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REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

FOR THE

YEAR

1960

BY

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

Medical Officer of Health



REPORT

OF THE BOARD OF THE

CITY OF LIVERPOOL

FOR THE
YEAR
1866

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PREFACE

My LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to submit my ninth annual report on the health and welfare services of the City of Liverpool for the year 1960, this being the 113th year reported on by the Medical Officer of Health.

In this report, there can be clearly seen the pattern of the community care services which have been emerging since the end of the second world war. It is therefore important that the aims of these services should be understood: as they become better known the public demand will increase and they will make an ever-increasing demand on the funds of local government. Care of the elderly, the mentally and physically handicapped, and those who through illness or some social inadequacy need support, has now been accepted as a duty of local government. The difficulty, as with all health progress, is one of finance, for the community care services cost money and we can only purchase what we can afford.

I think at this time it would be prudent to recall the words of Sir George Newman, contained in the Annual Report of the Chief Medical Officer of the Ministry of Health, 1921. "Public expenditure on national health is like expenditure on a life-boat or a fire-engine; even more, it is like a long-term investment. It yields its interest with absolute certainty, a thousand-fold, but only in the course of years and sometimes in the course of generations. It is money hidden in maternity, in good schools, in pure food, in clean streets, in sanitary houses, in an abundant water supply, in dispensaries, hospitals and sanatoria, and in the vast network of a sanitary and protective cordon in every village and city in the land. Its efforts are unappreciated until they are withdrawn. *Yet without this investment the nation is bankrupt.*"

This dictum applies today with equal force to the community care services described in the text of this report, together with the other aspects of the activities of the Health Department.

During the year, the birth rate rose again to 21.1 compared with 20.6 per 1,000 in 1959. There has been a slight fall again in the stillbirth rate to 23.07.

Vital
Statistics



The death rate in the City as a whole was 11.8 compared with 11.3 per 1,000 in 1959 and 11.7 in 1958. There was a most encouraging fall, from 105 to 84, in the number of deaths occurring from tuberculosis.

The infant mortality rate rose slightly to 28.2 compared with 27.4 in the previous year. There was, however, a reduction in the perinatal mortality rate from 39.5 in 1959 to 38.9 in 1960.

There was a slight increase of deaths from cancer of the lung to 457 compared with 444 in the previous year. This is the highest recorded figure.

Midwifery Service

Once again there was a small reduction in the number of domiciliary deliveries carried out by midwives in the City in 1960. There were forty-nine fewer deliveries than in 1959, as 4,967 women were delivered at home this year. This means that at present 72 per cent of all births in the City take place in hospitals but there was an increasing number of patients delivered in hospital but discharged home for nursing care. The figure in 1960 was 1,046 compared with 722 in 1959.

Full details are given in the annual report of the innovations introduced into the midwifery service during 1960. For the first time furnished accommodation was provided for young and newly trained unmarried midwives. The Health Committee granted permission for this in October and a flat was furnished for two midwives who had been with the department as pupils and recently qualified. Another house is being furnished for another two ex-pupils at the time of writing this report. The provision of this furnished accommodation was carried out as the number of full-time midwives had fallen as low as seventeen below establishment.

In addition, a rota system of off duty and night calls was introduced thereby making the task of the domiciliary midwife easier. Two pilot schemes were tried but although both were shown to work very satisfactorily they required additional staff and were therefore not proceeded with because of the staff shortage. A further scheme has been introduced whereby neighbouring midwives are on duty at different times and, under this scheme, the off duty rota runs in a four weekly cycle. The midwives have seven days off and two half-days in every 28. They also have fourteen nights on call and fourteen nights free from 6.0 p.m. In this way, it has been possible for them to plan their leisure ahead and this has been much appreciated.

There has been an increase in the number of oxygen apparatus available during the year and it is hoped to have, for each midwife, before the end of 1961, an oxygen resuscitator for infants which is taken on deliveries so that it can be immediately on hand should the infant show any signs of asphyxia and need resuscitation.

During the year, the traditional uniform of midwives has been changed and the National grey uniform coat and hat has been adopted. At the same time, the title of midwife has been changed from that of nurse to that of sister so that patients shall realise that the midwife who attends them in domiciliary practice holds the same qualifications as the hospital midwifery sister.

Even with the rota system and a liberal use of part-time midwives, there is still grave overwork for many of the domiciliary midwives working the City. The majority of them have delivered far more than the recommended case load of 66 per year. Three midwives delivered more than 150 cases, three delivered between 120 and 150 and ten more midwives attended over 100 cases. The shortage of midwives has been further aggravated by the large amount of sickness and maternity leave in the staff.

Full details are given once again of the work undertaken to avoid hypothermia in children. To reduce the risks of infection even lower, new antiseptics have been introduced. Haemoglobin estimations have been carried out on all mothers to make sure that the haemoglobin level in the blood was satisfactory before confinement.

Once again, it is most satisfactory to report the increased degree of co-operation which has been enjoyed between the general practitioners and the domiciliary midwives and at present 24 general practitioners hold ante-natal clinics in their surgeries which are attended by midwives. Altogether midwives attended 1,041 sessions in general practitioners' surgeries. In addition they held 1,077 sessions at midwives' clinics and carried out 19,887 visits to patients' homes.

During the year 228 premature babies were delivered at home and of these 178 were able to remain at home for nursing. 109 were cared for by midwives who delivered them and 69 required the special care of premature baby midwives. Full details are given in the text of the size of the 69 children assisted in this way.

**Premature
Infants**

In addition 416 premature babies born in hospitals were discharged to the care of the premature baby team.

**Work of the
Health
Visitors**

The text of the report gives a very full account of the increased scope of the work of the health visitor today. 1960 has been an extremely active year in this field and particularly saw an increase in the visiting carried out which more than made up for the gap which had been created by the secondment of a number of health visitors to the Mass X-ray Campaign in the previous year. The total number of visits made by health visitors throughout the year was 176,268 and it is interesting to note that of this total an increasing proportion (11,208) were visits of a special nature. The type of work undertaken by these visits is given in detail; it varies considerably and covers almost any welfare and health problem in the community.

The fatal case of diphtheria led to considerable extra work for the health visitors both in the following up of school and family contacts and in the flood of requests for immunisation which occurred in the following weeks when over 15,000 additional children were immunised, the majority of them at child welfare centres. The health educational work of the health visitors has extended throughout the year and it is encouraging to report that six health visitors have made regular visits to two of the City's maternity hospitals to assist in the health education of ante-natal patients. As a result of this liaison over 3,000 attendances were later made by mothers booked for hospital to mothercraft and educational classes arranged in local authority clinics. This is most satisfactory for it means that these mothers are able to get the benefit from the mothercraft class which often cannot be held in the hospital out-patient department because of lack of room. Thanks have been received from many mothers in regard to the benefit they have obtained from the relaxation exercises which have been carried out during the past few years.

Two health visitors have continued active liaison work with the Royal Southern Hospital and Alder Hey Children's Hospital in the field of special after care work for epileptics. This work has been of particular value to these patients and the health visitors have been able to sort out individual difficulties and help with employment and other problems. They help too with the building up of a sound liaison with the Disablement Resettlement Officer to ensure that occupation is found for such patients.

The work which has been undertaken for some years in Liverpool in relation to the health visitor attending the diabetic clinic and carrying out work in the field of diabetes has continued most satisfactorily and throughout the year 552 patients were helped in a total of 1,247 visits. Most of these cases have been treated from the David Lewis Northern Hospital but as this service has now become well established, the assistance of this service is being increasingly requested from other hospitals. The introduction of the Chiropody Service considerably helped with the problems of the acute diabetic in whom, of course, there is a very important need to watch foot hygiene. Full details are given of interesting cases dealt with in this field of work. It is also satisfactory to report that the department has been largely responsible through its health visitors in the formation of the Liverpool Branch of the British Diabetic Association in the early part of 1960. It was the special health visitor for diabetes who contacted members, served on the committee and gave guidance on the educational and social activities of this organisation which will be of such great benefit to the diabetic.

Follow up
Health
Visitor
dealing with
diabetes

1960 has shown a further marked increase in the work of the health visitor in the field of the aged and altogether over 3,000 visits were made to elderly people in need of care and advice. Full examples of the increased call being made by geriatricians at hospitals for health visitors' reports are given in the text of the annual report. Further and better co-operation has been maintained with maternity hospitals which began in April, 1960, to notify the Health Department of the discharge of expectant mothers who had been admitted to hospital because of some complication in their pregnancy. This exchange of information has proved to be of great value and has enabled the supervision of these mothers to be carried out much more effectively. 2,000 ante-natal visits have been paid by health visitors in 1960.

Convalescent care has extended throughout the year and altogether 326 mothers and babies were sent away for a period of convalescence and 125 aged persons.

Convalescent
Care

The health visitor has continued to be very active in the field of problem families and much valuable work has been done. Thirteen families have been sent to the Brentwood Rehabilitation Centre in Cheshire where they

Problem
Families

stayed for periods varying from one to two months to be taught house-cleaning, cooking, laundry and the art of budgeting for their family needs. On return their efforts have been supervised by the health visitor and in this way it is hoped that their rehabilitation will be permanent.

Home Nursing

Full responsibility of home nursing was transferred from the Liverpool Queen Victoria District Nursing Association to the Liverpool City Council on the 1st January, 1960.

The service was organised from ten centres situated at strategic points throughout the City and all the staff were non-resident. During the year work was carried out on 202 Grove Street which will eventually take the place of the present centre, 3 Maynard Street, and act as the main nursing centre for the central area of the City in 1961. In addition a small centre was opened in Childwall Valley at 16 Deepdale Road. This centre is excellently sited to serve Gateacre, Lee Park and Childwall estates.

A new centre was also opened at 73 Netherfield Road which is approximately half way between the two district nursing centres in the north and south of the City in Walton and Maynard Street, and the introduction of this new centre will obviously reduce markedly the travelling undertaken by nurses.

Training

Satisfactory training arrangements were made during the year and 23 nurses were successfully trained as Queen's District Nursing Sisters throughout the year.

Details are given of the introduction of new equipment into the Home Nursing Service during the year and it is hoped that this, which includes new sterilisers, will help considerably in the efficiency of the service. Three very interesting case histories are given illustrating the problems which face the Home Nursing Service. In particular the first case is a very good example of the value of not only the Home Nursing Service but also of the Chiropody Service.

Home Nursing Equipment

Once again in 1960 there was an increase in the demand for home nursing equipment and more specialised equipment has been purchased so that a full range will be available to meet the needs of patients.

The distribution service of welfare foods has continued throughout the year. There have been slight reductions in the amount of welfare foods distributed but this is part of a general tendency which has been noticed in the last few years. It will be noted also that in October, 1960, the administration of this part of the service was rationalised with the transfer of all responsibilities to the Principal Medical Officer (Maternity and Child Welfare).

**Welfare
Foods**

For the first time, the annual report this year contains a section dealing with the new chiropody services which were introduced in July, 1960, under Section 28 of the National Health Service Act, 1946. The Health Committee took over, for this purpose, the premises at 202 Grove Street, formerly occupied by the Liverpool Foot Hospital, and also continued to employ their staff of eleven chiropodists. There was no break in service and the appointments system has been continued. The service, which is free of charge, is designed for aged persons, handicapped persons and expectant mothers resident in the City. During the six months, July to December, 1960, 8,439 treatments have been given to 4,060 patients. It is hoped later, as the staff increases, to reduce the time interval between treatments which should, ideally, be not longer than two months. At the same time, a number of new chiropody clinics have been set up in maternity and child welfare centres in the periphery of the City and this has meant that chiropody sessions are held throughout the City much closer to where the people being treated live. This has meant a reduction in the travelling expenses and unnecessary fatigue for the handicapped people and has proved of great value especially during the winter months. In exceptional circumstances, ambulance transport has been used to carry patients unable to use public transport.

**Chiropody
Service**

This new service is already uncovering a great need within the City and it is clear that it will need to develop rapidly during the next few years. Already there is a long waiting list for treatment.

There was a considerable expansion of the work of the Home Help Service in the City in 1960. The number of families helped has risen further to 3,048 compared with 2,846 the previous year, and fifty additional home helps have been recruited, bringing the number of home helps at present employed to 270.

**Home Help
Service**

Of the 3,048 cases assisted, over 2,000 were aged and chronic sick and this group is by far the most important group being served, at present, by home helps. The need to develop the Home Help Service further is urgent, especially as the waiting list for residential accommodation makes it important to do all that is humanly possible to enable people to remain in their own homes as long as they can. It is interesting to see how, during the years, there has been a consistent decrease in the number of maternity cases assisted, which in 1960 was only 199.

In the text details are given of six typical cases assisted during the year.

Infectious Diseases

1960 was characterised as a year which saw a considerable increase in the number of cases of diphtheria and paratyphoid fever in the City.

Diphtheria

Six cases of diphtheria occurred in the City during the year, including one fatal case. Full details are given of these outbreaks in the main text, but it is important to realise that they indicate that this disease, although very largely controlled, is still dangerous in persons who are inadequately immunised. Full details are given of the preventive measures which were undertaken in all cases. It is most satisfactory to note that the sister of case number two, the fatal case, was protected so quickly, using both antitoxic and active immunisation, that when she developed diphtheria, she was such a mild case as to be classified as a carrier.

Paratyphoid Fever

Nineteen cases of paratyphoid fever were confirmed in Liverpool in 1960. This is the largest number for many years and although full investigations were carried out, in most instances it was not possible to be certain of the cause of the illness. For some time, considerable concern has been felt in regard to some imported foodstuffs which are known to be infected on arrival in this country and in this connection reference is made later in the infectious disease section of the report to work being carried out on desiccated coconut. The register of chronic typhoid and paratyphoid carriers has further increased and at present there are nine persons known to be living in the City who are carriers, eight carrying paratyphoid bacteria and one typhoid bacteria. This means that there has been a further increase in the potential dangers amongst families in the City.

Whooping Cough

There has been little change in the number of cases of whooping cough occurring in Liverpool in 1960, when there were 1,440 cases compared with 1,488 in the year before.

1960 was a year of moderately high measles presence in the City, although **Measles** it was not an epidemic year

It is most encouraging to report that only four cases of poliomyelitis **Poliomyelitis** occurred in Liverpool in 1960. The degree of improvement this represents is best shown by looking at the figures for the last eight years:—

1953	1954	1955	1956	1957	1958	1959	1960
38	35	46	32	32	16	27	4

The reduction in the number of cases is so great that there seems no doubt it must be connected with the value of poliomyelitis immunisation which was introduced in 1956. Further confirmatory evidence of this point is given when it is realised that every one of the four cases who developed poliomyelitis in the year was not immunised.

There was a reduction in the number of cases of food poisoning in the **Food Poisoning** year, there being 121 cases compared with 209 in the previous year. Full descriptions are given of interesting salmonella typhimurium and staphylococcal toxin outbreaks which were traced during the year.

