total
	M.	F.	M.	F.	M.	F.	
No. on Register—							
Over 16	30	21	3	11	—	2	} 243
Under 16	42	44	29	30	17	14	
Average Daily Attendance—							
Over 16	21	13	3	9	—	1	} 178
Under 16	30	32	22	21	15	11	

Every effort is made to ensure maximum attendance and special buses to and from Princes Road and Dovecot Centres help to this end. Two points should be noticed in this connection—that attendance is not compulsory and that defectives are apt to suffer from a higher incidence of physical illness than normal children.

Princes Road Centre caters for children of all ages and also for adult defectives of both sexes. Though there is not a great deal of contact between the children and the adults it is hoped that in due course we shall be able to open special Centres for adults.

The year's happenings followed the pattern of previous years with Christmas parties, open days and a week's holiday at Rhyl as highlights. A larger number of social workers and other visitors are visiting the Centres and the Medical Officer welcomes this increased interest.

Meals continue to be provided through the School Meals Service.

The amount of £93 10s. 0d. was realised by the sale of articles made at the Centre.

In each previous report the Medical Officer has touched upon the general background of a particular part of the Mental Health Service work in addition to the year's activities and this year it is felt that the Committee may like to have a description of the work of Occupation Centres and the reason for their existence.

Of 183 persons ascertained as defectives in 1952, 87 were "ineducable", i.e., were referred by the Education Department as being unable to benefit by education in school, and 79 were notified on leaving school (usually a special school). These are the two classes from which the population of Occupation Centres is largely drawn. So far as younger children are concerned the ideal to be aimed at is that all children who have had a period at school and been found ineducable should attend a Centre. Though attendance is voluntary parents should be encouraged to assume that rejection from a school should be followed automatically by attendance at a Centre. This ideal cannot be attained with present accommodation and it is planned to build an additional Centre in the north of the city.

The department must be prepared to cater for the occupation of adults as well as children. It is a melancholy fact that most of the children at Centres will not be able to earn their living when they

grow up and, in fact, will never be capable of existing without the help and guidance of their parents or other people. Providing them with occupation gives them a fuller and happier life.

At present 71 defectives attending Centres are over 16 but it is estimated that a much larger proportion of such defectives living in Liverpool would benefit by attendance.

There is a brighter side to this picture. Many defectives are working and each month the Committee is asked to agree to cessation of supervision of those who have succeeded in achieving an independent and stable life in the community.

The ability of defectives varies a great deal. The department should, in theory, be prepared to offer occupation for even those of lowest grade and, in fact, quite a number attending Centres are of such low grade that progress is painfully slow. This fact must be borne in mind in assessing the standard of the work done.

In this connection the following figures giving the intelligence quotients of the children referred as ineducable by the Education Department in 1952, will be of interest. They show beyond doubt that in Liverpool, training is provided within the educational system for every child who can possibly benefit from it. (For comparative purposes the quotient figures should be viewed in relation to the I.Q. for a normal child which is usually taken as being between 90 and 110.)

I.Q's	Under 30	30—34	35—39	40—44	45—49	50—54	55—59	60 and above
No. of cases referred ...	18	5	11	17	10	20	6	Nil

There is thus some difficulty in classifying the attenders. If groupings were entirely according to mental age adults would have to be placed with small children; on the other hand a class strictly grouped according to chronological age would have no common level in its work. A compromise is adopted so that, whilst brighter children have opportunity to develop, adolescents and adults, whatever their attainments, are given their separate status as "grown-ups".

When more accommodation is available it will be possible for classification according to ability to be further developed.

The curriculum is adapted to the limitations of those attending and academic subjects find only a small place in it. The following specimen time-table for a junior class at Princes Road Centre will indicate the type of work:—

MORNING

	9.30-10.15	10.15-10.45	10.45-11.15	11.45-11.45	11.45-12.25	12.25-12.45	12.45-1.15
Mon.	Assembly, Roll-call for special bus. Change shoes. Attendance. Register	Team games	Handwork	Personal hygiene (wash, teeth, hair, etc.)	Lunch	Free play.	Personal hygiene
Tues.		Mime	Sense Tr.				
Wed.		Music and movement.	Picture making.				
Thurs. Fri.		Physical Tr. Physical activity	Sense Tr. Painting				

AFTERNOON

	1.15-1.35	1.35-2.00	2.00-2.20	2.20-2.50	2.50-3.20	3.20-3.45
Mon.	Speech Tr.	Dancing	Singing	Handwork, including basket, felt, paper mache work, etc.	Drawing	Cloakroom, Bus—roll- call. Dismissal.
Tues.	Band	Eurhythmics	Speech Tr.		Colour Tr.	
Wed.	Singing	Physical Tr.	Speech Tr.		Felt work	
Thurs. Fri.	Speech Tr. Singing	Dancing Eurhythmics	Band Story		Drawing Own choice	

For the older children and adults other subjects—carpentry, rug-making, shoe-repairing, etc., for the males, and embroidery, sewing, country dancing, etc., for the females—are included. It is hoped to provide facilities for laundering as part of the training in the coming year.

As many of the defectives cannot, even after training, attain the level of an independent existence, the question is inevitably asked from time to time whether the efforts made are worth while.

True development in civilisation is marked by provision for the handicapped and the humanitarian aspect of training and supervision will commend itself to all. But, apart from this, it is to the advantage

of the community as well as to the defectives that they shall be socialised to the greatest degree possible. The comparative rarity of misdemeanours by defectives attending Centres is evidence that moral ideas can be inculcated and the change of a defective, after training, from being a helpless burden on a family to taking a part, however humble, in the family life is most marked in many cases. To these factors may be added the relief which is given to the mother during the day time.

Altogether the Committee may feel satisfied that in developing training of defectives they are performing a most useful social service.

(e) Institutional Care.

Each year since the inception of the service in 1948 the serious shortage of accommodation in Mental Deficiency Institutions has been mentioned in these reports and it cannot be said that any substantial improvement has been seen in 1952. The plans made by the Liverpool Regional Hospital Board will no doubt solve the problem in the long run but, meantime, hardship, misery and disruption of normal family life are suffered by a substantial number of families by reason of the shortage of beds. The circumstances under which some defectives, often of vicious or depraved habits are living, are appalling. It is true that nearly all the "problem families" of Liverpool are on the list of the Mental Health Service for supervision and in such cases sheer inability of the parents often leaves a defective child in a helpless and neglected state which can only be improved by admission to an Institution.

The following are the figures for the year:—

(i) Waiting List						At 1.1.52	At 31.12.52
Highest urgency	...	...	...	...	...	77	73
Second urgency	...	...	...	...	...	18	23
Third urgency	...	...	...	...	...	9	6
						104	102
(ii) Cases added to waiting list in 1952						...	34
(iii) Cases admitted to M.D. Institutions:—							
From the waiting list						...	46
(including 14 to places of safety, 1 after court proceedings on charge and 4 varying orders)							
Others—admitted after Court proceedings on charges						...	7
(iv) Applications for institutional care withdrawn...						...	10

(v) No. of Liverpool defectives in institutions—

	At 1.1.52		At 31.12.52	
	Certified	Place of Safety	Certified	Place of Safety
Institutions of Liverpool R.H.B. ...	181	40	192	47
Institutions of Manchester R.H.B. ...	1,109	—	1,121	2
Institution of Other Authorities ...	30	1	32	1
	1,361		1,395	

[NOTE.—The number in institutions at the end of 1948 was 1,329.]

It will be appropriate to mention here the question of short-stay accommodation. Though there are many cases where a long period of institutional care is essential there are others in which the parents are normally able and willing to supervise at home but who need a break occasionally for a holiday or because of illness, etc. The Ministry of Health early in the year authorised Local Health Authorities to sponsor admissions to suitable short-stay accommodation and arrangements were made for Liverpool cases to be admitted to Orchard Dene, the Home opened by the National Association for Mental Health, mentioned earlier in this report. Eleven cases were admitted, each for a stay of two weeks, between September and December.

The Regional Hospital Boards have also given a small number of temporary vacancies in their institutions and undoubtedly if such facilities could be extended and their existence made known to the public there would be less requests for more permanent institutional care.

(f) *Medical Examinations.*

The following examinations have been carried out by the Assistant Medical Officer of Health in charge of the service:—

Newly notified cases	45
Guardianship: Statutory Visits	122
Other Visits	2
Cases requiring institutional care (including licence cases)	107
Review of cases under supervision... ..	6
Periodic examinations at Occupation Centres	55
Remand Home examinations requested by Children's Officer and Police	74
Re fitness for adoption	6
Review of after-care	2
	419

The arrangement by which the Assistant Medical Officer of Health examined children and young persons in Remand Homes was discontinued in July, following a Ministry circular, and this work is now performed by officers of the Regional Hospital Board.

TUBERCULOSIS.

Notification.

Public Health (Tuberculosis) Regulations, 1930.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD 1ST JANUARY TO
31ST DECEMBER, 1952.

TABLE I.

Age-periods.	Notifications on Schedule A.													
	Number of Primary Notifications of New Cases of Tuberculosis.													
	0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Total Primary Notifica- tions.
Respiratory-														
Males ...	6	5	31	45	33	79	95	143	114	111	79	45	6	792
Females ...	4	9	35	43	40	145	148	155	95	49	40	9	5	777
Non Respiratory-														
Males ...	—	7	15	9	10	8	6	5	8	2	1	1	—	72
Females ...	2	4	9	11	5	5	4	13	8	4	1	1	—	67

Out of a total of 1,569 primary notifications of respiratory tuberculosis 1,151 were received from private and 418 from hospital practitioners, whilst in the case of non-respiratory tuberculosis these figures are 29 and 110 respectively, forming a total of 139.

In Table II is given an analysis of the 379 persons whose names are on the notification register but are not on the dispensary register, according to the latest information concerning them.

TABLE II.

		Respiratory Tuberculosis.						Non-Respiratory Tuberculosis.						Totals.	
		Males.			Females.			Males.			Females.				
		State of the Disease.						State of the Disease.							
		Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.	Arrested.	Quiescent.	Active.		
Totals	4	23	136	—	73	94	—	1	18	3	8	19	379

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 III, and in addition there are included a few statistics of a general nature.

TABLE III.

DIAGNOSIS.	RESPIRATORY			NON-RESPIRATORY			TOTAL			Grand Total
	Adults.		Children	Adults.		Children	Adults.		Children.	
	M.	F.		M.	F.		M.	F.		
A.—NEW CASES examined during the year (excluding contacts):										
(a) Definitely tuberculous ...	704	660	260	36	49	58	740	709	318	1,767
(b) Non-tuberculous ...	230	235	120	—	—	—	230	235	120	585
B.—CONTACTS examined during the year :—										
(a) Definitely tuberculous ...	17	32	83	—	—	2	17	32	85	132
(b) Diagnosis not completed ...	28	33	119	—	—	—	28	33	119	180
(c) Non-tuberculous ...	294	828	2,767	—	—	—	294	828	2,767	3,889
C.—CASES written off the Dispensary Register as :—										
(a) Recovered ...	87	81	14	9	22	11	96	103	25	224
D.—NUMBER OF CASES on Dispensary Register on Dec. 31st 1952 :—										
(a) Definitely tuberculous ...	3,333	3,225	792	291	307	378	3,624	3,511	1,174	8,509
(b) Diagnosis not completed ...	14	13	11	—	—	—	14	13	11	38
Number of attendances of patients at the Dispensaries during the year 1952 ... 35,458										
Number of patients under medical treatment at home on 31st December, 1952...										
Number of visits paid by the Tuberculosis Medical Officer to the homes of patients during 1952 ... 2,319										
Number of T.B. "plus" cases on Dispensary Register on 31st December, 1952 ...										
Total number of cases vaccinated with B.C.G. during 1952 :—										
Children ...			1,781	Total number of visits paid to the homes of patients by Tuberculosis Health Visitors during 1952 ... 14						
Others...			—							

Prevention, Care and After-Care.

During the year the Corporation appointed a Tuberculosis Prevention and After-Care Sub-Committee of the Health Committee for the purpose of supervising, assisting and expanding the preventive work against this disease. An endeavour has been made to give the Health Visitors

more time on their districts, partly through the appointment of Clinic Nurses in the clinics, and partly through the re-organisation of the Health Visitors' work. The Assistant Medical Officer of Health responsible for epidemiological work was appointed as liaison officer between the Public Health Department and the Chest Clinics. These arrangements have not yet had a full year's trial, but it is considered that an improvement in the efficiency of the preventive work has already been achieved.

Home Nursing.

The domiciliary nursing of both respiratory and non-respiratory cases continues to be carried out by the Liverpool Queen Victoria District Nursing Association. During the year, 687 cases of tuberculosis were nursed in their homes, and to these cases 31,807 visits were paid.

General Remarks.

The City death rates for the year 1952 for respiratory and non-respiratory tuberculosis are 0.34 and 0.04 per 1,000 respectively, making a total of 0.38 per 1,000 for all forms of the disease. An analysis of unnotified cases of tuberculosis is given in Table IV.

In accordance with the requirements of the National Service (Armed Forces) Act, 1939, the Tuberculosis Officers have submitted 17 reports to the Ministry of Labour, under the Public Health (Tuberculosis) Regulations, 1940 (Men). In future this information will be furnished direct to the Ministry of Labour by the Chest Physician concerned.

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

CONTACTS. The Tuberculosis Officers have examined 4,203 persons who were known to have been in contact with infectious cases of respiratory tuberculosis and found evidence of disease in 3.9 per cent.

B.C.G. Vaccination.

Vaccination with B.C.G. to combat tuberculosis was carried out by the Tuberculosis Medical Officers at the four Chest Clinics serving the Liverpool County Borough area. The vaccine is only used in persons who have not received a primary tuberculous infection as indicated by the absence of reaction to the Tuberculin Test.

The persons vaccinated during the year were those who were in contact with known cases of tuberculosis. The total number of persons vaccinated with B.C.G. during the year was 1,707.

Mass Radiography.

The static Mass Radiography Unit at Hood Street, Liverpool, now administered by the Liverpool Regional Hospital Board, has dealt with 48,946 persons during the year. Of 22,332 persons referred to the Unit by General Practitioners, 502, or 22·4 per 1,000 cases of active tuberculosis were discovered.

Tuberculosis Welfare.

During the year 1952, 870 cases have been the subject of reports to the National Assistance Board with a view to determining their eligibility for the special rates applicable to cases of tuberculosis.

Liaison is maintained with the Ministry of Labour with a view to assisting in the rehabilitation of suitable cases.

REHABILITATION.

Summary of cases dealt with during the year 1952:—

Total cases referred by Ministry of Labour to Tuberculosis

Officers	352
(a) Examined and found fit for light, part-time or full-time employment	295
(b) Not fit for employment	26
(c) Failed to attend for examination	14
(d) Certified as non-tuberculous	17

Letters sent by Tuberculosis Welfare Section to patients offering advice and assistance to obtain suitable employment 47

Number availing themselves of this assistance and referred to Ministry of Labour 19

Actual number of patients reported by Ministry of Labour as placed in employment 66

Total number of cases dealt with under Rehabilitation Scheme by Tuberculosis Welfare Section 399

Co-operation.

During the year, 490 reports were rendered by the Tuberculosis Officers in respect of school children. Many cases have also been examined at the request of organisations such as the Liverpool Personal Service Society; Child Welfare Association; Maternity and Child Welfare Department, etc.

Notification and Deaths.

During the year, 28 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 IV.

TABLE IV.

DISEASE.	Reasons for non-notification.						
	No. of Deaths.	No. of cases not notified before death.	Diagnosis made at a post-mortem examination. (Includes Coroner's Cases.)	Diagnosis delayed owing to clinical difficulties.	Doctor thought case had been notified by another Practitioner.	Notification forgotten.	Patient died before notification could be effected.
Respiratory ...	269	17 6.3%	8 3.0%	3 1.1%	2 0.7%	0 —	4 1.4%
Non-Respiratory ...	36	11 30.6%	5 13.9%	3 8.3%	1 2.8%	1 2.8%	1 2.8%

Deaths from Tuberculosis.

The number of deaths from respiratory and non-respiratory tuberculosis in Liverpool from 1939 to 1952, together with the number of new cases notified and the death rates which prevailed in England and Wales are given in Tables V and VI where case rates for Liverpool are shown.

TABLE V.

DEATHS FROM RESPIRATORY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1939	1,213	1.47	647	0.81	0.54
1940	1,311	1.73	761	1.01	0.59
1941	1,302	1.90	699	1.02	0.60
1942	1,370	2.04	653	0.97	0.54
1943	1,479	2.23	670	1.01	0.56
1944	1,441	2.16	597	0.90	0.52
1945	1,455	2.13	605	0.88	0.52
1946	1,478	2.01	579	0.79	0.46
1947	1,479	1.96	599	0.79	0.47
1948	1,618	2.04	630	0.79	0.44
1949	1,619	2.02	542	0.68	0.40
1950	1,572	1.96	481	0.60	0.32
1951	1,531	1.95	406	0.52	0.27
1952	1,569	1.98	269	0.34	0.21

TABLE VI.

DEATHS FROM NON-RESPIRATORY TUBERCULOSIS.

Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1939	317	0.38	99	0.12	0.09
1940	274	0.36	122	0.16	0.11
1941	305	0.44	147	0.21	0.13
1942	348	0.52	124	0.18	0.11
1943	335	0.51	103	0.15	0.11
1944	250	0.37	82	0.12	0.10
1945	248	0.36	96	0.14	0.10
1946	237	0.32	79	0.10	0.08
1947	234	0.31	85	0.11	0.09
1948	228	0.29	85	0.11	0.07
1949	211	0.26	68	0.08	0.05
1950	164	0.20	64	0.08	0.04
1951	160	0.20	43	0.05	0.04
1952	139	0.17	36	0.04	0.03

TABLE VII.

AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1952.

Age Periods.	RESPIRATORY		NON-RESPIRATORY	
	Males.	Females.	Males.	Females.
0—	—	—	1	1
1—	—	1	10	1
5—	—	—	2	1
10—	—	—	1	—
15—	—	3	3	—
20—	7	8	1	3
25—	14	38	—	2
35—	30	21	2	—
45—	36	15	—	1
55—	43	13	—	2
65—	33	7	2	3
TOTALS	163	106	22	14

VENEREAL DISEASES WELFARE.

The treatment of venereal disease is the responsibility of the Liverpool Regional Hospital Board and the Board of Governors of the United Liverpool Hospitals, but the welfare work associated with these diseases remains in the hands of the local health authority.

Two male and two female clinics which are open for most of the day continue to function as do the hospital wards for in-patients. From the table below it will be seen that although there has been a slight rise in cases of gonorrhœa in the female as compared with 1951, all figures show a rapid decline from 1946 and are actually lower than the immediate pre-war year of 1938.

ACUTE GONORRHOEA.

	1938	1946	1951	1952
Males	1,422	3,112	1,240	1,026
Females	141	422	113	133

EARLY SYPHILIS.

	1938	1946	1951	1952
Males	147	655	118	80
Females	34	331	33	18

The staff of the V.D. Welfare Section consists of a senior male welfare visitor, a male welfare visitor and a female welfare visitor. In addition, the services of the welfare visitor attached to the Royal Infirmary V.D. Clinic are available to deal with female defaulters from that clinic.

The work entails the interviewing of patients, the tracing of contacts and persuading them to attend for examination, writing and visiting defaulters from treatment and assisting patients to attend in the light of the knowledge of the circumstances of the individual patient. Close co-operation with the medical officers of the various treatment centres is maintained. In addition, patients referred to clinics by hospitals for investigation or treatment having failed to report, are followed-up, in most cases, successfully.

CONTACT TRACING.

In accordance with the recommendation contained in Ministry of Health Circular 5/48, the practice of following-up contact cases notified from all areas has produced the following results:—

TABLE A.

	Male	Female	Total
No. of notifications received	—	96	96
No. of cases traced and interviewed	—	45	45
No. of cases not yet interviewed	—	1	1
No. of cases who reported for investigation	—	40	40
No. of cases in which information was passed on to other Authorities	—	1	1
No. of cases already in the Register of a Liverpool Clinic ...	—	6	6
No. of cases untraced, due mainly to insufficient information...	—	49	49
No. of cases who refused to attend for investigation ...	—	2	2

The issue of "contact slips" to patients for the use of their potentially infected partners has brought under observation 16 males and 60 females.

FOLLOW-UP OF DEFAULTERS.

The following Tables B and C indicate respectively the response of defaulting patients to letters or to home visiting:—

TABLE B.

	Male	Female	Con- genital	Total
No. of cases written to	987	943	143	2,073
No. of letters despatched	1,232	1,649	181	3,062
No. of cases reporting after receipt of letter... ..	450	599	84	1,133
No. of letters returned—Dead Letter Office	74	66	1	141
No. of cases traced and transferred	8	13	3	24

TABLE C.

	Male	Female	Con- genital	Total
No. of cases visited	575	377	63	1,015
No. of visits made	1,585	1,603	154	3,342
No. of cases attending following visits	286	319	58	663
No. of cases promising to attend but failing to do so	74	4	—	78
No. of cases removed, or not known at address given	143	44	1	188
No. of cases not contacted, no access, away from home, etc.	47	6	4	57
No. of cases who refused to re-attend	17	4	—	21
No. of cases removed to other districts, and trans. for follow-up	3	—	—	3
No. of cases deceased	5	—	—	5

INSPECTION OF FOOD.

TABLE I.

NUMBER OF VISITS PAID TO PREMISES BY FOOD INSPECTORS.

Slaughter-houses (Private)	Butchers' shops.	Fruit shops.	Fish shops.	Jam fac-tories.	Wholesale and Retail Provision premises.	Ice Cream premises.	Food factories.	Knackers' yards.	Total visits.
19	8,008	17,920	14,966	47	1,121	2,288	753	18	45,140

Private Slaughter-houses.

There are 4 private slaughter-houses in the city at which, during the year 18 "Cottager's pigs" were slaughtered under Ministry of Food licences. 53 pigs slaughtered on private premises were also examined at the request of the owners.

The City Abattoir.

430,589 animals were slaughtered for human food, details of which are given in the following table. This number is an increase of 89,956 animals on the figure for the previous year.

TABLE II.

NUMBER OF ANIMALS SLAUGHTERED IN LIVERPOOL FOR HUMAN FOOD.

	Bulls.	Bullocks.	Cows.	Heifers.	Calves.	Sheep and Lambs.	Swine.	Horses.	Goats.
City Abattoir	931	26,876	28,058	18,202	52,325	224,627	78,591	179	800

As noted above, the increase in the number of animals slaughtered by 89,956 is largely accounted for by a remarkable increase of pigs slaughtered. From 22,360 in 1951, the total of pigs has increased three-fold to 78,591 in 1952.

The efficient inspection of all animals slaughtered has been accomplished without increasing staff, by merging the Food Sampling officers,

Dairies inspectors, and Meat inspectors in one section, now the Food Inspection branch of the Department, and by re-arrangement of the existing staff to cover all contingencies.

This new system has materially reduced expenditure, but more important, has increased the efficiency of the food inspection service of the City.

TABLE III.

CARCASSES INSPECTED AND CONDEMNED.

	Cattle excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs.	Goats.	Horses
Number killed	46,009	28,058	52,325	224,627	78,591	800	179
Number inspected	46,009	28,058	52,325	224,627	78,591	800	179
All Diseases except Tuberculosis.							
Whole carcasses condemned	11	95	721	201	171	9	—
Carcasses of which some part or organ was condemned	10,937	12,342	283	30,015	6,503	—	—
Percentage of the number inspected affected with disease other than tuberculosis	23·80%	44·33%	1·92%	13·45%	8·49%	1·13%	—
Tuberculosis only.							
Whole carcasses condemned	89	863	17	—	97	—	—
Carcasses of which some part or organ was condemned	1,614	5,821	7	—	3,337	—	—
Percentage of the number inspected affected with tuberculosis	3·70%	23·82%	0·05%	—	4·36%	—	—

Diseased Conditions.

The carcasses of 73,133 animals, approximately 17 per cent. of the 430,589 animals slaughtered, showed abnormal conditions, and a detailed examination was made in each case, 2,274 carcasses were totally rejected as unfit for human food, together with portions of 2,893 other diseased carcasses. A description of the diseased conditions found during 1952

which led to the total or partial destruction of carcasses is given in Table IV.

In addition, 271 carcasses were destroyed in Knackers' Yards. The animals from which these carcasses derive were not, of course, slaughtered with the intent that they might be used for human consumption.

TABLE IV.

DISEASES OR OTHER CONDITIONS FOR WHICH PARTIAL OR TOTAL
CONDEMNATION OF CARCASSES WAS NECESSARY.

Disease or Condition	Total	Partial
Abscess	9	197
Actinomycosis	1	63
Arthritis	5	344
Asphyxia	360	—
Carcinoma	3	—
Contamination	—	221
Decomposition	23	—
Distomatosis	34	—
Emaciation	5	—
Enteritis	132	—
Gangrene	1	—
Immaturity	80	—
Injury and bruising	6	323
Jaundice	125	—
Johnes Disease	1	—
Joint Ill	46	—
Malignant Neoplasms	5	—
Mastitis septic	3	—
Melanosis	1	2
Metritis Septic	1	—
Moribund	41	—
Nephritis	11	7
Oedema generalised	122	6
Pericarditis septic	5	—
Peritonitis septic	23	—
Peritonitis	—	37
Pneumonia septic	26	—
Pleurisy septic	10	—
Pleurisy	—	87
Presternal Calcification... ..	—	5
Pyæmia	18	—
Seedy Cut	—	73
Septicaemia	37	—
Swine Erysipelas, acute	3	—
Swine Fever	65	—
Toxaemia	4	—
Uraemia	2	—
Urticaria	—	33
Tuberculosis	1,066	1,495
Carcasses totally condemned	2,274	
Carcasses partially condemned		2,893

In addition to the carcasses totally or partially condemned, because diseased conditions made them unfit for human food, organs which showed diseased conditions were also condemned; the amount during the year was 1,179,951 lb. (Table V).

TABLE V.

DISEASED AND OTHER CONDITIONS FOR WHICH CONDEMNATION OF OFFAL WAS NECESSARY.

Disease	Beef Offal	Veal Offal	Mutton Offal	Pork Offal	Goat Offal	Horse Offal	TOTAL
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Abscess ...	31,571	—	371	180	—	—	32,122
Actinomycosis ...	10,664	—	—	—	—	—	10,664
Carcinoma ...	516	—	—	—	—	—	516
Cav. Angioma ...	21,336	—	—	—	—	—	21,336
Cirrhosis ...	15,486	—	—	610	—	—	16,096
Congestion ...	16,814	40	—	6,955	—	—	23,809
* Contamination...	37,860	34	47	105	—	—	38,046
Cystic ...	27,992	—	3,255	1,713	—	68	33,028
Cysticercus Bovis ...	1,470	—	—	—	—	—	1,470
* Decomposition...	17,588	1,736	4,706	6,669	—	—	30,699
Distomatosis ...	138,689	—	24,596	—	—	—	163,285
Emphysema ...	128	—	—	—	—	—	128
Enteritis ...	1,120	—	—	—	—	—	1,120
Inflammatory Cond. ...	2,629	—	—	6,658	—	—	9,287
Johnes Disease ...	1,169	—	—	—	—	—	1,169
Mastitis ...	9,192	—	—	89	—	—	9,281
Melanosis ...	170	36	—	—	—	—	206
Nephritis ...	438	—	—	92	—	—	530
Oedema ...	1,690	—	—	—	—	—	1,690
Pericarditis ...	272	—	—	106	—	—	378
Peritonitis ...	2,615	—	26	457	—	—	3,108
Parasitic Condition ...	45,158	—	12,153	768	—	84	58,163
Pleurisy ...	6,854	—	—	6,203	—	—	13,057
Pneumonia ...	5,714	—	—	6,497	—	—	12,211
Tuberculosis ...	481,370	—	—	21,051	—	—	502,421
Full Offal (Carcase Totally Condemned)	179,485	10,416	2,613	3,510	117	—	196,131
TOTAL ...	1,057,990	12,262	47,767	61,663	117	152	1,179,951

526 tons, 15 cwts., 1 qr., 3 lbs.

* This includes offal ex foot and mouth contact carcasses, also offals from other centres.

TABLE VI.

CARCASES AND QUARTERS OF HOME-KILLED MEAT BROUGHT INTO THE CITY
MEAT MARKET FROM OTHER DISTRICTS.

Beef.	Veal.	Mutton.	Lamb.	Pork.	Goat.
(quarters) 37,579	2,343	7,255	22,530	22,318	—

In addition to the above, 14,319 boxes or packages of offal sent from Ireland were dealt with in the meat market. (See Table V.)

TABLE VII.

CARCASES OF IMPORTED MEAT DEALT WITH AT THE CITY MEAT MARKET.

Beef.	Veal.	Mutton.	Lamb.	Pork.
(quarters) 17,688	269	73,969	234,487	1,554

In addition to the above, 48,467 boxes and packages of imported meat and offal were dealt with in the meat market. In general, this meat offal was free from pathological conditions but showed evidence of decomposition which necessitated reconditioning in many cases.

The following amount of imported meat and offal was destroyed by reason of bone taint, mould, brine damage or decomposition:—Beef 5,377 lb., Mutton 505 lb., Pork 91 lb.

Special examination of foodstuffs.

In addition to the routine inspections of meat, fruit, vegetables and fish at the abattoir or the wholesale markets, special examination is given to the fish prepared by contractors for hospitals, schools and canteens in the City.

Regular visits are made to day nurseries and other Corporation premises, for example, children's homes, aged persons' hostels, to examine meat, fish, vegetables and groceries supplied by contractors to the Council, to ensure that only the quality of foodstuffs specified is being delivered.

It was not necessary during the year to reject any of the commodities examined.

Foot and Mouth Disease.

During the summer months, between April and August, a serious epidemic of foot and mouth disease spread over parts of the whole country. Intensive action by the Ministry of Agriculture and Fisheries was taken and in the autumn the outbreaks were finally checked.

The usual policy of slaughtering affected animals as well as contacts was adopted, and from farms in adjacent counties much valuable food was salvaged in the form of carcasses and offals.

Slaughtering gangs of skilled butchers from Stanley Abattoir worked for lengthy periods in country areas during the period of outbreak and the "contact" stock were dressed and the carcasses sent in to Stanley Abattoir.

Due to primitive facilities and long motor journeys, this meat arrived in poor condition and each carcase or quarter together with offal was critically examined by the meat inspectors on arrival at the Abattoir. This work, in addition to the peak kill usual at this period of the year, imposed considerable strain on the resources of the Department and was only accomplished by the unstinted hard work of the inspectors.

The amount dealt with was as follows:—

Quarters (hinds/fores) of beef	...	...	9,625
Carcasses of calves	...	...	417
Carcasses of pork	...	...	1,000
Carcasses of mutton	...	...	1,033

The amount of meat condemned for reasons of disease and contamination was as follows:—

164 Quarters of beef and trimmings	...	32,780 lb.
11 Carcasses of mutton	...	315
16 Carcasses of pork	...	5,687
9 Carcasses of veal	...	496
Beef offal	...	9,590
Calf Offal	...	130
Pig offal	...	293

Total 49,291 lb.

The meat released for human consumption was utilised for manufacturing purposes under supervision due to the fact that in the main the beef was derived from stock bulls and dairy cows, the pork consisted of the carcasses of young stock as did the veal and mutton.

Cysticercus Bovis.

The inspection of bovine carcasses and offal has been carried out during the year with a thoroughness equal to that of 1950, but a marked decline was noted in the number of animals affected:—

	<u>1950</u>	1951	<u>1952</u>
Bulls ...	10	Nil	2
Bullocks ...	195	24	30
Cows ...	87	17	4
Heifers ...	75	6	15

No total condemnations of carcasses were necessary. Of the 51 carcasses affected, 47 had cysts in the face muscles and 4 had cysts in the heart muscles.

Most of the infected cattle were of Irish origin, fattened in Scotland.

The decline in the number of affected animals would appear to be the result of the national effort of local authorities to find and destroy the cysts in bovine carcasses at their abattoirs and so break the life cycle of the parasite.

The Tuberculosis Order, 1938, and Tuberculosis (Amendment) Order, 1946.

These Orders aim at the elimination of cows suffering from tuberculosis, or producing tuberculous milk. During 1952, 24 cows were slaughtered under these Orders at the City Abattoir. Of these, 16 carcasses were totally rejected, one was partially rejected, and in the remaining 7 cases, organs only were rejected.

Slaughter of Animals Act, 1933.

Applications for licences as slaughtermen were received as follows:—
5 new licences, 13 renewals of existing licences, and 126 temporary licences for the ritual slaughter of animals for the food of Moham-medans. In each case the licence was granted, but particular attention

was paid to the suitability of knives used by Mohammedans for slaughtering to avoid unnecessary suffering to animals.

Poultry.

All poultry is examined on arrival at the markets before sale, and, in addition during the year, 1,772 boxes of sub-standard poultry from Northern Ireland were subject to a special detailed examination. This resulted in 6,934 head of poultry being rejected for reasons set out as follows:—

Fibroma	486
Epithelioma	74
Decomposition	1,447
Arthritis	48
Ill Bleeding	53
Extensive Bruising	150
Oedematous Oviducts	1,187
Emaciation	3,489
Total	6,934

It has been noted that as a result of this special attention, the average quality of sub-standard grade poultry has materially improved.

TABLE VIII.

QUANTITY OF FOOD CONDEMNED FOR DISEASE OR FOUND UNFIT FOR
HUMAN CONSUMPTION

	Tons	Cwts.	Qrs.	lbs.
Beef, Veal, Mutton, Pork, Goatflesh	377	—	—	1
Offal	526	15	1	3
Fish (Wet)	87	15	2	25
Fish (Dry)	21	14	3	5
Shellfish	8	18	—	24
Poultry	17	12	1	8
Game	—	—	3	21
Rabbits and hares	6	6	2	19
Fruit	125	14	1	4
Vegetables	139	18	—	23
Nuts	3	—	—	4
Dried fruits	1	19	—	27
Canned foods	73	15	—	5
Sundries (Jellies, flour, sweets, cereals, etc.)	23	10	—	6
Total quantity of food condemned	1,414	—	3	7

DISPOSAL OF CONDEMNED FOOD.

Whenever possible, unsound foodstuffs are utilised after sterilisation, for animal feeding. The bulk of fruit, vegetables, flour and canned goods are thus used. Meat, blood and offals are rendered for bones, tallow and fertilisers. Much of this disposal is completed in a special plant built at Stanley Abattoir for this purpose.

There is no actual waste of any condemned food as it is completely used up for industrial purposes or for animal feeding after treatment.

Precautions Against Contamination of Food.

During the year, some 45,140 visits were made by the Food Inspectors to premises where food was prepared. Details of these visits are given in Table I. 88 complaints from members of the public were received—these complaints varied from a request to inspect meat suspected by the purchaser as consisting of horseflesh to the presence of beetles in a tin of beans manufactured in South Africa. In every case a thorough investigation was made and the complainant satisfied. The provisions and requirements of Section 13 of the Food and Drugs Act, 1938, have been fairly enforced, and it was only necessary to send 18 notices in regard to contraventions which were not remedied forthwith on verbal notification.

A considerable improvement has been noted in the standard of hygiene in food factories which is due to extensive reconstruction following war damage, and to personal attention to hygiene as a result of propaganda by this department.

Mobile canteens which are in use have also been regularly inspected, and under a local arrangement, the Ministry of Food only grants the licence to acquire and sell foodstuffs to operators of vehicles which are satisfactory on inspection before being put on the road. The difficulties met with in the sanitary disposal of dish water and refuse have now been largely overcome.

