

[Report 1953] / Medical Officer of Health, Liverpool City.

Contributors

Liverpool (England). City Council.

Publication/Creation

1953

Persistent URL

<https://wellcomecollection.org/works/teyt7rjg>

License and attribution

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

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

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



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



26/7/54
cm

REPORT
ON THE HEALTH OF THE
CITY OF LIVERPOOL
FOR THE YEAR
1953


BY

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

Medical Officer of Health.



C. TINLING & CO., LTD., Printers, 53, Victoria Street, Liverpool.



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

<https://archive.org/details/b29737874>

CONTENTS

	Page
PREFACE	i-xi
VITAL STATISTICS	1
INFECTIOUS DISEASE	14
TUBERCULOSIS	25
VENEREAL DISEASE WELFARE	35
IMMUNISATION AND VACCINATION	38
MIDWIFERY SERVICE	41
MATERNITY AND CHILD WELFARE CLINICS	48
HEALTH VISITING	54
DISTRICT NURSING	61
HEALTH EDUCATION	63
AMBULANCE SERVICE	64
MENTAL HEALTH SERVICE	69
WELFARE SERVICES	84
SANITARY ADMINISTRATION (PART I)	98
SLUM CLEARANCE AND HOUSING, ETC.	100
FOOD HYGIENE	114
SUPERVISION OF FOOD SUPPLY	123
CLEANLINESS OF MILK	133
ADULTERATION OF FOOD AND DRUGS	139
SANITARY ADMINISTRATION (PART II)	141
ATMOSPHERIC POLLUTION	159
DISINFECTION AND DISINFESTATION	176
WATER SUPPLY	180
CREMATION	181
REPORT OF THE CITY BACTERIOLOGIST	182
STATISTICAL APPENDIX	

HEALTH COMMITTEE—1953/54.

CHAIRMAN—ALDERMAN GEORGE W. PROUT.

DEPUTY-CHAIRMAN—ALDERMAN ALEXANDER GRIFFIN, J.P.

ALDERMEN

ADA MARTHA BURTON (Mrs.) (died 27.4.54)	JOSEPH HARRINGTON
THOMAS HENRY BURTON	ALBERT MORROW
WILLIAM JOHN MATHEW CLARK	MICHAEL JOHN REPPION
ERNEST ASH COOKSON	SAMUEL CECIL SALTMARSH
	HAROLD THRELFALL WILSON, J.P.
MABEL FLETCHER (Miss), J.P.	

COUNCILLORS

ALFRED NATHANIEL BATES	IAN ISIDORE LEVIN
ELIZABETH M. BRADDOCK (Mrs.), J.P., M.P.	GEORGE EDWARD LEWIS
ABRAHAM LOUIS CAPLAN	THOMAS HENRY MALONEY
GORDON FREDERICK CATLIN	WILLIAM McKEOWN
SAMUEL CURTIS, J.P.	JOSEPH NORTON
WALTER GIBBS, J.P.	PETER JAMES O'HARE
ELSIE E. GOUGH (Mrs.)	WILLIAM BELL PICKETT
JOHN GWILYM HUGHES	GEORGE WALTER PICKLES
JAMES JOHNSTONE	MARGARET JANE STRONG (Mrs.) (died 11.11.53)
MARY ELIZABETH JONES (Mrs.)	JOHN MATHEW TAYLOR, J.P.
FRANK KEATING	ELIZABETH TRAINOR (Mrs.)

Representing the Executive Council:

Professor W. LYON BLEASE, LL.M. A. J. MURNAGHAN, Esq.

Representing the Medical Profession:

P. J. GIBBONS, Esq., M.B., B.Ch., B.A.O., N.U.I.	T. A. JERMY, Esq., M.B., Ch.B.
---	--------------------------------

Representing the Bootle Corporation (National Assistance Act, 1948):

Alderman I. HARRIS, M.R.C.S., L.R.C.P., J.P.

<i>Medical Officer of Health</i>	Professor ANDREW B. SEMPLE, V.R.D., M.D., D.P.H.
<i>Deputy Medical Officer of Health</i>	J. B. MEREDITH DAVIES, M.D., D.P.H.
<i>Senior Medical Officer</i> (<i>Maternity and Child Welfare</i>)	VIDA J. M. STARK, M.D., D.P.H.
<i>Senior Medical Officer</i> (<i>Mental Health</i>)	T. L. BEGG, M.B., Ch.B., D.P.H.
<i>Assistant Medical Officer of</i> <i>Health</i>	R. C. MACLEOD, M.B., Ch.B., D.P.H., D.T.M. & H.
<i>Chief Welfare Officer</i>	S. ADAMSON,
<i>Chief Sanitary Inspector</i>	G. BINNS, O.B.E.
<i>Chief Food Inspector and</i> <i>Sampling Officer</i>	A. D. H. JOHNSTONE.
<i>Chief Ambulance Officer</i>	A. ORTON.
<i>Chief Disinfecting Inspector</i> ...	R. C. SYMES.
<i>Chief Smoke Abatement Inspector</i>	P. H. SAUNDERS.
<i>Principal Administrative</i> <i>Assistant</i>	T. H. MADDEN.

MY LORD MAYOR, LADIES AND GENTLEMEN,

In these opening pages of the Report for the year 1953, I shall attempt to epitomise the main activities of the Public Health Department during that period, and to fit the year's work into the continuous account of the City's history of health progress. Within the Department the year has seen a number of staff changes. I succeeded Professor Frazer in March 1953, Dr. Davies became Deputy Medical Officer of Health, Dr. Vida Stark was appointed Senior Medical Officer (Maternity and Child Welfare) and in October, Mr. Adamson was appointed Chief Welfare Officer. It is to be expected, that with the formation of a new team, new ideas and new approaches to old problems will be brought forward for consideration. If some of these ideas figure prominently in this introduction, it is because of the desire to continue the vigorous assault on disease and disease-producing conditions which has been a characteristic of local government in Liverpool for over a century.

The estimated civilian population of the City at mid-year was 789,700. There was a natural increase in population (the excess of births over deaths) during the year of 7,600. The birth rate continued at a high rate compared with the rest of the country and was 20·3 per 1,000 of the population. The proportion of illegitimate births was 5·4 per cent of the total births. Statistics

The total number of deaths during the year was 8,422 giving a general death rate of 10·7 compared with 11·4 for the previous year. This general death rate is the lowest ever recorded.

There was no reduction during the year in the infant mortality rate which has now remained at 35 for the past 3 years.

The death rate for pulmonary tuberculosis remains considerably higher than most other large cities, and represents one of the more serious problems facing the City.

The cancer death statistics show one disquieting feature. The corrected deaths from cancer of the respiratory system (lungs) have steadily risen from 1945 when 160 deaths from this cause occurred to 346 in 1952. In 1953, a further sharp increase to 432 occurred. This Cancer

trend is shown graphically on page 10. Research of possible causation of lung cancer is going on nationally, and the Health Department is co-operating in one such scheme to investigate the possible effect of atmospheric pollution on the incidence of cancer.

Maternity and Child Welfare.

**Infant
Mortality**

Reference has been made in earlier annual reports to the satisfactory reduction of the infant mortality rate in the City during the past fifty years. The rate has, however, remained stationary at 35 for the last three years and is now considerably higher than that for England and Wales (27) and of the other 160 large towns of the country (31).

Premature birth and the other causes of death in the early days of life are the concern of every branch of the medical services—general practitioners, hospitals, and the public health service. To achieve an improvement, a co-ordinated effort is required, and to assist in this effort, the maternity and child welfare clinics are being strengthened particularly to meet the challenge of the newer housing estates now being built on the outskirts of the City.

**Maternal
Mortality**

The midwifery service statistics show in contrast a more satisfactory position than that of England and Wales, and the low maternal mortality rate is most satisfactory. During the year, steps have been taken to increase the degree of co-operation between the local authority maternity services and the general practitioners. When a domiciliary midwife now books a patient, the patient's general practitioner is informed in order that he may make any additional arrangements concerning his patient which he considers desirable in her case.

The average case load per midwife is still high, and arrangements are in hand to recruit additional midwives. Unfortunately, many of the City's midwives are nearing retirement, and eight are at present retained beyond the normal retiring age because of the difficulty of recruiting younger midwives to take their places. This is a difficulty facing many authorities. The most realistic solution has been the establishment of appropriate training schools run by the local authority. A start was made during the year by establishing a second Part II midwifery training school in Liverpool, at Sefton General Hospital, and by the end of December five pupil midwives had completed their training in this new school.

Although still under their full establishment, it has been possible this year to extend the type of work undertaken by the Health Visitors. Thus they have been used to undertake duties in connection with certain infectious diseases, particularly poliomyelitis and trichinosis; and also to enter more the field of domiciliary care of the aged. It is important that the health visitor, who is one of the most valuable and experienced workers in the prevention of ill-health, should increase the scope of her work to cover the whole family, and that all is done to increase the amount of co-operation between health visitors and general practitioners.

A full report of the Home Nursing Services has been introduced. **Home Nursing** These services are run on behalf of the City Council by the Liverpool Queen Victoria District Nursing Association. During the year, in an attempt to relieve some of the pressure on hospital accommodation, additional nursing staff was employed to assist with the home nursing of the aged. Special precautions have been devised to try to prevent penicillin and other antibiotic sensitivity in the nursing staff, and so far the results appear to be favourable.

The Domestic Help Service has developed steadily during the year. The major portion of the work is in providing home help assistance for old persons, and for home confinements.

The results of an interesting survey carried out by the senior lecturer in preventive dentistry at the University of Liverpool are included in the Report. These emphasise that many children in the City are potentially dental cripples before they go to school. Everything should be done to increase regular dental inspections of the pre-school child, and the findings of this special survey are stressed.

Infectious Diseases.

The level of infectious diseases in the City was similar to the previous year.

There was a considerable amount of dysentery due to *Shigella sonnei* at the beginning of the year.

An outbreak of poliomyelitis occurred amongst the staff of a large **Poliomyelitis** general hospital. This outbreak clearly demonstrated how this disease will spread fairly rapidly within a relatively closed community. The

after-care scheme referred to last year whereby persons who had suffered from poliomyelitis could attend special swimming sessions has continued with great success and enjoyment.

Trichinosis

During the autumn, an outbreak of trichinosis occurred within the City which was shown to be mainly caused by infected sausages. Undoubtedly the habit of many women of eating or nibbling at raw sausages was a contributory factor.

Immunisation and Vaccination

Diphtheria immunisation has continued at a similar level, and it is now estimated that 81 per cent of the children aged 5-14 are protected and 45.9 per cent of the children under 5 years of age.

During the year immunisation against whooping cough was introduced and was carried out both at the Child Welfare Clinics and by general practitioners. 5,416 children had been immunised at the end of the year under the scheme. There was a diminution of 1,202 in the number of babies primarily vaccinated; out of a total number of live births during the year of 16,022, only 7,605 vaccinations were carried out. This falling-off of primary vaccination is a disappointing feature, and one to which the Department must direct additional effort.

Tuberculosis

The problem of tuberculosis is dealt with in detail in the report. It will be seen from the diagram on page 26 that with the exception of Glasgow, Liverpool continues to have the highest rate in the country. There are several reasons for this, but the main factor must undoubtedly be the large amount of infectious cases which are at present within the community, some of which are unsuspected. The contact tracing and other preventive work of the Tuberculosis Visitors is of great importance in this respect. During the year the services of the Tuberculosis Visitors have been transferred from being part-time with the Regional Board, to the Local Authority whole-time; although the Tuberculosis Visitor still remains working within the Chest Clinic. It is hoped to be able to extend and increase the tuberculosis preventive services, and to ensure that the preventive measures, such as contact tracing, mass miniature radiography, together with the B.C.G. immunisation of school-leavers, etc., are all co-ordinated.

*Mental Health.***Mental Deficiency Accommodation**

Steady progress continued to be made although the shortage of accommodation in mental and mental deficiency hospitals again caused

much difficulty. The acuteness of the problem in obtaining mental deficiency beds is very great and the position has deteriorated during the year. When it is realised that the majority of mental deficiency cases requiring urgent admission are living in poor housing conditions, the seriousness of the problem can be imagined.

This is how the number of these highest urgency cases awaiting admission to mental deficiency institutions has risen in the past four years:—

1950	...	...	...	29
1951	...	...	...	61
1952	...	...	...	73
1953	...	...	...	90

It will be seen that the figures have trebled and the increase has shown no tendency to fall off.

The numbers now attending the Occupation Centres are 274, compared with 60 when the service began in 1948. During the year the Garston Centre was extended by the incorporation of an adjacent hall.

The problem of old age and mental sickness is dealt with in detail in the report (page 69). It will be seen that it is found that many old persons are referred to the Mental Health Service for whom Lunacy Acts procedure should not be considered. The main reason for this is insufficient accommodation of a suitable type. It is very desirable that the various minor behaviour difficulties of old age should not be treated as 'certifiable' mental illness just because lack of accommodation for senile patients in general hospitals.

**Old Age and
Mental
Illness**

An interesting statistical survey of mental deficiency was undertaken during the year, and the results are given in the report (page 80).

Welfare.

During this year considerable progress has been made in the City's welfare services.

Two new hostels at Aigburth House and Holt House were opened during the summer to accommodate 52 and 57 people. Both provide all the amenities and comforts of a private hotel, and in addition, in Aigburth House it is possible to provide a number of residents with their own bedrooms, which is very much appreciated by many aged persons.

New Hostels

**Changes at
Westminster
House**

Equally important have been the changes in Westminster House which have occurred during the year. In April, a clinical survey of the large sick bays was carried out and this resulted in classifying 58 persons as being 'chronic sick', who were the responsibility of the hospital service. During the summer it was possible to arrange for all these persons to be admitted to Newsham General Hospital on an exchange basis, arranged with the assistance of the physicians at this hospital. At the same time, special provision was made in Westminster House for very frail persons in accommodation where their living room, dining room and sleeping rooms are all grouped together on the same floor. By reducing the beds in such accommodation by approximately a quarter, it was possible to raise the standard of the accommodation considerably. A new sick bay was provided for female patients accommodating 16 beds and the male sick bay was reduced to 23 beds.

The great improvements noted in the residents in the new frail ambulant accommodation has been most encouraging and even though Westminster House is over a hundred years old, a great deal can be done at relatively little expense to improve the lot of the old people living there. Towards the end of the year a scheme was prepared for the total adaptation of the accommodation (this has since been approved by the City Council). This upgrading foresees reduction of the beds by roughly one quarter to about 650 and replanning of the accommodation to form 12 separate houses, each accommodating from 35 to 70 people. In this way it is hoped that each house will create its own atmosphere and allow every old person to obtain individual attention. Old people will not be members of the immense community of Westminster House, but of a smaller home. The standard of accommodation planned will be similar to that being provided at New Grafton House.

**Temporary
Accommoda-
tion**

The position as regards provision of temporary accommodation for homeless families has improved during the year, and the number of persons accommodated at the end of December 1953, was only 60 compared to 162 the year before. This most satisfactory reduction has been due to the monthly review of cases by the Liaison Sub-Committee of the Health Committee, and the very close co-operation which has been maintained between the officers of various Corporation departments and the voluntary organisations. No family has been allowed to stay in the accommodation for long periods, and it is equally

satisfactory to report that there has been a great reduction in the average length of stay of each family. It has been possible to close the premises at Walton Village, and at the end of the year arrangements were made for a reduction in the amount of accommodation reserved for that purpose at Lower Breck Road.

There has been increased interest in special welfare services for the handicapped, including blind, deaf and dumb, hard of hearing, and all other physically handicapped persons. Towards the end of the year recommendations were received from the Ministry of Labour that they would be prepared to assist Local Authorities in providing similar sheltered workshops for other handicapped persons, and at present a full survey is being carried out to determine the needs of the various handicapped groups of persons within the City. At the same time it is felt that every effort should be made to ensure that full use is being made of special facilities in open industry for the blind and other handicapped persons. Many different departments of Central and Local Government are involved, and it is satisfactory to report that the fullest co-operation has been obtained from all parties concerned.

**Welfare of
Handicapped
Persons**

At a time when there is expansion occurring in all these welfare services for handicapped persons, it is important that a proper balance is maintained between the needs of the various groups of handicapped persons. In the past, due to the activities of voluntary societies, the welfare of the blind and the deaf and dumb has developed considerably, but it is only recently that welfare services for the hard of hearing, the crippled, and other handicapped persons have been considered. It would appear that one of the functions of any local welfare service must be to ensure that there is an adequate balance maintained between all groups of handicapped.

With this point in mind, a survey has been started in conjunction with the rehabilitation officers of the Ministry of Labour and National Service to attempt to find out what are the exact needs of all groups of handicapped persons in the City.

Considerable difficulty was encountered during the year with one or two epileptic adults who had been discharged from an epileptic colony because of anti-social behaviour. Apart from colonies, accommodation

Epileptics

for epileptics and the severely crippled young person is extremely difficult to obtain, and the only accommodation available to any local authority is that provided under Part III of the National Assistance Act for old persons. This arrangement is unsatisfactory, and is neither helpful to the aged nor to the handicapped person. There is need for more residential accommodation for the epileptic showing anti-social tendencies, and because of the relatively few cases in any one area it would seem that the problem can only be properly tackled on the national basis. Everything is done to prevent the admission of any epileptic or young handicapped person to Westminster House, but the lack of suitable accommodation elsewhere and the urgency of individual cases sometimes results in admission having to be arranged.

**Pier Head
Rest Room**

During the Coronation period a special Rest Room for the Aged was opened at the Pier Head. This is staffed by W.V.S., and provides the old person visiting the Pier Head with somewhere to go where he or she can sit, keep warm, get a cup of tea, and meet friends.

The success of this venture has been most marked, and since June when it opened, the numbers attending daily have steadily risen, and have continued to increase during the winter. The Pier Head Rest Room for the Aged has met a very real need in the City, and many old folks now visit this focal point of the City's life almost every day.

*Ambulance Service.***Ambulance
Statistics**

On 1st May, 1953, the Ambulance Service took over the work which had been done by the Merseyside Hospitals Council, and absorbed 9 ambulances, a depot and 21 staff. The general ambulance service has continued to be hard pressed during the year, but the demand for ambulance transport now appears to be more uniform.

The number of patients moved was 188,568 compared with 185,154 in 1952, which gives an increase of 3,314 (1.79 per cent). During this period also the mileage covered increased by 11,683 miles (1.37 per cent).

**Radio
Telephony**

The success of radio-telephony is now becoming apparent. In 1948 and 1949 the miles travelled per patient were 8.89 and 6.88 respectively, while for 1953 the figure had fallen to 4.57 miles per patient. This most satisfactory reduction has, to a large extent, resulted from the use of radio-telephony.

Atmospheric Pollution.

The title of the section has been changed from 'smoke abatement' to 'atmospheric pollution'. Today, a public health department must interest itself in all types of atmospheric pollution, especially as the invisible noxious gases emitted from some industrial concerns may be particularly dangerous to health, and not infrequently the nauseating odours given off by certain processes cause much discomfort to the public.

At present, control of emission of noxious gases such as sulphur dioxide from industrial plants is carried out by H.M. Alkali Inspectors from whom the Department enjoys the fullest co-operation. When it is realised that such gases can cause ill-health and nuisance, it may well be considered that the time may have arrived for local control to be transferred to local authorities.

The general problem of atmospheric pollution in the City has improved during the year. However, no major improvement can be expected until (a) a Smokeless Zone in the centre of the City has been established, and (b) compulsory powers of prior approval for all plans of fuel-burning equipment are introduced.

Consideration of a smokeless zone for Liverpool has been receiving attention for some time, and it was proposed that the selected area should be the business and commercial centre of the City where, during the winter months, the air pollution recorded is considerably higher than any other part of Liverpool.

The survey of areas in the centre of the City to be included in an initial Smokeless Zone was completed during the year. Details of the area are given in the text of the report (see page 166). Before the zone can be introduced, a local Act is at present required. The difficulty of having to introduce local Acts to establish smokeless zones is occurring all over the country, and it might be considered that the time has been reached for this problem to be dealt with nationally.

Slum Clearance.

During the year the slum clearance drive has been gaining considerable impetus, and it is satisfactory to report that 1,766 houses were represented in Clearance Areas. Compared with the previous

Smokeless
Zone

Slum
Clearance
Statistics

year, this figure is three times greater. In addition, 173 houses were scheduled for individual demolition.

Representation of these areas must always be at least two years ahead of the actual decanting of the population and demolition procedure to allow the necessary time limits, public enquiries and other legal requirements. The selection of the areas to be dealt with is difficult and many factors have to be taken into account.

During the past two centuries, the City's expansion has absorbed many small villages situated on its periphery. The original cottages of many of these are now in a dilapidated condition, and are as serious a threat to health as the larger slum areas near the dockside area. It is, therefore, impossible to confine the sphere of slum clearance activity within the boundaries of the dockside areas and the over-ruling principle always adopted in deciding which area comes next is the health of the inhabitants of each area.

Food Hygiene.

Food Hygiene It was felt at the beginning of the year that the standard of food hygiene was far from satisfactory, and detailed inspection suggested that the co-operation was not being maintained by some managements and personnel employed in various food establishments. Day-to-day cleanliness was not carried out satisfactorily, and many of the employees were careless in their habits, and the absence of soap, towels and hot water made things worse.

Large accumulations of dirt were found, as well as major infestations of rodents and pests. It was necessary eventually to take legal action, and the managements of eight bakehouses and eleven cafes were prosecuted.

In fifteen cases the Defendants pleaded guilty, and in the remaining four, not guilty, but all these were subsequently found guilty.

The concerted drive for clean food which has taken place during the year has undoubtedly met with considerable success. It is, however, necessary for continued vigilance to be maintained, and it is hoped that the active co-operation of both management and employees will continue to be enjoyed.

Industrial Hygiene.

In view of the fact that industry and commerce play such a prominent part in the life of this City, special attention has been given to the enforcement of the Local Authority's powers affecting factories and commerce and other non-industrial buildings and undertakings. As far as environmental hygiene is concerned in offices and workplaces there is a regrettable lack of legislation. Many complaints are received regarding lack of washing facilities, poor lighting and inadequate heating, and it is satisfactory to report that a great deal has been accomplished to improve these conditions. However, some firms still will not co-operate in rectifying these bad conditions, and the health and welfare of their staff suffers as a result.

As regards factories, the powers of the Local Authority are limited by the Factories Act, 1937, and with the exception of sanitary accommodation the responsibility rests with Her Majesty's Inspector of Factories. There are undoubtedly certain anomalies in this arrangement, particularly in the case of premises where food is manufactured. As it is the duty of the Local Authority to enforce the provision of the Food and Drugs Act, 1938, and the Food Byelaws made thereunder, it would seem reasonable for them to have a greater control over conditions under which various foodstuffs are manufactured.

The contents of this report reflect the work of the entire staff of the Health Department and I wish to record my thanks to everyone for their loyal support. I also desire to acknowledge the assistance given by other departments in providing certain information contained in this report.

Finally, I wish to record my sincere gratitude 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 am,

Your obedient Servant,

ANDREW B. SEMPLE,

Medical Officer of Health.

In view of the fact that industry and commerce have been given so much of the attention of the Local Authority's health officers and sanitary inspectors, it is not surprising that the health of the community is not so good as it should be. It is a regrettable fact of life that many complaints are caused by insanitary conditions, such as bad ventilation, poor lighting and dampness, and it is a pity that a great deal of time and money is spent in dealing with these complaints. However, some progress will be made in dealing with these bad conditions and the health and welfare of the community will be improved.

As regards factories, the powers of the Local Authority are limited by the Factories Act, 1901, and with the question of sanitary measures, the responsibility rests with the Master of the factory. There are undoubtedly certain standards in the environment, particularly in the case of premises where food is manufactured, and it is the duty of the Local Authority to ensure that these standards are maintained. The Food Hygiene Act, 1925, and the Food Hygiene Regulations, 1925, are responsible for this, and it is a great relief that these standards are maintained.

The contents of this report reflect the work of the entire staff of the Health Department and I wish to thank my colleagues for their loyal support. I also desire to acknowledge the assistance given by other departments in providing certain information contained in this report.

Finally, I wish to record my sincere gratitude to the Chairman and Members of the Health Committee for the courtesy and kindness with which they have conducted the reports and recommendations made to them in the course of the year.

I am,

Yours obedient servant,
ANDREW A. SMITH,
Medical Officer of Health.

CITY OF LIVERPOOL.

SUMMARY

OF

VITAL STATISTICS FOR 1953.

Area (land and inland water)	...	...	...	...	...	...	27,818 Acres
Population (Estimated by Registrar General)	...	...	...	...	...	...	789,700
Live Births ...	...	...	16,022	Live Birth Rate ...	20.3 per 1,000 of estimated population.		
Deaths (all causes)...	...	...	8,422	Death Rate ...	10.7 per 1,000 of estimated population.		
Deaths (under 1 year of age)	569			Infant Mortality rate	35 per 1,000 live births.		
Deaths from :—							
Pulmonary Tuberculosis	258			Pulmonary Tuberculosis death rate	0.33	} per 1,000 of the estimated population.	
Other forms of Tuberculosis	26			Non-Pulmonary Tuberculosis death rate	0.03		
Respiratory	1,142			Respiratory death rate	1.45		
Cancer	1,553			Cancer death rate	1.97		
Maternal Deaths ...	...	...	5	Maternal Mortality rate	0.30 per 1,000 births.		
Neonatal Death Rate	...	...	21.8				
Stillbirth Death Rate	...	...	24.0				

VITAL STATISTICS.

Certain changes have been made in the presentation of this section. All lengthy statistical tables have been grouped together at the back of the annual report (see Appendix). Graphs have been introduced to illustrate the various statistical changes.

Births.

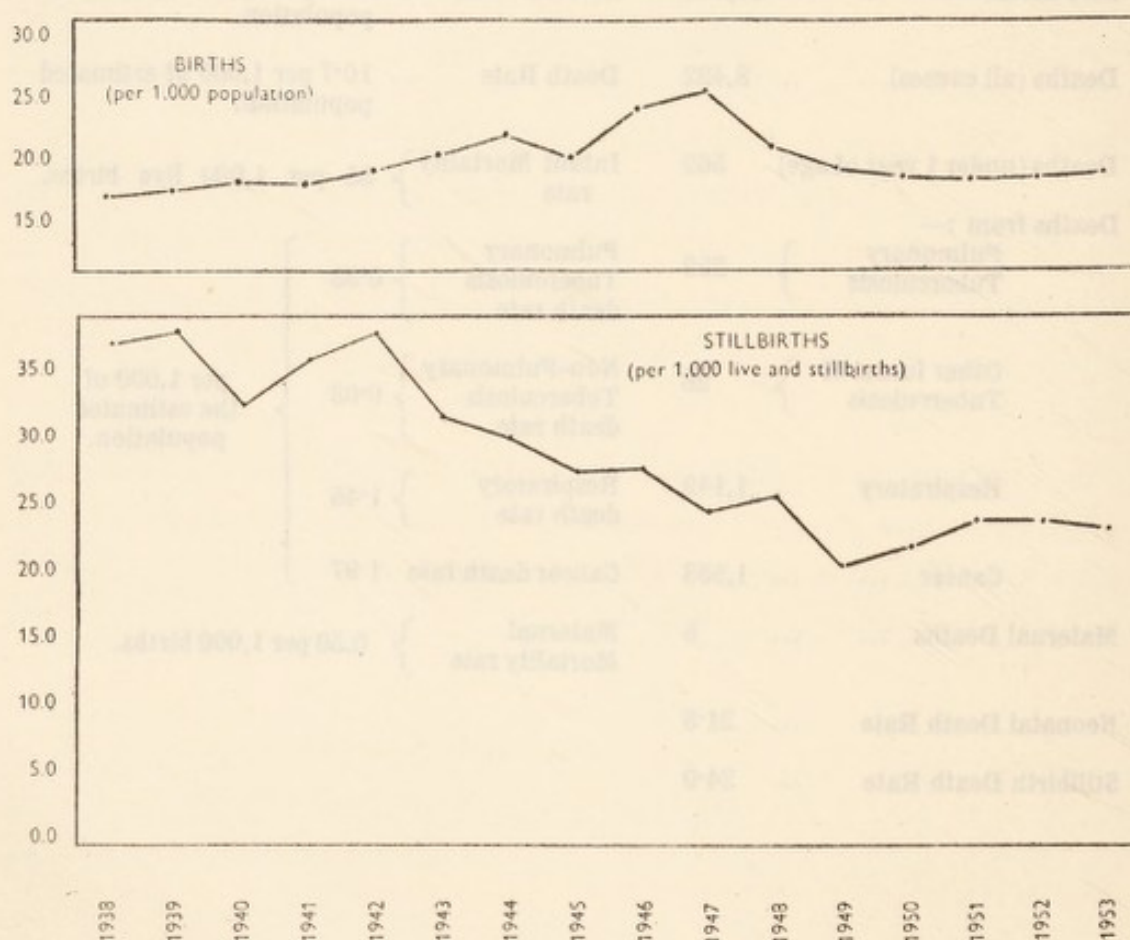
Birth Rate

The number of live births during the year was 16,022 producing a rate equal to 20.3 per 1,000 of the estimated mid-year population. 8,208 of the total births were males and 7,814 females. There were 873 illegitimate births (5.4 per cent. of total births), 449 being males and 424 females.

The birth rate for the City continues to be considerably above the average of all the great towns which was 17.0 per 1,000 of the population, and for England and Wales as a whole where it was 15.5 per 1,000.

The variations of the birth rate since 1938 are shown in the following graph:

BIRTHS AND STILLBIRTHS—LIVERPOOL
1938—1953



Still-births.

394 still-births were registered in the City during the year. This **Still-birth Rate** represented a still-birth rate of 24.0 per 1,000 of the total births registered.

The steady reduction since 1938 in the still-birth rate is illustrated by the graph on preceding page.

The still-birth rate among legitimate babies was 23 per 1,000, and that among illegitimate babies was 33 per 1,000 births. This difference slightly increased in 1953 compared with 1952.

Mortality.

The total number of deaths registered during the year was 8,422 **General Death Rate** (4,426 males and 3,996 females) which gives a further reduction in the general death rate to 10.7 which is the lowest rate ever recorded in the City.

There has been a reduction in all the major causes of death, although in the case of cancer this reduction has only been slight.

Regarding individual causes of death within the City during the year, the one disease which has shown a marked increase has been cancer of the respiratory system, where the total number of deaths have risen from 346 in 1952 to 432 in 1953. This increase is a startling one, and the graph on page 10 shows how the increase in deaths noted in cancer of the respiratory system have trebled since 1945.

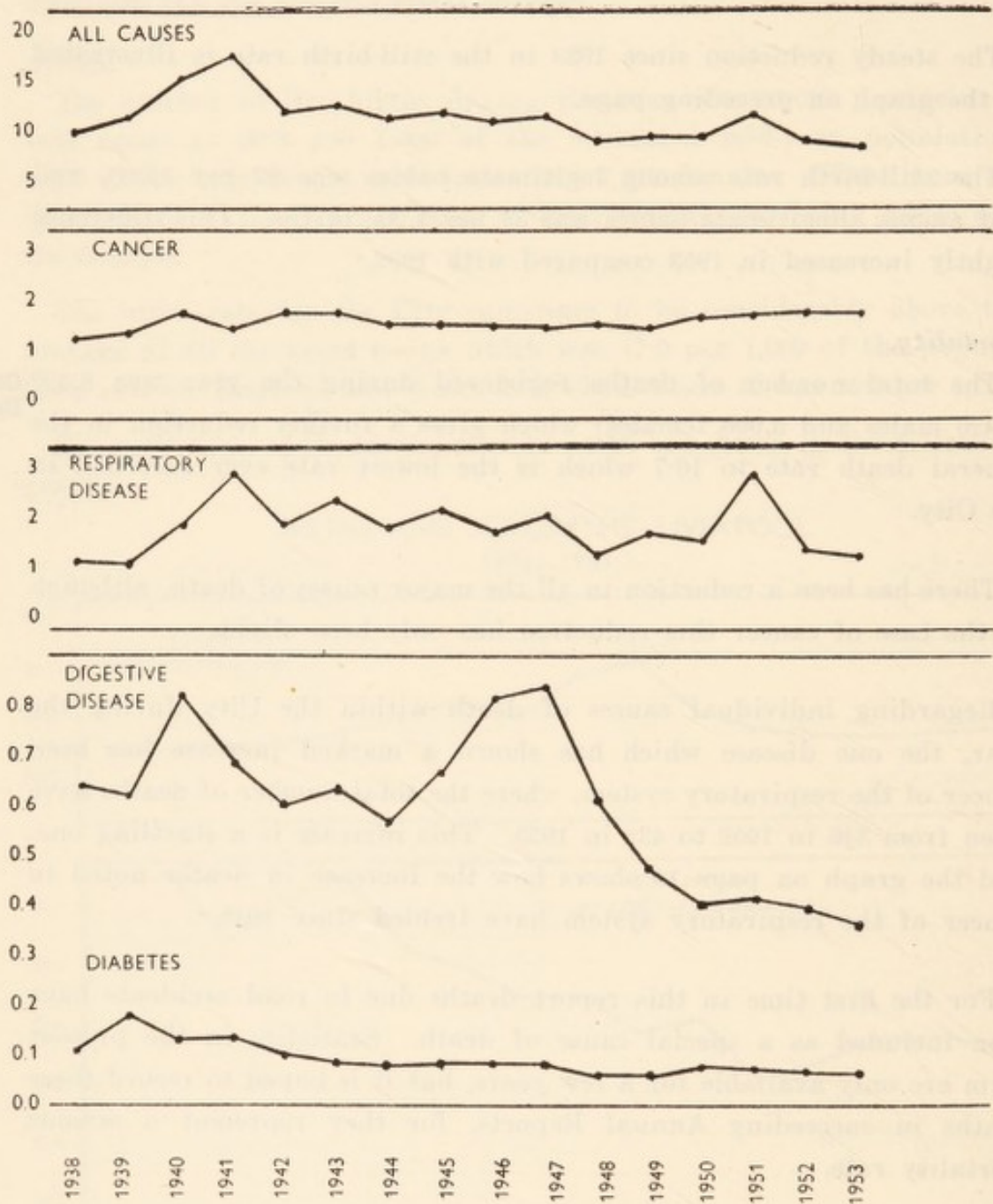
For the first time in this report deaths due to road accidents have been included as a special cause of death. Statistics in the present form are only available for a few years, but it is hoped to record these deaths in succeeding Annual Reports, for they represent a serious mortality rate.

The trends of mortality of all causes and of certain specified diseases have been prepared graphically and are given on the following pages.

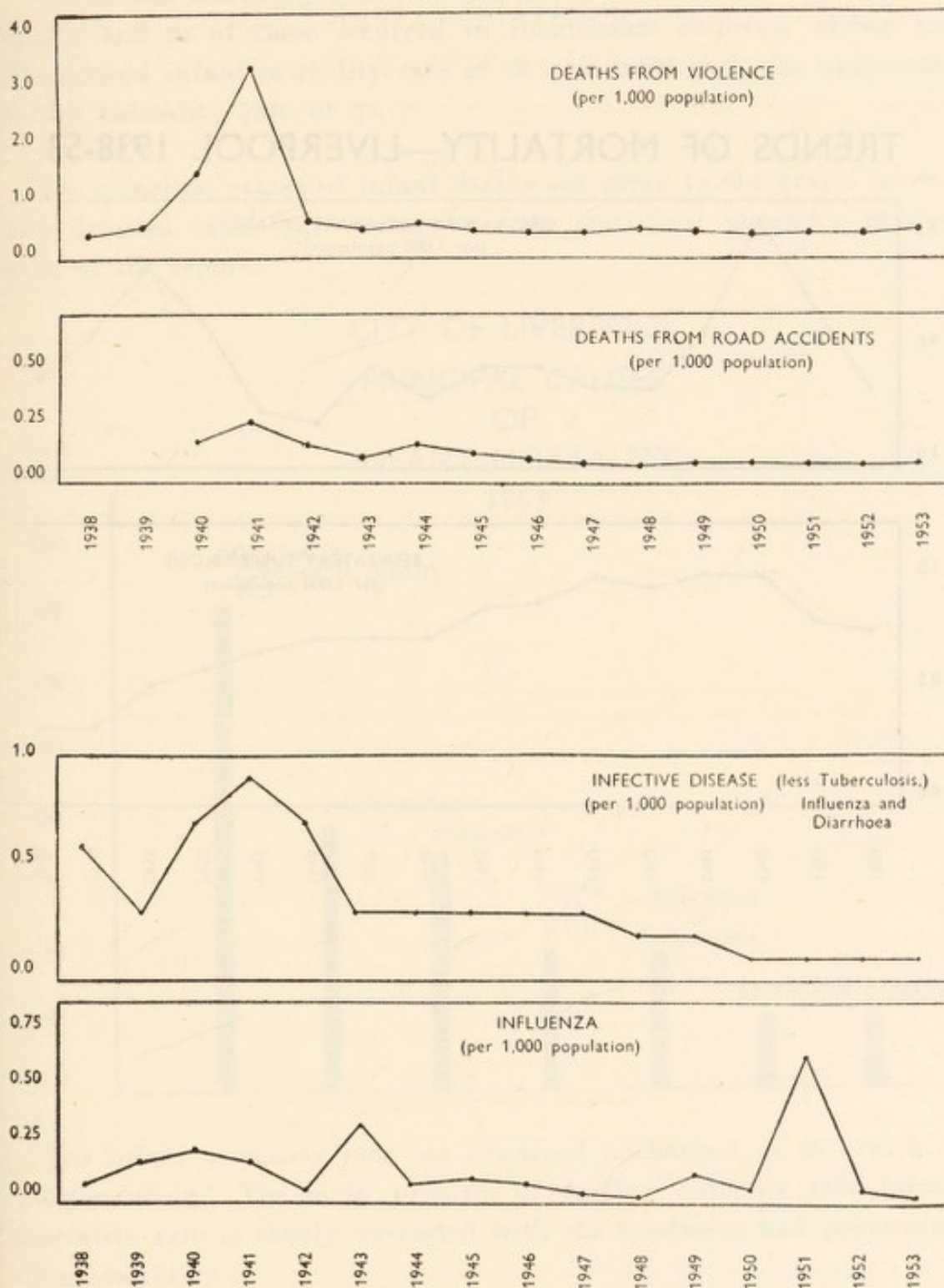
Detailed tables of the causes of mortality are given in the statistical appendix.