It is particularly satisfactory to report that instructional classes have continued throughout the year in food hygiene for members of the catering staff of many different types of establishment throughout the City and there is no doubt that the reduction in the number of cases is, to some extent, due to the increased education of the staff concerned.

An extremely rare and interesting outbreak of food copper poisoning is described in the report which was fully reported in the "Lancet" in September, 1960. This outbreak was due to accidentally disturbing a copper sulphate deposit in the tea urn in a factory canteen and involved eighteen persons. Fortunately all the victims recovered after a sharp illness.

Once again it is satisfactory to report a reduction in the number of cases **Dysentery** of dysentery to 515. There is also a reduction in the number of symptomless excretors discovered among contacts.

The problem of dysentery in day nurseries is dealt with in detail once again in the main report and shows the importance which the preventive work achieved in stopping dysentery spreading through day nurseries. In particular it showed how quickly staff and other children can become involved and spread an epidemic.

**Salmonella
Infection in
the River Alt**

In September, 1960, a full report was brought to the Health Committee of the investigations, which had been carried out during the last two years, of the salmonella infection in the River Alt. Considerable field investigations have taken place and have led to the finding of paratyphoid and salmonella bacteria in the mud and water of the River Alt, more or less continuously throughout the two year period. It is a large and potentially dangerous problem in the Gillmoss Ward around Coronet Road and the East Lancashire Road. The banks and water of the river have become readily accessible to children by their breaking down the wire netting which was erected to keep them away, and officers of the City Council and Mersey River Board have been in consultation to find out the full solution of this difficult problem. At present the recommendation is that some very strong permanent fence be erected to prevent the children gaining access and thus minimise the risk of infection and also that warning notices be put up informing the public of the danger.

**Radiation
Monitoring**

The monitoring for the radiation of all water supplies has been carried on throughout the year in Liverpool. Results show a diminution in the radiation present which is most satisfactory.

**Poliomyelitis
Immunisation**

Although the age limit in 1960 was raised for poliomyelitis immunisation from 26 years to 40 years, there was a considerable reduction in the number of inoculations carried out, 13,758 persons completed inoculations compared to 41,235 in 1959. It was felt that the level of inoculation was probably most unsatisfactory in certain parts of the City and a full survey was carried out during the year to find out exactly what the level was. Details of the levels in various wards are given in the full text of the annual report. It will be seen that they vary considerably in different parts of the City and, in each age group, the best ward is always more than twice as well protected as the worst wards. Because of the danger in this unequal protection throughout the City, the City Council agreed at the end of the year to the holding of a Poliomyelitis Immunisation Campaign in May, 1961.

**Yellow Fever
Inoculation**

On 1st July, 1960, the yellow fever vaccination required for travel to certain parts of the world was transferred from the National Blood Transfusion Service to special local authorities on the recommendation of the Minister of Health. Liverpool was chosen as one of these authorities. To meet this requirement a clinic has been set up in the basement of the Health Department which has been modernised to meet the needs of a

modern immunisation clinic. A full time assistant medical officer and nurse have been engaged for both yellow fever and general immunisation and vaccination duties. In order to recover part of the cost of the yellow fever inoculation and to give as good a service as possible, a sum of 25s. per inoculation was authorised by the Liverpool City Council. In addition travellers can obtain, for a small charge, protection against certain other diseases, i.e., cholera, smallpox, typhoid and paratyphoid at the same clinic. During the last six months of the year 1,295 yellow fever inoculations were given and during the same period 215 smallpox vaccinations, 103 T.A.B. inoculations and 136 cholera vaccinations were carried out at this clinic.

Diphtheria immunisation received a considerable boost throughout the year by the publicity which was given to the unfortunate fatal case of diphtheria which occurred in the autumn of 1960. There was a tremendous rush by parents to have their children protected following this case and a total of 25,946 children were immunised compared with 14,145 in the previous year. **Diphtheria Immunisation**

It is satisfactory to report that the number of infants protected against whooping cough during the year again rose considerably to 15,159 compared with 12,324 in 1959. **Whooping Cough Immunisation**

1960 saw a sharp fall in the number of smallpox vaccinations carried out from 10,956 in 1959 to 6,823 in 1960. This was largely due to the change, introduced as a result of the Minister of Health's recommendations, whereby smallpox vaccination is postponed until five months of age. Unfortunately it seems that many mothers forget to come back to have their children vaccinated at the age of five months and it is hoped that this tendency can be corrected in future. It is vitally important in a seaport like Liverpool that the vaccination rate should be as high as possible. **Smallpox Vaccination**

It is most encouraging to report the sharp reduction in the cases of respiratory tuberculosis, a total of 439 being traced compared with 1,633 in 1959 and 795 in 1958. **Tuberculosis**

It seems clear that the impact of the Mass X-ray Campaign has led to a marked acceleration of the natural decrease which was occurring, and has now placed the City in the position of being on the verge of reducing the number of cases even more dramatically.

**Drugs
Resistance**

Preparations for a pilot survey were started in 1960 to go into the problem of drugs resistance, particularly from the point of view of checking whether or not the treatment carried out at home is conscientiously undertaken.

**B.C.G.
Vaccination**

During the year, 10,569 were vaccinated within the school leavers class.

**Canine
Tuberculosis**

An interesting case of canine tuberculosis occurred in Liverpool in 1960 and full details are given in the text of the annual report.

**Venereal
Diseases**

It is disappointing to report an increase in the number of acute cases of male and female gonorrhoea in 1960 compared with 1959. The number of male cases of gonorrhoea rose to 1,013 compared with 940 but even more significant was the rise in the number of acute female cases to 301 from 231. This is the first time that the female figure has exceeded 300 since 1946. At the same time there was an increase in the number of cases of early male syphilis to 66 although there was a welcome reduction to one in the cases of female syphilis. One factor which gives rise to some encouragement is that, in the teenage group, there was a further reduction in the venereal disease recorded. At present, the groups up to and including the age of seventeen years represent 5.6 per cent of the total amount of venereal disease.

**Mental
Health
Service**

The Mental Health Act came into full operation on the 1st November, 1960, so it is not possible to analyse completely the full effects of a full year of working of this Act. There has, however, been considerable activity in the field of mental health, particularly as regards the planning of local schemes during the year and full details of them are given in the text. It is clear, however, that these very extensive plans will take several years to complete but already considerable progress has been made.

**Community
Care**

There has been a large increase in the number of visits which have been paid by mental welfare officers to all groups of mentally handicapped persons during the year, for in 1960, 19,011 visits were paid compared with 12,739 in 1959. This, of course, is due to the rapid increase of staff appointed after the passing of the Mental Health Act and has meant that, not only are people being visited more often, but more intensive and effective work is possible in each individual case. It is important to realise the valuable support which regular and effective visiting makes to the

recovery of a mentally handicapped person. Full details are given in the text of interesting cases both in the field of the mentally handicapped and the mentally sub-normal.

1960 was the first full year in which the services of a psychiatric social worker were available. She has been working with patients presenting special difficulties and has collaborated also with mental welfare officers in some of the more difficult cases. In addition, successful liaison has been maintained with health visitors and it has been possible, therefore, to co-ordinate more completely the services of all sections.

An important part of the development in the City is concerned with the **Training** plans for the training of the mentally disordered. This will, of course, include mentally sub-normal and mentally ill people. The accommodation at Fazakerley, named during the year New Hall, Fazakerley, is being converted to produce immediately, six training centres and also hostels for both groups of mentally handicapped people in the future. It is very important to realise that the training problem concerns itself just as much with adults as with children, for where the normal child will leave school at fifteen or a higher age to become self-supporting, the sub-normal child may well develop into manhood or womanhood without being able to be independent. Such is the pressure for places for the training of adults that three of the New Hall Centres at Fazakerley have been set aside for adults and these will be amongst the earliest ones to open. The full details of the training facilities which will be provided will be found in the text of the report and they are dealt with both under the training of children and the training of adults. There is also a full scale plan of the proposed development at New Hall, Fazakerley. It will be seen that the plans provide for 80 nursery and special care places and 250 junior intermediate places throughout the City and 120 places for youths and men and 100 places for women. At Fazakerley 120 of the new places will go to children and junior intermediate classes and 180 to adults. It is hoped that this redistribution will not only improve the facilities for adult training but will effect the very necessary segregation of adults and children in training centres. That in the past children and adults have been accommodated satisfactorily, without any incidents, in overcrowded training centres, is mainly due to the care and efforts of the staff. It is hoped that the new arrangements will be far more satisfactory.

There has been a satisfactory development in the field of occupational therapy for mentally ill and mentally handicapped people during the year, and reference is made to this in the occupational therapy section of the report. It is hoped to establish, when the new centre at Hatton Garden is opened in 1961, two full time occupational therapists to work there.

In July, as part of the National Mental Health Week, training centres were open to the public but there was very little response and this apathy contrasted strangely with the interest shown by many people in the display of articles made at centres which formed part of the Health Department exhibit at the Liverpool Show during the same week.

Employment The employment problems of patients have continued to be of concern to the mental health section during the year. The work in this field has been found to be so valuable that a further officer was allocated to it in August, so that, from that date, two officers continued to work in this field. During the year 61 persons were placed in employment which is a considerable increase on the number found work previously. It is, however, important to realise the difficulties which face this work and full details are given of the work of these officers in the text.

Hostels In the planning for the New Hall, Fazakerley, estate, allocation has been made for at least twelve hostels. An additional hostel, making thirteen in all, will act as the Superintendent's residence and small hostel, and it is hoped that the first phase of these extensive adaptations will start in the middle of 1961. It is hoped, eventually, that this development will provide for 160 residents with full social amenities such as a club, shop, tea-room, occupational therapy unit, swimming bath, gardens and kitchen-garden, and bowling green. The planning of this unit is shown on the sketch plan on page 106.

Mental Health Centre During the year the City Council agreed to a building being constructed at the rear of Hatton Garden and a comparatively small two-storey building has been planned and approved. This centre will include a club-room and rehabilitation room as well as an occupational therapy room.

Short Term Care There has continued to be an increase in the number of places found for short term care for mentally sub-normal people, and the waiting list for hospital institutional accommodation has been reduced further, although there are still 25 persons in the most urgent category awaiting accommodation.

As the new Act came into operation only on the 1st November, 1960, there has been hardly time to provide a comparison between the new and the old hospital admission procedures. An attempt has been made in the annual report to differentiate the experience of the first ten months under the old Act, January to October, and the second small period of two months, November and December, when it will be seen that there was an actual increase in the percentage of cases compulsorily admitted under the new procedure, for of the 186 persons admitted in November and December, no fewer than 79 per cent were admitted under compulsory procedure, whereas beforehand the level was 63 per cent. It is, of course, too early to be certain that this is a lasting trend. A further change, which is, in many ways, more disturbing, is the higher proportion of very old people admitted under compulsion since 1st November, 1960, more than ever before. For instance, seventeen people over the age of 70 were so admitted in November and December as against 32 for January to October. This represents almost three times the number of old people over 70 in the November and December period compared with the earlier period and may suggest that the medical practitioner, faced with the problem of finding hospital accommodation for the old person, is using the new Act as a means of ensuring that necessary hospital care is obtained.

**Hospital
Admission
Procedure**

A further difficulty was noticed in regard to the discharges from hospitals, for unfortunately, information from the hospitals was not being received in some cases, and this meant, of course, that the comprehensive after-care service which the City Council is hoping to provide could not be provided. These difficulties may well, of course, be in the nature of teething problems in the new Act and it is hoped that by next year a clearer picture of the whole pattern of the new legislation will emerge.

During 1960 the Ambulance Service fleet covered over a million miles for the first time in the history of the service. The number of patients moved rose further to 230,010, an increase of 4,000 over 1959.

**Ambulance
Service**

During the year special arrangements were made with the United Liverpool Hospitals and Hospital Management Committees of the Liverpool Regional Hospital Board (with the exception of Alder Hey Hospital), to appoint a senior member of the Ambulance Service as a hospitals transport officer in each of the large hospitals in the City area. It was agreed that

both parties would pay 50 per cent of the total cost of this scheme and already the scheme has shown considerable improvements in the service provided.

Occupational Therapy

The development of the Occupational Therapy Service has been even more rapid in 1960 than in the previous two years. Three more qualified occupational therapists were recruited bringing the establishment to six fully qualified officers. In addition a new occupational therapy and rehabilitation unit, in the grounds of Westminster House, was completed and came into operation in the middle of the year.

Type of work undertaken

The work of the Occupational Therapy Section has developed both in amount and scope. All types of patients are now being treated including the generally handicapped, very crippled people, mentally handicapped people, young children with gross handicaps and the large number of patients who require aids of some kind to assist handicapped people to live more independently. In addition, extended work has been carried out in relation to recommendations for altering and adapting houses to the needs of crippled and handicapped persons. A very good liaison has been maintained with officers of the Housing Department on this rehousing question and arrangements have been made for widespread house alterations to be carried out, at the cost of the Health Committee, in certain cases.

Occupational Therapy and Rehabilitation Unit

This building was commenced in April, 1960, and completed and occupied in October. It consists of a prefabricated building, the outside walls in cedar wood with brightly painted panelling beneath the windows. It has one large workroom with windows down both sides and a French window opening on to the garden. On one side of the door into the workroom is an office with an observation window on to the main room allowing therapists to be aware of any emergency, etc. On the other side of the door is the rehabilitation kitchen which has a hatch on to the workroom. This kitchen serves not only its normal function of cooking, but allows handicapped housewives to learn how to undertake kitchen work although grossly handicapped. It was found the storeroom provided was quite inadequate and a further one is being built at the end of the building. Two patients' toilets are provided each having a space beside the lavatory for a wheel chair and fitted with lifting chains and handles to help paraplegic patients to lift themselves if necessary.

Two fully trained occupational therapists work full time in this unit and the numbers attending the unit have increased each week. All types of patients are being treated, mental and physical cases working side by side together with old people. Patients are received each morning from 9.30 a.m., onwards and leave about 4.0 p.m. Some make their own way while others are brought in by ambulance.

A full list is given of representative cases helped during the year. It will be seen that the type of case helped is very wide, from elderly people to grossly handicapped people, persons suffering from tuberculosis, mentally handicapped persons and children referred by the School Health Service. This service, which has proved most popular, is filling a very great need in the City. Many references have been made to this pioneer work by visitors of all types and there is no doubt that Liverpool is leading the way in this development.

The acute problem of residential accommodation for the aged is dealt with in the report where it will be seen that if, as is contemplated, the number of residents in Westminster House can be reduced a further 200 by 1970 the total places which will be required to deal with the waiting list and the overspill from Westminster House in the period 1962 to 1970 will be 700. This will involve the building of new hostels at the rate of two per year. One of the acute problems of this large scale hostel development, is not only finance, but sites are becoming more and more difficult to acquire in suitable places.