All vehicles in use for the conveyance of meat from the City Abattoir to retail shops are of the enclosed type, and full use is made by owners of the facilities offered by the Manager of the City Markets, whereby vehicles can be efficiently washed at the Abattoir on payment of a fee

of sixpence. Every vehicle is washed daily, and during loading at the meat market an inspection of sheets, and interior of all motors in which meat is delivered to shops and cold stores, is a routine duty of the inspectors.

MARKETS.

With the co-operation of the Markets Committee several measures have been adopted in the markets and Stanley Abattoir which have furthered the clean handling of foodstuffs.

WHOLESALE FISH MARKET.

Eight new water taps have been installed for the cleansing of fish boxes, and drainage facilities improved.

ST. JOHN'S RETAIL MARKET.

The provision of hot and cold water with suitable sinks at selected points has improved the means of cleansing stalls and for personal hand washing. Toilet facilities have been improved for both sexes, the provision of paper towels and soap has also added to the amenities. It is pleasing to record that several food stalls have been rebuilt and roofed over. The provision of glass protection for foodstuffs displayed on stalls has been made by many stall holders.

In general the hygienic condition of this market has been markedly improved during the year. The temporary wartime stalls set up in the retail fish market, however, are not satisfactory and could well be improved.

STANLEY ABATTOIR.

Considerable effort has been made in co-operation with the Markets Department, the Abattoir Utility Company, the Wholesale Meat Supply Association, and the Ministry of Food. An advisory committee consisting of representatives of the above bodies and the Public Health Department, under the chairmanship of Councillor R. Nash (Chairman of the Abattoir Sub-Committee of the Markets Committee of the City Council), has met regularly to examine problems in regard to the Abattoir and meat market.

The value of this co-operation cannot be over-estimated. Some of the problems tackled during the year have included the following matters:

hygiene of slaughter houses; handling of diseased meat and offals; the efficient preparation of animal intestines; provision of improved meat inspection facilities; better lighting; the introduction of "line slaughter" methods; the provision of washable protective clothing for use by slaughtermen; sterilisation of knives and working tools; more efficient handling of bye-products.

It is hoped that by the improvements already made and those projected, to maintain Stanley Abattoir as the largest slaughtering unit and meat market in the country.

ROSE STREET, ROE STREET, QUEEN SQUARE, GREAT CHARLOTTE STREET.

By arrangement with the City Engineer and Water Engineer, particular attention is paid to the cleansing of this area where a considerable volume of trade is carried on, and special arrangement has been agreed for the regular washing of the streets, especially during the summer months.

FOOD POISONING.

APPENDIX D (i)

Annual Return of Food Poisoning Notifications.

1. COUNTY BOROUGH OF LIVERPOOL, 1952.

2. FOOD POISONING NOTIFICATIONS (CORRECTED) RETURNED TO R.G.

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
12	9	19	13	53

3. OUTBREAKS DUE TO IDENTIFIED AGENTS.

Outbreaks due to :—	Total Outbreaks.	Total Cases.
Chemical Poisons ...	—	—
Salmonella Organisms ...	—	—
Staphylococci ...	2	4
C.I. Botulism ...	—	—
Other Organisms ...	—	—
	2	4

4. OUTBREAKS OF UNDISCOVERED CAUSE.

Total Outbreaks ...	2	Total Cases ...	6
---------------------	---	-----------------	---

5. SINGLE CASES.

Agents Identified.	Unknown Cause.	Total.
*27	16	43
* Typhi Murium 22. Sal. Newport 2.	Sal. Enteritidis 2.	Staphylococci 1.

17 of these cases were reported from hospitals as infections caused by the particular organism named, but the lapse of time from the presumed date of infection precluded effective investigation.

APPENDIX D (ii)**Food Poisoning Outbreak (Summary of Details).**

1. FOOD CAUSING OUTBREAK: Brawn.

AGENT CAUSING OUTBREAK: Staphylococcus Pyogenes.

2. CASES FORMING OUTBREAK which occurred from 13th to 16th December, 1952.

Total Notified ...	...	...	...	2
Total Ascertained ...	...	...	...	2
Fatal ...	...	...	...	Nil

3. CLINICAL FEATURES :

Average interval ingestion to onset, 2 hours.

Main Symptoms : Vomiting, diarrhoea and stomach pains.

Severity of Illness : Moderate.

Duration of illness : 3 days.

4. RESULTS OF LABORATORY INVESTIGATIONS :

Cases ... Nil.

Food Handlers ... Nil.

Food Sample ... Specimen of brawn from what was thought to be the same stall in the market contained Staph. Pyogenes.

Others ... Nil.

5. ORIGIN AND PREPARATION OF FOOD CAUSING ILLNESS: Not known.

6. PLACE AT WHICH FOOD WAS CONSUMED: Home.

7. PROBABLE ORIGIN OF INFECTION OR CONTAMINATION: Not known.

APPENDIX D (ii)**Food Poisoning Outbreak (Summary of Details).**

1. FOOD CAUSING OUTBREAK: Tinned Crab.

AGENT CAUSING OUTBREAK: Staphylococcus Pyogenes.

2. CASES FORMING OUTBREAK which occurred from 29 December, 1951 to 2nd January, 1952.

Total Notified, 2.

Total Ascertained, 4.

Fatal, Nil.

3. CLINICAL FEATURES :

Average interval ingestion to onset, 1 hour.
 Main Symptoms : Vomiting and diarrhoea.
 Severity of Illness : Severe.
 Duration of Illness : 5 days.

4. RESULTS OF LABORATORY INVESTIGATION :

Cases, faeces and vomit, Staph. Pyogenes.
 Food handlers, Nil.
 Food Sample, Staph. Pyogenes.

5. ORIGIN AND PREPARATION OF FOOD CAUSING ILLNESS : Not known.

6. PLACE AT WHICH FOOD WAS CONSUMED : Home.

7. PROBABLE ORIGIN OF INFECTION OR CONTAMINATION : Tinned crab may have been infected after opening. An unopened tin purchased at the same time was found to be uninfected.

Section 13 of Food and Drugs Act, 1938.

18 notices were served.

	DEFECTS	
	Completed	Not completed
Inadequate washing facilities	4	—
Dirty utensils and fitments... ..	6	—
Accumulation of refuse	3	—
Inadequate protection against contamination ...	1	—
Dirty yard wall	1	—
Dirty condition of inside walls	5	1
Dirty ceilings... ..	3	1
Dirty floors	3	—
Dirty doors	1	—
Defective gutterings or downspouts	3	—
Defective floors	7	—
Defective walls	5	—
Defective ceilings	5	—
	47	2

Food Hygiene.

The Food and Drugs Act, 1938, Section 15, gave powers to Local Authorities, subject to the approval of the Minister of Food, to make byelaws concerning the handling, wrapping and delivery of food, and sale of food in the open air. The byelaws approved by the City Council came into operation on 30th July, 1951.

The purpose of the byelaws is to prevent all forms of contamination of foodstuffs, whether offered for sale in shops or in the open air, by "dust, dirt, mud, filth, dirty water, animals, rodents, flies, insects and other sources of contamination including contamination by other persons".

Steps were taken to inform traders and street hawkers of the byelaws by inspectors giving verbal instruction and by the issue of an extract from the bye-laws giving the more essential clauses and pointing out that the full byelaws were obtainable from the office of the Town Clerk. Trade Associations were informed of the byelaws in order that members could be informed in Trade Circulars, etc.

The trade has, in the main, co-operated in the implementation of the byelaws; a pronounced improvement has already been noted in the Queen Square Wholesale Fruit and Vegetable Market. Street traders have been fully informed of the byelaws and generally the cleanliness of the handcarts has been much improved. During the year 1952, 708 visits were made to Food Hawkers by Food Inspectors.

One hawker was summoned and convicted for exposing raw tomatoes for sale without an indication of the country of origin. The defendant who was selling Guernsey tomatoes with a large label marked "Local grown" was fined £1 0s. 0d. See Table XXIII.

A formal warning notice has been prepared on which specific offences are noted before it is delivered to the offender, pointing out to him that further offence may result in legal proceedings being taken.

There were no prosecutions by Food Inspectors under the byelaws during the year as it is felt that by instruction and gaining the co-operation of traders greater progress will be made toward hygienic handling of food. 73 infringements of the byelaws were noted during the year.

FOOD AND DRUGS ACT, 1938, SECTION 19, BYELAW INFRINGEMENTS
INSPECTIONS CARRIED OUT BY BOTH SANITARY INSPECTORS AND FOOD INSPECTORS.

Byelaw		Grocers and Provisions	Bread and Confectioners	Fish and Poultry	General	Butchers	Pork Butchers	Sweets	Green Grocers	Catering Establishments	Licensed Premises	Fish Friers	Bakeries	Hawkers	TOTALS
2	Cleanliness of persons and clothing ... ..	...	1	—	—	—	—	—	—	1	—	1	2	—	5
3	Handling food, etc., while suffering from disease ... ..	...	—	—	—	—	—	—	—	—	—	—	—	—	—
4	Persons smoking while handling food ... ..	...	—	—	—	3	—	—	—	1	—	—	4	—	8
5	(a) Food not protected from dust, dirt, etc.	7	—	3	1	—	—	—	1	61	10	1	7	—	91
	(b) Food not covered during delivery ... ..	...	—	—	—	—	—	—	—	—	—	—	—	—	—
	(c) Counters, fittings, apparatus, utensils, etc., not clean	3	—	—	1	8	—	—	—	17	—	10	7	—	46
	(d) Interior of delivery vehicles not clean. (Bread Vans)	—	—	—	—	—	—	—	—	—	—	—	30	—	30
6	(e) Refuse not placed in receptacles	—	—	—	—	—	4	—	—	2	—	2	7	—	9
	(a) Use of unsuitable wrapping material	—	—	—	—	—	—	—	—	2	—	—	—	—	6
	(b) Returned containers not clean	—	—	—	—	—	—	—	—	—	—	2	1	—	2
	(c) Refuse deposited near food	1	—	—	—	—	—	—	—	—	—	—	—	—	4
	(d) Unsuitable and insufficient lighting	2	—	—	—	—	—	—	—	—	—	—	—	—	2
	(e) Food not protected from other articles during delivery	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	(a) Suitable refuse receptacle not provided	9	—	5	1	—	—	—	3	12	—	17	10	—	57
	(b) Room not sufficiently lighted	—	—	—	—	—	—	—	—	2	—	1	2	—	5
	(c) Counters, apparatus, utensils, etc., not in repair	5	—	—	—	—	—	—	—	14	23	5	12	—	59
	(d) Notice to wash hands not affixed	177	122	11	39	35	2	27	30	19	20	9	17	—	508
	(e) Clothing and footwear improperly deposited	3	—	—	—	—	—	—	—	4	—	1	2	—	10
8	Interior of vehicles not in good repair. (Bread Vans)	—	—	—	—	—	—	—	—	—	—	—	3	—	3
9	OPEN AIR—Food not protected from dust, etc.	—	—	—	—	—	—	—	—	—	—	—	—	12	12
	(a) —Counters, etc., not clean	—	—	—	—	—	—	—	5	—	—	—	—	—	5
10	(b) —Refuse deposited near food	—	—	4	—	—	—	—	—	—	—	—	—	—	4
	(a) —Unsuitable or insufficient lighting	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	(b) —Stall, etc., not in good repair	—	—	—	—	—	—	—	8	—	—	—	—	—	8
	(a) —Name and address not on stall, etc.	—	—	—	—	—	—	—	—	—	—	—	—	18	18
12	(b) —Using stall, etc., not clean	—	—	—	—	—	1	—	—	—	—	—	—	5	6
	(a)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	TOTALS	207	123	23	42	46	7	27	47	135	53	49	104	35	898

Warning letters were sent in respect of the above infringements.

Clean Food Campaign.

CLASSES OR LECTURES FOR FOOD TRADERS OR THEIR EMPLOYEES.

Each year a number of meat trade and food factory principals and employees enrol in the Meat and Food Class to further their knowledge of the food industry. It is the practice to keep, as far as is possible, these men together and to impress upon them the necessity of the clean handling of food and the effects of dirty refrigerators, dirty personal habits, dirty premises and equipment. Special stress is made of the essential cleanliness of plant, more particularly sausage machines, and of the need of prevention of contamination of foodstuffs used in prepared foods, such as sausage, brawn, pressed meat and meat mixtures.

Every opportunity is taken in markets, food shops, food factories or food distribution premises of impressing employers and employees of the importance of clean handling of food. This fact is more particularly emphasised when a complaint has been received concerning the particular person, place or commodity.

Other Relevant Activities.

Lectures and demonstrations given to Nurses, Health Visitors, and Domestic Science students embrace the careful handling and storage of all foods, food spoilage by acari, flies, rats, mice, etc., and the danger of foods becoming contaminated by staphylococci thereby leading to outbreaks of food poisoning. Every effort is made during the lectures to show food specimens in their normal and abnormal state, including diseased meat, affected with tuberculosis, septicaemia, bone taint and other pathological conditions.

Morbid specimens are also prepared for examinations conducted by the Royal Sanitary Institute, the University of Liverpool Veterinary School, and the Institute of Meat.

Ice Cream.

In March, 1951, standards for the composition of ice cream came into operation under the provisions of the Food Standards (Ice Cream) Order, 1951. Briefly these standards are as follows:—

Ice cream shall contain not less than 5 per cent. fat; 10 per cent. sugar; and $7\frac{1}{2}$ per cent. of milk solids other than fat. Ice cream which contains any fruit pulp, fruit, or fruit puree must either conform to the above figures or alternatively the total content of fat, sugar and milk solids other than fat, shall be not less than 25 per cent. of the ice cream, fruit, puree, or fruit pulp as the case may be; such total to be composed of not less than $7\frac{1}{2}$ per cent. of fat; 10 per cent. of sugar, and 2 per cent. of milk solids other than fat. "Parev" (Kosher) ice must contain at least 10 per cent. of fat and not less than 14 per cent. of sugar.

During the year, the premises, plant and utensils of all makers or vendors of ice cream have been regularly inspected and 2,288 visits were made by the food inspectors to ensure cleanliness of methods of manufacture.

The number of samples taken for examination for chemical composition was 25. Of this total one was found to be slightly deficient of fat.

In addition to the 25 samples taken for compositional standard, 171 samples of ice cream were examined for bacterial cleanliness as follows: 67 samples were Grade 1; 43 samples Grade 2; 33 samples Grade 3; and 28 samples Grade 4.

The relative grades of cleanliness are as follows: Grade 1 is the highest—that is, the complete decolorization of Methylene blue takes $4\frac{1}{2}$ hours or more; Grade 2 where the time is between $2\frac{1}{2}$ -4 hours; Grade 3, $\frac{1}{2}$ -2 hours; and Grade 4, 0 hours, i.e., reduction takes place at the end of the pre-incubation period. The results shown above are satisfactory, 64 per cent. of the samples being in Grade 1 or Grade 2.

Steps are taken when a maker of ice cream has a sample graded 3 or 4 to make an investigation of the whole process of manufacture, by the food inspectors. This investigation is welcomed by the manufacturers who co-operate whole-heartedly in tracing the source of contamination.

Hydrogen Cyanide (Fumigation of Buildings) Regulations, 1938.

Successful fumigation of two flour mills, under the conditions of the Regulations took place during the year. The premises were, in each

case, inspected by a Food Inspector prior to the issue of a Certificate of Exemption by the Medical Officer of Health under Article 3 of the Regulation. This regulation provides that a Medical Officer of Health may, if he is satisfied that all necessary steps have been taken to safeguard any foodstuffs in the fumigation area from contamination, issue a certificate, which permits the fumigating staff to operate in warehouses or premises without the necessity of first removing all liquids or foodstuffs which might be stored on such premises. A Food Inspector was present at the actual fumigation of each building.

THE CLEANLINESS OF MILK.

During the year, the standard of cleanliness of milk has been very satisfactory. Regular routine samples were taken from the herds of producers within the City, and also from the milk brought into Liverpool daily by road and rail from the County areas of Lancashire, Cheshire, Denbighshire and Shropshire.

The total number of milk samples submitted to the City Bacteriologist for examination was 2,712, comprised as follows:—129 Tuberculin-tested milks; 483 Accredited milks; 92 Ungraded milks; and 2,008 heat-treated milks. The sale of raw ungraded milk ceased after November 1st, 1952 on which date the City was declared a specified area.

The Tuberculin-tested, Accredited, and ungraded milk were examined by the methylene blue reduction test, and subjected to guinea pig inoculation for the detection of tubercle bacilli. Heat-treated milk was tested by the phosphatase, methylene blue, or turbidity tests. The detailed results of bacteriological examinations of milk are given in Tables XVI to XIX.

TABLE XVI.

EXAMINATION OF SAMPLES OF TUBERCULIN TESTED MILK.

Supplied by	Number of Samples	Where taken	METHYLENE BLUE REDUCTION TEST.	
			Satisfactory.	Unsatisfactory.
A	12	Produced in City	11	1
B	12	"	10	2
C	12	"	2	10
D	12	"	12	0
E	12	"	12	0
F	12	"	11	1
G	11	"	11	0
H	8	"	8	0
Various	38	Wholesale Depots (Country Milk)	35	3
TOTALS	129		112	17
			86·9%	13·1%

TABLE XVII.

THE EXAMINATION OF ACCREDITED MILK PRODUCED IN LIVERPOOL.

Total Number of Samples.	METHYLENE BLUE TEST.	
	Satisfactory.	Unsatisfactory.
483	444	39
	92%	8%

It is interesting to note that the Accredited milk produced in city cow-sheds, which formerly were subject to supervision by the Health Department, was cleaner than Tuberculin-tested milk produced by herds in areas outside the City.

TABLE XVIII.

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

Month.	Number of Samples	METHYLENE BLUE REDUCTION TEST.	
		Satis- factory.	Unsatis- factory.
January ...	11	10	1
February ...	11	10	1
March ...	10	9	1
April ...	11	10	1
May ...	9	7	2
June ...	9	8	1
July ...	9	6	3
August ...	8	6	2
September ...	9	9	—
October ...	5	5	—
November ...	—	—	—
December ...	—	—	—
TOTAL ...	92	80	12
		87%	13%

TABLE XIX.

EXAMINATION OF HEAT TREATED MILK FROM PLANTS IN THE CITY.

Class of Milk.	Number Tested.	Appropriate Test.	Number of Samples.	
			Passed.	Failed.
Pasteurised... ..	1,096	Phosphatase ...	1,086	10
		Methylene Blue	1,083	13
Sterilised	214	Turbidity ...	213	1
Tuberculin Tested (Pasteurised)...	698	Phosphatase ...	688	10
		Methylene Blue	692	6
TOTAL	2,008	Phosphatase ...	1,774	20
		Methylene Blue	1,775	19
		Turbidity ...	213	1

Since February, 1948, by the operation of the Public Health Laboratory Service under the Ministry of Health, the examination of heat-treated milk for the purpose of testing the efficiency of the heat treatment by means of the phosphatase test, and for keeping quality by the methylene blue reduction test, has been carried out by the City Bacteriologist.

The twenty milks which failed the phosphatase test were obtained from small units. One unit ceased to operate during the year and at the others modification of the plant was made.

The efficiency of heat-treatment plants in the City (which are amongst the most up-to-date in the country) is being maintained at a high level and reflects credit on the firms concerned, who have co-operated with the Health Department by accepting suggestions and criticisms, in achieving most satisfactory results.

TUBERCULOUS MILK.

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

TABLE XX.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk 	544	12	2·2%
Ungraded raw milk 	99	1	1·0%

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

TABLE XXI.

Kind of Milk.	Number of samples.	Tubercle bacilli present.	Percentage tuberculous.
Graded milk 	48	—	—

The comparatively small amount of ungraded raw milk coming into the City from outside areas is pasteurised or sterilised before sale, and for this reason samples have not been submitted for guinea pig inoculation. Graded milks are, of course, also heat-treated in the City before sale as detailed in Table XIII. (Daily supply of milk to Liverpool, page 94.)

Milk for School Children.

Pasteurised milk only is supplied to school children under the Milk Marketing Board's Scheme. During the year some 116,309 children were each supplied with a third of a pint daily. This number is approximately 94·57 per cent. of the children attending school. During the year

120 samples were examined bacteriologically and chemically, and the results as a whole were highly satisfactory. None of the samples was found to be tuberculous.

Legal proceedings were instituted against a supplier of milk under the scheme for selling milk which contained broken glass to three schools. The firm was convicted, fined £20 and ordered to pay £1 1s. 0d. costs.

Routine milk samples taken at Day Nurseries, the Central Kitchen, and School Canteen Kitchens have proved satisfactory.

Milk Supply to Hospitals and Aged Persons' Hostels.

The milk supplied to the Hospitals and Aged Persons' Hostels in the City by various contractors is regularly sampled at the time of arrival. 252 samples were submitted for chemical analysis and bacteriological examination, and the results of these tests during the year have been satisfactory.

Milk and Dairies Regulations, 1949.

Provisions with regard to Infection of Milk.

During the year, 13 cases of milk infected with *Mycobacterium tuberculosis* were found as a result of the routine inoculation of milk samples taken from dairy herds in the City. It was not found necessary to serve any notices under Article 20 of the Regulations requiring heat treatment of this milk before sale, because in each instance the Veterinary Officers of the Ministry of Agriculture and Fisheries detected the cows giving tuberculous milk within 24 hours of notification by the Medical Officer of Health. The cows were subsequently slaughtered at Stanley Abattoir. See page 69 (Food Section).

THE ADULTERATION OF FOOD AND DRUGS.

The importance of a pure food supply cannot be over-estimated, and low quality or adulterated foods cannot be tolerated.

The Medical Officer of Health is, of course, responsible for ensuring that the foodstuffs offered for sale for human consumption in his area are pure and wholesome. This entails the constant vigilance of the Food and Drugs Inspectors who purchase samples of foodstuffs of every description, and after analysis by the Public Analyst (whose duty is to test for adulteration), appropriate action is taken. In some cases, legal proceedings are instituted; in others, advice is given to the vendor—particularly in regard to milk which proves to be of abnormal composition although genuine—and in other instances the packer or manufacturer is advised of the irregularity or technical offence. The laying of informations, service of summonses and the preparation of evidence is carried out by the Food Inspection Staff.

It is satisfactory to note that during the year 1952, out of a total number of 4,498 samples taken or purchased, only 4.5 per cent. were found to be not genuine or otherwise giving rise to irregularity. This comparatively low figure is a tribute to food suppliers and shopkeepers as well as to constant inspection and sampling.

Of the total number of 4,498 samples detailed in Table XV, 672 were formal and 3,826 informal. An "informal" sample is one purchased without intimation to the vendor that it is to be analysed. Valuable information as to irregularities is obtained in this way. Prosecution for adulteration cannot be undertaken, however, until a "formal" sample has been taken subsequently, in accordance with the procedure described in the Food and Drugs Act, 1938. 93 formal samples and 110 informal samples were reported as not being genuine or otherwise giving rise to irregularity. Legal proceedings were instituted in 36 cases where formal samples were found not to be genuine and, in the remaining instances appropriate action was taken. The results are summarised in Table XXII.

TABLE XXII.

SUMMARY OF SAMPLES TAKEN OR PURCHASED DURING THE YEAR 1952 UNDER
THE FOOD AND DRUGS ACTS, 1938-1950.

Nature of Sample.	Number of Samples.		Samples found not to be genuine or otherwise giving rise to irregularity.		Manufacturers or Vendors cautioned.	Prosecutions.	Remarks on Sample where Caution was given.
	Formal.	In-formal.	Formal.	In-formal.			
Arrowroot	1	—	—	—	—	—	—
Baking Powder	3	—	1	—	1	—	Slightly deficient in available Carbon dioxide.
Barley	1	—	—	—	—	—	—
Beer and Stout	—	51	—	11	11	—	Contained small amounts of lead.
Beef Suet with Flour	10	—	—	—	—	—	—
Beans, Peas, etc.	2	—	—	—	—	—	—
Bread	—	1	—	—	—	—	—
Butter	12	1	—	—	—	—	—
Candied Peel	3	—	—	—	—	—	—
Cake Decorations	1	—	—	—	—	—	—
Cake and Flour Mixtures	9	—	—	—	—	—	—
Cake and Biscuits	4	—	—	—	—	—	—
Cheese and Wrapped Cheese	1	2	—	—	—	—	—
Cooked Meats	8	1	1	—	1	—	Brawn which contained 0.08% preservative.
Coffee, Mixtures and Extracts... ..	1	—	—	—	—	—	—
Condensed Milk	—	1	—	—	—	—	—
Confectionery and Sweets	23	—	5	—	5	—	1 wrongly labelled. 4 slightly deficient of butter fat.
Cornflour	5	—	—	—	—	—	—
Condiments and Spices	27	3	1	—	—	1	—
Custard and Blanc Mange Powders.	7	—	—	—	—	—	—
Desiccated Coconut	6	—	—	—	—	—	—

Nature of Sample.	Number of Samples.		Samples found not to be genuine or otherwise giving rise to irregularity.		Manu- facturers or Vendors cau- tioned.	Prosecu- tions.	Remarks on Samples where Caution was given.
	Formal.	In- formal.	Formal.	In- formal.			
Dripping, Lard and Compounds	3	—	—	—	—	—	—
Dried Fruits	13	—	—	—	—	—	—
Drugs	47	37	1	1	—	—	1 incorrectly labelled 1 deteriorated through storage.
Flavourings and Colourings ...	4	—	—	—	—	—	—
Fish Cakes	4	7	—	—	—	—	—
Golden Raising Powder ...	1	—	—	—	—	—	—
Gelatine	3	—	—	—	—	—	—
Gravy Salts and Browning ...	3	1	—	—	—	—	—
Glacé Cherries	4	1	—	—	—	—	—
Honey and Mixtures	4	—	—	—	—	—	—
Ice Cream	25	1	1	—	1	—	Slightly deficient fat content.
Jams, Jellies and Marmalade ...	70	4	1	—	1	—	Slightly deficient fruit content.
Lemonade, Cordials, etc. ...	11	—	—	—	—	—	—
Margarine	2	—	—	—	—	—	—
Meat Pies	1	—	—	—	—	—	—
Milk	167	3582	49	83	27	30	Caution given producers. — 1 slightly deficient fat.
Nuts	1	—	1	—	—	1	—
Oatmeal and Cereal Foods ...	6	—	—	—	—	—	—
Olive Oil and Salad Oil, etc. ...	4	2	—	—	—	—	—
Prepared Puddings	4	—	—	—	—	—	—
Sauces, Chutney and Pickles ...	—	13	—	—	—	—	—
Sago, Semolina and Rice ...	13	—	—	—	—	—	—
Self-Raising Flour	24	—	—	—	—	—	—

Nature of Sample.	Number of Samples.		Samples found not to be genuine or otherwise giving rise to irregularity.		Manufacturers or Vendors cautioned.	Prosecutions.	Remarks on Sample where Caution was given.
	Formal.	In-formal.	Formal.	In-formal.			
gar	—	1	—	—	—	—	—
usage and Sausage Meat ...	83	24	31	10	37	4	Sausages found to be slightly deficient of meat content.
thetic Cream	—	2	—	—	—	—	—
a and Tea Saving Tablets ...	6	2	1	1	1	—	Wrongly labelled as to ingredients.
ned Beans and Soups ...	3	9	—	—	—	—	—
ned Fruit	7	14	—	—	—	—	—
ned Vegetables	2	18	—	—	—	—	—
ned and Potted Meats ...	2	7	—	—	—	—	—
ned and Potted Fish ...	—	12	—	—	—	—	—
egar	19	1	—	—	—	—	—
ter Ices	—	28	—	4	4	—	Contained very small amount of lead.
nes and Spirits	12	—	—	—	—	—	—
	672	3826	93	110	89	36	

TABLE XXIII.

OFFENCES UNDER THE FOOD AND DRUGS ACTS, 1938-50.
AND THE MERCHANDISE MARKS ACT, 1926.

Number of Informations laid	Nature of Sample.	Nature of Offence.	Result of Legal Proceedings.		
			Number of convictions	Fines.	Costs.
30	Milk	Contained added water ...	30	£ s. d. 68 0 0	£ s. d. 65 2 0
2	Beef Sausages...	Deficient in meat content	2	3 0 0	4 4 0
2	Pork Sausages	Deficient in meat content	2	4 0 0	6 6 0
1	Walnut Dust ...	Contaminated by live and dead insects	1	1 0 0	3 3 0
1	Pepper	Contained 70% of cereal flour	1	5 0 0	3 3 0
4	Milk	Contained broken glass ...	4	20 0 0	1 1 0
2	Bread	Unfit for human consumption (mouldy)	2	6 0 0	16 6
1	Meat Pies	Unfit for human consumption (contained live maggots)	1	10 0 0	1 13 6
1		Obstruction of Inspector in course of his duty	1	3 0 0	—
3	Tomatoes	Exposing raw tomatoes for sale without indication of country of origin	3	3 0 0	—
47			47	123 0 0	85 9 0
				£208 9 0	

Fertilisers and Feeding Stuffs Act, 1926.

During 1952, 47 samples of fertilisers and feeding stuffs were submitted for analysis. It was not necessary to take any legal proceedings. All samples with minor exceptions were found on analysis to conform with the manufacturers' statutory statement.

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 Order, 1949. The number of names entered in the register is 737. It was not necessary to institute any legal proceedings.

THE SUPERVISION OF COWSHEDS, DAIRIES AND MILKSHOPS.

Registration of Dairies.

TABLE IX.

(*Food and Drugs Acts, 1938-1950.*)
(*Milk and Dairies Regulations, 1949.*)

Number of registered dairies at the end of 1951.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1952.
413	16	—	16	413

(39 dairies were transferred from one person to another.)

Inspection of Dairies.

1,449 visits of inspection were paid to dairies. In 42 instances infringements of the Milk and Dairies Regulations, 1949, were found. In every case where a notice of requirements was issued, it was complied with at once.

Registration of Dairymen.

TABLE X.

Number of registered dairymen at the end of 1951.	Applications for transfer of registration.	Applications refused.	Ceased to be dairymen.	Remaining on the register, Dec. 31st, 1952.
418	30	—	16	418

In addition to the above registration, there are 18 Distributors of Milk whose premises are situated outside the City boundary, but who regularly bring milk into Liverpool for sale. Two additional Registration Certificates have been granted to milk distributors in this category during the year. Of the 418 dairymen on the register at the end of the year, 5 were milk-hawkers who, not having premises of their own, are

registered at the dairy from which they obtain their supplies and store their utensils.

FOOD AND DRUGS ACTS, 1938-1950.

MILK AND DAIRIES REGULATIONS, 1949

MILK (SPECIAL DESIGNATION) (RAW MILK) REGULATIONS, 1949.

MILK (SPECIAL DESIGNATION) (PASTEURISED AND STERILISED MILK) REGULATIONS, 1949.

REGISTRATION AND LICENSING OF MILK DISTRIBUTORS.

The following table shows the number of Registered Dairy Farmers who are producing designated milk, all of whom are licensed by the Ministry of Agriculture and Fisheries.

In addition, there is shown the number of distributors of Tuberculin Tested Milk, Tuberculin Tested Milk (Pasteurised), Pasteurised Milk, and Sterilised Milk, who obtain their licences from the Liverpool City Council.

TABLE XI.

	Tuberculin Tested Milk	Tuberculin Tested Milk Pasteurised	Pasteurised Milk	Accredited Milk	Sterilised Milk	Total Licences Issued
Producer Wholesaler	4	0	0	4	0	0
Producer Retailer ...	4	0	0	32	0	0
Dealer Pasteuriser ...	0	0	16	0	0	16
Dealer Steriliser ...	0	0	0	0	3	3
Registered Distributors ...	31	429	410	8	358	1,236
Vendors of Sterilised Milk only ...	0	0	0	6	902	908
Supplementary Licences ...	6	14	14	0	7	41
Transferred Licences	0	31	29	0	72	132
Total Licences Issued for the Distribution of Milk ...	37	474	469	14	1,342	2,336

Cleanliness of Milk Churns, Bottles and Equipment.

Observations were made at railway stations and other distributing centres to ensure that Regulations 25 and 26 of the Milk and Dairies Regulations, 1949, relating to the marking, construction and cleanliness of milk churns, were complied with. No contraventions were noted.

During the past year 1 new automatic churn washer has been installed in a dairy, 4 new automatic bottle washers have been installed and 4 new automatic rotary fillers and cappers are now in operation. During the past year 3 complaints have been received from consumers, of milk being delivered in dirty bottles. In these cases the matter was investigated and effective steps taken to prevent any recurrence.

Licensing of Premises for Keeping Cattle.

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. Tables XII and XV give summaries of the registers of licences in respect of milch cows and pigs:—

TABLE XII.

LICENSING OF PREMISES ON WHICH MILCH COWS ARE KEPT.

	End of 1951.	End of 1952.
Number of licensed cowsheds	87	73
Number of cows specified on the licences	1,658	1,393
Approximate average number of cows kept ...	1,340	1,132

Of the above 73 licences, 21 are issued to persons other than registered dairy farmers, who keep store cattle, or cows for the production of milk for their own use, as distinct from persons who produce milk for sale. No licences were transferred.

During the year, 14 licences were surrendered on the holders ceasing to keep cattle. No new licences were issued.

140 inspections were made of cowsheds and in 11 cases attention was required to defects and to contraventions of the Liverpool Corporation Act, 1921. All requirements were ultimately complied with and no prosecution was necessary, nor was any licence forfeited because premises were not maintained in proper condition.

THE MILK (SPECIAL DESIGNATIONS) (SPECIFIED AREAS) ORDER, 1952.

This Order declared areas, of which the County Borough of Liverpool was one specified area, in which, on and after November 1st, 1952, all milk sold must be specially designated milk, that is: pasteurised milk, sterilised milk, tuberculin tested milk or (until September 30th, 1954) accredited milk from a single herd.

TABLE XIII.

DAILY SOURCE OF MILK DURING 1952.

Produced from cows kept within the City.	Brought into the City by road.	Brought into the City by rail.
3,396 gallons	88,147 gallons*	100 gallons

TOTAL, 91,643 gallons.*

* 85,586 gallons of this milk are heat treated at plants in the City before sale. The remainder consists of milk previously pasteurised, or of designated raw tuberculin tested or accredited milk.

Daily Supply of Milk to Liverpool.

TABLE XIV.

DAILY CONSUMPTION OF MILK DURING 1952.

Grade of Milk.	Quantity in Gallons.
Tuberculin-tested (Farm Bottled)...	698
Tuberculin-tested ...	1,387
Tuberculin-tested (Pasteurised under licence) ...	28,924
Accredited ...	1,884
Pasteurised under licence ...	46,626
Sterilized ...	12,124
TOTAL ...	91,643

Milk Pasteurisation.

During the year the following methods of pasteurisation of milk were in operation :—

10 establishments are equipped with Holder type or Batch Pasteurisers with a total of 17 units of capacities varying from 75 gallons to 200 gallons. During the year 1 establishment was closed down and the licence surrendered.

6 establishments are operating High Temperature Short Time plant with a total of 11 units of capacities varying from 450 gallons per hour to 2,500 gallons per hour.

The amount of milk pasteurised daily is some 85,000 gallons.

1 dairy is in course of construction and will be opened in 1953 with complete new plant of the Holder type.

105 visits were paid to Pasteurising establishments during the pasteurising of milk, for the purpose of checking the temperature recorders. On 7 occasions it was found that the recorders required adjustment. In each case the necessary alteration was made and upon subsequent examination, the plant was found to be operating correctly.