TRENDS OF MORTALITY—LIVERPOOL 1938-53

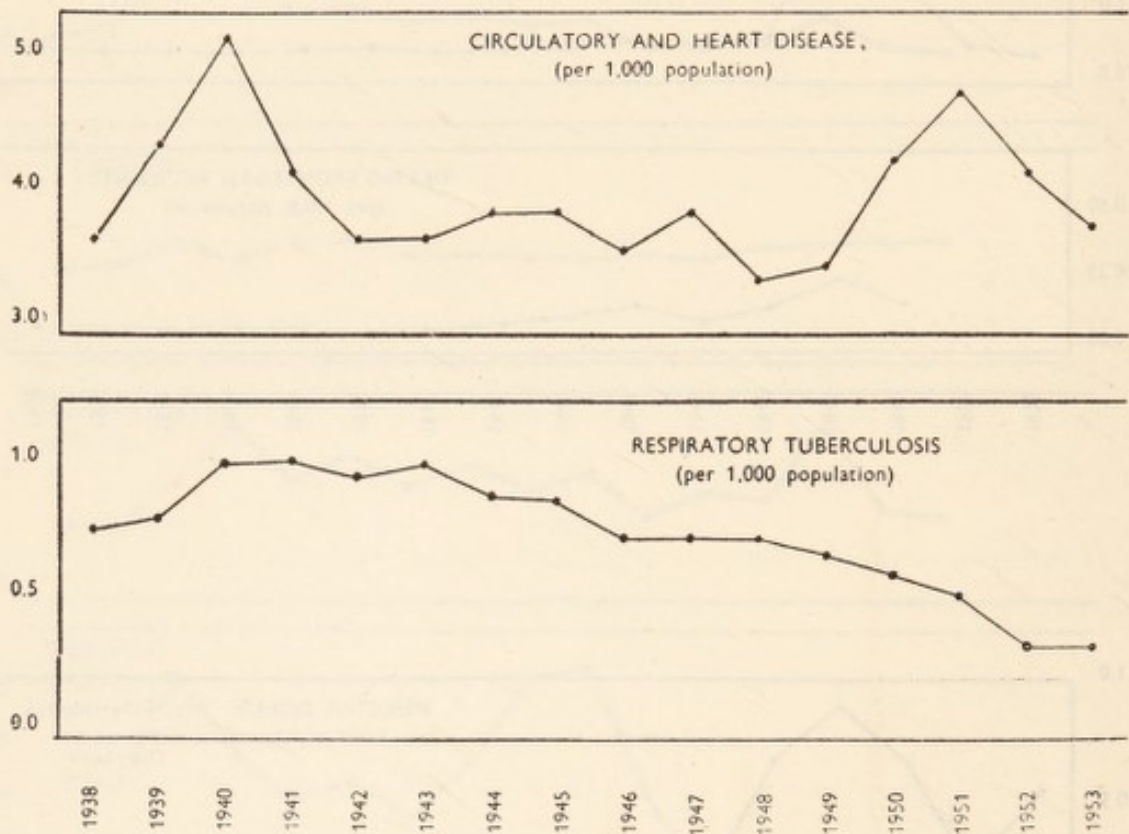
Death Rate per 1,000 population



TRENDS OF MORTALITY—LIVERPOOL 1938-53



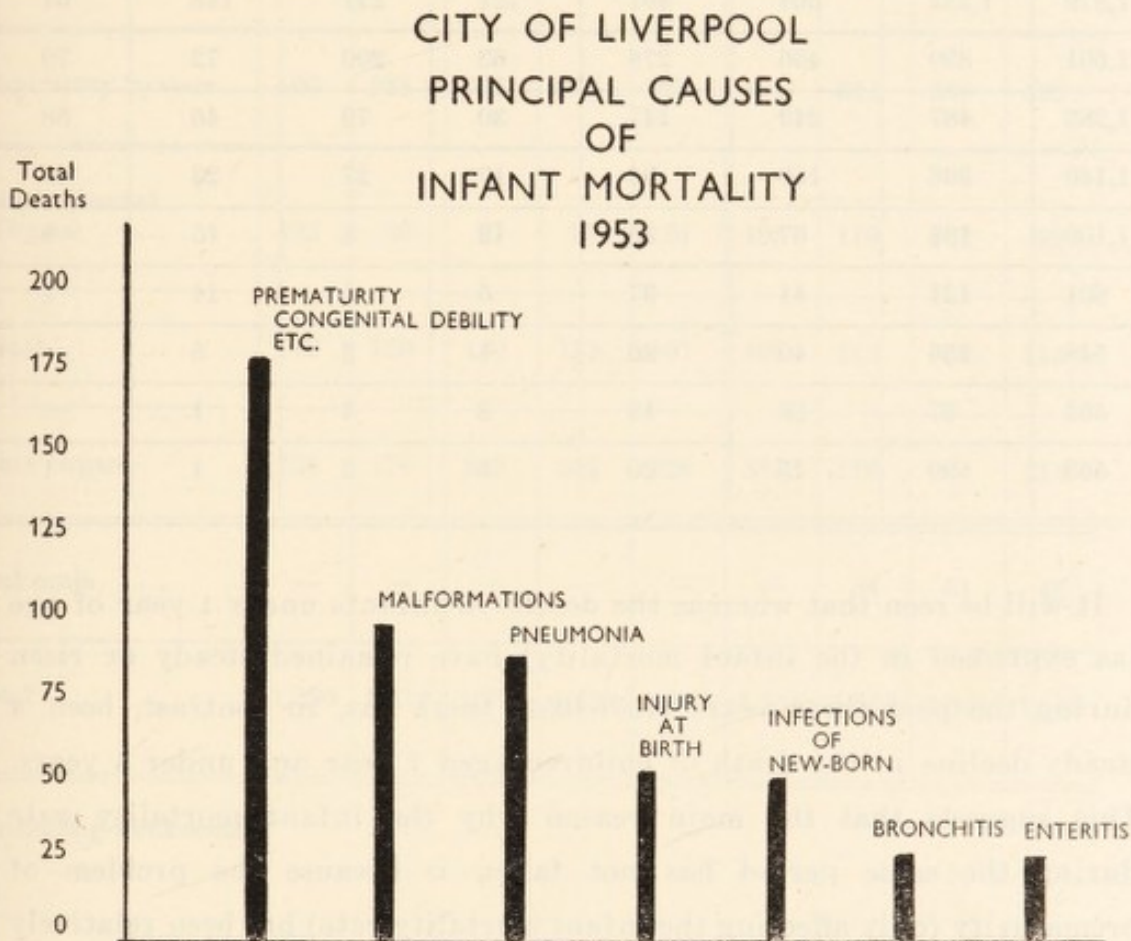
TRENDS OF MORTALITY—LIVERPOOL 1938-53



Infant Mortality Rate.

The infant mortality rate for 1953 was 35. There were 569 infant deaths and 34 of these occurred in illegitimate children, giving an illegitimate infant mortality rate of 39, compared with the legitimate infant mortality rate of 35.

The principal causes of infant deaths are given in the graph below, and detailed tables are included in the statistical appendix at the back of the report.



The infant mortality rate has remained unchanged at 35, which is disappointing. The main problem of further reducing this infant mortality rate is closely connected with the treatment and prevention of prematurity.

Child Mortality.

The principal causes of child mortality are given in the following table:

**Child
Mortality**

YEARLY AVERAGE NUMBER OF DEATHS IN SUCCESSIVE QUINQUENNIA, 1920-1949, AND
TOTAL DEATHS IN 1950, 1951, 1952 AND 1953.

Year.	Deaths under 1 year of age.	DEATHS, 1 YEAR AND UNDER 5 YEARS OF AGE.							
		Total, 1 year and under 5 years of age.	General Diseases (including T.B.).	Respiratory Diseases.	Digestive Diseases.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.
						Included in General Diseases.			
1920-24	2,278	1,349	557	513	121	202	109	62	
1925-29	1,879	1,252	564	461	121	227	118	61	
1930-34	1,601	890	456	278	63	200	72	79	
1935-39	1,283	487	243	147	30	79	46	58	
1940-44	1,140	366	160	94	17	27	23	45	
1945-49	1,100	168	67	36	13	8	15	9	
1950	601	121	41	37	5	1	11	1	
1951	548	136	40	26	4	3	5	—	
1952	562	97	26	18	8	4	1	—	
1953	569	90	15	20	5	2	1	1	

It will be seen that whereas the deaths in infants under 1 year of age (as expressed in the infant mortality) have remained steady or risen during the past three years (1951-1953) there has, in contrast, been a steady decline in the death of children aged 1 year and under 5 years. This suggests that the main reason why the infant mortality rate during the same period has not fallen is because the problem of prematurity (only affecting the infant mortality rate) has been relatively untouched by the favourable factors which have resulted in fewer deaths in children aged 1 year and under 5 years.

Cancer.

Cancer Mortality

Reference has already been made to the marked increase of deaths from respiratory cancer which have been noticed in the past five years. The way in which the incidence of cancer deaths from various causes has varied since 1945 is shown by the following table:

DEATHS FROM CANCER

1945—1953

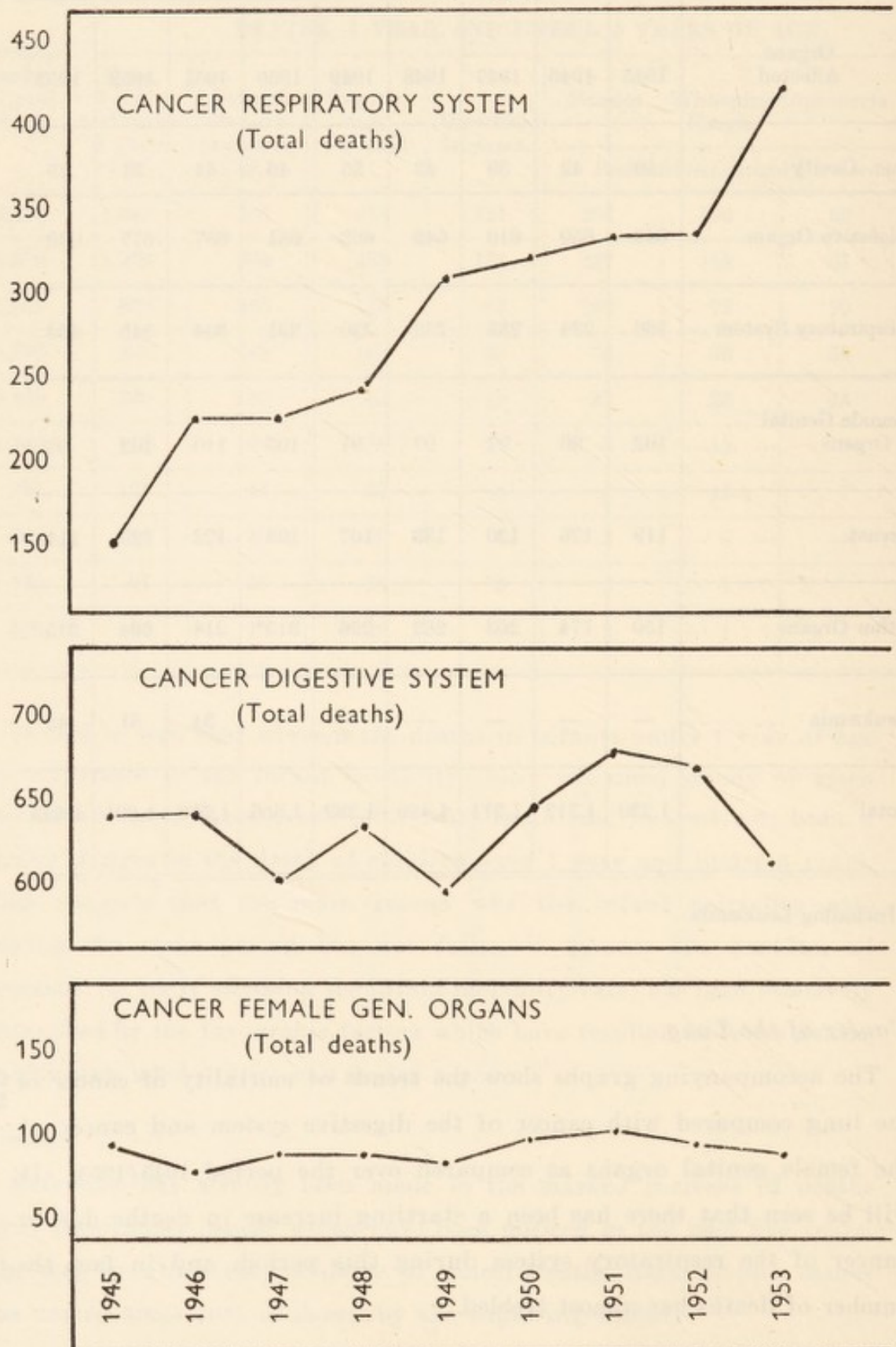
Organs Affected	1945	1946	1947	1948	1949	1950	1951	1952	1953
Buc. Cavity ...	40	42	39	43	35	46	44	31	29
Digestive Organs ...	649	650	610	642	603	651	687	677	620
Respiratory System ...	160	234	235	252	320	331	344	346	432
Female Genital Organs ...	102	86	97	97	91	105	110	102	98
Breast ...	119	126	130	133	107	108	122	120	114
Other Organs ...	150	174	203	262	226	315*	218	264	215
Leukæmia ...	—	—	—	—	—	—	34	51	45
Total ...	1,230	1,312	1,314	1,429	1,382	1,556	1,559	1,591	1,553

*Including Leukæmia.

Cancer of the Lung.

The accompanying graphs show the trends of mortality of cancer of the lung compared with cancer of the digestive system and cancer of the female genital organs as compared over the period 1945/1953. It will be seen that there has been a startling increase in deaths due to cancer of the respiratory system during this period, and in fact the number of deaths has almost trebled.

TRENDS OF MORTALITY—LIVERPOOL 1945—53



Deaths in the various Wards of the City.

Abercromby	...	...	239	Netherfield	...	...	166
Aigburth	...	...	227	Old Swan	...	...	256
Allerton	...	...	129	Picton	...	...	264
Anfield	...	...	271	Pirrie	...	...	210
Arundel	...	...	229	Princes Park	...	...	229
Breckfield	...	...	232	St. Domingo	...	...	221
Broadgreen	...	...	223	St. James	...	...	226
Central	...	...	151	St. Mary's	...	...	122
Childwall	...	...	194	St. Michael's	...	...	237
Church	...	...	248	Smithdown	...	...	205
Clubmoor	...	...	171	Speke	...	...	156
County	...	...	240	Sandhills	...	...	176
Croxteth	...	...	163	Tuebrook	...	...	199
Dingle	...	...	254	Vauxhall	...	...	230
Dovecot	...	...	179	Warbreck	...	...	254
Everton	...	...	237	Westminster	...	...	164
Fairfield	...	...	220	Woolton	...	...	136
Fazakerley	...	...	208	Miscellaneous (No fixed			
Gillmoss	...	...	169	abode or resident out of			
Granby	...	...	250	England and Wales)	...	31	
Kensington	...	...	221				
Low Hill	...	...	215				8,422
Melrose	...	...	270				

ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1950, and during the years 1951, 1952 and 1953.

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
1953	69	284	1,142	271	1,766	1,553	8,422

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

Years.	(a)	(b)	(c)	(d)	Total Deaths from (a), (b), (c) & (d)	(e)	Total Deaths from all causes.
1871-1880	19.2	13.5	20.2	10.0	62.9	1.4	100.0
1881-1890	14.1	12.7	23.2	9.4	59.4	2.0	100.0
1891-1900	9.3	10.8	24.6	12.7	57.4	2.9	100.0
1901-1910	8.6	10.6	21.8	12.0	53.0	4.3	100.0
1911-1920	7.9	10.9	27.3	8.9	55.0	5.5	100.0
1921-1930	6.6	10.7	25.0	6.9	49.4	8.4	100.0
1931-1940	5.6	8.1	15.7	5.2	34.7	10.9	100.0
1941-1950	2.6	7.1	15.9	4.4	30.1	13.7	100.0
1951	1.0	4.2	22.0	2.9	30.1	14.6	100.0
1952	1.0	3.4	13.7	3.2	21.3	17.7	100.0
1953	0.8	3.4	13.6	3.2	21.0	18.4	100.0

**Analysis of causes of Infant Mortality in successive quinquennia 1896-1950,
and the years 1951, 1952 and 1953.**

(A.)—Recorded Deaths.

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respira- tory Diseases	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions, Premature Birth, Maras- mus, &c.	9 External Causes.
3/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	819
1/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	565
3/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	539
1/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	426
3/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	179
1/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	120
3/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	81
1/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	67
3/1940	80,936	6,226	573	74	519	1,457	698	2,691	84
1/1945	71,348	5,512	341	71	403	1,704	548	2,193	131
3/1950	88,788	5,034	311	47	213	1,109	963	2,226	111
1951	15,593	548	21	3	5	118	33	351	8
1952	15,839	562	25	2	5	97	30	380	13
1953	16,022	569	11	2	8	118	33	377	14

(B.)—Death Rates per 1,000 Births.

3/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0	7.3
1/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1	4.7
3/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7	4.6
1/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1	3.8
3/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0	1.8
1/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1	1.2
3/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1	0.8
1/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3	0.8
3/1940	19.4	77	7.0	0.9	6.4	17.9	8.8	32.9	1.0
1/1945	21.3	78	4.8	1.0	5.6	24.1	7.7	30.7	1.8
3/1950	22.9	56	3.4	0.5	2.3	12.3	10.5	25.1	1.2
1951	19.9	35	1.3	0.2	0.3	7.6	2.1	22.5	0.5
1952	20.0	35	1.6	0.1	0.3	6.1	1.9	24.0	0.8
1953	20.3	35	0.7	0.1	0.5	7.4	2.1	23.5	0.8

*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.

3/1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1/1905	100.0	91.0	102.3	89.3	95.9	91.5	76.5	94.0	65.7
3/1910	93.0	78.6	107.1	62.9	78.6	83.1	57.8	91.0	63.0
1/1915	87.0	72.5	91.9	50.0	57.9	81.5	56.9	84.0	52.1
3/1920	76.0	61.4	87.4	32.2	49.3	88.7	32.7	82.0	25.5
1/1925	75.1	54.9	80.3	30.6	24.9	84.7	29.9	70.8	16.4
3/1930	66.2	49.7	80.3	17.7	18.9	83.5	30.4	60.9	11.0
1/1935	61.4	47.2	79.5	14.8	18.9	72.2	23.4	69.2	10.4
3/1940	58.1	40.7	55.1	14.5	29.0	55.9	15.4	64.5	13.7
1/1945	63.8	41.3	37.8	16.1	25.3	75.3	13.5	62.0	24.6
3/1950	68.7	29.4	26.9	8.0	10.6	38.5	18.3	48.8	15.9
1951	59.6	18.5	10.2	3.2	1.3	23.7	3.7	44.1	6.8
1952	59.9	18.5	12.6	1.6	1.3	19.0	3.3	47.1	11.0
1953	60.8	18.5	5.5	1.6	2.3	23.1	3.7	40.6	11.0

INFECTIOUS DISEASE.

SUMMARY.

Number of Cases of Infectious Diseases Reported during 1953.

Anthrax	...	...	...	...	8
Enteric Fever	...	...	...	...	2
Scarlet Fever	...	...	...	...	1,292
Measles and German Measles	...	...	...	...	10,292
Diphtheria	...	...	...	...	9
Cerebro-spinal fever	...	...	...	...	51
Poliomyelitis—Paralytic	...	...	...	...	27
Non-paralytic	...	...	...	...	11
Pneumonia and Influenzal Pneumonia	...	...	...	...	833
Dysentery	...	...	...	...	755
Whooping Cough	...	...	...	...	4,740
Food Poisoning	...	...	...	...	265

No case of plague, smallpox or typhus fever occurred during the year. Details of the monthly incidence of these diseases are given on page 24.

Anthrax

Anthrax.

Eight cases of anthrax occurred during the year. Four of the persons affected were dock labourers and had been handling hides. One of the others was employed in the Government Wool Disinfecting Station, and one was employed in the Mersey Dock and Harbour Board Wool Warehouse. The remaining two cases, both women, had been engaged in repairing and bundling secondhand sacks. They were not employed in the same premises.

Typhoid and Paratyphoid Fever.

Typhoid and Paratyphoid Fever

There were no cases of typhoid fever during the year, and two isolated cases of paratyphoid "B" fever occurred.

Register of Chronic Typhoid and Paratyphoid Excretors.

Examination of chronic typhoid carrier and the three paratyphoid carriers has been continued throughout the year. It is interesting to record that the typhoid carrier has been consistently positive, but has not been found to have infected any contacts.

The paratyphoid carriers were rather less consistently positive, but two of them have infected contacts.

Whooping Cough.

During 1953, 4,740 cases of whooping cough came to the notice of the Health Department, a figure representing a case rate of 6.0 per 1,000 of the population. Four cases proved fatal, three in children under one year of age, and one child between one and two years old, corresponding to a death rate of 0.05 per 10,000 of the population.

Diphtheria.

During 1953, 9 cases of diphtheria were confirmed, a case-rate of 0.01 per 1,000 of the population. Of these cases, two proved fatal. Both were in children who had never been immunised.

Age Incidence of Cases.

	Under 1 Year	1—4	5—9	10—14	Over 15	All Ages
Ages of Cases	—	3	1	1	4	9
Ages at death	—	1	1	—	—	2

Measles.

During the year, 10,090 cases of measles were reported, representing a case-rate of 12.8 per 1,000 of the population. The number of deaths was 5, making a fatality rate of 0.05 per 100 cases and a mortality-rate of 0.6 per 100,000 of the population. Three of the deaths occurred in children under 1 year of age, and two in children aged 5-10 years.

Poliomyelitis.

38 cases of poliomyelitis occurred during the year—27 paralytic cases and 11 non-paralytic cases.

There occurred in July and August a considerable outbreak of poliomyelitis amongst the staff of a large general hospital. Over the weekend 11th and 12th July, four doctors and a dentist on the resident staff became ill. Three of the doctors had a minor illness with headache and sore throat, but the dentist was diagnosed as suffering from poliomyelitis (paralytic) on the 17th of the month. The other doctor's symptoms were more indefinite, but she later developed paralytic poliomyelitis on the 29th of the month.

Between the 27th July and 1st August, four doctors and five nurses became ill and, of these, one doctor and two nurses were found to be suffering from paralytic poliomyelitis. Two of the nurses developed non-paralytic poliomyelitis, two doctors abortive poliomyelitis, and a doctor and a nurse were considered to have suffered a minor illness not associated with poliomyelitis.

Between the 9th August and 12th August, six more nurses became ill, two with paralytic poliomyelitis, one with non-paralytic poliomyelitis, and three with abortive poliomyelitis.

The disease thus proceeded in three waves and only staff members were affected. No hospital patient developed poliomyelitis, and all hospital discharges were followed up by health visitors for a period of three weeks. 249 persons were thus followed up, and in no instance did poliomyelitis or any suspicious illness develop.

The disease originated amongst the resident staff, and there was in all cases, except two, a fairly well defined contact between cases in the first wave and in the succeeding waves. The course of this outbreak would seem to conform to the "narrow stream" theory of the spread of this disease.

A fatal case of poliomyelitis occurred at a teachers' training college in September. The date of the girl's arrival at the college made it possible that she might have been infected at home or at the college. The college was kept under observation for three weeks, and one girl who developed initial symptoms similar to those of the first was removed to hospital, but found to have a respiratory infection. No further cases did, in fact, occur, although every opportunity for spread appeared to have been present.

Dysentery.

Dysentery

During 1953, 755 cases of bacillary dysentery were reported in the City. Sonne 728, Flexner 1, and clinical diagnosis only 26. There was during the year a considerable outbreak of Sonne dysentery in one of our day nurseries, where 26 children were affected. All the children in the nursery had specimens examined on three separate occasions following the occurrence of the first case, and all those found to be infected were excluded until three negative specimens had been obtained.

Many children were absent for some considerable time, and in order to aid the general practitioners where this was the case, specimens from the families were examined and the practitioners notified of positive results. While any member of the family remained positive, stooling of all members was continued in order to find reinfections or fresh infections.

The outbreak was brought under control by these measures, and the day nursery staff are to be congratulated on the efficiency with which they were applied. A careful watch was kept throughout all the day nurseries for the occurrence of enteritis of any type, and children suffering from any illness of this nature were excluded. (Where a case of Sonne dysentery occurs in a family with a child at a day nursery, that child is also excluded and the nursery contacts are investigated.)

There was begun at the beginning of the year, in conjunction with the Physician Superintendent of the Fazakerley Isolation Hospital, an investigation into the epidemiology of Sonne dysentery and into the efficiency of the various methods of treatment. Many factors from the severity of the case and the amount of the infection in the family, the type of house, the amount of overcrowding, and the standard of mothercraft are being studied. Approximately 150 cases had been studied by the end of the year, but the investigation is proceeding and results cannot yet be assessed.

An Outbreak of Sonne Dysentery in a Residential Nursery.

There also occurred an outbreak of Sonne dysentery in a Babies' Home. This Home accommodated children up to three years of age, and was arranged in five dormitories, as shown in Table 1.

**Sonne
Dysentery
Outbreak in
Residential
Nursery**

TABLE I.

Room.	Age Group.	Occupants.
1	-6 mths	1
2	6-12 mths.	7
3	12-18 mths.	4
4	18 mths.-2 yrs.	8
5	2-3 yrs.	4

The staff in the Babies' Home consisted of a Matron, two staff nurses, and seven nursery assistants. The Matron had been in charge

of the Home for $2\frac{1}{2}$ years, one staff nurse had been employed for 6 months, and the other commenced work on the 1st May, 1953. Five nursery assistants had been employed for 4 years, 15 months, 6 months, 6 months and $2\frac{1}{2}$ years respectively. Of the other two, one commenced work on the 15th April, 1953, and the other in the first week of the same month. The other staff consisted of a cook, three domestics, and one laundry maid. These had been employed for 18 months, 4 years, 6 years, 4 years and 7 years respectively.

History of the Outbreak. The child in Room 1 became ill on 1st May, with symptoms of frequent greenish relaxed stools with mucus but no blood, and was diagnosed by the general practitioner in charge of the Home as suffering from gastro-enteritis. The child was removed to an isolation cubicle, and was treated with Chloromycetin, 125 mgms. every four hours for three days, and was clinically cured in that time. Another child in Room 4 became ill with similar symptoms on 3rd May, two children in Room 3 on 4th May, two children in Room 2 on 8th May, another child in Room 2 on 9th May, and another child in that room on 10th May. No case occurred in Room 5.

These children were treated by the general practitioner attending the Home and were barrier nursed in their own rooms until May 9th, when the first 7 cases were admitted to hospital. The last case was admitted to hospital on the following day.

The occurrence of the outbreak first came to the attention of the Health Department when the admissions to hospital on the 9th May were noted. Investigations, including obtaining stools from remaining children and staff were then commenced. On the 12th May, *Shigella Sonnei* was isolated from the stools of the patients admitted to hospital.

The sixteen children remaining in the Home were given 125 mgms. of Chloromycetin four-hourly for 24 hours on 11th-12th May, before the isolation of *Shigella Sonnei*.

One of two of the children's contacts was reported to have had relaxed stools, but no diarrhoea or illness occurred in either child or staff contacts.

The results of the stool examinations of the sixteen child contacts remaining in the Home were available on the 13th and 14th May, and showed that six were excreting *Shigella Sonnei* without symptoms. These children were given Chloromycetin, 125 mgms. four-hourly for three days. Second specimens of stools from child contacts were submitted on the 19th and resulted in three more positive results for *Shigella Sonnei*, all in children whose stools previously were negative. These children, too, were given 125 mgms. of Chloromycetin four-hourly for three days.

Stool specimens were obtained from all the fifteen staff members and were negative, with the exception of one nursery assistant, who was found to be excreting *Shigella Sonnei* on the 15th May.

Seventeen out of the twenty-four children in the Nursery were thus found to be affected—eight with symptoms of diarrhoea and nine without. The dates of onset of those children with symptoms cover a period of ten days. This is considerably longer than the usually accepted incubation period for Sonne Dysentery, and suggested infection being spread over a few days.

The finding of only one excretor in the staff, and that a new member, suggested that infection probably was introduced by this nurse, who had had access to all rooms. In this respect, it is interesting to note that no case and only one carrier occurred in Room 5, the toddlers' room, and that these children largely feed themselves.

It was thought that the infection had now died out, but precautionary stooling was continued, and on 15th June, two children were reported positive again, both of whom had been among those originally infected. On the 18th June, a child who had not previously been infected, was reported positive. On the 19th June a nurse was reported positive, and on the 20th and 25th June two more children, both previously infected, were reported positive. These were all admitted to hospital. Once again in July, further children were reported positive, two on the 8th July, one on the 22nd July, and two on the 27th July. These were the last children to be discovered as positive, all those remaining in the Home produced three negative specimens after that date.

The whole outbreak, therefore, covered a period of almost three months from the 1st May to 27th July. Apart from the discovery of two members of the staff who were excreting *Shigella Sonnei*, one factor which may explain the continuation and spread of the infection was the discovery during a surprise visit at night, that a nurse who had been in some ways refractory, but had seemed to be efficient at her duties, was not obeying the rules and was, in fact, changing numbers of babies' nappies without washing her hands, and was collecting these nappies in a heap on the floor, having transferred this heap from room to room as she proceeded. This shocking state of affairs was discovered on the 1st August, and the nurse dismissed; it is noteworthy that no further cases occurred after this date.

*Outbreak of Sonne Dysentery in a Residential School
Controlled by Chloromycetin.*

An outbreak occurred at a residential school for disabled children, and at which there were 45 children in residence ranging from 5 years to 16 years. There were 12 resident staff, and 16 staff coming in daily to help. The first case was a boy of 10 years of age, who had returned from holiday to the school on 15th April, developed a temperature of 103.6 on the 23rd April, and complained of vague pains in the right iliac fossa. He then passed two loose green stools. It was later found that he had been in contact with a case of diarrhoea 8 days before returning to the school; he was isolated and treated by the school doctor with 1½ tablets of Sulphatriad four-hourly for 2 days. On the 25th his temperature was normal, and by the 26th he was almost well although his stools were a little relaxed. A specimen of faeces sent for examination on the 27th was reported positive for *Shigella Sonnei*. On the 27th five other children became ill with diarrhoea, two of them having temperatures of 102, and one having vomiting as well as diarrhoea. On the 29th, a further child became ill with diarrhoea and blood in the stools, and on the 30th two further children became ill with diarrhoea and abdominal pain. Specimens from all these children were sent for examination from the 27th onwards and proved to be positive for *Shigella Sonnei*. All the other children in the school and all members of the staff were rectally swabbed on two separate occasions. From these swabbings it was found that the school nurse and one of the domestic staff were excreting the *Shigella Sonnei*. The domestic

had no symptoms at all, but the school nurse had been unwell for a few days, and had diarrhoea with blood and mucus in the stools on the 29th April.

Ten of the children, without symptoms, were found to be excreting the bacillus. On 30th April all the children and domestic staff, both with and without symptoms, and including the original case, who were found to be excreting the bacillus, were placed on an eight-day course of Sulphatriad, consisting of $1\frac{1}{2}$ tablets four-hourly. In the series of swabs following this treatment, 19 out of the 21 persons involved were still excreting the bacillus. It was then decided to place them all, that is the whole 21 persons who had been positive, on a course of Chloromycetin, at the rate of 75 mgms. per kgm. for 5 days.

Following this course, a series of five rectal swabs taken over a period of two months in the case of 19 of the cases, and in two of the cases three swabs extending over a month were taken. In the last two, the full period could not be covered as the children had been discharged from the school.

Every single swab in every case was negative. The treatment with Chloromycetin had, therefore, been completely effective, and there were no side effects whatever from the use of the drug.

This outbreak also shows the necessity of sending all stools early for bacteriological examination. It also demonstrated that all staff, particularly those in close contact with children, should report any illness, particularly of the diarrhoea type, as soon as it starts.

Food Poisoning.

An outbreak of food poisoning occurred in December following a **Food Poisoning** staff dinner given by one of the large commercial concerns in the City. Altogether 121 persons who ate the dinner were affected.

Investigations showed that undoubtedly this outbreak was caused by staphylococcal toxin type of food poisoning, and it was felt that the stuffing used was the cause of the outbreak, as laboratory findings showed a large number of staphylococcal pyogenes present. It was impossible to find out how the stuffing had become infected.

The families of 71 cases of *Salmonella Typhi* Murium were examined, and 61 symptomless carriers were discovered. 41 of these were negative at the end of the year and the others are still under observation. It is intended to maintain a carrier list for this infection as is done in the cases of Paratyphoid and Typhoid, and to institute periodic examinations of carriers and contacts.

Trichinosis.

Trichinosis

An outbreak of Trichinosis occurred in Liverpool in late October and early November. Following circulation of the General Practitioners and Consultants of the City, 82 cases were traced, and all patients were visited by a doctor from the Health Department. The full details of the enquiry which followed have been published in the British Medical Journal of the 1st May, 1954.

The main features of the outbreak were as follows:—

Source of Infection.

The majority of cases were traced to sausages of a certain local firm, although two quite definite cases had no connection whatever with the firm concerned, or with sausages, and in these persons it was felt that the disease had originated from eating pork. Investigation showed that just under half of the cases habitually ate raw sausages, and the Health Visitors carried out a survey into this habit, enquiring from every family visited whether they nibbled or ate sausages raw. From 3,092 replies received from housewives, it was found that 497, or 16.1 per cent. habitually ate raw sausages. There is no doubt that such a habit is highly undesirable, and the public were warned against it.

Although it was possible to trace back the infection to the Abattoir, lack of adequate records did not allow the tracing of the infection to any farm or piggery, and it was felt that there is a need for a formal record to be kept which would permit such tracing.

With the help and co-operation of all branches of the medical profession, both within the City and in the surrounding areas, it was possible to carry out a full survey of the symptoms presented by all the cases. It was found that many of the cases suffered from after-effects, and three months after the outbreak 16 of these patients were still being visited.

County Borough of Liverpool, 1953.

*Food Poisoning.*Food
Poisoning

1st Quarter	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL
12	29	79	145	265

Outbreaks due to Identified Agents.

Outbreaks due to :—	Total Outbreaks.	Total Cases.
Chemical poisons... ..	—	—
Salmonella organisms	2	8
Staphylococci (inc. toxin)	2	124
C.I. Botulinum	—	—
Other bacteria	—	—
	4	132

Outbreaks due to Undiscovered Cause.

Total outbreaks—2. Total cases—6.

Single Cases.

Agent identified.	Unknown cause.	Total.
108	19	127

TABLE

NUMBER OF CASES OF CERTAIN INFECTIOUS DISEASES REPORTED DURING 1953.

	January	February	March	April	May	June	July	August	September	October	November	December	TOTALS
Scarlet Fever ...	168	178	164	98	100	100	77	31	69	94	110	103	1,292
Measles and German Measles ...	274	494	1385	1968	1797	2232	1276	380	128	128	98	132	10,292
Diphtheria ...	1	—	—	—	—	1	1	—	—	3	1	2	9
Cerebro-spinal Fever	7	2	7	2	7	3	8	1	3	4	4	3	51
Poliomyelitis													
Paralytic ...	—	—	—	—	1	—	4	6	5	7	2	2	27
Non-paralytic ...	1	—	—	—	—	—	—	7	1	—	1	1	11
Pneumonia & Influenzal Pneumonia	76	163	108	56	54	47	26	22	33	51	102	95	833
Dysentery ...	125	97	136	125	109	63	37	14	16	17	12	4	755
Whooping Cough ...	643	741	832	805	575	305	269	171	136	96	87	80	4,740
Food Poisoning ...	4	5	3	4	2	23	37	27	15	9	7	129	265

TUBERCULOSIS

During the year, 1,382 new cases of pulmonary tuberculosis were notified compared with 1,569 last year. The trend of both mortality and morbidity of pulmonary tuberculosis in the City during the past 15 years is shown by the following table:—

TABLE I.
DEATHS FROM RESPIRATORY TUBERCULOSIS.

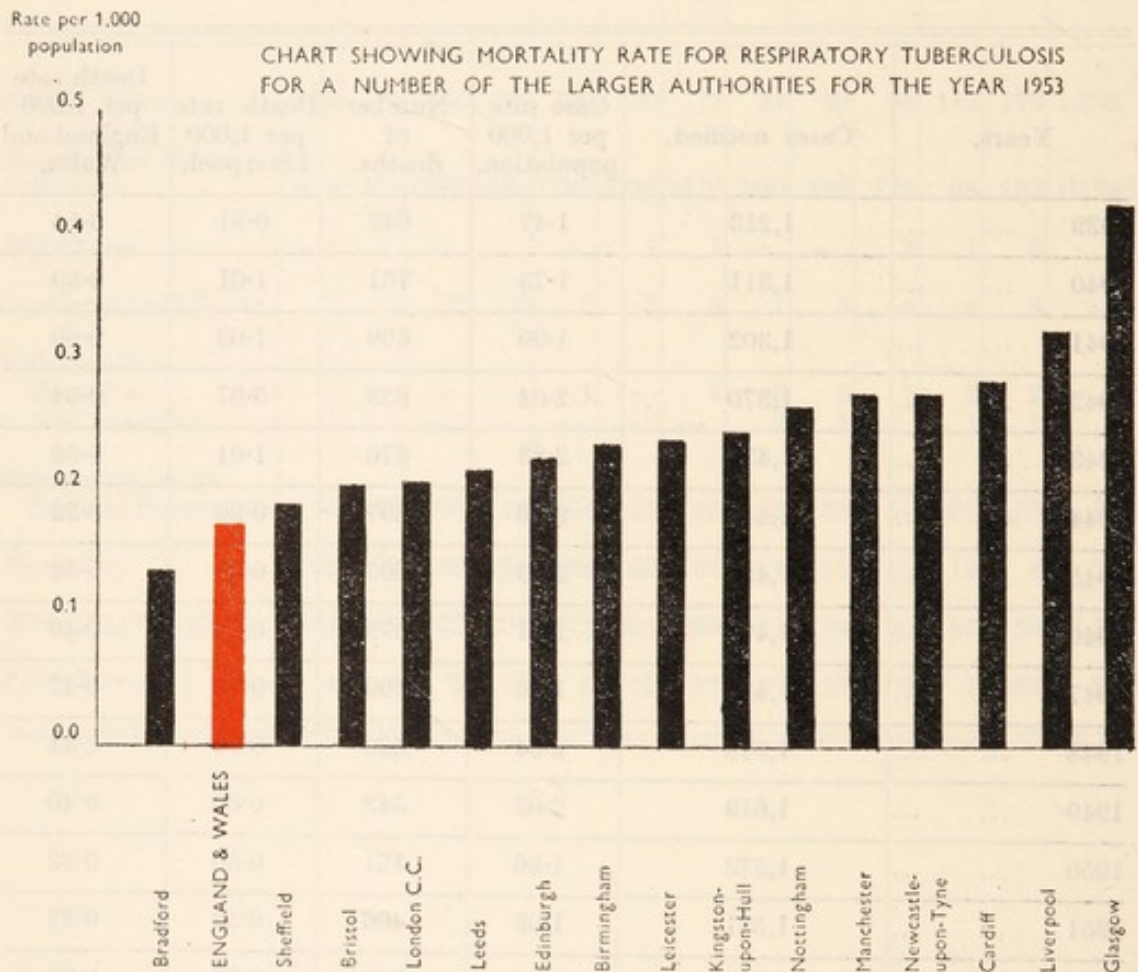
Years.	Cases notified.	Case rate per 1,000 population.	Number of deaths.	Death rate per 1,000 Liverpool.	Death rate per 1,000 England and Wales.
1939	1,213	1.47	647	0.81	0.54
1940	1,311	1.73	761	1.01	0.59
1941	1,302	1.90	699	1.02	0.60
1942	1,370	2.04	653	0.97	0.54
1943	1,479	2.23	670	1.01	0.56
1944	1,441	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
1953	1,382	1.75	258	0.33	0.18

Details of deaths are given in Table V.

It will be seen that in the last five years there has been a marked reduction in the mortality figures with, however, little change in the new notifications. In 1953 for the first time in 4 years did any noticeable reduction in the new notifications occur.

As an innovation in this report a section entitled "The Chest Physician Reports" has been introduced, to enable the chest physicians to comment.

The last year has seen a halting in the falling-off of the death rate from respiratory tuberculosis. A comparison between the death rates of respiratory tuberculosis with other large cities is given in the following diagram which emphasises the situation, and the extent of the problem within the City.



The Problem of Tuberculosis and its Prevention

Solution of the problem lies in the application of commonsense epidemiological rules already well known and understood. Tuberculosis is essentially an infectious disease, and until it is possible to define and control each infectious person, little improvement can be hoped for. Modern chemotherapeutic methods will help, but it must be realised from the preventive point of view such advances can be double-edged weapons. For such drugs have undoubtedly prolonged the life of some chronic excretors of the tubercle bacillus who may, therefore, now be more likely to spread infection.

During the year there has been an extension of B.C.G. vaccination, and soon this will be extended to include all school leavers who give a negative reaction to the Mantoux test. At the same time, it must be realised that any immunisation project can only be part of any preventive scheme.