**Welfare
Service
Residential
Accommo-
dation**

At the end of 1960 the waiting list stood at 248. It will be seen that there has been an increase since the end of 1959 when the waiting list was 213. During the year the up-grading of Westminster House has continued with the modernisation of houses five and six, and the setting up of a special unit for approximately twelve antisocial residents. In addition, two additional lifts have been installed in Westminster House which have greatly eased the problems for the old people and staff. The future of Westminster House was considered by the Committee during the year and meetings were arranged with the Regional Hospital Board to discuss the best way of arranging its final closure. A tentative programme was agreed whereby the annexe and West block would be emptied and demolished in the next ten years. In the ten to fifteen years the demolition of the terrace would follow and the final demolition of the main part of the building in the fifteen to

twenty-five years' period. At the same time, the planning of the grounds of Westminster House has been given attention and it has been agreed to build a new hostel in the grounds in 1961-62 in addition to the occupational therapy unit which was opened during the year. It is also hoped to build a maternity and child welfare clinic in the grounds and so encourage the breaking up of this accommodation.

**Holidays for
old persons**

In October, twenty residents were sent for a week's holiday to hotels at Llandudno, as an experiment with a view to permanent bookings so that old people could be sent for holidays from hostels in the City. So successful was the experiment that it has been agreed to arrange for 200 residents to go to Llandudno sometime between May and October, 1961, to enjoy holidays at off-peak periods. The old people particularly enjoyed a visit to the sea and, for many of them, it was the first time that they had spent such a seaside holiday.

**Brookside
Annexe**

In June, 1960, the Brookside Annexe was opened and the enlargement of the accommodation now makes provision for 40 residents of both sexes. This hostel is now amongst the most attractive in the City and looked extremely pleasant when it was opened by the Lord Mayor.

**Chest X-ray
of residents**

Once again the arrangements whereby old people admitted to residential accommodation have had a chest X-ray have proved well worth while during the year for out of the 334 people X-rayed two were found to have active tuberculosis and arrangements were made for their treatment.

**Temporary
Accommo-
dation**

The problem of temporary accommodation has remained a minimal one throughout 1960. One of the characteristics of this accommodation is the large number of people who were admitted and discharged. During the year, 909 were admitted and 886 discharged. The maximum number of persons at any stage being accommodated was 67 and the minimum 24. The daily average was reduced in the year from 63 to 47. This shows the value of the Liaison Sub-Committee of the Health Committee which is not only keeping the problem within reasonable limits but reducing the average length of stay of all families. In 1960, it was the lowest ever recorded, the average length of stay being thirteen days. This emphasises that this accommodation is what it sets out to be—temporary.

These services have once again been strengthened throughout the year to cope with the ever increasing demands upon them. As the waiting list for accommodation increases, so does it become more necessary for the domiciliary welfare services to expand. This has been seen particularly in the fields of visiting and mobile meals.

**Domiciliary
Welfare
Service**

Mobile meals rose during the year to the highest level ever recorded and 450 persons received a meal on every week day. Full records are given of interesting cases showing, not only the value of the work of the welfare visitors, but also the scope of the welfare work undertaken. This includes the care of the handicapped, care of the aged, and social care, particularly the care of problem families and the care of cases who are in financial difficulties due to bad planning.

**Mobile
Meals**

Seventeen people were removed in 1960 under Section 47 of the National Assistance Act, 1948, either suffering from grave chronic disease or aged and infirm living in insanitary conditions, unable to care for themselves, and not receiving from other persons proper care and attention. This is an increase from the nine persons removed during last year and emphasises the importance of extending the scope of domiciliary work.

**Removal to
suitable
premises of
persons in
need of care
and attention**

The ever popular River View Rest Centre has continued to attract many old people during the year and the Sheil Park New Club has been most successful.

**River View
Rest Centre**

During the year another centre was opened in Paradise Street in the heart of the City and has proved to be a great success. Another centre was opened in September in Norris Green but owing to the counter attractions in the neighbourhood of other clubs for old people the attendance was so small that, after a brief period, it was decided to close the centre. It is clearly important to carry out careful survey work as, although rest centres are valuable, their value must be proportionate to the services which are provided by other means for old people in the area.

Paradise St.

The work being carried out in Handicraft Centres has continued to expand during the year and there are now four centres where instruction in handicraft is given to a number of handicapped persons. Transport has been provided, where necessary, for people who are unable to get to these centres and during the year a day trip was also arranged to North Wales for about 60 handicapped persons. These centres have proved to be most useful and the numbers attending the classes have continued to increase.

**Welfare of
Handicapped
People
Handicraft
Centres**

**100 Walton
Village**

Provision continues to be made for the generally handicapped at 100 Walton Village for recreational purposes and the following voluntary bodies are continuing to use the centre:—

Infantile Paralysis Fellowship, Merseyside Branch;
Liverpool Spastic Fellowship, Day Centre;
Merseyside Hard of Hearing Club; and
Merseyside and Wirral Group Invalid Tricycle Association.

Blind Welfare

Once again there was an increase, during the year, in the number of blind persons referred to the Department, 234 compared with 214 in the previous year. Of these 148 were found to be blind, 67 partially sighted and nineteen not blind.

**Blind
employment
maintained**

A similar trend in blind employment has been maintained as in the past, there being 110 persons employed in open industry and 78 in sheltered employment. Once again it is a pleasure to be able to record the valuable help which has been received from the Blind Placement Officer of the Royal National Institute for the Blind who has helped to make so successful the placement of many blind people in open industry.

**Sir Robert
Jones Work-
shops**

It is encouraging to report that, at the time of writing this report, there are 59 severely handicapped persons employed in this workshop which is an increase from 50 recorded last year. The City has continued to contribute an increasing financial sum annually to the running of the workshop and it is important to realise that the numbers attending have increased from just over 40 six years ago, to the present figure of 59.

**Deaf and
Dumb
Welfare**

Deaf and Dumb Welfare has continued to be carried out during the year very satisfactorily by both the Liverpool Deaf and Dumb Benevolent Society and the Catholic Deaf and Dumb Society of St. Vincent de Paul. The City Council has continued to pay a sum of £7 per head which is an increase on the figure of £5 for 1959.

Epileptics

During the year twenty adult epileptics needing residential care and attention were placed in epileptic colonies and the total number of persons handicapped in this way who are maintained by the local authority has risen from 71 in 1959 to 86 in 1960. The Club run by the Merseyside Epileptic Association has continued to do excellent work throughout the year and receives the active support of staff in the Health Department.

A number of case conferences have been carried out throughout the year to deal with difficult problem families and the meetings, which have been attended by various Corporation Officers from many Departments and many social workers of voluntary associations, have proved of great value in co-ordinating the work for such persons.

**Problem
Families**

There was a slight increase in the number of cases referred to in the housing points scheme in 1960, 4,911 compared with 4,481 in 1959.

**Housing
Points
Scheme**

Examples of the type of case assisted during the year are given in the text of the report.

During the year, a new and improved scheme was devised to help patients suffering from infectious tuberculosis to be urgently rehoused. This resulted from meetings between the Health and Housing Committees' elected representatives and it was finally resolved that six per cent of the Municipal Housing accommodation (roughly 170 to 180 houses per year) which become available for letting or re-letting, be reserved specifically for the rehousing of this type of tuberculosis patient. The Medical Officer of Health analyses the circumstances of patients awaiting housing and selects those most urgently in need of rehousing to prevent infection. At this meeting it was also resolved that the six months waiting period before inclusion in the housing register be waived in respect of tuberculosis cases specifically recommended for special priority by the Medical Officer of Health.

A new arrangement has also been made so that any refusal by a tuberculosis patient of an offer is immediately investigated by the Medical Officer of Health to ensure that patients do not refuse reasonable offers.

During 1960, 2,603 medical examinations were carried out by doctors in the Health Department, an increase over the figure of 2,488 in 1959. These examinations are carried out for three reasons:—

**Medical
Examina-
tions**

- (1) Entry into the Corporation Service,
- (2) Entry into the Superannuation Scheme, and
- (3) By reason of extended medical sickness.

It is interesting to see that the commonest medical reason for employees being certified as permanently unfit is chronic bronchitis and emphysema.

There were fifty-four of these cases. The next commonest cause was hypertension (44) and fourteen cases of coronary thrombosis were recorded, this being the third commonest cause.

It is of interest to note that although every new employee is x-rayed routinely, whereas in 1959 three cases of pulmonary tuberculosis were discovered, no cases of active pulmonary tuberculosis were found in 1960. This may well be due to the excellent preventive work which the Mass X-ray Campaign in 1959 carried out. Two cases of carcinoma of the lung were found on routine x-ray and three further cases were discovered in employees referred to the department for extended sickness.

Environmental Health Control

Reference is made in the report to two new Acts of Parliament, the Offices Act, 1960, which is due to come into force in 1962, and the Noise Abatement Act which came into operation on the 27th November, 1960. It is encouraging to see two pieces of legislation which will greatly improve the powers of the local authority to enforce standards in both fields.

Recruitment and Training

The training scheme has continued to be most valuable in providing a flow of properly trained personnel for work in the Health Department. It is encouraging to report that the examination results of the Liverpool trained candidates have been very good, and during the year nine assistant inspectors completed their training and obtained the certificate and sixteen qualified inspectors obtained the Meat and Other Foods Certificate of the Royal Society of Health. During the year, the new Diploma Course started and eighteen student inspectors from the department are attending this course. This training which is considerably longer than any ever undertaken before, involves four years. To cover all the needs of these students, a full-time tutor was appointed.

Work in Default

There has been an increase once again in the work undertaken in default of owners who have failed to carry out notices or where property has been abandoned. This power given to the Corporation of Liverpool by the Corporation Act, 1955 has continued to be of great assistance to the department and, during the year, work was carried out in default of owners on 359 houses involving an expenditure of £3,000, all of which will eventually be recovered through the procedure incorporated in the Public Health Act, 1936, and the amount concerned is also registered against the property in the local land charges register in accordance with the Land Charges Act, 1925.

Investigations have continued to be carried out in the field of food poisoning and other infectious diseases, and during the year 6,656 specimens from 4,494 persons were submitted for bacteriological examination of which 1,404 were shown to be positive.

**Food
Poisoning
Investigations**

Inspections of the thirteen common lodging houses registered in the City were continued throughout the year, and 282 visits (both night and day) were made resulting in forty-eight notices being served in respect of bye-law infringements. Out of 8,182 beds examined 47 were found to be verminous. Arrangements were made for cleansing.

**Common
Lodging
Houses**

1960 saw the end of the first five year period (from 1956 to 1960 inclusive) following the housing survey which was carried out in accordance with the provisions of Section 1 of the Housing Repairs and Rents Act, 1954. During the year 5,462 houses have been represented to the Council either as clearance areas or individually. As there were already 4,827 houses represented and there were a further 1,103 dwellings represented during 1955, the total in the period 1955 to 1960 inclusive is 11,392 dwellings available for clearance. Unfortunately there has been considerable delay of confirmation of rehousing of families occupying the condemned properties and the problem is an increasing one due to demands for central area accommodation which is so scarce. This emphasises the tremendous problems caused by the shortage of land for housing development. These difficulties are becoming more and more apparent year by year.

**Slum
Clearance**

Of the orders submitted during the year for confirmation, two were opposed and public enquiries were held in respect of nine compulsory purchase orders. The Minister's inspector carried out inspection of all properties involved in these orders. During the year eleven confirmation orders were received from the Minister in respect of twelve compulsory purchase orders and one clearance order containing a total of 737 houses.

There has been a further reduction in the work undertaken under the Rent Act, 1957, during the year. Altogether, since the inception of this Act, 27,000 visits have been paid in connection with problems arising under this Act. As a result of the action taken many houses are now well maintained and in good repair. Repairs are carried out to controlled dwellings including in many instances, new roofs, pointing of external brickwork, the building of boundary walls and repair of internal door and window furniture. Progressive delapidations have been halted as a result of this Act and many premises have been given a new lease of life.

**Rent Act,
1957**

**Loans on
Mortgage**

During the year further work has been undertaken under the Housing (Financial Provisions) Act, 1958, and there has been an increase from 704 inspections to 864 inspections carried out by the staff.

**Administra-
tion of the
Shops' Act,
1950, and the
Young
Persons'
(Employment)
Act, 1938**

Both the Shops Act, 1950 and the Young Persons (Employment) Act, 1938, have been administered by the Department throughout the year. 10,069 shops were entered during special visits on early closing day and during the evening and on Sundays, and in addition 55,577 visits were made to retail shops of all classes, cafes, clubs, hairdressers, warehouses, pet shops and also places of entertainment. Altogether 423 contraventions have been dealt with mainly by warning letters. As in previous years, reference is made to the difficulties of Shops Acts' enforcement, particularly in regard to the anomalies in respect of mobile trading.

**Hairdressers
and
Barbers**

During the year, fifty-two new and transfer registrations were reported to Committee. The total number of hairdressers on the register at the end of the year was 659. 519 inspections of hairdressers' shops were made and 156 infringements were reported and dealt with by informal letters. Three cases involving hairdressing in dwelling houses were dealt with, one in which the hairdresser applied for registration and complied with requirements, and in the other two cases the business was discontinued.

**Factory
Inspection**

Details are given in the body of the report of the type of close co-operation which is maintained between H.M. Inspector of Factories, the Alkali works inspector and the Public Health inspectors in this work. Investigations were carried out regarding complaints of dust and works effluvia in the industrial area and it was found that one cause was due to emission of dust from a plant, grinding metallic alloys. H.M. Inspector of Factories was advised and following an examination of process by both officers it was decided that the recognised method of dust extraction might give rise to possible explosion hazards. This was pointed out to the directors of the firm who agreed to transfer this particular process to another works.

**Food
Factories**

Particular supervision has been paid, as in the past, to food factories as these are particularly liable to lead to trouble if the food hygiene standard is not of the very highest. There has been a welcome increase in the number of workers in these factories who have been trained, during the year, by courses held by the Department.

Considerable complaints regarding obnoxious smells, particularly from those by-products and ancillary trades at Stanley Abattoir which process animal offal and waste material, have been investigated during the year. One of the most difficult problems in dealing with these trades is concerned with the human element. Careless use or mishandling of plant can cause momentary emissions of an offensive smelling vapour which will drift slowly in certain weather conditions and takes a long time to disperse. Prevention of such carelessness is very difficult and, in order to minimise such happenings, inspectors have found it necessary to keep all by-products plants under continuous observation during the summer months whilst other inspectors have patrolled the district lying to the windward of the abattoir. This practice has certainly made a marked improvement, but it is unfortunate that there is no automatic method of controlling these plants so that emissions can be prevented without having to depend on the activities of the public health inspectors.

Industrial Nuisances

During the year increased attention was paid to noise with the passing of the Noise Abatement Act, 1960. In addition to industrial and other extraneous noises which are a nuisance to residents in the vicinity, this Act is also concerned with the use and operation of loud speakers in the City and on the highway. Many complaints were investigated in the year. They included noise from plants, machinery and high speed fans in large industrial establishments, a packing and grinding plant in a factory of a cattle food manufacturer, machinery in a metal box making factory, and the clatter of milk bottles and shouting of workers at a milk depot during the early morning delivery.