Milk Sterilisation.

Three establishments are equipped with milk sterilising plants. In one, there are six sterilising chambers, each chamber dealing with 2,400 bottles (already filled, closed, and packed in crates), at each sterilisation. Some 8,000 pint bottles of milk are treated every hour in this dairy during a working day.

At another establishment a new automatic plant has been installed with a capacity of 1,000 gallons per hour. In this type of steriliser, the milk, pre-bottled at 160° F. and closed with a crown cork, is heated to 226° F. whilst travelling through the plant for some thirty minutes, then, after cooling, the bottles are crated ready for despatch.

The third establishment operates a smaller cabinet type of steriliser which can sterilise some 2,500 bottles of milk per hour.

The total quantity of milk sterilised daily in Liverpool's processing dairies is approximately 100,000 pints of milk. Not all this quantity

is sold in the City, the surrounding districts on both sides of the River Mersey are also supplied.

The following changes in licence holders took place:—

Tuberculin Tested Milk.

1 new licence became operative for the production of Tuberculin Tested Milk. (This licence was granted by the Ministry of Agriculture and Fisheries.)

8 new licences, for the sale of Tuberculin Tested Milk were granted.

2 new supplementary licences for the sale of Tuberculin Tested Milk were granted.

Tuberculin Tested Milk (Pasteurised).

57 new licences to sell Tuberculin Tested Milk (Pasteurised) were issued.

31 licences were transferred from one person to another.

4 licences were surrendered.

Pasteurised Milk.

1 new licence was granted for the Pasteurisation of Milk by the Holder process.

29 licences to sell Pasteurised Milk were transferred from one person to another.

85 new licences were granted for the sale of Pasteurised Milk.

2 licences were surrendered.

14 supplementary licences were granted for the sale of Pasteurised Milk.

Accredited Milk.

9 producers of "Accredited Milk" surrendered their licences on ceasing to produce milk. (These licences were issued by the Ministry of Agriculture and Fisheries.)

14 licences to sell "Accredited Milk" were issued.

Sterilised Milk.

166 new licences to sell Sterilised Milk were granted.

4 supplementary licences to sell Sterilised Milk were granted.

72 licences to sell Sterilised Milk were transferred from one person to another.

TABLE XV.

LICENSING OF PREMISES ON WHICH PIGS ARE KEPT.

	End of 1952.
Number of licensed piggeries	91
Number of pigs specified on the licences	2,917
Approximate average number of pigs kept	1,749

During the year, applications were made for 9 new licences to keep 49 pigs, and 7 requests were made to keep an additional 243 pigs, all of these applications being granted. Six licences, covering the keeping of 445 pigs, were voluntarily surrendered.

Five piggeries have been reconstructed and one new piggery has been erected to accommodate 12 pigs. This latter is entirely of pre-cast concrete.

190 visits of inspection were made, and at 11 piggeries defects were noted. These contraventions were infringements of the Liverpool Corporation Act, 1921, and were remedied after service of an appropriate notice.

In farms situated on the outskirts of the City licensed for the keeping of milch cows, 476 store cattle other than dairy cows were kept. One application to keep 30 additional store cattle was approved and a licence granted, and one licence was surrendered. One licence was also issued for the keeping of 15 store cattle in lieu of dairy cows, the producers licence being voluntarily surrendered.

AMBULANCE SERVICE.

For the year under review, the total number of removals again revealed an increase when compared with 1951. The removals totalled 129,495, an increase of 15,254, or 13 per cent. The mileage increased by 36,104, or 5.5 per cent.

Radio telephony, which was introduced in April 1951, again proved of exceptional value.

Removals to places outside the City boundary have increased slightly when compared with the previous year. 5,101 patients were conveyed to and from the areas of other authorities. Approximately 70 per cent. of the cost of this service was rechargeable. Co-operation with other authorities has been maintained, and their vehicles when returning empty from Liverpool have been used whenever possible.

The arrival of patients from overseas necessitates ambulances travelling to distant parts of the country. Each case is carefully investigated and, whenever possible, transport arranged by train.

Infectious cases are dealt with by a separate staff and vehicles. Removals of this type, when compared with 1951, increased by 8 per cent. The work of this Depot is mainly concerned with the transport of tubercular cases receiving regular clinic treatment. The Infectious Bed Bureau of the Regional Hospital Board is operated by this Depot and has been extensively used by neighbouring authorities to obtain vacancies in Liverpool Hospitals. The staff of this Depot consists of 1 station officer, 14 driver/attendants, operating 8 ambulances.

Arrangements are in being whereby cases of smallpox occurring in the areas of Cheshire County Council, Birkenhead County Borough Council, and Bootle County Borough Council, are removed by the Liverpool Ambulance Service.

During the year, 5 new stretcher carrying ambulances and 4 sitting case ambulances were delivered and 9 old ambulances and 7 old sitting case cars and brakes sold. The present fleet comprises 38 stretcher carrying ambulances, 4 sitting case ambulances, 6 sitting case cars, and 1 service van. In addition 2 Chevrolet ambulances and 2 Austin ambulances have been retained in reserve for Civil Defence requirements.

61,021 gallons of petrol were consumed during the year which, when compared with 1951, shows an increase of 3,548 gallons or 6·2 per cent. An analysis reveals that ambulances used on general and infectious removals averaged 10·2 miles per gallon, whilst ambulances confined to accident work averaged 7·88 miles per gallon. Sitting case cars and brakes averaged 16·5 miles per gallon.

The alterations to the Ambulance Headquarters, Belmont Grove, were completed in September 1952 and the new control room, offices and stores brought into operation.

The accident ambulances continue to be housed in certain Police premises as follows:—

- 1 at Westminster Road.
- 1 at Seel Street.
- 1 at Heald Street, Garston.
- 1 at Rose Lane, Allerton.
- 1 at Derby Lane, Old Swan.

It has not been possible to remove the vehicles from these premises, and the proposed new Ambulance Station at Westminster House has again been deferred.

The administrative staff of the Service comprises:—

- 1 Chief Ambulance Officer.
- 1 Deputy Ambulance Officer.
- 1 Senior Control Assistant.
- 4 Control Assistants.
- 2 Clerks.
- 1 Telephone Switchboard Operator.
- 1 Storekeeper.

The operational staff, including the Infectious Depot, consists of:—

- 82 Male Driver/Attendants.
- 9 Male Attendants.
- 20 Female Driver/Attendants.

The whole of this staff, with the exception of 6 driver/attendants, are qualified in First Aid.

All mechanical maintenance is undertaken at Headquarters by the following staff:—

- 1 Foreman.
- 6 Mechanics.
- 1 Labourer.

Extensive body repairs and re-painting of vehicles are carried out by outside contractors.

The Merseyside Hospitals Council, operating on an agency basis for Liverpool Corporation, carried out 55,759 removals and their 16 vehicles travelled 164,828 miles. The staff comprises 1 Ambulance Manager, 3 clerks, 27 driver/attendants, 1 mechanic, 1 labourer and 1 cleaner. The vehicles are housed in one central depot.

STATISTICAL REPORT.

1ST JANUARY, 1952 TO 31ST DECEMBER, 1952.

Non-infectious cases removed from:

Home to Hospital:

General Cases	52,768
Maternity	6,437
					<hr/> 59,205

Hospital to Home	38,995
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Infectious Cases removed from:

Home to Hospital	8,188
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Mental Cases removed from:

Home to Hospital	295
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Accident Cases removed from:

Home, Street, etc., to Hospital	7,865
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Inter-Hospital transfers	9,846
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Removals to and from places outside the City	5,101
--	-----	-----	-----	-----	-------

129,495

Cases requiring the Service of Midwives	559
---	-----	-----	-----	-----	-----

Patients to Railway Stations to entrain	254
---	-----	-----	-----	-----	-----

VEHICLES.

Ambulances.				Number in Service.	Mileage covered.	Petrol used (gallons).	O/Authorities issues.
Non-infectious	...	...	...	22	351,374	34,534	251
Infectious	...	...	...	9	87,234	8,331	—
Accident	...	...	...	6	47,484	6,018	—
Sitting case cars	...	...	...	9	131,382	7,104	38
Brakes...	...	...	...	5	69,267	5,034	—
TOTALS	...	...	...	51	686,741	61,021	289

DISINFECTION AND DISINFESTATION.

Although the primary duties of this section are disinfection and disinfestation, there is a considerable number of other duties for which the section is responsible. The complete functions are as follows:—

Inspection of premises for verminous condition.

Disinfestation of verminous premises.

Disinfestation of furniture, bedding, and personal effects.

Fly prevention measures

Burial or cremation of poor persons.

Transfer of bodies between hospitals.

Control of City Mortuary.

General transport for all sections of the Health Department, and certain transport duties for other departments.

Control of food distribution centre and textile store at Gascoyne Street.

Repairs to damaged furniture and equipment from all sections of the Health Department.

Storage and distribution of Home Nursing equipment.

Transport in connection with the Mobile Meals Service.

The following is a detailed summary of the duties carried out by this section during the past year:—

INSPECTIONS FOR VERMIN.

The Disinfestation Inspectors made 6,536 visits to inspect for vermin. These visits revealed that 2,024 premises were in a verminous condition and 4,512 free from vermin.

TREATMENT OF VERMINOUS PREMISES.

As a consequence of the Disinfestation Inspectors' visits, 1,966 dwelling-houses were treated for vermin. Of these, 945 were treated with D.D.T. and 1,021 with GAMMEXANE insecticide.

In 967 cases where occupants were to be rehoused, the verminous furniture it was proposed to remove to new accommodation was treated with a suitable insecticide.

Arrangements are in being for periodic disinfestation of canteens, locker rooms, etc., belonging to a number of commercial undertakings in the City. Under these arrangements 85 treatments were carried out, the cost being defrayed by the occupier.

DISINFECTION AND DISINFECTING STATIONS.

2,575 premises in which infectious disease had occurred were disinfected, and infectious articles removed for steam disinfection.

The two Disinfecting Stations (Charters Street and Smithdown Road) dealt with the following materials:—

14,116 verminous articles from premises in course of disinfestation treatment.

13,952 infectious articles and 803 library books from premises and ships in which infectious disease had occurred.

90 infectious articles on behalf of Bootle Public Health Department.

255,303 articles for precautionary disinfection on behalf of local undertakings, who defray the cost of such treatment.

1,393 tons of miscellaneous goods for export, the outer wrappers being treated with Sulphur Dioxide, and the cost of such treatment being borne by the exporter concerned.

FLY PREVENTION.

Fly prevention measures in treatments of 2,176 manure middensteads and dumps met with a considerable degree of success in reducing the fly population.

CITY MORTUARY, PEMBROKE GARDENS.

The City Mortuary received during the year 453 bodies and 18 stillbirths. Post mortem examinations were held on 412 of these bodies.

BURIAL OF POOR PERSONS.

The burial or cremation of poor persons who die in the City, is a duty which this section performs on behalf of the Welfare Department. In this connection 164 adults and children and 22 stillborn babies were interred and 1 adult cremated.

The department has an arrangement with local Hospital Management Committees for the transfer of bodies between hospitals. Under this arrangement 221 bodies were transferred, the cost being borne by the hospital concerned.

TRANSPORT.

Food, stores, and equipment are conveyed by vans attached to this section to:—

25 Maternity and Child Welfare Centres.

15 Day Nurseries.

67 Midwives.

8 Aged Persons' Hostels.

4 Mental Health Establishments.

3 Children's Department Establishments.

Police Training College and 17 other establishments.

The food distribution centre and textile reserve store established at Gascoyne Street depot in 1950, now functions to a considerably larger extent than was originally anticipated. Food, textiles and cleaning materials, etc., are now supplied to 77 establishments.

The section carries out repairs to furniture and other equipment in use at Health Department establishments.

Storage, distribution and collection of Home Nursing equipment is a further duty for which the section is responsible.

The movable property of persons admitted to hospital or to accommodation provided under Part III of the National Assistance Act, 1948, is conveyed, where necessary, to and from store.

The transport of food for persons in temporary accommodation at 100, Walton Village is also undertaken.

Transport for the Mobile Meals Service inaugurated in 1951 is a duty for which this section is responsible.

VEHICLES AND MAINTENANCE.

All these duties are carried out by 11 motor vehicles, which, during 1952, covered 84,557 miles and consumed 6,819 gallons of petrol. The

complete maintenance of these vehicles, including major and minor repairs, is carried out by the staff at Gascoyne Street depot.

STAFF.

The total staff of 43 engaged on these services comprises:—

- 1 Chief Inspector.
- 8 Inspectors.
- 2 Clerks.
- 1 Storekeeper.
- 31 Manual employees.

SMOKE ABATEMENT.

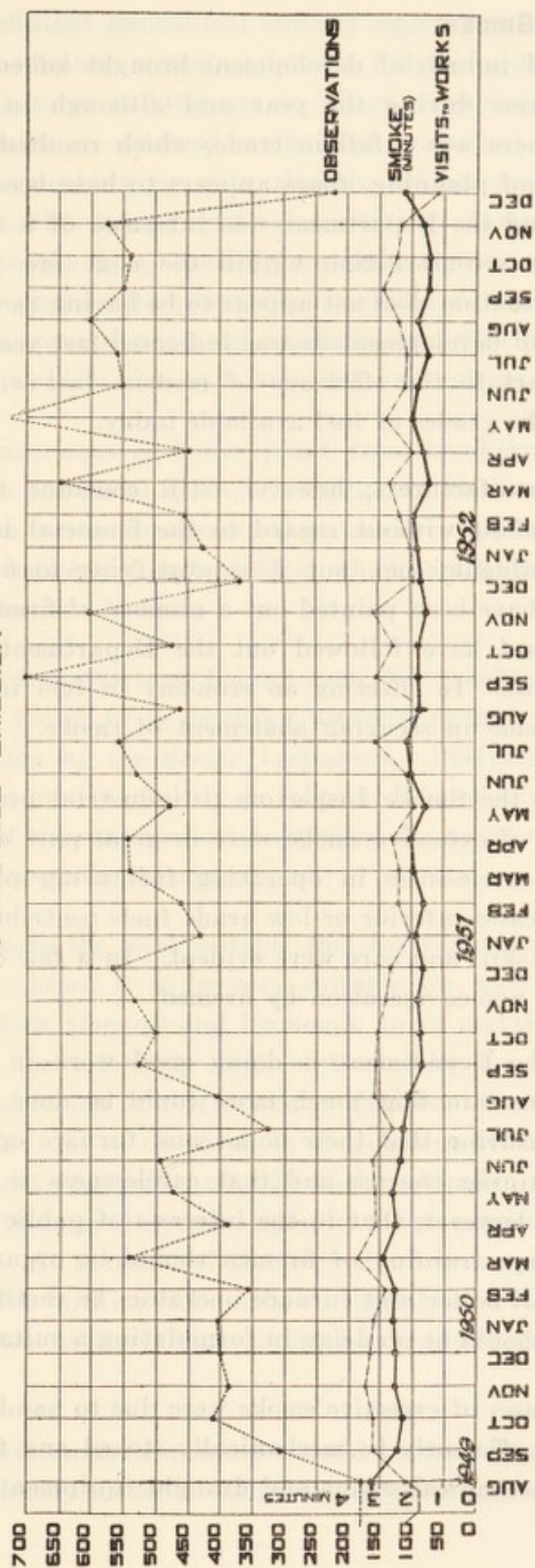
The work of smoke abatement has continued satisfactorily during the year and, in spite of adverse trade conditions, has resulted in further improvement in reducing atmospheric pollution. The accompanying graph of monthly smoke observations and average smoke emissions, continued from previous years, indicates the extent of this improvement, the average emission per chimney observed having been reduced to 1.67 minutes per half-hour during 1952 from 2.53 minutes per half-hour in 1949. The graph also shows the number of advisory visits to works made by the Smoke Inspectors.

Smoke from chimneys is an indication of inefficient combustion of fuel and, therefore, of waste of the country's most valuable raw material. At the present time, when the promotion of industrial fuel efficiency is so vital, the abatement of smoke for health reasons has assumed a further degree of importance.

During the year the report of the Ridley Committee, which had been appointed by the Minister of Fuel and Power to consider the question of fuel and power utilisation, was published, and certain recommendations were made. These embodied proposals are fully supported by the Department, and the principles of which are the basis of smoke abatement work in the the City.

The policy of the Department, in seeking co-operation of manufacturers, ship owners, engineers and boiler-house staffs in the prevention of smoke nuisances, continued to prove successful. It was again obvious, however, that in a small number of cases, co-operation was secured only after considerable pressure had been exerted; in one case it was found necessary to serve an Abatement Notice. Some firms have already placed orders for improved plant but a year or two will be necessary for completion. One or two firms, however, still remain persistent offenders and stronger action may become necessary during the forthcoming year.

GRAPH I.
MONTHLY SMOKE OBSERVATIONS
AND AVERAGE EMISSION



Industrial Smoke.

Increased industrial development brought added atmospheric pollution problems during the year and although in certain sections of industry there was a fall in trade, which resulted in delays to reconstruction and planning, there appears to have been increased demands for fuel, and the Department was informed of a number of proposals for further reconstruction within the next few years. The present economic situation does not appear to be having as severe an effect upon the extent of development as was indicated last year. This may be due in some part to the efficiency of modern fuel-using plant in accommodating the grades of fuel available today.

Some manufacturers, however, still continue to operate old and inefficient plant without regard to the financial loss to themselves or waste of valuable fuel, but it is gratifying to find that where such conditions have been pointed out a number of firms have gone into the problems and have followed out the Department's advice regarding improvements. In effecting an economy in fuel in this way, progress has been made in securing abatement of smoke.

Visits by the Smoke Inspectors to industrial premises have revealed that causes of excessive smoke were in great part due to lack of knowledge and carelessness in operating fuel using plant, although in a number of cases inferior or low grade fuels contributed to the problems even where skill and care were evident. In a few other cases the cause was due to non-co-operation by firemen.

Whilst the Department is doing good work in trying to overcome this, it is certain that much more could be done by employers themselves in ensuring that their boiler and furnace operators take advantage of training courses and that carelessness is not allowed. It is considered, however, that in the interests of public health as well as of fuel economy, training of firemen should be organised on a national basis and all boiler and furnace operators be certificated, and further, that there should be no delay in formulating a suitable training scheme.

Other causes of excessive smoke were due to hand-firing boilers which could more efficiently be mechanically stoked and to the defective condition of mechanical stoker and draught equipment. Failure to obtain

suitable fuels for efficient mechanical stoking aggravates this and still makes it doubtful whether recommendations for the conversion from hand-firing to mechanical stoking are in all cases advisable. This is particularly noticeable in cases of mechanical underfeed type stokers which require a non-caking or only slightly caking coal but which have been supplied with caking coals necessitating, during operation, manual attention to the fires, resulting in heavy bursts of smoke. A few cases of overloaded boiler plant have resulted in excessive smoke being made and on some occasions it has been found to be due to the chimney not being readily observed from the firing floor.

A number of conversions of boiler plant from hand firing to mechanical stoking with improved types of coking and chain grate stokers have taken place or are in progress; these modern appliances appear to have solved the smoke and grit problem which is associated with the use of inferior or low grade fuels.

Excessive smoke from vertical boilers and slow combustion heating stoves which were found to be burning bituminous coal has received considerable attention by the Smoke Inspectors. Prevention of smoke from these appliances can readily be obtained by changing to coke fuel and, in view of the now increased supplies of gas coke, every effort has been made to secure improvements.

Not only is gas coke the most suitable fuel for vertical steam boilers but experience has shown it to be very suitable for shell type boilers such as the Lancashire, Cornish and Economic under certain conditions. but unfortunately the relatively high cost of coke for this purpose prevents wider application of this smokeless fuel on this type of steam boiler. Tests carried out at one firm, in conjunction with the Department, showed the extreme value of coke fuel, not only in preventing smoke, but also in increased evaporation, in plant consisting of small water tube boilers. As a result of the tests the firm concerned is considering a scheme for burning coke only on their hand-fired water tube boilers in preference to conversion to mechanical stoking with bituminous coal.

Railway locomotive smoke continues to add to atmosphere pollution in the City, particularly in the areas surrounding the railway termini

and marshalling yards, and on certain occasions the attention of the British Railway officials has been called to individual cases. It is hoped that allocation to Liverpool of some of the new Diesel locomotives will receive serious consideration with a view to improving conditions, but the only satisfactory solution is complete electrification; although it would be a great improvement if electric or Diesel engines could take over from steam locomotives at the City boundaries to work trains to and from the termini. Co-operation with the British Railways Executive in smoke abatement matters has continued satisfactorily during the year.

With the advent of cold weather there was the usual increase in atmospheric pollution by smoke from very low chimneys of small workshops, garages, etc. Raising the heights of the chimneys or conversion to smokeless fuels has resulted in abatement of the nuisances.

During the year improvements recorded by the Smoke Inspectors in industrial and commercial undertakings and which have resulted in marked improvement in smoke pollution total 122. They include:—

Change from solid fuel to electricity, gas or steam heating	20
„ „ „ „ oil for steam raising	7
„ „ bituminous coal to coke	8
„ „ wood refuse to coke only	1
Chimneys raised	25
Change from hand-firing to mechanised stoking	6
Improved types of mechanical stokers fitted	7
Increased boiler power provided or boiler load reduced ...	7
Reconstructed and improved furnaces, incinerators, etc. ...	13
Instrumentation (smoke indicators, CO ₂ recorders, etc.) ...	8
Gas ignition installed	1
Automatic flue dust cleaning plant installed	1
Fume extraction plant reconstructed and improved ...	1
Inefficient plant dismantled	11
Chimneys demolished	6
<hr/> Total	<hr/> 122 <hr/>

In addition to these improvements the Department has noted the abolition of at least 165 open fires in commercial office buildings in

the City centre, hospital buildings, etc., smokeless forms of heating being substituted. Such few conversions as these show definite localised reduction in atmospheric pollution, and it is to be regretted that much wider development in this direction cannot be reported.

In a small number of cases prospective purchasers of plant for new and reconstruction work have sought the advice of the Department before entering upon projects in connection with fuel burning appliances and have expressed their appreciation of the advice given. Other fuel users were invited to seek our advice before embarking on costly reconstruction schemes with a view to removing any likelihood of smoke nuisance arising from the plant during subsequent operation.

Grit Emission from Chimneys.

During the year the most serious nuisance from grit was finally remedied. The nuisance, which has been the source of many complaints for some years, was caused by the use of low grade fuels containing a high percentage of "fines" with forced draught and mechanical sprinkler-type stokers. Replacement of these sprinkler stokers with modern low ram type stokers has brought about an abatement of the grit nuisance.

Other cases of grit emission from industrial chimneys have been receiving close attention and some improvements are reported. In one case considerable expenditure would be necessary for a complete abatement of the nuisance at one factory. But plans are in hand for an entirely new boiler plant which will develop within the next year or two, and consequently concentration is being made on operational methods of reducing grit emission pending transfer of operations to the new plant. In other cases reduced forced draught has brought about satisfactory results. Modifications to the design of an incinerator furnace for wood chippings has resulted in a reduction in the emission of wood ash at a timber factory.

It is hoped that manufacturers, in considering reconstruction of fuel using plant, will bear in mind the possibility of supplies of suitably graded good quality fuel being restricted for many years to come, and that, in installing new plant, they will make provisions to accommodate the available fuel in order to avoid subsequent trouble.

Smoke from Shipping.

Concentrated attention, so far as is possible at present, has continued to be given to smoke from shipping in the River Mersey and in the Liverpool docks, but investigation into complaints received from across the river shows the need for more intensive river inspection beyond the limits of the Liverpool boundaries.

Whenever possible, advisory visits have been made by the Smoke Inspectors to offending vessels and the Masters or Chief Engineers have been interviewed, but in view of staff limitations intensive inspection and personal contact cannot satisfactorily be carried out. In almost all cases where visits and inspections were made the cause of excessive smoke was found to be careless firing of boiler furnaces or neglect in attending to oil-burning apparatus.

Following discussions of some of the problems with owners of offending vessels and advice given by the Department, consideration has been given, in a few cases, to the installation of approved smoke consuming devices, to conversion of steam boilers to oil burning and to Diesel propulsion. In some instances plans for such improvement have been put in hand. The application of such devices will undoubtedly result in reducing river smoke, but for any marked general improvement a much wider application would be necessary. From information received by the Department some development on these lines is likely to be secured during the next year or two. Meanwhile, results of improvements effected during the year are awaited as observations continue.

Some large vessels of foreign shipping firms have been observed to emit black smoke for long periods whilst lying in mid-river or in dock. Where possible, visits have been made to the offending vessels and requests made for control of smoke whilst in the Port area. Difficulties in ascertaining the ownership of some of the vessels with which contact could not be made prevented an approach being made to secure co-operation, but where contact was possible, co-operation was promised and on subsequent visits to the Port it was noticed that smoke was kept under control. Unfortunately, however, the emission of excessive smoke from shipping in the docks on the Cheshire side of the river continues unabated.

Smoke from Diesel Exhausts.

Attention has continued to be given to smoke and fumes from the exhausts of Diesel engined appliances operating in conjunction with building operations in the City.

Disposal of Wood and other Trade Refuse.

During the year a number of complaints were received of smoke and fumes from the burning of wood and other industrial wastes, and observations showed in some cases very heavy emissions of smoke. Investigations showed the methods of disposal to be totally inefficient; in some cases sawdust and chippings were being disposed of in open firegrates, in other cases in sectional central heating boilers, neither type being suitable for this method of disposal to be carried out smokelessly or to utilise the heat value of the material. In two cases chemical refuse was being disposed of in its wet state, one method being to feed it to Lancashire boilers by hand without pre-drying. Such methods resulted in heavy emissions of smoke, and in all cases pungent and lachrymatory fumes were also present.

Special trial furnaces were constructed to a design drawn up by the Department and proved most successful in disposing of the refuse smokelessly; in one case the calorific value of the refuse is being utilised for factory space heating. One local firm, in conjunction with one of the large boiler manufacturers, conducted experiments in the disposal of cardboard, paper, and similar refuse in this design of furnace and secured an evaporation of nearly $3\frac{1}{2}$ lb. of water per lb. of waste. This firm, as a result, has commenced construction of a special furnace and boiler on these lines to provide steam for factory use.

Consideration is now being given to the possibility of adopting the principles of this design for the disposal of hospital swabs and dressings, etc., and also for market refuse.

There has been very little nuisance during the year from the burning off of rubber and bituminous covering of electric cables, no doubt due to the use of suitable incinerators for the purpose.

Smoke Inspection Procedure.

Smoke abatement duties are carried out under the Public Health Act of 1936 and a Bye-law thereunder. Action regarding shipping can,

if necessary, be taken under the Liverpool Corporation Acts of 1921 and 1936, but it is hoped that, in spite of one or two difficulties, present methods of co-operative working between the Department and both owners of factories and ship owners will continue to show improvement in industrial smoke pollution.

Smoke inspection work carried out by the Department during 1952 is shown in the following figures:—

Total number of timed observations of chimneys—

Factories	...	...	...	...	...	4,629
Shipping	...	...	...	...	...	1,664

Average excessive smoke emission per half-hour observation 1.67 min.

Number of advisory visits to works, ships, etc.	...	706
„ „ other „ „ „ „	...	679
„ „ complaints dealt with	...	68
„ „ major improvements to plant, etc. recorded	...	122

Smoke from Commercial and Business Premises.

This includes smoke from central heating plant, cooking ranges and open fires in office blocks, hotels, restaurants, washhouses, hospitals and institutions, salesshops, stores, etc., and as the colder months of the year approach a marked increase of atmospheric pollution is noticeable, to which these premises add their quota. This is most pronounced in the business and commercial centre of the City as a later pollution graph (Graph 5) shows. The apparently small amount of smoke contributed by each of the many thousands of commercial and business premises chimneys in the centre, which serve fires using raw coal, quickly forms a fog blanket over the City as fires are lighted up in the mornings, and recordings of smoke pollution taken over twelve months in this area show the amount of pollution to be considerably higher than in certain other areas including Garston, which is industrial and in close proximity to the river and docks.

Because of the need for remedying this state of affairs and with a view to cleaning up the City area, consideration has been given to establishing a smokeless zone in the centre area of the City, but in view of the great amount of preparation work involved a year or two must elapse before such a zone can be formed.

The remedy is to be found in measures to prevent the burning of raw coal in any open fireplace or heating range unless fired by suitable mechanical means, or in the efficient use of smokeless fuel, oil fuel, gas or electricity. Such requirements are an essential part in the formation of a smokeless zone and up to the present time, difficulty in securing adequate supplies of these smokeless fuels precludes the immediate development of such a zone, but the Department now understands that, in a few years' time, extensions and development of the undertakings manufacturing these commodities will have reached the stage when adequate supplies will be available. Consequently a survey has been commenced of a proposed area in the business and commercial centre of the City to ascertain the possibilities of establishing such a zone.

Industrial Fumes and Smells.

During the early part of the year complaints of fumes and smells were intensified, the areas of Mossley Hill, Aigburth and Woolton being subject, for a time almost daily, to obnoxious smells being airborne by southerly and south-easterly winds. Investigations eventually resulted in two main sources of offensive smell being traced. One of these arose from the use of a pungently smelling chemical in a factory on the Speke Industrial Estate, but since recommendations by the Department have been carried out complaints of this particular nuisance have ceased.

The other offensive smell offered more difficulty in being traced and dealt with. It was, however, found to originate at a large oil refinery on the Cheshire side of the River Mersey and to consist of a mixture of sulphur gases, the production of which is unavoidable during the process of oil refining. Emission of one of the gases, sulphuretted hydrogen, was eventually controlled, but the sulphur dioxide gas, emitted with the products of combustion from a large number of chimneys serving boilers which are fired with waste oil products, is not at present being dealt with. The cost of removing this gas from the products of combustion, it is understood, makes it prohibitive, but the Local Authorities concerned have been in touch with the Ministry of Health over the matter with a view to seeking some remedy. In the meantime, contact has been maintained between the Department and

H. M. Alkali, etc. Works Inspector, who is responsible for the control of noxious gases from registered works.

Prior Approval of Plans for Fuel-burning Equipment.

Powers to inspect plans of fuel using equipment prior to installation are not held by the Corporation as is the case in certain other Local Authorities, but during the year one or two firms approached the Department and requested approval or observations on their proposals for the installation of such plant. No difficulty was experienced in reaching mutual agreement on final plans and details, and after considering the principle as a whole, it has been decided to endeavour, during the forthcoming year, to establish a system of voluntary prior approval.

Domestic Smoke.

It is estimated that in Liverpool, domestic smoke causes approximately fifty per cent. of the total amount of atmospheric pollution, the light smoke from each of the many thousands of open house fires burning raw coal forming dense clouds of pollution over built-up areas which drift together and join up with pollution from other sources to form a haze over the City, which is noticeable, not only in the immediate vicinity, but from any high ground on the outskirts. It is aggravated by the wilful or neglectful firing of dirty chimney flues instead of having them swept. This is dealt with by the Police and during 1952 the number of prosecutions for this class of offence numbered 128.

The continued increased use of gas and electricity is reducing the smoke nuisance from domestic chimneys, and the provision of smokeless solid fuel appliances in new houses should prevent any increased pollution due to building development. It is important, however, that smokeless fuel only should be used in these appliances and, with the increased supplies of domestic coke during the year, it is hoped that every effort will be made to ensure delivery of coke for this purpose. Unfortunately the opinion of many users of these appliances appears to be against the use of coke on account of its high cost, but once it is realised that far more efficient heating can be obtained with it than with coal, and that, therefore, it provides more economical heating, users express their opinions in its favour.

Factors in favour of a reduction of domestic smoke pollution were the use during the year of an estimated 6,666.6 million cubic feet of gas and that approximately one-quarter of the 200,000 houses in the City are using electricity for cooking whilst many others employ this form of power for space heating.

Unfortunately a large quantity of fuel unsuitable for domestic fires was placed on the market at a reduced price and its use advocated for domestic fires. It is to be regretted that, in view of the serious effects of domestic smoke and the recent recommendations of the Ridley Committee, a more efficient and smokeless means of disposal of this low grade fuel was not secured.

Lectures on Smoke Abatement and Fuel Economy.

A course of evening lectures on smoke abatement and fuel economy was held during the winter months of 1952/3 but the response to invitations to local industrial firms to take advantage of the arrangements by ensuring attendance of their firemen and boiler operators was disappointing. The importance of employing trained and efficient stokers has been stressed in the Ridley Report, but unfortunately the average type of fireman cannot be encouraged to attend for training in his own time, and it is considered that employers, who eventually benefit by the employment of trained men, should themselves undertake the responsibility of seeing that their firemen and stokers attend for training.

Elementary classes of instruction are arranged by the Education Authority and more advanced training is given under direction of the Sanitary Science Committee, and in view of the importance of this form of technical education it has the full backing of the Ministry of Fuel and Power.

A course of lectures and a film show by the North Western Gas Board were attended by a number of local coal and coke merchants, at which the subject of smoke abatement and fuel economy was dealt with and should indirectly, contribute towards the work of the Department. Other talks and lectures were given by a member of the Smoke Abatement staff to interested bodies on Merseyside.

National Smoke Abatement Society.

The Medical Officer of Health attended the 1952 Annual Conference of the Society at which air pollution and cancer of the lung, prior approval and smokeless zones were the main subjects dealt with. Resolutions adopted unanimously at the Conference dealt with the further establishment of smokeless zones, the availability of smokeless solid fuel for domestic purposes and the need for certificated persons in charge of fuel burning plant.

It is proposed to hold a meeting of the North West Division of the Society in the early part of the forthcoming year in Liverpool.

Co-operation with other Local Authorities.

Close contact was maintained during the year with adjoining Local Authorities in the question of smoke nuisances and atmospheric pollution generally. It is hoped that the activities of the West Lancashire and Cheshire Regional Smoke Abatement Committee will be resumed during the forthcoming year.

Atmospheric Pollution Research.

Co-operation in atmospheric pollution research with the Department of Scientific and Industrial Research has continued during the year and to whom results of measurement have been provided each month. Measurement of deposited and suspended impurities in the atmosphere have been carried out by the Department by means of three Standard Deposit Gauges and one Owen Automatic Smoke Filter.