As part of the planned extension of preventive measures, during the year the Tuberculosis Visitors were transferred whole-time to the Local Authority, although still remaining attached to the Clinics. If the present problem of tuberculosis in the City is to be solved, there is little doubt that the preventive field workers—the Tuberculosis Visitors, will have to be strengthened. Also with the increasing prophylactic services, it is of vital importance that the valuable information obtained is co-ordinated.

Once the infectious patient has been defined, there often still remains the problem of maintaining effective separation and segregation. If this cannot be achieved in the present living accommodation, assistance to obtain satisfactory living accommodation is an essential to prevent spread of infection. The assistance of the tuberculosis patient as regards housing if used to this purpose only, can be an effective measure in controlling the disease. If, however, some form of “omnibus” assistance is given to all tuberculous patients, the speed in separating those highly infectious patients from close susceptible contacts such as children will be lost, and the usefulness of the measure from the preventive angle greatly diminished.

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 II.

**Tuberculosis
Clinics**

TABLE II.

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):	626	531	210	34	37	42	660	568	252	1,488
B.—CONTACTS examined during the year :—										
(a) Definitely tuberculous ...	24	52	51	—	—	—	24	52	51	127
(b) Diagnosis not completed ...	22	18	57	—	—	—	22	18	57	97
(c) Non-tuberculous ...	364	883	2,285	—	—	—	364	883	2,285	3,532
C.—CASES written off the Dispensary Register as :—										
(a) Recovered ...	107	84	32	24	24	20	121	108	52	288
D.—NUMBER OF CASES on Dispensary Register on Dec. 31st 1952 :—										
(a) Definitely tuberculous ...	3,631	3,473	891	280	323	374	3,911	3,796	1,265	8,972
(b) Diagnosis not completed ...	—	—	—	—	—	—	4	7	23	34

Number of attendances of patients at the Dispensaries during the year 1953 ...	37,870	Number of patients under medical treatment at home on 31st December, 1953...	
Number of visits paid by the Tuberculosis Medical Officer to the homes of patients during 1953 ...	2,112	Number of T.B. "plus" cases on Dispensary Register on 31st December, 1953 ...	3,112
Total number of cases vaccinated with B.C.G. during 1953 :—		Total number of visits paid to the homes of patients by Tuberculosis Health Visitors during 1953 ...	24,112
Children ...	1,704		
Others...	—		

Details of the groups of various new cases notified are given in the Statistical Appendix.

"The Chest Physician Reports."

Reports of Chest Physicians

Extracts from reports by Chest Physicians are shown below :—

Dr. Osborne Hughes of the East Chest Clinic writes as follows :—

Although the death rate from tuberculosis has shown a dramatic decline in recent years, the number of patients on the Clinic registers continues to rise, because patients are living longer, and new cases are

being discovered. More contacts are thus at risk, and because of the improved position with regard to milk supplies are reaching adolescence without having had any contact with tubercle bacilli. This susceptible adolescent group calls for regular examination and increases the preventive work required.

The figures for B.C.G. vaccination show an increase. Unfortunately, by the time a patient is diagnosed he has already infected some of his contacts, who cannot then be helped by B.C.G. The vaccination of new-born infants and the extension of the scheme to school-leavers are recommended steps in an attempt to protect the susceptible members of the community before they become exposed to infection. Improved living standards, including re-housing, extra nourishment, and home helps, are all-important factors in assisting and maintaining a patient's recovery. So long as the housing shortage persists, the re-housing of tuberculous families will present a problem.

Tuberculosis always causes economic distress, and although provision for help and National Assistance is now considerably better, there are still cases of hardship ineligible for money from public funds. If money were available at the disposal of Chest Physicians, many of these families could be assisted.

Dr. Crawley, of the South Chest Clinic, makes the following comments on the Tuberculosis Visitors:—

The City employs Tuberculosis (Health) Visitors, whose official responsibility it is to be the guide and friend not only of the tuberculosis patient, but of the whole family of which the patient is a member. The Visitors advise on the measures to be taken to reduce the possibility of the spread of disease, and urge the examination of all contacts of the patient to discover if any other possible source of infection exists in the family, or if infection has spread to any other member. Each Tuberculosis (Health) Visitor is also attached to the Clinic serving her area, and thus she can welcome her patient and discuss the patient's problems with the doctor, indicating where special action may be necessary in the provision of extra nourishment, better housing, and co-operation with the Housing Department, means for more adequate isolation, and also deal with any other problems which, by their solution, will lessen the risk of the spread of the infection.

Every effort which maintains the health of a formerly infectious patient pays dividends in the prevention of the spread of disease. In all matters affecting the tuberculous patient, the closest co-operation is necessary between the Clinic, Sanatorium, Public Health Department, and the patient's own family doctor.

Dr. Gray, of the North Chest Clinic, writes as follows:—

The key to preventive work lies in the hands of the Tuberculosis Visitor but the large number of cases on the register makes it impossible for families to be visited often enough; in fact some are not visited at all in the course of a year.

The provision of suitable living accommodation in hostels for chronic sputum positive cases with no homes of their own, some of whom are living in lodgings, remains an urgent need in this City.

The holding of evening Clinics for patients who have returned to work continues to be a useful part of our after-care service, as the patient is more willing to attend if he does not lose money by it.

Prevention and After-Care.

Prevention and After-Care

The special Sub-Committee of the Health Committee which was appointed last year has continued to interest itself in preventive and after-care problems of tuberculosis. During the year this Sub-Committee paid a visit to the Tuberculosis Colony at Barrowmore Sanatorium, near Chester, where five ex-patients are being rehabilitated. This Colony is undoubtedly providing most useful work for certain selected patients, and all the Liverpool patients interviewed were undoubtedly obtaining great benefit from the Colony.

The Sub-Committee also paid a visit to the Ann Glassey Workshop at Wallasey, and were extremely interested and impressed by the work which is being carried on there in the rehabilitation of the tuberculosis patient.

Tuberculosis Visitors.

Tuberculosis Visitors

The number of Tuberculosis Visitors employed continued to be nine. Three are centred at the North Chest Clinic, two at the East Chest Clinic, two at the South Chest Clinic, one at the Central Clinic, and one dividing her time between the South and Central Clinics. These

Visitors paid 24,093 home visits. 3,756 persons were examined by the Chest Physicians as contacts of known infectious cases, and evidence of active disease was discovered in 3·4 per cent.

The ratio of the number of contacts examined per new case at the four Chest Clinics is as follows:—

East Chest Clinic	...	...	2·27
North Chest Clinic	...	...	2·51
South Chest Clinic	...	...	2·43
Central Chest Clinic	...	...	2·91

B.C.G. Vaccination.

The number of B.C.G. Vaccinations carried out by the Tuberculosis Medical Officers at the four Chest Clinics within the City was 1,704 compared with 1,707 in the preceding year. The vaccine is considered of value to those who have not received a primary infection as demonstrated by a negative reaction to the tuberculin test. The persons vaccinated at the clinics were those who were known to be in contact with known cases yet negative to the tuberculin test.

**B.C.G.
Vaccination**

The field for B.C.G. vaccination will be increased considerably with the Local Authority's proposed scheme for the vaccination of school leavers.

Mass Radiography.

The static Mass Radiography Unit at Hood Street, Liverpool, administered by the Liverpool Regional Hospital Board, deals mainly with persons within the City Boundary. Persons referred to this unit are derived from three sources:—

**Mass
Radiography**

- (a) Persons referred from Firms in the City and adjacent areas.
- (b) National Service Recruits.
- (c) Cases referred by General Practitioners.

Out of a total of 50,882 examinations made at this unit during 1953, 25,723 were referred by General Practitioners mainly within the City. This General Practitioner Service was inaugurated in 1946 when 8,835 were referred, and has increased yearly to the present number, 27,723.

The mobile units of the Regional Hospital Board have co-operated to the full with the Medical Officer of Health's Department by arranging

visits to schools and other establishments whenever a case of tuberculosis has been discovered, with a view to the detection of contact cases. Routine examinations of secondary schools have also been carried out.

In addition (1) all prospective employees in the City Nursing Staffs are X-rayed by the static unit at Hood Street before their engagement. (2) Members of the City Engineer's Staff who have been exposed, by reason of their occupation, to industrial respiratory infection such as silicosis, are referred to this unit for X-ray. (3) All candidates for employment as school teachers are automatically referred before appointment, and (4) the same procedure applies in the case of recruits for the Liverpool City Police.

Tuberculosis Welfare.

During the year 1953, 788 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.

Rehabilita- tion

Summary of cases dealt with during the year 1953:—

Total cases referred by Ministry of Labour to Tuberculosis

Officers	422
----------	-----	-----	-----	-----	-----	-----	-----	-----

(a) Examined and found fit for light, part-time or full-time employment	374
---	-----	-----	-----	-----	-----	-----	-----

(b) Not fit for employment	21
----------------------------	-----	-----	-----	-----	-----	----

(c) Failed to attend for examination	16
--------------------------------------	-----	-----	-----	-----	----

(d) Certified as non-tuberculous	11
----------------------------------	-----	-----	-----	-----	----

Letters sent by Tuberculosis Welfare Section to patients offering advice and assistance to obtain suitable employment	52
---	-----	-----	-----	-----	-----	-----	----

Number availing themselves of this assistance and referred to Ministry of Labour	15
--	-----	-----	-----	-----	-----	----

Actual number of patients reported by Ministry of Labour as placed in employment	73
--	-----	-----	-----	-----	-----	----

Total number of cases dealt with under Rehabilitation Scheme by Tuberculosis Welfare Section	472
--	-----	-----	-----	-----	-----	-----

In addition to the persons shown above, five patients are undergoing rehabilitation at the Tuberculosis Colony, Great Barrow, Chester.

These patients have been in the Colony since January 1951, June 1951, September 1952, September 1952, and October 1953, respectively. All are making very good progress.

Notification and Deaths.

During the year, 23 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 III.

The contacts of such persons were called in for examination in the usual way.

TABLE III.

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 ...	258	14	4	1	1	0	8
Non-Respiratory ...	26	9	3	3	1	0	2

It is pleasing to note that the number of deaths of non-notified cases of respiratory tuberculosis continues to fall.

Deaths from Tuberculosis.

The number of deaths from respiratory and non-respiratory tuberculosis in Liverpool from 1939 to 1953, together with the number of new cases notified and the death rates which prevailed in England and Wales are given in Tables I and IV where case rates for Liverpool are shown.

TABLE IV.

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
1953	123	0.16	26	0.03	0.02

TABLE V.

AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1953.

Age Periods.	RESPIRATORY		NON-RESPIRATORY	
	Males.	Females.	Males.	Females.
0—	1	—	1	—
1—	—	—	5	1
5—	—	—	—	2
10—	—	1	—	—
15—	2	5	1	—
20—	4	7	1	1
25—	15	25	2	1
35—	20	18	1	1
45—	43	14	1	3
55—	49	7	1	—
65—	39	8	2	2
TOTALS	173	85	15	11

VENEREAL DISEASES WELFARE.

The treatment of venereal disease is the responsibility of the Liverpool **Administration** 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 all figures show a rapid decline from 1946 and are actually lower than the immediate pre-war year of 1938.

ACUTE GONORRHOEA.

	1938	1946	1952	1953
Males	1,422	3,112	1,026	710
Females	141	422	133	128

EARLY SYPHILIS.

	1938	1946	1952	1953
Males	147	655	80	65
Females	34	331	18	13

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.

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	2	109	111
No. of cases traced and interviewed	1	34	35
No. of cases not yet interviewed	—	3	3
No. of cases who reported for investigation	—	31	31
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 ...	—	2	2
No. of cases untraced, due mainly to insufficient information...	—	72	72
No. of cases who refused to attend for investigation ...	1	—	1

The issue of "contact slips" to patients for the use of their potentially infected partners has brought under observation 44 males and 39 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	1,154	924	129	2,207
No. of letters despatched	1,245	1,581	225	3,051
No. of cases reporting after receipt of letter... ..	558	617	91	1,266
No. of letters returned—Dead Letter Office	91	43	3	137
No. of cases traced and transferred	12	3	2	17

TABLE C.

	Male	Female	Con- genital	Total
No. of cases visited	539	486	81	1,106
No. of visits made	1,647	1,517	288	3,452
No. of cases attending following visits	231	294	64	589
No. of cases promising to attend but failing to do so	66	36	11	113
No. of cases removed, or not known at address given	108	85	4	197
No. of cases not contacted, no access, away from home, etc.	113	28	3	144
No. of cases who refused to re-attend	14	28	—	42
No. of cases removed to other districts, and trans. for follow-up	6	8	2	16
No. of cases deceased	1	4	—	5

IMMUNISATION AND VACCINATION.

Diphtheria Immunisation.

Diphtheria Immunisa- tion

Diphtheria immunisation is carried out at Child Welfare Clinics, Day Schools, and by general practitioners of the City. The total number of children immunised for the first time during 1953 was 11,163 and 8,815 received a booster inoculation. The age groups of the children inoculated during the year and an estimate of the percentages of the child population immunised during the past five years are given in the table below.

Diphtheria Immunisation

	Under 1 year.	1-4 years.	5-9 years.	10-14 years.	Total under 15 years.
Primary Inoculations completed in 1953	3,820	2,963	4,118	262	11,163
Booster Inoculations completed in 1953	—	101	7,902	812	8,815
Percentage of child population immunised during past five years.	*24.6%	51.7%	42.5%		—
Percentage of child population immunised	45.9%		81.0%		

*The maximum percentage of immunisation possible in children under one year, where immunisation is given at about eight months, is 33%.

It will be seen that it is now estimated that 81.0 per cent. of the child population aged 5-14 years of age are at present protected against diphtheria by immunisation and that 45.9 per cent. of the children aged 0-4 years are similarly protected.

A complete table of the number of immunisations, primary and booster, carried out in the City, and the exact places where these immunisations were given is contained on page 40. It will be seen that from 1948-1950 there was a rapid falling-off of the number of total immunisations, but that since that date the figures have remained fairly constant. This is satisfactory, as it is particularly important that everything shall be done to maintain the present high standard of immunisation in the City.

Whooping Cough Immunisation.

During the year an immunisation campaign against this disease was commenced, and the first inoculations were given during March. The same arrangements used for diphtheria immunisation were carried out, and whooping cough immunisations were offered at Child Welfare Clinics and by general medical practitioners. During the year 5,416 children had been immunised under this scheme.

At the end of the year, in conjunction with the Medical Research Council, a whooping cough trial was commenced comparing the value of the Kendrick type of vaccine then being used, and a new type of American vaccine in which the bacterial bodies had been lysed by high frequency sound waves. It is hoped that this trial will continue during the next two years.

The response of the population to the offer of immunisation against whooping cough has been encouraging, and although the giving of diphtheria and whooping cough immunisation separately requires five injections, there has not been a marked falling-off in the numbers of children receiving diphtheria immunisation.

Vaccination.

Vaccination of infants against smallpox is carried out by Special Clinics and by general practitioners in their own surgeries. The following table illustrates the number of births and the number of primary vaccinations given during the past three years.

	1951	1952	1953
Births	15,593	15,839	16,022
Number of primary vaccinations ...	9,385	8,240	7,605
Number of re-vaccinations ...	1,346	1,777	1,222
Number insusceptible ...	115	69	57
	<hr/> 10,846	<hr/> 10,086	<hr/> 8,884
Number vaccinated at clinics ...	5,562	4,174	3,884
Number vaccinated by private doctors	5,284	5,912	5,000
	<hr/> 10,846	<hr/> 10,086	<hr/> 8,884

It will be seen that there has been a steady reduction in the number of primary vaccinations carried out during this time, and it is very important that everything is done to halt this reduction, and to ensure that more young children are vaccinated.

NUMBER OF PRIMARY DIPHTHERIA IMMUNISATIONS.

Where or by whom immunised.	1925- 1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
Immunisation Clinics	33397	9164	8266	9292	8902	8482	9824	8219	5973	6442	5316	4111
Schools	54701	14520	5837	7178	8862	5709	5510	3471	2858	2941	3307	3307
Medical Practitioners	1507	121	133	75	82	40	688	1617	2066	2396	2579	2579
Miscellaneous	10215	392	385	414	334	269	208	228	322	283	109	109
TOTALS	99820	24197	14621	16959	18180	14500	16230	13535	11219	12062	11311	11311
GRAND TOTAL									263,810			

In addition to the above immunisations, 8815, previously immunised children received a reinforcing injection either at school or at one of the clinics during the year.

MIDWIFERY SERVICE.

During the year, 294 midwives gave the required notice under Section 15 of the Midwives Act, 1951, of their intention to practise midwifery in the City.

Statement of Notifications of Live and Still Births Received During the Year 1953.

	Live Births.	Still Births.	Total.	Still Births per cent. of Total.	Statistics
Midwives (Municipal)	3,324	37	3,361	1.1	
„ (Independent)	6	—	6	—	
Medical Practitioners	1,026	15	1,041	1.4	
Liverpool Maternity Hospital ...	2,739	78	2,817	2.7	
Other Hospitals	9,766	322	10,088	3.2	
District Homes	1,089	8	1,097	0.7	
	17,950	460	18,410	2.5	

The midwives continue to work in close co-operation with the general practitioners. When a domiciliary midwife books a patient, a formal note is sent to the patient's private doctor to ascertain whether he wishes to supervise the pregnancy. If he does, he is asked to state whether he wishes to be present at the confinement or merely to be called in case of emergency.

Medical Assistance.

Under the rules of the Central Midwives Board, midwives sought medical aid in 1,285 cases—908 mothers and 377 infants.

Consultant Services.

The total number of occasions on which consultant obstetricians were called in connection with obstetrical emergencies or complications was 62.

Emergency Flying Squad.

The obstetric flying squad was called in 37 cases and in 30 of these blood transfusions were given.

MUNICIPAL MIDWIFERY SERVICE.

At the end of 1953, the staff of the Municipal Midwifery Service comprised 1 medical and 3 non-medical supervisors responsible for the supervision of all domiciliary midwives in the City, including 51 full-time and 3 part-time municipal midwives.

The midwives continued to investigate home conditions of cases referred by the hospitals where the mothers were obstetrically suitable for home confinement but had applied for admission to hospital.

The work of the municipal midwives is summarised as follows:—

DELIVERIES.	1951	1952	1953
Midwifery cases	2,660	3,135	3,232
Maternity cases	543	640	652
	3,203	3,775	3,884

Average case-load per midwife in 1953 = 74.

Special Cases Visited in Addition to the Midwives' Ordinary Case Load.

Maternity patients discharged from hospital before the 9th day	2,958
Maternity patients discharged from hospital after the 9th day but before the 14th day	4,290
Cases discharged from hospital after the 14th day (Prematurity)	421
Domiciliary cases after the 14th day (Prematurity)	595
Cases referred by hospitals for investigation of home conditions	2,026
	<hr/> 10,290 <hr/>

Emergency Ambulance Calls.

During the year, the midwives were called out by the Ambulance Service to 80 cases.

Analgesia.

Analgesia

All the midwives in this City are qualified to administer analgesia in accordance with the requirements of the Central Midwives Board. Gas and air has been administered to an increasing number of mothers during the past three years.

GAS/AIR ADMINISTERED.						1951	1952	1953
As Midwives	...	...	...	...	...	1,595	1,988	2,430
As Maternity Nurses	...	...	...	...	...	430	492	344
						2,025	2,480	2,774

The number of cases receiving Pethidine has also increased, as is shown in the following Table.

PETHIDINE GIVEN.						1951	1952	1953
As Midwives	...	...	...	...	...	805	1,153	1,455
As Maternity Nurses	...	...	...	...	...	218	312	233
						1,023	1,465	1,688

Visits paid by the Administrative Staff during 1953 are summarised as follows:—

Routine and special visits to midwives	...	...	1,302
Special visits to cases of puerperal pyrexia, etc.	...	...	535

Prevention of the Spread of Infection.

Eleven 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 1,016. Of these, 69 occurred in the practice of midwives and in 45 cases the services of a district nurse were provided.

Part II Training of Midwives.

For some years, the Local Health Authority had under consideration a scheme for setting up a Part II midwifery training school in Liverpool. It was felt by the hospital authorities that if pupil midwives could complete their midwifery training within the City, it might keep a potential source of trained staff from filtering to other areas.

Training of
Midwives

Following discussions with the Central Midwives Board and Sefton General Hospital, the Medical Officer of Health was able to offer facilities for the establishment of a Part II midwifery training school and on 1st June, 1953, two pupils from Sefton General Hospital were accepted for training. By 31st December, five pupil midwives had completed their training. Three of these returned to Sefton General Hospital and the other two applied for training with the Liverpool Queen Victoria District Nursing Association.

The pupil midwives receive three months' practical midwifery training from municipal midwives approved by the Central Midwives Board. Theoretical teaching and administration of the training school is carried out by one of the non-medical supervisors of midwives.

It is hoped that from this small beginning, a Part II midwifery training school worthy of the teaching traditions of the City may be established.

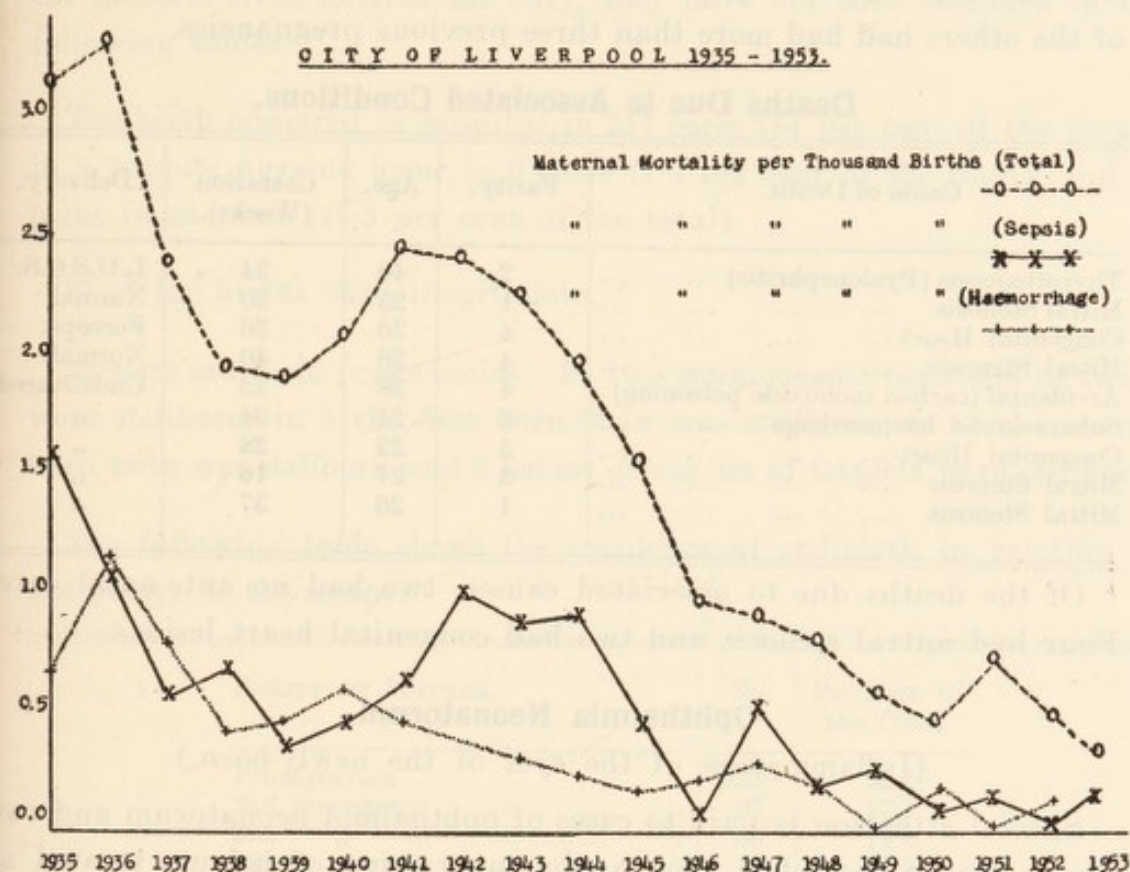
Maternal Mortality.

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

Year.	BIRTHS REGISTERED.			MATERNAL MORTALITY.	
	Live Births.	Still Births.	Total Births.	Deaths.	Rate per 1,000 Total Births.
1930	18,881	774	19,655	75	3.81
1931	18,626	722	19,348	55	2.84
1932	18,149	827	18,976	51	2.69
1933	16,929	680	17,609	60	3.41
1934	17,593	685	18,278	51	2.79
1935	17,347	749	18,096	59	3.26
1936	17,403	708	18,111	64	3.52
1937	16,728	618	17,346	40	2.31
1938	16,175	639	16,814	33	1.96
1939	15,614	631	16,245	29	1.86
1940	15,016	519	15,535	31	2.01
1941	13,291	508	13,799	32	2.42
1942	13,729	552	14,281	34	2.38
1943	14,432	485	14,917	34	2.27
1944	15,412	492	15,904	31	1.95
1945	14,784	431	15,215	23	1.51
1946	18,528	539	19,067	19	0.99
1947	19,904	514	20,418	17	0.83
1948	17,695	479	18,174	14	0.77
1949	16,551	358	16,909	9	0.53
1950	16,110	375	16,485	7	0.42
1951	15,593	396	15,989	10	0.62
1952	15,839	400	16,289	7	0.43
1953	16,022	394	16,416	5	0.30

Maternal
Mortality

Maternal mortality in this City continues to be low. The high standards of the midwives and their supervisors, without doubt, contributes to this good record. The following chart shows remarkable achievement.



Four outstanding factors contributed to the great reduction in the number of maternal deaths during the past 16 years:—

1. The appointment of municipal midwives in 1937;
2. The introduction of chemotherapy in 1937-38;
3. The introduction of anti-biotics in about 1945;
4. The inception of the flying squad in 1948.

During 1953 there were five deaths directly due to child-bearing and nine due to associated causes.

Deaths Due to Pregnancy and Child-Bearing.

Cause of Death.	Parity.	Age.	Gestation (Weeks).	Delivery.
Pre-eclampsia (cerebral haemorrhage) ...	1	22	34	Forceps.
Abortion (Sepsis)	2	18	—	—
Abortion (cortical necrosis)	9	39	16	—
Abortion (air embolism)	3	28	—	—
Ruptured ectopic	4	33	—	—

Of the five cases due directly to child-bearing, four had no ante-natal care of any kind. The youngest was 18 years of age, two were between 20 and 30 years of age and two were between 30 and 40 years of age. One was a primipara and one was having her ninth pregnancy. None of the others had had more than three previous pregnancies.

Deaths Due to Associated Conditions.

Cause of Death.	Parity.	Age.	Gestation (Weeks).	Delivery.
Thyrototoxicosis (Pyelonephritis) ...	2	40	34	L.U.S.C.S.
Mitral Stenosis ...	1	23	30	Normal.
Congenital Heart ...	4	26	36	Forceps.
Mitral Stenosis ...	4	26	40	Normal.
Accidental (carbon monoxide poisoning)	4	30	32	Undelivered.
Subarachnoid haemorrhage ...	2	24	34	"
Congenital Heart ...	3	22	28	"
Mitral Stenosis ...	3	27	16	"
Mitral Stenosis ...	1	26	37	"

Of the deaths due to associated causes, two had no ante-natal care. Four had mitral stenosis and two had congenital heart lesions.

Ophthalmia Neonatorum.

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

Ophthalmia Neonatorum

Special attention is paid to cases of ophthalmia neonatorum and two nurses devote their full time to the supervision of infants treated at home.

Number of cases brought to the notice of the Department during the year (including 150 notified cases) ... 746

Of these, 636 were mild and 110 severe cases.

In no case was vision either lost or impaired.

Three cases were treated in hospital.

Number of visits paid by the ophthalmic nurses ... 6,501

Arrangements are made with the City Bacteriologist for the examination of discharge from inflamed eyes in the newly-born in special cases. Out of 746 cases traced, 3 were found to be due to gonorrhoea.

Nursing Homes.

The nursing homes on the register at the end of the year numbered 8, the approximate number of beds being 139. Babies born in nursing homes numbered 411 including 4 twin births.

Stillbirths.

The number of stillbirths notified during the year was 460. Enquiries **Stillbirths** were made into the circumstances of all stillbirths but since in 82 cases the mothers lived outside the City, they have not been included in the following tables.

The birth occurred in hospital in 317 cases (84 per cent of the total), in a private nursing home in 6 cases (1·5 per cent of the total), and at home in 55 cases (14·5 per cent of the total).

27 of the births were illegitimate.

22 were multiple pregnancies. In two confinements both sets of twins were stillborn, in 5 the first born twin was stillborn, in 14 the second born twin was stillborn and 2 babies of one set of triplets were stillborn.

The following table shows the incidence of stillbirth in relation to the parity of the mother.

PARITY OF MOTHER.	No.	Per cent. of the Total.
Primigravida	122	32·5
2nd pregnancy	67	17·4
3rd „	55	14·5
4th „	45	11·9
5th „	27	7·1
6th „	15	3·9
7th „	16	4·2
8th „	9	2·3
9th „	6	1·5
10th-16th pregnancy...	14	3·7

STAGE OF PREGNANCY AT WHICH STILLBIRTH OCCURRED.

28-31 weeks ...	78	...	20·9%
31-35 „ ...	60	...	15·9%
36-40 „ ...	219	...	58·4%
Over 40 „ ...	19	...	5·0%

The following table indicates the relationship between rhesus factor and stillbirths and suggests that further efforts should be made to have blood tests done on all pregnant women.

Rhesus Positive	211	55·8%
Rhesus Negative	45	11·9%
Rhesus Negative antibodies demonstrated ...	19	4·0%
No Rhesus data available	101	26·7%
		64 } 16·9%

MATERNITY AND CHILD WELFARE CLINICS.

Maternity and Child Welfare Clinics

At the end of 1953, medical staff at the clinics comprised 4 full-time Assistant Medical Officers and 25 part-time medical officers (including 2 consultants and 1 hospital registrar).

During the year, health talks with practical demonstrations and visual aids were given on subjects of interest and importance to the family. Relaxation and exercises in preparation for natural child-birth, under the supervision of a physiotherapist, were introduced in the ante-natal clinics and were received by the mothers with interest.

The following statistics relate to the year 1953:—

Ante-natal and Post-natal Clinics.

Total number of centres at which ante-natal clinics were held	23
Number of clinic sessions held per week	38
Number of new cases attending ante-natal clinics	5,744
Total attendances at ante-natal clinics	31,008
Total attendances at post-natal clinics	947

Child Welfare Clinics.

Total number of centres at which child welfare clinics were held	23
Number of clinic sessions held per week	44
Number of new cases: Under 1 year of age	8,617
Aged 1-5 years	378
Total attendances: Under 1 year of age	74,349
Aged 1-2 years	8,657
Aged 2-5 years	6,747

Facilities for immunisation against diphtheria and whooping cough are available at all child welfare clinics and arrangements have been made with the general practitioners in this City for vaccination and immunisation against diphtheria and whooping cough.

Dental Care.

Dental Care

Dental inspection and treatment of expectant and nursing mothers and children under the age of 5 years was provided by the School Health Service on behalf of the Health Committee. Treatment was carried out at 9 dental sessions in 7 centres per week.

Radiographs, when required, have been carried out by the radiologists of the local hospitals, and the Medical Officer of Health 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 clinic patients suffering from abnormal conditions.

In 1948, Mr. Geoffrey Slack, O.B.E., T.D., F.D.S.R.C.S.(Eng.), D.D.S. (N.U.), Dipl.Bact., Senior Lecturer in Preventive Dentistry, School of Dental Surgery, University of Liverpool, kindly undertook to examine the teeth of children attending the day nurseries. He has written the following Report.

Dental Survey

In May, 1952, a series of four surveys of the dental condition of the day nursery children was completed. These examinations have been carried out, where possible, annually, with the intention of observing the incidence of dental disease over a period of many years. The data is analysed periodically for presentation.

Materials and Method.

All the day nursery children were examined who have teeth present, except during the 1948 and 1949 examinations when only those children who were expected to remain some time were examined.

Dental Examinations. All examinations were carried out by the writer using mirror and probe in a good light. Cavities in the teeth were graded 1, 2 and 3, according to size. The condition of the gums was also noted.

Examinations were always carried out in the presence of as many children as possible, beginning with the older children. Only four toddlers refused to be persuaded. Credit is due to the kind but firm handling by the Matrons and their staffs. The babies were examined most conveniently by the nurse and the writer sitting facing one another and placing the baby on their knees on his back with his head towards the examiner.

Numbers Examined. The number of children examined is given in Table I.

TABLE I.

Age.	CHILDREN EXAMINED.				
	Dec., 1948.	May, 1949.	June, 1951.	May, 1952.	Total.
Under 2 ...	33	21	151	152	357
Under 3 ...	146	136	153	197	632
Under 4 ...	117	149	134	148	548
Under 5 ...	28	52	156	136	372
TOTAL ...	324	358	594	633	1,909

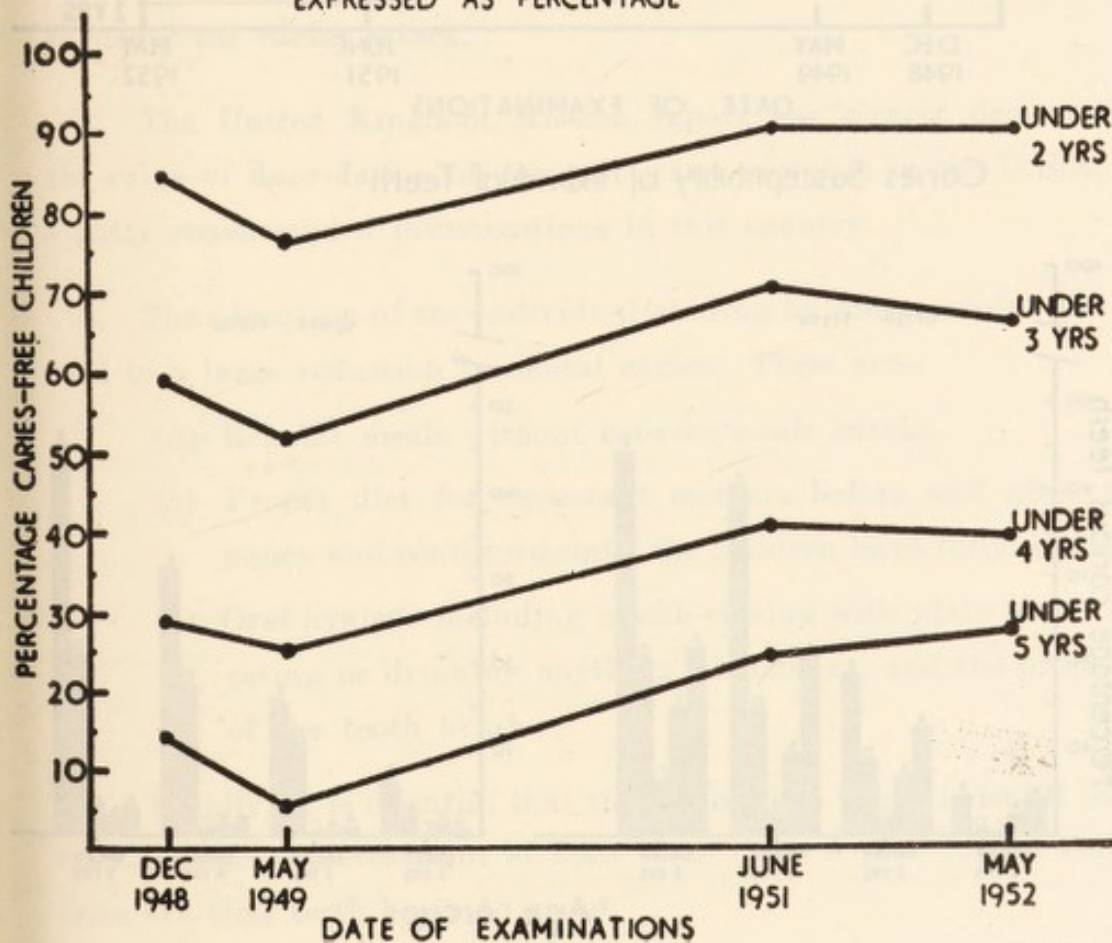
Results.

The results have been prepared in graphic form as follows:—

- (i) Percentage number of caries-free children (Fig. 1).
- (ii) Average d.e.f. (decayed, extracted, filled) teeth per child (Fig. 2).
- (iii) The susceptibility of individual types of teeth to dental caries by age groups with upper and lower teeth shown separately (Fig. 3).

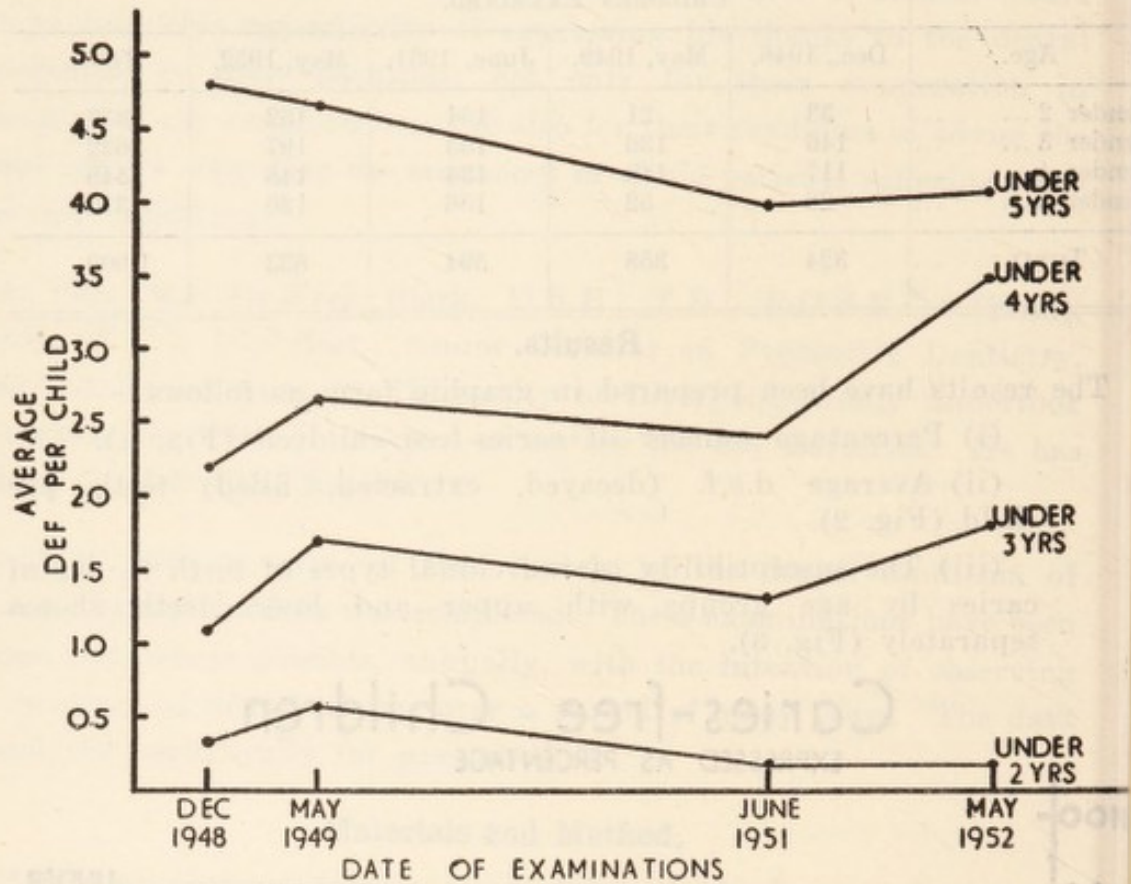
Caries-free Children

EXPRESSED AS PERCENTAGE

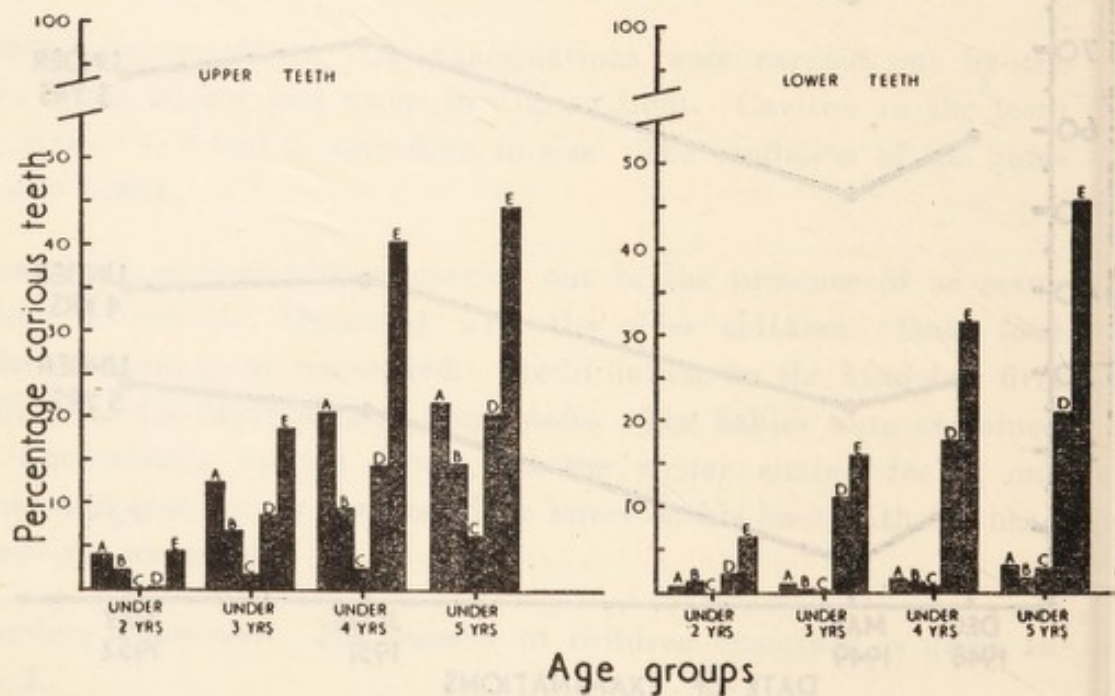


CARIES INCIDENCE

AVERAGE D.E.F. PER CHILD



Caries Susceptibility of Individual Teeth



It is particularly noticeable that there is a sudden increase in dental caries incidence in May, 1949, which may or may not be related to the period of the de-rationing of sweets just prior to that time.