Noise

Reference has been made in many of my previous annual reports to the problems facing offices and factories and it is most satisfactory to report that during the year a private Members Bill was passed in the House of Commons dealing with the protection of office workers, and was presented on the statute book as the Offices Act, 1960. This Act provides for the making of regulations by the Secretary of State in respect of many environmental conditions in addition to provision of first aid, washing facilities, installation of electrical equipment, fire precautions and other matters directly affecting office workers. Although the Act does not come into operation until January, 1962, by which time the necessary regulations will be made, it is hoped that the knowledge of such an Act coming into operation at this time will encourage people to improve their conditions

Offices and Work Places

in advance of legislation. During the year considerable attention has been paid to this part of the work and no fewer than 4,758 visits were made to offices.

**Hygiene In
Licensed
Premises**

1,234 systematic visits were paid to public houses and other types of licensed premises during the year to ensure that a satisfactory standard of hygiene was being maintained in such places. Although it has been found necessary on occasions to administer verbal cautions and in certain instances to serve written notices in respect of unsatisfactory conditions, generally the trade maintains a good standard of cleanliness in such premises. Several sub-standard public houses in congested areas have been closed in the past year and the licence either surrendered or transferred to new premises in the suburbs.

**Domestic
Smoke
Emission**

The preliminary approval of the proposals of the City Council to claim the first large area of domestic premises as a smoke control area was received from the Ministry of Housing and Local Government during 1960. This proposed area is the largest in the country. The City Council submitted the formal order in July and in December a public enquiry was held as a result of fourteen objections, and the decision of the Minister is now being awaited.

During the year a total of 18,470 visits were made in connection with this smoke control survey when 99,937 appliances were examined by inspectors. A further 5,415 visits were made in connection with other matters of atmospheric pollution.

Improvements have been noted in the overall problem of atmospheric pollution in the City largely as a result of the new plant being installed in various places in industry, the Corporation's own boiler plant and in shipping. In particular, it is satisfactory to report that there has been considerable improvement in the solution of problems concerning shipping.

In the industrial field 3,390 observations on industrial chimneys were made and 1,416 on shipping.

Plans for new furnaces have to be approved by the Health Department for all building projects and during the year details were submitted for approval in respect of seventy-two installations. Sixty-three were approved by the Committee without modification, seven were approved after modification and two were withdrawn.

This power station is still a formidable problem. After approach by the City Council to the Minister of Housing and Local Government, an order was made allowing the local authority to exercise control over this power station. Since the receipt of this order continuous visits have been made to the power station by inspectors, meetings and discussions have taken place between officers and there has been a very close liaison between officers of both departments together with the setting up of observation points to enable the station engineer to be informed immediately smoke emission becomes dark, thereby ensuring that the necessary adjustments can be made immediately.

Clarence
Dock Power
Station

It is satisfactory to report that there has been a definite improvement in the smoke emissions from Liverpool Hospitals and the new boiler house at Oxford Street was in an advanced stage of building at the end of the year. When completed this should add materially to smoke control in the central areas.

Evidence was found during the year of less rodent infestation than ever before and it is satisfactory to report that the general public are becoming increasingly conscious of the free services made available by the City Council to deal with this problem in their own houses and even in the case of minor infestations advice is sought early which, of course, leads to them being dealt with quite satisfactorily. A total of 5,096 infestations and re-infestations were remedied during the year.

Rodent
Control

Routine sampling work has continued to be carried out of all food and drug supplies sold in the City. A total number of 3,915 samples of food and drugs were taken in the year and of this amount 206 or 5.2 per cent were found to be not genuine or otherwise irregular.

Adulteration
of Food and
Drugs

Legal proceedings were instituted in respect of sixteen samples of milk which contained added water and convictions were obtained in all cases.

Full details of the work undertaken to ensure that the milk supplies of the City are of a high standard are given in the report. During the year 495 visits were made to pasteurising plants for sampling and other inspection purposes. In only two instances was there any evidence of poor standards and these were due, in both instances, to careless handling.

Milk Supplies

An interesting change observed in 1960 was a large increase in the sales of milk from automatic vending machines. A total of six dairies are supplying milk in sealed cartons to twenty automatic vending machines sited within the City. Each vendor must be registered with the Local Authority and licences are issued under the Milk (Special Designation) (Pasteurised and Sterilised) Regulation, 1949. Slight troubles were encountered during the year, but generally the standard of milk supplied in this way has been high. In all 748 visits were made to such machines concerned with sampling and inspection.

**Supervision
of Food
Supply**

Full details are given in the general text of the report of the work undertaken during the year by the public health inspectors to ensure that the City's food supplies are satisfactory. Work is undertaken daily at the wholesale fish markets, St. John's retail market, Queens Square, and the wholesale fruit and vegetable market in Cazneau Street, in addition to the inspections carried out in the wholesale warehouses situated throughout the City.

During the year two unduly large consignments of poultry were rejected. These were connected with two large shipments, one from Ireland in which the cargo had been damaged by heavy seas and the second stored in the possession of a wholesale firm. In both instances it was necessary to certify the destruction of all the consignment as unfit for human consumption.

It is satisfactory to report that there was a decrease in the amount of fruit rejected compared with 1959 but conversely there was a slight increase in the total weight of vegetables rejected and this can almost be completely accounted for in two isolated consignments occurring several months apart. Firstly there was a small incidence of blight in Spanish potatoes in the early half of the year and the second large scale rejection concerned a consignment of onions.

The daily inspection of canned goods and sundries has been maintained throughout the year at a variety of premises including food factories, warehouses and shops within the City. Details are given of the 252 complaints received from members of the public during the year involving items of foodstuffs which had been purchased in the City. Regular inspections have been carried out of the 148 establishments run by the City Council where food is prepared for human consumption. These premises are controlled by various departments of the Corporation, i.e., school meals, health, special

schools and children's departments. In addition, regular visits of inspection are made to ten hospital premises under an agreement with the United Liverpool Hospitals Board and the purpose of these visits is the examination of foodstuffs and ensuring that the Food Hygiene (General Regulations) 1960, are being carried out.

Meat inspection during 1960 saw a large increase in the number of animal carcasses condemned as being unfit for human consumption. During the year a total of 2,854 whole carcasses were condemned and 12,136 part carcasses compared with comparative figures in 1959 of 1,891 and 7,531. The total number of animals slaughtered at Stanley Abattoir did increase during the year substantially to 482,856 but there was still a comparative increase in the number of carcasses condemned.

1960 was the fourth year in which there was an operation of the training scheme approved by the City Council in 1956. Of 25 trainees, 23 were successful in obtaining the certificate in meat and food issued by the Royal Society of Health and this has meant that there is now a very satisfactory reserve of fully trained men to carry out meat inspection anywhere in the City.

In March, 1960, the entire slaughtering personnel and ancillary workers employed by the utility company of the slaughtering organisation at the abattoir were equipped with rubber boots, peaked white drill caps, blue short-sleeved overalls and white nylon aprons. This compliance with the requirements of the regulations has proved most satisfactory.

Reference is made in the report to the extensive foot and mouth disease outbreak which occurred later in the year and which resulted in a considerable increase in the amount of slaughtering carried out at the Abattoir. It was most satisfactory to receive a letter from various organisations complimenting the inspectorial staff on the excellent work they had undertaken.

This section, which once again, has concerned itself very much with transport problems within the department as well as with disinfection has been extremely active during 1960. In particular there has been a spectacular increase in the work undertaken in respect of meals on wheels. Extra transport has been available to meet this demand and now five vans are being used for this purpose. Altogether a total of 47,793 visits were made

during the year and the corresponding number of meals delivered. This compares with 19,729 meals in 1959 and 11,573 in 1958. This remarkable increase has resulted from the opening up of new kitchens in New Grafton House and Holt House which can supply different parts of the City.

This report records the work of every member of the staff of the health department, for under modern conditions little can be achieved by individual effort and it is the work of the whole team which is so essential and which yields the best results. I wish to thank all the members of the staff for their keenness, loyalty and unfailing support during the year. My thanks are also due to the other Corporation departments for their assistance when required. I wish to acknowledge the help given during the year by the Chairman, Alderman Alexander Griffin, J.P., and the Deputy-Chairman, Alderman Michael J. Reppion, who have both devoted so much time and energy to the work of the department. Finally, I am pleased to acknowledge the assistance given by the members of the Health Committee and for the kindness and courtesy with which they have considered the reports and recommendations made to them during the year.

I am,

Your obedient servant,

Andrew B. Semple

Medical Officer of Health.

CITY of LIVERPOOL

MUNICIPAL WARDS

1960

SHOWING

BIRTH RATE per 1000 population
DEATH RATE per 1000 population
INFANT DEATH RATE per 1,000 live births
NUMBER OF PERSONS PER ACRE



CITY OF LIVERPOOL

POPULATION
754,670

BIRTH RATE 21.1 per 1000 population
DEATH RATE 11.8 per 1000 population
INFANT DEATH RATE 28.2 per 1,000 live births
NUMBER OF PERSONS PER ACRE 27.1

CITY OF LIVERPOOL

SUMMARY

OF

VITAL STATISTICS FOR 1960

Area (land and inland water)	27,818 Acres
Population (Estimated by Registrar-General)	754,670
Deaths (all causes)	8,891
Death rate per 1,000 population	11.8
Live Births	15,961
Live Birth rate per 1,000 population	21.1
Percentage of illegitimate live births	5.4
Stillbirths	377
Stillbirth rate per 1,000 total (live and still) births	23.07
Total Births	16,338
Infant Deaths (under one year)	451
Infant Mortality rate per 1,000 live births	28.2
" " " " 1,000 legitimate births	27.9
" " " " 1,000 illegitimate births	32.2
Neo-natal Mortality rate (First four weeks) per 1,000 related live births	18.9
Early Neo-natal Mortality rate (First week) per 1,000 related live births	16.2
Perinatal Mortality rate (stillbirths + deaths during first week) per 1,000 total live and stillbirths	38.9
Maternal Deaths	5
Maternal Mortality rate per 1,000 total births	0.31
Deaths from:—Pulmonary Tuberculosis	81
Death rate	0.107
Non-pulmonary Tuberculosis	3
Death rate	0.004
Respiratory Diseases	1,641
Death rate	2.17
Cancer (all forms)	1,617
Death rate	2.14

VITAL STATISTICS.

Statistical Appendix

The majority of the lengthy statistical tables are included in a special appendix at the back of this report. A list of these tables is given on pages v-vi of the preface.

Births.

Birth Rate

During the year, 15,961 live births were registered within the City which represents a birth rate of 21.1 per 1,000 of the estimated mid-year population. 8,370 of these births were male and 7,591 were female. 5.4 per cent of the total live births (868 births) were illegitimate live births. These figures show a slight increase in the birth rate for the year compared with 1959. There has also been a small increase in the percentage of illegitimate births. The birth-rate within the City continued to be considerably higher than the average for England and Wales, which, for the year, was 17.1 per 1,000. The variation in births and stillbirths from 1938 to 1960 inclusive is given in the graph on the page facing.

Stillbirths.

Stillbirth Rate

There were 377 stillbirths registered in the City during the year, representing a stillbirth rate of 23.1 per 1,000. This is a slight reduction on the figure of 23.4 for the preceding year. The stillbirth rate among legitimate babies was 22.9 per 1,000 and among illegitimate babies was 25.8 per 1,000.

Mortality.

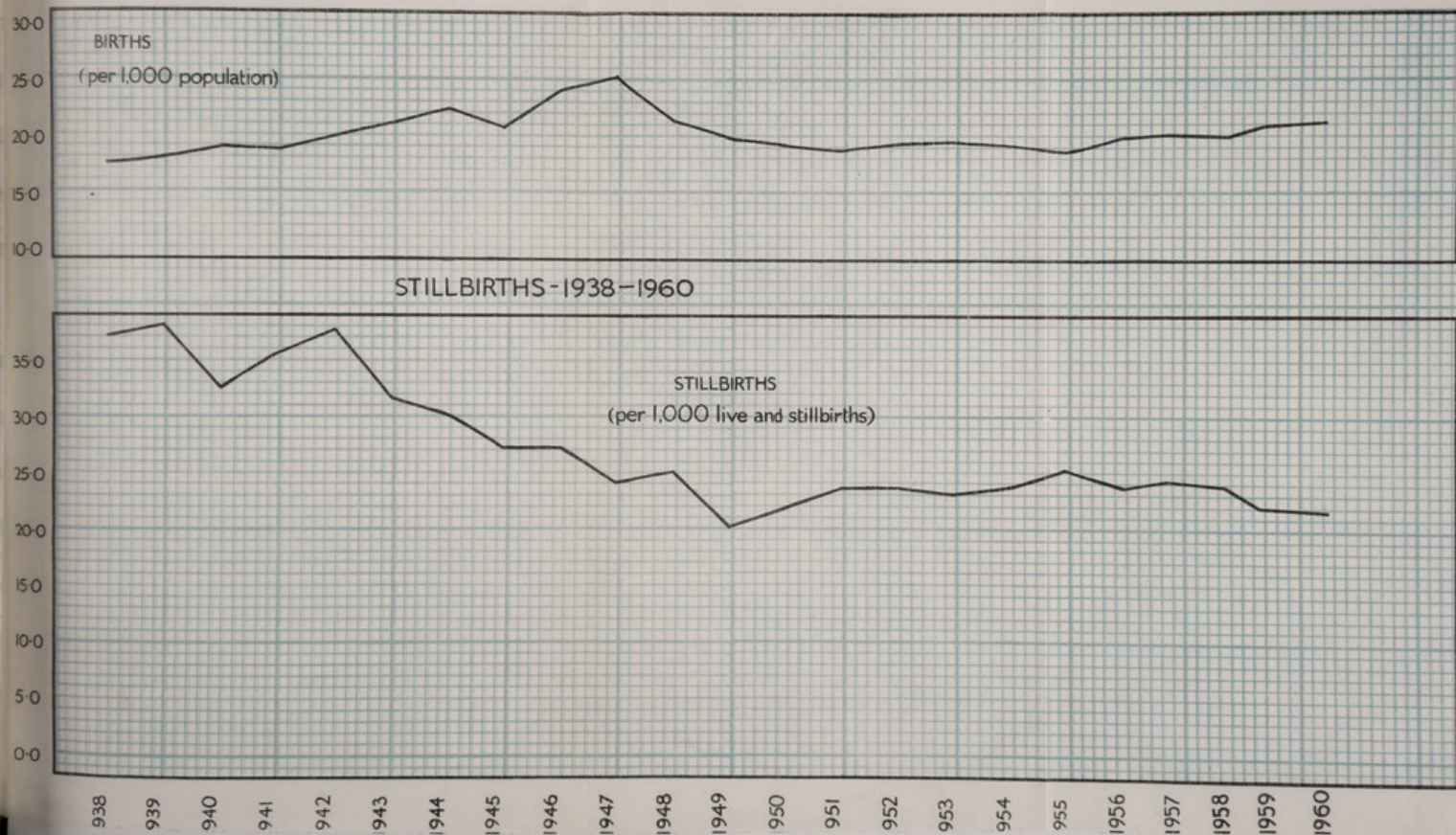
General Death Rate

There were 8,891 deaths registered within the City during the year, 4,552 males and 4,339 females. This gives a general death rate of 11.8 per 1,000 as compared with a death rate of 11.3 for the preceding year. The number of deaths from cancer of the lung was 457. It is encouraging to record that a further fall was observed in the number of deaths from tuberculosis during the year, and the number of such deaths fell to 84 compared with 105 in the previous year.