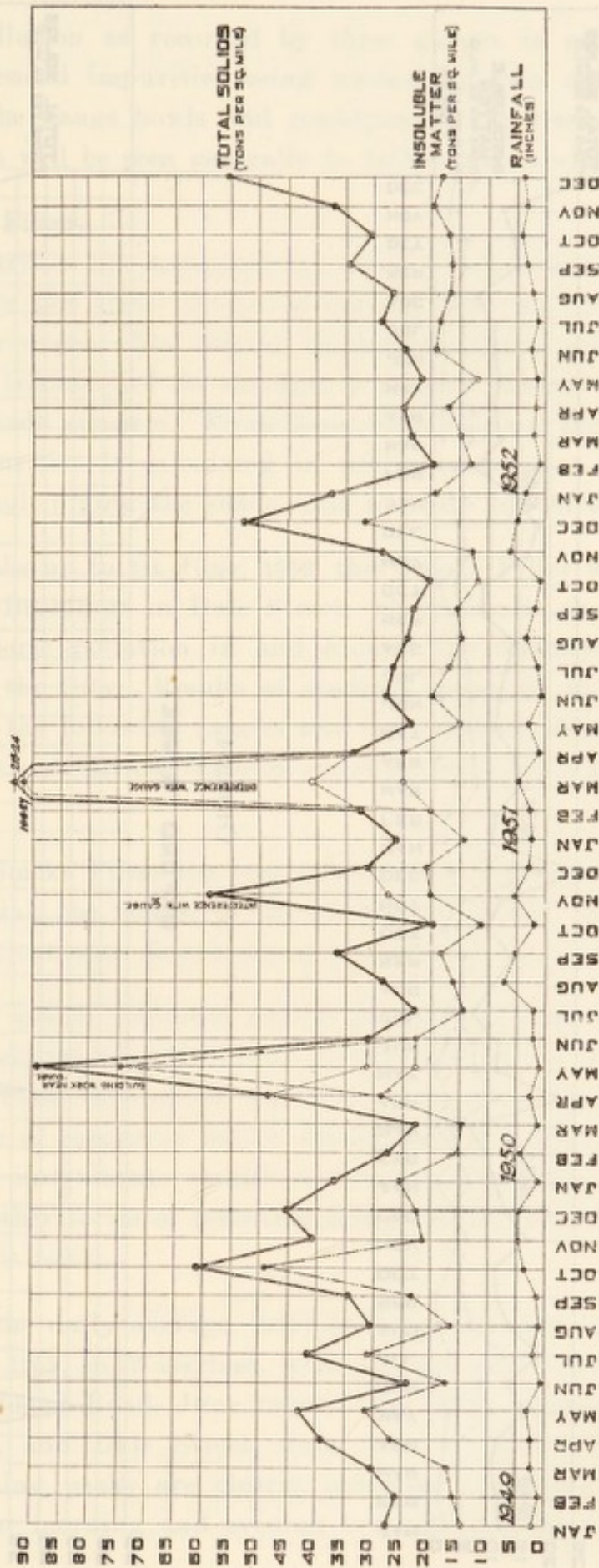
Standard Deposit Gauges.

The deposit gauges are situated at Netherfield Road, where a general indication of conditions in a thickly populated and industrial area is obtained; at Oxford Street, where conditions are sub-average City centre conditions; and at Aigburth Vale, where conditions are those of a residential area with large open spaces subject to drifting pollution from other areas. The extent of deposited pollution is indicated in tons per square mile of total solids and of undissolved mineral matter such as soot from domestic chimneys and grit and ash from industrial chimneys, etc. Monthly results for 1952 are shown in the following graphs, with curves for 1949, 1950 and 1951 as comparisons.

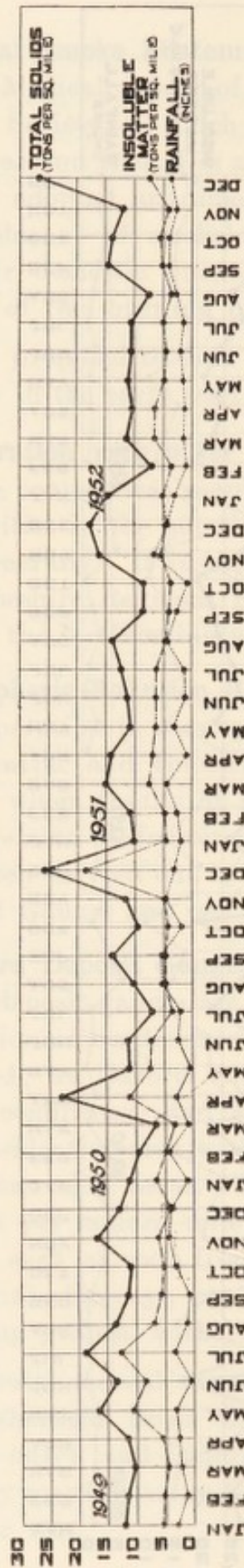
The total annual deposit of pollution as indicated by these gauges is: Netherfield Road 363.0 tons, Aigburth Vale 259.45 tons (eleven months only), and Oxford Street 150.42 tons; the average deposit for the City may therefore be regarded as 265.49 tons per square mile for the year 1952.

GRAPH 2.

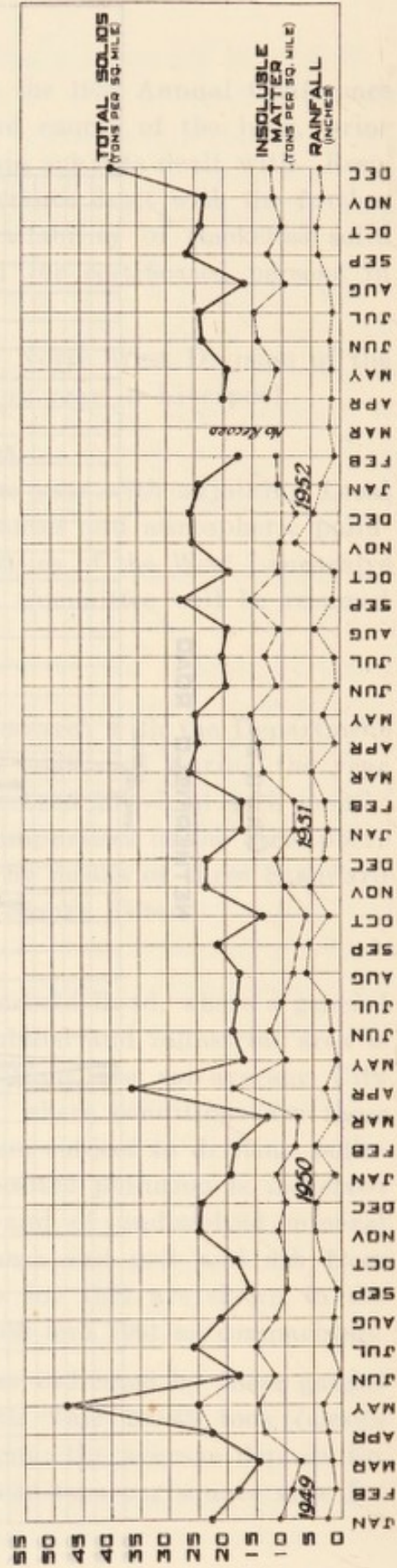
NETHERFIELD ROAD



GRAPH 3.
AIGBURTH VALE



GRAPH 4.
OXFORD STREET



Atmospheric pollution as recorded by these gauges is relative to rainfall, the suspended impurities being washed by rain out of the atmosphere into the gauge bowls and consequently the rise and fall of pollution curves will be seen generally to follow the rainfall curve.

Automatic Smoke Filter.

Suspended impurities are measured by means of the Owen Smoke Filter which draws two litres of air at regular intervals through a disc of white filter paper. The filtered impurities form a smudge on the paper and the intensity of the smudges is checked against readings in a standard of shade numbers. From these shade numbers the amount of suspended impurities is calculated in milligrammes per hundred cubic metres by multiplying the shade unit numbers by thirty-two.

For twelve months up to 1st June, 1952, this Smoke Filter was sited at the Municipal Buildings in Dale Street, where results showed the extent of atmospheric pollution in and around the commercial and business centre of the City. Results of readings shown by the instrument are given in the following graphs and the extremely high degree of pollution in this area stresses the need for development of a smokeless zone there.

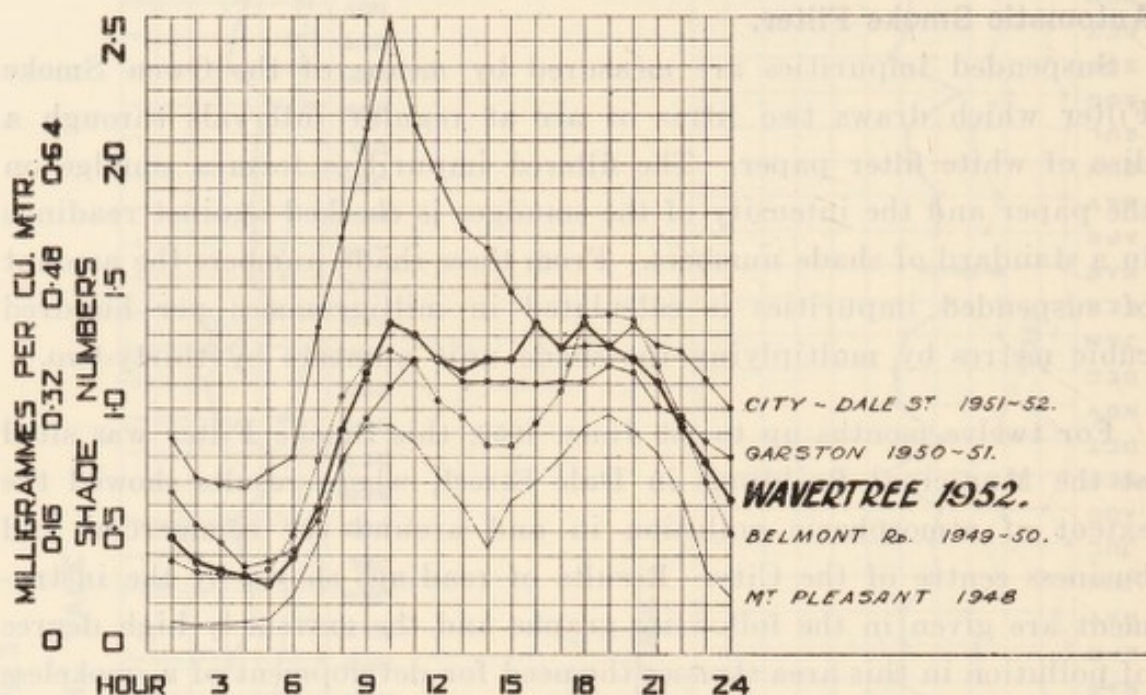
Since June the Smoke Filter has been operating at Wavertree, which is mainly residential, the houses in the area being mostly of the old type, having inefficient open fires burning raw coal.

Readings are, of course, localised, and it is estimated that, in order to obtain a true record for satisfactory comparison of the degree of pollution at any time throughout the City, and at the same time indicate the degree of success in smoke abatement being obtained, ten or twelve of these instruments should operate simultaneously and in conjunction with other forms of pollution measurement instruments at selected sites.

Graph 5 shows the daily average, hour by hour, for the months of July to December, 1952, in Wavertree, with average curves for Mount Pleasant, 1948; Belmont Road, June 1949 to May 1950; Garston, June 1950 to May 1951, and Dale Street, June 1951 to May 1952. The morning and evening peaks are clearly indicated; they are due to stoking up fires for morning and evening heating, cooking, banking,

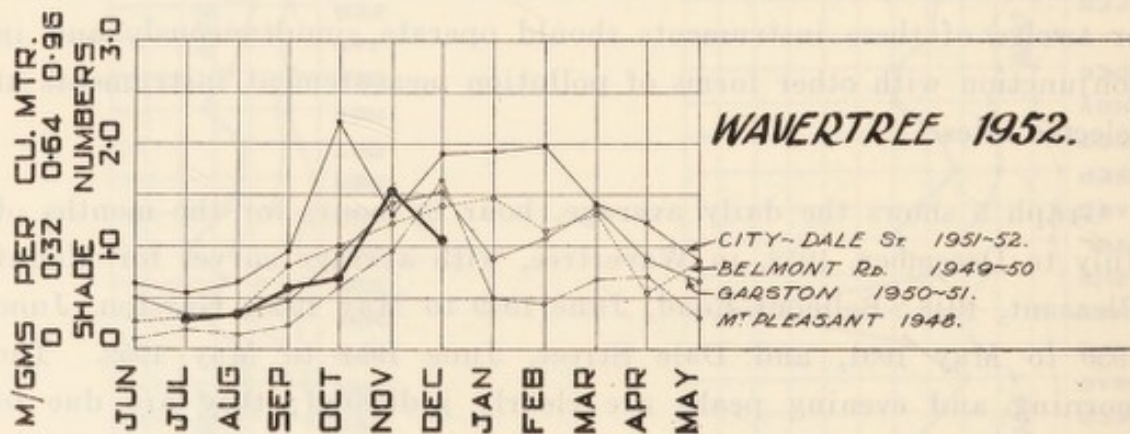
etc., but the high morning peak for Dale Street shows the intensity of pollution cause by raw coal fires used for heating offices and business premises which are mainly stoked up during the early and mid-mornings.

GRAPH 5.



Graph 6 shows the average daily pollution, month by month, for the recording periods, and again this high degree of pollution in the City centre may be compared with Belmont Road, Garston and Wavertree areas, all of which are mainly working class residential with industrial areas, gas works and railway sidings close enough to affect pollution. The heavy curve shows results at Wavertree from July to December 1951.

GRAPH 6.



SANITARY ADMINISTRATION.

During the year the district sanitary inspectors made 176,752 inspections and visits for the investigation and suppression of nuisances. The total number of nuisances reported was 54,474.

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

During the year 31,521 complaints of nuisances were received as compared with 32,252 the previous year.

The number of notices served for the abatement of nuisances was 27,525 informal, and 10,498 statutory, 1,103 of the latter being served for the provision of dustbins.

In 135 cases legal proceedings were instituted at the City Court for failing to comply with notices served by the department under the Public Health Act, 1936, and the Liverpool Corporation Act, 1921.

Departmental References.

The co-operation which the Public Health Department received from other departments of the Corporation is fully appreciated, and as a result many sanitary defects are observed, and at once dealt with by the department. The number of references so received was 4,355, whilst the number of references to other departments was 8,422.

Infected Houses.

The following table shows the number of houses visited where notifiable infectious diseases have occurred, with the number of visits made by sanitary inspectors to these houses, and to houses where cases of non-notifiable infectious diseases have been reported to the Health Department by the Education Department:—

Number of investigations relating to cases of infectious disease	...	...	...	...	...	...	...	5,652
Number of inquiries regarding contacts of cases of infectious disease	...	...	...	...	...	...	...	692
Number of visits to infected houses	...	...	...	...	...	...	...	5,737
Number of visits to tuberculosis cases	...	...	...	...	...	...	...	397
Number of inquiries relating to suspected smallpox contacts	...	...	...	...	...	...	...	303

Drain Testing.

During the year, 2,526 drainage systems were tested, 635 by colour test of which 276 were positive and 359 negative, 299 by smoke rocket test, 181 were positive and 118 negative, 1,592 by smoke machine test, of which 804 were positive and 788 negative. Where defects have been revealed by these tests, repairs have been carried out. In the case of tests of large buildings and offices, as well as dwelling-houses of higher rateable value, the assistance of the City Engineer and Surveyor's Department has been utilised.

Factories and Workplaces Inspection.

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

All factories and workplaces are visited by sanitary inspectors appointed under the Act, the various premises being grouped in districts so as to facilitate visitation.

Factories Act, 1937.

Part I of the Act.

Prescribes particulars of the administration of the Act at the request of the Ministry of Labour and National Service. (Form 572 revised.)

1. **INSPECTIONS** for purpose of provisions as to health (including inspections made by the Sanitary Inspectors):—

Premises. (1)	M/c. Line No. (2)	Number on Register. (3)	Inspection. (4)	Written Notices. (5)	Occupiers prosecuted. (6)	M/c. Line No. (7)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	1	1,486	1,206	68	—	1
(ii) Factories not included in (i) in which Section 7 is enforced by Local Authority	2	3,709	5,478	115	—	2
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding outworkers premises) ...	3	64	744	18	—	3
TOTAL ...		5,259	7,428	201	—	

2. Cases in which DEFECTS were found.

Particulars. (1)	M/c. Line No. (2)	Number of Cases in which Defects were found.				Number of Cases in which Prosecutions were instituted. (7)	M/c. Line No. (8)
		Found. (3)	Remedied. (4)	Referred To H.M. Inspector. (5)	Referred By H.M. Inspector. (6)		
Want of cleanliness (S.1) ...	4	40	40	6	20	—	4
Overcrowding (S.2) ...	5	1	1	—	—	—	5
Unreasonable temperature (S.3) ...	6	2	2	3	2	—	6
Inadequate ventilation (S.4) ...	7	3	3	—	1	—	7
Ineffective drainage of floors (S.6) ...	8	4	4	—	—	—	8
*Sanitary Conveniences (S.7)—							
(a) Insufficient ...	9	18	19	—	4	—	9
* (b) Unsuitable or defective ...	10	224	235	—	18	—	10
(c) Not separate for sexes ...	11	4	4	—	5	—	11
Other offences against the Act (not including offences relating to outwork) ...	12	40	40	33	—	—	12
TOTAL ...	60	336	348	42	50	—	60

* The defects remedied include outstanding matters from the previous year.

Part VIII of the Act.

Outwork.

(Sections 110 and 111)

Nature of Work.	M/c. Line No.	No. of out- workers in August list required by Section 110(1)(c).	No. of cases of default in sending lists to the Council.	No. of prosecu- tions for failure to supply lists.	Section III.		Prosecu- tions.	
					No. of instances of work in unwhole- some premises.	Notices served.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Wearing apparel— Making, etc.	13	165	—	—	—	—	—	
TOTAL	70	165	—	—	—	—	—	

Outworkers, Sections 110 and 111.

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

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

Employers failing to keep list	—
Notices served for failing to keep or send list	—
Prosecutions for failing to send list	—
Number of outworkers' returns referred to M.O.H. of dis- tricts outside City	18
Number of outworkers' returns received from other districts	14
Number of visits to premises	289
Number of Notices served	—
Number of outworkers' returns received	310
Number of instances of employment in unwholesome premises	—

Offensive Trades.

There were 74 offensive trades on the register in the City at the end of the year, which is one more than at the end of the preceding year. One application for consent to establish the offensive trade of a tripe boiler was granted during the year.

Nature of Business.						Trade.
Blood boilers	...	...	...	...	...	—
Blood driers	...	...	...	...	...	—
Bone boilers	...	...	...	...	...	2
Fat extractors	...	...	...	...	...	10
Fat melters	...	...	...	...	...	8
Fellmongers	...	...	...	...	...	5
Glue makers	...	...	...	...	...	—
Gut scrapers	...	...	...	...	...	8
Rag and bone dealers	...	...	...	...	...	27
Size makers	...	...	...	...	...	—
Soap boilers	...	...	...	...	...	6
Tallow melters	...	...	...	...	...	—
Tripe boilers	...	...	...	...	...	8
TOTAL						74

The number of inspections during the year	...	...	...	659
Number of special visits	...	...	...	7
„ „ ordinary visits	...	...	...	652
„ „ applications to establish	...	...	...	1
„ „ applications granted	...	...	...	1
„ „ applications for renewal of consent	...	...	...	16
„ „ offensive trades discontinued and removed from the register	...	...	...	1
„ „ notices issued (informal)	...	...	...	16
„ „ notices issued (statutory)	...	...	...	2
„ „ nuisances found	...	...	...	18
„ „ nuisances abated	...	...	...	18

Offices and Workplaces.

Reduction in staff and extra duties have made it difficult to visit and examine all offices and workplaces in the City during the year. However, this fact has not caused undue anxiety as careful inspection of these premises has been carried out in the two previous years.

In addition to securing the abatement of nuisances, extensive improvements were made to sanitary accommodation, the cleansing and decoration of a large number of business buildings were carried out as a result of notices served by the department.

As regards other matters relating to the health and welfare of employees which are not provided for in existing legislation, such as the provision of suitable washing facilities, adequate heating, lighting and seating arrangements, the inspections during the past year have again indicated the need for the promotion of legislation to implement the recommendations contained in the report of the Gower's Committee on the health, welfare and safety of persons engaged in non-industrial employment.

The absence of powers of enforcement in this direction was particularly noticeable in the case of certain workplaces, such as laundries, cleaning and dyers receiving depots. The workers in these classes of premises which are neither shops nor factories, do not enjoy the amenities or welfare arrangements contained in the Shops Act and the Factories Act, although it is most desirable and necessary that at least adequate washing facilities should be provided for persons handling soiled clothing. Having this in mind the proprietors of these businesses were approached and convinced of the necessity for the provision of welfare facilities similar to those for shop assistants, and the result has been most encouraging.

Lighting in workplaces and particularly in offices, does not appear to receive the degree of attention merited by its importance, although there is a general desire for better lighting, both natural and artificial by workers. There should be adequate and satisfactory lighting for all purposes. This improves output, comfortable working conditions, and most important, exposes dirty environmental surroundings.

As these benefits of good lighting are usually accepted by most persons, it is all the more surprising to find clerical workers not infrequently carrying out their work in a luminous intensity as low as 2 or 3 foot-candles, which is very poor compared with 15 to 20 foot-candles recommended by the Lighting Committee of the Building Research Board and other authoritative bodies for this type of employment.

It has, therefore, been the practice to advise the occupiers of commercial buildings where the standard of illumination was inadequate, and this action has had very satisfactory results.

In some instances improvement has been effected, so far as artificial lighting is concerned, by better maintenance and the cleansing of lamps and reflectors; in others it has been explained how much light can be absorbed by dull and dark coloured or panelled walls, partitions, furniture and floors, and subsequent redecoration or refurnishing in bright colours has illustrated how much light can be reclaimed in this way.

Adequate natural light is, of course, a most desirable asset to most workers, but in a large city centre where most of the commercial buildings are aged, window space is limited. Conditions such as corridor streets, high buildings and unsatisfactory orientation of property in the business area tend to reduce the degree of natural light available, and therefore artificial lighting is an essential supplement in most offices, even during the summer months.

It is anticipated that legislation will eventually come into being to enforce adequate standards of lighting in workplaces and offices.

4,662 visits were made to 4,609 offices and workplaces on the register during the year. A total of 246 defects were found and an analysis of these is set out below:—

Public Health Act, 1936.

Offices and Workplaces	Defects	
	Reported	Remedied
<i>Sanitary Accommodation—Section 46</i>		
Not provided for males	1	2
Insufficient for males	3	4
Not provided for females	4	7
Insufficient for females	2	1
Separate means of approach not provided	2	3
Separate not provided for sexes	1	1
Reconstruction required	12	11
Screens, doors, fasteners, etc., defective or not provided... ..	13	18
Lighting inadequate	4	3
Ventilation—inadequate	8	8
—absence of intervening space	8	7
Floors, basins, seats, walls, etc., dirty or defective	52	51
Flush, defective or inadequate	6	6
Urinals—defective, insanitary	—	1
—absence of, or insufficient flush	3	3
<i>Nuisances—Section 92. Subsection 1(a.b.c.f)</i>		
Nuisances reported	85	81
<i>Sub-section 1(e).</i>		
Ventilation insufficient or not maintained	7	5
Cleanliness not observed	31	31
Rooms overcrowded	2	4
Not kept free from noxious effluvia... ..	2	2
Total	246	249

The defects remedied include six outstanding matters from the previous year.

Food Hygiene.

During the year all food premises were visited. Special attention has been paid to catering establishments, food shops and bakehouses and where it has been considered necessary several visits have been

made to certain premises where there has been an apparent lack of appreciation on the part of the occupiers or workers of the importance of a hygienic approach to the preparation, sale and handling of food, so as to ensure that a satisfactory standard is maintained.

It is important that visits by sanitary inspectors should not only be made to premises of this character upon receipt of complaint, which are very few, but by systematic inspection satisfy themselves that the legal requirements are being observed, and to see that food handlers are carrying out in a thorough manner the hygienic handling and preparation of food.

Every opportunity is taken of advising all concerned on suitable measures that can be adopted to secure a good environmental and hygienic standard, and generally speaking food traders appreciated this advice and there has been an active spirit of co-operation by these various classes.

The fact that attention has been focused upon securing good structural and environmental conditions does not mean that the department under-estimates or fails to recognise that personal hygiene is the vital safeguard in the production of safe food, but nevertheless experience has shown that if the environmental circumstances are poor, the food handlers are careless and unresponsive to appeals for an improvement in their personal cleanliness.

It is appreciated that the process of inculcating food handlers with the knowledge that their habits are important factors in relation to public health will be gradual and unspectacular, but a genuine marked improvement in this direction has been observed. This is particularly noticeable as regards persons who have adopted the food trade as a career.

In this city more than 50,000 workers, the majority of whom are women, are employed in this industry, and it is only to be expected that there will be an appreciable labour movement. This fact will serve to indicate the difficulty facing food traders and manufacturers, who, although they may initiate training schemes and exercise careful supervision, cannot check every personal act or habit, any one of which

may be a cause of contamination. The danger of this aspect of the problem is that certain proprietors and supervisors tend to become careless or accept as a matter of course, that any attempt to improve matters is destined to fail and is wasted effort. The effect of systematic visits in such cases is invaluable as each inspection stimulates fresh effort. Inspectors remind both management and employees that there is a moral and legal responsibility for the preparation, sale and handling of clean and safe food, and that any relaxation in this respect will not be tolerated. It is due in no small measure to the fact that the inspectors have taken every opportunity of teaching and preaching the principles and practice of hygiene during normal visits to food premises that the campaign and need for safe food is not forgotten or overlooked by food traders.

New Food Businesses.

The co-operation which has been established between the Food Executive Officer of the area and the department was maintained during the year with satisfactory results, particularly as regards new businesses. In the case of a person applying to the Ministry of Food for permission to open a new food business which is subject to a licence, e.g., cafe, snack bar, bakery, etc., the licence is only granted on the condition that the premises and arrangements satisfy the requirements of the department and are suitable for the purpose of food preparation.

The applicant is advised by the Food Executive Officer to contact the Chief Sanitary Inspector, and following an examination of the premises in company with the applicant, a schedule of works is given which must be completed before the business can be commenced.

Although 135 applications were approved by the Food Control Committee during the year, only 96 licences were eventually granted in respect of premises satisfying the standard set by the department, as indicated hereunder:—

Snack Bars	...	...	...	...	...	...	...	21
Cafes and restaurants	...	...	...	...	...	...	...	8
Snacks on licensed premises	...	...	...	...	...	...	...	16

Industrial canteens	11
Sandwich services	1
Fish frying establishments	15
Snacks in fish frying establishments	6
Other premises (clubs, Church halls, etc.	18
	—
TOTAL	96
	—

Catering Establishments.

The diverse character of businesses in which food is served for consumption on the premises and the wide difference in the type of construction, capacity and situation of catering establishments, makes the application of a rigid code of practice impracticable so far as the environment and equipment is concerned, but, notwithstanding the fact that facilities, services and design may vary it is made clear to all caterers that the personal hygiene and cleanliness of food utensils and premises, must be beyond doubt in all cases.

These views have been emphasised by the inspectors during their examination of such premises. Large precision-made dish-washing machines and sanitary suites are excellent in themselves when used in a proper manner, but caterers who are in a small way of business have all been informed that it is possible to secure clean utensils and service of safe food with only limited equipment, so long as the workers are careful and conscientious, and there is ample supply of running hot water, detergents and separate personal washing facilities.

The process of washing-up as an important factor in catering hygiene has attracted the attention of the Catering Workers Party, commercial interests and scientific bodies and there is now a wide choice of detergents on the market. Although sterilizing properties are usually claimed for some detergents, particularly those containing hypochlorites or one of the ammonium quaternary compounds there is reason to believe that the average caterer is inclined to view the effectiveness of a detergent by its capacity to remove grease and fat rapidly and to produce a minimum of scum in addition to being economical and easy to use rather than to the bactericidal efficiency.

It may well be as caterers become conversant with the cause of food infections, more interest will be shown in the claims of the sterilizing effect of certain proprietary detergents. The inspectors are, however, encouraging occupiers of cafes, canteens and restaurants who are unable to instal automatic dish-washing apparatus to adopt the two-sink method of cleansing utensils in which the water in the second sink is hot enough to sterilize and obviate the necessity for articles to be dried by a cloth.

In snack bars where the amount of trade is small and where the washing up is under the direct control of the occupier, suitable detergents are being recommended and used.

The lack of knowledge on the part of many persons engaged in cleansing utensils in cafes and the need for close personal control over operations in catering establishments is illustrated in the case of a busy cafeteria which installed a good two-sink unit and trained two women to work whole-time on washing up. Without the knowledge of the supervisor the women decided that the instructions given to them were wrong and when the inspector visited the premises he noticed that they were rinsing the soiled plates in the sterilizing sink, giving the final wash in the lower temperature, and using drying cloths. On being corrected, the women asserted that the method they had used for many years, when washing up at home, was to run the hot water over the dishes in bowls and then wash the articles clean and the hotter the water the easier the food was removed. Hence they had come to the conclusion that the supervisor had instructed them wrongly.

This incident would serve to draw the attention of public health officials to the fact that the education of workers in food premises on the hygienic aspect of the food trade, particularly in catering establishments is a subject which may have to be given serious consideration if the increase in the incidence of food infection persists.

During the year 3,273 visits were made to 614 catering establishments and in 306 cases written notices were issued in respect of the under-mentioned defects:—

Restaurants and Cafes.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938, Section 13.</i>		
(a) Sanitary conveniences, dustbin, etc., within or communicating direct	4	4
(b) Drain inlet within or communicating direct	4	8
(c) Dining rooms	71	107
(Walls, ceilings, floors, etc., in disrepair).		
Kitchen	142	152
(Walls, ceilings, floors, etc., in disrepair).		
Food store	28	31
(Walls, ceilings, floors, etc., in disrepair.)		
(d) Dining rooms	145	181
(Walls, ceilings, windows, etc., require cleansing.)		
Kitchen	214	227
(Walls, ceilings, windows, etc., require cleansing.)		
Food store	46	51
(Walls, ceilings, windows, etc., require cleansing.)		
(e) Room used as a sleeping apartment or communicating direct...	2	2
(f) Dining room	16	16
(Ventilation not provided and maintained.)		
Kitchen	12	18
(Ventilation not provided and maintained.)		
Food store	36	34
(Ventilation not provided and maintained.)		
(g) Accumulation of refuse or filth within the rooms	9	9
Floors not kept in a clean condition	2	2
(h) Cleanliness of persons employed in rooms not observed	1	1
Cleanliness of articles, utensils and apparatus not observed	1	1
(i) Suitable and sufficient washing facilities not provided... ..	61	74
Supply of soap and towels insufficient or not provided... ..	17	17
Supply of hot and cold water insufficient or not provided	42	46
<i>Sub-Section 2 (b).</i>		
Cutlery, crockery and other accessories, cleanliness not observed...	10	10
Equipment defective, worn, requiring repair or renewal	40	52
Swill bin accommodation unsatisfactory	9	12
Storage of food ; inadequate, unsatisfactory accommodation	17	23
Handling of food ; unsatisfactory methods used	15	15
Washing of hands after use of sanitary convenience. Notice not posted	9	9
Other matters causing risk of contamination of food	21	29
<i>Public Health Act, 1936, Section 89.</i>		
(Sanitary accommodation.)		
Not provided for males	1	1
Insufficient for males	—	—
Not provided for females	2	2
Insufficient for females	—	—
Reconstruction of sanitary convenience required... ..	—	—
Separate means of approach not provided	3	3
Screens, doors, fasteners, etc., defective or not provided	3	3
Lighting inadequate	—	—
Ventilation—		
Inadequate	1	1
Absence of intervening space	8	9
Floors, basins, seats, walls, etc., dirty or defective... ..	68	66
Flush to water closets defective or inadequate	7	7
Urinals—		
Defective, insanitary	1	1
Absence of or insufficient flush thereto	—	—
TOTAL	1,068	1,224

The defects remedied include 223 outstanding items from the previous year.

Canteens.

It is not always appreciated that factory and other canteens in which food is sold to the employees are subject to the provisions of the Food and Drugs Act, 1938, and the Food Bye-Laws as are any other catering establishments.

Sanitary inspectors make routine inspections and frequent requests are received from business concerns for advice and assistance with regard to design of food preparation rooms and the use of suitable types of materials and equipment in connection with the construction and reconditioning of canteen kitchens.

The result of this contact has been a marked improvement in the hygienic preparation of factory meals. The fact that the personnel responsible for the inspection of catering establishments are also appointed to carry into effect the duties imposed upon local authorities by the Factories Act, 1937, has been a distinct advantage from an administrative point of view and gives an opportunity to impress executives with the special risks that are involved in the case of canteens serving workers employed in the same firm where possible food infections may be a cause of illness and absenteeism and a consequent dislocation of work and production.

Food Shops.

Through the continued endeavour of the shops inspectors and shopkeepers, the hygienic standard of food shops throughout the city has improved considerably during the year.

The main problem still concerns the natural weaknesses and habits of persons employed in these shops. The education of food handlers to a consciousness of personal hygiene appears slow and difficult, partly because of the constant changing of staffs.

This factor, however, is not a deterrent to inspectors entrusted with the enforcement of the food laws, and the efficiency with which they

carry out their duties is evidenced by the increasing improvements, and the willingness on the part of personnel to respond to helpful advice and suggestions.

Structural faults and the limitations of space also present certain problems, particularly in small general shops, and while ordinary defects and dilapidations are dealt with, the effect of extensive war damage in some properties still limits the full use of the premises and thereby causes congested storage conditions, which in turn hinder thorough and frequent cleansing.

It is, however, pleasing to observe that the unsightly and unsatisfactory temporary coverings to the blitz-damaged windows of shops have almost disappeared, mainly because of determined action by this department.

It is also satisfactory to record that during the year many shopkeepers have installed approved types of water heaters in place of the unsatisfactory methods they formerly considered sufficient to comply with the requirements of the Food and Drugs Act. Some of these shopkeepers have been pleased to acknowledge the efforts of the inspectors concerned, and have admitted the advantages of the appliances, not only for reliability but economy.

Fish Frying Establishments.

A remarkable hygienic improvement has been observed in this type of trade during recent years. History records these establishments became popular in the north of England about a century ago. From an environmental point of view, for most of the time, it was regarded as an undesirable and offensive type of business, which demanded special legislation for its control.

At one time this type of business produced many nuisances, but considerable change has taken place, which made slow progress at first but has gained impetus during the past few years.

Since 1945, co-operation between members of the trade, the engineering industry and public health officials, has been the main cause of the improvement, and the bright, clean-looking and hygienic appearance of the majority of these businesses is a marked contrast to the premises in which they were conducted in the past.

The old-fashioned, coal-fired range was difficult to keep clean, burned vast quantities of coal, was the cause of much dirt and dust, and owing to its construction, the sickly odour of overheated fat often escaped into the atmosphere and permeated the neighbourhood. These are now gradually being replaced by modern thermostatically-controlled streamlined ranges, constructed in stainless metal and vitriolite which consume their own fumes and are often provided with means for mechanical extract ventilation. The modern fish frying establishment will bear comparison with any other food business, particularly when considered from a hygienic and sanitary standard.

As a predominant feature of this trade is the large percentage of "one man" businesses, many of which attract only a modest degree of custom, it is clear that in these cases, major and expensive improvements as distinct from matters relating to legislative infringements, can only be effected gradually as the financial means of occupiers permit. It has been evident, however, that so far as this business is concerned the public are inclined to patronize the type of shop which has a bright, clean and hygienic appearance, and this fact has had the effect of stimulating competition and encouraging friers to make special efforts to retain and invite business by investing in new equipment, lighting and decorations, and in some cases businesses have discontinued when found to be uneconomic.

Fish Frying Establishments.