In Figure 3, the extent of the attack of dental caries can be appreciated. For this Figure, the data of the four surveys has been pooled. It is tragic that so many teeth are diseased even before school age. The embarrassment to the school dental service is considerable and in many cases the damage is irreparable and wholesale extraction the only course. Unfortunately, the early extraction of primary teeth leads to overcrowding and malocclusion so that many of these children are potential dental cripples already. Irregularities of tooth alignment leads also to food stagnation, predisposing to caries, and the creation of septic foci. A menace to general health without doubt exists.

Conclusions.

Present day knowledge of dental caries offers only three methods of reducing the caries attack.

1. The United Kingdom Mission report has clearly demonstrated the value of fluoridation of domestic water supplies in the U.S.A. and rightly recommended investigations in this country.

2. The education of the individual abiding by some simple rules will lead to a large reduction in dental caries. These are—

- (a) Regular meals without between-meals snacks.
- (b) Proper diet for expectant mothers before and after pregnancy and continued until the children have fully developed.
- (c) Oral hygiene including mouth-rinsing with plain water after eating or drinking anything whatsoever, and the proper use of the tooth brush.

3. Finally, it is essential that there should be regular dental inspections, advice and treatment at least three times a year for all children from the time teeth begin to erupt.

HEALTH VISITING.

Health Visiting

At the end of the year, the health visiting staff comprised:—

- 1 Superintendent Health Visitor.
- 2 Deputy Superintendent Health Visitors.
- 1 Tutor to the Student Health Visitors.
- 8 Clinic Superintendents.
- 52 Health Visitors.
- 8 Nurses engaged temporarily to assist the health visitors, mainly in the clinics, but also with routine visiting;

and other staff attached to the health visiting team included:—

- 1 Physiotherapist.
- 1 Medical Research Worker engaged in collecting data relating to deaths due to cancer.
- 5 Dried Milk Distributors and 2 Clinic Clerks.
- 2 Nurses undertaking the home visiting of notified cases of measles.

During 1953, the health visitors, with their expert knowledge of the care of children, continued their work as health teachers in the homes as well as in the clinics and gave advice to parents as to the best means of promoting their own health and welfare and that of their families. To expectant mothers, advice was given on their general mental and physical well-being, preparation for confinement and the facilities available for social help required from either official or voluntary sources.

In addition, during the year health visitors have increased the scope of their work and have undertaken all visits to contacts of poliomyelitis. During the trichinosis outbreak, the health visitors carried out a spot survey to determine the number of housewives in the habit of eating raw sausage meat, and discovered out of 3,412 enquiries that no fewer than 16·1 per cent nibbled or ate sausages raw. A considerable amount of the follow-up work on the trichinosis cases was undertaken by health visitors. Health visitors have also been encouraged to undertake more work in connection with the aged in the community and, during the year, a system was introduced to ensure the closest possible co-operation between the health visitors and welfare visitors of the welfare department.

Research work continued and the health visitors carried on their enquiries into virus diseases during pregnancy and a survey relating to the growth of children under 5 years of age, both at the instigation of the Ministry of Health. They also took a very large part in the collection of data for the North Wales, West Cheshire and South West Lancashire Cancer Research Committee, 1,703 cases being investigated.

Health visiting presents a great opportunity for practical social work and advantage was taken of this by D.P.H., D.C.H. and medical students, district nurses, student nurses, domestic science students and overseas visitors by observing the work of the health visitors both in the clinics and on the district.

The district work of the health visitors during 1953 is summarised as follows:—

Visits to expectant mothers	6,802
Visits to infants following notification of birth	14,927
Total visits to infants during the 1st year of life	93,507
Total visits to infants aged 1 to 5 years	40,714
Visits to children discharged from hospitals	2,400
Visits to special cases (Trichinosis Enquiry)	3,536
Visits to cases of infantile diarrhoea	287
Visits to cases of measles	11,998

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.

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.

**Premature
Infants**

Of the infants born in the City during 1953, 1,304 were premature, i.e. their birth weight was $5\frac{1}{2}$ lbs. or under. Of these, 1,019 were born in hospital; 276 were born in their own homes and 9 were born in private maternity homes.

Special Treatment for Pre-School Children.

By arrangement with the Education Committee, children under the age of 5 years suffering from defective vision or orthopaedic defects may receive treatment and advice at the School Health Department's special clinics. During the year, 552 cases were referred to the School Health Service, namely:—

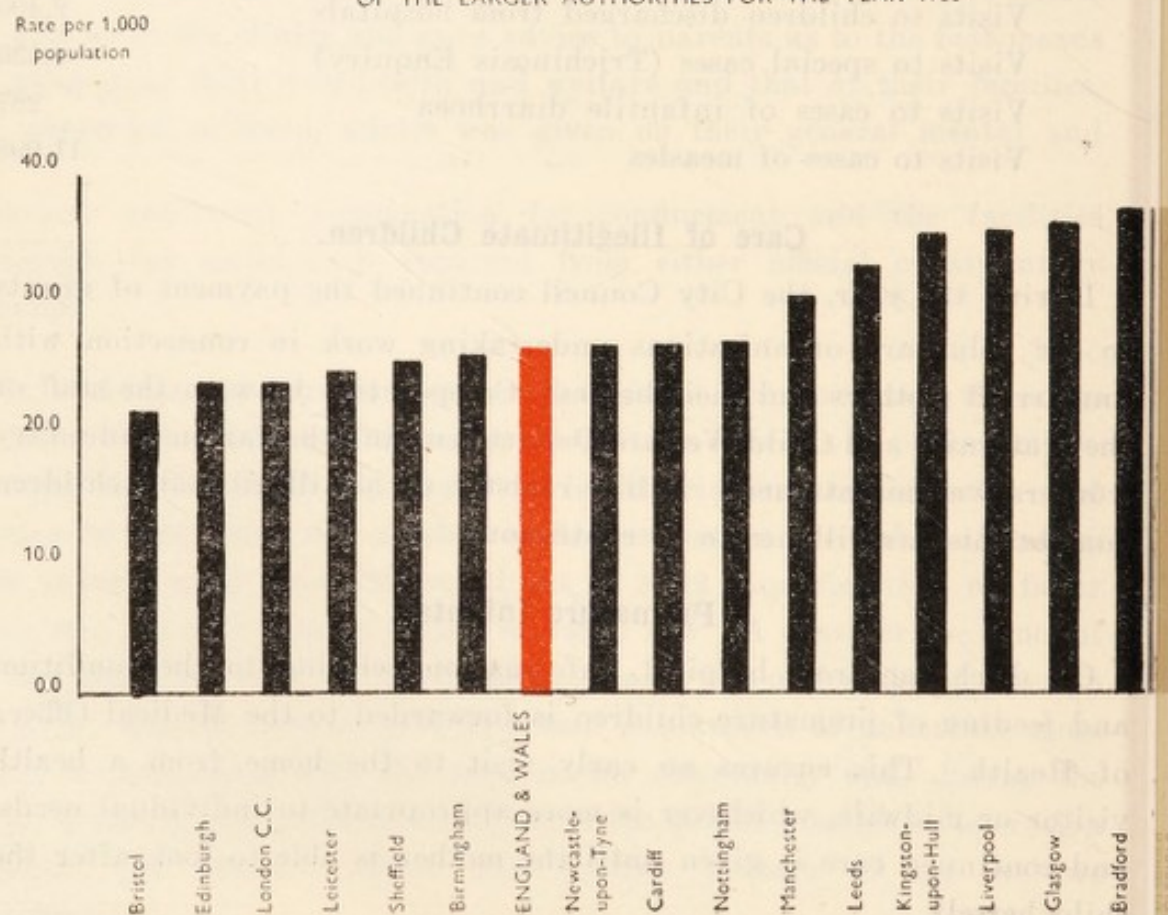
Defective Vision	...	...	...	329
Orthopaedic defects	...	...	...	223

Infant Mortality.

Infant Mortality

There has been no diminution in the infant mortality rate during 1953. This rate of 35 is still considerably higher than the comparable figure of 27 for England and Wales.

CHART SHOWING INFANT MORTALITY RATE FOR A NUMBER
OF THE LARGER AUTHORITIES FOR THE YEAR 1953



While the infant mortality rate has shown a steady decline during the past ten years, the figure is by no means satisfactory and the neo-natal mortality rate has shown a much slower fall than the infant mortality rate. For this reason special attention has been given to the causes of death in children under 4 weeks old.

During the year the number of deaths of children under 28 days old (Neo-natal Deaths) amounted to 349, equal to a rate of 21·8 per 1,000 live births registered.

Special enquiries were made into the circumstances of these deaths and the following Table summarises the available information collected.

INFANTS WEIGHING $5\frac{1}{2}$ LBS. OR UNDER AT BIRTH.

(56·71 per cent of total neo-natal deaths.)

Cause of Death.	No. of Deaths.	Born in Hospital and Died in Hospital.	Born at Home and Died at Home.	Born at Home and Transferred to Hospital.
Prematurity only... ..	94	78	5	11
Prematurity Associated with :—				
Atelectasis	50	42	1	7
Respiratory Disease	17	13 + 1 (Nursing Home)	1	2
Congenital Defects	9	9	—	—
Cerebral Haemorrhage	13	11	1	1
Asphyxia	2	2	—	—
Icterus neonatorum	2	2	—	—
Meningitis	2	1	—	1
Peritonitis	1	1	—	—
% Total of Deaths in this group ...		83·7	4·3	11·6

INFANTS WEIGHING OVER 5½ LBS. AT BIRTH.

(43.29 per cent of total neo-natal deaths.)

Cause of Death.										No. of Deaths.
Atelectasis	...	...	...	...	...	...	...	...	...	22
Respiratory Disease	...	...	...	...	...	...	...	...	...	33
Congenital Defects	...	...	...	...	...	...	...	...	...	29
Cerebral Haemorrhage	...	...	...	...	...	...	...	...	...	22
Asphyxia	...	...	...	...	...	...	...	...	...	20
Diseases of the Blood—										
Haemorrhagic disease	...	...	...	...	...	...	...	...	...	2
Haemolytic disease	...	...	...	...	...	...	...	...	...	6
Icterus neonatorum	...	...	...	...	...	...	...	...	...	1
Meningitis	...	...	...	...	...	...	...	...	...	7
Unclassified—										
Septicaemia (with pneumonia)	...	...	...	...	...	...	...	...	...	2
Haemorrhage from umbilical cord due to want of attention at birth	...	...	...	...	...	...	...	...	...	1

Many of these infants come from the so-called "Problem Families" who seldom, if ever, can be induced to attend infant welfare clinics and when the child becomes ill they will not call medical attention, in the early stages of the illness. The only way to help these mothers is by paying more frequent visits to their homes and giving more advice about health. It is important too that the advice given shall be in agreement with that of the hospital consultant and the general practitioner, and that the three sections of the medical service shall work as a team.

Infestation by Head Lice.

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

During the year, 872 children under the age of five years and 135 mothers were found by the health visitors to be verminous. In all cases, advice was given as to cleanliness and arrangements made for cleansing at home or at cleansing stations.

Day Nurseries.

Day Nurseries are provided in various parts of the City for the children of women who are obliged to work or who, for domestic reasons, cannot care for their children themselves. **Day Nurseries**

One Day Nursery was closed during the year, leaving a total of 14 nurseries with places for 788 children under the age of 5 years. In addition, a day nursery under voluntary control but subsidised by the Health Committee provides accommodation for 60 children.

Priority is given to:—

- (i) Unmarried mothers.
- (ii) Widows.
- (iii) Mothers not living with, or supported by their husbands and not in receipt of a separation, or similar allowance.
- (iv) Mothers whose husbands are incapacitated by reason of ill-health or who are themselves similarly incapacitated.
- (v) Mothers with large families whose husbands are in receipt of low wages—for example, casual or unskilled workers.
- (vi) Cases where it is considered a child is living under conditions detrimental to its health and well-being.

Charges for children attending the nurseries are made at the following rates:—

- 3s. per day for one child;
- 2s. 6d. per day for each additional child from the same family.

The Domestic Help Service.

This service was started in the City in October, 1945, with 11 domestic helps. The work of this section has increased steadily and, at the end of the year 1953, there were 12 full-time and 104 part-time domestic helps. **Domestic Health Service**

During 1953, 2,228 households were supplied with domestic help—1,248 on account of old age and/or infirmity; 30 on account of tuberculosis, 441 on account of other types of illness, and 509 were maternity cases.

Payments by the Merseyside Hospitals Council towards the cost of domestic help during periods of illness were formerly part of the benefits which contributors to the 1d. in the £ Fund were entitled to claim. The withdrawal of this benefit in June had a marked effect on the number of applications for domestic help made during the summer months of 1953. This was not only due to the actual loss of benefit, but also to the impression gained by some that the service had ceased to function.

The old age pensioners' semi-permanent service of one or two mornings per week was not affected and a total of 1,248 aged and/or infirm persons were assisted. The continued increase in the number assisted was partly offset by those ceasing to have the services of a domestic help because they could no longer remain in their own homes. Three-fifths of the domestic helps were employed in caring for 5 or 6 old people each week.

Charges made for the services of a domestic help to persons in receipt of allowances from the National Assistance Board were notified to the Board's district officers, who were extremely helpful in all cases.

Visits are paid by the Organiser and her two assistants to all applicants before a domestic help is supplied and emergency cases are visited at least once whilst the domestic help is in attendance. As far as possible, pensioners receiving continuous domestic help are visited at three monthly intervals.

DISTRICT NURSING

The Liverpool Queen Victoria District Nursing Association continued to act on an agency basis for the Local Health Authority.

District Nurses continued to work only under the direction of a doctor, cases being referred to them by the General Practitioner, Medical Officer of Health, or Hospitals.

They have undertaken the skilled nursing of acute and chronic surgical and medical cases, tuberculosis and other infectious diseases, and the care of sick persons of all ages and income levels. By their nursing of patients in their own homes the pressure on hospital beds has been relieved.

It is considered that some patients, for example young children, and old people, have progressed better when nursed at home in familiar surroundings.

The following figures indicate the varying types of work undertaken and visits made during 1953:—

YEAR ENDING 31ST DECEMBER, 1953.

Cases on Books 1st January, 1953—1,625.

Medical	...	...	11,864	Medical	...	...	239,314
Surgical	...	...	3,068	Surgical	...	...	52,267
Tuberculosis	...	...	900	Tuberculosis	...	...	36,848
Maternity and Child				Maternity and Child			
Welfare	...	...	3,596	Welfare	...	...	23,573
Infectious	...	...	70	Infectious	...	...	553
Diabetic	...	...	256	Casual	...	...	4,116
			<hr/>				<hr/>
			19,754				357,031
			<hr/>				<hr/>

Included in above figures:—

(a) Analysis of Injections:

			<i>Cases</i>	<i>Visits</i>
Insulin	...	...	468	65,795
Penicillin	...	...	11,994	83,879
Streptomycin	...	...	1,165	36,273
Haematen	...	...	878	19,169
Others	...	...	1,545	39,339
			<hr/>	<hr/>
			16,050	244,455
			<hr/>	<hr/>

- (b) Patients who were 65 years of age or over at time of the first visit:—

<i>Cases</i>	<i>Visits</i>
5,410	107,680

- (c) Children who were under 5 years of age at the time of the first visit:—

<i>Cases</i>	<i>Visits</i>
3,035	19,331

Source of origin of cases—

Sent by Doctors	...	...	...	18,555
Sent by Hospitals	...	...	...	767
Sent by Public Health Department	...	...	...	265
Applied direct	...	...	...	127
Other Sources	...	...	...	40
				<hr/> 19,754 <hr/>

The work of the District Nurses during the year has included nursing the aged chronic sick, nursing the slowly dying especially those with cardiac disease, strokes, growths, bed bathing, enemas, prevention and treatment of bedsores, nursing of acutely ill patients, care of patients immediately after their discharge from Hospital, especially early post-operative cases, nursing of children, accidents, injuries, burns and scalds, dressings after minor operations and a varying range of injections.

Following discussions with the Medical Officer of Health regarding the problem of the increasing number of aged sick persons in the City at the present time who are unable to gain admission to Hospital, the Health Committee approved the appointment of eight additional District Nurses to help with the nursing of these patients at home.

The training of District Nurses has continued, and during the year 20 students were trained and qualified as Queen's Nurses. The tendency for the District Nurse to prefer to be non-resident has continued.

In addition to District Nursing, the Liverpool Queen Victoria District Nursing Association continued to maintain by voluntary effort, entirely outside the orbit of the National Health Service Act, a Mobile Physiotherapy Service comprising three Mobile Units staffed by three Chartered Physiotherapists. There appears to be an increasing need for this Service, and it is felt that greater use could be made of it, particularly in the treatment of the aged chronic sick.

HEALTH EDUCATION.

Health Education in the City is mainly carried out on an individual **Health Education** basis, by individual field workers such as Doctors, Health Visitors, Welfare Visitors, District Nurses, Midwives and Sanitary Inspectors in the course of their daily duty.

To assist these workers, posters and pamphlets are available for use both in the home and clinics. During the year the Health Department provides lecturers on health matters to various bodies, and to assist lecturers a modern film strip has now been made of the activities of the Department.

AMBULANCE SERVICE.

A most important feature has been the take-over of the Ambulance Service formerly operated by the Merseyside Hospitals Council. Since the 5th July, 1948, the Hospital's Council operated a separate Service as agents of the City Council. After prolonged negotiation, 9 Commercial Ambulances, a modern Ambulance Depot and 21 staff were absorbed into the City Ambulance Service on the 1st May, 1953.

During the year under review, the total number of removals showed a slight increase compared with 1952. The number of patients moved totalled 188,568, and included 19,111 which were patients moved by the Hospitals Council between 1.1.53 and 30.4.53. These figures compare with 185,154 in 1952, and the increase was 3,314, or 1.79 per cent. The mileage increased by 11,683 miles, or 1.37 per cent.

Careful consideration has been given to the present volume of work and a "Code of Practice" prepared indicating how the Service should and should not operate. This has been based on the recommendations contained in Ministry Circulars and local usage. The Code was circulated to the Liverpool Regional Hospital Board, Board of Governors of the United Liverpool Hospitals, the Local Executive Councils and the Liverpool Medical Liaison Committee. With minor exceptions the Code has been accepted and brought into practice.

Radio Telephony

Radio Telephony, which was introduced in April 1951, again proved of exceptional value. More mobile sets have been added, and now 32 vehicles are radio controlled. The use of this equipment has been largely responsible for reducing the miles per patient. In 1948 and 1949, the miles per patient were 8.89 and 6.88 respectively, whilst for the year under review, the figure was 4.57 miles.

Removals to places outside the City boundary have increased considerably when compared with the previous year. 8,859 patients were conveyed to and from the areas of other authorities. This increase of 3,758 patients is largely accounted for by removals of patients to and from Maternity Annexe outside the City. This work, formerly carried out by the Hospitals Council, relieves the bed situation in Maternity Hospitals. 342 patients were conveyed to destinations of between 25 and 50 miles radius of the City, whilst 346 patients were taken distances

of over 50 miles radius. Approximately 60 per cent. of the cost of this work was rechargeable. Co-operation with other authorities has been maintained, and their vehicles when returning empty from Liverpool have been used whenever possible. 296 patients were conveyed to Railway Stations to travel to distant places.

The procedure for dealing with Major Civilian Disasters has been completely revised. Six large boxes of First Aid Materials have been prepared to supplement the boxes carried on Ambulances. 30 Stretchers and 48 Blankets are now held as a reserve and two boxes of medical equipment are available for the use of Medical Officers.

**Major
Civilian
Disasters**

The arrival of patients from overseas at the Port and Airport 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 1952, increased by 7.7 per cent. The work of this Depot is mainly concerned with the transport of tuberculous patients 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.

The demand for sitting case transport for out-patients has been such as to warrant further increases in special type sitting case ambulances. These vehicles are designed to carry ten to twelve sitting patients, but can be converted to carry a stretcher. Ten such vehicles are in regular use, and it has proved useful to allocate a vehicle and the same driver to the Hospitals having large clinics. The problem of transporting mothers and babies to Maternity Annexe after three days confinement required special vehicles. Two large ambulances have been converted to four-berth hydraulic loading, and operate together with one driver/attendant in charge of each vehicle. Eight mothers and babies are conveyed on three days each week, and those taken the previous week returned to the Hospital for discharge.

During the year, 1 new stretcher-carrying ambulance, 5 sitting-case ambulances, and one sitting-case car were delivered, and one sitting-case car disposed of. The present fleet is as follows:—

- 48 Stretcher carrying ambulances.
- 10 Sitting case ambulances.
- 6 Sitting case cars.
- 1 Service van.
- 1 Breakdown wagon.

In addition, two old Austin Ambulances have been retained for Civil Defence training purposes.

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

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

The ambulance formerly housed at Seel Street has been transferred to the new Station at Stanhope Street, and the vehicle at Westminster Road will be transferred to Westminster House when the new Station has been completed.

The administrative staff of the Service consisted of:—

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

The operational staff consisted of:—

- 100 Male Driver/Attendants.
- 10 Male Attendants.
- 21 Female Driver/Attendants.

The whole of this staff, with the exception of six driver/attendants have been trained in First Aid.

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

- 1 Foreman.
- 6 Mechanics.
- 1 Oiler and Greaser.
- 1 Labourer.
- 3 Car Washers.

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

STATISTICAL REPORT.

	YEAR	YEAR
	1953	1952
Non-infectious cases from:		
Home to Hospital	68,124	52,768
Hospital to Home	55,890	38,995
Maternity Cases	6,847	6,437
Infectious cases from:		
Home to Hospital	8,824	8,188
Mental cases from:		
Home to Hospital	337	295
Accident cases from:		
Home, Streets, etc. to Hospital ...	8,531	7,865
Inter-Hospital transfers	12,045	9,846
Removals from places outside the City ...	2,209	789
Removals to places outside the City ...	6,650	4,303
Merseyside Hospitals Council Cases ...	*19,111	55,759
Total	188,568	185,254
Cases requiring the service of Midwives:		
Hospital	554	438
Domiciliary	115	121
Total	669	559

Removals outside the City:

25 miles radius	8,171	4,400
50 miles radius	342	299
Beyond 50 miles radius	346	402
Total	8,859	5,101

Patients to Railway Stations to Entrain ...	296	254
---	-----	-----

* Period 1.1.53 to 31.4.53.

VEHICLES.

Ambulances.	Mileage covered.	Petrol used (gallons.)	O/Authorities issues.
Non-infectious	466,547	45,985	382½
Infectious	87,482	8,443	—
Accident	36,658	5,003	—
Sitting case cars	107,088	5,717	32
Brakes... ..	108,409	6,956½	—
TOTALS	806,184	72,131½	414½

MENTAL HEALTH SERVICE.

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

**Mental
Health
Service**

- (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, supervision and training of mental defectives.
- (d) Provision of pre-care and after-care measures.

The treatment of mental illness, whether in hospital or clinics is the function of Regional Hospital Boards and Hospital Management Committees which are responsible also for institutional accommodation for mental defectives. This divided responsibility is emphasised because it is, in part, the cause of misunderstanding among members of the public. Even among doctors and social workers some misconception still exists about the functions of the mental health service and, in particular, about its limited scope.

No spectacular developments have taken place during the year but the details which follow show that much good work is being done. The completion of five years work has provided an opportunity to give comparative figures and prominence has also been given, in the section on mental deficiency, to the results of a special survey of one-third of all ascertained defectives in the city. The subject of mental illness among old people, which has been discussed in the press recently, has also been specially considered.

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—Senior Medical Officer (Mental 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, 10 Assistant Supervisors, 3 Trainees, 9 Domestic staff.

CO-ORDINATION WITH HOSPITAL SERVICES.

Co-ordination with Hospitals The following work has been done on behalf of Hospital Management Committees:—

(a) Number of visits paid to defectives on licence from	
Institutions	458
(b) Copies of After-care reports sent to hospitals	2,934

The section is in constant touch with the hospitals and with the joint bed bureau set up by the Regional Boards to deal with admissions to mental deficiency institutions. Meetings have been held between the responsible officers when points of difference or of mutual interest have arisen.

Unfortunately contact has been chiefly concerned with the question of the shortage of accommodation in both mental and mental deficiency hospitals and the mental health service has often been placed in the position of begging admissions as a favour. Especially in the case of mental deficiency the shortage of beds tends to overshadow all else in relations between the two authorities.

In addition to visits and reports the preliminary work regarding admission of defectives (or, as more often happens, the placing of their names on the waiting list) is carried out. The Medical Officer sees all such cases and completes a detailed report assessing the need for hospital care and classifying cases in the priority groups established by the Regional Boards Joint Bed Bureau.

VOLUNTARY ASSOCIATIONS.

In the course of the year the service is in touch with most of the voluntary associations in the city. The existence of the mental health service must be a relief to such societies for it is often people who are mentally ill who are apt to make the greatest call upon their time and resources.

Friendly relations exist with the National Association of Parents of Backward Children which has a strong branch on Merseyside. Lectures have been given by officers of the service to explain the law regarding mental deficiency and methods of carrying it out and meetings have been held with the Association's officers.

TRAINING OF MENTAL HEALTH WORKERS.

The policy of appointing Assistant Supervisors from persons who have been given training in Occupation Centres has been continued with success.

TRANSPORT.

The stationing of a car at the Mental Health Service has continued to be a great convenience. Records now kept show that working during office hours it has averaged 1,100 miles and 200 journeys per month.

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

Persons referred for care and after-care during the year ...	670	Prevention, Care and After-Care Duties
Visits and interviews	3,391	
Persons under active supervision on 31.12.53	822	
Persons referred for employment	143	
Posts found	57	

Each visiting officer has between 40 and 90 after-care cases on his or her register in addition to mental deficiency cases. There is practically no limit to the amount of time which can be spent on this work for nearly all patients discharged from mental hospitals are willing to be visited. The problems are many and varied, ranging from the all too familiar "can you get me a house" to intimate personal and family relationships and the officer may expect to be regarded as an estate agent, lawyer, employment exchange, doctor and marriage guidance counsellor all in one.

It is often difficult to assess the value of the work in tangible terms. An example may be taken of a voluntary patient who comes out of a mental hospital against advice. He is visited and helped in every way possible but his condition deteriorates. The officer is then on hand to encourage, cajole and help him to obtain treatment again. Without the visits the patient would refuse to seek advice and deterioration would be unchecked. Though the direct result is a return to hospital, this must be accounted successful after-care.

As an example of more positive results we may take the case of Mr. A, aged 59, who was discharged from a mental hospital after 23 years stay. By frequent visits he was helped to adapt himself to changed conditions and, despite his age, a job was at length found for him after many unsuccessful efforts. Paid at the rate of £6 10s. 0d. per week he was amazed at having so much money but, it is understood, has now become accustomed to it! His mental condition has greatly improved.

The question of employment is obviously one of the most important factors in rehabilitation in many cases and the policy of having a full-time Employment Officer continues to be well justified. The officer maintains close contact with the Ministry of Labour and National Service and also personally approaches many employers. Ministry officials and employers alike have been found most sympathetic in helping with the special problems described to them. 20 posts were found for after-care cases and 37 for mental defectives, the types of employment being as follows:—

Labourers, Handymen, etc. ...	20	Assemblers ...	6
Porters ...	4	Telephonists ...	2
Clerks ...	6	Laboratory Assistant ...	1
Female Domestics ...	14	Assistant Nurse ...	1
Packer ...	1	Machinist ...	1
Presser ...	1		

The number of posts found over the last 5 years was:—

	1949	1950	1951	1952	1953
On register at end of year ...	85	90	132	181	223
Posts found ...	23	35	51	57	57

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

**Lunacy Act
1890 and
Mental
Treatment
Act**

1,324 cases were notified under provisions of the Lunacy and Mental Treatment Acts as compared with 1,216 last year. The requests for the services of the Duly Authorised Officer in these cases were made as follows:—

By general practitioners	649
hospitals	152
clinics	136
other Corporation Departments ...	12
police	194
relatives	93
National Assistance Board	15
shipping cases	11
Duly Authorised Officers	19
other sources	43

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

Admitted to Hospital (Section 20 Lunacy Act)	606
Referred to J.P. (Section 14 Lunacy Act)	132
Admitted to Hospital (Section 21 Lunacy Act)	6
Admitted to Hospital as voluntary patients	28
Admitted to Hospital as temporary patients	3
Admitted to Hospital other than Mental Hospitals	17
Referred to Psychiatric Clinics	101
Referred for pre-care	66
Referred to Welfare Section	89
No further action needed	213
Referred back to private doctor... ..	55
Action deferred	4
Referred to National Assistance Board	4

The 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	55	99	3
Rainhill	220	370	5
Winwick	68	53	3
Deva	14	6	—
Ormskirk	5	1	—
Whiston	1	2	—
Hospitals outside Liverpool R.H.B. area	2	1	—
	365	532	11

Admissions of Liverpool cases to Mental Hospitals during the past 4 years can be compared as follows:—

	1950	1951	1952	1953
Patients certified under Section 16 Lunacy Act ...	401	388	375	365
Voluntary Patients	343	374	358	532
Temporary Patients	—	7	5	11

The substantial increase in the number of voluntary patients admitted, with no corresponding decrease in the certified patients, will be noticed. As the accommodation at Mental Hospitals in the Liverpool Region is always marginal it follows that it becomes more difficult to obtain beds for urgent and violent cases when the number of voluntary patients increases. Quicker turnover of voluntary patients may offset this to some extent but it is a factor which this department cannot ignore and it has, in fact, been brought to the notice of the Regional Hospital Board.

Admission of Old People to Mental Hospitals

A question which causes much discussion is that of the admission of old people to mental hospitals and, particularly, their detention under Judicial Order. A survey on this subject carried out for a voluntary association and covering the year ended 31st March, 1953, showed the following interesting results:—

	Age groups (persons of pensionable age)								
	MEN.				WOMEN.				
	65-69	70-74	75-79	80 & over	60-64	65-69	70-74	75-79	80 & over
Admitted Sec. 20 Lunacy Act ...	15	4	7	4	25	17	8	11	3
Of these :—									
Certified Sec. 16 Lunacy Act ...	7	1	3	—	14	10	4	7	1
Not certified	8	2	4	4	6	6	3	3	2
Retained as Voluntary patients...	—	1	—	—	5	1	1	1	—
Admitted Sec. 16 Lunacy Act from home	—	—	1	—	—	2	—	1	—
Admitted as Voluntary patients...	—	—	—	—	5	—	—	—	—
Admitted as temporary patients	—	—	—	—	—	—	—	—	—
Referred to Welfare Section ...	4	2	1	2	1	7	5	5	2
J.P. notified but case not certified	4	—	—	1	3	3	4	1	—
Referred to clinics	1	—	—	—	4	—	—	—	—
Referred for care	2	—	—	—	2	2	1	—	1
Senile Dementia :—									
Hospital admissions	5	6	6	6	1	7	6	9	5
Waiting list	3	3	5	3	2	5	3	5	6
No action	7	4	6	2	7	8	5	5	3
Total of cases referred for action	41	19	26	18	50	51	32	37	20

Thus, in the year, 294 persons of pensionable age were referred. In 94 cases the Duly Authorised Officer used his power to arrange hospital admission under Section 20 (3 day Order) and of these 47 were subsequently certified under Section 16.

If we take only persons over the age of 70 we see that of 133 cases referred 37 were admitted under Section 20 and of these 16 were subsequently certified.

It will be realised that old people may reasonably come within the scope of the Lunacy Act if they are violent and if their mental illness is not the result of a natural process of mental degeneration but it is also clear from the above figures that many old people are being referred to the Mental Health Service for whom Lunacy Act procedure should not be used—and is not, in fact, used after the initial visit.

One reason for this is that there is not sufficient accommodation of a more suitable type. A busy general practitioner, faced with a full surgery and a truculent or confused old person as patient, and unable to find a vacancy in a suitable hospital or institution may well have recourse to the Mental Health Service, knowing that some action will be taken immediately.

Additional accommodation for senile dementia cases which is in process of being provided by the Regional Hospital Board should improve matters.

Duties undertaken under the Mental Deficiency Acts.

(a) *Ascertainment.*

145 new cases were ascertained as mentally defective during the year. 25 others were, after investigation, considered not to be defective within the meaning of the Mental Deficiency Acts but 9 of these accepted voluntary supervision. **Mental Deficiency Ascertainment**

The sources of notification of those ascertained were as follows:—

	Males.	Females.
Section 57 (3) Education Act (ineducable)	38	28
Section 57(4) Education Act (inexpedient)	2	2
Section 57(5) Education Act (needing supervision after leaving school)... ..	12	30
Police	1	—
Parents	1	—
Private Doctor	2	4
Children's Officer	1	2
National Assistance Board	—	1
Approved School	2	1
Hospitals	14	1
Other	1	2

Of these 131 were placed under statutory supervision (including 32 where institutional care was recommended but not obtained). 13 were admitted to mental deficiency hospitals and 1 was placed under guardianship.

Ascertainments over the last 5 years have been as follows:—

	1949	1950	1951	1952	1953
Under Sec. 57 (3) or (4) Education Act ...	134	92	65	88	70
Under Sec. 57 (5) Education Act ...	73	73	88	78	42
Other references	20	13	13	17	33
Total	227	178	166	183	145
Not ascertained	3	11	11	4	25

It has not been possible to refer any cases back to the Education Department as provided for in the Education (Miscellaneous Provisions) Act, 1948, and it is evident that the most careful consideration is given by that department before the important step of referring a case as ineducable is taken. Most parents accept the reference and are willing to receive the statutory visits. In the case of children referred on leaving school, however, a small number of parents refuse to co-operate and supervision in these cases is difficult to exercise. When they realise that the department is concerned only with the child's welfare and can help in obtaining work or in other ways the parents usually adopt a more friendly attitude.

(b) Supervision—

Supervision

No apology is needed for emphasising, in this as in previous annual reports, that the Health Authority does not seek to part parents from defective children unless there is real cruelty or neglect. Statutory supervision and training were instituted in order to help parents and enable defectives to become as useful members of the community as their limited capacities allow.

There is a wealth of parental affection devoted to defectives and many cases can be cited of self-sacrifice meriting the greatest admiration.

At 31st December, 1953, the numbers under supervision were:—

	Males.		Females.	
	Over 16.	Under 16.	Over 16.	Under 16.
Statutory Supervision	583	221	494	185
Guardianship	23	8	50	9
Voluntary Supervision	21	1	20	—
Totals ...	627	230	564	194

5,797 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.

In 38 cases supervision was discontinued during the year and in 16 cases Orders under the Mental Deficiency Act were discharged.

The numbers under supervision at 31st December over the last 5 years were:—

	1949	1950	1951	1952	1953
Statutory	1,772	1,243	1,304	1,423	1,483
Guardianship	93	92	95	92	90
Voluntary	77	15	22	30	42

[NOTE.—The reduction in 1950 was the result of a review when many old cases were deleted.]

Supervision has followed the lines of previous years. Case-loads are on a territorial basis and officers thus get to know their cases thoroughly and can assess how frequent visits should be.

(c) *Guardianship.*

Of the 90 cases under guardianship 21 received allowances, at a total **Guardianship** cost of £585 8s. 9d. for the year. A parent was the guardian in 50 cases, another relative in 20 cases, Superiors of Convents in 14, and others in 6.

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.***Training**

Further expansion of the training given at Occupation Centres has taken place and the following details will show that good progress has been made in the last 5 years though the provision still falls short of requirements.

			Number on Roll.				
			1949	1950	1951	1952	1953
Princes Road Centre	...		100	105	115	137	146
Dovecot Centre	...	...	—	—	70	73	84
Garston Centre	...	...	—	—	30	33	44
Total	...		100	105	215	243	274

The fact that attendance is not compulsory, and the high incidence of physical illness among these children, result in a rather low average attendance even though special buses are provided to two Centres. Towards the end of the year the Committee agreed to extend the bus service and early in the New Year a bus will run to and from Garston Centre for the first time. A second bus for Princes Road Centre is also contemplated.

The usual Christmas and other functions have taken place but perhaps the highlight of the year was the Sports Day held at Westminster House in September. This was an outstanding success enjoyed by children and parents alike and the keenness and good behaviour of the children provided an object lesson in the value of Centre training. A shield was presented to the winning Centre—Garston, and winners of each event received prizes. It is proposed to make the event an annual one.

Garston Centre has been extended by bringing into use an adjacent hall and is now capable of accommodating up to about 80 children. The only open space near this Centre is a small piece of ground at the rear abutting on the railway line. This has been leased and is being fenced to provide a playground and garden.

Adult defectives continue to be concentrated mainly at Princes Road Centre. It is hoped that in the coming year it may be possible to open the separate accommodation for them which is so desirable.

(e) *Institutional care.*

Each year this report has reiterated the seriousness of the shortage of **Institutional Care** accommodation for mental defectives. The Regional Hospital Board's plans have not as yet resulted in any improvement and the only change has been an administrative one—the Liverpool and Manchester Boards have formed a Joint Bed Bureau to consider admissions.

As will be seen from the following figures the waiting list has gone up but there has been no corresponding increase in admissions.