The trend of mortality of all causes and certain specified diseases have been prepared and are produced on the accompanying graphs. The full details of the causes of mortality are given in the statistical appendix.

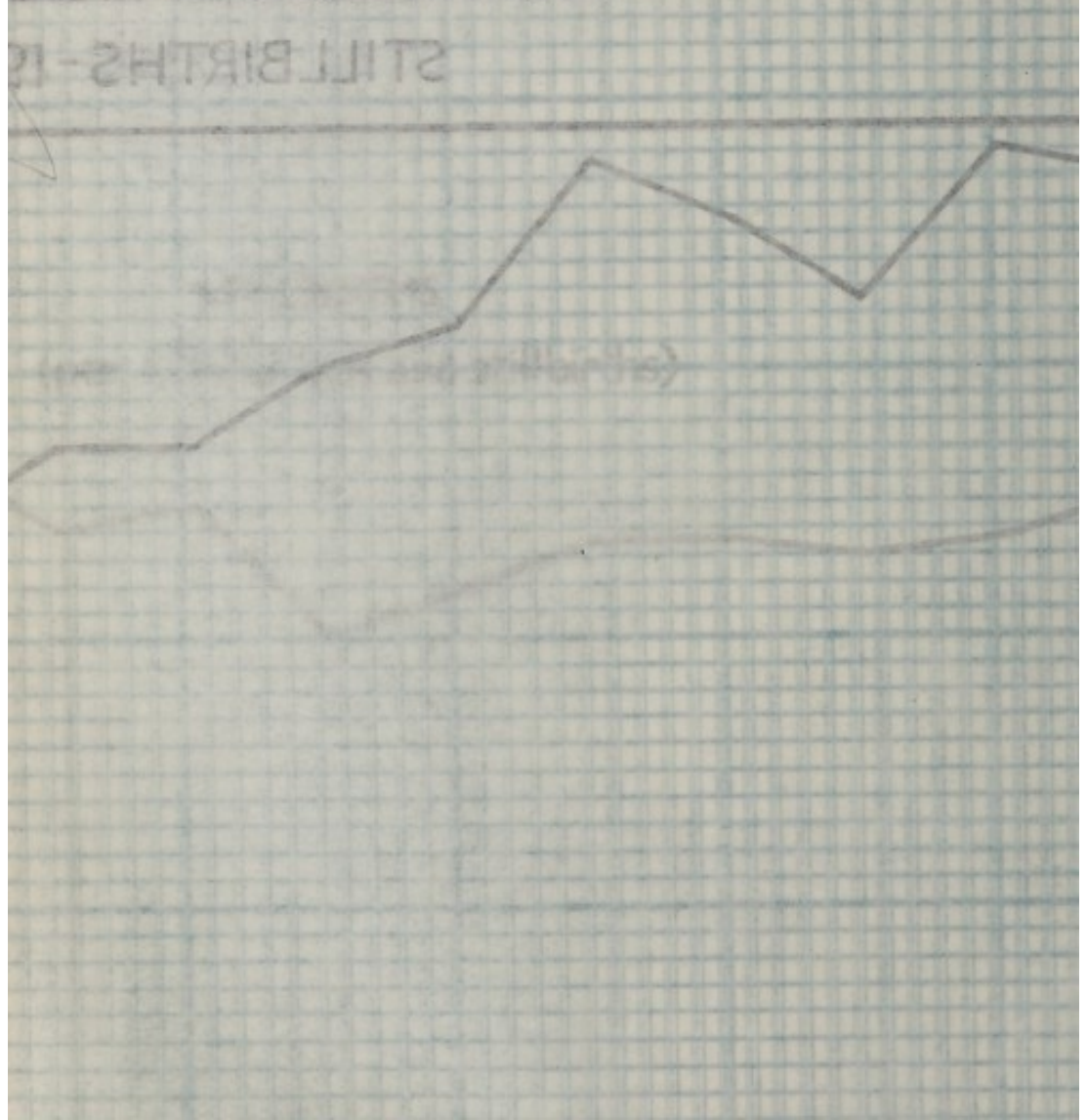
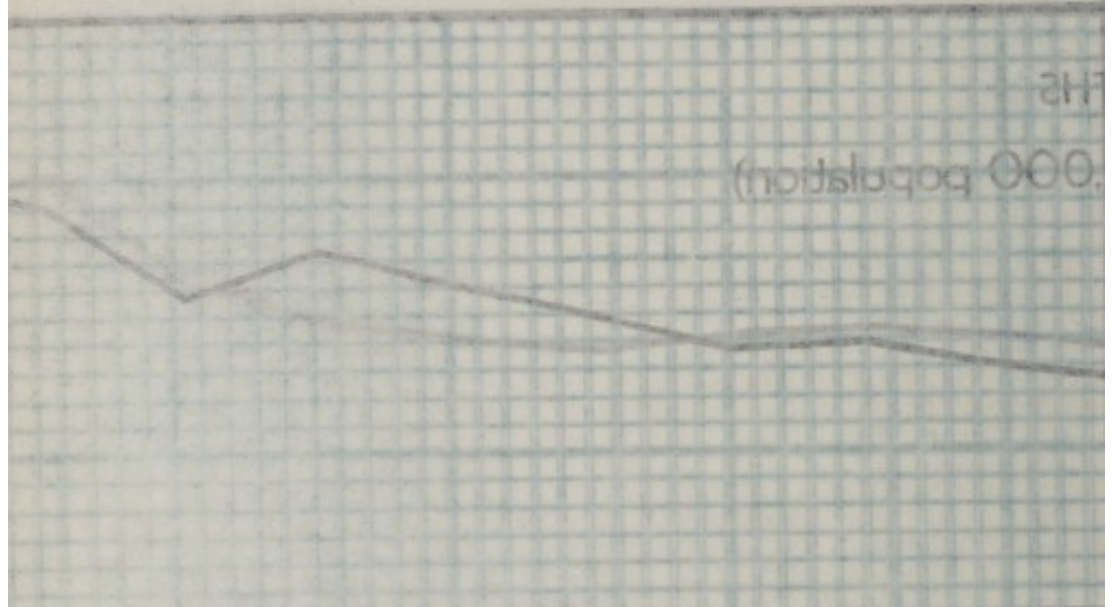
CITY OF LIVERPOOL

BIRTHS - 1938-1960



CITY OF

BIRTHS - R

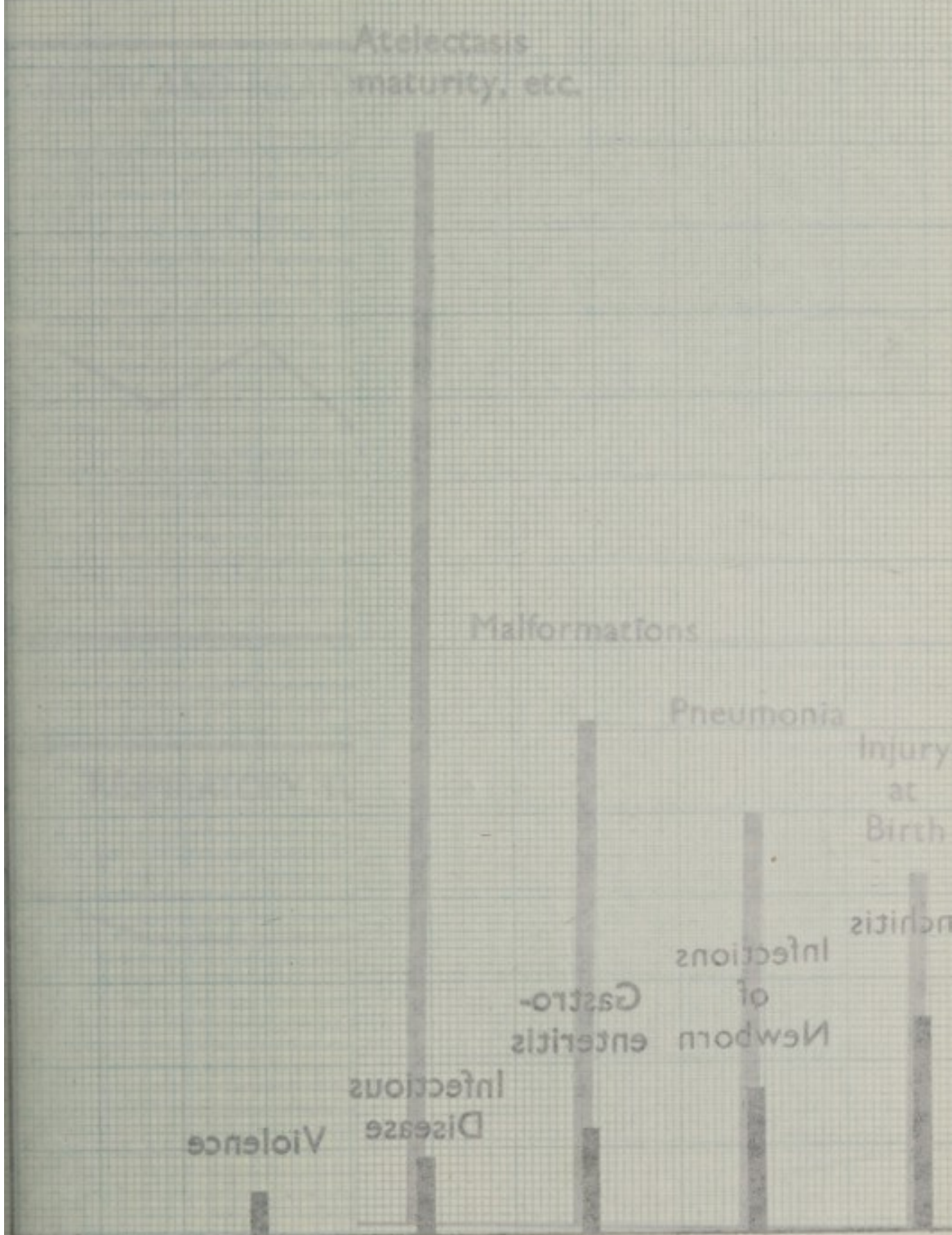


MORTALITY -

1960

OFFICE OF LIVERPOOL

OF INFANT MORTALITY - 1960



CITY OF LIVERPOOL

PRINCIPAL CAUSES OF INFANT MORTALITY — 1960

Total
Deaths

175

Atelectasis
Prematurity, etc.