There are 424 fish friers operating in the city, and 1,773 visits were made during the year. The following defects were reported:—

Fish Friers.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938. Section 13 (1).</i>		
(a) Sanitary convenience, dustbin, etc., within or communicating direct	2	2
(b) Drain inlet within or communicating direct	1	1
(c) Preparation room (Walls, ceilings, floors, windows, etc., in disrepair.)	52	41
Shop (Walls, ceilings, floors, windows, etc., in disrepair.)	30	28
(d) Preparation room (Walls, ceilings, windows, etc., require cleansing.)	159	142
Shop (Walls, ceilings, windows, etc., require cleansing.)	105	100
(e) Room used as a sleeping apartment or communicating direct...	3	3
(f) Preparation room (Ventilation not provided and maintained.)	11	11
Shop (Ventilation not provided and maintained.)	10	10
(g) Accumulation of filth or refuse within the rooms	8	7
Floors not kept in a clean condition	4	4
(h) Cleanliness of persons employed in rooms not observed	—	—
Cleanliness of articles, utensils and apparatus not observed	—	—
Cleanliness of persons with regard to clothing	5	5
(i) Suitable and sufficient washing facilities not provided...	15	14
Supply of hot and cold water insufficient or not provided ...	3	5
Supply of soap and towels insufficient or not provided...	7	7
<i>Sub-Section 2 (b).</i>		
Failure to prevent risk of contamination of food	8	8
Food refuse accommodation unsatisfactory... ..	6	6
Storage of food, unsatisfactory accommodation	15	15
Handling of food, unsatisfactory methods used	1	1
Equipment unsatisfactory, requiring repair or renewal	15	15
<i>Public Health Act, 1936.</i>		
Nuisances reported	21	23
TOTAL	481	448

The defects remedied include 23 outstanding matters from the previous year.

Bakehouses.

During the year, 1,227 visits were made to 221 bakehouses, and in addition to notices served under the Public Health Act and Factories Act, written notices were issued in 98 cases under the Food and Drugs Act, 1938, Section 13, and new Food Byelaws, details of which are as follows:—

Food and Drugs Act, 1938, Section 13.

Bakehouses.	Defects.	
	Reported.	Remedied.
(a) Sanitary conveniences, dustbins, etc., within or communicating direct	—	—
(b) Drain inlet within the room	—	—
(c) Preparation rooms	32	34
(Walls, ceilings, floors, windows and doors in disrepair).		
Store rooms	5	10
(Walls, ceilings, floors, windows and doors in disrepair).		
(d) Preparation rooms	108	106
(Walls, ceilings, doors, windows require cleansing).		
Store rooms	9	10
(Walls, ceilings, doors, windows require cleansing).		
(e) Room used as sleeping apartment, etc.	—	—
(f) Preparation rooms	5	5
(Ventilation inadequate or not maintained).		
Store rooms	3	2
(Ventilation inadequate or not maintained.)		
(g) Accumulation of filth or refuse in the room	1	1
Floor not kept in a clean condition	8	8
(h) Cleanliness of persons employed in rooms not observed	—	—
Cleanliness with regard to clothing not observed	1	1
Cleanliness of articles, utensils and apparatus not observed	—	—
(i) Supply of soap and towels insufficient or not provided... ..	1	—
Suitable washing basins not provided	15	16
Supply of hot and cold water insufficient or not provided	7	9
<i>Sub-Section 2.</i>		
(b) Failure to prevent risk of contamination of food	5	4
Equipment worn, etc.	6	6
Storage of food unsatisfactory	9	8
TOTAL	215	220

The defects remedied include nine outstanding items from the previous year.

Bread Vans.

The inspection of vehicles in which bread is conveyed has been maintained during the year, and of the 980 vans examined the interior was found to be dirty in 30 cases and 3 vans were found to be in want of repair.

Licensed Premises.

During the year only a limited amount of structural work has been carried out on licensed premises, but, as the restrictions on Civil building have recently eased slightly many brewery companies will, no doubt, take advantage of this fact to improve the unsatisfactory and unhygienic sanitary accommodation in licensed premises.

Progress in this direction has been seriously hampered and curtailed since the outbreak of hostilities; many sanitary conveniences are not in keeping with modern standards and the increase in the number of female customers has aggravated the position.

Certain unavoidable difficulties will, however, retard the rate of improvement, this is particularly the case in public houses where the floor area is so restricted as to necessitate an extension of the premises if the sanitary accommodation is to be modernised. In many cases possession of the adjoining land or building for this purpose is prevented by reason of the fact that the premises, such as dwellinghouses, are protected by statute or in the case of building and land occupied for business purposes, is held under leasehold agreements. It is also to be noted that a number of sub-standard public houses are situated in areas scheduled for action under the Housing Acts or affected by re-development schemes.

A relaxation on the control of building and other materials has enabled a number of schemes for decorating, lighting and heating in bar and bar parlours to proceed. Many public houses have been refitted with modern counters, beer engines, tables and seating and these matters which cannot always be demanded by notice have a direct effect on environmental and hygienic conditions.

The replacement of lead pipe lines for conveying beer from the casks to the beer-engines has been proceeding steadily and the few that remain are in premises owned by a brewery company which is installing new equipment, including stainless steel pipe-lines in all public houses under its control, an operation which has been delayed owing to certain fittings being in short supply.

Licensed Premises.

3,138 visits were made to licensed premises during the year and appropriate notices were issued in cases where the undermentioned defects were observed:—

Licensed Premises.	Defects.	
	Reported.	Remedied.
<i>Food and Drugs Act, 1938. Section 13 (1).</i>		
(a) Sanitary conveniences, dustbin, etc., within or communicating direct	11	8
(b) Drain inlet within or communicating direct	2	2
(c) Bars and Parlours	75	63
(Walls, ceilings, floors, etc., in disrepair.)		
Beer cellars... ..	79	97
(Walls, ceilings, floors, etc., in disrepair.)		
(d) Bars and parlours	176	129
(Walls, ceilings, windows, etc., require cleansing.)		
Beer cellars... ..	150	143
(Walls, ceilings, windows, etc., require cleansing.)		
(e) Room used as a sleeping apartment or communicating direct...	—	—
(f) Bars and parlours	4	3
(Ventilation not provided and maintained.)		
Beer cellars... ..	2	2
(Ventilation not provided and maintained.)		
(g) Accumulation of refuse or filth within the rooms	2	2
Floors not kept in a clean condition	—	—
(h) Cleanliness of persons employed in rooms not observed	—	—
Cleanliness of articles, utensils and apparatus not observed	—	—
(i) Suitable and sufficient washing facilities not provided	1	1
Supply of soap and towels insufficient or not provided... ..	—	—
Supply of hot and cold water insufficient or not provided	2	2
<i>Sub-Section 2 (b).</i>		
Failure to prevent risk of contamination of food	14	17
Beer pipes	2	2
(Defective, worn, or cleanliness not maintained.)		
Stillage	1	1
(Defective, worn, or cleanliness not maintained.)		
Beer engine	2	2
(Defective, worn, or cleanliness not maintained.)		
Drip trays	16	10
(Defective, worn, or cleanliness not maintained.)		
Drainers, trays, sinks	4	4
(Defective, worn, or cleanliness not maintained.)		
Waste beer vessels uncovered or in an unsatisfactory condition	—	—
Filters and funnels in an unsatisfactory condition... ..	1	1
Glasses—		
Not served in a clean condition	—	—
Unsatisfactory method of cleansing	—	—
Other matters causing risk of contamination of food	20	13
<i>Public Health Act, 1936, Section 89.</i>		
<i>(Sanitary Accommodation.)</i>		
Not provided for males	6	10
Insufficient for males	6	6
Not provided for females	24	32

Licensed Premises (continued).	Defects.	
	Reported.	Remedied.
Insufficient for females	4	3
Reconstruction required	1	13
Separate means of approach not provided	—	5
Screens, doors, fasteners, etc., defective or not provided	19	15
Lighting inadequate	8	9
Ventilation—		
Inadequate	3	4
Absence of intervening space	26	30
Floors, basins, seats, walls, etc., dirty or defective	162	155
Flush to water closets defective or inadequate	8	9
Urinals—		
Defective, insanitary	21	27
Absence of or insufficient flush thereto	10	5
TOTAL	862	825

The defects remedied include 167 outstanding items from the previous year.

Furniture Removers.

86 visits were made to the premises of furniture removers, and 84 vans were inspected. Four vans were found to be dirty and on reinspection were found to have been cleansed.

Employment Agencies.

These premises are controlled by byelaws made under the Liverpool Corporation Act, 1927, and visits were made from time to time to ascertain that the requirements of the byelaws are being carried out. There are at present 29 licensed employment agencies on the register.

The Rag Flock and other Filling Materials Act, 1951.

The administration of the above enactment is carried out by certain authorised sanitary inspectors.

The Act provides for the registration of premises in which specified filling materials are used in the manufacture of new bedding and upholstery, toys and baby carriages and for the annual licensing of manufacturers and storers of rag flock.

Powers are given to take samples of filling materials for the purpose of testing by a prescribed analyst and regulations have been laid down which govern the standard of cleanliness to which the materials must conform.

At the end of the year the number of premises licensed and registered was:—

Number licensed to manufacture Rag Flock	...	...	1
Number licensed to store Rag Flock	...	...	9
Number registered in which filling materials are used	...	...	73

52 samples of filling materials were taken during the year, as follows:—

Rag Flock	...	...	28 samples
Woollen Flock	...	...	1 sample
Woollen Felt	...	...	1 „
Woollen Mixture Felt	...	...	5 samples
Coir Fibre	...	...	12 „
Loose Kapok	...	...	1 sample
Curled Hair	...	...	2 samples
Feathers	...	...	2 „
TOTAL			52 „

The results of the analytical tests showed that one sample of Rag Flock and one sample of Feathers did not conform to the prescribed standard of cleanliness. The sample of Rag Flock was taken from a consignment being used in the manufacture of upholstery and contained 132 parts of Chlorine expressed as soluble Chlorides per 100,000 parts of Flock. This was 102 parts of Chlorine in excess of the maximum amount permitted under the Act.

Legal proceedings were instituted in this case against the user of the material, who, taking advantage of a provision of the Act, pleaded “not guilty” on the ground that the flock had been purchased by him

under a Warranty from a Wholesaler. The Wholesaler, in turn pleaded a similar defence as having bought the material under a Warranty from the manufacturer. These pleas were accepted by the Stipendiary Magistrate who gave judgment against the manufacturers of the Flock and imposed a fine of £5 with costs amounting to £14 17s. 6d.

With regard to the sample of Feathers which was taken at premises occupied by a bedding manufacturer, the Analyst's Certificate declared this sample to contain total impurities amounting to 2.5 per cent., which is 0.5 per cent. in excess of the maximum impurities permitted and in this case a cautionary letter was sent to the company concerned.

Administration of the Shops Act, 1950, and Young Persons (Employment) Act, 1938, Part I.

ADMINISTRATION AND ENFORCEMENT.

The work of the department in respect to the Shops Act, 1950, has continued throughout the year. The administration and enforcement of its provisions have been carried out by daily visits to shops and other premises to which the Act relates, by shops inspectors employed full-time on duties in connection with the employment of shop assistants and young persons, the welfare provisions, and the closing hours of shops. Premises in which young persons are employed and to which Part I of the Young Persons (Employment) Act, 1938, applies, and places of public entertainment, have also been dealt with during the course of the inspectors' normal duties.

A very considerable number of persons are employed in the various branches of the distributive trade and in other establishments affected by these enactments, and the administration of the many, and somewhat complex provisions, is sometimes difficult, and often misunderstood by those whom the requirements are intended to benefit. The relative value of health and comfort, which is undoubtedly the primary object of this legislation, compared with wages and income, is not considered in the same way by administrators and employees, or for that matter by employers, and there is considerable justification for the view held by assistants and shopkeepers that certain provisions are too restrictive, particularly those relating to the compulsory weekly half-holiday, the compensatory holiday for Sunday employment and certain closing provisions, and in respect to shops where the owner of the business works in the shop.

It is in such circumstances that the personality and the ability of the inspector is of importance, for he has the additional duty of persuading the persons concerned of the purposes and benefits of these requirements in order to avoid the undesirable consequence of court proceedings. It can, however, be recorded that success almost invariably attends these endeavours, resulting in a better understanding and continuing co-operation.

Before any action is taken upon the finding of contraventions, consideration is always given to all the circumstances, and only when a warning letter has failed to achieve compliance with the statutes are subsequent court proceedings taken.

A record of all premises is kept in the form of a card register, giving all particulars as to the occupier, type of business, assistants employed, structural details of the premises, visits by inspectors, the welfare arrangements, the types of contraventions found and the steps taken to deal with them.

The inspectorate making initial visits to premises, whether as the result of a complaint or during the course of routine inspection, carry out a complete examination and deal with all matters arising out of their duties, not only under the Shops Act, but those imposed by the Public Health Act, 1936, Section 13 of the Food and Drugs Act, 1938, the Byelaws made under Section 15 of the said Act, the Prevention of Damage by Pests Act, 1949, in so far as they relate to shop premises, and the Pet Animals Act, 1951. Visits are also made to places of entertainment, clubs, meeting halls, and sports grounds.

As a result of these visits such matters as may require the attention of the occupier of the shop or the owner of the premises in connection with infringements of the statutes or regulations made thereunder, are immediately brought to their notice in order that steps may be taken without delay to secure compliance with the appropriate enactment.

Although many years have passed since these statutes first became operative, there can be no relaxation in the constant supervision of the premises and persons affected by the various provisions. Changes of tenancies, types of businesses, the frequent movement of staffs, together with normal habits of forgetfulness and indifference on the part of

shopkeepers and their employees cause a daily quota of infringements. Many of these contraventions are dealt with satisfactorily at the time of the inspectors' visits, and it can be said that there is an earnest endeavour by the majority of the shopkeepers, not only to comply with the law, but to make provision for their assistants beyond the minimum required.

EMPLOYMENT OF YOUNG PERSONS AND SHOP ASSISTANTS.

The hours of employment of young persons employed in premises regulated by the Shops Act and the Young Persons (Employment) Act, 1938, are given special attention. While there is a tendency for these assistants to be employed fewer hours than the maximum provided for in the statutes, visits are made at appropriate times to restaurants, dairies, places of public entertainment and shops, to ensure compliance with the provisions relating to night employment.

Regular visits are also made to retail shops on Sundays when particular attention is given to the employment of assistants on that day and to the keeping of the appropriate records, the granting of compensatory holidays and intervals for the taking of meals. Very few contraventions are found in respect to compensatory holidays and intervals for meals, but failure to keep the Record of Sunday Employment (Form VII) is frequently found. These infringements are usually of a minor or technical character, or are due to a misunderstanding of the position where relatives help in the shop on Sundays only.

The week-day employment of persons in shops and other premises regulated by the Shops Act, is dealt with during the course of routine or special visits, and again the main infringements relate to failure to keep up-to-date the prescribed forms or notices. A few instances have been reported of assistants being employed at 1.30 p.m., on the day stated in the Assistants Half-holiday Notice as being the statutory holiday for that week, but in these cases there has been a justifiable cause, such as repairs or redecorations to the shop while it is closed, and the staff detained thereby have received a half-holiday on another day not recorded on the notice. It has also been found that managers in one or two of the large departmental stores in the city, because of their special administrative position in the firm, fail to appreciate that they also are shop assistants for the purposes of the Shops Act.

This erroneous impression has been corrected satisfactorily by consultation and explanation by the inspectors.

In keeping with the usual practice of the department, infringements are usually brought to the notice of the employer by means of a warning letter, where this is considered necessary, and this action has proved sufficient to impress upon those concerned the importance of meeting the requirements of the Act and the avoidance of legal proceedings.

WELFARE ARRANGEMENTS.

The provisions of the Act in respect to the arrangements for the health and comfort of shop workers are of the utmost importance in so far as they directly affect the well-being and privacy of employees. The provision of suitable and sufficient ventilation, temperature, lighting, sanitary conveniences, washing facilities and facilities for the taking of meals should be the primary consideration of any person contemplating the opening of a business. It is to be admitted, of course, that during the past years employers have been brought to the realisation of the importance of these considerations, and many are anxious to do their utmost to provide for the welfare of their workers.

Through the efforts of inspectors and employers alike commendable work has been done, and is still being done, but there still remain many difficulties to be overcome, mainly those of inadequate space. These provisions are given strict attention, intimations and notices are sent daily in respect of premises which fail to comply with these requirements of the Act. The greater part of these infringements are of a minor character and are readily and speedily remedied.

The more serious contraventions often prove to be the most difficult to remedy, but by consultation between the owners or occupiers, architects, contractors, and inspectors, these problems are ultimately solved, not only to the satisfaction of the department, but to that of the person who has eventually to bear the expense.

It can be recorded, therefore, that the work in connection with these provisions has been satisfactory, and in no case has it been necessary to institute proceedings to enforce compliance with this part of the Act.

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

Routine observations are carried out for the purpose of enforcing the closing provisions of the Shops Act on the day of the weekly half-holiday, in the evening, and on Sundays. Very few complaints are received of selling after closing hours, but these are strictly dealt with by frequent, and if necessary, intensive observation. Persistent offenders are usually careful in their determination to flout the law, even to the extent of having observers outside their shops, and although different inspectors are instructed to make the necessary observations, it is often impossible to obtain sufficient evidence to take legal action. In spite of this difficulty, many contraventions of selling after the closing hours and on Sundays have been reported, and where the shopkeeper has been warned previously by letter for a similar infringement, court proceedings have been initiated and convictions obtained in all cases.

There has been one notable amendment to the Shops Act during the year. The Shops (Revocation of Winter Closing Provisions) Order, 1952, No. 1862, came into operation on the first day of November of that year. This Order revokes such of the provisions of Sections 2 and 6 of the Shops Act, 1950, as prescribe the general closing hours of shops in winter, and the effect of this is to make the normal general closing hours the same throughout the year. This has not affected the majority of shops whose occupiers, by virtue of the shopping habits of their customers, have no desire to remain open after 5.30 p.m. or 6 p.m. But, the small general dealer has benefited, and the difficulties of shopping experienced by women who go to work have been considerably lessened.

Hairdressers too, have gained a particular advantage by the removal of the winter closing provisions, as this has enabled them to provide a better service for men and, especially, for women and girls employed in shops, factories and offices.

This Order has also resulted in a marked decline in the number of contraventions of the general closing hours.

PLACES OF ENTERTAINMENT.

The systematic inspection of cinemas, theatres, dance halls, and skating rinks by shops inspectors has continued throughout the year in

accordance with the request of the Licensing Justices. These visits are to ensure that sufficient means of ventilation are provided and maintained, the satisfactory cleansing of the auditorium, seats, staff rooms and sanitary conveniences, and maintenance of suitable and sufficient sanitary conveniences for the use of patrons and staff. During the year, 799 evening visits were made in addition to day-time inspections. In 29 cases defects of a minor character were observed and brought to the attention of the persons concerned and were remedied without delay.

The sale of ice-cream, minerals, sweets and tobacco to patrons takes place in the majority of places of entertainment, and in a number of them kiosks or stalls have been constructed in the entrance foyers to the premises. Attention has been given to the application of the Shops Act to such transactions and to those employed in connection therewith; also the provisions of the Act and the Young Persons (Employment) Act, 1938, affecting the employment of young persons in these establishments.

In connection with the administration of the various Acts to shops and other premises visited by shops inspectors, notices have been issued as follows:—

Act.	Notices issued.		Notices not yet complied with.
	Preliminary.	Statutory.	
Public Health Act, 1936	558	131	63
Food and Drugs Act, 1938	106	21	11
Shops Act, 1950, Section 38	624	137	54
Prevention of Damage by Pests Act, 1949 ...	—	1	—

In addition to the notices served under the Food and Drugs Act, 1938, and Shops Act, 2,218 Warning Letters were sent to the occupiers of shops in respect to contraventions of these Acts.

Inspection.			
A.	Retail shops visited	8,991	
	Retail shops re-visited	10,619	
	Retail warehouses visited	—	
	Retail warehouses re-visited	8	
	Assistants employed.		
	Young Persons—Male	547	
	Young Persons—Female	988	
	Adults—Male	2,482	
	Adults—Female	5,402	
B.	Wholesale shops visited	214	
	Wholesale shops re-visited	270	
	Wholesale warehouses visited	27	
	Wholesale warehouses re-visited	110	
	Young persons employed.		
	Male	60	
	Female	35	
	Adults employed.		
	Male	309	
	Female	228	
	Half-holiday Closing.		
	Visits to shops after 1 p.m.	61,152	
	Evening Closing.		
	Visits to shops—		
	After 7 p.m.	17,342	
	After 8 p.m.	17,533	
	After 9 p.m.	10,333	
	After 9.30 p.m.	7,308	
	After 10 p.m.	1	
	Sunday Closing.		
	Visits to shops on Sunday	5,631	
	Public Health Acts.		
	No. of nuisances reported	1,249	
	No. of nuisances abated	1,028	
	No. of nuisances outstanding	221	

Contraventions.		
	Reported.	Remedied.
Shops Act 1950.		
Half-holiday closing	50	50
Mixed trades notice	73	73
Closing notice		
(Alt. W.H.H.)	32	32
Assistants' Half-holiday	90	90
Intervals for meals	1	1
Seats for female assistants	9	9
Assistants' half-holiday		
notice	476	475
Evening closing	82	82
Mixed trades notice	52	52
Hours of employment of		
young persons	—	—
Night employment of		
young persons	—	—
Record of hours of em-		
ployment of young		
persons	195	195
Abstract of provisions of		
1950 Act (Forms H		
and J)	154	154
Notices as to seats for		
female assistants		
(Form K)	399	399
Other notices (A-Z)	1	1
Ventilation	7	5
Temperature	11	8
Sanitary conveniences	1,174	974
Lighting	1	1
Washing facilities	94	71
Facilities for taking meals	32	26
Closing of shops on		
Sunday	133	133
Mixed Shops' Notice		
(Form I)	222	222
Record of Sunday		
employment	221	221
TOTALS	3,509	3,274

Pet Animals Act, 1951.

The Pet Animals Act, 1951, came into operation on the first day of April, 1952, and in this city the responsibility for its enforcement was added to the already wide and varied duties of the shops inspector. It is an interesting departure from the normal scope of the Public Health Service to be now concerned with the health and comfort of pet animals.

There can be no possible doubt that this is a much needed piece of legislation, for the conditions under which certain pet animal dealers conducted their businesses were a disgrace to a twentieth century community, and while there are unfortunate omissions with respect to the application of the Act to stalls in fairgrounds and to persons giving animals in exchange for rags, the provisions contained in the statute appear to be comprehensive and clearly defined.

The Act requires that no person shall keep a pet shop except under the authority of a licence granted in accordance with the provisions set forth therein.

The local authority, in determining whether to grant a licence for the keeping of a pet shop by any person at any premises, shall have regard to the need for securing that animals will be kept in accommodation suitable as respects size, temperature, lighting, ventilation and cleanliness; shall be adequately supplied with suitable food and drink; that animals will not be sold at too early an age; that precautions shall be taken against the spread of infectious diseases; and that appropriate steps shall be taken in case of fire or other emergency.

The Act also prohibits the sale of animals as pets in any part of a street or public place, except at a stall or barrow in a market. It is gratifying that this unsatisfactory kerb-side business with all its doubtful background is now discontinued.

In order that the provisions with respect to fire precautions may be competently administered, the Liverpool City Fire Service have, for this purpose, kindly undertaken the duties of inspection, and report their observations and recommendations to the Medical Officer of Health; and where necessary these recommendations are added to the conditions specified in the licence.

Following the inception of the Act, 79 applications were received and of these 76 were approved, the remaining 3 were withdrawn, either because the business of selling pets had ceased, or that the premises were found not to be pet shops for the purposes of the statute.

The inspection of the premises concerned revealed that the majority of applicants only sold pet animals as a secondary part of their business, the main part being that of the sale of animal foods and commodities associated with the keeping of pets. The conditions under which the animals are now kept are deemed to be satisfactory in all the shops visited. In some cases considerable work had already been done by the occupiers in anticipation of the Act, and where matters requiring attention were reported by the inspectors, immediate action was taken to deal with the faults.

The provisions of this enactment are more easily and satisfactorily complied with in shop premises, but considerable difficulties were experienced in applying them to the stalls in the city market. These stalls consisted of animal pens stacked on to barrows or trestles, and afforded little or no protection to the animals against inclement weather or interference by passers-by. The means used to maintain a sufficient temperature were inadequate and extremely dangerous as a fire risk. Having regard to the portable nature of these stalls and the fact that they were only used on Saturday afternoons, special consideration had to be given to the problem of making them conform to all the requirements of the Act. It was considered reasonable, therefore, to allow the stall-holders sufficient time to devise ways and means of satisfactorily altering and improving their stands. They were advised as to the way in which this could be done and periodical visits were made to ensure that suitable steps were being taken without undue delay. The stalls have now been brought up to a reasonable standard of suitability, although a more pleasing form of structure might well be desired.

Common Lodging-houses.

At the commencement of the year there were on the register 18 Lodging-houses providing accommodation for 1,172 lodgers. One lodging-house for 51 males was closed during the year.

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

21 verbal notices for infringements of the bye-laws were given to registered keepers during the year.

54 notices were served under the Byelaws relating to Common Lodging-houses in respect of choked and defective drains, verminous bedding and beds, floors unswept and not washed, windows requiring cleaning, and dirty condition of ceiling and walls, rooms, staircases and landings, 51 of which were abated at the end of the year. 24,864 beds were examined and 91 found verminous; of these 90 beds were cleansed by the local authority, and one was destroyed. 92 lodgers were found to be verminous, and were cleansed by the local authority.

Inspection of Common Lodging Houses.

Number of houses on register at 31st December, 1952	
(males only) 	15
Number of houses on register at 31st December, 1952	
(females only) 	2
Number of lodgers allowed (males)	1,021
Number of lodgers allowed (females)	113
Number of day visits 	1,122
Number of nocturnal visits 	38

Seamen's Lodging Houses.

At the commencement of the year there were 18 Seamen's Lodging-houses on the register, 7 of these are not licensed under the Byelaws as to Seamen's Lodging-houses. Three applications were received for licences to keep a Seamen's Lodging-house and after carrying out works necessary to comply with the Byelaws, 2 of these houses were added to the register.

Two houses have ceased to be used as Seamen's Lodging-houses during the year, and applications were received for the renewal of 11 licences, which were granted.

At the end of the year there were 18 Seamen's Lodging-houses on the register.

Number of Houses.	Nationality of Seamen.	Number of Seamen allowed.
6	British	350
3	Chinese	326
7	Arab	154
1	Somalis	10
1	Indian	173
18		1,013

Number of inspections	856
Number of nocturnal inspections	43
Number of houses in which contraventions of byelaws were found	47
Number of contraventions of the byelaws	183
Number of contraventions abated	27
Number of verbal notices	29
Number of statutory notices issued	20
Number of beds and bedding examined	12,708
Number of beds and bedding found verminous	4
Number of beds and bedding disinfested by local authority	4

Houses Let-in-Lodgings.

Number of houses visited	3,030
Number of inspections	4,323
Number of houses found dirty	7
Number of houses found cleansed on revisit	7
Number of verbal notices	7
Number of preliminary notices issued	34
Number of statutory notices issued	33
Number of nuisances found	143
Number of nuisances abated	140

Canal Boats.

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

The Docks and Inland Waterways Executive, North-Western Division, are the proprietors of the Leeds and Liverpool Canal, the only canal having direct communication with Liverpool. The length of the waterway within the City (exclusive of the locks communicating with the Dock Estate) is approximately three miles.

Liverpool is one of several registration authorities for boats used as dwellings plying on the Canal. The details of the boats registered by this authority are indicated in Tables I and II.

TABLE I.

Boats on Register, 1st January, 1952	416
New Boats registered	4
Boats removed from Register	4
Boats on Register, 31st December, 1952	416

Four boats ceased to be used as dwellings during the year and were removed from the register at the owners' request.

TABLE II.

NUMBER AND TYPES OF BOATS REGISTERED.

Motor-propelled boats	96
Steam-propelled boats	62
Motor-towed boats	41
Steam-towed boats	125
Horse-drawn boats	92
	<hr/>
	416
	<hr/>

2,394 inspections of Canal Boats were made during the year and the places of registration of the boats visited were as follows:—

TABLE III.

Number of Boats visited	170
Registered at Liverpool	98
„ „ Leeds	1
„ „ Runcorn	7
„ „ Manchester	9
Boats not registered and not used as dwellings	55

All the boats examined were "wide" boats, 60 being motor propelled, 4 steam-propelled, 59 motor-towed, 33 steam-towed, and 14 horse-drawn.

Contraventions of the Act and Regulations were found on 45 boats, of which number 14 were registered by other authorities. The nature of the contraventions is shown in the following Table:—

TABLE IV.

Nature of Contraventions.	Reported.	Remedied.
Unregistered boats used as dwellings	2	2
No certificate of registration on board	11	11
Registration lettering and numbering not legible or incorrect	14	10
Leaking decks	8	5
Defective stoves or stove pipes... ..	9	8
Cabins requiring re-painting	16	11
Defective water-cask	2	2
TOTAL ...	62	49

45 written notices with respect to the contraventions were sent to the owners concerned, and 36 notices have been complied with.

No informations were laid during the year against owners or masters for infringements of the Act or Regulations.

The Inspectors of the Port Health Authority made 471 inspections of canal boats in the docks during the year. 37 contraventions were found and subsequently dealt with. These figures are included in the foregoing Table.

No case of infectious sickness was reported as having occurred during the year on any Canal Boat visiting the district.

The number and sex of persons found in occupation of the 115 Canal Boats used as dwellings are indicated in the following Table:—

TABLE V.

POPULATION OF CANAL BOATS.

Men	...	...	...	...	238
Women	...	...	...	...	nil
Children	...	...	...	...	nil
					—
					238
					—

distributed as under:—

Males over 14 years of age	...	...	238
Males over 5 years and under 14	...	...	nil
Males under 5 years	...	...	nil
Females over 12 years	...	...	nil
Females over 5 years and under 12	...	...	nil
Females under 5 years	...	...	nil

NOTE.—Males on attaining the age of 14 years, and females on attaining the age of 12 years, living on a canal boat, are regarded as adults, and are recorded as such in the foregoing Table.

No children of school age were found on canal boats during the year.

The Hydrogen Cyanide (Fumigation) Act, 1937.

Official notice has been received in respect of 3 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937, 2 dwelling-houses and 1 office and out-building were satisfactorily fumigated under the supervision of the sanitary inspectors.

Court and Alley Inspections.

326 inspections were made of courts and alleys, and 505 inspections of water-closets used in common, visits being made by sanitary inspectors to ascertain whether these common water-closets are kept in a clean condition.

Prohibition of Sale of Verminous Furniture, etc.

Under Section 83 of the Liverpool Corporation Act, 1936, no dealer shall sell or expose for sale any second-hand furniture, mattress, bed linen or similar articles if these are to his knowledge infested with bed bugs, or if by taking reasonable precautions he could have known them to be infested. 971 visits have been paid to premises by the sanitary inspectors, and no infringements were observed.

Removal of Remains.

Under the terms of licences issued from the Home Office the sanitary inspectors supervised the exhumation and re-interment of 5 bodies during the year, also the remains of 5 persons were shipped abroad under supervision and after complying with local requirements, three to America, one to Israel, and one to Brazil.

Exhumations from St. Mary's Recreation Ground, Mulberry Street (previously St. Mary's Cemetery) commenced on 3rd November, 1950, and to the end of the year 25,290 remains had been exhumed and re-interred in Walton Park Cemetery.

Miscellaneous.

STABLES.—Stables within the city are systematically inspected by the sanitary inspectors, constant attention being paid to the frequent removal of manure and to general sanitation. The total number of visits to stables during the year was 2,198, the number of stables found occupied was 182 and the number disused was 84.

The manure depots are situated in close proximity to the North Corporation destructor, and visits are made to them to see that the manure which has been received from the stables in the centre of the city is frequently removed so as to avoid the possibility of breeding places for flies. During the year 57 visits were made to manure depots.

MARINE STORES.—During the year 118 visits were paid to 18 marine stores, and in no cases were nuisances found.

Public Health Act, 1936, Sec. 54. Filled up ground.

Inspections of trial holes were made on 32 filled up sites to ascertain that the ground was now free from faecal or offensive animal or vegetable matter, and that the site was suitable for building purposes.

PARKS.—Fortnightly visits are paid to all public sanitary conveniences within parks and gardens throughout the city to ascertain if they are kept in a clean condition and in good repair, 744 visits were made and in 2 instances they were found to be incorrect, the necessary action being taken to remedy defects.

POULTRY DEPOTS.—12 poultry depots were visited fortnightly, and were found to be in a clean condition.

SCHOOLS.—2,734 visits were made to schools, and in 32 instances defects were found. The necessary steps were immediately taken to have the defects remedied.

SUMMARY OF PROSECUTIONS.

Act.	Section.	No. of Informations.	Penalties.	Costs.	Magistrates' Orders.
			£ s. d.	£ s. d.	
Public Health Act, 1936 ...	75	8	5 10 0	Nil	—
Public Health Act, 1936 ...	94	100	103 10 0	1 8 0	56
Public Health Act, 1936 ...	95	15	45 0 0	Nil	—
Public Health Act, 1936 ...	154	6	2 0 0	Nil	—
Liverpool Corporation Act, 1921	468	6	6 10 0	Nil	—
Shops Act, 1950 (Half Holiday)	—	1	1 0 0	Nil	—
Shops Act, 1950 (Evening Closing)	—	24	22 10 0	Nil	—
Shops Act, 1950 (Sunday Trading)	—	19	19 5 0	Nil	—
Food and Drugs Act, 1938 ...	13	1	Nil	Nil	—
Food and Drugs Act, 1938 (Bye-law No. 2)	15	1	Nil	0 4 0	—
*Rag Flock and Other Filling Materials Act, 1951 ...	—	1	5 0 0	2 5 6	—
Factories Act, 1937 (Basement Bakehouse)	54	1	10 0 0	Nil	—
TOTALS ...	—	183	£220 5 0	£3 17 6	56

Cases withdrawn ... 5

Cases dismissed ... 5

Summonses not served ... 7

* Rag Flock, etc.—In this case defendant pleaded Warranty and brought in the supplier, who in turn brought in the manufacturer after pleading a Warranty. All pleaded Not Guilty to the Summonses.

The Manufacturer was convicted in £5 penalty, with costs allocated as follows:—

To Liverpool Corporation	... £2 5 6
To Defendant	... £6 6 0
To Defendant's supplier	... £6 6 0

Rodent Control.

DUTIES OF LOCAL AUTHORITIES.

The Prevention of Damage by Pests Act, 1949, requires every local authority to take such steps as may be necessary to secure, so far as practicable, that their district is kept free from rats and mice and in particular to

- (a) from time to time carry out inspection of buildings and lands;
- (b) destroy rats and mice on land of which they are the occupier;
- (c) enforce the duties of owners and occupiers of lands under Part I of the Act; and
- (d) keep records and submit reports as may be required by any directions given by the Ministry of Agriculture and Fisheries.

The importance of adequate rodent control needs no emphasis, for it is recognised that the presence of a large rat and mouse population within the city is a potential danger to the health of the public. In addition, the financial and material loss occasioned by rodents by the destruction and damage to essential food, which is already scarce, to other valuable goods, to buildings and to installations are also important factors to be considered. Regard must also be given to the possibility of food contamination by these pests.

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

Precautions are also taken to safeguard against the spread of plague, a disease which may be brought into the port by rats leaving ships arriving from foreign countries, and a proportion of the rodents collected are sent daily to the City Bacteriologist who tests for infection. It is satisfactory to report that all specimens submitted during the year were found to be free from plague.

WEIL'S DISEASE.

A number of rats were sent to the City Bacteriologist for the detection of the presence of the organism of Weil's Disease. This organism, the *Leptospira Icterohaemorrhagiae* was found in one of the specimens submitted.

The rat affected had been caught in a sewer in Oliver Street. Special measures were promptly taken by this department and the City Engineer's department for the destruction of rodents in buildings in the sewers in the areas concerned, which was bounded by part of Falkner Street, Harding Street, part of Upper Parliament Street and part of Crown Street.