(i) Waiting list :						At. 1.1.53.	At 31.12.53.
Highest urgency	...	...	...	...	...	73	90
Second urgency...	...	...	...	...	...	23	27
Third urgency	...	...	...	...	...	6	19
						102	136

(ii) Cases added to waiting list in 1953 ... 47

(iii) 52 cases were admitted to M.D. Institutions in 1953, including 37 from the waiting list.

Admissions during the past 5 years have been as follows :—

Type of Admission.	1949	1950	1951	1952	1953
Section 3 (placed) ...	2	—	—	14	2
Section 6 (petition) ...	19	26	12	28	29
Section 7 (varying order) ...	2	2	—	4	2
Section 8 (court) ...	21	15	15	10	6
Section 9 (from Approved School, etc.)...	3	1	—	—	4
To places of safety ...	29	16	16	27	9
Total ...	76	60	43	83	52

(iv) Number of Defectives in institutions :—

	At 1.1.53.		At 31.12.53.	
	Certified.	Place of Safety.	Certified.	Place of Safety.
Institutions of Liverpool R.H.B. ...	192	47	201	48
Institutions of Manchester R.H.B. ...	1,121	2	1,108	2
Institutions of other Authorities ...	32	1	34	1
Total ...	1,395		1,394	

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

It will be noticed that the number accommodated is reduced by 1 as compared with last year's total, the 52 admissions having been offset by 53 deaths and discharges.

With regard to short-term care which, properly developed, might be an economical alternative in many cases to more extended institutional care, some help has been given by the Regional Boards, but it is felt that this form of care could well be extended as an economical alternative in many cases to more permanent institutional care. In the absence of full provision by the Boards the Committee has continued to sponsor short-term admissions to the voluntary Home, Orchard Dene. 22 such cases have been sponsored during the year at a cost of £183. Parents contributed £24 towards this cost.

Statistical Survey.

Survey of Mental Defectives

During the year the case-files of 1,066 defectives—approximately one-third of the total of ascertained defectives—were examined in order to obtain statistical data on the following points:—

- (a) Mental condition of parents and other relatives.
- (b) Occupation of the head of each family.
- (c) Proportion of Mongols.
- (d) Proportion with physical defects.
- (d) Defectives working.

Older cases were taken as being likely to give a fuller family history but in one respect this proved to be a disadvantage in that in many cases Intelligence Quotients had not been recorded. The ratio of idiots, imbeciles and feeble-minded in the sample was thus not available. 80 per cent of the cases sampled were adults.

A general analysis of the 1,066 cases was as follows:—

Living in the community	503 or 47.1 per cent.
Of these—	
No. attending Occupation Centres	63 or 12.5 per cent.
No. remaining at home	270 or 53.7 per cent.
No. working either permanently or intermittently	170 or 33.8 per cent.
Living in institutions	563 or 52.9 per cent.

(a) *Mental condition of parents and other relatives.*

		Total	(a)		(b)		(c)		(d)	
			No.	%	No.	%	No.	%	No.	%
Fathers	...	1,066	594	55.7	17	1.6	52	4.9	403	37.8
Mothers	...	1,066	630	59.1	30	2.8	110	10.3	296	27.8
Brothers	...	1,561	1,110	70.6	108	6.9	23	1.5	320	20.5
Sisters	...	1,672	1,234	73.8	89	5.3	29	1.1	320	19.2
Sons	...	19	9	47.4	—	—	1	5.2	9	47.4
Daughters...		35	15	42.9	4	11.4	1	2.9	15	42.8
Others	...	385	139	36.1	93	24.1	28	7.2	125	32.4
TOTAL	...	5,804	3,731	64.3	341	5.9	244	4.2	1,488	25.6

KEY. (a) Normal.

(b) Attended special school, notified mental defective or certified under Lunacy Act.

(c) Not in "b" but regarded as retarded or unstable mental condition.

(d) Mental condition not known.

These figures provide the following information:—Of the fathers whose mental state was recorded 10.4 per cent were retarded or unstable to some degree. 18 per cent of mothers, 10.5 per cent of brothers, 8.7 per cent of sisters, 10.0 per cent of sons, 25.0 per cent of daughters and 46.5 per cent of other relatives were similarly placed. The proportion of all relatives retarded or unstable is 13.5 per cent of the total of those whose mental condition was recorded.

(b) Occupation of family head.

OCCUPATION.	No.	%
1. Highest professional, administrative and business posts	5	0.5
2. Lower professional, administrative and business posts (e.g., teachers, special clerks, travellers, etc.)	9	0.9
3. Ordinary clerks	10	1.0
4. Shop assistants, Insurance agents, small shopkeepers (minor commercial posts)	22	2.3
5. Manual supervisory, e.g., foremen, police sergeants	5	0.5
6. Skilled manual	71	7.5
7. Semi-skilled manual	124	13.3
8. Unskilled manual—general labourers, dockers, etc.	458	49.3
9. Chronically unfit to work	38	4.0
10. Widows or unmarried mothers as head of family... ..	187	20.1
TOTAL	929	

The significant point about these figures is, of course, that 58.2 or 62.6 per cent of the heads of the families of the defectives sampled are semi-skilled or unskilled manual workers, indicating, as so often reported by others, that most defectives are produced by those in the lowest groups of the population.

(c) Proportion of Mongols.

There were 73 mongols in the sample, or 6.9 per cent, which is quite near the accepted estimation that mongols comprise about 5 per cent of the total number of defectives of all ages in England.

(d) Proportion with physical defects.

It is a well known fact that the incidence of illness and physical defect in defectives is higher than in the total population. In the sample 328 or 30.7 per cent had other defects such as tuberculosis and epilepsy apart from their mental deficiency.

(e) *Defectives working.*

170 or 33·8 of those sampled who are living in the community are working. The percentage if only those over the age of 20 are taken is as high as 42 per cent.

It can fairly safely be deduced that of the adult defectives who do not need institutional care between a third and a half are at least capable of some form of work.

In concluding this report on the working of the Mental Health Service the fact must be mentioned that a Royal Commission has been appointed "to enquire into the existing law and administrative machinery governing the certification, detention, care . . . , absence on trial or licence, discharge and supervision of persons who are or are alleged to be suffering from mental illness or mental defect . . .". The year under review, as previous years, has not been free of difficulties associated with the carrying out of the existing law on these subjects and the findings of the Commission will be awaited with great interest.

WELFARE SERVICES.

Residential Accommodation.

Residential Accommoda- tion

Construction of Aigburth House, a new hostel for 52 residents, was completed during the year and the home was formally opened by the Lord Mayor of Liverpool on 30th June, the first residents being admitted on 16th July.

The adaptations at Holt House to accommodate 57 residents, and the alterations at "Beechley" to provide for 27 additional residents, were also completed.

Further consideration was given to the accommodation provided at Westminster House, and following upon a survey on the aged men and women in the "Sick Bays", steps were taken with the co-operation of the physicians from Newsham General Hospital, to remove to hospital all the chronic sick who were being wrongly retained.

Sickness in Aged Persons in Residential Accommodation.

A survey was carried out by the Medical Officer of Health on all the chronic sick patients in the "Sick Bays" during April; their subsequent removal from the accommodation has been most satisfactory. The success of this large-scale operation has largely resulted from the co-operation which has been obtained with the physicians at Newsham General Hospital, and there is no doubt that the advantages of organising the Welfare Services as a section of the Health Department have been most obvious.

There are many difficulties regarding provision of accommodation for sick old people in residential accommodation, and it is very important never to allow an old person slowly to deteriorate and become a chronic invalid if this can be avoided. The only practical answer which has been found is to ensure that any severely ill patients or chronic sick person be rapidly transferred to hospital, where he may have all the benefits of complete treatment and rehabilitation. As soon as the patient has recovered from his illness, everything must be done to encourage him once again to become mobile, and at this stage discharge from the hospital atmosphere is highly desirable. With the establishment of Frail Ambulant Accommodation in Westminster House it has been possible to achieve this ideal.

Very frail convalescent persons are now removed to this accommodation without delay, and, where a short waiting list occurs, the choice of which patient on that list shall enter the accommodation is left entirely to the geriatrician, so that he may discharge an old person at the height of his rehabilitation. It has been found when rehabilitating old people that it has been usually possible to improve their physical and mental condition only up to a certain level, and that further attempts to do so only result in deterioration. It should always be the aim to transfer any frail old person at the height of his rehabilitation, and the present arrangements with Newsham General Hospital enable this to be carried out.

Future of Westminster House.

This large building, accommodating 980 old people, is a legacy from the mid-19th century. The City Council has already accepted a policy that envisages its eventual complete closure. It is, however, necessary to consider the population trends in the community, and based on the recent census figures and the best available forecasts, it would appear necessary to provide about 600-700 additional places for old people in need of care and attention by 1977 if the present figure of 1.4 per cent of the over-65 population is to be accommodated in hostels. Because of these trends and the lengthening waiting lists, it will be very difficult to close Westminster House for another 25 years. The present standard of accommodation there varies considerably, but there is a large degree of overcrowding.

Towards the end of the year plans were completed for the total adaptation of the accommodation at Westminster House (these have since been agreed by the City Council). This upgrading envisages reduction of the beds by roughly one quarter to about 650 and replanning of the accommodation to form 12 separate houses each accommodating from 35 to 70 persons. In this way it is hoped that each house will create its own atmosphere and allow each old person to obtain the individual attention he needs from the staff. The old people will not be members of the immense community of Westminster House, but of a smaller home. The standard of accommodation planned will be similar to that now being provided at New Grafton House.

Resident Accommodation.

The total accommodation available for use on the 31st December, 1953, was as follows:—

Westminster House	...	...	980 beds
New Grafton House	...	...	88 „
Moreno House	...	...	36 „
Lismore	...	...	33 „
New Parkfield House	...	...	26 „
Park House	...	...	20 „
Brookfield	...	...	19 „
Beechley	...	...	43 „
Aigburth House	...	...	52 „
Holt House	...	...	57 „

Total 1,354 „

RESIDENTIAL ESTABLISHMENTS.
STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS.

Establishment	Remaining 31/12/52	Admitted	Discharged	Died	Remaining 31/12/53
Westminster House ...	915	553	462	119	887
New Grafton House ...	86	32	29	2	87
Moreno House ...	32	14	11	1	34
Lismore ...	32	11	10	—	33
New Parkfield House	26	14	14	—	26
Park House ...	21	18	19	1	19
Brookfield ...	17	15	13	—	19
Beechley ...	12	34	9	—	37
Aigburth House ...	—	55	6	1	48
Holt House ...	—	59	7	—	52
TOTAL ...	1,141	805	580	124	1,242

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:—

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

Authority or Organisation	Remaining 31/12/52	Admitted	Discharged	Died	Remaining 31/12/53
Turner Memorial Home	20	11	5	3	23
Salvation Army Home, Liverpool	18	2	2	2	16
Salvation Army Home, Bootle ...	9	3	—	1	11
Salvation Army Home, Penketh...	1	—	—	—	1
Methodist Home for the Aged ...	11	2	1	3	9
Church Army Home, Bootle ...	5	—	2	—	3
Church Army Home, Newcastle- on-Tyne	—	1	—	—	1
Home for Aged Jews, Liverpool...	17	4	—	1	20
Convent of the Good Shepherd, Liverpool	8	—	—	—	8
"Maryland," Formby	1	—	—	—	1
Red Cross Home, Portmadoc ...	1	2	1	—	2
W.V.S. Home, Liverpool... ..	4	2	1	—	5
2/4 Croxteth Road, Liverpool ...	9	—	—	1	8
Elitherow House, Harrogate ...	—	1	—	—	1
British Legion Home, Yorks. ...	4	1	—	—	5
"Sundale," Linnet Lane, Liver- pool	1	—	—	—	1
Cumberland County Council ...	1	—	—	—	1
Flintshire County Council ...	1	—	—	—	1
Lancashire County Council ...	1	—	1	—	—
Lincolnshire County Council ...	1	—	—	—	1
Staffordshire County Council ...	—	1	—	—	1

Authority or Organisation.	Remaining 31/12/52.	Admitted.	Discharged.	Died.	Remain 31/12/53.
West Riding (Yorks.) County Council	1	—	1	—	—
Bootle Corporation	1	—	1	—	—
Bristol Corporation	1	—	—	—	1
Croydon Corporation	—	1	—	—	1
Portsmouth Corporation	1	—	—	—	1
Southport Corporation	1	—	—	—	1
TOTAL	118	31	15	11	123

Coronation Celebrations.

As part of the Coronation Celebrations, clubs for old-age pensioners were assisted financially by the City Council to provide parties and entertainments. Picnics, coach trips, parties or souvenirs were also provided for residents of the Corporation establishments for aged persons. Voluntary bodies were also assisted to provide entertainment for a number of handicapped persons.

Pier Head Rest Room for Aged Persons.

Pier Head Rest Room

Premises were also acquired at the Pier Head for use as a rest-room for elderly persons, and this building is still available and used regularly. Refreshment facilities are also provided and members of the Women's Voluntary Services supervise the arrangements. The latest figures show that on an average 122 old persons used the Rest Room daily throughout the winter (Monday to Friday) and 35 on Saturdays when the Rest Room is only open for half a day.

Temporary Accommodation.

Temporary Accommo- dation

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. There was a most satisfactory steady falling off during the year of the

number of persons afforded temporary accommodation and in November it was possible to close the premises at 100, Walton Village which had been in use since October 1950.

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 31/12/52	Admitted	Discharged	Remaining 31/12/53
Lower Breck Road ...	130	1,242	1,312	60
100 Walton Village ...	32	63	95	—
TOTAL ...	162	1,305	1,407	60

Welfare Visitors.

The following Table includes details of some of the work of the Welfare Visitors and the Property Officer during the year.

**Welfare
Visitors**

No. of personal applications for advice and help ... 366

No. of visits paid (including 325 visits to handicapped persons) ... 2,101

No. of re-visits (including 56 re-visits to handicapped persons) ... 4,981

No. of persons admitted to:—

(a) residential accommodation ... 521

(b) hospital ... 64

No. of visits in connection with the protection of the property of persons admitted to hospital, etc., and the effects of deceased persons with no known relatives ... 1,165

In addition, requests for assistance, either by letter or telephone, during the year numbered 1,290.

During the year the Welfare Visitors encountered a number of general problems, the more important of which included:—

- (a) Old people living alone in top storey rooms in old premises requested admission to hostels because they cannot continue to manage the stairs, carry up coal and water, etc. If more alternative accommodation, suitable for elderly persons, was available they would be capable of carrying on in their own homes for a longer period.
- (b) During the winter months especially, many old people needed assistance with lighting fires, shopping, etc. Whilst the Domestic Help Service aided a large number of elderly people to a certain extent (usually one half-day per week) there were some who had neither friends nor relatives to call upon for daily needs.
- (c) There were a number of urgent requests for residential accommodation which cannot be granted immediately and linked with this there was an apparent increase in the need for frail ambulant type of accommodation. In some cases the condition of the old person deteriorated, necessitating hospital treatment before suitable accommodation was available.
- (d) There were some old people in hospital who refused to go to any residential establishment but whose former residence (usually one dirty room) was quite unsuitable for them. Their bed in hospital was urgently needed. The Welfare Visitor tried to persuade but this failed and the case had to be referred back to the Almoner in the hospital.
- (e) Loneliness was still a great problem which existing services have alleviated to a certain extent, but have not yet fully overcome.

The following are a few specific reports from individual cases during the year which have been visited by the Welfare Visitors and demonstrate a few of the diverse and difficult problems met during the year:—

1. An epileptic boy who for the past two years made every effort to obtain any type of employment. Unfortunately, employers do not look favourably upon epileptics. This boy eventually agreed to enter a Colony for Epileptics. Application for admission was made to Maghull who refused to accept him. He

has been accepted for Langho Colony and his name is on their very long waiting list. This, however, is not a very satisfactory answer to the problem of young epileptics who could, with a little sympathy and understanding, be usefully employed.

2. A man, aged 35, who suffers from severe chronic heart trouble. He needs residential accommodation in a home with younger men but this has not been possible to arrange and he has had to remain in a common lodging house.
3. A man whose doctor considered him to be suffering from Senile Dementia. Admission had been arranged to Rumney Road Hospital Unit, but the old man was sufficiently aware of his position and prevailed upon relatives to sign for his discharge. Relatives later abandoned all responsibility and the problem arose. He is again anxious to be provided with accommodation, but will not return to Rumney Road Hospital Unit and said that he would prefer to go to Part III accommodation as he had observed the life from the windows of the hospital section. This has happened on two occasions.
4. An old lady, aged 87 years, who is very forgetful, lives with her unmarried daughter who goes to work. The old lady wanders out of the house during the day and frequently goes to her daughter's place of employment. The daughter cannot give up her work for financial reasons and the mother is not willing to enter residential accommodation.
5. A woman who is only sixty-two years of age and has recently lost her husband, applied for hostel accommodation. She is very eccentric and unstable although cultured and well educated. It is reported, although not proved, that she attempted suicide by taking an overdose of sleeping tablets. The doctor is disturbed about her and feels she should not be living alone (there are no relatives or friends who can take her). He does not feel, however, that her mental state is sufficiently disturbed to merit certification. She is not a suitable applicant for hostel accommodation but is definitely in need of care and attention as her condition is likely to deteriorate.
6. A woman of 44 years of age who has been admitted to Westminster House or Reception Centre on sixteen occasions, has later taken

her discharge (usually to an unknown address) and when making application for re-admission has always been in a very neglected state. She is of low mentality but cannot be considered a mental defective.

Mobile Meals.

The arrangements have continued whereby certain old persons in one defined experimental area have been supplied with three mid-day meals per week. At the end of the year the number of elderly persons using this service was 32.

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. Up to the end of 1953, 26 such homes had been registered, and of these, 16 are administered by voluntary bodies, the remainder by private individuals.

Welfare of Handicapped Persons.

Blind.

Blind Welfare

During 1953, 168 applicants for admission to the registers of blind or partially-sighted persons were examined by ophthalmic surgeons and reports completed on Form B.D.8. Of these, 121 were found to be blind and 39 partially-sighted. 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	—	1	1
1	2	3	5
2	3	2	5
3	3	5	8
4	—	1	1
5—10	9	5	14
11—15	6	7	13
16—20	12	15	27
21—30	45	24	69
31—39	56	45	101
40—49	82	79	161
50—59	137	110	247
60—64	87	85	172
65—69	78	111	189
70 and over	211	464	675
TOTALS	731	957	1,688

The following table shows a summary of Forms B.D.8 received during the year indicating, under the headings of cataract, glaucoma, retrolental fibroplasia in premature infants and other causes, whether treatment was recommended and if so whether it was medical or surgical, and also the number of cases recommended for treatment which had been found on follow-up to have received it.

**FOLLOW-UP OF REGISTERED BLIND AND
PARTIALLY SIGHTED PERSONS**

(i) Number of cases registered during the year in respect of which para. 7 (c) of Forms B.D.8 recommends :—	Cause of Disability			
	Cataract	Glaucoma	Retrolental Fibroplasia	Other
(a) No treatment	18	15	5	70
(b) Treatment (medical, surgical or optical)	16	19	—	42
(ii) Number of cases at (i) (b) above which on follow-up action have received treatment	8	15	—	32

Employment of Blind Persons.

There are facilities in Liverpool for the employment of suitable blind persons in workshops, and 97 employees are engaged in various trades as follows:—

Workshops for the Blind, Cornwallis Street.

Brush Making	27
Basket Making	14
Mat Making	27
Upholstery	10
	78

School for the Blind, Hardman Street.

Machine Knitting	9
Basket Making	4
Mat Making	2
Boot Repairing	1
	16

Catholic Blind Asylum, Brunswick Road.

Mat Maker	...	...	...	1	
Machine Knitter	...	...	...	1	
Basket Maker	...	...	...	1	
				<u>3</u>	
					<u>97</u>
Total					

There are also 94 blind persons employed in sighted industry, as follows:—

Factory operatives	...	...	...	46
Telephone operators	...	...	...	17
Shorthand typists	...	...	...	3
Cleaners, packers, porters	...	...	...	7
Home Teachers	...	...	...	4
Miscellaneous	...	...	...	17
				<u>94</u>
Total				

Eight blind persons are employed as Home Workers in the following occupations:—

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

A most satisfactory degree of co-operation has been obtained from the local officers of the Ministry of Labour and National Service in all matters affecting the employment of blind persons.

**BLIND PERSONS MAINTAINED IN ESTABLISHMENTS
PROVIDED BY VOLUNTARY ORGANISATIONS
STATEMENT OF ADMISSION, DISCHARGES AND DEATHS**

Organisation	Remaining 31.12.52	Admitted	Discharged	Died	Remaining 31.12.53
Catholic Blind Asylum, Liverpool.....	19	6	4	3	18
Herefordshire County Assn. for the Blind	1	—	—	—	1
Jewish Blind Home, Surrey...	1	1	—	—	2
Manchester & Salford Blind Aid Society	1	—	—	—	1
Royal National Inst. for the Blind, Hoylake	—	1	—	—	1
Total	22	8	4	3	23

Deaf and Dumb.

The City Council makes an annual grant of £3 per registered deaf and dumb person towards the funds of two voluntary agencies in Liverpool who undertake welfare work for the deaf and dumb. About 600 adult deaf and dumb persons are registered with these agencies. In addition three deaf and dumb persons are maintained in establishments provided by voluntary organisations for this class of handicapped persons in Barrowford, Bath and Leeds.

**Deaf and
Dumb
Welfare**

General classes of handicapped persons.

During the year a survey was started to compile a detailed register of disabled persons, and in this way it is hoped to form an accurate estimate of the requirements of such persons and how their needs could be met under the Council's scheme for the welfare of handicapped persons. At the end of the year one disabled person was being maintained at the cost of the Corporation in a home for cripples administered by a voluntary body.

Spastics.

Arrangements have been made for all available statistics of the School Health Department to be supplied to the Welfare Department so that spastic children when leaving school can be followed up by Welfare Visitors. Steps are also being taken with a view to a survey being carried out of various voluntary organisations dealing with the various classes of handicapped persons, including spastics.

**Spastic
Welfare**

Epileptics.

Adult epileptic persons needing residential care and attention continued to be admitted, at the cost of the local authority, to colonies established for this purpose, usually by voluntary bodies. Cases are referred by the patient's own doctor, hospitals or other branches of the Health Department. In 1953 arrangements were made for 14 persons to be admitted to epileptic colonies.

**Epileptic
Welfare**

Generally speaking the epileptics admitted to colonies settle down happily in their new surroundings. Occasionally, however, some do not fit into the communal life: others deteriorate mentally, become inordinate, indisciplined and intractable. In cases of this description the colony authorities have requested the early removal of the patient. This

has caused considerable difficulty as it has often been impossible to provide alternative accommodation, particularly for a person who has been away for years from the general community.

There is no doubt that there is a very great need for such colonies to provide special accommodation for the awkward anti-social type of epileptic.

It is appreciated that an anti-social epileptic can completely upset other persons in a colony and may have to be segregated for this reason ; but there is an urgent need for special accommodation to be provided for this group and one of the most obvious methods would be to provide a separate annexe in each colony.

**EPILEPTIC PERSONS MAINTAINED IN ESTABLISHMENTS
PROVIDED BY OTHER LOCAL AUTHORITIES AND BY
VOLUNTARY ORGANISATIONS**

STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS

Authority or Organisation	Remaining 31.12.52	Admitted	Discharged	Died	Remaining 31.12.53
David Lewis Colony	4	1	—	—	5
Langho Colony	22	5	2	1	24
Maghull Homes	52	8	14	1	45
St. Elizabeth's Home, Much Hadham	3	—	1	—	2
Total	81	14	17	2	76

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

Action under S.47 of National Assistance Act 1948 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 four cases under this Section.

(a) NATIONAL ASSISTANCE ACT, 1948.

Case 1. A woman, aged 81 years, who was bedridden and living in insanitary conditions. She lived alone and was unable to care for herself. An order was obtained for her compulsory removal, the period mentioned being for not exceeding three

months, and she was admitted to hospital. She was still a patient at the end of the year but subsequently returned home early in 1954.

- Case 2. A man, aged 79 years, who was of poor physical capacity living in insanitary conditions. He lived alone and was unable to look after himself. An order was obtained for his compulsory removal, the period mentioned being for not exceeding three months, and he was admitted to hospital. He was still a patient in hospital at the end of 1953.

(b) NATIONAL ASSISTANCE (AMENDMENT) ACT, 1951.

- Case 3. A woman, aged 75 years, who was of poor physical capacity and suffering from senile dementia. 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 where she died six days later.

- Case 4. A woman, aged 70 years, who was suffering from severe infected ulcers of the legs and living in insanitary conditions. 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 where she died nine days later.

SANITARY ADMINISTRATION.

Administra- tion

Sanitary inspectors are called upon to visit every type of building and dwellinghouse situated within the City. Specialised inspectors are engaged full-time upon duties connected with factories, shops, slum clearance, workplaces, bakehouses and cafes.

Although the inspectorate is much below establishment, 331,870 inspections were made during the year, and 42,457 notices served as a result of these inspections.

The sanitary inspectors engaged only in general district duties made 151,298 inspections and reported 45,470 nuisances. During this period 32,297 complaints of nuisances were received as compared with 31,521 the previous year.

The number of notices served for the abatement of nuisances was 25,309 informal, and 11,123 statutory; 1,820 of the latter being served for the provision of dustbins.

In 127 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.

The duties of a sanitary inspector are extremely varied. One day he may find himself visiting a large store or cafe and during the inspection be surrounded with all the glitter and dazzle of chromium, tile and glass, and the next day find himself in a humble artisan dwelling surrounded instead by 4 or 5 unkempt children, filth and squalor.

The work of environmental hygiene calls for tact, courtesy, patience and devotion to safeguard the health of the general community.

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 dealt with at once by the department. The number of references so received was 5,301, while the number of references to other departments was 6,994.

Infected Houses.

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

Number of investigations relating to cases of infectious disease	...	...	...	...	...	...	8,183
Number of inquiries regarding contacts of cases of infection disease	...	...	...	...	...	...	893
Number of visits to infected houses	...	...	...	...	...	...	8,081
Number of inquiries relating to suspected smallpox contacts	...	...	...	...	...	...	393

Drain Testing and Maintenance of Public Sewers.

During the year 2,588 drainage systems were tested, 705 by colour **Drain Testing** test, of which 294 were positive and 411 negative; 266 by smoke rocket test, 123 were positive and 143 negative; 1,617 by smoke machine test, of which 793 were positive and 824 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 dwellinghouses of higher rateable value, the assistance of the City Engineer and Surveyor's Department has been utilised.

The department also dealt with 40 cases of choked and defective public sewers which were referred to the City Engineer and Surveyor by the sanitary inspectors for urgent attention under Section 24 of the Public Health Act, 1936.

SLUM CLEARANCE and HOUSING.

Slum Clearance

The advancing tide of slum clearance swept on throughout the year, steadily gathering momentum month by month, and engulfing in its flood many obsolete worn out houses. Fresh impetus was given to the surge forward by the Minister's announcement promising local authorities full assistance to clear the slums.

Compared with the previous year, five times the number of Clearance Areas and three times the number of dwellinghouses were represented as unfit for human habitation.

Representation of these areas must always be at least two years ahead of the actual decanting of population and demolition procedure to permit elapsing of the statutory time limits concerned with service of notices, holding of public inquiries and development plans to be completed in accordance with legal requirements. Seven public inquiries were held during the year, and eight compulsory purchase orders were confirmed.

The guiding principles governing the selection of areas must be flexible and capable of adaption as experience and knowledge is acquired of the City's black spots.

The specialist staff engaged in this work with years of acquired practical experience behind them, do not adopt an arbitrary programme, but survey the needs of all the population.

During the last two centuries the City's expansion has absorbed many small hamlets and villages situated on its periphery.

The original cottages now form a cankerous condition within the better residential areas. Therefore, it is impossible to confine the sphere of activities within the boundaries of the dockside areas and some action must be taken in the suburbs to prevent general deterioration of the outlying areas.

Consideration must be given to the development plan in relation to the eventual use of the land, and although priority was given for the clearance of land scheduled for housing, the small aggregations of houses situated alongside warehouses on land scheduled for industrial purposes

were not forgotten and plans were formulated for the gradual rehousing of the tenants according to degree of urgency to permit the eventual demolition of these dwellings.

The slow evolution of slum clearance demands that houses should be demolished in blocks and 52 areas were dealt with by clearance area procedure. Unfortunately, it is impossible to adopt this method in respect of all the unfit houses situated in the City. There are many houses due to various reasons which have deteriorated more rapidly than the others in the vicinity. This has caused a certain amount of dislocation in the programme to permit the demolition of these houses, which are known in official circles as "individual unfits".

During the year, 173 individual houses were represented as being unfit for human habitation. The procedure is not so cumbersome for the single dwelling and consequently rehousing of the tenant is accomplished more expeditiously. This type of house includes all classes ranging from the substandard cottage to the large semi-detached dwelling. These houses deteriorate due to lack of maintenance, gross overcrowding, or are abandoned by the owner. It may be possible to preserve a number of this type under the provisions of the new Housing Bill for in many cases if repairs had been carried out continuously, the property would not have deteriorated until it became unfit for human habitation.

Although the primary consideration determining the demolition of a house is the condition of the structure or its bad arrangement, the other aspects concerning the living conditions of the occupiers are given attention.

Where demolition of individual houses would affect adjacent premises then closing orders are made under the Local Government (Miscellaneous Provisions) Act, 1953, which provides for closing of the premises instead of demolition. Seventeen closing orders have been made after representation to the Demolition and Closing Orders (Special) Sub-Committee.

Where part of the premises are unfit then closing orders are made for that portion only and under Section 12 of the Housing Act, 1936, four closing orders have been made.

All the problems associated with obsolescence, congestion, abandoned property, gross overcrowding and rehousing tuberculosis cases, add up to a formidable total, but they are dealt with systematically according to degree of urgency with the minimum amount of delay to the housing programme.

Cellar Dwellings.

Cellar Dwellings

In view of the shortage of housing accommodation there is a tendency for families to occupy basements of large houses for living and sleeping purposes in contravention of Section 469 of the Liverpool Corporation Act, 1921.

The inspectors made 142 visits and in 22 instances found families using these basements as separate dwellings. Twenty-two notices were issued to the owners and occupiers of the premises and reports submitted to the Housing Department for rehousing purposes.

Sub-standard Houses.

Sub-standard Houses

The extent of the slum clearance problem must provide for the eventual demolition of 40,594 sub-standard houses. These are houses where, apart from the absence of suitable sanitary amenities, the fabric of the structure is decayed and worn out, and it is a depressing fact that including this type there are 73,950 houses without baths and 74,286 houses without hot water. The structure of a number of these premises is in good condition and the proposed improvement clause in the new Bill will help all those willing to take advantage of this enactment.

Allocation of Houses—Points Scheme.

The allocation of houses is accomplished under a points scheme and applicants are recommended for priority in accordance with environmental conditions, overcrowding of families and tuberculosis. These priority cases are visited by the sanitary inspector who makes enquiries as to the size of family, occupation, income, type and size of house, the permitted number, extent of overcrowding, verminous conditions, cleanliness and disrepair of the premises. These reports are considered and 1,200 recommendations for rehousing were forwarded to the City Architect and Director of Housing.

When an applicant resides outside the City boundary contact is made with the local authority concerned and a report and number of points allocated requested.

When an applicant lives in this City and applies for a house elsewhere an inspection is made of the premises and a report, together with the number of points allotted, forwarded to the authority concerned.

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. Clearance Areas

Number of dwelling-houses represented during 1953	...	1,766
Number of persons occupying the dwelling-houses	...	8,089
Number of Clearance Areas officially represented	...	52
Number of areas declared to be Compulsory Purchase Orders		17
Number of areas declared to be Clearance Orders	...	Nil
Number of areas in abeyance	...	36

Progressive Summary of Slum Clearance.

Year.	No. of C.O.'s.	No. of C.P.O.'s.	No. of Declaration 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
1953	—	17	—	1,766	8,089	518	2,828
TOTALS	282	258	5	17,518	86,860	10,540	52,428

During the year under review 7 Public Inquiries were held in connection with 7 Areas, further details of which are set out in the following table:—

No. of C.P.O.'s	No. of Dwelling Houses	No. of Persons Displaced
7	466	2,087

During the year 8 Confirmation Orders were received in connection with 358 dwelling-houses, and these Orders confirmed the inclusion of 100 per cent of dwelling-houses in the areas.

Compulsory Purchase Orders Confirmed—1953.

Area	Date of Representations	Houses	Population
Berwick Square	18.9.52	15	78
Burnet Place.....	19.6.52	15	66
Clifton Street No. 1	19.6.52	38	149
Field Street.....	20.11.52	145	625
Southwell Street No. 1	16.7.52	28	126
Southwell Street No. 2	16.7.52	15	71
Tamworth Street	16.7.52	98	444
Watmough Street	20.11.52	4	16
Totals		358	1,575

The following is a list of Clearance Areas which were represented during the year, for which Compulsory Purchase Orders were made:—

Compulsory Purchase Orders.

Compulsory Purchase Orders

Area	Houses	Population
Beaufort Street No. 5.....	14	104
Beaufort Street No. 6.....	3	9
East Prescott Road No. 5	9	39
Greaves Street	3	10
Lancaster Street No. 2	83	371
Longville Street.....	129	598
Mill Street No. 10	8	40
Netherfield Road North No. 3.....	4	12
Northumberland Buildings.....	25	56
Northumberland Street No. 2	5	31
Northumberland Street No. 3	8	39
Opie Street	4	26
Parliament Street	2	14
Penryhn Street No. 2.....	9	45
Robsart Street	6	39
Upper High Street	26	160
Wellington Road	5	16
Totals	343	1,609

Clearance Areas in Abeyance.

Area	No. of Houses	Population
Bala Terrace	29	120
Beaufort Street No. 7.....	2	8
Bembridge Street No. 1.....	114	391
Bidder Street No. 2	14	45
Bolton Street No. 2	12	41
Canterbury Street No. 1	339	1,555
Chester Street No. 2	38	284
Commercial Road	3	20
Cornwallis Street	18	102
Everton Terrace No. 2	4	16
Everton Terrace No. 3	10	55
Everton Terrace No. 4	47	228
Frank Street.....	38	169
Goring Street	188	895
Grafton Street No. 2	22	92
Kirkdale Road No. 1.....	4	20
Langsdale Street No. 1	5	24
Langsdale Street No. 2	41	174
Mann Street	16	58
Mill Street No. 11	6	38
Newsham Street	8	43
Northumberland Street No. 4	4	10
Paddington No. 2	239	1,115
Paddington No. 3	8	29
Park Street No. 1	10	75
Portland Place No. 1	2	13
Prophet Street	6	28
Roscommon Street No. 1	9	34
Roscommon Street No. 2	24	72
St. James Street No. 3	5	25
Seiont Terrace	43	213
Springfield No. 1	16	91
Springfield Square.....	31	110
Windsor Street No. 3.....	23	173
Windsor Street No. 4.....	20	120
Wrexham Street No. 1.....	2	14
Totals	1,400	6,500

Demolition Orders.

During the year 173 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	138
Undertakings given not to use for human habitation ...	3
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	2
Number deferred and later represented under Section 25	nil
Number of representations still to be considered ...	56
Number of properties acquired by Local Authority ...	nil
Number of houses demolished by Owner	115
Number of houses demolished prior to Demolition Order being made	2
Closing Orders made under Section 10, Local Govern- ment (Miscellaneous Provisions) Act, 1953	17

These figures include houses represented in the previous year.

Section 3, Housing Act, 1949.

Houses of Architectural or Historic Interest.

Number of Closing Orders made	3
--------------------------------------	---

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

Three applications were received for the renewal of licences for the temporary re-occupation of houses included in confirmed Clearance Orders.

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

Certificates have been issued under the above Acts in respect of 45 dwelling-houses which were not in a reasonable state of repair. Thirteen 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.

73,049 visits were made to houses in connection with the overcrowding provisions of the Housing Act, 2,207 houses were found to be overcrowded and 1,566 overcrowded families were recommended for re-housing under the provisions of Section 85 of the Housing Act, 1936.

Sections 4 and 62, Housing Acts, 1936/49.

In 25 cases the name and address of the Medical Officer of Health was not inscribed in the rent books, whilst in 2 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 35 rent books. Informal Notices were served in respect of these infringements and the rent books were corrected.

Rentals.

The weekly rentals of flats (including rates), range from 5s. 2d. for a bed living room flat to 13s. 9d. for a five bedroom flat. The inclusive weekly rental of houses vary between 11s. 9d. for the non-parlour type, and 61s. 0d. per week for houses with four bedrooms and garage and for Aged Persons' Dwellings 4s. 6d. and 7s. per week. New three-storey flats range from 11s. 8d. for one bedroom to 41s. 5d. for a four bed roomed flat.

Housing Statistics.

1. Inspection of dwelling-houses during the year—	Housing Statistics
(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	63,809
(b) Number of inspections made for the purpose	96,068
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Amendment Regulations, 1932	3,290
(b) Number of inspections made for the purpose	5,289
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	1,939
(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	25,858
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	15,975
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	—
(2) Number of dwelling-houses which were rendered fit after service of formal notices—	
(a) by owners	479
(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	25,858
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) by owners	9,560
(b) by local authority in default of owners	8

(c) Proceedings under Section 11 of the Housing Acts, 1936/49.	
(1) Number of dwelling-houses in respect of which Demolition Orders were made	138
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	117
(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	4
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	1

Houses Owned by the Local Authority.

Total number of houses and flats owned by the Local Authority at 31st December, 1953 (excluding 19 houses built under the Housing Acts and subsequently sold, and 3,502 temporary bungalows) including 206 houses and flats under the control of the County Borough of Bootle	55,195
Number of houses built in the last three years under the Housing Act, 1936, Part V	7,209

The Local Government (Miscellaneous Provisions) Act, 1953.

Sections 8, 10 and 11 of the above Act, which came into operation in August this year, are of direct interest to sanitary authorities. These sections seek to remedy what have been imperfections in the existing legislation as interpreted by the Courts.

Section 8 is an attempt to solve the dustbin problem, and Section 10 is concerned with the making of Closing Orders in respect of certain buildings as distinct from parts of buildings.

Section 75 of the Public Health Act, 1936, was to place responsibility for the provision of a dustbin on either the owner or the occupier, and also to enable a local authority, if it is so desired, to provide and maintain dustbins throughout the whole or any part of the district. Under this Act the person who receives the notice may appeal to the Court and the Court may make such order as it thinks fit with respect to the compliance with the notice, either by the owner or occupier, but the Court is not compelled to order the provision of a dustbin.

Section 10 empowers a local authority to make a Closing Order in respect of a house, where it considers it inexpedient to make a Demo-

lition Order under Section 11 of the Housing Acts, 1936/49. The section makes applicable to a Closing Order all the relevant sections under the Housing Act, 1936, as applied to Closing Orders under Section 12 of the Act.

Section 11 enacts provisions relating to certain outstanding Demolition Orders.

FACTORIES AND WORKPLACES INSPECTION.

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

Factories and Workplaces Inspection 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)	Inspec- tions. (4)	Written Notices. (5)	Occupiers prosecuted. (6)	M/c. Line No. (7)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	1	1,461	1,305	94	—	1
(ii) Factories not included in (i) in which Section 7 is enforced by Local Authority	2	3,790	5,443	206	—	2
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding outworkers premises) ...	3	78	415	8	—	3
TOTAL ...		5,329	7,163	308	—	

2. Cases in which DEFECTS were found.

Particulars. (1)	M/c. Line No. (2)	Number of Cases in which Defects were found.				Number of Cases in which Prosecu- tions were instituted. (7)	M/c. Line No. (8)
		Found. (3)	Remedied. (4)	Referred To H.M. Inspector. (5)	Referred By H.M. Inspector. (6)		
Want of cleanliness (S.1)	4	55	54	5	13	—	4
Overcrowding (S.2) ...	5	2	2	—	—	—	5
Unreasonable tempera- ture (S.3)	6	7	7	1	—	—	6
Inadequate ventilation (S.4)	7	11	11	2	—	—	7
Ineffective drainage of floors (S.6)	8	—	—	—	—	—	8
*Sanitary Conveniences (S.7)—							
(a) Insufficient ...	9	26	24	—	3	—	9
*(b) Unsuitable or defective ...	10	288	286	—	30	2	10
(c) Not separate for sexes	11	14	14	—	3	—	11
Other offences against the Act (not including offences relating to outwork)	12	11	11	15	—	—	12
TOTAL ...	60	414	409	23	49	2	60

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

Part VIII of the Act.