150

Malformations

125

Pneumonia

100

Injury
at
Birth

50

Bronchitis

75

Infections
of
Newborn

25

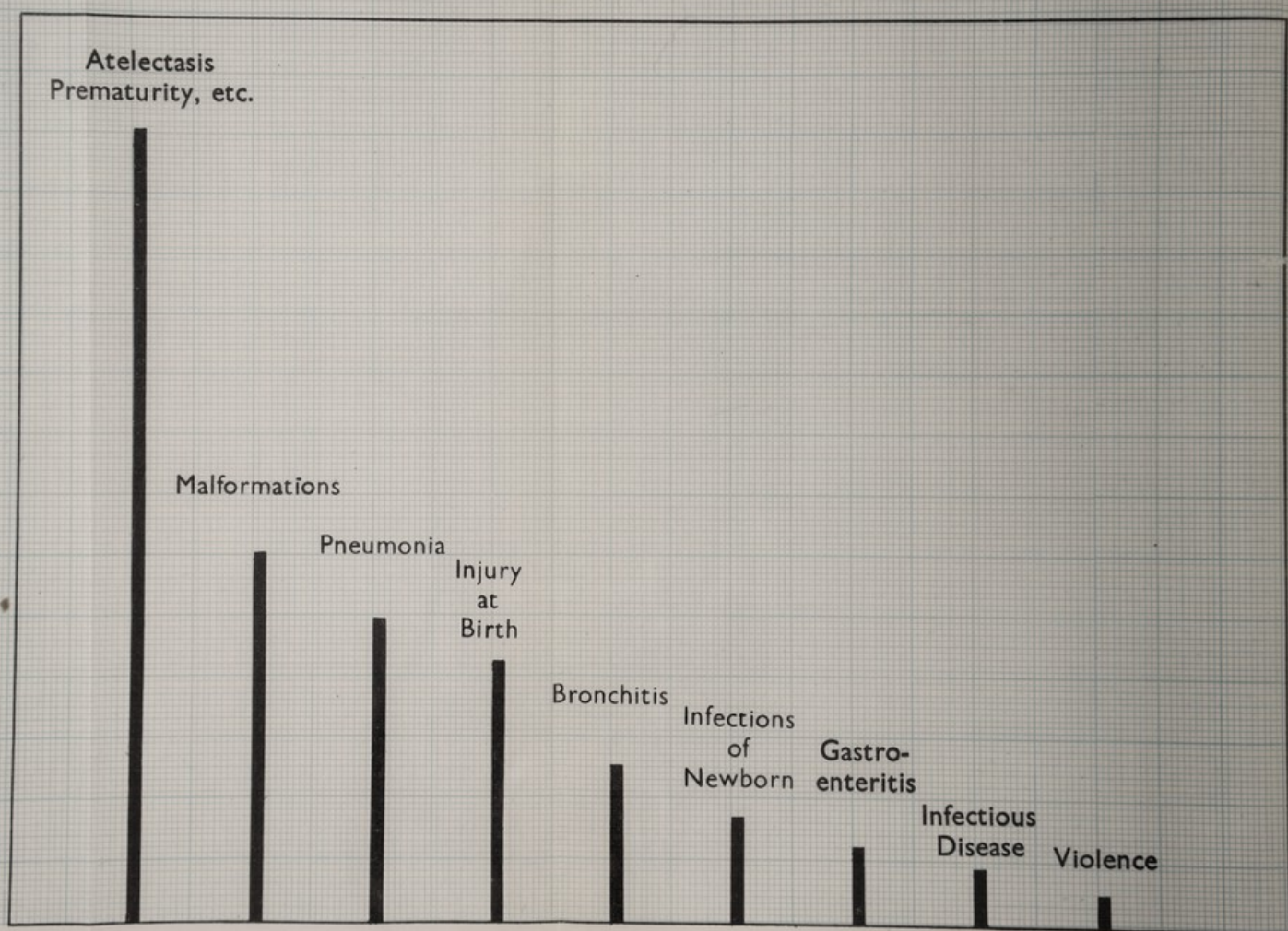
Gastro-
enteritis

50

Infectious
Disease

0

Violence

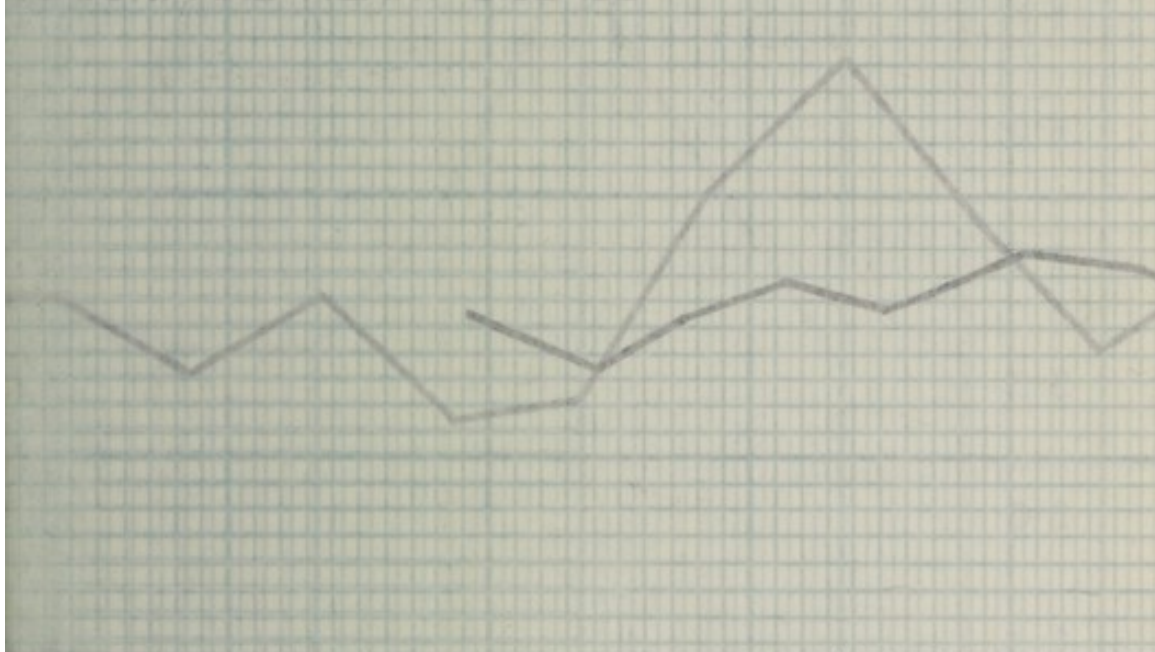


MORTALITY - LIVERPOOL

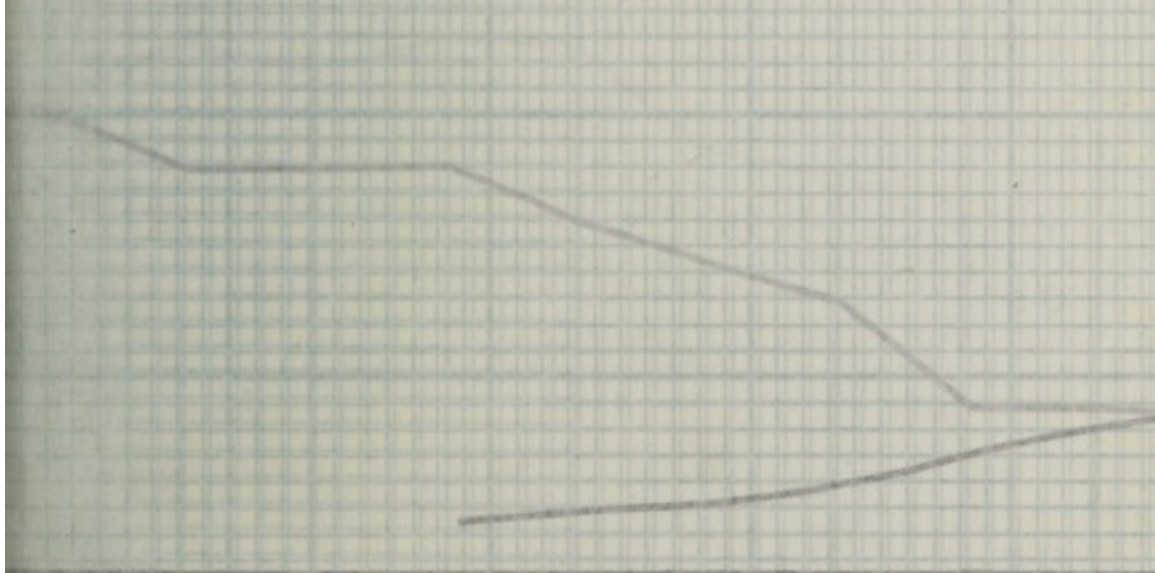
1938 - 1960

per 1,000 population

RESPIRATORY AND HEART DISEASE



RESPIRATORY TUBERCULOSIS



1946

1947

1948

1949

1950

1951

1952

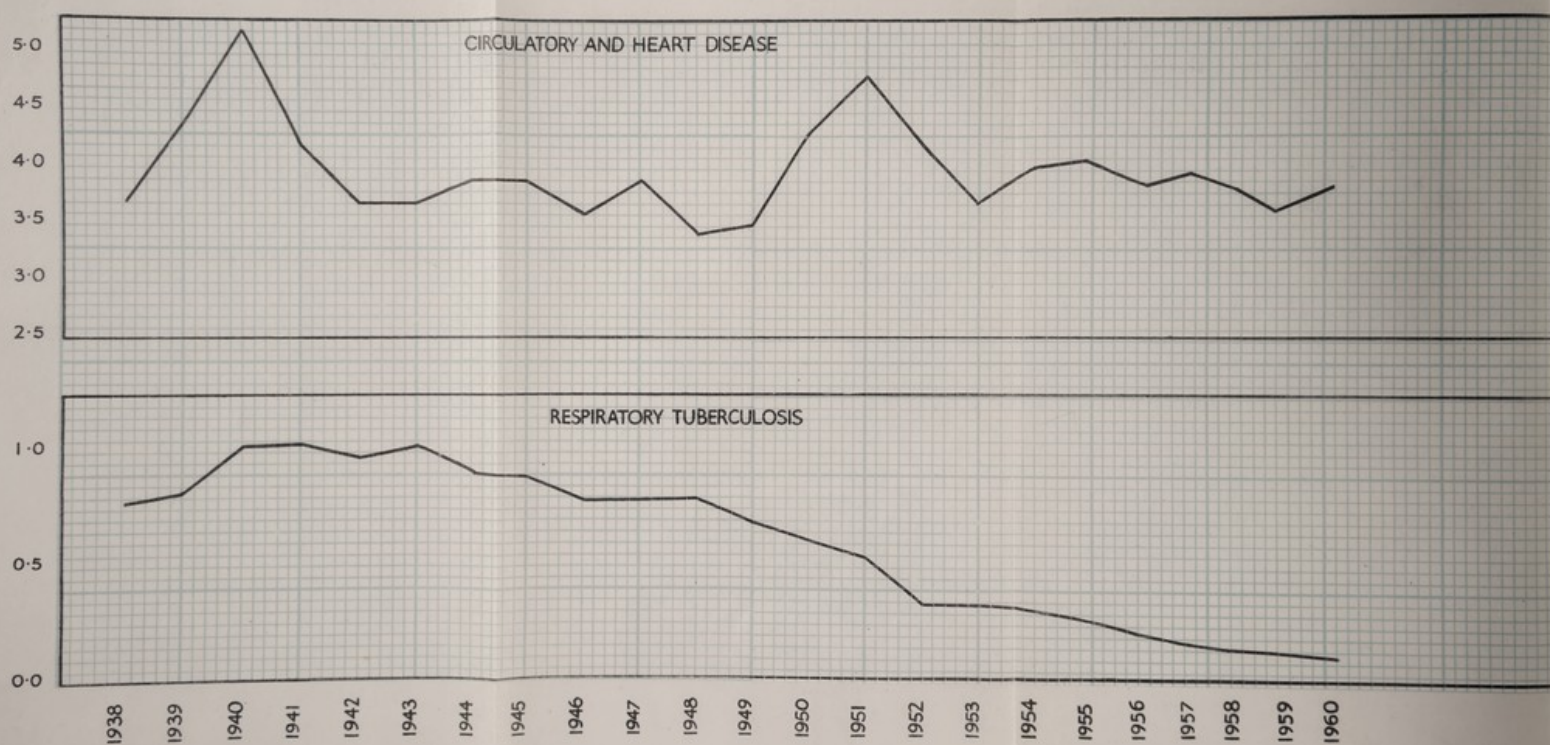
1953

1954

TRENDS OF MORTALITY-LIVERPOOL

1938 - 1960

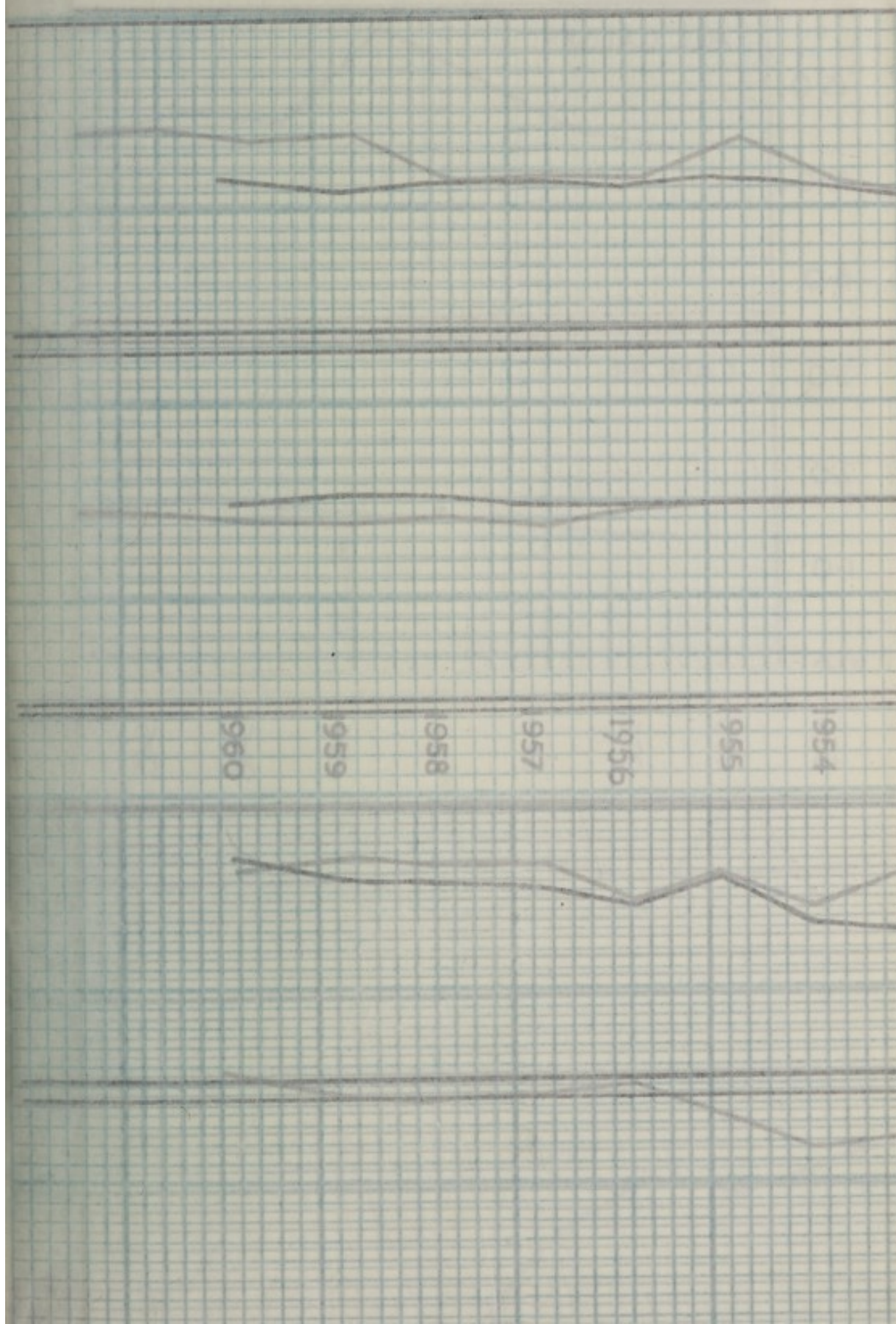
Death rate per 1,000 population



MORTALITY - LIVERPOOL

1938 — 1960

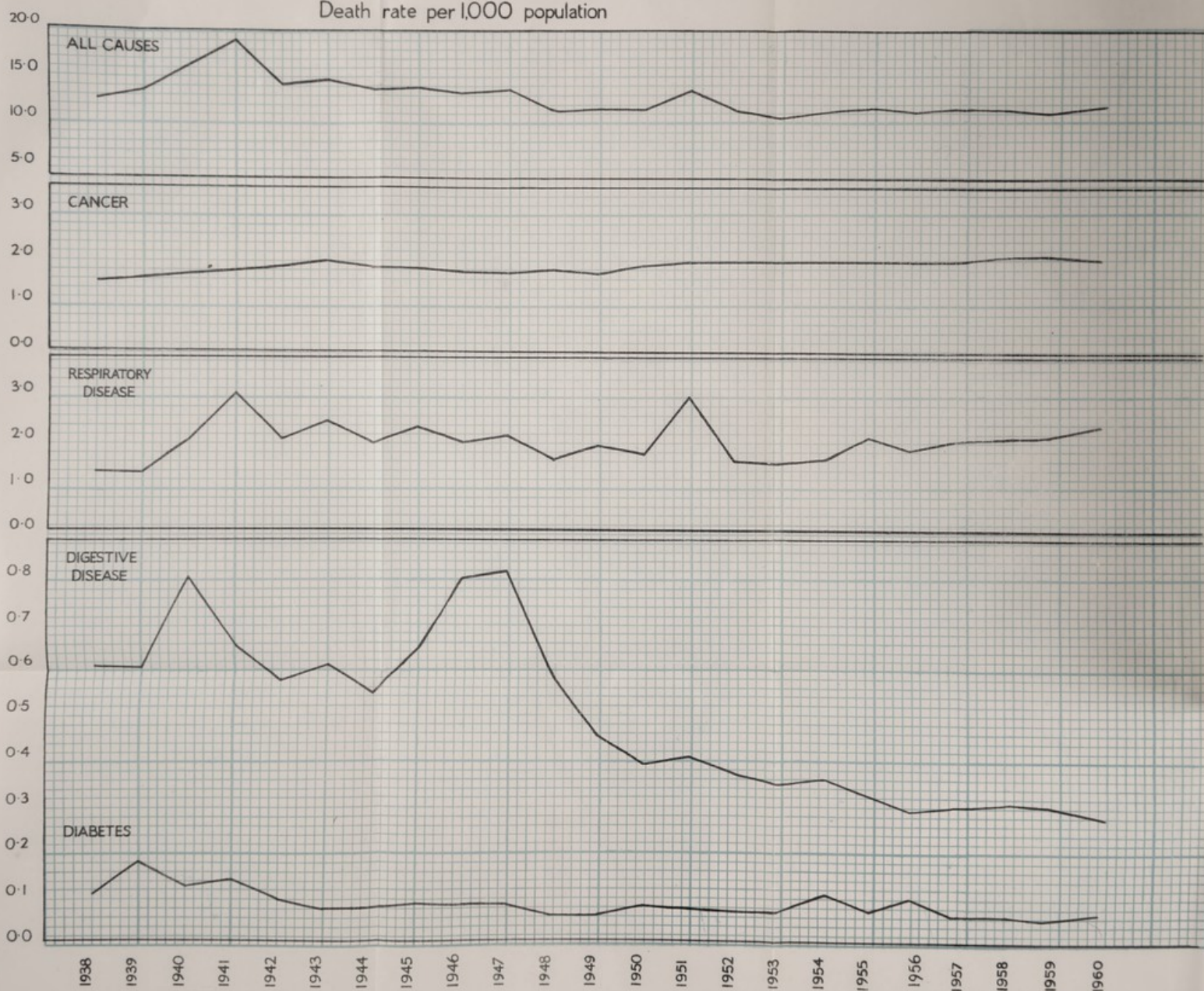
rate per 1,000 population



TRENDS OF MORTALITY-LIVERPOOL

1938 — 1960

Death rate per 1,000 population

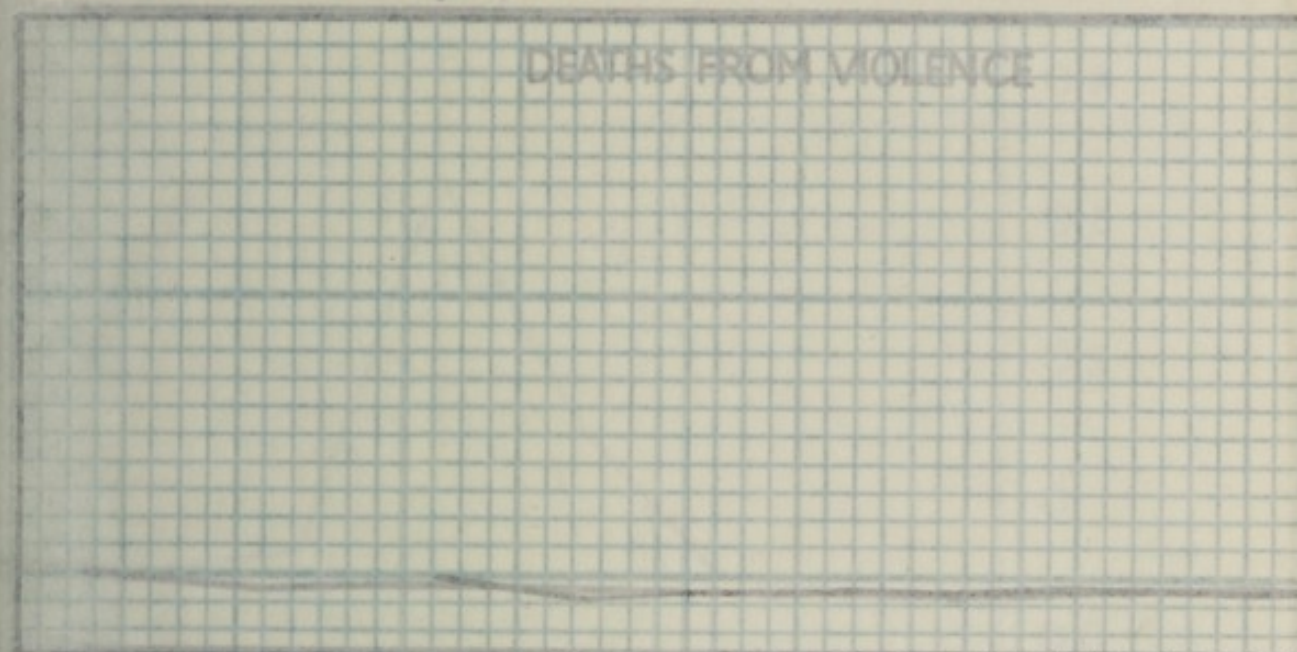


MORTALITY—LIVERPOOL

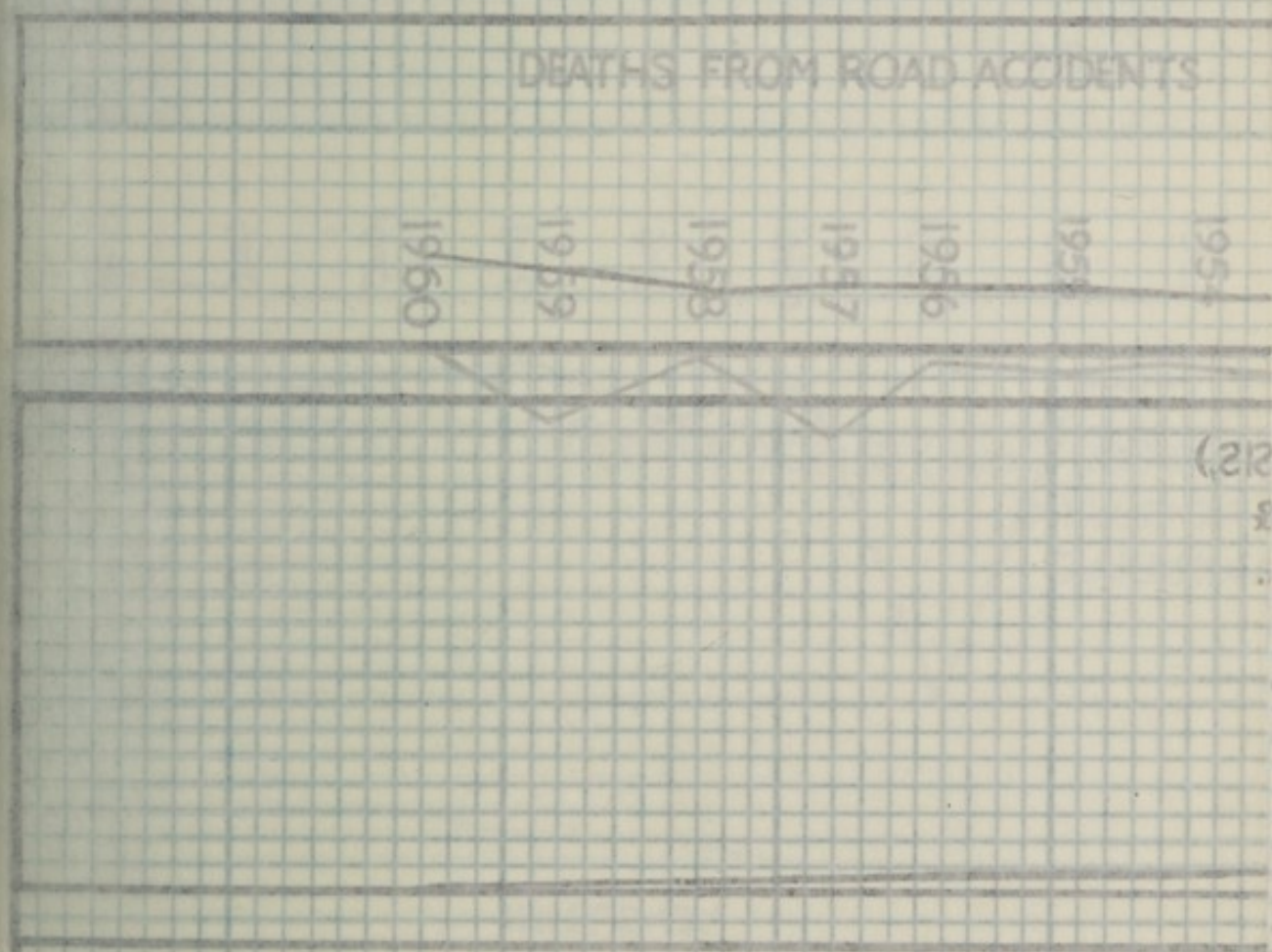
1938 — 1960

Rate per 1,000 population

DEATHS FROM VIOLENCE

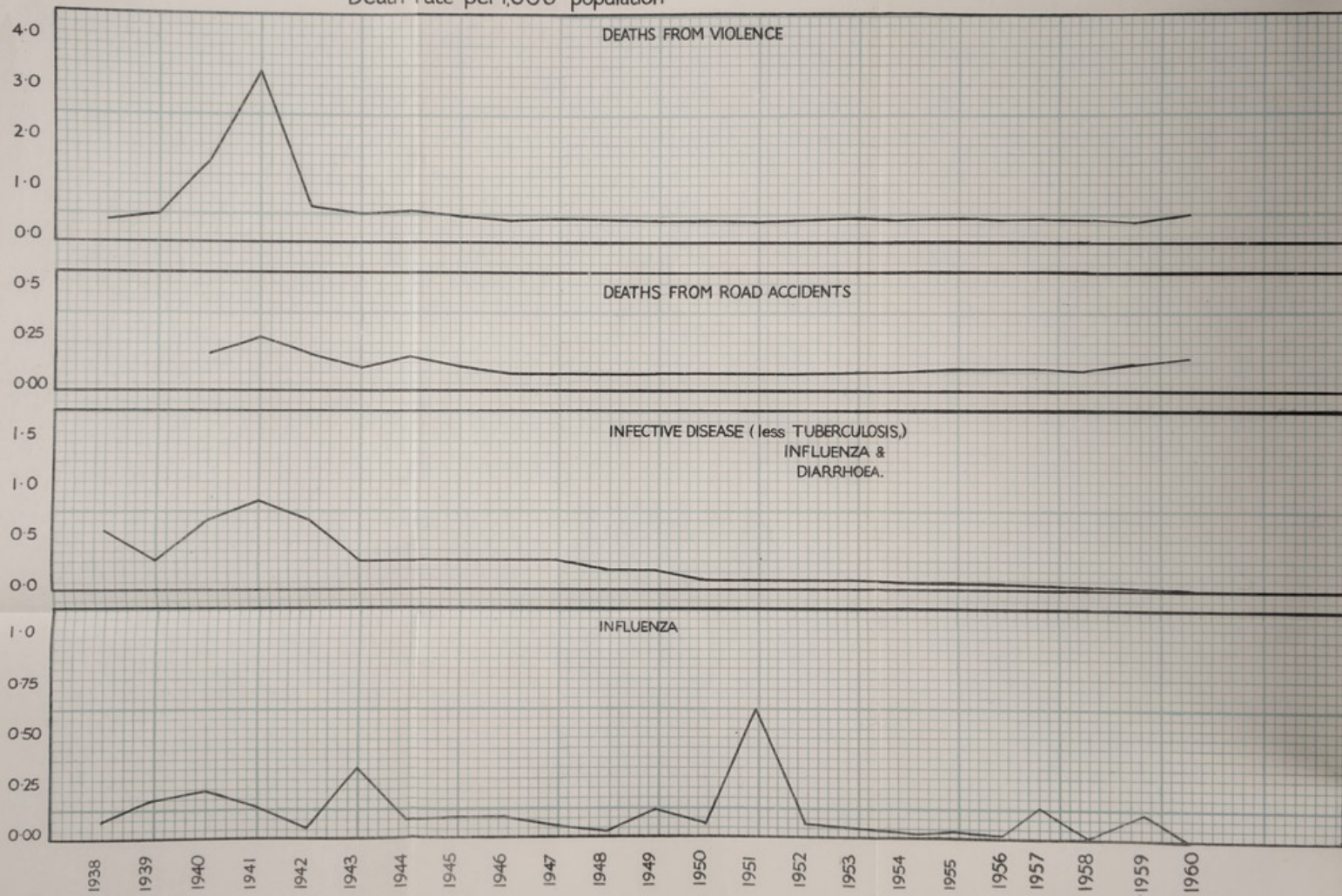


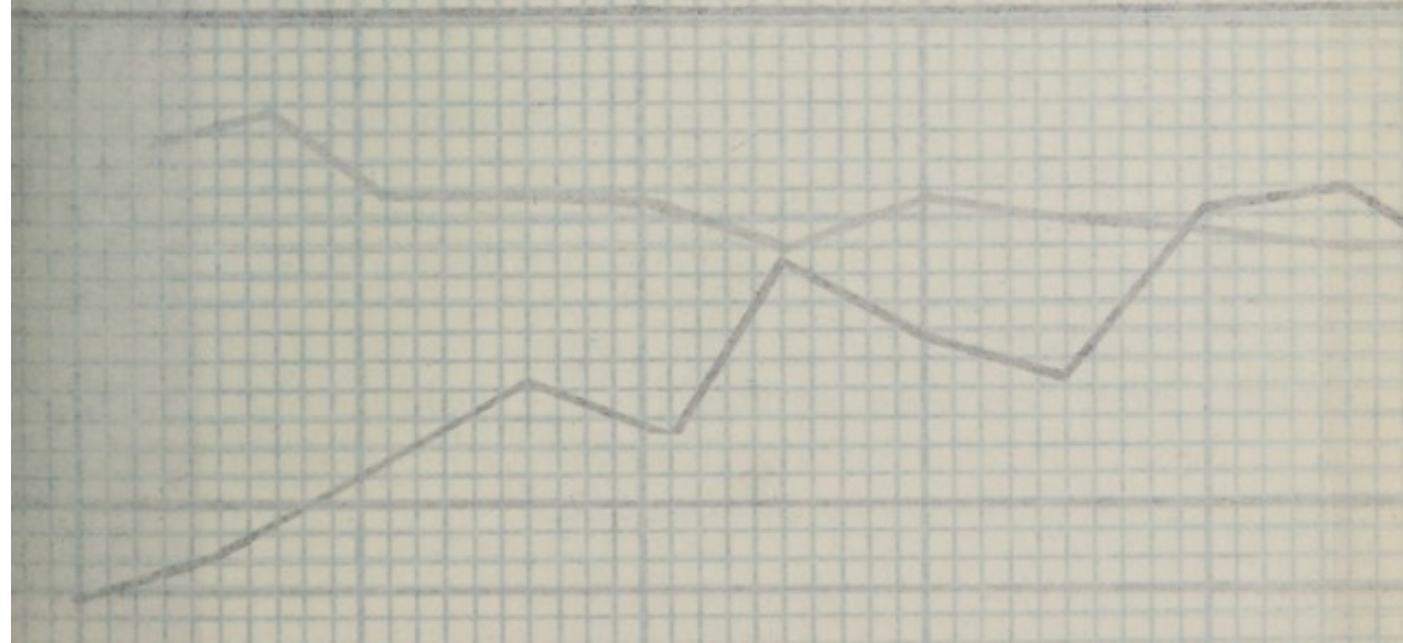
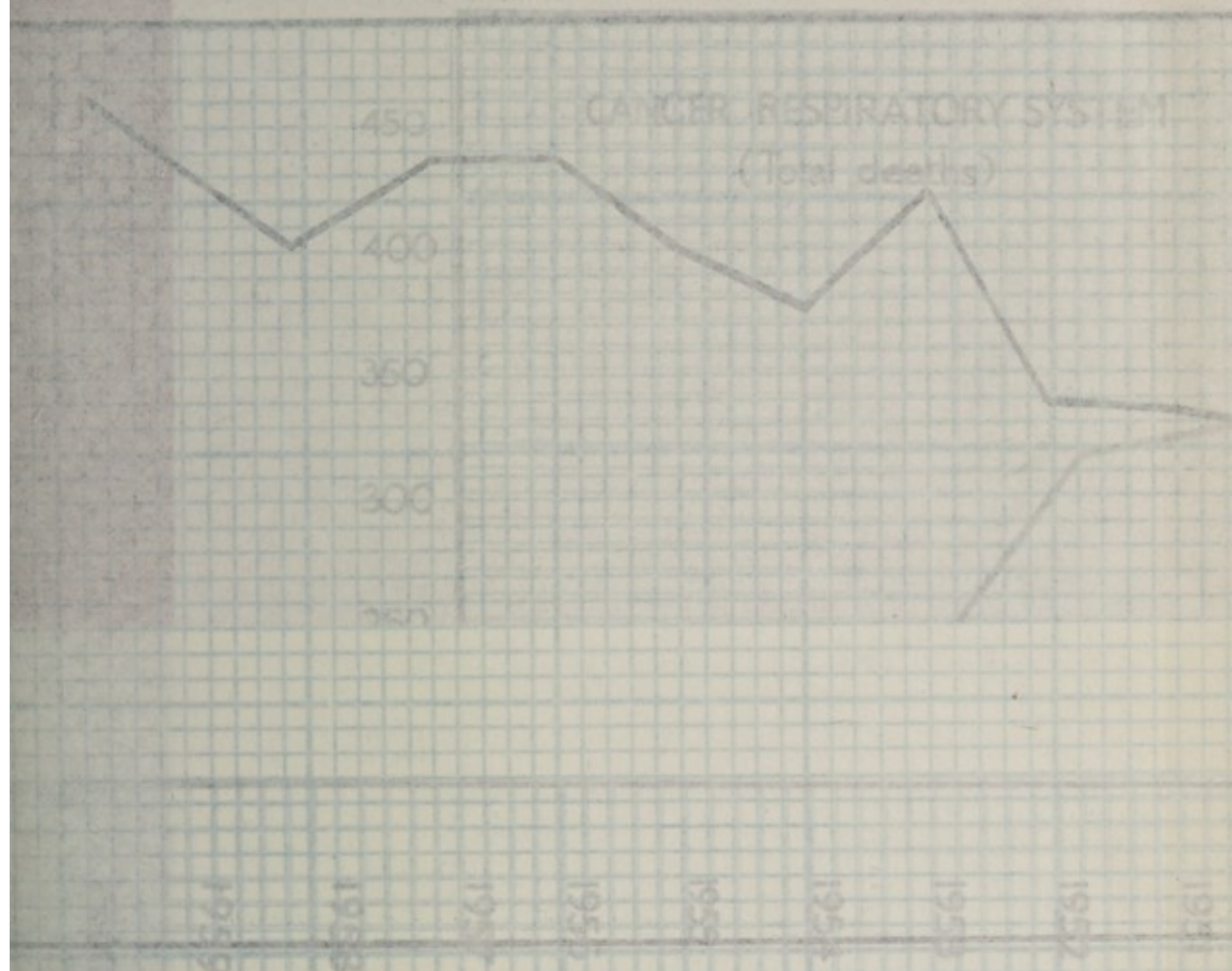
DEATHS FROM ROAD ACCIDENTS



TRENDS OF MORTALITY—LIVERPOOL 1938 — 1960

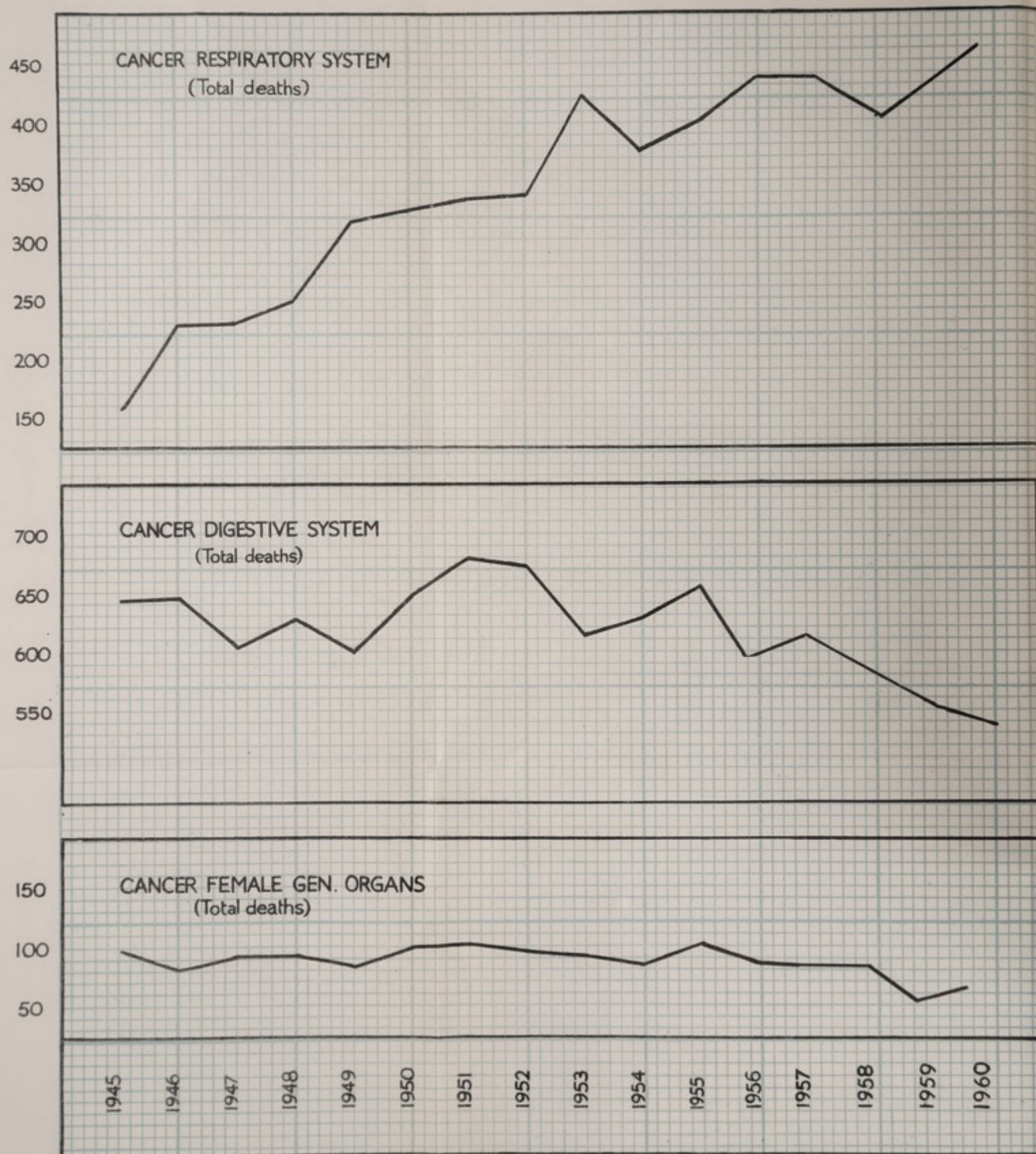
Death rate per 1,000 population





TRENDS OF MORTALITY-LIVERPOOL

1945 - 1960



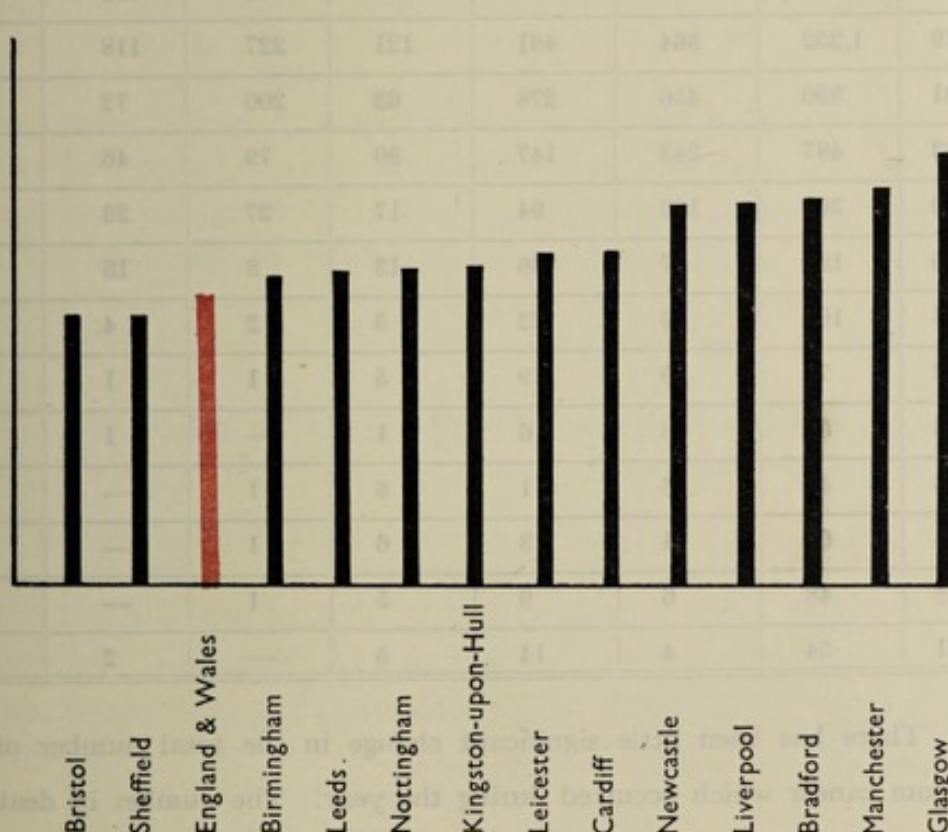
Infant Mortality.

The infant mortality rate rose slightly during the year to 28.2 per 1,000 live births. A total number of 451 infant deaths occurred, of which 28 were illegitimate children. This represents an illegitimate infant mortality rate of 32.2 compared with a legitimate mortality rate of 27.9. The principal causes of infant mortality rate are represented in a graph facing this page, and complete causes are given in the statistical tables in the appendix at the back of this report.

CHART SHOWING INFANT MORTALITY RATE FOR A NUMBER
OF THE LARGER AUTHORITIES FOR THE YEAR 1960

Rate per 1,000
births

40.0
30.0
20.0
10.0
0.0



Perinatal Mortality.

This rate, which is the number of stillbirths and the number of deaths in infants under one week per 1,000 births is being increasingly used in statistics and it represents more fairly the hazards of childbirth. During 1960 the rate was 38.9 compared with 39.5 in 1959.