Poison treatment was applied to the sewers, 32 manholes being baited, and it is estimated that 150 rats were destroyed. A second treatment was applied a month later with a further kill of 83 rats.

Traces of rats were found on five sites only in the area and action was taken to remedy the infestations in conjunction with the sewer treatment.

MAINTENANCE OF RODENT CONTROL.

Rodent control in the city following the special campaign in recent years has continued throughout 1952.

PROCEDURE.

The Rodent Control staff are employed to

- (a) carry out systematic inspection of buildings and lands throughout the city;
- (b) investigate complaints;
- (c) prescribe the appropriate treatment for disinfestation and determine the sites to be included in block control schemes;
- (d) make the necessary arrangements with occupiers by collective and concerted action for disinfestation, operating when required for the destruction of rats and mice; and
- (e) generally assist occupiers towards the prevention of infestation and the destruction of rodents.

SYSTEMATIC SURVEY.

The rodent operatives examined 15,766 sites during the year in connection with systematic survey and investigation of complaints. A further 64,265 visits were made entailing operational work and re-examination of buildings and lands.

Sanitary inspectors also made, in conjunction with other matters, 99,549 inspections under the Act.

Complaints relating to rats and mice to the total of 4,972 were received and promptly investigated, appropriate action being taken in each case where infestation was found to exist.

INFESTATION.

During the year, 2,578 buildings and lands were subject to infestation, and of this total 1,472 were rat infested, 38 rat and mouse infested, and 1,068 were mouse infested only.

In addition, 1,252 sites previously disinfested since the commencement of the special campaign in the year 1943 were found to be again affected by rats or mice. Of these, 692 were by rats, 64 by rats and mice, and 496 by mice only.

Re-infestation occurred in 171 premises treated during the year. 92 were by rats, 2 by rats and mice, and 85 by mice only.

The total infestations and re-infestations of 3,830 buildings and lands was 4,009.

The principal sites infested were within the dockside wards. The central area showed a marked decrease in rodent infestation of buildings and the intensified drive of recent years by block control methods is no doubt having its good effect. It is also noted that the degree of infestation in the vulnerable areas has been appreciably reduced.

Infestations within the middle belt of the city were generally of a very minor degree and for the most part concerned rats in or near, or mice in dwelling-houses, of which the source of infestation in the case of rats was considered in many instances to have been from the sewer via defective drains.

1,081 references to examine sites were forwarded to the sanitary inspectors for inspection of drains, 707 relating to dwelling-houses and 374 to business premises. Defective drains were subsequently reported in 420 and 206 cases, respectively, and appropriate action was taken to remedy the defects found.

Infestations on the outskirts of the city were small and chiefly confined to gardens of dwelling-houses, especially those in the vicinity where poultry are kept.

Although the presence of rats was reported in connection with a large number of dwelling-houses, the limited supply of food and facilities for harbourage in such places available for rats necessitates their taking a wide range of movement, thereby increasing the number of sites showing traces of the pests without concentrated areas of infestation. Furthermore, the prompt action by occupiers of dwelling-houses in reporting the presence of rodents enables the department to take the necessary action before infestation is allowed to develop to serious proportions.

A report of the conditions of infestation in each case was made, together with recommendations for the destruction of rodents, including any reasonable and practicable measure considered necessary to keep the land free from rats and mice.

DISINFESTATION.

The treatment to remedy infestations was prescribed and applied by the rodent control staff in accordance with the approved methods of rat and mouse destruction now recommended. Infested sites within each area of infestation were, therefore, dealt with at the same time to pre-arranged time-tables under the block system of control. While the work was proceeding the non-infested sites adjoining those under treatment were periodically re-examined as a precautionary measure.

During the year 4,126 buildings and lands were disinfested from rats and/or mice.

Infestations are not considered abated unless no further trace of rodents is found during a period of three to four weeks after the works is completed.

The practice of providing free assistance to occupiers of private dwellings has been continued. Owners or occupiers of premises and lands other than private dwellings who desire the department's assistance in the destruction of rats and mice are required to reimburse the local authority for the expenditure incurred. The demand for assistance is increasing, and 1,363 requests were received during the year.

POISONING.

Of the 3,281 sites disinfested by the department, 2,986 were cleared by the use of poison. The number of treatments applied to effect such clearance are set out in the table Number III.

The quick acting poisons used are zinc phosphide, arsenious oxide, red squill and alpha naphthyl thiourea. The use of these poisons necessitates pre-baiting the site under-going treatment with unpoisoned food in the form of a token bait before poison is applied to the food. In this way rats are conditioned to take a lethal amount of poison in the bait.

The bait bases chiefly used are damp sausage rusk, bread mash, and to a lesser degree soaked wheat. Sugar meal (9 parts oatmeal and 1 part castor sugar) is mainly used with zinc phosphide or arsenious oxide for the destruction of mice.

DIRECT POISONING.

At the moment only one poison is known to be suitable for use without the need for pre-baiting the site for several days with unpoisoned bait. This is a slow acting poison known as Warfarin, a blood anti-coagulant which, when ingested regularly in small doses over a period of several days, causes fatal haemorrhage in rats and mice. The low concentration of poison required for effective use (0.005 per cent. for common rats, and 0.025 per cent for ship rats and mice) thoroughly mixed with medium grade oatmeal, induces little or no shyness in rodents.

Continuity of feeding is essential for this type of treatment. The bait is left in position for one, two or three weeks until the rodents are destroyed. Periodic examination of the baiting points is made to replenish the poison bait according to the rate of consumption. It is therefore more suitable for use on sites where there is little or no movement of the surroundings undergoing treatment, to ensure the non-disturbance of the baiting points without the need for daily visits which would be an expensive procedure. Warfarin has been employed with continued success during the year.

Certain precautions are necessary when laying any type of poison bait, and where it would be dangerous to leave the poison unprotected, containers accessible only to rodents are used as a safety measure.

TRAPPING.

Trapping is chiefly used for very slight infestations or as a secondary treatment to deal with residual population of two or three rats or mice which have survived poisoning treatment. Break back traps of the treadle type are mainly used and also sticky trays where conditions are favourable for this type of trap.

RAT AND MOUSE DESTRUCTION.

It is estimated, using the appropriate formula for calculating the kill, that a total of 21,858 rats in buildings and on lands, and 233 rats in sewers were destroyed as the result of poisoning treatment, and 3,065 dead rats were collected during operations. In addition, 1,561 rats were caught in traps in buildings and on lands, and 3,770 rats were caught in traps in sewers by the rat-catchers employed by the City Engineer and Surveyor's Department and collected from the several depots.

The species of rats collected were 6,444 *Rattus Norvegicus* ("brown" or "common" rat) and 1,952 *Rattus Rattus* ("black" or "ship" rat). The total number of rats destroyed by poisoning and trapping in buildings, lands and sewers is calculated to be 27,422.

A proportion of rodents collected, 631 rats and 9 mice, were sent to the City Bacteriologist for examination and the remainder were burnt.

With regard to the destruction of mice, 2,862 were collected as the result of poisoning and trapping operations. A formula for calculating the kill by the use of poison in relation to mice is not available but there is no doubt that the number destroyed by this method is appreciable when taking into consideration the amount of poison bait consumed by mice as indicated in Table IV.

PREVENTIVE MEASURES.

Co-ordinated action by the rodent control staff and sanitary inspectors is taken when required in relation to preventive measures. Conditions likely to contribute to infestation, such as food or food waste available to rodents which could reasonably be protected, or lack of environmental hygiene, were at once brought to the notice of the persons responsible.

Preventive measures and works of proofing were carried out during or following the process of disinfestation as the occasion warranted. The works comprised *inter alia*, repairing defective drains, abolition or sealing of disused drains, protection of doors, windows, ventilators and

TABLE I.

SUMMARY INDICATING THE EXTENT TO WHICH BUILDINGS AND LANDS WERE FOUND INFESTED BY RATS AND MICE AND THE NUMBER DISINFESTED DURING THE YEAR, 1952.

Description of Buildings and Lands	Buildings and Lands examined	Initial Infestations				Recurring infestation of sites treated 1943/1951				Total Premises Infested	Reinfestations during year				Total Infestations and Reinfestations	Category of Infestation		Species		Infestations and Reinfestations remedied	Buildings and Lands disinfested
		Premises	Rats	Rats and Mice	Mice	Premises	Rats	Rats and Mice	Mice		Premises	Rats	Rats and Mice	Mice		Major	Minor	Black	Brown		
Allotments ...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bakehouses ...	13	3	1	...	2	...	...	...	...	3	...	...	...	...	3	...	3	...	1	6	6
Camps ...	3	1	1	...	...	1	1	...	...	2	...	...	...	...	2	...	2	...	2	2	2
Catering Estabs, Canteens, etc. ...	206	45	20	3	22	42	14	6	22	87	10	3	...	7	97	1	96	19	32	90	80
Cemeteries ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Churches, Chapels, etc. ...	53	5	4	...	1	5	4	...	1	10	...	...	...	...	10	...	10	...	8	8	8
Clinics ...	30	4	1	...	3	10	2	...	8	14	1	...	...	3	17	...	17	...	3	18	17
Clubs ...	58	13	7	1	5	9	4	1	4	22	...	...	...	...	22	...	22	1	12	17	17
Cowsheds ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dairies ...	26	2	1	...	1	2	1	...	1	4	...	...	...	...	4	...	4	...	2	3	3
Derelict Buildings ...	41	5	5	...	...	1	1	...	...	6	...	...	...	...	6	...	6	...	6	6	6
Ditches ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dwelling-Houses ...	8,756	1,659	897	16	746	529	320	8	201	2,188	82	53	1	31	2,273	1	2,272	12	1,283	2,376	2,294
Factories—Food ...	62	11	9	1	1	20	11	5	4	31	2	4	...	...	35	1	34	10	22	37	35
Factories—Non-Food ...	793	66	40	6	20	109	74	10	25	175	14	10	...	5	190	2	188	65	89	209	195
Farms ...	7	2	2	...	...	...	...	...	...	2	...	...	...	...	2	...	2	...	2	4	4
Garages ...	151	10	3	...	7	10	8	1	1	20	...	...	...	...	20	...	20	8	5	23	23
Gardens—Market ...	4	...	...	...	...	3	2	...	1	3	...	...	...	...	3	...	3	...	2	2	2
Government Buildings ...	42	7	2	...	5	6	2	1	3	13	...	...	...	...	13	...	13	2	3	16	16
Hospitals ...	32	4	1	...	3	11	1	4	6	15	1	...	...	1	16	...	16	1	5	13	12
Hotels—Residential ...	46	5	1	1	3	7	3	1	3	12	2	...	...	...	14	...	14	...	6	24	22
Institutions: Homes ...	27	6	1	...	5	8	1	...	7	14	2	...	...	...	16	...	16	...	2	15	13
Land, Banks, etc. ...	440	245	245	...	...	15	15	...	...	260	...	...	...	...	260	...	260	1	259	325	325
Land, Bombed Sites ...	229	7	7	...	...	2	2	...	...	9	...	...	...	...	9	...	9	...	9	7	7
Marine Stores ...	11	...	...	...	...	3	3	...	...	3	...	...	...	...	3	...	3	2	2	3	3
Markets—Food ...	1	...	...	...	...	1	1	...	...	1	...	...	...	...	1	...	1	1	1	2	2
Offices ...	818	92	29	1	62	69	25	2	42	161	7	1	...	6	168	...	168	40	23	170	163
Parks, Recreation Gardens ...	2	1	1	...	...	1	1	...	...	2	...	...	...	...	2	...	2	...	2	2	2
Places of Public Entertainment ...	50	9	3	1	5	8	5	...	3	17	4	1	...	...	21	...	21	5	6	21	17
Public Buildings ...	21	2	...	1	1	5	2	1	2	7	2	...	...	...	9	...	9	1	3	7	5
Public Houses ...	301	27	14	2	11	20	16	1	3	47	2	1	...	1	49	...	49	13	23	47	45
Railway Banks ...	12	3	3	...	...	1	1	...	...	4	...	...	...	...	4	...	4	...	4	3	3
Railway Sidings ...	6	3	3	...	...	...	...	...	...	3	...	...	...	...	3	...	3	...	3	2	2
Railway Stations ...	7	2	2	...	...	...	...	...	...	2	...	...	...	...	2	...	2	...	2	2	2
Refuse Destructors ...	3	...	...	...	...	2	2	...	...	2	...	...	...	...	2	...	2	...	2	1	1
Schools ...	160	21	4	...	17	78	6	2	70	99	15	1	1	13	114	...	114	2	12	122	107
Shops—Food ...	1,179	124	39	2	83	68	21	5	42	192	11	7	...	4	203	...	203	8	66	228	217
Shops—Non-Food ...	1,520	94	46	1	47	80	42	9	29	174	7	4	...	3	181	...	181	31	82	197	190
Slaughter-Houses ...	1	...	...	...	...	1	1	...	...	1	...	...	...	...	1	...	1	...	1	1	1
Sports Grounds ...	5	2	2	...	...	...	...	...	...	2	...	...	...	...	2	...	2	...	2	3	3
Stables ...	51	6	6	...	...	...	...	...	...	6	...	...	...	...	6	...	6	1	6	6	6
Store Sheds ...	3	2	1	...	1	...	...	...	...	2	...	...	...	...	2	...	2	1	...	2	2
Warehouses—Food ...	178	32	26	1	5	44	38	1	5	76	6	6	...	...	82	1	81	62	28	100	94
Warehouses—Cotton ...	35	2	2	...	...	8	8	...	...	10	...	...	...	...	10	...	10	8	6	17	17
Warehouses—General ...	377	56	43	1	12	73	54	6	13	129	3	1	...	2	132	...	132	75	57	160	157
TOTAL ...	15,766	2,578	1,472	38	1,068	1,252	692	64	496	3,830	171	92	2	85	4,009	6	4,003	369	2,084	4,297	4,126

N.B.—The Infestations remedied include 905 which were outstanding at the end of 1951.

TABLE II.

RODENT DESTRUCTION—BUILDINGS AND LANDS.

SUMMARY OF OPERATIONAL DETAILS IN CONNECTION WITH THE DESTRUCTION OF RATS AND MICE IN SURFACE INFESTATIONS DURING THE YEAR 1952.

Description of Buildings and Lands	Total	Infestations remedied			RODENT DESTRUCTION BY LOCAL AUTHORITY																		Species of Rats		Total Rats collected	Total Mice collected	Estimated Rats killed—Poisoning and Trapping
					Method employed			POISONING					TRAPPING				How disposed										
		By Local Authority	By Occupier	By Proofing				Poisoning	Poisoning and Trapping	Trapping	Total Poison Bait laid (ounces)	Total Poison Bait taken (ounces)	Dead Rats collected	Dead Mice collected	Estimated Rats killed by Poisoning	Break Back Traps		Trays		Sent to City Bacteriologist		Burnt					
					Rats caught	Mice caught	Rats caught									Mice caught	Rats	Mice	Rats	Mice							
Factories	246	202	37	7	161	37	4	26,147	7,030	1,004	391	6,570	403	120	—	165	173	1	1,234	675	550	857	1,407	676	6,973		
Warehouses	277	167	107	3	140	25	2	16,418	5,447	1,055	32	5,073	319	26	42	25	156	...	1,260	83	1,067	349	1,416	83	5,434		
Shops	425	346	54	25	280	55	11	6,927	2,001	209	267	1,867	163	240	3	106	57	1	318	612	124	251	375	613	2,033		
Dwelling Houses	2,376	1,998	161	217	1,923	58	17	10,234	2,331	321	354	3,906	218	39	...	...	63	...	476	393	3	536	539	393	4,124
Other Premises and Lands ...	973	568	93	212	482	79	7	14,803	3,898	476	661	4,442	362	341	51	95	90	7	799	1,090	208	681	889	1,097	4,855		
TOTAL	4,297	3,281	452	564	2,986	254	41	74,529	20,707	3,065	1,705	21,858	1,465	766	96	391	539	9	4,087	2,853	1,952	2,674	4,626	2,862	23,419		

Description of Holdings and Lands	Acres	Value	Improvements					Total
			Buildings	Other	Stock	Other	Other	
Residence	1,000	100	100	100	100	100	100	1,000
Business	1,000	100	100	100	100	100	100	1,000
Other	1,000	100	100	100	100	100	100	1,000
Travelling House	1,000	100	100	100	100	100	100	1,000
Other Improvements and Lands	1,000	100	100	100	100	100	100	1,000
Total	5,000	500	500	500	500	500	500	5,000

other openings in walls and roofs of buildings, proofing of floors, elevation of poultry houses and sheds clear of the ground and the removal of unnecessary harbourages to prevent infestation by rats and mice.

Generally it is found that owners and occupiers of buildings and lands affected show readiness to carry out preventive measures recommended, but in 26 cases notices were served under the Prevention of Damage by Pests Act, 1949, to obtain the desired result. It has not been necessary to institute proceedings for non-compliance with the Act.

Tables I to VI indicate the type of building or land found infested, details in connection with the destruction of rats and mice, and generally summarise the work of rodent control.

TABLE III.

SITES DISINFESTED BY POISONING AND NUMBER OF TREATMENTS REQUIRED.

RATS.						MICE.					
Number of treatments.						Number of treatments.					
1	2	3	4	5	6 or more	1	2	3	4	5	6 or more
920	491	124	68	16	35	961	287	52	16	8	8

TABLE IV.

MOUSE DESTRUCTION BY LOCAL AUTHORITY DURING THE YEAR 1952.

DETAILS OF POISONING AND TRAPPING OPERATIONS.

Premises disinfested			Method employed			POISONING			TRAPPING		TOTAL MICE COLLECTED
Total	Dwelling Houses	Business Premises				Ounces		Dead Mice collected	Mice caught in Breakback Traps	Mice caught on Trays	
						Total Poison Bait laid	Total Poison Bait taken				
1,399	924	475	1,332	62	5	5,949	1,312	1,705	766	391	2,862

TABLE V.

BUILDINGS, LANDS AND SEWERS.

NUMBER AND SPECIES OF RATS AND MICE COLLECTED, EXAMINED AND DESTROYED

IN THE CITY OF LIVERPOOL DURING THE YEAR 1952.

	Buildings and Lands.			Sewers. Rats Brown.	Total Examined.		Total Burnt.		Total Rats.	Total Mice.
	Rats Black.	Rats Brown.	Mice.		Rats.	Mice.	Rats.	Mice.		
January	187	171	448	528	96	2	790	446	886	448
February	161	198	387	272	61	4	570	383	631	387
March	164	257	275	546	60	—	907	275	967	275
April	135	190	250	481	59	1	747	249	806	250
May	198	308	208	480	53	1	933	207	986	208
June	149	211	180	265	37	—	588	180	625	180
July	126	276	153	197	34	—	565	153	599	153
August	107	176	212	253	25	1	511	211	536	212
September ...	307	247	152	219	45	—	728	152	773	152
October	235	250	204	160	58	—	587	204	645	204
November	84	210	179	181	55	—	420	179	475	179
December	99	180	214	188	48	—	419	215	467	214
Grand Total	1,952	2,674	2,862	3,770	631	9	7,765	2,853	8,396	2,862

TABLE VI.

BUILDINGS, LANDS AND SEWERS.

TOTAL RATS DESTROYED BY POISONING AND TRAPPING DURING THE YEAR 1952.

Buildings and Lands.			Sewers			Estimated Total Rats Destroyed
Trapping	Poisoning.		Trapping.	Poisoning.		
Rats caught.	Dead Rats Collected.	Estimated Rats destroyed : Not Found.	Rats caught.	Dead Rats Collected.	Estimated Rats destroyed : Not found.	
1,561	3,065	18,793	3,770	—	233	27,422

HOUSING.

Progress with slum clearance proceeded throughout the year, 10 areas being dealt with by clearance area procedure, such action being controlled by the availability of new houses.

Clearance Areas.

The following summary refers to dwelling-houses represented by the Medical Officer of Health during the year as being unfit for human habitation within the meaning of Section 25 of the Housing Acts, 1936/49.

Number of dwelling-houses represented during 1952	...	524
Number of persons occupying the dwelling-houses	...	2,350
Number of Clearance Areas officially represented	...	10
Number of areas declared to be Compulsory Purchase Orders		10
Number of areas in abeyance	...	1

Progressive Summary of Slum Clearance.

Year.	No. of C.O.'s.	No. of C.P.O.'s.	No. of Declara- tion of Unfitness Orders.	No. of Dwelling Houses.	No. of Persons to be Displaced.	No. of Houses Demolished.	No. of Persons Displaced.
1930	—	16	—	398	3,430	—	—
1934	60	42	—	2,757	13,093	—	709
1935	47	60	—	2,793	14,302	278	1,285
1936	55	59	—	3,511	17,923	695	3,263
1937	60	27	—	1,867	9,979	872	4,637
1938	38	5	—	2,583	11,923	1,412	6,654
1939	18	4	—	814	3,895	1,076	4,995
1940	—	—	—	—	—	631	3,214
1941	—	—	—	—	—	653	3,707
1942	—	—	—	—	—	916	4,223
1943	—	—	—	—	—	654	3,387
1944	—	—	—	—	—	423	2,115
1945	—	—	—	—	—	190	920
1946	—	—	—	—	—	374	1,396
1947	—	—	1	35	156	485	2,540
1948	—	—	3	65	215	260	1,299
1949	4	16	—	373	1,362	161	678
1950	—	2	1	32	143	327	1,536
1951	—	—	—	207	—	207	943
1952	—	10	—	524	2,350	408	2,099
TOTALS	282	241	5	15,752	78,771	10,022	49,600

The following is a list of Clearance Areas which were represented during the year, for which Compulsory Purchase Orders were made.

Compulsory Purchase Orders.

Area.	Houses.	Population.
Burnett Place	15	66
Clifton Street No. 1	38	149
Tamworth Street	98	444
Southwell Street No. 1	28	126
Southwell Street No. 2	15	71
Berwick Square	15	78
Prince William Street No. 2	12	49
Field Street	145	625
Watmough Street	4	16
Skirving Street No. 2	154	726
Totals	524	2,350

Areas Still in Abeyance.

Clearance Areas.	Houses.	Population.
Commercial Road No. 1	3	20
Totals	3	20

Demolition Orders.

During the year 92 individual houses were represented as being unfit for human habitation within the meaning of Section II of the Housing Acts, 1936/49, which were dealt with as follows:—

Demolition Orders made	51
Undertakings given not to use for human habitation ...	2
Undertakings given to render houses fit for human habitation in accordance with approved schemes ...	nil
Undertakings cancelled after houses have been rendered fit	nil
Number adjourned	16
Number deferred and later represented under Section 25	24
Number of representations still to be considered ...	35
Number of properties acquired by Local Authority ...	nil
Number of houses demolished by Owner	102
Number of houses demolished prior to Demolition Order being made	2

These figures include houses represented in the previous year.

Section 3, Housing Act, 1949.

Houses of Architectural or Historic Interest.

The Medical Officer of Health submitted representation in respect of 3 houses with a view to Closing Orders being made.

Proceedings under Section 9, 10 and 16 of the Housing Acts, 1936/49:—

(a) Number of dwelling-houses inspected	765
(b) Number of dwelling-houses in respect of which notices were served requiring repairs	674
(c) Number of dwelling-houses which were rendered fit after service of formal notices:—	
(i) by owners	771
(ii) by local authority in default of owners	nil
(iii) number of items of works carried out	8,873
(iv) number of houses where work is in progress	495
(v) number of houses where work has not commenced	311

These figures include houses for which notices were served in 1951/52.

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

One application was received for a licence to re-open houses included in confirmed Clearance Orders, under the above regulations. 23 applications were received for the renewal of licences for the temporary re-occupation of houses included in confirmed Clearance Orders. Six applications were refused, owing to the extreme dilapidation of the premises.

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

Certificates have been issued under the above Acts in respect of 53 dwelling-houses which were not in a reasonable state of repair. Four applications were received from landlords for a report that the premises were deemed to be in a reasonable state of repair, and all these applications were granted.

Housing Act, 1936, Part IV. Overcrowding.

75,421 visits were made to houses in connection with the overcrowding provisions of the Housing Act, 1,884 houses were found to be

overcrowded and 944 overcrowded families were recommended for rehousing under the provisions of Section 85 of the Housing Act, 1936, and the Ministry of Health Circular, 2845.

Sections 4 and 62, Housing Acts, 1936/49.

In 19 cases the name and address of the Medical Officer of Health was not inscribed in the rent books, whilst in 16 cases the necessary summary of Sections 58, 59 and 61 of the Housing Act, 1936, was not inserted in the rent book.

The numbers of persons permitted to occupy the houses were not inserted in 16 rent books.

Informal Notices were served in respect of these infringements and the rent books were corrected.

Houses erected on Suburban Estates at 31st December, 1952.

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

Estate.	Non-Parlour.	Parlour.	Total.
Ashes Estate, Clubmoor...	—	176	176
Buckland Street ...	—	4	4
Cantril Farm ...	592	42	634
Cantril Farm (Flats) ...	20	60	80
Chelwood Avenue and Walsingham Road ...	16	270	286
Childwall Road ...	—	34	34
Croxteth (including 148 Flats & 16 Aged Persons Flats)	204	706	910
Croylands Street...	—	10	10
Dovecot ...	2,331	686	3,017
Edge Lane Drive ...	560	311	871
Edge Lane Drive (Flats) ...	72	—	72
Elms House ...	252	—	252
Elm Vale, Fairfield ...	—	31	31
Fazakerley ...	1,030	410	1,440
Fernwood Road ...	—	18	18
Field House, Wavertree ...	—	14	14
Finch Lane ...	54	—	54
Freeland Street ...	—	25	25
Garston ...	—	159	159
High Park Street ...	—	22	22
Highfield ...	—	636	636
Horrocks Avenue ...	—	88	88
Horrocks Avenue (Flats) ...	48	—	48
Hunt's Cross ...	159	68	227
King Street, etc., Garston ...	76	—	76
Knotty Ash ...	406	287	693
Knowsley ...	874	—	874
Larkhill ...	480	1,846	2,326
Larkhill (Flats) ...	90	120	210

Estate.	Non-Parlour.	Parlour.	Total.
Linnet Lane and Waverley Road (Flats)	78	—	78
Needham Road	—	17	17
Norris Green	4,754	2,965	7,719
Northcote Street (Flats)	12	—	12
Park Road, Dingle	—	31	31
Pinehurst Road	287	395	682
Queens Drive, Walton (Flats)	51	—	51
Ronald Street	78	—	78
Sparrow Hall	539	65	604
Sparrow Hall (Flats)	68	—	68
Speke (Banks Lane)	286	—	286
Speke	1,663	2,329	3,992
Speke (Flats)	609	—	609
Speke (Aged Persons Flats)	308	—	308
Speke Road (Flats)	312	—	312
Springwood	280	1,420	1,700
Springwood (Flats) including 28 Aged Persons Flats	106	49	155
Stalmine Road, Fazakerley	—	78	78
Walton-Clubmoor	1,525	1,671	3,196
Woodlands, Aigburth	—	61	61
Woolton	534	120	654
Total within the area of the City	18,754	15,224	33,978
Brook House	389	203	592
Brook House (Flats)	198	—	198
Huyton Farm	937	79	1,016
Kirkby	14	86	100
Kirkby (Flats)	12	—	12
Kirkby (Aged Persons Flats)	4	—	4
Knowsley	4,086	822	4,908
Knowsley (Flats) including 68 Aged Persons Flats	176	—	176
Lyme Grove	—	56	56
Lyme Grove (Aged Persons Flats)	32	—	32
Total outside the City Boundary	5,848	1,246	7,094
GRAND TOTAL	24,602	16,470	41,072

Housing Statistics.

1. Inspection of dwelling-houses during the year—

- (1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) 68,546
- (b) Number of inspections made for the purpose 120,593
- (2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Amendment Regulations, 1932 2,021
- (b) Number of inspections made for the purpose 10,366
- (3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 616

(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation)	32,471
2. Remedy of defects during the year without service of formal notices—	
Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	18,119
3. Action under Statutory Powers during the year—	
(a) Proceedings under Section 9, 10 and 16 of the Housing Acts, 1936/49.	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	674
(2) Number of dwelling-houses which were rendered fit after service of formal notices—	
(a) by owners	771
(b) by local authority in default of owners	—
(b) Proceedings under Public Health Acts.	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	31,706
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) by owners	10,019
(b) by local authority in default of owners	6
(c) Proceedings under Section 11 of the Housing Acts, 1936/49.	
(1) Number of dwelling-houses in respect of which Demolition Orders were made	51
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	102
(d) Proceedings under Section 12 of the Housing Acts, 1936/49.	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	7
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	—

Houses Owned by the Local Authority.

Total number of houses and flats owned by the Local Authority at 31st December, 1952 (excluding 19 houses built under the Housing Acts and subsequently sold, and 3,502 temporary bungalows) including 216 houses and flats under the control of the County Borough of Bootle	52,575
Number of houses built in the last three years under the Housing Act, 1936, Part V	6,262

The following table shows the accommodation which has been provided in the Corporation's housing and rehousing schemes up to 31st December, 1952.

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	138	—	222	490
2	—	824	434	—	1,987	3,245
3	2,151	—	641	33	3,849	6,674
4	19,495	—	647	212	4,270	24,624
5	16,013	—	261	35	461	16,770
6	430	—	—	—	18	448
7	1	—	—	—	—	1
TOTALS ...	38,090	954	2,121	280	10,807	52,252

In addition there are 180 flats over shops or attached to maintenance depots, and 3,502 temporary bungalows, and 145 flats provided in the Kirkby Woods Hostel.

Rentals.

The weekly rentals of flats (including rates), range from 4s. 11d. for a bed living room flat to 13s. 6d. for a five bedroom flat. The inclusive weekly rental of houses vary between 11s. 6d. for the non-parlour type, and 50s. 5d. per week for houses with four bedrooms, and for Aged Persons' Cottage Flats 4s. 4d. and 6s. 10d. per week. New three-storey flats range from 11s. 5d. for one bedroom to 40s. 7d. for a four bed-roomed flat.

General Statistics.

Area of City	...	...	27,818 acres
Number of inhabited houses at 31st December, 1951	...	...	200,513
Number of structurally separate dwellings occupied (1931 Census).	...	...	173,938
Rateable value	...	...	£6,777,493
Sum represented by a Penny Rate	...	...	£26,834

WATER SUPPLY.

The water supply in the area during 1952 was satisfactory both in quality and quantity.

Bacteriological examinations of the waters were made regularly by the City Bacteriologist, samples for these routine examinations being taken both in the City and at the local Reservoirs, Prescott.

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

There are no parts of the area dependent upon stand-pipes for a supply.

REPORT OF THE CITY BACTERIOLOGIST.

In 1952 the number of examinations made was 84,758.

PLAGUE.—3,342 examinations on rats were made, and none of the rats was found to be infected with plague.

ANTHRAX.—Of the samples of wool and hair submitted for examination, 284 samples were received from the Government Wool disinfecting Station; 142 were untreated, of which 45 contained anthrax bacilli; 142 were treated and of these none was infected with anthrax.

Examinations made in the Bacteriological Department during the year 1952.

Milk (fresh—liquid)	10,233
Ice Cream	1,126
Water	3,044
Shellfish	95
Foodstuffs	254
Wool and Hair for Anthrax	285
Rats for Plague	3,342
Swabs from Throat and Nose Infections	5,741
Specimens from Intestinal Infections	18,067
Cerebro-Spinal Fluid for Pathogenic Organisms... ..	546
Sputum and/or other Secretions for Tubercle Bacilli	6,654
Exudates for Anthrax Bacilli	17
Specimens for Clostridium Tetani	8
Cough Plates, etc., for Whooping Cough	952
Secretions for Organisms	2,149
Miscellaneous Specimens	144
	<hr/> 52,657

Venereal Diseases.

Serological Tests	31,807
Other Tests	294
	<hr/> 32,101
	<hr/> 84,758

PUBLIC HEALTH DEPARTMENT,
LIVERPOOL.

February, 1953.

SPECIAL SURVEY OF LOCAL HEALTH SERVICES PROVIDED UNDER NATIONAL HEALTH SERVICE ACTS.

In accordance with Ministry of Health Circular No. 29/52, attached is a description of the various Local Health Services in Liverpool, which not only outlines the operation of these services but also the difficulties encountered and the measures taken to overcome them, together with suggestions for possible improvements.

The various services are dealt with in precisely the same order as set out in the Appendix to the Ministry's Circular, namely:—

1. Administration.
2. Co-ordination and co-operation with other parts of the National Health Service.
3. Joint use of staff.
4. Voluntary organisations.
5. Care of expectant and nursing mothers and children under school age.
6. Domiciliary Midwifery.
7. Health Visiting.
8. Home Nursing.
9. Vaccination and Immunisation.
10. Ambulance Service.
11. Prevention, Care and After-Care.
12. Domestic Help.
13. Health Education.
14. Mental Health.

In addition to the above, a brief description of the scheme for the provision of Mobile Meals made under Section 28 of the National Health Service Act, 1946, is given at the end of the Survey, together with a reference to co-operation with the Welfare Services Section of the Department in regard to the follow-up of cases discharged from hospital.

W. M. FRAZER,
Medical Officer of Health.

1. Administration.

The Liverpool Public Health Department is sectionalised under the general control of the Medical Officer of Health, assisted by a Deputy Medical Officer of Health.

The Maternity and Child Welfare Section is supervised by a female Senior Medical Officer. This section embraces the Health Visitors' Staff, the Domiciliary Midwifery Service, Day Nurseries, Ante-Natal and Post-Natal Clinics, and the Domestic Help Service. Home Nursing, which is performed on an agency basis for the Department by the Liverpool Queen Victoria District Nursing Association, is closely linked with this Section.

Vaccination, Immunisation, and Prevention and After-Care of Tuberculosis and Venereal Disease form part of the duties of an Assistant Medical Officer of Health.

The Ambulance Service is under the immediate supervision of a Chief Ambulance Officer, who works in close co-operation with the Deputy Medical Officer of Health.

The Mental Health Service is under the supervision of an Assistant Medical Officer of Health.

All these services come under the Health Committee of the City Council and there are the following Sub-Committees meeting monthly:—

General Purposes and Mental Health.

Maternity and Child Welfare.

Ambulance.

Tuberculosis Prevention and After-Care.

Contracts and Buildings.

2. Co-ordination and Co-operation with Other Parts of the National Health Service.

MATERNITY AND CHILD WELFARE.

Co-operation in the care of patients:

(a) at hospitals;

Arrangements have been made with the Medical Board of the Liverpool Maternity Hospital that registrars from that Hospital should

act as clinic medical officers at ante-natal clinic sessions in maternity and child welfare centres in the area of the City which the hospital uses for Part II training of pupil midwives. Similar arrangements with other hospitals have been attempted but, owing to staffing difficulties, have been unsuccessful up to the present.

Reference forms and co-operation cards are exchanged between the district and hospital ante-natal clinics. At present, the system of exchange of records is giving rise to difficulties owing to duplication of forms, and discussions are taking place with a view to improving the system. In the local authority's reference form a report was asked for from the obstetric specialist and this was usually obtained. In the new co-operation cards no such report is given and this is considered to be a loss which might operate to the detriment of the expectant mother. It is hoped that the obstetric consultants, the general practitioners, and the local health authority, will be able to agree to some form of mutual exchange of information which will contain, as far as possible, all the particulars relevant to each expectant mother's case, so that it may be available at her confinement and for guidance in subsequent pregnancies.