Outwork.

(Sections 110 and 111)

Nature of Work. (1)	M/c. Line No. (2)	No. of out- workers in August list required by Section 110(1)(c). (3)	No. of cases of default in sending lists to the Council. (4)	No. of prosecu- tions for failure to supply lists. (5)	Section III.		Prosecu- tions. (8)	M/c. Line No. (9)
					No. of instances of work in unwhole- some premises. (6)	Notices served. (7)		
Wearing apparel— Making, etc.	13	105	—	—	—	—	—	13
TOTAL	70	105	—	—	—	—	—	70

Outworkers, Sections 110 and 111.

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

Number of outworkers' returns referred to M.O.H. of districts outside City	...	...	...	...	...	23
Number of outworkers' returns received from other districts	...	...	...	...	...	11
Number of visits to premises	...	...	...	...	...	285
Number of Notices served	...	...	...	...	...	—
Number of outworkers' returns received	...	...	...	...	...	230

Offensive Trades.

No applications were received during the year for consent to establish new offensive trades.

Offensive Trades

774 visits were made to the 74 trades on the register, and 21 notices were served in respect of defects found in this class of premises.

Offices and Workplaces.

Inspection of offices and other workplaces has continued and appropriate action has been taken in cases where structural defects and unsatisfactory environmental conditions have been reported.

Many matters, such as poor lighting, inadequate heating and washing facilities have, in the absence of legislative provisions, been dealt with successfully by informal methods. It has not always been necessary to serve notices for the abatement of nuisances in view of the willing co-operation given by the majority of business firms and owners of commercial property in the City.

In 275 cases, statutory notices had to be served to secure compliance with the provisions of the Public Health Act. Although most of the defects and nuisances have been of a minor character every effort was made to see that these were corrected as quickly as possible.

Prompt remedial measures are most important in the case of defects resulting in damp and unventilated conditions which are frequently the cause of dry rot and deterioration to the fabric and decorations.

In this connection it is noted that a large number of complaints have been received in the department of dampness and water percolating into the basements and sub-basements of commercial buildings in the central area of the City. A great deal of the sanitary inspectors' time has been spent in investigating this type of complaint and tracing the source of the trouble, which is a task often complicated, demanding a wide knowledge of the drainage systems of the older buildings, the location of service mains and the characteristics of the subsoil and other factors.

As a general rule in pre-war days signs of dampness in rooms situated in floors below the ground level caused little concern to occupiers in view of the fact that these rooms were used for the storing of fuel and lumber. The acute shortage of office accommodation has, however, had the effect of compelling many firms to utilise the lower floors for housing records, files and documents and on occasions even as additional work-rooms. It is in such cases that the presence of damp walls and floors becomes a matter of sufficient importance to invoke the assistance and advice of the sanitary inspector.

During the year, 5,319 visits were made to 4,688 offices and workplaces on the register, and 274 defects were reported.

FOOD HYGIENE.

Food Hygiene

For many years the sanitary inspectors have tried in a number of ways, including lectures to staffs, and the service of the Standard Code and warning letters, to improve the standard of hygiene in all the various establishments and industries connected with the food trade.

During the early part of the year the sanitary inspectors' reports indicated that frequent admonitions had failed to inculcate even an elementary standard of hygiene in some of the personnel engaged in the handling, preparation, storage or distribution of food. This lack of co-operation caused unsatisfactory conditions in food premises and increased the danger of food poisoning.

After studying the reports, senior inspectors visited shops, bakehouses and cafes. The initial survey revealed that day-to-day cleanliness was not being carried out and that many of the employees were careless in their habits due to the absence of towels, soap and hot water. Large accumulations of dirt were found, major infestations of rodents and pests, dirty structural conditions and dirty equipment were observed, and a general deterioration in the standard of food hygiene.

These conditions called for immediate punitive action and it was decided that statutory measures be taken, and the adoption of shock tactics to bring personnel engaged in the food trades to a realisation of their responsibilities. Legal action was taken, therefore, against the managements of several bakehouses and cafes within the city.

A copy of the Code of Practice recommended in the report of the Catering Trades Working Party was despatched during the year to 7,137 food traders, but in some cases it was obvious that the Code was ignored. During the drive the press gave their support unstintingly and public interest was aroused.

Cafes and Bakehouses

The prosecutions involved 8 bakehouses and 11 cafes. There were 103 infringements under Section 13 of the Food and Drugs Act, 1938, 322 infringements under the Byelaws made under Section 15 of the Food and Drugs Act, 1938, and 2 infringements under the Factories Act, 1937.

In 15 cases the defendants pleaded guilty and in 4 cases the defendants pleaded not guilty. These were subsequently found guilty and penalised. The penalties imposed amounted to £352.

The inspectors were compelled to reveal most unhygienic conditions in certain establishments which shocked the general public. A prosecution involving a basement cafe kitchen described the premises as consisting of one small room, comparative to the average scullery in a dwelling-house, in which four people were permanently employed. The equipment in the room consisted of a large gas cooker, fish and chip fryer, hot water geyser, gas grill, gas ring and food cupboards. The remaining space in the room was taken up by a food preparation table. The atmospheric temperature of the room was 90° F. and there was a strong smell of gas. The staff water-closet ventilated directly into the room, and there was no ventilating apparatus provided for the fumes from the various articles of equipment situated in the room. The floor was 9 feet below the adjoining street level, and it was observed that the staff were perspiring freely and suffering intense discomfort. The average number of meals served during a peak period was 156.

A number of establishments were found to be in first-class condition and every effort was being made to keep matters relating to food hygiene up to the required standard, but many were far from satisfactory.

The inspectors were informed by the occupiers of these unsatisfactory premises that all necessary works required by them would be carried out immediately. Apparently a visit from the inspector was necessary to accomplish day-to-day cleanliness.

At the present time the staff is reduced considerably in number and routine visits are unfortunately spaced over long intervals. It would appear that certain managements expect to relax in between the inspectors' visits. The drive continued throughout the summer until the traders were aroused from their inertia and a climax was reached at two mass meetings, one in the Picton Hall and the other in Byrom Street Technical School. It was noted that the attendances at these meetings were in the region of several hundreds and there was a feeling of exhilaration within the department when it was realised that at last some real interest was being shown in the problem of food hygiene.

It was observed that many of the food byelaws are subject to ambiguity, but the inspectors concerned were not deterred by criticism, or other complications, and it may be said that this year, for the first time, has seen a real response as a result of the efforts to protect the general public from infection due to food contamination.

During the year, 2,401 visits were made to 238 bakehouses, and 1,969 visits to 285 cafes, snacks bars, etc. Warning letters were sent in respect of 139 bakehouses and 152 cafes, etc. The total number of defects involved in respect of bakehouses was 746, and in respect of cafes 609.

Food shops were included in the clean food campaign and although conditions found were not so bad as those in the other establishments, considerable improvements in day-to-day cleanliness are necessary. Court proceedings were taken against four food retailers, one for failing to protect sweets and chocolate from contamination by mice; one failure to keep the basement storeroom floor clean; one failure to supply sufficient hot water, and one for general dirty conditions. A total of £21 was imposed in penalties.

The salutary effect of these prosecutions caused a general upheaval in the food trades, supervision of staff was improved, premises re-constructed, new equipment installed, and special steps taken with regard to day-to-day cleanliness.

The educational work undertaken by senior sanitary inspectors during the year included the following lectures:—

1. Lectures on food hygiene and principles associated with equipment to demonstrators of electrical appliances. The films "Another Case of Food Poisoning" and "Behind the Menu" were shown.
2. Lectures on food hygiene to staffs of large emporia with cafes and canteens situated within the premises. Films on food hygiene were shown.
3. Lecture on food hygiene to a church congregation. Films were shown on food hygiene and sanitation.
4. Lecture on food hygiene to members of a Community Centre. Films were also shown.
5. Lecture on food hygiene to the Townswomen's Guild.
6. Lecture on food hygiene to the kitchen staffs and certain student nurses at a general hospital. The film "Another Case of Food Poisoning" was shown.

7. Lectures on hygiene as applied to hotels and licensed premises as part of the lecture course for licensees and bar-tenders, organised by the National Trade Defence Association. During the course films "Another Case of Food Poisoning", "Behind the Menu" and "House Proud", were shown.
8. A talk was given to representatives of the sweet and confectionery trades on the hygienic handling of food.

Types of food premises visited by sanitary inspectors for the purpose of securing compliance with the requirements of Section 13 of the Food and Drugs Act, 1938, and the Byelaws made under Section 15 of the Act:—

Bakehouses	...	...	...	...	...	248
Licensed Premises	...	...	...	...	...	1,164
Fish Frying Establishments	...	...	...	...	...	438
Industrial Canteens	...	...	...	...	...	178
School Kitchens, etc.	...	...	...	...	...	237

FOOD FACTORIES.

Brewing and Beer and Minerals Water Bottling	...	...	...	...	...	47
Spice Manufacturers	...	...	...	...	...	4
Bacon Curing	...	...	...	...	...	11
Miscellaneous Food Products	...	...	...	...	...	20
Biscuit Manufacturers	...	...	...	...	...	5
Jam Manufacturers	...	...	...	...	...	4
Fruit (Cleaning and Packing)	...	...	...	...	...	10
Custard and Meal Powder Manufacturers	...	...	...	...	...	4
Millers (Flour, Rice, etc.)	...	...	...	...	...	21
Pickles	...	...	...	...	...	3
Sweet Confectioners	...	...	...	...	...	16
Coffee and Tea (Packing, etc.)	...	...	...	...	...	20
Sugar Manufacturers	...	...	...	...	...	11
Tripe Dressers	...	...	...	...	...	8
Edible Fat Manufacturers	...	...	...	...	...	2

Total 2,451

Shops.

Bread and Confectionery	...	...	459
Butchers	...	...	624
Cafes, Snack bars, etc.	...	...	285
Cooked meats	...	...	53
Dairies	...	...	205
Farm produce	...	...	7
Fishmongers and poulterers	...	...	235
General	...	...	1,264
Greengrocers	...	...	795
Grocery and provisions	...	...	861
Herbalists	...	...	21
Off-licensed premises	...	...	94
Sweets and minerals	...	...	1,155
Tea merchants	...	...	2
Tripe dealers	...	...	3
Total			6,063

*New Food Businesses.***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 Office 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 86 applications were approved by the Food Control Committee during the year, only 55 licences were eventually granted in

respect of premises satisfying the standard set by the department, as indicated hereunder:—

Snack bars	...	...	...	...	...	8
Cafes and restaurants	...	...	...	...	...	3
Snacks on licensed premises	...	...	...	...	...	7
Conversion of snack bars to full-meal service	...	...	...	...	...	2
Industrial canteens	...	...	...	...	...	9
Fish frying establishments	...	...	...	...	...	17
Snacks in fish frying establishments	...	...	...	...	...	4
Other premises (clubs, church halls, etc.)	...	...	...	...	...	5
Total						55

Hospital Catering Hygiene.

The Minister of Health on the 3rd June, 1953, forwarded a circular Hygiene in Hospitals to all Hospital Management Committees relative to the importance of hygiene in hospital catering and urging the Committees to enlist the specialised assistance of the local Medical Officer of Health and his staff in order to ensure a high standard of hygiene in hospital catering.

The sanitary inspectors upon request have inspected 20 of the 25 hospitals in the city and prepared reports on the conditions in the kitchens and in all rooms in which food is prepared or stored.

A copy of the inspector's report was forwarded to the Secretary of each hospital concerned after every facility for inspection had been afforded by the administration officers of the respective hospitals. The reports made by the inspectors enumerated defects and unsatisfactory conditions causing risk of contamination of food and recommendations to obviate these dangers. Extensive works of reconstruction were in operation before the end of the year.

Industrial Canteens.

The provision of satisfactory arrangements for workers to obtain meals at their place of work is now recognised as an important aspect of industrial management and control, and the number of firms who find it an advantage to supply cooked meals at reasonable charges is steadily increasing.

It is encouraging to note that many concerns are paying increasing attention to the construction and planning of the canteen kitchens, so as to allow for easy operation and working, which, as a rule, results in a good standard of hygiene being maintained.

The importance of scrupulous environmental and personal cleanliness in premises where the food is consumed by the workers cannot be overestimated in view of the fact that an outbreak of food poisoning in any particular factory may interfere seriously with production.

Bearing this in mind industrial managements and architects frequently consult the department with respect to matters relating to planning details and equipment in canteens.

There are 182 industrial canteens on the register, but in practice it is seldom necessary to serve notices as steps are usually taken immediately to implement the inspector's recommendations, but on occasions where the work is extensive schedules of work are sent to assist the companies concerned in assessing their commitments.

Fish Frying Establishments.

Fish Frying Establish- ments

The steady and notable advance in the structural improvement and general standard of cleanliness in fish frying establishments has been maintained during the year.

Indeed, the spirit of competition in this class of business, which is becoming more and more evident between certain proprietors, developed to such a degree that one fryer has installed window refrigerator display cabinets to advertise his interest in supplying clean food, so as to attract customers. The personal cleanliness angle, particularly from an appearance point of view, has not been overlooked by this trader.

Although there are more than 400 fish fryers in this city only two complaints were received in the department in the past year with regard to unhygienic conditions in this class of premises.

One of these complaints resulted in summary action being taken against a proprietor in respect of dirty conditions of structure, equipment, and for not providing a sufficient supply of soap and clean towels for the use of persons employed in the shop; fines totalling £15 were imposed by the Stipendiary Magistrate.

With regard to the second complaint, the occupier concerned decided to cease business immediately rather than meet the cost of the repairs and renewals of worn equipment and fixtures which were necessary to conform with the requirements of the appropriate legislation.

1,544 visits were made to 428 fish frying establishments and notices were served in respect of 481 defects.

Bread Vans.

The inspectors have not confined their activities to establishments **Bread Vans** only and inspections have continued of vans used for the purpose of conveying bread and confectionery at the bakehouses and in the course of delivery.

Cautionary letters were sent to food traders whose vans were found to be in a state of disrepair or the standard of cleanliness was unsatisfactory, and subsequent inspection showed marked improvement in each case. Every effort is being made to discourage the practice of some salesmen in leaving the van doors open longer than is absolutely necessary when delivering goods, and particularly when vehicles are in motion, so as to prevent dust and dirt entering the vans and settling on the food. It is doubtful, however, if any vehicles of this type are so constructed that dust can be eliminated entirely, even when the doors are closed, and the only certain method of preventing contamination of bread and confectionery from this source would be the granting of powers to enforce the wrapping of food which is delivered in this manner.

Of the 1,068 examinations of vans carried out during the year, the interiors of 18 were found to be dirty and 5 were in want of repair.

Licensed Premises.

The easing of controls has allowed brewery companies to carry out **Licensed Premises** reconditioning and repairs in licensed premises.

The furnishings and equipment of many licensed houses had deteriorated, making it difficult to comply with legislative requirements.

Public houses are food premises and subject to the provisions of the Food and Drugs Act, 1938, and representatives of the local companies have expressed the wish that the consumption of intoxicating liquor should not give any cause for anxiety, so far as food poisoning is concerned. The pre-war policy of systematic redecoration of bars and bar

parlours has been revived, and there has been a substantial development in the replacement and renewal of out-of-date and worn equipment and fittings.

It is pleasing to record that of the 1,164 licensed premises in the city only 5 are still using lead pipes for conveying the liquor from the barrel to the beer engine. These lead pipes are tin lined, and located in houses which are expected shortly to be closed.

Sanitary accommodation for persons frequenting such premises is not satisfactory, particularly in the provision of separate facilities for women customers. There are still many public houses without separate sanitary conveniences for the sexes, and although it is understood that the solution of this problem presents difficulties, the companies concerned should give immediate attention to this matter.

With regard to the cleansing of drinking utensils, there is evidence to show that the use of a bactericidal detergent in the bar sinks is becoming general practice.

Licensees complain occasionally to the inspectors that glasses treated in this manner have become marked or are slippery to touch, or that the "head" on the beer is affected, but there is every reason to believe that the dosage of detergent has been incorrect in these cases. These conditions are not likely to arise if the particular detergent which is recommended by the Brewing Institute is used in accordance with instructions. Where there is no effective glass washing machine, this type of detergent should be used in all bar sinks, as a preventive measure against the spread of infection.

The courses of instruction for licensees and bartenders organised by the National Trade Defence Association continue to be held in the city, and although the syllabus covers a wide field of subjects of interest to licensed victuallers, special emphasis is laid on the importance of hygiene.

3,001 visits were made to licensed premises during the year, and 661 defects were reported.

SUPERVISION OF FOOD SUPPLY.

TABLE I.

NUMBER OF VISITS PAID TO PREMISES BY FOOD INSPECTORS.

Slughter-houses (private)	Butchers' shops.	Fruit shops.	Fish shops.	Food factories.	Provision premises.	Ice Cream premises.	Knackers' yards.	Dairies, Milk shops.	Pig-eries.	Total visits.
22	14,226	12,044	13,358	867	1,399	3,288	56	3,676	286	49,222

Private Slaughter-houses.

There are 4 private slaughter-houses in the city at which, during the year 21 "Cottager's pigs" were slaughtered under Ministry of Food licences. 43 pigs slaughtered on private premises were also examined at the request of the owners.

The City Abattoir.

466,830 animals were slaughtered for human food, details of which City Abattoir are given in the following table. This number is an increase of 36,241 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	786	27,724	26,699	16,991	46,079	225,120	123,320	99	12

As noted above, the increase in the number of animals slaughtered by 36,241 is largely accounted for by a remarkable increase of pigs slaughtered. From 22,360 in 1951, the total of pigs has increased to 123,320 in 1953.

As noted in the previous year's report 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. The staff was depleted during the year by the sudden death of one inspector, whilst another took up an appointment with the Admiralty.

Carcases
Inspected and
Condemned

TABLE III.

CARCASSES INSPECTED AND CONDEMNED.

	Cattle excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs.	Goats.	H
Number killed	45,501	26,669	46,079	225,120	123,320	12	
Number inspected	45,501	26,669	46,079	225,120	123,320	12	
All Diseases except Tuberculosis.							
Whole carcases condemned	6	59	631	212	181	—	
Carcases of which some part or organ was condemned	9,682	12,091	165	36,466	12,484	—	
Percentage of the number inspected affected with disease other than tuberculosis	21·29%	45·51%	0·58%	16·29%	10·27%	—	
Tuberculosis only.							
Whole carcases condemned	71	498	9	—	126	—	
Carcases of which some part or organ was condemned	1,540	4,268	2	—	4,270	—	
Percentage of the number inspected affected with tuberculosis	3·54%	17·85%	0·02%	—	3·56%	—	

Diseased Conditions.

The carcases of 82,761 animals, approximately 18 per cent. of the 466,830 animals slaughtered, showed abnormal conditions, and a detailed examination was made in each case. 1,793 carcases were totally rejected as unfit for human food, together with portions of 4,902 other diseased carcases. The weight of this meat was 373 tons. See Table VI.

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 458 tons, 1 cwt. 8 lbs. See Table VI.

TABLE IV.

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

Beef.	Veal.	Mutton.	Lamb.	Pork.
(quarters) 30,705	1,352	600	14,131	34,215

In addition to the above, 11,563 boxes or packages of offal sent from Ireland were dealt with in the meat market. Much of this offal arrived in unsatisfactory condition.

TABLE V.

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

Beef.	Veal.	Mutton.	Lamb.	Pork.
(quarters) 33,614	8	114,690	288,885	5,327

In addition to the above, 58,552 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 15,088 lb., Mutton 3,902 lb., Pork 1,586 lb., Veal 110 lb.

In the month of July the first consignment of chilled beef to arrive in this country for a number of years from South America was unloaded from the s.s. *Hornby Grange* in a mould-damaged condition.

As this chilled beef was unloaded, it was pitched on the Stanley Meat Market for trimming and reconditioning with the object of salvaging as much as possible. This work called for intensive effort on the part of

the Wholesale Meat Supply Association and the Meat Inspectors as 1,981 forequarters and hindquarters of beef had to be extensively trimmed and critically examined in the time of one week-end. The amount of meat rejected as unfit for human consumption by reason of mould growth and decomposition was 40,579 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, and school canteen kitchens, 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.

During the year three contractors were prosecuted and convicted, being fined £10 0s. 0d. each, for supplying meat which was not of the quality demanded, to canteen kitchens of the Liverpool Education Committee.

Poultry.

Poultry Inspection

All poultry is examined on arrival at the markets before sale, and in addition during the year 1,443 boxes of sub-standard poultry from Northern Ireland were subject to a special detailed examination. This resulted in 5,626 head of poultry being rejected for reasons set out as follows:—

Arthritis	...	...	...	...	98
Decomposition	...	...	...	...	958
Emaciation	...	...	...	...	2,916
Epithelioma	...	...	...	...	90
Extensive Bruising	...	...	...	...	164
Fibroma	...	...	...	...	494
Ill Bleeding	...	...	...	...	87
Lymphadenoma	...	...	...	...	27
Oedematous Oviducts	...	...	...	...	792
					<hr/>
					5,626
					<hr/>

It has been noted that as a result of this special attention paid to the examination of sub-standard grade poultry, the average quality of this grade has materially improved in the past two years.

In addition 3,973 head of high grade poultry were rejected mainly for decomposition. This figure includes 20 boxes (12 head of poultry each box) of Irish Free State poultry which were rejected for decomposition due to incomplete drying after wet plucking by machine.

Fish Inspection.

The Wholesale Fish Market supplies an extensive area on both banks of the River Mersey. In the year 1952/1953, 788,476 packages, 14,669 tons of fish were handled in addition to some 28,000 packages of rabbits, poultry and game, including venison.

The inspection of this fish and game, poultry and rabbits resulted in the condemnation of some 148 tons as unfit for human consumption. (See Table VI.)

It is interesting to record that 14 plaice, 1 flounder, 1 lemon sole, and 1 hake were found affected with sarcoma, carcinoma, or melanotic sarcoma lesions or growths. The routine bacteriological examination of various types of shellfish was carried out during the year and the results were satisfactory. It was not necessary on any occasion to condemn shellfish for pollution.

Fruit and Vegetables.

The inspection of fruit and vegetables at the North Market, Queens Square, and the various wholesale storage warehouses has been maintained during the year. Samples of citrus fruits have been examined for the presence of diphenyl from being wrapped in paper treated with this preservative. None of the samples contained excessive amounts of diphenyl.

NOTE.—Diphenyl, like thiourea, inhibits the progress of fungus-causing moulds, although thiourea has been banned in the United States on the grounds of its toxic effects, and of course in this country the presence of thiourea would be a contravention of the Preservatives, etc., in Food Regulations, 1925-1953.

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. However, during the year, the Ministry of Food (to whom the meat belongs) has continued the policy of offering diseased raw meat and offals for sale by public auction to firms engaged in preparing animal food. Condemned diseased meat from Stanley Abattoir has been thus sold to firms in Shropshire, Lancashire and Cheshire. The meat and offals are, of course, green-stained before removal from the Abattoir, but in turn, some of this meat and offal has been resold (quite legitimately) to owners and those carrying on the business of pet stores where the meat is sold in its diseased raw state for dog and cat food.

It cannot be too strongly urged that all meat sold in pet shops should be sterilised before sale, as the handling and cutting of such diseased meat and offal presents a real danger to the shopkeepers, and of course, a source of infection to the animals.

Dried Fruit.

Dried Fruit Some 16,400 boxes of Australian sultanas and currants stored in two of the City warehouses in the dock area were extensively damaged in part, being contaminated with sewage/drain water, which the main sewers could not take following heavy thunderstorms in July.

The bottom layers of the stacked cases had to be removed, the warehouse cellar floors cleaned and the sound cases re-stacked. All sewage-damaged cases of dried fruit unfit for human consumption were placed under detention; being subsequently released piecemeal as buyers could utilise the sultanas and currants for animal feeding under the usual guarantee that no portion would be used for human consumption. In cases where the fruit was sent out of Liverpool, the Medical Officer of Health for the receiving area was advised of quantities, marks, and weight.

So far, some 1,400 cases of sewage-damaged sultanas and currants have been dealt with in this way, and 164 cases remain for disposal.

TABLE VI.

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

	Tons	Cwts.	Qrs.	lbs.
Beef, Veal, Mutton, Pork	373	—	3	6
Offal	458	1	—	8
Fish (Wet)	106	9	1	6
Fish (Dry)	17	5	—	18
Shellfish	3	9	—	20
Poultry	18	8	2	22
Game	—	1	3	18
Rabbits and hares	3	—	3	13
Fruit	39	15	2	22
Vegetables	155	16	—	9
Nuts	—	8	3	14
Dried fruits	1	5	—	10
Canned foods	75	6	1	5
Sundries (Jellies, flour, sweets, cereals, etc.) ...	16	12	1	1
Total quantity of food condemned	1,269	1	1	4

Trichinosis.

Routine samples of pork muscle snippets are submitted for examination to the City Bacteriologist who has developed a special technique for this purpose. In the 600 specimens examined no trichinella have been found. **Trichinosis**

Hydrogen Cyanide (Fumigation of Buildings) Regulations, 1938.

Successful fumigation of two flour mills, under the conditions of the Regulations, took place during the year. A Food Inspector was present on each occasion, the work being carried out during the week-end.

Fertilisers and Feeding Stuffs Act, 1926.

During 1953, 62 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 722. It was not necessary to institute any legal proceedings.

Precautions against Contamination of Food.

Precautions against Contamina- tion of Food

During the year, 49,222 visits of inspection were made by the Food Inspectors to premises where food was prepared. Details of these visits are given in Table I. The number of premises registered under Section 14 of the Food and Drugs Act, 1938 for the manufacture or preparation of sausages, potted, pressed, pickled or preserved food is 576.

During the year, 133 complaints from members of the public were received, these complaints varied from the presence of beetles in a tin of beans packed in South Africa to broken teeth resulting from eating popcorn. (See legal proceedings.) In every case a thorough investigation was made.

The provisions of Section 13 of the Food and Drugs Act, 1938 have been fairly enforced, 104 notices were served in regard to contraventions which were not remedied on verbal notification. Under the Clean Food byelaws (Section 15 of the Food and Drugs Act) 147 notices were served for infringements of the provisions.

The hygienic conditions of St. John's Market and the Retail Fish Market have both been the subjects of report by the Medical Officer of Health to the Health and Markets Committees.

Retail Fish Market.

The continued existence of the Retail Fish Market as carried on at present is unsatisfactory from a public health viewpoint and it is now a matter for the City Council to determine its future.

St. John's Market has also been the subject of report and recommendations from the two Committees and it is hoped that the proposals already accepted will result in further hygienic improvement particularly in the provision of drainage, water supply and toilet amenities.

Rose Street, Roe Street, Queens Square, Gt. Charlotte Street.

In the report for 1952 it was stated that 'special agreement had been made (with the City Engineer and Water Engineer) for the regular washing of the streets especially during the summer months'.

No such work has been carried out and the Medical Officer has again reported to the Committee on the imperative need for adequate cleansing, particularly of Great Charlotte Street.

It is hoped that attention will be given to this matter and that improvement in the hygienic condition will be noted in this area of the City where a considerable quantity of food is handled and sold.

Clean Food Campaign.

Classes or Lectures for Food Traders or their Employees.

Each year, in addition to sanitary inspectors and colonial students, 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 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.

**Clean Food
Campaign**

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.

In addition this year a special series of lectures and practical demonstrations was given to the staff of the Liverpool Education Committee concerned with the supervision and preparation of school meals at Canteen kitchens. The course dealt particularly with the identification of fish and cuts of meat.

Morbid specimens are also prepared for examinations conducted by the Royal Sanitary Institute, the University of Liverpool Veterinary School, and the Institute of Meat. Specimens are also provided for the hospitals and University teaching schools for dissection and demonstration purposes.

THE CLEANLINESS OF MILK.

During the year, the standard of cleanliness of milk has been very **Milk Inspection** 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 2,955, comprised as follows:—123 Tuberculin-tested milks; 421 Accredited milks; and 2,411 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 and Accredited milks 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.

TABLE VII.

EXAMINATION OF MILK—METHYLENE BLUE REDUCTION TEST.

Designation	Number of samples	Satisfactory	Unsatisfactory
Tuberculin tested	123	105 (85·3%)	18 (14·7%)
Accredited	421	382 (90·7%)	39 (9·3%)

TABLE VIII.

EXAMINATION OF MILK—TUBERCLE BACILLI.

Designation	Number of samples	Tubercle bacilli present	Percentage Tuberculous
Tuberculin Tested and Accredited }	506	10	1·9%
Raw Milk	68	2	2·9%

The tuberculin tested and accredited milks were on sale without heat treatment; the raw milk was pasteurised after production before retail sale.

Milk and Dairies Regulations, 1949.

Provisions with regard to Infection of Milk.

During the year, 12 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.

Registration of Dairies.

TABLE IX.

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

Registration
of Dairies

Number of registered dairies at the end of 1952.	New applications for registration.	Registration refused.	Dairies removed from the register.	Number of registered dairies at the end of 1953.
413	16	—	10	419

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

Inspection of Dairies and Milk Shops.

3,676 visits of inspection were paid during the year. In 63 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.

The number of registered distributors of milk is 1,333, and in addition 1,118 persons (mainly shopkeepers) are registered as vendors of bottled sterilised milk.

Daily Supply of Milk to Liverpool.

TABLE X.

DAILY CONSUMPTION OF MILK DURING 1953.

Grade of Milk.							Quantity in Gallons.	Daily Consumption of Milk in the City
Tuberculin-tested (Farm Bottled)...	...	...	...	...	...	...	997	
Tuberculin-tested	...	...	...	...	...	...	2,280	
Tuberculin-tested (Pasteurised under licence)	...	...	...	...	...	...	27,718	
Accredited	...	...	...	...	...	...	1,860	
Pasteurised under licence	...	...	...	...	...	...	44,446	
Sterilized	...	...	...	...	...	...	12,571	
TOTAL							89,872	

Orange Drinks. All the large dairy concerns in the City are now producing and bottling orange drinks. Separate plant, bottles and preparation rooms are devoted to this new feature of the dairying trade, and some idea of its growth in the short time of eighteen months can be formed by a realisation that approximately 311,000 bottles of orange drink are filled daily in the three large wholesale dairies of the City. Bacteriological and chemical examinations are carried out as a routine by the Department and the results prove that the product (consisting of orange juice, water and sugar) is safe and palatable.

Heat Treatment of Milk.

Milk Pasteurisation.

There are 16 pasteurising plants operating in the City of which 6 are equipped with High Temperature Short Time plant and 10 with Holder type or Batch pasteurisers. The capacity of the plants varies from 75 gallons per hour to 2,500 gallons per hour. 113 visits were made during the year to check on the heating temperatures and efficient-running of these plants.

Heat
Treatment
of Milk

The amount of milk pasteurised daily is some 86,300 gallons.

Milk Sterilisation.

Three establishments are equipped with large scale sterilisation plant. The daily amount of milk sterilised is approximately 100,000 pints. It is of interest to record that one firm in the City processes and exports sterilised milk in bottles to West Africa.

TABLE XI.

EXAMINATION OF HEAT TREATED MILK FROM PLANTS IN THE CITY.

Class of Milk.	Number Tested.	Appropriate Test.	Number of Samples.	
			Passed.	Failed.
Pasteurised... ..	1,219	Phosphatase ... Methylene Blue	1,210 1,204	9 15
Sterilised	256	Turbidity ...	256	0
Tuberculin Tested (Pasteurised)...	936	Phosphatase ... Methylene Blue	924 930	12 6
TOTAL	2,411	Phosphatase ... Methylene Blue Turbidity ...	2,134 2,134 256	21 21 0

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.

Milk Supply to Hospitals and Aged Persons' Hostels.

The milk supplied by contractors is regularly sampled at time of delivery. 252 samples tested chemically and bacteriologically proved satisfactory.

Milk Supply to Schools, Day Nurseries, School Canteens.

Routine sampling is carried out at these premises covering all the suppliers. None of the 126 milks were found to be tuberculous, and all complied with legal standards of quality.

Ice Cream.

Ice Cream

During the year, 3,288 visits of inspection were made by the Food Inspectors to premises where ice cream was manufactured or sold. The number of registered manufacturers is 155, and there are 1,698 premises registered for the storage and sale of ice cream.

Of 171 samples examined bacteriologically, 85 samples were Grade 1; 29 Grade 2; 37 Grade 3; and 20 Grade 4.

Chemical analysis of 32 ice creams showed the ingredients to comply with the provisions of the Food Standards (Ice Cream) Order, 1953, in all but three instances. These samples were deficient of fat content—one slightly deficient, and in the other two cases, the fat deficiencies were 34 per cent. and 40 per cent. respectively. The manufacturers of the two samples were convicted and fined. See Table XII.

Ice Lollies.

The sale of ice lollies amongst children in the City, and indeed **Ice Lollies** throughout the country as a whole has been a feature of post-war years. It has been observed that many children consume three or four ice lollies daily. In view of this high consumption it was decided during the year to make an investigation into the methods of manufacture, also the chemical, and bacteriological purity of this product. The report on the incidence of metallic contamination of ice lollies which was approved by the Health Committee and subsequently published in the medical press and all the national newspapers, focused public attention on a state of affairs which was disquieting. 39 out of 70 samples detailed in this report were found contaminated with lead, copper or zinc. The respective amount of metals was as follows:—

Lead from 1.5 parts per million to 11 parts per million; Copper varied from 0.5 parts per million to 11 parts per million; whilst tin and zinc present was of the order of 20 to 70 parts per million, and 4 to 5 parts per million respectively.

The sources of the metallic contamination generally were the metal moulds in which the liquid was frozen into shapes—the use of old moulds which had become cracked in use, tin plate of poor quality, soldered joints (lead-tin solder), galvanised metal pails (zinc), worn copper moulds, were all factors contributing to the final metallic content.

One may reasonably enquire why metal moulds are used instead of plastic fashioned moulds, but the ice lollie makers state that the use of plastic moulds slows up the freezing process as compared with metal; and although some promising experiments have been made with plastic-sprayed metal moulds the solution to the problem is not yet in sight.

The total number of ice lollies taken in the whole year was 148, and in 73 of these metallic contamination was noted:—

Lead to amounts varying from 1.5 to 6 parts per million was found in 25 samples; copper 1.5-33.0 parts per million in 36 samples, and 12 samples containing tin varying from 30-70 parts per million. Bacteriologically the samples were satisfactory, and chemical analyses showed that the product varied from frozen water faintly flavoured to a palatable fruit crush.

It is hoped that in the near future the Ministry of Food will issue a standard for the maximum quantities of metals (particularly lead) which are to be regarded as permissible in ice lollies.

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 1953, out of a total number of 3,898 samples taken or purchased, only 4·4 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 3,898 samples, 633 were formal and 3,265 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. 50 formal samples and 123 informal samples were reported as not being genuine or otherwise giving rise to irregularity. Legal proceedings were instituted in 15 cases where formal samples were found not to be genuine and, in the remaining instances appropriate action was taken.

**Routine
Sampling of
Foodstuffs**

TABLE XII.

OFFENCES UNDER THE FOOD AND DRUGS ACTS, 1938-50.

Number of Informations laid	Nature of Sample.	Nature of Offence.	Result of Legal Proceedings.		
			Number of convictions	Fines.	Costs.
2	Beef Sausages	Deficient in meat content...	2	£ s. d. 6 0 0	£ s. d. 6 6 0
1	Beef Sausages	Contained excess of preservative	1	3 0 0	—
2	Ice Cream ...	Deficient of fat ...	2	2 0 0	6 6 0
10	Milk ...	Contained added water ...	10	16 0 0	14 14 0
1	Sliced Loaf ...	Contained string ...	1	3 0 0	0 15 6
1	Loaf ...	Contained cigarette-end ...	1	5 0 0	0 10 0
1	Loaf ...	Contained foreign bodies (oil and cotton fibres)	1	3 0 0	—
1	Self-raising Flour	Contained dead mouse ...	1	10 0 0	—
2	Processed Cheese	Mouldy—unfit for consumption	2	8 0 0	—
1	Eccles Cake ...	Contained a nail (tack) ...	1	3 0 0	—
1	Popcorn ...	Contained foreign substance (metallic origin)	1	10 0 0	3 8 0
1	Syrup of Violets and Sweet Oil of Almonds	Contained living and dead flies	1	3 0 0	—
1	Cough Mixture	Contained dead beetle ...	—	Dismissed	—
1	Fancy Cake ...	Contained piece of string ...	1	2 0 0	—
1	Chocolate Biscuit	Contained a nail ...	1	3 0 0	—
3	Supply of Beef	Not of the quality demanded by the purchaser (Liverpool Education Committee)	3	30 0 0	—
30			29	107 0 0	31 19 6
				£138 19 6	

SANITARY ADMINISTRATION (continued).

Furniture Removers.

69 visits were made to the premises of furniture removers, and 84 vans were inspected, 4 vans were found to be dirty and on re-inspection 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 were 30 licensed employment agencies on the register at the end of the year.

Rag Flock and Other Filling Materials Act, 1951.

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

Rag Flock
and other
Filling
Materials Act
1951

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 purposes 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 ...	...	8
Number registered in which filling materials are used		75

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

Rag Flock	...	...	...	...	24
Woollen Mixture Felt	...	...	...	...	9
Coir Fibre	...	...	...	...	12
Curled Hair	...	...	...	...	4
Feathers	...	...	...	...	1
Cotton Felt	...	...	...	...	1
Cotton Mill puffs	...	...	...	...	1
					—
				Total	52
					—

The results of the analytical tests showed that 2 samples of rag flock being used in the manufacture of upholstery did not conform to the prescribed standard of cleanliness. These samples contained 48 and 82 parts of chlorine expressed as soluble chlorides per 100,000 parts of flock, which was 18 parts and 52 parts, respectively, in excess of the maximum amount permitted under the Act.

A sample of rag flock taken from a cushion purchased at a shop was certified to contain soluble impurities averaging 2.1 per cent which is 1.5 per cent in excess of the permitted maximum. The offenders in these cases were cautioned.

Filling materials were also observed being used in two premises not registered by the City Council but in both cases the occupiers were found to have registered other premises which they had previously used for upholstery manufacture, and were under the impression that registration was automatically transferred on removal to a new premises. In these circumstances a caution letter was sent to each occupier.

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

Administration and Enforcement.

**Shops Act,
1950**

The enforcement of the provisions of the Shops Act, 1950, and the Young Persons (Employment) Act, 1938, and the administrative duties associated therewith, is of foremost importance among the varied activities of the sanitary inspectors in this City.

While certain requirements of the Shops Act, particularly those relating to the closing hours of shops, are considered by some sections of public opinion to be arbitrary or restrictive, the legislation as a whole is undoubtedly a measure closely allied to the health and welfare of the community. It is true that these enactments are primarily designed to protect shop workers and young persons in certain classes of employment, but the benefits intended for employees are in some respects shared, if not entirely appreciated, by employers and shopkeepers generally.

**Young
Persons
(Employment)
Act, 1938**

During the last war, and in the years immediately after, when trade was limited by the lack of goods, shops were closed early in the evenings and for the most or all of Sundays. This gave the shopkeeper an opportunity for rest and recreation rarely experienced in pre-war years.