*Child Mortality.***Child
Mortality
Rate**

The various causes of child mortality, both in total and for specific diseases, are given in the table illustrated below. It will be seen that deaths from 1 year to 5 years of age rose from 48 to 54 in 1960.

YEARLY AVERAGE NUMBER OF DEATHS IN SUCCESSIVE QUINQUENNIA, 1920-1954, AND TOTAL DEATHS IN THE YEARS 1955, 1956, 1957, 1958, 1959, AND 1960.

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	2
1925-29	1,879	1,252	564	461	121	227	118	61	2
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	
1950-54	553	100	26	22	5	2	4	—	
1955	462	71	9	19	5	1	1	—	
1956	413	58	8	6	1	—	1	—	
1957	423	47	6	11	6	1	—	—	
1958	434	60	4	13	6	1	—	—	
1959	428	48	6	9	5	1	—	—	
1960	451	54	4	14	5	—	2	—	

**Deaths from
Cancer**

There has been little significant change in the total number of deaths from cancer which occurred during the year. The number of deaths from cancer of the respiratory tract rose to 457 as compared with 444 in 1959. (Table 4.)

MATERNITY AND CHILD WELFARE

During the year, there was a slight increase in the birth rate. The total **Births** figure for live and stillbirths was 16,338. The total number notified was 19,585. The disparity between these figures is due to the fact that many women living outside the city came into Liverpool hospitals to be confined.

The total number of domiciliary births was 5,036, this being 38 less than last year.

The infant mortality rate was 28.2 as compared with 27.4 in 1959.

**Infant
Mortality**

The stillbirth rate was 23.07, the figure for 1959 being 23.4. The domiciliary **Stillbirths** stillbirth rate was 6.6 per thousand home confinements.

MIDWIFERY

During the year, 297 midwives notified their intention to practise midwifery in the city. Although this is lower than last year when 309 midwives notified, fewer midwives left during the year, so that at the end of the year there were actually more midwives in practise; 282 as against 255 at the end of 1959.

Almost 72 per cent of all births took place in hospitals but there was an increasing number of patients delivered in hospital but discharged home for nursing care. The figure in 1960 was 1,046 as against 722 in 1959.