It has been found necessary for hospitals to introduce a scheme for priority admission to their maternity wards. The cases of expectant mothers whose obstetric condition is normal are referred, when they make application for admission to hospital for confinement, to the Maternity and Child Welfare Section of the Health Department for the investigation of home conditions. These women are visited by the municipal midwives who would attend them if they were confined at home and, on the midwives' reports as to suitability for home-confinement, the hospital decide whether or not to book the cases.

The Maternity and Child Welfare Section is notified either by letter or telephone when women are discharged from hospital before the 14th day of the puerperium. Arrangements are made immediately for nursing during the remainder of the lying-in period to be undertaken by the midwife in whose district the mother and baby live. Since 1948, there has been an increasing tendency to discharge midwifery cases from hospital on the eighth or ninth day of the puerperium and in a number of cases earlier. This has led to a considerable increase in the

amount of maternity nursing done by the district midwives and it is considered that such early discharge is not in the best interests of the mother and new-born infant. Owing to early ambulation, the mother tends to do more when she gets home and early discharge also interrupts breast feeding before it is properly established. Early discharge of nursing mothers is still too prevalent and it is hoped that when more experience of the priority system is gained, it will become less frequent.

A health visitor attends the paediatric clinics held at the Liverpool Maternity Hospital and Mill Road Maternity Hospital.

Notes on the condition, treatment and feeding of young children discharged from the four children's hospitals in the City are sent by the hospital staff to guide the health visitor in following up at home. Reports on the health visitors' findings are sent to the hospitals.

As a rule, cases are not referred direct to hospital from the child welfare clinics—the mothers are advised to take children in need of treatment to their family doctor.

(b) by general medical practitioners;

Co-operation between the local health authority and general medical practitioners in regard to maternity and child welfare is not as satisfactory as it might be. Many of the doctors are willing for their booked maternity patients to attend ante-natal clinics in addition to attending their surgeries, but others have given their patients definite instructions that they are not to attend the local health authority's ante-natal clinics. In such cases, the midwives are in a difficult position since they feel they should not go against the instructions of a patient's doctor. The cause of this is lack of appreciation of the respective functions of the general practitioner service, and the ante-natal clinic. There is no doubt that the general practitioner should be consulted and should be kept fully aware of the condition of every expectant mother on his list. He should be the person to advise his patient on how her pregnancy and confinement should be managed. The ante-natal clinic is educational and advisory in function and must operate as an adjunct and aid to the general practitioner and not in competition with him. In any branch of medicine opinions may differ and at times the teachings of the clinic may be in conflict with the views of the woman's doctor,

but this is not a reason for condemnation of ante-natal clinics. Provided there is goodwill on both sides and a proper appreciation of the educational and advisory functions of these clinics, they can still provide a most useful service to the community. The clinic can save the busy general practitioner much time by giving instructions on mothercraft, ante-natal hygiene, and preparation for the coming infant, together with reports on blood examinations and other tests which the expectant mother might require.

Co-operation cards are available for exchange of records between general practitioners and clinic doctors and are being used by those general practitioners who have no objection to their patients attending clinics.

Since the inception of the National Health Service, the number of new cases and total attendances at all the City's ante-natal clinics have decreased.

Suggestions for improving the present arrangements are as follows:—

- (1) Improved co-ordination between the local authority's district ante-natal clinics and hospital ante-natal clinics so that expectant mothers will understand that the two are working together. Expectant mothers showing no abnormality of pregnancy and booked for confinement in hospital could be instructed to attend a district ante-natal clinic until a time later in pregnancy to be decided either by the clinic doctor or the hospital at which they have booked.
- (2) A better system of exchanging information. This is difficult to organise in practice and a closer understanding of mutual difficulties is required.
- (3) The appointment of hospital staff to local authority's district clinics has not been a success and should probably be given up. The educational aspect of ante-natal care is not of great interest to the young registrar.
- (4) Closer co-operation with general practitioners in regard to ante-natal clinics. It appears difficult to break down prejudices where they exist. It might be possible to persuade the

general practitioners to send their patients to the clinics for instruction but not medical examination. General practitioners have been invited and should be encouraged to attend the ante-natal clinics and see the work carried on there. Their advice will be sought when any changes likely to affect them are being considered.

DIPHTHERIA IMMUNISATION AND VACCINATION.

Immunisation material is issued to general practitioners on request, and completed immunisation cards are received from them. The Public Health Department is constantly asked for advice on immunisation problems and the Assistant Medical Officer dealing with this work will see any case where a practitioner wishes it. Parents desirous of having their children immunised are always advised that they should see their own doctors and information about the Immunisation Clinics given afterwards. Lymph for vaccination is issued by the City Laboratory, but otherwise arrangements are as for diphtheria immunisation.

The closest possible co-operation with the Infectious Diseases Hospitals is maintained and information is freely passed either way.

PREVENTION AND AFTER-CARE OF TUBERCULOSIS.

The Corporation's prevention and after-care service is, as will be evident from the description given on page 199, fully integrated with the work of the Regional Hospital Board's Chest Clinics.

PUBLICITY.

Copies of a guide to the Local Health Services in Liverpool, published by the Department in July, 1948, and a Handbook published in January, 1952, were circulated to schools, hospitals, clinics, voluntary organisations, public libraries, etc.

3. Joint Use of Staff.

MATERNITY AND CHILD WELFARE.

Seven medical practitioners, one consultant paediatrician and two consultant obstetricians conduct weekly maternity and child welfare clinic sessions in the Local Health Authority's centres on a sessional basis.

The registrar at one of the hospitals controlled by the Board of Governors is in charge of the two weekly ante-natal sessions at a district maternity and child welfare centre serving the area in which the hospital is situated.

One of the Assistant Medical Officers in the employ of the Local Health Authority attends, as frequently as her other duties permit, a weekly ante-natal session at a maternity hospital controlled by the Regional Hospital Board, to which she refers patients from her district ante-natal clinics.

Another of the Assistant Medical Officers attends, when other duties permit, a weekly paediatric out-patients' session held in one of the children's hospitals (by arrangement with the Department of Child Health).

Co-operation between the medical staffs of the hospitals and the Local Health Authority's Maternity and Child Welfare Section is well maintained.

4. Voluntary Organisations.

MATERNITY AND CHILD WELFARE.

Full use is made by the Local Health Authority of the facilities provided by the various voluntary organisations concerned with maternity and child welfare—for example:—

- (a) by the Liverpool Child Welfare Association in respect of convalescent care; holidays; clothing of needy mothers and children; loan of perambulators, cots, etc.;
- (b) by the Liverpool Personal Service Society; Soldiers', Sailors' and Airmen's Families' Association, and such like bodies in respect of payment of special grants and loans to meet debts of exceptional expenses incurred by needy families;
- (c) by the various denominational and other organisations in respect of the care of unmarried mothers and their children; affiliation orders; adoptions, etc.;
- (d) by the Family Service Units in respect of "problem families";
- (e) by the Liverpool Society for the Prevention of Cruelty to Children.

There is very close liaison between the voluntary workers in the City and the staff of the Maternity and Child Welfare Section.

AMBULANCE SERVICE.

Since the 5th July, 1948, the Merseyside Hospitals Council have operated their fleet of ambulances on an agency basis on behalf of the Liverpool Corporation, their work being mainly concerned with the former voluntary hospitals, and confined within the City boundary. The following table indicates the number of patients removed each year from 1948 to 1952:—

Year	No. of Patients	Increase on previous year	Percentage increase
1948 ...	39,508	—	—
1949 ...	43,912	4,404	11.1%
1950 ...	44,979	1,067	2.4%
1951 ...	50,161	5,182	11.5%
1952 ...	55,759	5,598	11.2%

The Hospitals Council have indicated their wish for the assets to be purchased by the City Council, and negotiations have now reached the stage where agreement has been reached, and the Ministry of Health asked to approve and issue loan sanction. It is anticipated that the take-over will be in the early part of 1953. At the present time, the staff of the Hospitals Council consists of 1 Ambulance Manager, 3 Control Clerks, 27 Driver/Attendants, 1 Mechanic, 1 Labourer and 2 Car Washers. Their fleet is composed of 16 vehicles. It is proposed to reduce the number of vehicles to 9, and the number of Driver/Attendants to 14. The maintenance and administrative staff will consist of 1 Station Officer, 2 Telephone Operators, 1 Mechanic, 1 Labourer and 2 Car Washers.

5. Care of Expectant and Nursing Mothers and Children under School Age.

EXPECTANT AND NURSING MOTHERS.

There are 37 weekly ante-natal clinics held in 23 district centres and at each of these post-natal examinations are made. So far, no scheme has been adopted whereby assistance is given at clinics in general practitioners' own premises, but this matter is under consideration.

Specimens of blood are sent from almost all ante-natal clinics for examination (Wassermann, Rh.factor, etc.) at the Blood Transfusion Centre and reports are sent from that Centre to the clinic doctors. The blood examination service is working smoothly and successfully in the clinics and in co-operation with hospitals, and general practitioners whose patients attend the clinics. No special arrangements are made by the Local Health Authority for the ante-natal care and examination of unmarried mothers—such women attend the ordinary ante-natal clinics. Those resident in the various Mother and Baby Homes either attend clinics held in the Homes or go to the out-patients' department of their booked hospital.

Mothercraft training is given at all sessions and, in some cases, special classes are held for primiparae. Demonstrations include bathing of a baby (a bath and doll being used); care and storage in the home of food, milk and infants' feeding bottles and utensils; babies' and children's clothing suitable for the different seasons of the year. Talks are given on such subjects as ante-natal hygiene; preparation for, and the importance of breast feeding; ventilation and the need for fresh air and exercise; the importance of vaccination and immunisation; general care of children; the value of vitamin preparations, and the prevention of accidents.

Since the inception of the National Health Service, there has been a steady decline in attendances at ante-natal clinics.

Maternity outfits are supplied to district midwives for issue free of charge to their booked patients. Women who book a general practitioner and engage a private maternity nurse to attend their confinements may receive a free outfit by presentation of a medical certificate at the Midwifery Office or at any maternity and child welfare centre. Drugs and sundries required for the delivery and lying-in period are supplied by the midwife at the time of her attendance.

CHILD WELFARE.

There are 37 weekly child welfare clinic sessions held in 22 centres. They are fairly well attended now although, when the National Health Service was inaugurated, the numbers of children taken to the clinics decreased.

Mothercraft talks and demonstrations are given at all sessions. So far as is known by the Local Health Authority, child welfare clinics are not held by general practitioners in their own premises in this area; no requests have been received for assistance at such clinics.

CARE OF PREMATURE INFANTS.

Midwives attend all premature babies born at home until a weight of $5\frac{1}{2}$ lb. is reached. If a premature baby is discharged from hospital weighing under $5\frac{1}{2}$ lb. a midwife visits until that weight is attained. In all cases of premature birth, the midwife advises the health visitor as soon as she ceases attendance so that supervision of the baby may be continued. Necessary items of equipment, including flannel gowns and gamgee jackets are issue on loan, if they are required, for the use of premature babies nursed in their own homes.

A paediatrician is available for home consultation at the request of a general practitioner. Two of the general hospitals admit, to their special premature baby units, infants born at home and requiring institutional care. A nurse is sent in a specially heated and equipped ambulance to take the infant to hospital.

SUPPLY OF DRIED MILKS.

Arrangements have been made with the Ministry of Food for national dried milk and vitamin preparations to be available at all maternity and child welfare centres, with the exception of four where there are inadequate storage facilities. In addition, the Ministry of Food have rented other premises (in consultation with the Local Health Authority) and use a mobile van for distribution purposes. Every effort is made by the Authority's staff to encourage mothers to collect supplies to which they and/or their young children are entitled.

Iron preparations and simple medicaments for mothers and pre-school children are issued free, on medical advice, at the clinics, and certain proprietary brands of dried milk are sold at reduced price for complementary feeding or for use in cases where national dried milk is unsuitable.

DENTAL CARE.

The present arrangements for the dental care of expectant and nursing mothers and children under school age are adequate to meet

demands. The School Health Service is responsible for the arrangement and staffing of the 8 sessions held in 7 centres each week. At one session, inspection only is carried out, the women or children found to be in need of treatment being referred to another session. The teeth of mothers attending the dental clinics are usually in such poor condition that extensive extractions are required, but conservative treatment is advised whenever possible.

A doctor, well experienced in the administration of dental anaesthesia, is engaged on a sessions' basis as and when her services are required by the dental officer; otherwise the dentists give anaesthetics.

Expectant and nursing mothers and pre-school children are now provided with free dentures. Impressions are taken and plates are fitted by a school dental officer and the dentures are supplied, on the requisition of the Local Health Authority, by a reputable local firm of dental mechanics.

OTHER PROVISION.

Full use is made of the Liverpool Child Welfare Association's facilities (grant-aided by the Local Health Authority) for mothers' holidays, and periods of stay in Homes outside Liverpool for young children in need of change of surroundings and special care.

6. Domiciliary Midwifery.

There are 72 midwives and 14 maternity nurses practising in the City at present. Of the midwives, 54 are in the municipal service (51 full-time and 3 part-time); 14 are working from the Liverpool Maternity Hospital's district homes and 4 are in independent practice. This number is adequate, at the moment, for attendance on women in their own homes as midwives or maternity nurses. The administrative staff of the Midwifery Section comprises 1 Medical and 3 Non-Medical Supervisors who are responsible for the supervision of *all* district midwives in the area. Apart from regular routine inspection of records, equipment, etc., the midwives' practical work is supervised from time to time in cases where such action is considered necessary.

All full-time municipal midwives and those attached to the Liverpool Maternity Hospital's district homes are qualified to give gas/air analgesia and have been issued with machines for use in their practices.

The various maternity departments of hospitals refer to the Midwifery Section cases where women suitable, obstetrically, for home confinement and not in the priority groups apply for admission to hospital. The midwives who would attend these patients if confined at home call to verify the need for hospitalisation on social grounds. In this way, it has been found possible for the midwives to increase their bookings and for the hospitals to be relieved of a proportion of normal deliveries.

Municipal midwives attend patients in their own homes who have been discharged from hospital before the 14th day of the puerperium.

All district midwives are required, on booking a patient, to ask for the name of her family doctor and to ascertain if the doctor wishes to supervise the pregnancy and to be called to the delivery, and if the patient may attend one of the Authority's ante-natal clinics.

The Non-medical Supervisors and the municipal midwives attend, in turn, refresher courses arranged from time to time by the Royal College of Midwives, and as many as can be spared attend lectures arranged by hospitals and organisations such as the Central Council for Health Education. In addition, the supervisory staff of the Midwifery Section hold special short courses which are attended by those midwives who are considered to be in need of instruction on specific matters.

The Local Health Authority has so far arranged no training for pupil midwives, but a scheme is under consideration and will, it is hoped, be put into operation during 1953, whereby some of the 11 municipal midwives who have been approved by the Central Midwives Board as district teachers of midwifery will assist in the training of Part II pupils from one of the hospitals under the control of the Regional Hospital Board.

7. Health Visiting.

There are 69 health visitors assisted in the clinics and with routine work by 7 trained nurses approved for such duties by the Ministry of Health. Apart from their statutory duties concerned with the welfare of mothers and children, the health visitors undertake:—

- (a) Enquiries regarding stillbirths, neo-natal deaths, deaths due to diarrhoea;

- (b) Close supervision of illegitimate children, details of whom are recorded in a special register;
- (c) Visits to problem families, cases of overcrowding, housing difficulties, and verminous conditions;
- (d) Visits to children discharged from the children's hospitals, following receipt of reports from the paediatricians;
- (e) Visits to cases of diarrhoea;
- (f) Following up of young children suffering from defective vision, orthopaedic defects, otorrhoea;
- (g) Special supervision of delicate children attending hospital paediatric clinics. (A health visitor is in attendance at two of the hospitals and the information she collects is passed on to the health visitor for the district in which each child lives);
- (h) Visits to absentees from hospital and district ante-natal clinics;
- (i) Home visiting of applicants for nursery accommodation where verification of circumstances is considered desirable;
- (j) Home nursing of cases of measles and pneumonia;
- (k) Visits to aged persons who form part of the families under the care of the health visitors;
- (l) Visits in connection with special enquiries, such as Growth of Babies Survey and the Virus Survey, and the Cancer Survey.

There is satisfactory co-operation between the health visitors and home nurses, midwives, domestic helps, mental health visitors, children's officers, social welfare visitors, school nurses, National Assistance Board officers and the various voluntary organisations concerned with maternity and child welfare.

The health visitors have consultations with the family doctors of children attending the clinics and, in some cases, the doctors ask for visits to be paid to their patients in regard to advice on infant feeding.

Liverpool is a training centre for health visitors and 17 assisted students are accepted each year. They are paid two-thirds the commencing salary of a health visitor during their period of training.

Resident accommodation is not provided by the Local Health Authority, but students are helped to obtain it. The students' study and lecture rooms are situated in one of the maternity and child welfare centres where arrangements are available for the cooking of light meals.

Health visitors are allowed to attend refresher courses arranged for health visitors and school nurses by the Women Public Health Officers' Association at various centres and lectures in Liverpool arranged by the Royal College of Nurses and Royal College of Midwives and frequent meetings of the staff are arranged in order to discuss administrative matters.

8. Home Nursing.

The Home Nursing Service is carried out by the Liverpool Queen Victoria District Nursing Association, acting as agents for the Local Health Authority.

The nursing staff comprises :—

- 1 Senior Superintendent of Home Nursing.
- 3 Superintendents.
- 5 Assistant Superintendents.
- 38 Full-time Queen's nurses.
- 5 Part-time Queen's nurses.
- 3 Full-time state registered nurses.
- 22 Part-time state registered nurses.
- 43 State enrolled assistant nurses.
- 14 Student district nurses.

The work is carried out from 1 central home, 3 main homes and 4 Corporation houses, to each of which are allocated 2 resident nurses and an appropriate number of non-resident staff.

The district nurses give no service, excepting an emergency first visit, unless instructions are received from a doctor. The doctors referring patients are mainly in general practice, but some cases are referred from hospitals on a special form provided for the purpose, following a telephone message.

The family doctor is advised by the hospital when his patient is referred for home-nursing and subsequent to the patient's discharge, instructions in regard to nursing are taken from the family doctor.

During 1952, 321,231 visits were paid to 1,426 old cases and 18,362 new cases, details of the latter are as follows:—

	CASES
Medical	11,402
Surgical	3,403
Tuberculosis	687
Maternity and Child Welfare ...	2,798
Infectious	64
Others	8
	<hr/>
	18,362
	<hr/>

Of the patients visited 13,536 were given injections (penicillin, insulin, streptomycin, etc.) involving 208,243 visits.

Night visits have not been found necessary up to now, but an extended day service has been in operation for some time whereby two nurses, on rota are on call until 10.30 p.m. at each of the homes for (a) emergency work and (b) administration of morphia.

Refresher courses are arranged every year by the Queen's Institute of District Nursing (a) for juniors and (b) for seniors. District nurses in Liverpool are included in any local refresher courses arranged for midwives or nurses.

The arrangements for district nurse training are those approved by the Queen's Institute of District Nursing. The Block Training is in operation in Liverpool and nurses are resident mainly in the Central Home, although those doing practical work throughout the City are housed in the three main district homes. All teaching is given at the Central Home where there is a lecture room and a film projector.

A special section of the department has been set up by the Local Health Authority for the issue on loan of home-nursing equipment. A small deposit is charged for articles costing over £1 0s. 0d. This service is very well patronised.

9. Vaccination and Immunisation.

VACCINATION.

The satisfactory vaccination state of Liverpool children is maintained by the following arrangements.

The health visitor, on her visit following the birth of each child, endeavours to persuade the mother to have her child vaccinated. A list of all mothers who agree to this is forwarded to the vaccination clerk who sends a post-card to the mother when the child is two months old, reminding her of her wish to have the child vaccinated, and stating that she should take the child to her own doctor or, if this is not convenient, to one of the eleven clinics for vaccination established throughout the City. Where the mother does not take the child for vaccination, the vaccination clerk visits her and endeavours to persuade her to have the child vaccinated as she originally wished. In those cases where the mother does not originally agree, the vaccination clerk also visits and endeavours to persuade her to change her mind. The vaccination clerks, of which there are three, manage to visit the home in about 75 per cent. of cases. The records of deaths of infants are studied by the vaccination clerks in order to avoid unfortunate incidents. The vaccination clerks who attend at the vaccination clinics also visit the homes in cases where the mother does not bring the child to have the vaccination inspected. The Assistant Medical Officer responsible for immunisation and vaccination vaccinates all un-vaccinated children attending day nurseries, a special effort being made by the nursery staff to persuade the mothers to agree to this procedure. These measures appear to produce in Liverpool a reasonably satisfactory result. There is no doubt, however, that the fairly frequent smallpox scares in the Port assist in keeping up the vaccination figures. Appended is a table showing percentages of children born in any year and vaccinated in that year, from 1942 to 1951:—

	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Births ...	14,084	15,368	16,975	16,315	20,304	21,900	17,695	16,551	16,110	15,593
Primary Vaccinations ...	8,984	10,012	10,901	9,982	11,691	11,934	9,784	7,592	9,214	9,385
% Vaccinated	63·8	65·1	64·2	61·2	57·7	54·5	55·3	45·9	57·2	60·2

DIPHTHERIA IMMUNISATION.

The initial procedures undertaken to publicise the advantages of, and the facilities for, immunisation consisted of advertisements in local papers, the exhibition of posters on hoardings, shop windows, Corporation clinics, etc., but emphasis has latterly been placed on

personal contact by the health visitors. School teachers are kept informed of the progress of immunisation and their influence on parents is very valuable. Members of the Public Health Department staff, when giving talks to organisations or the public, lose no opportunity of emphasising the advantages of immunisation against diphtheria. Children under five may be immunised at any of the 23 municipal child welfare centres, where one, two or more sessions are held each week. Immunisation of children of school age is carried out mainly at school, elementary, secondary and residential schools being included. A few children of school age are immunised at the clinics and children under school age are sometimes immunised at the schools attended by their elder brothers and sisters. Experience has taught school teachers how great is the value of immunisation and their co-operation has contributed, and doubtless will continue to contribute, to the success of this work among children of school age. At all primary immunisations, parents are told of the necessity for repeat inoculations to maintain immunity, and are told the age at which these inoculations should be given. Practically all children attending school do receive booster doses. Parents are also advised that their children may be inoculated by their own doctors and the general practitioners are, in fact, doing an increasing proportion of the immunisation work. They immunised 241 children in 1942 and 2,610 in 1952. The immunisation of school children is done by an Assistant Medical Officer of Health, assisted by a part-time medical practitioner employed and paid on a sessional basis. In the child welfare clinics the work is done by three full-time child welfare medical officers and 20 part-time clinic medical officers paid on a sessional basis. Health visitors assist in both cases.

General Observations and Statistics. During the five years ending 1934 there was an annual average of 3,300 cases of diphtheria, with a peak of 4,023 in 1930, and in the latter year there were 236 deaths. The average number of cases from 1935 up to and including 1941 was 2,363 with an average of 143 deaths. The number of cases per month sank steadily throughout the later months of 1941 and this trend has continued ever since. The actual number of deaths in 1941 was 199 and that in 1942, 99.

The appended table shows, from 1942 to 1951, the percentages of children immunised in each age group, together with the numbers of cases and deaths. One case occurred in the early part of 1952 and in

October and November seven cases and two carriers were confirmed as harbouring virulent diphtheria bacilli. One case (non-immunised) died. It will be noted from the table that the percentage of children under five immunised has continued to stay steady over the past few years and steps have been taken, and are being taken, to increase these figures. The first step has been to support and intensify the efforts of the health visitors in their present contact work and, the second, a campaign of general publicity, which is about to commence. It is felt worth observing that the occurrence of a few cases of diphtheria in the latter months of 1952 has greatly increased the number of parents applying for immunisation for their children. The fact of the cases occurring has been judiciously publicised.

	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
% of population under 5 years age immunised	23.4	30.0	29.0	34.1	35.5	35.1	38.7	41.4	40.5	41.3
% of population 5—9 years of age immunised	46.1	59.9	53.8	57.3	64.6	66.7	69.3	68.3	69.2	70.8
% of population 10-14 years of age immunised	62.4	84.1	74.1	72.9	77.0	77.7	80.4	83.5	87.1	89.8
Diphtheria case rate per 1,000 population	3.7	1.8	1.5	1.0	0.7	0.5	0.3	0.2	0.1	0.03
No. of Deaths from Diphtheria ...	99	38	31	28	25	12	12	4	2	nil
Mortality rate per 100,000 population	14.7	5.7	4.6	4.1	3.4	1.6	1.5	0.5	0.2	nil

WHOOPING COUGH IMMUNISATION.

Recently, permission has been requested from the Ministry of Health to amend the Council's scheme under Section 28 of the National Health Service Act, 1946, to include immunisation against whooping cough.

10. Ambulance Service.

The following table indicates the number of patients conveyed each year from 1948 to 1952:—

Year	No. of Patients	Increase on previous year	Percentage increase
1948	53,963	10,618	24.5%
1949	86,700	32,737	60.6%
1950	98,064	11,364	13.1%
1951	114,241	16,177	16.5%
1952	129,495	15,254	13.4%

The figures show that since the introduction of the National Health Service Act, 1946, the work of the Ambulance Service has increased beyond all expectations. When comparing the years 1948 and 1952, the increase is 75,532 patients, or 140 per cent. The staff was increased in July, 1948, in accordance with the proposals approved by the Ministry of Health, in order to undertake the Accident Ambulance Service formerly under the City Police. This demand has been met without any further increase in staff or vehicles, and has been achieved by deploying the staff to the fullest advantage to meet the peak demand, and by the introduction of Radio Telephony, and specially designed sitting-case ambulances.

There is no doubt that there is a steady rise in the number of persons receiving hospital treatment and this, together with the policy of the hospitals in releasing beds earlier than formerly, and requiring patients to return regularly for out-patient treatment, tends to strain the resources of the Ambulance Service. If this trend persists, it will be necessary to consider increasing the staff and vehicles in order to maintain the Service without giving rise to complaints in respect of delays.

ARRANGEMENTS IN FORCE WITH HOSPITALS AND GENERAL PRACTITIONERS.

Hospitals generally have not appointed a transport officer as envisaged in paragraph 2, Appendix 1, Circular 30/51, but have placed this function upon the Almoners Departments. Attention has been drawn to the contents of the Circular, and hospitals asked to keep their demands to a minimum. The Chief Ambulance Officer is, at the present time, making personal visits to each hospital in the Liverpool area to stress the need for economy, and point out the tremendously increased demand.

In certain hospitals, it is still the practice for Ward Sisters to sanction ambulance transport. They have been told that this practice is not acceptable, and the authority of the Medical Officer must be obtained before transport is ordered.

Medical Certificates signed by a Consultant and Medical Registrar are required for all cases travelling to places outside the City boundary. These certificates are filed, and are available to support claim for

charges under Section 24, National Health Service (Amendment) Act, 1949, and for audit purposes.

With regard to co-operation with general practitioners, the attention of the Local Executive Council has been drawn to the contents of Circular 30/51.

ABUSE OF THE SERVICE.

In removing large numbers of patients, it is safe to assume that cases of abuse do occur. Every care is taken to reduce this to a minimum, and drivers are instructed to report all circumstances which, to them as laymen, would appear to be abuse. The Medical Superintendent of the hospital is then informed, and the patient's name is usually removed from the list.

Some members of hospital staffs appear to consider the Ambulance Service is a taxi service. It is repeatedly stressed to them that transport must be related to the patient's physical needs, but it is felt that further instructions from the Ministry of Health to Regional Hospital Boards might prove more effective.

DIFFICULTIES ENCOUNTERED.

1. The operation of Section 24, National Health Service (Amendment) Act, 1949, has placed considerable administrative work upon the department, but it has also proved of financial benefit. Difficulty is often experienced by delay on the part of local authorities in submitting their accounts, some of which have been received some twelve months after the transport has been undertaken. So far as Liverpool is concerned, advice post-cards are forwarded to other authorities before the cases are removed. A schedule of journeys undertaken is sent during the month following the journeys, and an account is rendered 14 days later.

2. Paragraph 10 (i), Circular 30/51, reads as follows:—

“It should be noted that Section 24 does not apply where, owing to a transfer in the course of treatment, the return journey is from a hospital other than that to which the original journey was made.”

This has had an adverse effect on the Liverpool Service and, this applies no doubt also to other large hospital centres. Many patients

arriving from distant parts, particularly North Wales, enter Liverpool hospitals and are found, upon further examination, to be suffering from complaints for which specialist hospitals are available in the City. The Ambulance Service is required to transfer the patient and, in doing so, any claim under Section 24 for the return journey to the patient's home is thus nullified.

3. Patients arriving at Liverpool from overseas also present a problem. By virtue of being a large port and airport, Liverpool receives many of this type of patient. Holiday-makers returning to the mainland as patients from Ireland and the Isle of Man may also require to be conveyed to various parts of the country. Whilst in many cases prior arrangements are made, there are instances where an ambulance has to be provided at extremely short notice to undertake long journeys. The cost of such journeys, of course, falls upon this authority.

NEW EQUIPMENT.

In the early part of 1951, radio telephony was introduced. At the present time, there are 26 vehicles equipped with mobile transmitter/receivers and, in the near future, a further six vehicles will be equipped. The efficiency of the service has been increased by this quick method of mobilising a number of ambulances for major accidents. It is also found that ambulances standing by for accidents can be used during peak periods for general work and, if necessary, promptly diverted to the scene of an accident. The speed by which vehicles are deployed has saved much time, and enabled the vehicles to carry out more work. An economy has also been achieved. Statistics show that the average miles per patient during 1951 decreased by .73 and, when based on the total number of patients for the year, namely, 114,000, a saving of approximately 83,000 miles is indicated. It is difficult to assess the economy in man-hours, but based on the vehicles averaging a mileage of 2,000 per month, the economy would appear to be over 15,000 man-hours per year. For the year 1952, a similar economy has been achieved. Prior to the use of radio-telephony, it was the practice to take "mid-wifery sisters" for all maternity cases. This has been discontinued, and ambulances are despatched instantly to all such cases, thus reducing the possibility of births occurring in the ambulance. On occasions where the crew find the birth to be imminent, they contact ambulance

control by radio, and the services of a domiciliary midwife are obtained. This occurs in approximately 3 per cent. of the cases moved.

Specially designed sitting-case ambulances have been placed in service during 1952, the bodies being fitted to Morris Commercial 25 cwt. chassis. The seating arrangements provide for longitudinal seats on each side of the body, which ensures a wide space down the centre of the vehicle to enable patients with leg-irons, etc., to enter without difficulty. Moveable armrests are fitted to the seats and, when in position, the vehicle seats 9 patients. When the armrests are removed, 14 patients can be accommodated. A collapsible stretcher is fitted under the seats, and wide doors are provided at the rear and near side of the vehicles. Only one man is required to staff the ambulance, and his seat is enclosed in the main body of the vehicle. He is thereby able to supervise the patients at all times.

11. Prevention, Care and After-Care.

(i) Tuberculosis.

The Part III services provided by the Corporation were fully integrated with the Regional Hospital Board's services as from the Appointed Day. The Central Tuberculosis Office, run by the Regional Hospital Board, deals with all the administrative running of the combined service, the Corporation paying a proportion of the cost. The Corporation's nine tuberculosis health visitors worked until 1952 direct from the chest clinics under the supervision of the chest physicians. The Medical Officer of Health received all necessary information and statistics from the Central Tuberculosis Office. This scheme worked very well up to a point and the number of contacts per case, for instance, rose steadily after its inception. However, it began to appear that the one-third of the health visitors' time, which was paid for by the Regional Hospital Board and spent in chest clinics, was not giving the health visitors enough time to cover their duties, particularly their care and after-care duties on the district adequately.

The Health Committee therefore appointed a Tuberculosis Prevention and After-Care Sub-Committee for the purpose of supervising, assisting and expanding this work and the appointment of clinic nurses to perform the nursing duties in the chest clinics, thus enabling the health visitors to spend more time on their districts, the health visitors

to be taken over whole-time by the Corporation. By the end of the third quarter in 1952, clinic nurses had been appointed in all the four chest clinics and the health visitors were thus released to fulfil their proper function. Investigation had revealed that it was the after-care visits which were suffering because of the health visitors' lack of time and it is now hoped that the health visitors, once again spending most of their time on the district and being controlled directly by the Medical Officer of Health, that the prevention of tuberculosis in the City will be materially assisted. The health visitors will, of course, still spend some time in the chest clinics, but this will be devoted to liaising with the chest physicians and not in performing nursing duties as heretofore.

Further to this re-arrangement of the health visitors' duties, the Assistant Medical Officer of Health responsible for epidemiological work, has been appointed to perform, under the supervision of the Medical Officer of Health, all duties relative to the prevention and after-care of tuberculosis. This officer now works in close co-operation with the Chest Physicians, visits the clinics regularly, visits patients or contacts where necessary and supervises and arranges the health visitors' duties in conjunction with the Chest Physicians and the Tuberculosis Officers. Three of these Officers hold joint appointments, being paid and employed by the Corporation for 3/11ths of their time.

(ii) *Illness generally.*

Provision of full-time or part-time domestic help, as described in paragraph 12.

Loan of home nursing equipment, as referred to in paragraph 8.

General home nursing service and special service for cases of measles and pneumonia.

There is close co-operation between the Local Health Authority and the staffs of hospitals in regard to home nursing.

Full advantage has been taken of Ministry of Health's Circular 85/49 regarding the payment of rail and bus fares in necessitous cases for relatives to visit patients in hospitals or sanatoria.

(iii) *V.D. Welfare.*

The treatment of V.D. is, of course, no longer the responsibility of local health authorities, but the welfare work associated with these diseases remains in their hands.

The staff of the V.D. Welfare Section consists of a senior male welfare visitor, a male welfare visitor, and a female welfare visitor. In addition, the services of the welfare visitor attached to the Royal Infirmary V.D. Clinic are available to deal with female defaulters from that clinic.

The work entails the interviewing of patients, the tracing of contacts and persuading them to attend for examination, writing and visiting defaulters from treatment and assisting patients to attend in the light of the knowledge of the circumstances of the individual patient. Close co-operation with the medical officers of the various treatment centres is maintained. In addition, patients referred to clinics by hospitals for investigation or treatment having failed to report, are followed-up, in most cases, successfully.

CONTACT TRACING.

In accordance with the recommendation contained in Ministry of Health Circular 5/48, the practice of following-up contact cases notified from all sources has produced very gratifying results.

The issue of "contact slips" to patients for the use of their potentially infected partners has brought under observation a substantial number of individuals. From no other single source has a greater number of female patients come to the clinics for examination.

FOLLOW-UP OF DEFAULTERS.

This work consists mainly of either writing to or the home visiting of patients who have defaulted from treatment. In 1952 some 3,062 letters were sent to 2,073 cases which resulted in bringing 1,133 back for treatment.

On the visiting side, 3,342 visits were made to 1,015 cases, 663 of which were persuaded to resume treatment.

12. Domestic Help.

The staff of the Domestic Help Service comprises:—

- 1 Organiser;
- 2 Assistant Organisers;
- 2 Clerks;
- 12 Full-time regular Domestic Helps;
- 43 Part-time regular Domestic Helps;
- (A varying number (at present 57) of casual Domestic Helps, a large proportion of whom work full-time.)

People supplied with domestic helps include expectant mothers, recently confined women, patients suffering from tuberculosis and nursed at home, those suffering from illness of other types, and old aged pensioners. The service is working very smoothly.

Some of the domestic helps recently attended a course arranged by the National Institute of Houseworkers Limited and held in Birkenhead. Since then, lectures relative to the duties of domestic helps have been planned but have not yet been given.