Unfortunately, increasing competition in recent years among trade people is tending to extend late-evening and Sunday trading, but it is hoped that new shops law will in some measure control this undesirable tendency.

In spite of this trend to keep shops open later, it is interesting to note that very few complaints of trading outside permitted hours are received by the department. Shops inspectors continue to carry out all the duties required by the provisions of these enactments and the various infringements discovered are dealt with appropriately.

Late Closing Day.

There are indications of a trend towards the re-establishment of a "late" closing day, and certain shopkeepers are now thinking in terms of "service" to the public. There can be little doubt that some consideration of the need for such a service should be given at this time, before new legislation is considered by Parliament, in order that some assessment may be obtained of the demand for a later shopping hour on one day a week. Strong influences are being brought to bear by representatives of employees organisations to counter any trend towards the later closing of shops, apparently on the ground of the encroachment into the hours of leisure and recreation of shopworkers.

**Late Closing
Day**

It is too soon yet to draw any conclusion from what has happened so far. Two large departmental stores and a large retail food establishment in the city, together with a number of smaller main road shops, chiefly selling wearing apparel and furniture, are being kept open until 7 o'clock on either Thursday or Friday evenings for an experimental period of some six months which commenced several weeks before Christmas. There was a marked seasonal trade on the "late" nights prior to the holiday, but there was apparently a considerable reduction in business afterwards.

Whatever the outcome of this experiment the back-street general dealer, for the most part, has a "late" night every night, and in some instances later than the hours prescribed in the Act. It may well be that as long as the Shops Act gives exemption to the sale of certain commodities, and fixes later hours for others, mixed trades shops, situated as they are, in the main, in districts where orderly shopping habits are rarely practised, will always present a problem to those responsible for the enforcement of the closing provisions of the Act.

Welfare Provisions.

Welfare Provisions

The enforcement of the welfare provisions of the Shops Act has always been strictly adhered to with the result that it can be recorded the only infringements now found in respect of these matters relate to those premises where there has been a change of occupation or in the number or composition of staff, or where repairs have been found necessary. Notices, served upon the owners or occupiers, as the case may be, have been complied with, and it has been unnecessary to resort to court proceedings.

While the welfare provisions of the Act are limited to specified matters, certain larger firms provide facilities far beyond those limits.

The facilities for the taking of meals by staffs are equal to those provided in good restaurants or cafes, and cooked meals are obtainable at remarkably low prices. In some stores an excellent medical centre is also provided where assistants are given regular examination and certain forms of treatment not requiring the attention of a doctor or hospital.

Places of Entertainment.

The complete absence of complaints relating to places of entertain-
ment is an indication of the high standard of cleanliness generally **Places of Entertainment**
maintained by the managements of these premises. Few patrons as they sit during the various performances, are aware of the frequent and thorough inspections carried out by sanitary inspectors in accordance with the request of the Licensing Justices.

It is, however, not without serious difficulties that this standard is maintained, particularly in a number of cinemas. In some parts of the city gross misuse of the sanitary conveniences produces abominable conditions calling for the constant attention of attendants in order to avoid serious nuisance arising. There is frequent and sometimes serious damage to flushing apparatus and other fittings, and seats in the auditorium are subjected to slashing and sometimes are found to be fouled. Hence the need for regular supervision.

Managers and licensees are appreciative of these inspections and are always anxious to deal with any matters brought to their attention.

During the year, 744 evening visits were made in addition to day-time inspections, and 23 defects, mainly of a minor character, were observed and brought to the notice of the managers and were remedied without delay.

Statistical Appendix.

PARTICULARS OF INSPECTIONS.

APPROXIMATE NUMBER OF SHOPS IN THE CITY—16,788.

Inspection.				Contraventions.		
					Reported.	Remedied.
A.	Retail shops visited	...	5,236			
	Retail shops re-visited	...	9,956			
	Retail warehouses visited	...	—			
	Retail warehouses re-visited	...	—			
	Assistants employed.					
	Young Persons—Male	...	527			
	Young Persons—Female	...	882			
	Adults—Male	...	2,143			
	Adults—Female	...	4,718			
	Pet shops visited	...	84			
	Pet shops re-visited	...	66			
B.	Wholesale shops visited	...	142			
	Wholesale shops re-visited	...	270			
	Wholesale warehouses visited	...	43			
	Wholesale warehouses re-visited	...	116			
	Young persons employed.					
	Male	...	43			
	Female	...	29			
	Adults employed.					
	Male	...	263			
	Female	...	223			
	Half-holiday Closing.					
	Visits to shops after 1 p.m.	...	56,349			
	Evening Closing.					
	Visits to shops—					
	After 7 p.m.	...	18,215			
	After 8 p.m.	...	19,521			
	After 9 p.m.	...	12,769			
	After 9.30 p.m.	...	9,357			
	After 10 p.m.	...	8			
	Sunday Closing.					
	Visits to shops on Sunday	...	6,820			
	Public Health Acts.					
	No. of nuisances reported	...	963			
	No. of nuisances abated	...	816			
	No. of nuisances outstanding	...	147			
				Shops Act 1950.		
				Half-holiday closing	61	61
				Mixed trades notice	105	105
				Closing notice		
				(Alt. W.H.H.)	39	39
				Assistants' Half-holiday	61	61
				Seats for female assistants	4	4
				Assistants' half-holiday		
				notice	460	430
				Evening closing	49	49
				Mixed trades notice	28	28
				Hours of employment of		
				young persons	9	9
				Schedule...	6	6
				Record of hours of em-		
				ployment of young		
				persons	169	169
				Abstract of provisions of		
				1950 Act (Forms H		
				and J) ...	161	157
				Notices as to seats for		
				female assistants		
				(Form K) ...	406	370
				Other notices (A-Z)	1	1
				Ventilation	7	7
				Temperature	18	11
				Sanitary conveniences	1,132	889
				Lighting	2	2
				Washing facilities	98	72
				Facilities for taking meals	13	10
				Closing of shops on		
				Sunday	112	112
				Mixed Shops' Notice		
				(Form I)	271	271
				Record of Sunday		
				employment	268	268
				TOTALS	3,479	3,130

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	501	91	74
Food and Drugs Act, 1938	123	19	21
Shops Act, 1950, Section 38	387	139	57
Prevention of Damage by Pests Act, 1949 ...	—	—	—

In addition to the notices served under the Food and Drugs Act, 1938, and Shops Act, 586 Warning Letters were sent to the occupiers of shops in respect to contraventions of these Acts.

Pet Animals Act, 1951.

The Pet Animals Act, 1951, which came into force on the first day of April, 1952, has now completed its first full year in operation. Licences expire on the 31st December each year, irrespective of the date on which they are granted, and all persons desiring to continue their businesses as pet shops are required to make yearly application for a new licence.

During the year, 84 visits, and 66 re-visits, were made by shops inspectors to premises regulated by this enactment, to deal with enquiries, applications for licences, and to ensure that the conditions required by the Act are maintained satisfactorily. Apart from a few minor matters all the premises licensed were found to be satisfactory.

Matters relating to fire precautions were dealt with by the Liverpool City Fire Service.

Common Lodging-houses.

At the commencement of the year there were on the Register 17 lodging-houses, 15 providing accommodation for males and 2 providing

Pet Animals Act, 1951

Common Lodging-houses

accommodation for females, making a total available accommodation for 1,021 males and 113 females. The sanitary inspectors made 656 visits during the day-time and 33 nocturnal inspections.

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

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

23 notices were served under the byelaws 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, all of which were abated at the end of the year. 11,318 beds were examined and 63 found verminous; of these, 62 beds were cleansed by the local authority, and one was destroyed. 58 lodgers were found to be verminous and were cleansed by the local authority.

Seamen's Lodging-houses.

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 seamen's lodging-houses. One house has ceased to be used as a seamen's lodging-house during the year, and applications were received for the renewal of 10 licences, which were granted. At the end of the year there were 17 lodging-houses on the register which provided accommodation for British, Chinese, Arab, Somalis and Indian seamen. The total available accommodation for seamen was 1,004. The sanitary inspectors made 429 day inspections and 33 nocturnal inspections.

99 contraventions of the byelaws were found in 52 houses, which were dealt with either verbally or by the service of notices. The inspectors examined 5,308 beds of which only 2 were found to be verminous.

Sub-let Houses.

1,870 sub-let houses were inspected and 2,560 visits made during the year, only 15 houses were found dirty, which were cleaned immediately without the service of statutory notices.

Canal Boats.

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

The Docks and Inland Waterways Executive, North-Western Division, Canal Boats 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, 1953	416
New Boats registered	9
Boats removed from Register	4
Boats on Register, 31st December, 1953	421

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	98
Steam-propelled boats	62
Motor-towed boats	45
Steam-towed boats	126
Horse-drawn boats	90
	<hr/> 421 <hr/>

1,025 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	206
Registered at Liverpool	146
„ „ Leeds	—
„ „ Runcorn	13
„ „ Manchester	9
Boats not registered and not use as dwellings	38

All the boats examined were "wide" boats, 70 being motor propelled, 7 steam-propelled, 38 motor-towed, 53 steam-towed, and 38 horse-drawn.

Contraventions of the Act and Regulations were found on 35 boats, of which number 6 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	4	4
No certificate of registration on board	15	9
Registration lettering and numbering not legible or incorrect	10	6
Leaking decks	8	4
Defective stoves or stove pipes... ..	4	3
Cabins requiring re-painting	11	5
Defective water-cask	3	2
Incorrect marking of boat	1	1
TOTAL ...	56	34

30 written notices with respect to the contraventions were sent to the owners concerned, and 25 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 435 inspections of canal boats in the docks during the year. 44 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 168 Canal Boats used as dwellings are indicated in the following Table:—

TABLE V.

POPULATION OF CANAL BOATS.

Men	342
Women	nil
Children	nil
	<hr/>
	342
	<hr/>

distributed as under:—

Males over 14 years of age	342
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 4 fumigations under the Hydrogen Cyanide (Fumigation) Act, 1937, 1 dwelling-house and 2 flour mills and 1 stores were satisfactorily fumigated under the supervision of the sanitary inspectors.

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

**Prohibition of
Sale of
Verminous
Furniture**

Removal of Remains.

Under the terms of licences issued from the Home Office the sanitary inspectors supervised the exhumation and re-interment of 9 bodies during the year; also the remains of 3 persons were shipped abroad,

**Removal of
Remains**

after embalming under the supervision of the Chief Sanitary Inspector, and after complying with local requirements, one to America, one to Italy and one to Buenos Aires.

Exhumations from St. Mary's Recreation Ground, Mulberry Street (previously St. Mary's Cemetery) were commenced on the 3rd November, 1950, and completed on the 10th April, 1953. A total of 27,180 remains have 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 1,341, the number of stables found occupied was 145 and the number disused was 118.

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 36 visits were made to manure depots.

MARINE STORES.—During the year 102 visits were paid to 23 marine stores and in no cases were nuisances observed.

Public Health Act, 1936, Sec. 54. Filled up ground.

Inspections of trial holes were made on 45 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, 621 visits were made and in 5 instances they were found to be incorrect, the necessary action being taken to remedy defects.

POULTRY DEPOTS.—5 poultry depots were visited fortnightly, and were found to be in a clean condition.

SCHOOLS.—2,371 visits were made to schools, and in 16 instances defects were found. The necessary steps were immediately taken to have the defects remedied.

SUMMARY OF PROSECUTIONS.

Act.	Section.	No. of Informa- tions.	Penalties.	Costs.	Magistrates' Orders.
			£ s. d.	£ s. d.	
Public Health Act, 1936 ...	75	15	7 15 0	Nil	—
Public Health Act, 1936 ...	94	69	63 0 0	0 4 0	45
Public Health Act, 1936 ...	95	9	18 0 0	Nil	—
Public Health Act, 1936 ...	154	11	7 10 0	Nil	—
Public Health Act, 1936 ...	290	17	28 0 0	Nil	—
Liverpool Corporation Act, 1921	468	6	10 0 0	Nil	—
Shops Act, 1950 (Half Holiday)	—	3	2 10 0	Nil	—
Shops Act, 1950 (Evening Closing)	—	9	13 0 0	Nil	—
Shops Act, 1950 (Sunday Trading)	—	9	15 0 0	Nil	—
Food and Drugs Act, 1938 ...	13	111	243 0 0	Nil	—
Food and Drugs Act, 1938 (Bye-laws Nos. 5(a) to 7(e))	15	32	115 0 0	Nil	—
Prevention of Damage by Pests Act, 1949 ...	22	1	3 0 0	Nil	—
Factories Act, 1937 ...	7	2	15 0 0	Nil	—
TOTALS ...	—	294	£540 15 0	£0 4 0	45

Cases withdrawn ... Nil

Cases dismissed ... 15

Summonses not served ... 1

Rodent Control.

Prevention of Damage by Pests Act, 1949.

The work to secure adequate rodent control in the city is of the utmost importance. Rats and mice are dangerous pests and their destruction is necessary as a preventative measure against the spread of

diseases which they may carry and transmit with fatal results to humans. Regard must also be given to the possibility of food contamination by these pests.

In addition, there is financial or material loss caused by rodents in damage to essential food, valuable goods, buildings and installations.

Precautions Taken Against the Spread of Diseases.

**General
Rodent
Control
Precautions**

Precautions are taken against the spread of plague, a disease which may be brought into the port by ship rats, and specimens of these rodents are sent daily to the City Bacteriologist for examination. It is satisfactory to report that all rodents submitted during the year were found to be free from plague.

Although poison is now used for rat destruction in sewers in the city, spot trapping is employed in advance of the treatment to obtain specimens for examination as a further precautionary measure against the spread of infection.

A number of rats were sent to the City Bacteriologist for detection of the organism of Weil's disease. This organism, the leptospira icterohaemorrhagiae, was found in three of the specimens submitted.

The vertical block control system was applied to remedy the infestations, which means that the buildings, lands and sewers were treated for the destruction of rodents at the same time.

Systematic Survey.

21,242 sites were examined during the year in connection with systematic survey and investigation of complaints. A further 71,592 visits were made entailing operational work and re-examination of buildings and lands.

Sanitary inspectors also made, in conjunction with other matters, 90,396 inspections under the Act.

Complaints relating to rats and mice to the total of 4,609 were received and promptly investigated, appropriate action being taken in each case where infestation was found to exist.

Infestation.

During the year 21,242 buildings and lands were examined of which **Rodent Infestation** 4,241 were subject to infestation, and of this total 2,284 were rat infested, 122 rat and mouse infested, and 1,835 were mouse infested only.

Re-infestation occurred in 72 premises treated during the year. 24 re-infestations were by rats, 4 by rats and mice, and 51 by mice only. The total infestations and re-infestations of 4,241 buildings and lands were 4,320.

The categories of infestations included 12 major infestations and 4,308 minor. There were 364 infestations with ship rats (black) and 2,186 with the common rat (brown). 4,045 infestations were remedied during the year. The total infestations included 2,125 in premises where food was prepared, stored or sold.

1,024 references to examine sites were forwarded to the sanitary inspectors for inspection of drains, 618 relating to dwelling-houses and 406 to business premises. Defective drains were subsequently reported in 373 and 221 cases respectively, and appropriate action was taken to remedy the defects found.

Disinfestation.

During the year 3,973 buildings and lands were disinfested from rats **Rodent Disinfestation** 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 work 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 such assistance is still increasing, and 1,626 requests were received during the year.

Poisoning.

Of the 3,087 sites disinfested by the department, 2,995 were cleared by the use of poison.

**Rat and
Mouse
Destruction**

Rat and Mouse Destruction.

It is estimated, using the appropriate formula for calculating the kill, that a total of 16,468 rats in buildings and on lands were destroyed as the result of poisoning treatment, and 2,597 dead rats were collected during operations.

1,065 rats were caught in traps in buildings and on lands, and 392 rats were caught in traps in sewers by the rat-catchers employed by the City Engineer and Surveyor's Department prior to the work being transferred to the Health Department in the early part of the year. In addition, 66 rats were caught in traps in sewers to obtain specimens for examination before poisoning treatment was applied.

The species of rats collected were 2,928 *Rattus Norvegicus* ("brown" or "common" rat) and 1,192 *Rattus Rattus* ("black" or "ship" rat).

The total number of rats destroyed by poisoning and trapping in buildings and lands is calculated to be 17,533.

A proportion of rodents collected, 451 rats and 3 mice, were sent to the City Bacteriologist for examination, and the remainder were burnt.

With regard to the destruction of mice, 1,855 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, namely, 4,288 ounces.

Rat Destruction in Sewers.

It is essential to an efficient rat destruction campaign for surface and sewer rodent control to be closely co-ordinated. With this object in view the work of rat destruction in sewers in the city is now undertaken by the Public Health Department. The comprehensive drive for the destruction of rats in sewers by approved treatment was commenced during the year.

1,025 items comprising manhole covers seized to castings and unable to be opened, defective castings, rubbish on manhole benches and part-choked sewers, were referred to the City Engineer and Surveyor to be

remedied in preparation for baiting. The department has received the fullest co-operation and assistance from the City Engineer and Surveyor's Department in the work.

Baiting of sewer manholes was commenced in the Sandhills Ward adjoining the Bootle boundary, thence proceeding southwards and eastwards through the city. The migration of rats made it necessary for simultaneous action to be taken by the Health Department of Bootle to prevent a re-invasion of rats in the sewers from one district to another.

Summary of Initial Sewer Treatment.

Survey and Preparation.

Total number of manholes in foul and connected systems	25,681	Sewer Treatment
" " " examined	25,681	
" " " suitable for baiting	22,588	
" " baitable manholes with benches ...	14,239	
" " baiting trays fixed in manholes without benches	8,349	

Treatment.

Total number of manholes pre-baited	16,378
" " " showing pre-bait takes ...	9,329
" " " showing complete pre-bait takes (on one or both days)	8,662
" " " poison baited	11,141

Test Baiting Divisions.

Total number of manholes	6,337
" " " tested	797
" " " showing bait takes	68

Preventative Measures.

Co-ordinated action by sanitary inspectors and rodent control staff is taken when required in relation to preventative measures. Conditions likely to contribute to infestation 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.

Generally it was found that owners and occupiers of buildings and lands affected showed readiness to carry out the measures recommended, but in 27 cases notices were served under the Prevention of Damage by Pests Act, 1949, to obtain the desired result. It was found necessary in one case to institute legal proceedings for non-compliance with a notice served under Section 22 of the Act and a penalty of £3 was imposed.

ATMOSPHERIC POLLUTION.

The increased interest of the general public has undoubtedly resulted from the disastrous smoke fog of December, 1952, with its disturbing increase in deaths and sickness, particularly in the London area, and was evidenced in Liverpool by the increase to double the previous year's number of smoke complaints throughout the year.

In spite of a temporary depletion of smoke abatement staff and the consequent reduction of observations and visits, the work of the Department has continued satisfactorily and the standard of smoke pollution, as indicated by smoke observations of chimneys, has been maintained at 1.67 minutes per half hour, as indicated in Graph 1, having been reduced from over 2.5 minutes per half hour in 1949.

Co-operation by manufacturers, ship owners, engineers, and boiler house staffs in the prevention of smoke nuisance has continued to be received by the Department generally. Difficulties have, however, arisen in a number of cases in obtaining the assistance of the man on the firing floor, and there still remains one or two persistent offenders against whom stronger action may become necessary during the forthcoming year.

Smoke inspection work carried out by the Department during 1953 is shown in the following figures:—

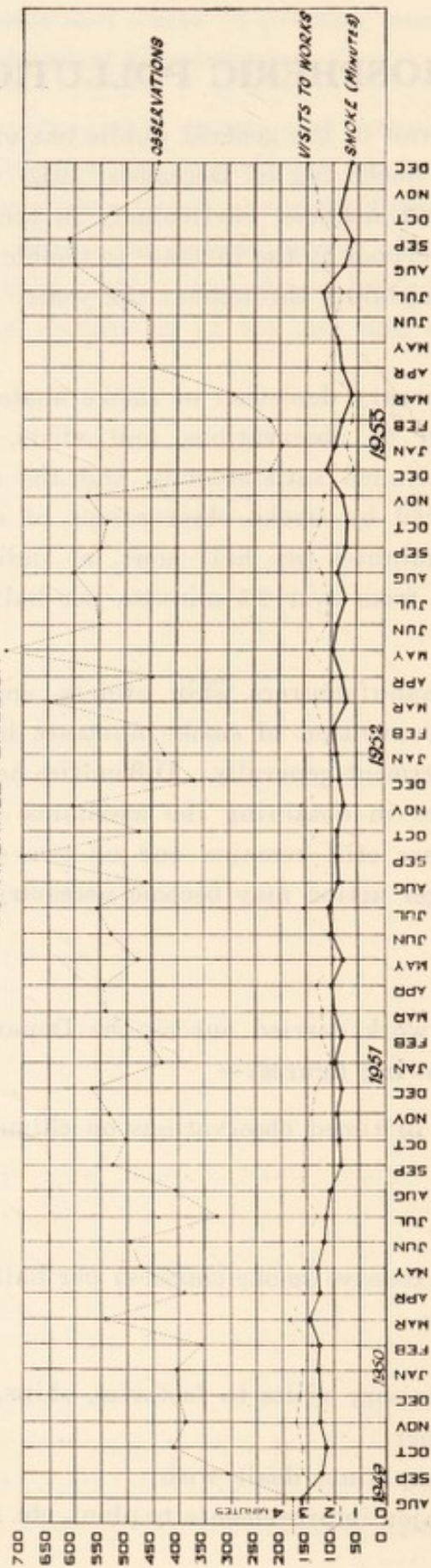
Total number of timed observations on chimneys:—

Factories	...	...	...	...	...	...	3,956
Shipping	...	...	...	...	...	...	1,310

Average excessive smoke emission per half-hour observations,
1.67 minutes.

Number of advisory visits to factories, ships, etc.	...	587
„ „ other	„ „ „ „	601
„ „ complaints dealt with	... ..	141
„ „ major improvements to plant, etc. recorded		152

MONTHLY SMOKE OBSERVATIONS
AND
AVERAGE EMISSION



Industrial Smoke.

Industrial development and commercial rebuilding during the year increased the work of the Department, but realisation by the firms concerned of the advantages of modern smokeless fuel-using plant and technical advice by the Smoke Inspectors, in many cases resulted in very little addition to visible smoke pollution. Industrial Smoke

Causes of excessive smoke.

Visits by the Smoke Inspectors to industrial firms, etc., revealed that causes of excessive smoke were mainly due to incorrect methods of hand firing, brought about in a number of cases by the neglect of the boiler and furnace operators to follow out their instructions. Lack of knowledge of correct and efficient methods of firing, the need for proper training of stokers, and overloaded boiler plant were also causes of excessive smoke. The number of cases in which inferior grades of fuel could be blamed was much less during the year due to considerable upgrading of boiler fuel, especially in hospitals and institutions in the City. Causes of Excessive Smoke

The Department continues to try to overcome these causes of excessive smoke by individual technical advice and instruction to owners, engineers, and firemen, but more could be done by the employers themselves by ensuring that careless firing is not allowed. It is hoped that the newly instituted system of training, examination, and certification of firemen will assist in overcoming this.

Other causes of excessive smoke were due to hand firing boilers which could more efficiently be mechanically stoked or oil-fired; others to the defective condition of mechanical stokers and draught equipment. In some cases the supply of caking coal for use with underfeed stokers has necessitated manual attention to the fires during operation, resulting in heavy bursts of smoke. It is understood, however, that there are sufficient supplies of non-caking coal available, and consequently owners and fuel-distributing organisations providing these caking fuels must be held responsible for the pollution which follows.

Owners do not always realise that a smoky fuel means a wasteful fuel. It is generally the smaller vertical steam boiler owner who objects to changing from coal to coke in view of prices and sometimes

because of lack of storage space for the bulkier smokeless fuel. In one particular case of a small laundry where efforts to secure a change of fuel to coke had been made over a considerable period, the owner was eventually persuaded this year to make the change and found that he was better able to maintain his steam supply and that his fuel bill was reduced by 50s. per week.

The use of gas coke is not only restricted to vertical boilers but is also continuing to be used on a number of shell-type boilers with exceptionally good steaming results without the production of smoke.

Major Improvements during the year.

Major Improvements

The advantages of gas as a fuel in industry appeared to be appreciated rather more during the year, gas burning appliances having been included in newly-planned buildings and in connection with reconstruction schemes, and one of the most serious complaints of smoke nuisance from the chimneys of a large bakery was effectively abated by changing the fuel from raw coal, mechanically fed, to gas firing. This form of heating with its ease of control and lack of need for storage space together with economy in use, invariably outweighs the cost, has many advantages, and its extensive development in industrial heating, particularly in connection with food preparation, etc., is most satisfactory.

Introduction of various instruments, including the installation of steam meters and flow recorders, flue gas sampling and recording apparatus in 13 boiler houses has resulted in increased combustion efficiency and reduced smoke emission. Unfortunately, many owners do not appreciate the value of such instrumentation.

During the year 17 chimneys have been raised, giving improved draught and enabling smokeless methods to be followed out, as well as carrying away sulphur gases and other products of combustion into a higher stream of atmosphere.

It should, however, be realised that the use of coal-fired locomotives, especially for shunting, will always result in smoke pollution. A satisfactory short-term answer would be the provision of Diesel locomotives for all shunting operations.

During the year improvements recorded by the Smoke Inspectors in industrial and commercial undertakings include:—

Change from bituminous coal to gas coke	21
Change from solid fuels to gas firing... ..	16
Change from solid fuels to oil firing	9
(including 3 river vessels)	
Change from bituminous coal to electricity	3
Chimneys raised in height	17
Plant converted from hand firing to mechanical stoking ...	4
Plant or processes abolished for replacement by smokeless methods	30
Increased boiler power provided or boiler load reduced ...	19
Plant reconstructed for improved efficiency and smokelessness	15
Effective smoke eliminators fitted	3
Instrumentation (steam meters, smoke indicators, flue gas recorders, etc.)	13
Dust and grit arrestors fitted	2
<hr/>	
Total improvements recorded	152
<hr/>	

A number of reconstruction schemes are actually in progress in the City and will be completed during 1954; others are in hand and will be commenced during the forthcoming year. In a number of these cases temporary measures are being considered to keep the smoke nuisance to a minimum.

Grit and Dust Emission.

There have been no serious nuisances from chimney grit during the year, apart from one complaint of grit from railway locomotives and another of grit from a factory chimney in a built-up area. In the latter case, investigation showed that for a period the firm had been supplied with a low grade of fuel which not only gave rise to grit emission but caused extreme difficulty in steaming. Immediate attention to the matter resulted in a better grade of fuel being supplied following which tests carried out showed a definite improvement.

There were, however, a number of complaints of burnt paper ash from a factory incinerator, as well as dust and ash from a Corporation destructor, grit and dust from coke storage, metal dust from an abrasive

**Grit and
Dust
Emission**

process and charred wood dust from two factories producing large quantities of wood waste. Following advice given by the Department, the nuisances were almost immediately abated at one factory and at the others, steps were put in hand for securing improvements.

Tests are carried out from time to time by the Smoke Inspectors to find the extent of the fall of grit, dust, ash, soot, etc. Following a proposal to erect a number of dwellings close to a section of railway in an industrial area, tests were made for deposited local impurities and pollution and results indicated the unsuitability of the proposed site for such a purpose.

Smoke from Shipping and Industry within the Port.

Smoke within Port

Concentrated attention to excessive smoke from the River and Docks continued as far as possible with staff available, but during the year serious complaints of smoke from factories and shipping in the Liverpool Port area were received, including several from representatives of Local Authorities bordering the Port area.

Investigations into these complaints showed the need for more intensive river and dock inspection, for which the Department is responsible, and an effort was made to concentrate still further on the problem. Observations were taken from the Liverpool side dock wall and also from New Brighton, but it was found only practicable to visit offending vessels when they were berthed in dock. On those occasions the Masters of the vessels, or the Chief Engineers, were interviewed, but in the cases of offending vessels which could not be visited, letters were sent to the Owners. In almost all cases when visits and inspections were made, the cause of the excessive smoke was found to be careless hand firing of boiler furnaces, or neglect to attend to oil-burning apparatus. Such visits resulted in some improvement, if it was only temporary. If constant personal interviews could be maintained by daily Port inspection, lasting improvements would be possible.

In some cases the cause of smoke was found to be the condition and age of boilers and engines making them inadequate for the work required. In the more serious cases of those vessels using the River daily, interviews with the Owners and discussions of the problems were

held, and have brought about some improvement. Three of the largest of these vessels have been converted to oil-burning during the year, and proposals put in hand for replacement of three of the worst offenders by two modern diesel-driven vessels during 1954. Consideration has been given by some of the Owners to installing a much recommended type of smoke eliminating fire-door which, if widely applied and properly operated, would undoubtedly result in reducing river smoke, but the efficiency of these appliances is limited by their manner of use by the firemen.

As regards the factories in the Port area on both sides of the River, a number of persistent offenders have been closely followed up with some success. However, until daily smoke inspection can be carried out in the Port area as in the City, a satisfactory abatement of the smoke cannot be guaranteed.

Disposal of Wood and other Trade Refuse.

During 1953 a number of complaints were received, and cases observed, of smoke and fumes from the burning of wood and other industrial wastes. Investigations showed the methods of disposal to be totally inefficient; in some cases the refuse was being burnt in the open, in others attempts were being made to dispose of it in sectional heating boilers or in badly designed incinerators, neither type being suitable for the smokeless disposal of such material.

Disposal of
Wood and
Trade Refuse

In those cases where the quantity of refuse warranted construction of suitable disposal furnaces advice was given by the Smoke Inspectors as to the design of plant, and, in a number of cases plans were submitted to the Department for approval; in other cases advice was requested in the design of such proposed plant. During the ensuing year a number of these specially designed refuse incinerators should be in operation without causing smoke nuisance.

Smoke from Commercial and Business Premises.

This includes smoke from central heating plant, cooking ranges and open fires in office blocks, hotels, restaurants, warehouses, salesshops, stores, etc., and as the colder months of the year approach a marked increase of atmospheric pollution is noticeable, to which these processes add their quota. This is most pronounced in the business and com-

Smoke from
Commercial
and Business
Premises

mercial centre of the City as a later pollution graph (Graph 5) shows. The apparently small amounts of smoke contributed by each of the many thousands of open fires in administrative, commercial and business premises quickly forms a fog blanket over the City as fires are lighted up in the mornings. Records taken of smoke pollution during a twelve months period in this area show the amount of pollution to be considerably higher than in other areas, both industrial and domestic.

During a survey of these commercial areas carried out during the year, improvements were noted in the form of smokeless heating in place of open fires which had been using raw coal.

The remedy for such commercial areas is the establishment of smokeless zones in which the emission of coal smoke is prohibited.

Smokeless Zone.

Survey.

Smokeless Zone

During the year a survey has been carried out of an area in the business and commercial centre of the City which has provisionally been selected for the proposed smokeless zone. The area selected is bounded by Chapel Street, Tithebarn Street, Hatton Garden, Manchester Street, Whitechapel, Lord Street, James Street, and the Pier Head. It covers approximately 100 acres, and is shown on the accompanying map outlined in red; it includes offices, warehouses, salesshops, cafes, restaurants and public houses, etc., with only one large industrial concern, although a number of industrial type boilers are included in the larger premises.

Extension of this area for survey during the forthcoming months includes a further 85 acres and makes an area bounded by, but not including, the 3 main railway stations to the north, east, and south-east, and the River on the south-west. The southerly boundary of this extension closely follows the proposed inner ring road in the future planning of the City Centre, and the additional area is shown on the map outlined in blue.

Survey of the Proposed Area.

Survey

An organised survey of the first 100 acres was carried out during the year, each block of premises in the area being dealt with separately

and figures were ascertained of the number of fuel-burning appliances in use or capable of being used, their type and purpose, together with the amount and type of fuel burnt.

Special reference was made to the facilities for gas ignition of solid fuel fires and to the practicability of installing gas where necessary for this purpose.

Results of the survey showed a total of 1,933 premises of which 1,325 or nearly 70 per cent were already smokeless.

There were 9,627 fuel-burning appliances of all kinds in the area; 2,320 were open fires burning 4,597 tons of bituminous coal per annum. Replacement of this quantity of raw coal with smokeless forms of fuel, and, where necessary, with suitable smokeless fuel appliances does not, at the present time, appear to be difficult.

Only 5 appliances used gas ignition for lighting fires, and this would account for a large amount of the heavy pollution during lighting-up periods. Consideration is being given to installing gas where it is necessary and practicable.

If, however, there are any cases where it is definitely not practicable to instal gas, and solid smokeless fuel heating is preferred, portable bottled gas for lighting up will no doubt be the answer.

The information resulting from the survey has been tabulated and recorded on individual record cards, and will probably need revision from time to time to be brought up-to-date before application is made for legislation.

Extension of the Area Surveyed.

Survey of the additional area which is now in progress will be completed during the forthcoming year, and an estimate only of the total requirements of the whole 185 acres has been based on the figures already obtained to enable other aspects of the scheme to be proceeded with.

Provision of Smokeless Forms of Heating.

Based on these estimated figures an approach has been made to various Undertakings which will be required to provide smokeless forms

of heating within the zone to replace the existing smoke-making types, and assurances given by these bodies leave no doubt whatever that smokeless heating, either by smokeless solid fuel, gas or electricity, is completely practicable within the proposed area.

Draft Legislation.

Legislation seeking powers to develop a smokeless zone was drafted and approved for submission to the Parliamentary (Special) Committee, and although this first proposed area is but a small proportion of the total area of Liverpool, it will be the first step in what is hoped will be steady and continuing progress towards real smokelessness in the City.

Industrial Fumes and Smells.

Industrial Fumes and Smells

During 1953 complaints of fumes and offensive smells, airborne by southerly and south-easterly winds, continued to be received from residents in the Mossley Hill-Aigburth-Woolton area, and it was learned that other Local Authorities on the Cheshire side of the River Mersey were also subject to the nuisance.

The offensive odour is known to originate at a large Refinery on the Cheshire side of the River and to consist of a mixture of sulphur-bearing gases, the production of which is a result of fractional distillation of petroleum oil during refining.

Control of the emission of these gases is the responsibility of H. M. Alkali, etc., Works Inspector, with whom close liaison has been maintained, and in July representatives of this Department attended a conference with representatives of the Refinery, of the Local Authorities concerned, and the Alkali Inspectors, and the problems associated with the prevention of the escape of these aromatic gases were considered. Towards the end of the year there appeared to be an improvement in conditions, the smells becoming of somewhat less frequency and duration.

Another offensive odour which caused considerable inconvenience in the south end of Liverpool during 1952, that of phenyl acetic acid fumes, did not give rise to any serious complaints until towards the end of the current year when it was again found to be causing a nuisance downwind of the source. It would appear that if recom-

mendations made by the Department are not strictly and constantly adhered to the nuisance will arise, and the firm concerned has been requested to investigate other means whereby the chemical may be handled without causing a nuisance.

A number of complaints of other industrial smells was received and dealt with by the Smoke Inspectors including those from burning paint, wood refuse, etc., and from asphalt boiling.

Prior Approval of Plans for Fuel-burning Equipment.

Voluntary Scheme.

Powers to inspect plans for fuel-burning equipment prior to installation are not held by the Corporation as is the case in certain other Local Authorities. During 1953 efforts were made to secure inspection and prior approval on a voluntary basis in connection with construction and reconstruction and with new installations in non-domestic buildings.

**Prior
Approval of
Plans for Fuel
Burning
Equipment**

Co-operation by Architects, etc.

Personal visits were made to more than one hundred architects, heating engineers, owners, etc., and their co-operation requested in connection with new buildings or extensions in which fuel-using appliances would be installed; the object was to obviate, as far as possible, the likelihood of smoke nuisances arising during subsequent operations.

It was obvious that in all cases there was full support for the prevention of smoke pollution and in almost all cases co-operation was promised, and it was gratifying to learn that in many commercial and some industrial projects under consideration, gas heating was proposed. Subsequently a number of plans were submitted and in those cases where full approval could not readily be given, the reasons were discussed and alterations to plans and specifications suggested. In a number of cases, however, industrial plant has been installed without further reference to the Department. This method of securing prior approval, however, cannot be regarded as satisfactory, particularly as much time must be spent in approaching individuals, in securing sufficient necessary details, and in following up the work.

Legislation.

Legislation seeking powers for prior approval has, therefore, been drafted and approved for submission to the Parliamentary (Special) Committee. In the meantime efforts will continue to be made for the continuance of the system of voluntary prior approval.

Domestic Smoke.*Effects.*

It has been estimated in previous years that in Liverpool domestic smoke has been responsible for approximately 50 per cent of the total atmospheric pollution of the City, but investigations and recordings of smoke pollution at a number of centres during the past five years indicate the probability of this percentage being still higher. The light smoke from each of the many thousands of open house fires burning raw coal forms dense clouds of pollution over the built-up areas which drift together and join up with the pollution from other sources to form a smoke haze over the City. Such pollution is aggravated by the wilful or neglectful firing of dirty chimney flues, an intolerable and anti-social practice which, apart from its inherent dangers of fire, causes a severe nuisance from the resulting black, greasy soot which falls on property and clothing in the areas surrounding the source.

This offence does not come within the jurisdiction of the Department, but is dealt with by the Police, and during 1953 the number of prosecutions for such fires was 109.

Use of smokeless fuels.

The continued increased use of gas and electricity and of smokeless solid fuels is reducing the pollution from domestic chimneys, but there are still many users of solid smokeless fuel appliances who continue to burn raw coal instead of solid smokeless fuels for which they are designed. Such appliances are only slightly more efficient with raw

coal than the old-fashioned type, but with smokeless fuels, such as gas coke, there is considerably increased efficiency, resulting in less fuel being consumed and more radiant heat given off. Unfortunately the opinions of the users of these appliances appear to be prejudiced against the use of coke on account of its cost and fumes, but once it is realised that far more efficient and economical heating can be obtained than with raw coal, and that fumes are not due to the type of fuel, but to defective draught, users might express their opinion in its favour.

It is essential in the interests of smoke abatement that all modern houses in which suitable appliances are installed should burn only smokeless fuels, and every effort should be made by the authorities concerned to instruct people in the advantages of such fuels and appliances and to encourage their use to the fullest extent.

Factors in favour of reduction of domestic smoke pollution were the use during the year of an estimated 5,105.5 million cubic feet of gas and the use of electricity for cooking by approximately 51,000 of the 200,000 houses in the City, together with the large numbers of people using this form of power for domestic space heating.

The National Smoke Abatement Society.

Meetings and Papers.

The Society continues to do good work in the field of smoke abatement, and to work in close co-operation with the Department. During the year a meeting of the North West Division was held in Liverpool and was addressed by the Medical Officer of Health on "Domestic Smoke". Representatives of the Department attended the Society's Annual Conference and also meetings of the North West Divisional Council. A joint meeting of the Society with the Merseyside branch of the Institute of Fuel was addressed by the Director of the Society on "Air Pollution and the Law".

Co-operation with other Local Authorities.

Close co-operation was maintained during 1953 by the Department with neighbouring Local Authorities and others in connection with atmospheric pollution problems and smoke nuisances, and, following requests for technical assistance in individual difficult cases, visits and inspections were made by a member of the smoke abatement staff and the necessary advice given. Smoke pollution is not restricted to the boundaries in which it arises, and consequently any improvements which can be effected outside the City boundaries must add their share to the reduction of pollution over the City. In this direction Liverpool and other neighbouring Authorities would benefit greatly under regional smoke abatement for the whole of Merseyside.

Atmospheric Pollution Research.

Pollution Measurement.

**Atmospheric
Pollution
Research**

Co-operation with the Department of Scientific and Industrial Research in atmospheric pollution research has continued throughout the year and results of measurements have been forwarded to them each month. Measurements 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.

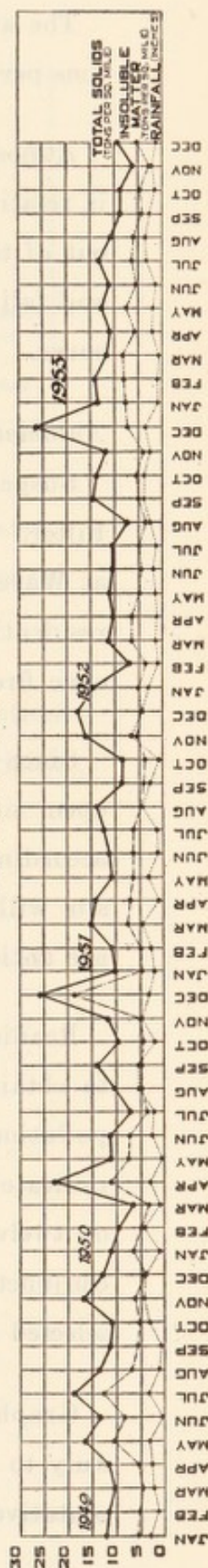
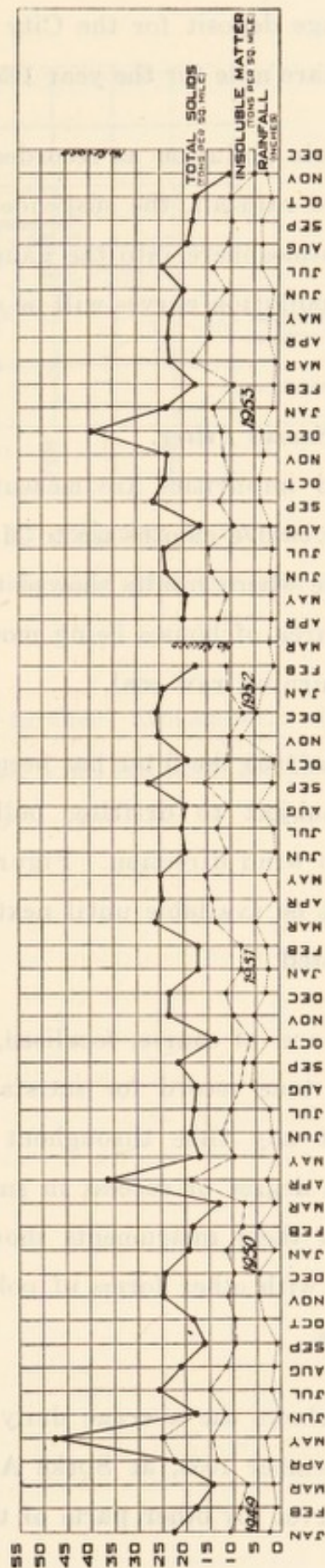
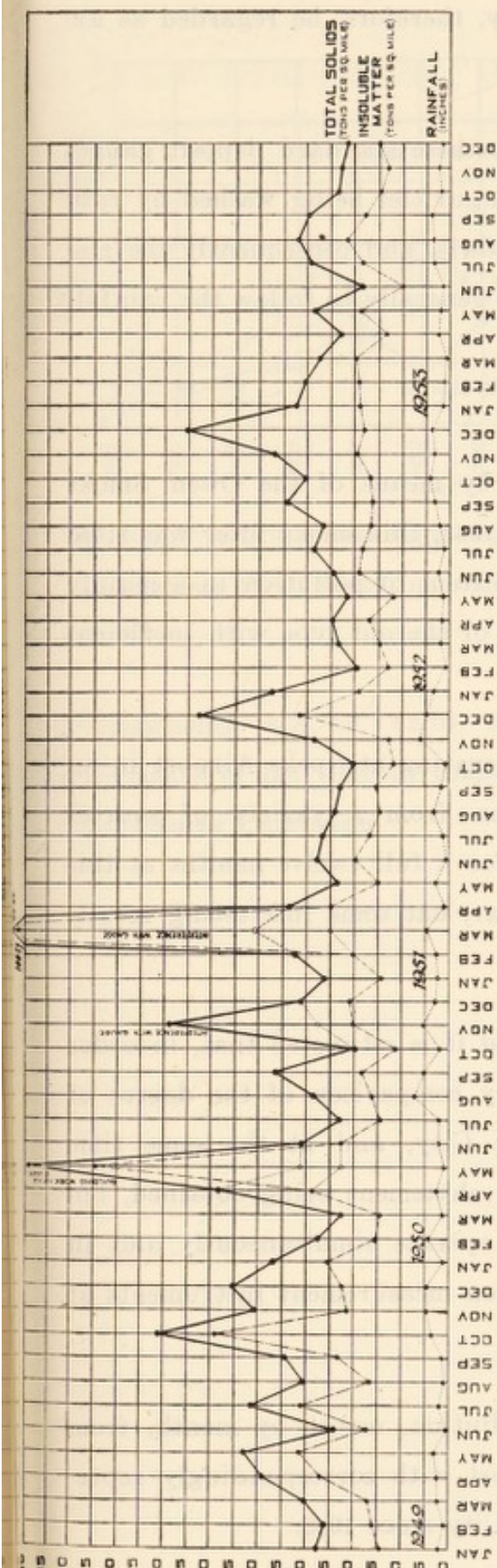
These deposit gauges are situated at Netherfield Road, where a general indication of conditions in a thickly populated and industrial area is obtained; at Oxford Street, where conditions are sub-average City centre conditions; and at Aigburth Vale, where conditions are those of a residential area with 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 are shown in the following graphs, with curves for 1949, 1950, 1951 and 1952 as comparisons.

The total annual deposit of pollution as indicated by these gauges is:—

Netherfield Road—320 tons.

Oxford Street—240 tons.

Aigburth Vale—131 tons.



The average deposit for the City may, therefore, be regarded as 230 tons per square mile for the year 1953.

Atmospheric pollution as recorded by these standard deposit 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.

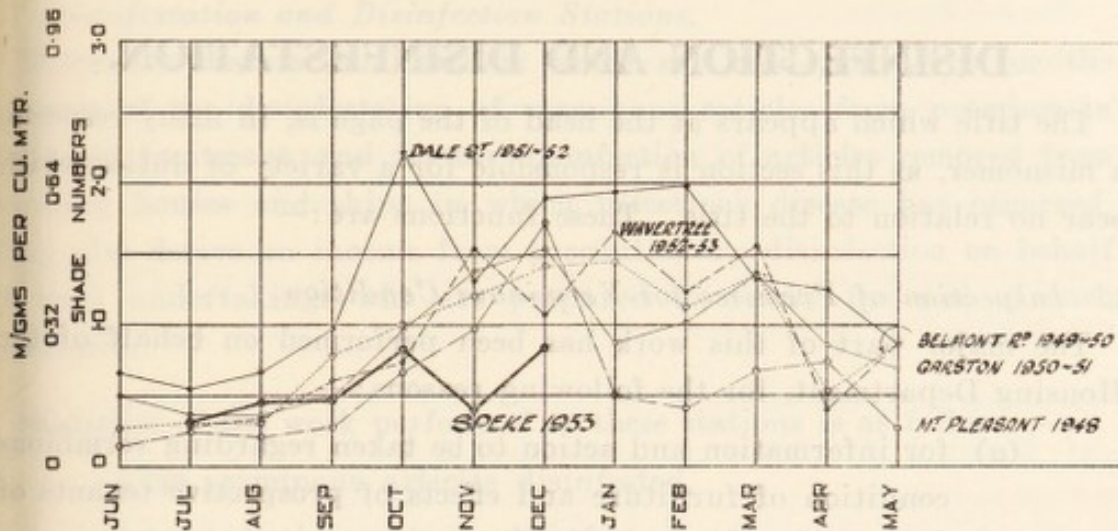
Automatic Smoke Filter.

Suspended impurities are measured by means of the Owen Smoke Filter. For twelve months up to May, 1953, this smoke filter was sited at Wavertree where results showed the extent of pollution in a mainly residential area of houses being mostly of the old type with inefficient open fires burning raw coal.

Since June 1953 the filter has been operating at Speke Airport in an open site subject to drifting pollution from a variety of sources according to wind direction. Figures for a full twelve months at this site will not be available until next year, but some interesting results are anticipated.

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 average daily pollution, month by month, from July to December 1953, at Speke Airport with correspondingly representative curves for other parts of the City since 1948.



This graph indicates the high degree of pollution in the City centre, and emphasises the desirability of making that area the first smokeless zone.

Arrangements are in hand for further atmospheric pollution measurements in the City in connection with research for the British Empire Cancer Campaign.

DISINFECTION AND DISINFESTATION.

The title which appears at the head of the page is, in many respects, a misnomer, as this section is responsible for a variety of duties which bear no relation to the title. These functions are:—

1. *Inspection of Premises for Verminous Condition.*

The major part of this work has been performed on behalf of the Housing Department, for the following reasons:—

- (a) for information and action to be taken regarding verminous condition of furniture and effects of prospective tenants of Corporation houses and flats;
- (b) Reports on verminous condition prior to change of tenancy of Corporation premises;
- (c) Reports on the extent of vermin infestation on receipt of complaints.

Other inspections of premises were made at the request of other Corporation departments and on behalf of property owners and tenants, all of whom had reason to believe that premises were infested with vermin.

Inspections of Cafe kitchens, Canteens, Locker Rooms, etc., were carried out at the request of owners or occupiers.

In all these connections 6,283 inspections were made and 2,077 premises were found to be verminous.

2. *Disinfestation treatment of Verminous Premises.*

During 1953 the following treatments took place:—

- 2,023 Corporation premises disinfested.
- 197 privately owned premises disinfested.
- 103 cafe kitchens, etc., disinfested.

3. *Disinfestation of Furniture, Bedding and Personal Effects.*

In conjunction with the treatment of premises it has been usually necessary to disinfest the furniture, bedding and personal effects either on the premises or by removal to an appropriate disinfestation station. Statistics in this connection are given under the heading of Disinfestation and Disinfection Stations.

4. *Disinfestation and Disinfection Stations.*

There are disinfection stations which are used primarily for the purpose of the disinfestation of verminous articles from premises in course of treatment, and for the disinfection of articles removed from dwelling houses and ships in which infectious disease has occurred. They also derive an income from precautionary disinfection on behalf of local undertakings who are prepared to defray the cost of such treatment.

Statistics of the work performed at these stations is as follows:—

9,749 verminous articles disinfested.

9,642 infectious articles disinfected.

1,266 infectious library books disinfected and returned to circulation.

400,292 articles disinfected as a precautionary chargeable measure.

966 tons of miscellaneous goods, the outer wrappers of which are disinfected as a precautionary chargeable measure.

5. *Disinfection of Infectious Premises.*

A small section of this staff has been engaged in the disinfection of premises in which notifiable infectious disease had occurred, and during the year, 2,129 premises of this nature were disinfected.

6. *Fly Prevention Measures.*

In an effort to reduce the fly population in the City, regular periodic treatment of manure dumps and middensteads was carried out from early spring until autumn. The treatment not only combatted the fly nuisance at its source, but was also instrumental in setting an example of cleanliness to the owners of stables and shippens. The number of treatments was approximately 2,000 in the year.

7. *City Mortuary.*

The provision and maintenance of the City Mortuary has continued to be the responsibility of the Health Department, and it has been used for the reception of bodies of persons who have died in unusual circumstances. During the year, 406 bodies were received, and at the instruction of the City Coroner 385 post-mortem examinations were held.

8. *Burial Service.*

The local authority has a duty to perform under Section 50 of the National Assistance Act, 1948, to arrange for the burial or cremation of persons found dead in the City and where it appears that no suitable funeral arrangements are being made by relatives or friends.

In this connection 140 adults and children and 8 stillborn babies were interred during 1953.

In addition to this service, the department has an arrangement with local Hospital Management Committees for the transfer of bodies between hospitals. Under this arrangement 262 bodies were transferred during 1953.

9. *General Transport Service.*

All of the transport necessary for establishments under the control of the Health Department has been undertaken by this section.

10. *Food and General Stores.*

At Gascoyne Street depot there is situated a food and general store which has been responsible for supplying food, chandlery, textiles, and general equipment to all establishments under the control of the Health Department. The extent of this service can be judged when it is pointed out that 131 establishments are supplied from this store, comprising:—

25 Maternity and Child Welfare Centres.

14 Day Nurseries.

69 Domiciliary Midwives.

9 Aged Persons' Hostels.

5 Mental Health Establishments.

9 Children's Department Establishments.

Police Training College, and 17 other establishments.

11. *Other Duties and Services.*

Furniture and equipment in need of maintenance or repair was collected and repaired at Gascoyne Street Depot. The storage, distribution and collection of Home Nursing equipment continued to be the responsibility of this section.

The transport necessary for the functioning of the Mobile Meals Service has been supplied by this section.

12. *Staff.*

The varied functions of this section of the Health Department are performed by a staff of 42, comprising:—

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

13. *Vehicles and Maintenance.*

Eleven motor vehicles are in daily use, and during the year they covered 87,523 miles. The entire maintenance of these vehicles including major and minor repairs has been carried out by the staff at Gascoyne Street Depot.

WATER SUPPLY.

The water supply in the area during 1953 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 by lime in order to raise the pH value: further chlorination is carried out at Prescott Storage Reservoirs.

There are no parts of the area dependent upon stand-pipes for a supply.

CREMATION.

The Medical Officer of Health is appointed by the Home Office to be Cremation Medical Referee to the Liverpool Crematorium, and there are two deputies. The statutory documents connected with cremations are scrutinised at the Central Offices of the Health Department before authority to cremate is given, and there is close liaison with the Crematorium.

Cremation as a means of disposal is growing steadily amongst all classes of the community, and in recent years notable improvements have been effected at the Crematorium itself. The number of cremations both locally and nationally increases year by year. So far as Liverpool is concerned, since 1940 for example, when there were 482 cremations, the number has now grown to nearly 2,000 per annum, despite the opening of new crematoria in adjacent areas.

REPORT OF THE CITY BACTERIOLOGIST.

In 1953 the number of examinations made was 91,403.

PLAGUE.—3,062 examinations of 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, 386 samples were received from the Government Wool Disinfecting Station; 193 were untreated, of which 83 contained anthrax bacilli; 193 were treated and of these none was infected with anthrax.

Examinations made in the Bacteriological Department during the year 1953.

Milk (fresh—liquid)	10,718
Ice Cream	1,109
Water	3,360
Shellfish	135
Foodstuffs	1,373
Wool and Hair for Anthrax	392
Rats for Plague	3,062
Swabs from Throat and Nose Infections	4,991
Specimens from Intestinal Infections	25,412
Specimens for Weil's Disease	78
Cerebro-Spinal Fluid for Pathogenic Organisms... ..	14
Sputum and/or other Secretions for Tubercle Bacilli	7,618
Exudates for Anthrax Bacilli	34
Cough Plates, etc., for Whooping Cough	604
Secretions for Organisms	1,254
Miscellaneous Specimens	61
	<hr/> 60,215
Venereal Diseases.	
Serological Tests	30,581
Other Tests	607
	<hr/> 31,188
	<hr/> 91,403

STATISTICAL APPENDIX.

BIRTH STATISTICS.

	LIVE BIRTHS.			STILL BIRTHS.		
	Males.	Females.	Total.	Males.	Females.	Total.
Legitimate ...	7,759	7,390	15,149	184	180	364
Illegitimate ...	449	424	873	19	11	30
	8,208	7,814	16,022	203	191	394

Year	Births	Birth Rate	Illegitimate Births	% of Births
1938	16,175	18·7	771	4·8
1942	13,729	20·5	871	6·3
1943	14,432	21·8	1,030	7·1
1944	15,412	23·1	1,274	8·3
1945	14,784	21·7	1,582	10·7
1946	18,528	25·2	1,351	7·3
1947	19,904	26·4	1,151	5·8
1948	17,695	22·3	1,009	5·7
1949	16,551	20·7	943	5·7
1950	16,110	20·1	968	6·0
1951	15,593	19·9	859	5·5
1952	15,839	20·0	876	5·5
1953	16,022	20·3	873	5·4

Year	Registered Live Births.	Registered Still Births.	Total Births.	Still-births per 1,000 Live and Still Births.
1935.....	17,347	749	18,096	41·4
1936.....	17,403	708	18,111	39·1
1937.....	16,728	618	17,346	35·6
1938.....	16,175	639	16,814	38·0
1939.....	15,614	631	16,245	38·9
1940.....	15,016	519	15,535	33·4
1941.....	13,291	508	13,799	36·8
1942.....	13,729	552	14,281	38·6
1943.....	14,432	485	14,917	32·5
1944.....	15,412	492	15,904	30·9
1945.....	14,784	431	15,215	28·3
1946.....	18,528	539	19,067	28·3
1947.....	19,904	514	20,418	25·2
1948.....	17,695	479	18,174	26·3
1949.....	16,551	358	16,909	21·2
1950.....	16,110	375	16,485	22·7
1951.....	15,593	396	15,989	24·8
1952.....	15,839	400	16,239	24·6
1953.....	16,022	394	16,416	24·0

NOTIFIABLE DISEASES (OTHER THAN TUBERCULOSIS) DURING THE YEAR 1953.

DISEASE.	NUMBER OF CASES NOTIFIED.													TOTAL DEATHS
	At all Ages.	At Ages—Years												
		Under 1	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	65—	
Acute Infective Encephalitis	1	—	—	—	—	1	—	—	—	—	—	—	—	1
Scarlet Fever.....	1292	8	28	108	144	140	716	114	14	13	4	3	—	—
Diphtheria	9	—	2	1	—	—	1	1	2	1	—	1	—	2
Enteric Fever (including Para- typhoid)	2	—	1	—	—	—	1	—	—	—	—	—	—	—
Puerperal Pyrexia.....	1016	—	—	—	—	—	—	—	89	816	105	6	—	—
Pneumonia	833	156	84	71	52	25	61	20	20	72	65	138	69	97
Cerebro-spinal Fever	51	28	9	2	4	1	5	—	—	—	—	—	2	8
Poliomyelitis (Paralytic)	27	4	1	1	1	1	6	—	2	10	1	—	—	3
Poliomyelitis (Non-paralytic)	11	1	—	—	—	1	2	1	1	5	—	—	—	—
Dysentery	755	77	111	118	85	60	136	35	13	35	21	19	45	2
Ophthalmia Neonatorum	150	150	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	97	2	—	—	—	1	—	1	1	14	15	44	19	—
Malaria	40	—	—	—	—	—	—	—	1	24	5	10	—	—
Anthrax	8	—	—	—	—	—	—	—	1	3	1	2	1	—
Measles	10090	594	1334	1629	1609	1448	3240	132	74	20	6	4	—	5
Whooping Cough	4740	530	611	841	761	684	1265	29	7	8	2	2	—	4
Food Poisoning.....	265	28	11	18	4	3	14	3	56	74	32	17	5	—
TOTALS.....	19387	1578	2192	2789	2660	2365	5447	336	281	1095	257	246	141	122

NOTES ON THE HISTORY OF THE

No.	Name	Age				Sex	Status	Remarks
		1880	1881	1882	1883			
1	John Smith	25	26	27	28	M	Single	
2	Mary Jones	22	23	24	25	F	Single	
3	Robert Brown	20	21	22	23	M	Single	
4	Elizabeth White	18	19	20	21	F	Single	
5	Thomas Green	15	16	17	18	M	Single	
6	Sarah Black	12	13	14	15	F	Single	
7	William Grey	10	11	12	13	M	Single	
8	Anna Lee	8	9	10	11	F	Single	
9	James Hall	6	7	8	9	M	Single	
10	Elizabeth King	4	5	6	7	F	Single	
11	John Davis	3	4	5	6	M	Single	
12	Mary Wilson	2	3	4	5	F	Single	
13	Robert Taylor	1	2	3	4	M	Single	
14	Elizabeth Adams	0	1	2	3	F	Single	
15	Thomas Baker	0	1	2	3	M	Single	
16	Sarah Clark	0	1	2	3	F	Single	
17	William Evans	0	1	2	3	M	Single	
18	Anna Miller	0	1	2	3	F	Single	
19	James Moore	0	1	2	3	M	Single	
20	Elizabeth Taylor	0	1	2	3	F	Single	
21	John Wilson	0	1	2	3	M	Single	
22	Mary Adams	0	1	2	3	F	Single	
23	Robert Baker	0	1	2	3	M	Single	
24	Elizabeth Clark	0	1	2	3	F	Single	
25	Thomas Evans	0	1	2	3	M	Single	
26	Sarah Miller	0	1	2	3	F	Single	
27	William Moore	0	1	2	3	M	Single	
28	Anna Taylor	0	1	2	3	F	Single	
29	James Wilson	0	1	2	3	M	Single	
30	Elizabeth Adams	0	1	2	3	F	Single	

TABLE SHOWING POPULATION, BIRTH-RATES, DEATH-RATES, INFANT AND MATERNAL MORTALITY RATES, ETC., OF A NUMBER OF THE LARGER AUTHORITIES FOR THE YEAR 1953.

Name of Authority	Birmingham	Bradford	Bristol	Cardiff	Edinburgh	Glasgow	Kingston-upon-Hull	Leeds	Leicester	Liverpool	London C. C.	Manchester	Newcastle-upon-Tyne	Nottingham	Sheffield
Registrar General's estimated population for 1953	1,118,500	286,600	444,200	246,600	470,847	1,085,000	299,400	505,500	286,500	789,700	3,343,000	701,800	289,700	311,500	507,600
*Comparability factor—															
(a) Births	0.96	1.01	0.99	0.97	—	—	1.00	0.96	0.98	0.96	0.87	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	0.99	1.11	1.09	1.08	1.07
Crude birth rate per 1,000 population ...	16.60	15.9	15.63	17.93	15.4	18.6	19.1	15.7	16.04	20.29	15.22	17.41	17.06	16.64	13.90
Birth rate as adjusted by factor	15.94	16.0	15.47	17.39	—	—	19.1	15.1	15.72	19.48	13.24	16.54	16.55	16.14	13.76
Crude death rate per 1,000 population ...	10.63	14.2	11.58	11.25	12.3	11.8	10.9	11.7	11.19	10.66	11.56	12.31	10.90	11.01	11.90
Death rate as adjusted by factor	11.91	13.8	11.23	11.93	—	—	12.4	12.5	11.30	12.68	11.44	13.66	11.88	11.89	12.73
Infant mortality rate per 1,000 live births	26.12	37.0	21.89	26.92	24	36	35.2	32.90	24.80	35.51	24	30.53	26.82	27.00	25.66
Neonatal mortality rate per 1,000 live births	18.04	24.5	15.12	15.82	16	22.2	21.7	22.90	15.44	21.78	16	20.87	19.91	16.39	16.30
Stillbirth rate per 1,000 total births ...	23.46	19.5	17.82	21.90	22	26	27.3	20.62	27.09	24.00	21	28.24	23.4	20.22	25.15
Maternal mortality rate per 1,000 total births	0.58	0.21	0.99	—	0.7	1.06	1.36	0.62	0.85	0.30	0.71	0.80	0.397	0.77	0.55
Deaths Rates per 1,000 population from—															
Respiratory Tuberculosis	0.24	0.14	0.209	0.29	0.23	0.43	0.25	0.22	0.244	0.33	0.21	0.28	0.280	0.27	0.193
Non-respiratory Tuberculosis	0.01	0.03	0.027	0.028	0.02	0.04	0.04	0.02	0.021	0.03	0.02	0.03	0.041	0.02	0.018
Cancer (all forms)	2.00	2.3	1.887	1.97	2.43	2.05	1.84	1.91	1.864	1.97	2.34	2.16	2.095	1.86	2.12
Whooping Cough	0.01	0.007	0.004	0.01	0.01	0.01	0.01	0.00	0.007	0.00	0.01	0.01	0.003	0.01	0.008
Influenza	0.15	0.132	0.162	0.11	0.08	0.07	0.15	0.11	0.101	0.04	0.15	0.15	0.059	0.14	0.083
Diarrhoea (under 2 years) (per 1,000 live births)	1.08	0.438	0.43	1.99	0.55	2.2	1.2	1.64	0.870	1.7	1.28	0.74	0.813	1.35	1.28

*Not used in Scotland.

TABLE SHOWING POPULATION, BIRTH-RATE, DEATH-RATE, INFANT AND MATERNAL MORTALITY, AND SELECTED CAUSES OF DEATH, 1922

State of Arizona	Population	Birth rate per 1,000 population	Death rate per 1,000 population	Infant mortality rate per 1,000 live births	Maternal mortality rate per 1,000 live births	Stillbirth rate per 1,000 total births	Respiratory tuberculosis	Ischemic heart disease	Stroke (all forms)	Diabetes mellitus	Alcoholism	Other causes
Arizona	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Alaska	58,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Alabama	1,518,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Alaska	58,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Arkansas	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
California	4,450,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Colorado	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Connecticut	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Delaware	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
District of Columbia	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Florida	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Georgia	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Idaho	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Illinois	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Indiana	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Iowa	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Kansas	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Kentucky	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Louisiana	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Maine	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Maryland	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Massachusetts	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Michigan	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Minnesota	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Mississippi	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Missouri	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Montana	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Nebraska	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Nevada	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
New Hampshire	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
New Jersey	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
New Mexico	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
New York	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
North Carolina	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
North Dakota	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Ohio	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Oklahoma	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Oregon	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Pennsylvania	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Rhode Island	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
South Carolina	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
South Dakota	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Tennessee	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Texas	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Vermont	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Virginia	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Washington	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
West Virginia	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Wisconsin	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Wyoming	1,118,000	16.0	11.7	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

* Data from 1921

CITY OF LIVERPOOL.

Infant Mortality during the year 1953.

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 2 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	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
„ Meninges, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
„ Intestines, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
„ Other Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	3
Meningococcal Infections	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	1	—	—	—	—	—	4
Acute Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	—	—	—	3
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Psychosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis (non-tubercular)	—	—	—	—	—	—	—	1	1	—	2	—	—	—	—	—	—	2	2	—	—	1	7
Influenza	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	2
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	13	18	17	13	8	11	1	3	2	—	1	87
Bronchitis	—	—	—	—	—	—	—	—	—	—	—	7	5	5	3	2	1	—	2	1	—	—	26
Enteritis	—	—	—	—	—	—	—	—	—	—	—	6	5	3	3	2	2	—	2	1	—	2	26
Malformations	19	9	9	4	2	—	1	13	3	2	62	12	5	3	6	3	1	1	—	2	1	1	97
Injury at Birth	17	12	6	2	4	—	3	5	1	2	52	—	—	—	—	—	—	—	—	—	—	—	52
Infections of Newborn	1	2	10	4	1	2	2	7	13	7	49	—	—	—	—	—	—	—	—	—	—	—	49
Other Diseases of Early Infancy	93	35	18	6	11	4	1	8	—	1	177	—	1	—	1	—	—	—	—	—	—	—	179
Other Causes	2	1	—	—	—	—	—	1	2	1	7	4	2	1	6	2	2	3	2	—	2	1	32
Totals	132	59	43	16	18	6	7	35	20	13	349	43	37	32	33	18	19	8	13	7	3	7	569

Net Births in the year { Legitimate ... 15,149
 Illegitimate ... 873

Net Deaths in the year of { Legitimate Infants 535
 Illegitimate Infants 34

CITY OF LIVERPOOL.

DEATHS REGISTERED DURING THE YEAR 1953

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	4426	3996	569	36	24	13	17	38	30	42	64	82	94	124	197	333	435	625	771	1072	1261	1229	812	439	124	8422
I.—Infectious and Parasitic Diseases	228	125	13	4	4	1	5	4	1	11	13	26	21	18	26	29	36	33	37	32	21	13	4	1	...	303
II.—Neoplasms	550	729	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1576
III.—Allergic, Metabolic Diseases, etc.	41	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	113
IV.—Diseases of the Blood	12	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35
V.—Mental, and Psychoneurotic Diseases	4	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
VI.—Diseases of Nervous System	401	514	8	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	915
VII.—Diseases of Circulatory System	1475	1452	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2927
VIII.—Diseases of Respiratory System	655	476	118	11	5	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1142
IX.—Diseases of Digestive System	141	130	32	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	271
X.—Diseases of Genito-urinary System	103	60	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	169
XI.—Diseases of Pregnancy	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XII.—Diseases of Skin	4	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
XIII.—Diseases of Bones	12	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38
XIV.—Congenital Malformations	62	62	97	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	124
XV.—Diseases of Early Infancy	159	121	289	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	289
XVI.—Senility and Ill-defined Diseases	49	59	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	99
XVII.—Deaths from Violence	222	142	14	10	5	3	5	14	12	7	15	11	13	13	21	22	22	26	30	21	27	39	17	11	6	264
Class 1.—Tuberculosis of Respiratory System	173	85	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	258
Tuberculosis of Meninges, etc.	5	4	...	2	1	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
Tuberculosis of Intestines, etc.	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
Tuberculosis of Other Organs	9	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
Syphilis	20	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	2	2	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Meningococcal Infections	6	2	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
Acute Poliomyelitis	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Measles	2	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Other Infectious Diseases	8	8	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
Class 2.—Malignant Neoplasm of Buccal Cavity	20	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
Malignant Neoplasm of Digestive Syst.	197	323	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	629
Malignant Neoplasm of Respiratory Syst.	358	74	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	432
Malignant Neoplasm of Breast	1	113	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	114
Malignant Neoplasm of Female G. Organs	...	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	98
Malignant Neoplasm of Other Organs	142	73	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	215
Leukaemia	22	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
Benign Neoplasms	16	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
Class 3.—Thyroiditis	1	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
Diabetes mellitus	17	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48
Other Allergic diseases, etc.	23	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	51
Class 4.—Anæmia	9	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
Other Diseases of Blood	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
Class 5.—Psychoses and Psychoneurotic Disorders	4	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
Class 6.—Vascular Lesions of Central Nervous Syst.	370	472	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	842
Meningitis	6	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
Epilepsy	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
Optic Media and Mastoiditis	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Other Diseases of Nervous System	17	26	1	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43
Class 7.—Rheumatic Fever	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
Chronic Rheumatic Heart Disease	35	113	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	148
Arteriosclerotic, etc. Heart Disease	1129	979	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2108
Other Diseases of Heart	88	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	185
Hypertensive Disease	196	229	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	415
Other Diseases of Circulatory System	22	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47
Class 8.—Influenza	9	20	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
Bronchopneumonia	191	237	80	5	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	428
Pneumonia	50	18	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	68
Bronchitis	344	163	26	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53

DEATHS REGISTERED DURING THE YEAR 1901

Station

THE

WILLIS-1901

CAUSES OF DEATH

No.	Sex	Age	Cause of Death	Date	Time	Place	Signature	Initials	Remarks
1	M	12	Smallpox	1901	12	Home	W. J. Willis	W. J. Willis	
2	F	10	Scarlet fever	1901	10	Home	W. J. Willis	W. J. Willis	
3	M	15	Diphtheria	1901	15	Home	W. J. Willis	W. J. Willis	
4	F	18	Typhoid fever	1901	18	Home	W. J. Willis	W. J. Willis	
5	M	20	Measles	1901	20	Home	W. J. Willis	W. J. Willis	
6	F	22	Whooping cough	1901	22	Home	W. J. Willis	W. J. Willis	
7	M	25	Scarlet fever	1901	25	Home	W. J. Willis	W. J. Willis	
8	F	28	Diphtheria	1901	28	Home	W. J. Willis	W. J. Willis	
9	M	30	Typhoid fever	1901	30	Home	W. J. Willis	W. J. Willis	
10	F	32	Measles	1901	32	Home	W. J. Willis	W. J. Willis	
11	M	35	Whooping cough	1901	35	Home	W. J. Willis	W. J. Willis	
12	F	38	Scarlet fever	1901	38	Home	W. J. Willis	W. J. Willis	
13	M	40	Diphtheria	1901	40	Home	W. J. Willis	W. J. Willis	
14	F	42	Typhoid fever	1901	42	Home	W. J. Willis	W. J. Willis	
15	M	45	Measles	1901	45	Home	W. J. Willis	W. J. Willis	
16	F	48	Whooping cough	1901	48	Home	W. J. Willis	W. J. Willis	
17	M	50	Scarlet fever	1901	50	Home	W. J. Willis	W. J. Willis	
18	F	52	Diphtheria	1901	52	Home	W. J. Willis	W. J. Willis	
19	M	55	Typhoid fever	1901	55	Home	W. J. Willis	W. J. Willis	
20	F	58	Measles	1901	58	Home	W. J. Willis	W. J. Willis	
21	M	60	Whooping cough	1901	60	Home	W. J. Willis	W. J. Willis	
22	F	62	Scarlet fever	1901	62	Home	W. J. Willis	W. J. Willis	
23	M	65	Diphtheria	1901	65	Home	W. J. Willis	W. J. Willis	
24	F	68	Typhoid fever	1901	68	Home	W. J. Willis	W. J. Willis	
25	M	70	Measles	1901	70	Home	W. J. Willis	W. J. Willis	
26	F	72	Whooping cough	1901	72	Home	W. J. Willis	W. J. Willis	
27	M	75	Scarlet fever	1901	75	Home	W. J. Willis	W. J. Willis	
28	F	78	Diphtheria	1901	78	Home	W. J. Willis	W. J. Willis	
29	M	80	Typhoid fever	1901	80	Home	W. J. Willis	W. J. Willis	
30	F	82	Measles	1901	82	Home	W. J. Willis	W. J. Willis	
31	M	85	Whooping cough	1901	85	Home	W. J. Willis	W. J. Willis	
32	F	88	Scarlet fever	1901	88	Home	W. J. Willis	W. J. Willis	
33	M	90	Diphtheria	1901	90	Home	W. J. Willis	W. J. Willis	
34	F	92	Typhoid fever	1901	92	Home	W. J. Willis	W. J. Willis	
35	M	95	Measles	1901	95	Home	W. J. Willis	W. J. Willis	
36	F	98	Whooping cough	1901	98	Home	W. J. Willis	W. J. Willis	
37	M	100	Scarlet fever	1901	100	Home	W. J. Willis	W. J. Willis	
38	F	102	Diphtheria	1901	102	Home	W. J. Willis	W. J. Willis	
39	M	105	Typhoid fever	1901	105	Home	W. J. Willis	W. J. Willis	
40	F	108	Measles	1901	108	Home	W. J. Willis	W. J. Willis	
41	M	110	Whooping cough	1901	110	Home	W. J. Willis	W. J. Willis	
42	F	112	Scarlet fever	1901	112	Home	W. J. Willis	W. J. Willis	
43	M	115	Diphtheria	1901	115	Home	W. J. Willis	W. J. Willis	
44	F	118	Typhoid fever	1901	118	Home	W. J. Willis	W. J. Willis	
45	M	120	Measles	1901	120	Home	W. J. Willis	W. J. Willis	
46	F	122	Whooping cough	1901	122	Home	W. J. Willis	W. J. Willis	
47	M	125	Scarlet fever	1901	125	Home	W. J. Willis	W. J. Willis	
48	F	128	Diphtheria	1901	128	Home	W. J. Willis	W. J. Willis	
49	M	130	Typhoid fever	1901	130	Home	W. J. Willis	W. J. Willis	
50	F	132	Measles	1901	132	Home	W. J. Willis	W. J. Willis	
51	M	135	Whooping cough	1901	135	Home	W. J. Willis	W. J. Willis	
52	F	138	Scarlet fever	1901	138	Home	W. J. Willis	W. J. Willis	
53	M	140	Diphtheria	1901	140	Home	W. J. Willis	W. J. Willis	
54	F	142	Typhoid fever	1901	142	Home	W. J. Willis	W. J. Willis	
55	M	145	Measles	1901	145	Home	W. J. Willis	W. J. Willis	
56	F	148	Whooping cough	1901	148	Home	W. J. Willis	W. J. Willis	
57	M	150	Scarlet fever	1901	150	Home	W. J. Willis	W. J. Willis	
58	F	152	Diphtheria	1901	152	Home	W. J. Willis	W. J. Willis	
59	M	155	Typhoid fever	1901	155	Home	W. J. Willis	W. J. Willis	
60	F	158	Measles	1901	158	Home	W. J. Willis	W. J. Willis	
61	M	160	Whooping cough	1901	160	Home	W. J. Willis	W. J. Willis	
62	F	162	Scarlet fever	1901	162	Home	W. J. Willis	W. J. Willis	
63	M	165	Diphtheria	1901	165	Home	W. J. Willis	W. J. Willis	
64	F	168	Typhoid fever	1901	168	Home	W. J. Willis	W. J. Willis	
65	M	170	Measles	1901	170	Home	W. J. Willis	W. J. Willis	
66	F	172	Whooping cough	1901	172	Home	W. J. Willis	W. J. Willis	
67	M	175	Scarlet fever	1901	175	Home	W. J. Willis	W. J. Willis	
68	F	178	Diphtheria	1901	178	Home	W. J. Willis	W. J. Willis	
69	M	180	Typhoid fever	1901	180	Home	W. J. Willis	W. J. Willis	
70	F	182	Measles	1901	182	Home	W. J. Willis	W. J. Willis	
71	M	185	Whooping cough	1901	185	Home	W. J. Willis	W. J. Willis	
72	F	188	Scarlet fever	1901	188	Home	W. J. Willis	W. J. Willis	
73	M	190	Diphtheria	1901	190	Home	W. J. Willis	W. J. Willis	
74	F	192	Typhoid fever	1901	192	Home	W. J. Willis	W. J. Willis	
75	M	195	Measles	1901	195	Home	W. J. Willis	W. J. Willis	
76	F	198	Whooping cough	1901	198	Home	W. J. Willis	W. J. Willis	
77	M	200	Scarlet fever	1901	200	Home	W. J. Willis	W. J. Willis	
78	F	202	Diphtheria	1901	202	Home	W. J. Willis	W. J. Willis	
79	M	205	Typhoid fever	1901	205	Home	W. J. Willis	W. J. Willis	
80	F	208	Measles	1901	208	Home	W. J. Willis	W. J. Willis	
81	M	210	Whooping cough	1901	210	Home	W. J. Willis	W. J. Willis	
82	F	212	Scarlet fever	1901	212	Home	W. J. Willis	W. J. Willis	
83	M	215	Diphtheria	1901	215	Home	W. J. Willis	W. J. Willis	
84	F	218	Typhoid fever	1901	218	Home	W. J. Willis	W. J. Willis	
85	M	220	Measles	1901	220	Home	W. J. Willis	W. J. Willis	
86	F	222	Whooping cough	1901	222	Home	W. J. Willis	W. J. Willis	
87	M	225	Scarlet fever	1901	225	Home	W. J. Willis	W. J. Willis	
88	F	228	Diphtheria	1901	228	Home	W. J. Willis	W. J. Willis	
89	M	230	Typhoid fever	1901	230	Home	W. J. Willis	W. J. Willis	
90	F	232	Measles	1901	232	Home	W. J. Willis	W. J. Willis	
91	M	235	Whooping cough	1901	235	Home	W. J. Willis	W. J. Willis	
92	F	238	Scarlet fever	1901	238	Home	W. J. Willis	W. J. Willis	
93	M	240	Diphtheria	1901	240	Home	W. J. Willis	W. J. Willis	
94	F	242	Typhoid fever	1901	242	Home	W. J. Willis	W. J. Willis	
95	M	245	Measles	1901	245	Home	W. J. Willis	W. J. Willis	
96	F	248	Whooping cough	1901	248	Home	W. J. Willis	W. J. Willis	
97	M	250	Scarlet fever	1901	250	Home	W. J. Willis	W. J. Willis	
98	F	252	Diphtheria	1901	252	Home	W. J. Willis	W. J. Willis	
99	M	255	Typhoid fever	1901	255	Home	W. J. Willis	W. J. Willis	
100	F	258	Measles	1901	258	Home	W. J. Willis	W. J. Willis	