13. Health Education.

Public lectures are arranged periodically in conjunction with the Central Council for Health Education on "Parents' Problems"; "Food Hygiene"; "Principles, Methods and Media of Health Education" and "Ages and Stages in Health Education", etc., and copies of "Better Health" are widely distributed each month. Three public exhibitions have been held illustrating various aspects of personal and food hygiene.

14. Mental Health.

The Mental Health Service has developed along the lines laid down in the original scheme. There has been a steady enlargement of the scope of the work and there can be no doubt that it is of considerable benefit to the community. It is, however, an incomplete service and though many lines of co-operation have been developed between Health Authority and Regional Hospital Board the dichotomy between the two presents administrative and other problems which have not yet been solved.

(i) ADMINISTRATION.

(a) *Committee responsible for service.*

The Sub-Committee dealing with mental health matters meets monthly and consists of 18 members of the Health Committee.

(b) *Staff.*

The following was the staff employed at 31st December, 1952:—

Medical:	Assistant Medical Officer of Health (M.B., Ch.B., D.P.H.).
Administrative	1 Senior Administrative Assistant (Dipl.P.A.);
and Clerical:	1 Senior Authorised Officer;
	1 Administrative Assistant;
	8 Clerks and Typists.
Visiting:	9 Duly Authorised Officers;
	5 Female Visitors;
	1 Removals Officer.
Occupation	3 Supervisors;
Centres:	1 Supervisor of Industrial Class;
	7 Assistant Supervisors;
	3 Trainees;
	9 Domestic Staff.

The Duly Authorised Officers carry out after-care duties and mental deficiency supervision in addition to their functions under the Lunacy and Mental Treatment Acts. The Female Visitors have been given power to act as Duly Authorised Officers in emergency. The absence of a Psychiatric Social Worker (due to shortage of these officers) has probably meant that after-care has fallen short of maximum effect in a few cases but in the vast majority the knowledge and experience of the officers appointed have enabled an adequate service to be provided. The personality of the officer and the establishment of friendly relations with patients and relatives often count far more than any other factor in after-care.

There is no recognised training course for visiting staff and in making new appointments the Committee has had regard to experience as well as academic distinction. Thus four new officers were previously mental nurses, whilst two others had University qualifications in social science.

Occupation Centres have also presented staffing problems. As regards Supervisors it was necessary to appoint an inexperienced officer at one new Centre and the progress of the Centre suffered in consequence. Assistant Supervisors have been recruited from ladies who have had a period as trainees, with lectures and demonstrations as part of their training.

(c) *Co-ordination with Regional Hospital Boards and Hospital Management Committees.*

The following work is done on behalf of these bodies:—

- (1) Visits are paid and reports made on defectives on licence from institutions. In 1951 there were 660 such visits;
- (2) Copies of after-care reports are sent to the hospital from which the patient has been discharged;
- (3) A visiting officer attends the Psychiatrists at Walton Hospital Clinic. In 1951 he paid 377 visits to clinic patients in their homes.

Many reports are provided for other clinics but there is no attachment of an officer except at Walton.

There is a possibility that the work of the Health Authority Officers and of the Social worker employed by Hospital Management Committees may be duplicated to some extent. This has not so far occurred in Liverpool and no doubt will be avoided by conference. It is felt that officers working from hospitals, all of which are well outside Liverpool, cannot perform community work in this city as well as the officers of the Health Authority.

The Medical Officer of Health is a member of the Liverpool Regional Hospital Board and his deputy a co-opted member of the Board's Technical Advisory Committee on Mental Health.

It may be mentioned that, as regards the third branch of the National Health Service, every effort is made to acquaint general practitioners of the progress of persons receiving after-care. They are also informed when a child is ascertained as mentally defective so that they can maintain contact with the department.

(d) *Voluntary Associations.*

No work is delegated to voluntary associations, but friendly relations exist with those whose activities impinge upon the field of mental health.

An active branch of the Association of Parents of Backward Children exists, with the objects of which the Committee is very much in sympathy. The efforts of this body resulted in the opening of Orchard Dene, a short-stay home for defectives, which is now administered by the National Association for Mental Health. The Committee is sponsoring the admission of Liverpool children to this Home. Talks have been given to members of a number of voluntary associations by members of the Mental Health Service.

(e) *Staff training.*

The initial training of visiting staff is referred to above. An evening course of lectures and demonstrations arranged in the Autumn of 1951 was attended by all Occupation Centre staffs, most of the visiting staff and by a fair number of special school teachers, members of Children's Departments, etc. An evening course in mental health is at present in progress under University auspices.

(ii) ACCOUNT OF WORK UNDERTAKEN IN THE COMMUNITY.

(a) *Prevention, care and after-care.*

	5.7.1948	1949	1950	1951	1952
New cases referred ...	172	514	434	569	615
Visits and Interviews ...	304	1,218	2,400	4,335	3,973

Most of the cases referred are people who have been discharged from mental hospitals but others include members of the Forces discharged as a result of mental abnormality, persons referred by medical practitioners and those who, though unwilling to accept mental treatment, welcome visits and advice. The word "prevention" must be taken in this context to denote prevention of the development of illness rather than of actual onset, for the mental health service is usually not approached until some mental abnormality is apparent.

Turning to the largest section of after-care work—that among patients discharged from mental hospitals—it can be said that the need

for this work is almost proved by the very high proportion—not less than 80 per cent. of all discharges—of patients who are willing to accept visits.

It is felt that there must be much variation in the way Local Health Authorities approach this problem. The method adopted by some, of paying one visit and leaving a card indicating that advice can be obtained on application, is certainly time and staff saving, but can hardly be regarded as real after-care. The initiative in Liverpool is left to each visiting officer and some cases remain on the "live" register even two or three years after discharge from hospital.

Along with the few spectacular successes in care and after-care there are hundreds of cases in which ex-patients are leading quiet, normal lives in the community and some credit for this must be attributed to the visiting, procuring of allowances, efforts to find employment and accommodation and, not least, to the fact that a sympathetic listener is available to share personal problems.

Housing and employment are two of the most important social factors affecting mental health. Though the possibility of rehousing is always under review there is not a great deal that can be done at present, but special attention has been paid to employment as a means to rehabilitation and a full-time Employment Officer has been appointed who works in close co-operation with the statutory agencies. The personal attention he can give to the special problems, together with his experience of the Liverpool labour market (where unemployment is higher than in most parts of the country) justify this addition to the normal employment-finding agencies, as indicated in the following table:—

	5.7.1948		1949		1950		1951		1952	
	AC.	MD.	AC.	MD.	AC.	MD.	AC.	MD.	AC.	MD.
No. of live cases on employment register at end of year ...	30	25	45	40	47	43	68	64	82	99
Posts found ...	1	2	16	7	14	21	27	24	26	31

At 31st December, 1952, the total number of care and after-care cases on the case-loads of visiting officers was 1,091, i.e. nearly 90 to each officer.

(b) *Work under the Lunacy and Mental Treatment Acts.*

REFERENCES TO THE MENTAL HEALTH SECTION.

	5.7.1948	1949	1950	1951	1952
No. of persons reported alleged to be mentally disordered	266	909	1,179	1,112	1,216
ACTION TAKEN					
Admitted Section 20... ..	163	561	520	445	561
(of whom certified Section 16) ...	99	415	304	217	270
Referred to Clinics	25	86	149	111	88
Referred to non-mental hospitals ...	18	52	24	80	22
Referred for voluntary treatment ...	3	22	59	54	42
Referred for temporary treatment ...	—	7	—	7	2
Referred for care	30	37	52	42	84
Referred for Section 16 action ...	27	70	97	95	103

HOSPITAL ADMISSIONS OF CERTIFIED, VOLUNTARY AND TEMPORARY PATIENTS.

	1948 Part	1949	1950	1951	1952
Certified (Section 16)	208	468	421	259	373
Voluntary	123	331	338	376	360
Temporary	3	9	1	8	4

Initial visits and removals are carried out by the Duly Authorised Officers on a weekly roster system, two for day duty and one for night and week-end duty. Night and week-end work are performed from the officers' homes where telephones have been installed.

There appears to be no significant change in the numbers referred and numbers admitted under Section 20 of the Lunacy Act. Voluntary admission is always considered but it is natural that cases admitted in this way are few. There are, of course, many voluntary admissions arranged without reference to the Mental Health Service.

Pressure on mental hospital accommodation has at all times been severe and this department is often placed in the position of having to go, cap in hand, to beg vacancies. Where the margin is so close much time is lost in telephoning and in taking patients to distant hospitals.

(c) *Work under the Mental Deficiency Acts.*

(i) ASCERTAINMENT

CASES REPORTED AND ASCERTAINED.

	1948		1949		1950		1951		1952	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under Sec. 57 (3) Ed. Act ...	45	44	75	59	51	41	34	31	44	36
Under Sec. 57 (5) Ed. Act ...	35	44	48	25	42	31	40	48	27	37
Referred by Courts ...	—	—	—	—	—	—	5	—	1	—
Other references ...	9	—	13	7	8	5	7	1	9	17
TOTAL ...	177		227		178		166		170	
Not ascertained ...	11	3	2	1	6	5	5	6	2	2

The following is the disposal of the cases ascertained from 1948 to 31st December, 1952:—

(a) Under statutory supervision ...	729
(b) Admitted to Institutions ...	110
(c) Applied for Institutional care but not yet admitted (not included under (a) above) ...	68
(d) Died or left district ...	6
(e) Referred back to Education Department ...	5

It is felt that the parents of a child who has attended school should be given the impression that attendance at an Occupation Centre follows automatically after notification and a vacancy should be available immediately. This is the aim of the efforts being made to extend Centre accommodation.

Only five cases have been referred back to the Education Department under the provisions of Section 8 of the Education (Miscellaneous Provisions) Act. Four of them were accepted as educable and are attending Special School.

Ascertainment, on leaving school, under Section 57(5) gives rise to misunderstanding among some parents who find it difficult to understand why there should be further supervision when the child has remained at school until leaving age. It is chiefly in these cases that difficulties arise, which will be referred to under the heading

"Supervision". Of 321 children referred under Section 57(5) since 5th July, 1948, 179 were in permanent or temporary work at 31st December, 1952.

A small number of children under the age of two are referred each year, usually because the parents wish to obtain admission of the child to an Institution. It is not the department's policy to ascertain at such an early age in most cases but when a gross physical condition, such as Hydrocephalus has existed, action has been taken. Children between the ages of two and fifteen are always referred to the Education Department with a view to ordinary notification procedure being operated.

SUPERVISION.

The numbers of defectives under supervision at the end of each year from 1948 were as follows:—

	1948		1949		1950		1951		1952	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
STATUTORY SUPERVISION										
Over 16	748	570	794	596	495	422	506	448	539	484
Under 16	147	128	209	173	178	148	193	157	216	184
VOLUNTARY SUPERVISION										
Over 16 ...	30	33	31	33	5	2	10	7	19	9
Under 16	8	4	8	5	6	2	4	1	2	—
TOTAL ...	1,668		1,849		1,258		1,326		1,453	

[NOTE.—The substantial reduction in 1950 was the result of a review when many cases were deleted, having died, left their addresses, been employed for long periods, etc.]

The total number of home visits (including licence and guardianship cases) in 1951 was 5,226; in 1952—5,331.

Each month recommendations as to cessation of supervision are submitted to the Committee regarding defectives who have proved their stability and ability to hold their own in the community. Visiting officers have an average of 100 supervision cases each. Visits are

normally paid at least twice yearly and more frequently where necessary, especially in cases which are on the waiting list for institutional care where the home conditions are often deplorable. It is perhaps the shortage of institutional care, referred to in more detail below, which more than anything else makes much supervision work so unrewarding, for where parental supervisions and home conditions are satisfactory, visits are mainly routine, and where they are not, the visitor is powerless to provide the alleviation which institutional care would give.

Nevertheless, over a long period the value of supervision can be seen in its deterrent effect where there is a tendency towards neglect and as a positive factor in the development of the defective where the family needs advice and help.

The wide scope of supervision is stressed—confidence cannot be established by confining it within the limits of the Mental Deficiency Act—the accent must be on social work generally rather than on mental health, and on the constructive side rather than the inquisitorial. There is no satisfactory way of enforcing supervision on defectives whose parents are unco-operative. This is unfortunate, because it is often in these cases that neglect or cruelty are liable to be found. The number of parents who are recalcitrant in this respect is, however, surprisingly small. Most of them, as have been mentioned, are parents of notified Special School leavers.

(ii) GUARDIANSHIP.

	1948	1949	1950	1951	1952
Defectives under guardianship at 31st December—					
Under 16	3	16	17	19	20
Over 16	81	77	75	76	72
Number receiving allowances	76	16*	18	19	21
Total of Allowances	£744	£2,076*	£469	£470	£484

* Numbers reduced from 70 half way through the year.

Of the 92 defectives under guardianship at 31st December, 1952, 54 are under the guardianship of a parent, 19 of another relative, 14 of Convent Superiors and 5 of others. Twenty-five Varying orders have been obtained since 1948 for cases under guardianship.

The giving of allowances by the National Assistance Board to defectives over the age of 16 since 1949 has meant that most Health Authorities no longer give guardianship allowances in such cases. (The financial effect is seen in the above table.)

The principle on which the Liverpool Authority bases allowances (for defectives under 16) is that the allowance should cover extra expense entailed by the condition or behaviour of the defective, e.g. extra laundry and clothing costs resulting from incontinence.

INSTITUTIONAL CARE.

The concern of the Liverpool Health Authority about the shortage of institutional accommodation for defectives has been brought to the notice of the Ministry on more than one occasion. If the matter is not ventilated in such great detail in this survey it is not because the position has become any easier but because it is considered that the problem is now so well known nationally that reiteration would be superfluous. The following figures are therefore presented without further comment:—

LIVERPOOL DEFECTIVES ACCOMMODATED IN INSTITUTIONS.

	At 5th July, 1948	1952	Total accommodation (approx.)
Liverpool R.H.B. ...	163	192+47 POS.	500
Manchester R.H.B. ...	1,163+3 POS.	1,121+2 POS.	6,500

(POS.—Place of Safety).

ADMISSIONS.

Admissions	1949	1950	1951	1952
Section 6	19	26	12	28
Section 3	2	—	—	14
Section 8	21	15	15	10
Section 7	2	2	—	4
Place of Safety	29	16	16	27

NOTE.—1948 figures not available.

WAITING LIST.

The waiting list has fluctuated between 70 and 100 and at 31st December, 1952, stood at 102. This figure can be analysed as follows:—

			Time on Waiting List				Total
			0-6 mths.	6-12 mths.	1-2 years	Over 2 yrs.	
Highest urgency	...	...	18	10	13	30	73
2nd urgency	...	...	3	2	8	10	23
3rd urgency	...	...	—	1	1	4	6
TOTAL	...	...	21	13	22	44	102

(iii) OCCUPATION AND TRAINING.

At 5th July, 1948, there was one Occupation Centre in Liverpool with an average attendance of 50. The other Centres have since been opened and at present the details of attendance, etc., are as follows:—

		Princes Road		Dovecot		Garston		Total
		M.	F.	M.	F.	M.	F.	
No. on Register								
Over 16	...	30	21	3	11	—	2	243
Under 16	...	42	44	29	30	17	14	
Av. daily attendance								
Over 16	...	21	13	3	9	—	1	178
Under 16	...	30	32	22	21	15	11	

The following is the waiting list for admissions:—

Male				Female			
Over 16	14-16	10-14	Under 10	Over 16	14-16	10-14	Under 10
27	6	5	16	5	4	5	2

There is no Occupation Centre in the north of Liverpool. Special buses bring many of the defectives in this area to other Centres but the establishment of an additional Centre is regarded as essential.

Apart from the opening of new Centres, the following are among the innovations made since the Health Department took over responsibility:—Provision of special buses (for which no charge is made), payment of fares for defectives and escort where a special bus cannot be used, provisions of school meals (ability to pay assessed on same basis as for school children), regular medical and Health Visitors' inspection of children, provision of holidays at seaside, staff training scheme, facilities for horticultural training.

The majority of children attending are of imbecile grade. The home conditions as well as the defective's capabilities are studied when vacancies are allocated and for this reason some children of idiot grade have been accepted particularly where there is great stress on the mother of a family. The lowest grade cases do show improvement through training but they need so much individual attention that the progress of other children may be impeded.

The question of home training for defectives who cannot attend Centres has been considered. It is doubtful whether a scheme for this would be a success without financial outlay out of all proportion to the results which could be achieved. The correct lines of training are indicated to the parents in all cases, but the number of parents who are prepared or who have the time to devote to training is very limited. The number of homes where three or four defectives could be grouped together for training is even more limited.

It is understood that not all Health Authorities think alike regarding provision of free transport facilities. The view we have taken is that without this inducement the very defectives most in need of training will not be allowed by their parents to attend a Centre, either because the parents cannot afford fares or because they cannot or will not take time to escort their children. In any event the fact that three Centres cater for the whole Liverpool area makes provision of special transport essential at the present time if attendances are to be maintained.

MEDICAL EXAMINATIONS.

TYPE OF EXAMINATION	1949	1950	1951	1952
Newly notified cases	22	46	26	45
Guardianship cases	103	113	142	123
Institutional care cases	21	91	97	86
Review of cases under supervision	5	23	27	25
Periodic examinations at Occupational Centres	—	—	56	55
Remand Home examinations, Police and Probation references	33	73	106	77
Re fitness for adoption	—	—	14	5
TOTAL	184	346	468	416

SUMMARY.

It is felt that expenditure on the mental health service is giving a fair return in health, welfare and happiness. The incomplete nature of

the service makes continual and extended co-operation with the Regional Hospital Board essential to satisfactory progress, and the Health Authority should assert its position as a partner, not auxiliary, of the treatment services.

The chief factor retarding progress has been the institutional accommodation position and the Regional Board's schemes for alleviation of the shortage of beds will, when they come to fruition, do much to foster the development of the Local Authority's work.

In mental deficiency, beside the provision of an Occupation Centre in north Liverpool and possibly other Centres for children, it is hoped that we shall open Special Centres for adults in due course. There is a good deal of scope for developing adult occupation, though quite good work is being done on the existing premises.

In prevention, care and after-care there is a project to open a Psychiatric Social Club which has not yet been fully explored but which will be discussed with the Regional Hospital Board in the near future.

The statutory work is not likely to change much except as a result of new legislation, but care and after-care can be extended. It is perhaps too soon to offer an estimate of the value of this work, but there seems no reason to doubt that in the long term its good effect will be apparent.

Mobile Meals provided under Section 28 of the National Health Service Act, 1946.

In August, 1951, the Minister of Health approved of a modification of the Council's proposals under the above Act so as to include the provision of a mobile meals service for the benefit of sick persons whose needs cannot otherwise be satisfactorily met; this arrangement may also apply where such a provision is judged to be necessary to prevent a breakdown in the health of others who, by reason of disability or age, are unable to make satisfactory provision for themselves in the way of adequate and regular meals.

The service was inaugurated on an experimental basis in December, 1951, and it is still being operated on those lines. The area covered is roughly within a mile of Westminster House, a large residential estab-

ishment administered by the Department from which the meals are supplied. Transport is undertaken by vans belonging to the Department, the servers of the meals being members of the Women's Voluntary Services.

In order to ascertain the persons who would wish to receive meals, medical practitioners and voluntary agencies, etc., operating in the area were asked to co-operate by referring names and addresses to the Department, each person being subsequently visited by a Welfare Visitor with a view to verifying their qualification to participate in the scheme.

At the present time a midday meal is delivered on three days a week, a flat rate charge being made which is collected on delivery. Regular follow-up visits are made to the recipients in order to see if they are still qualified to receive meals.

Since the inception of the scheme an average of 474 meals have been delivered per month, the number of persons who have so far benefited being 109. Thirty-eight persons were receiving meals at the end of December, 1952.

The scheme is capable of rapid expansion to operate in times of epidemics such as influenza, or for other reasons.

Welfare and After-Care Services.

Certain of the Council's after-care services under Section 28 of the National Health Service Act, 1946, are dealt with by the Welfare Services Section. The Welfare Visitors make every effort, where cases are referred to the Department, to ensure that adequate arrangements will be made for patients (i.e. aged, infirm, handicapped, etc.) on discharge from hospital. This takes the form of seeing that the person is getting his pension, sick pay, and any supplementary allowances to which he is entitled; that his name is on a doctor's list and that he is receiving adequate care and attention. Residential accommodation is arranged in appropriate cases. When the Welfare Visitor feels that no further assistance is necessary a card is left with the person so that he can post it to the Department should further help be requested. If it is considered that regular friendly visits are desirable, the circumstances are referred to the Liverpool Personal Service Society whose voluntary workers undertake this work.

APPENDIX A.

CITY OF LIVERPOOL.

Birth-Rates, Death-Rates, and Analysis of Mortality during the year 1952.

England and Wales, London, 160 County Boroughs and Great Towns, and 160 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.	Whooping Cough.	Diphtheria.	Influenza.	Diarrhoea and Enteritis (under two years).	Total Deaths under one year.
England and Wales	15.3	0.35	11.3	0.00	0.00	0.00	0.00	0.04	1.1	28
160 County Boroughs and Great Towns, including London	16.9	0.43	12.1	0.00	0.00	0.00	0.00	0.04	1.3	31
160 Smaller Towns (Resident Populations 25,000 to 50,000 at Census 1951)	15.5	0.36	11.2	0.00	0.00	0.00	0.00	0.04	0.5	26
London	17.6	0.34	12.6	0.00	0.00	0.00	0.00	0.05	0.7	24
Liverpool	20.0	0.50	11.4	0.00	0.00	0.01	0.00	0.07	1.8	35

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

Puerperal Sepsis.	0.18	Others.	0.54	Total.	0.72
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CITY OF LIVERPOOL.

APPENDIX B.

Infant Mortality during the year 1952.

Net deaths from stated causes at various ages under One Year.

CAUSE OF DEATH	Under 1 day	1 to 2 days	2 to 3 days	3 to 4 days	4 to 5 days	5 to 6 days	6 to 7 days	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	Total deaths under 28 days	28 days to months	2 to 3 months	3 to 4 months	4 to 5 months	5 to 6 months	6 to 7 months	7 to 8 months	8 to 9 months	9 to 10 months	10 to 11 months	11 to 12 months	Total deaths under 1 year
Tuberculosis of Respiratory System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
.. Meninges, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
.. Intestines, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
.. Other Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Syphilis	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Typhoid Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	1	1	—	—	—	—	4
Meningococcal Infections	—	—	—	—	—	—	—	1	1	—	2	—	1	—	—	1	1	1	2	1	—	—	9
Acute Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	2	1	—	4
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Psychosis	—	—	—	—	—	1	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	2
Meningitis (non-tubercular)	—	—	—	—	—	—	—	1	—	—	1	—	—	2	—	—	—	1	—	—	—	1	5
Influenza	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	12	21	14	7	4	7	2	1	5	3	—	76
Bronchitis	—	—	—	—	—	—	—	—	—	—	—	3	7	2	1	1	—	1	1	2	—	—	18
Enteritis	—	—	—	—	—	—	—	—	—	—	—	1	4	7	6	1	2	1	—	2	—	1	25
Malformations	22	7	2	5	1	1	1	12	3	3	57	9	4	2	3	3	4	1	—	—	3	—	86
Injury at Birth	28	10	10	4	—	3	3	4	1	1	64	—	1	—	—	—	—	—	—	—	—	—	65
Infections of Newborn	—	3	3	6	2	4	1	11	10	7	47	—	—	—	—	—	—	—	—	—	—	—	47
Other Diseases of Early Infancy	100	28	20	9	7	4	1	2	2	2	175	5	1	1	—	—	—	—	—	—	—	—	182
Other Causes	6	—	—	—	—	—	—	1	—	2	9	2	8	2	4	2	2	2	2	—	—	2	35
Totals	156	48	35	24	10	13	6	32	17	15	356	34	48	32	22	12	19	10	6	12	7	4	562

Net Births in the year { Legitimate ... 14,963
 { Illegitimate ... 876

Net Deaths in the year of { Legitimate Infants 533
 { Illegitimate Infants 30

APPENDIX C.

CITY OF LIVERPOOL.

Notifiable Diseases (other than Tuberculosis) during the Year 1952.

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.....	1435	7	23	91	142	180	805	141	19	21	1	5	—	433	—
Diphtheria	8	—	—	1	—	—	4	—	3	—	—	—	—	8	1
Enteric Fever (including Para- typhoid)	8	—	1	—	1	1	2	—	1	—	—	1	1	8	—
Puerperal Pyrexia.....	778	—	—	—	—	—	—	—	50	638	90	—	—	721	—
Pneumonia	857	95	66	58	47	33	83	31	20	84	65	173	102	189	149
Cerebro-spinal Fever	54	24	11	6	2	1	5	1	—	4	—	—	—	53	17
Poliomyelitis	35	6	6	4	3	1	8	2	1	4	—	—	—	35	1
Dysentery	300	27	56	51	40	24	49	12	9	6	6	6	14	227	—
Ophthalmia Neonatorum	129	129	—	—	—	—	—	—	—	—	—	—	—	66	—
Erysipelas	114	—	—	1	—	1	2	4	—	18	20	44	24	61	1
Malaria	27	—	—	—	—	—	—	—	1	15	6	5	—	15	1
Anthrax	1	—	—	—	—	—	—	—	—	1	—	—	—	1	—
Measles	8768	572	1221	1480	1451	1307	2613	71	37	9	5	2	—	560	8
Whooping Cough	2631	320	410	438	445	346	654	11	2	3	2	—	—	357	5
Food Poisoning	53	9	4	5	5	1	4	2	3	8	2	9	1	28	—
TOTALS.....	15198	1189	1798	2135	2136	1895	4229	275	146	811	197	245	142	2762	183

CITY OF LIVERPOOL

APPENDIX D.

DEATHS REGISTERED DURING THE YEAR 1962

CAUSES OF DEATH	SEX		AGE—BELOW																						Totals	
	Males	Females	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90		Over 90
ALL CAUSES	4687	4307	562	45	14	25	13	32	28	57	68	91	112	134	198	309	454	633	868	1125	1302	1398	905	493	128	8994
I.—Infectious and Parasitic Diseases	249	147	27	11	5	4	4	5	2	9	20	27	30	27	27	29	32	36	40	22	23	11	1	4	...	396
II.—Neoplasms	887	726	4	2	1	...	1	6	8	7	4	8	17	34	46	91	148	189	229	248	263	199	83	31	2	1623
III.—Allergic, Metabolic Diseases, etc.	33	65	...	2	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	98
IV.—Diseases of the Blood	17	21	...	...	...	...	...	...	...	2	...	...	1	1	...	2	5	6	11	18	16	6	1	...	...	38
V.—Mental, and Psychoneurotic Diseases	9	13	2	...	...	2	...	...	...	...	...	...	1	2	3	...	1	...	...	1	5	2	2	1	...	22
VI.—Diseases of Nervous System	421	519	5	5	1	...	1	1	2	5	6	6	10	8	11	26	37	71	84	121	166	201	129	39	14	940
VII.—Diseases of Circulatory System	1656	1650	1	...	...	1	...	4	10	14	16	17	19	54	92	112	197	290	467	551	635	491	264	71	...	3306
VIII.—Diseases of Respiratory System	673	556	97	12	2	2	2	2	4	6	6	6	3	13	14	32	37	81	137	159	178	203	116	82	19	1229
IX.—Diseases of Digestive System	144	148	30	6	1	1	...	...	1	2	1	4	7	7	10	11	14	13	41	43	35	38	15	9	3	292
X.—Diseases of Genito-urinary System	119	67	3	...	...	1	...	2	3	5	2	4	5	5	9	7	9	9	15	17	32	26	15	15	2	186
XI.—Diseases of Pregnancy	...	7	...	...	...	...	...	...	...	...	3	...	1	3	...	...	...	...	...	...	...	...	...	...	...	7
XII.—Diseases of Skin	4	8	2	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	1	2	...	2	1	...	1	12
XIII.—Diseases of Bones	7	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
XIV.—Congenital Malformations	61	50	86	1	...	2	1	2	2	2	2	2	1	1	1	1	1	2	3	1	3	...	...	...	...	111
XV.—Diseases of Early Infancy	164	130	294	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	294
XVI.—Senility and Ill-defined Diseases	28	51	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79
XVII.—Deaths from Violence	215	121	13	3	4	12	4	13	6	8	19	16	17	12	22	11	26	27	14	17	19	33	30	11	6	336
Class 1.—Tuberculosis of Respiratory System	163	106	...	...	...	1	...	...	...	3	15	23	29	26	25	24	27	27	29	18	16	4	1	1	...	269
Tuberculosis of Meninges, etc.	13	4	1	3	1	1	3	2	1	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	17
Tuberculosis of Intestines, etc.	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tuberculosis of Other Organs	8	10	1	1	...	1	1	...	...	2	2	...	...	...	...	1	1	1	1	3	1	3	1	...	...	18
Syphilis	24	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	7	9	3	1	4	...	2	31
Typhoid Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Whooping Cough	4	1	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Meningococcal Infections	12	5	9	4	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
Acute Polymyositis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Measles	5	3	4	2	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	8
Other Infectious Diseases	17	11	7	...	1	...	...	...	...	2	1	2	1	...	1	3	2	1	1	...	3	2	...	...	1	28
Class 2.—Malignant Neoplasm of Bue. Cavity	24	7	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	5	6	11	4	1	...	31
Malignant Neoplasm of Digestive Syst.	351	326	...	...	...	...	...	...	1	1	...	...	6	9	17	30	43	72	88	108	124	109	45	23	1	677
Malignant Neoplasm of Respiratory Syst.	291	25	...	...	...	...	...	...	...	...	...	2	...	7	7	22	54	62	65	52	42	23	9	1	...	346
Malignant Neoplasm of Breast	1	119	...	...	...	...	...	...	...	...	...	...	4	6	3	6	16	16	16	13	20	12	7	1	...	120
Malignant Neoplasm of Female G. Organs	1	102	...	1	...	...	...	...	...	...	...	...	1	1	4	6	9	13	22	13	16	8	5	3	...	162
Malignant Neoplasm of Other Organs	175	89	2	1	...	...	...	1	4	4	4	4	3	7	6	19	23	21	28	44	45	31	12	4	1	264
Leukemia	27	24	...	...	...	1	...	1	5	2	1	1	...	3	4	4	4	3	1	5	7	6	4	...	...	51
Benign Neoplasms	18	14	2	...	...	...	...	...	1	1	...	1	...	...	4	3	...	4	4	6	4	1	1	...	...	32
Class 3.—Thyroiditis	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	2	...	...	...	...	6
Diabetes mellitus	15	34	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	2	6	10	8	14	4	...	...	49
Other Allergic diseases, etc.	18	25	...	2	...	...	...	1	...	...	...	...	1	2	2	5	3	4	4	7	8	2	1	1	...	43
Class 4.—Anaemias	13	17	...	...	...	...	...	...	...	...	...	1	1	...	...	2	2	...	2	4	4	10	3	1	...	30
Other Diseases of Blood	4	4	...	...	...	...	...	...	...	2	...	...	...	...	...	...	3	...	3	...	1	1	1	...	...	8
Class 5.—Psychoses and Psychoneurotic Disorders	9	12	2	...	2	...	...	...	...	...	...	1	2	3	...	...	1	...	...	1	5	2	2	1	...	22
Class 6.—Vascular Lesions of Central Nervous Syst.	373	477	...	...	...	...	...	...	1	1	...	1	3	2	4	19	34	61	76	115	163	198	119	39	14	850
Meningitis	7	8	5	2	1	...	...	...	...	...	...	...	1	2	1	1	1	...	...	...	...	...	...	...	...	15
Epilepsy	12	11	...	...	...	1	1	1	3	3	2	4	1	1	2	...	2	3	1	...	...	...	...	...	...	23
Otitis Media and Mastoiditis	1	4	...	2	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	5
Other Diseases of Nervous System	28	19	...	1	...	...	...	...	...	1	1	3	2	3	5	3	2	6	7	6	3	3	1	...	...	47
Class 7.—Rheumatic Fever	7	9	...	...	...	...	...	...	2	2	...	1	1	...	1	3	4	1	1	...	...	...	...	...	...	16
Chronic Rheumatic Heart Disease	62	104	...	...	...	...	...	...	2	5	11	11	12	12	19	19	14	14	12	16	8	19	1	1	...	167
Arteriosclerosis, etc. Heart Disease	1238	1142	...	...	...	...	...	...	...	...	...	...	3	26	48	67	130	191	326	403	482	406	251	67	...	2360
Other Diseases of Heart	107	101	1	...	...	...	...	...	3	1	3	1	...	2	7	11	11	24	33	42	39	21	7	2	...	208
Hypertensive Disease	221	261	...	...	...	...	...	...	2	1	1	2	4													

CAUSES OF DEATH

SEX	AGE	CAUSE OF DEATH	MALE	FEMALE	TOTAL
MALE	1-14	1. Tuberculosis of Respiratory System	102	108	210
		2. Ischaemic Heart Disease	18	14	32
		3. Malignant Neoplasm of Digestive System	1	1	2
		4. Malignant Neoplasm of Respiratory System	1	1	2
		5. Malignant Neoplasm of Urinary System	1	1	2
		6. Malignant Neoplasm of Female Genitalia	1	1	2
		7. Malignant Neoplasm of Breast	1	1	2
		8. Malignant Neoplasm of Female Genitalia	1	1	2
		9. Malignant Neoplasm of Urinary System	1	1	2
		10. Malignant Neoplasm of Digestive System	1	1	2
		11. Malignant Neoplasm of Respiratory System	1	1	2
		12. Malignant Neoplasm of Urinary System	1	1	2
		13. Malignant Neoplasm of Female Genitalia	1	1	2
		14. Malignant Neoplasm of Breast	1	1	2
		15. Malignant Neoplasm of Female Genitalia	1	1	2
		16. Malignant Neoplasm of Urinary System	1	1	2
		17. Malignant Neoplasm of Digestive System	1	1	2
		18. Malignant Neoplasm of Respiratory System	1	1	2
		19. Malignant Neoplasm of Urinary System	1	1	2
		20. Malignant Neoplasm of Female Genitalia	1	1	2
FEMALE	1-14	1. Tuberculosis of Respiratory System	102	108	210
		2. Ischaemic Heart Disease	18	14	32
		3. Malignant Neoplasm of Digestive System	1	1	2
		4. Malignant Neoplasm of Respiratory System	1	1	2
		5. Malignant Neoplasm of Urinary System	1	1	2
		6. Malignant Neoplasm of Female Genitalia	1	1	2
		7. Malignant Neoplasm of Breast	1	1	2
		8. Malignant Neoplasm of Female Genitalia	1	1	2
		9. Malignant Neoplasm of Urinary System	1	1	2
		10. Malignant Neoplasm of Digestive System	1	1	2
		11. Malignant Neoplasm of Respiratory System	1	1	2
		12. Malignant Neoplasm of Urinary System	1	1	2
		13. Malignant Neoplasm of Female Genitalia	1	1	2
		14. Malignant Neoplasm of Breast	1	1	2
		15. Malignant Neoplasm of Female Genitalia	1	1	2
		16. Malignant Neoplasm of Urinary System	1	1	2
		17. Malignant Neoplasm of Digestive System	1	1	2
		18. Malignant Neoplasm of Respiratory System	1	1	2
		19. Malignant Neoplasm of Urinary System	1	1	2
		20. Malignant Neoplasm of Female Genitalia	1	1	2