Medical Aid The midwives called in medical aid for 1,721 different abnormalities. In 1,364 cases a doctor had been booked for the confinement.

Puerperal Pyrexia During 1960 there were 583 notified cases of puerperal pyrexia. The different causes of the pyrexia are shown in Table 10.

Staff The midwifery staff at the end of the year consisted of a non-medical supervisor of midwives, who commenced duty on 29th February, 1960, two assistant supervisors, and 48 full-time midwives, three of whom cared for premature babies and their mothers. In addition, there were ten part-time midwives who helped with nursing duties on busy districts, cared for patients discharged early from hospital and investigated homes for suitability for home confinements.

Two midwives retired during the year, two left to return to work in hospital and one went to another authority to be nearer home.

At one time, the part-time midwives numbered fifteen, but with additional full-time staff (seven were recruited) the elderly part-time midwives who had stayed on to help after their retirement, were able to retire once again to their firesides before the winter weather commenced. The city is very grateful to them for all the help they have given us. There are now only two midwives over 60 years of age.

An innovation during the year was the provision of furnished accommodation for young, newly trained single midwives. The Health Committee granted permission for this in October and a flat was furnished for two midwives who had been with us as pupils and recently qualified. Another house is being furnished for another two ex-pupils.

This provision of furnished accommodation was granted as an aid to recruitment as the establishment was seventeen midwives short. Another effort to improve conditions for the midwives and at the same time give a better service to the patient, was the establishment of a rota system of off-duty and night calls. Two pilot schemes were tried. The first one commenced in April, in the Fazakerley and Norris Green area and the second in May in the Dingle and Toxteth area.

In these schemes the midwives worked a five-week rota on day or night shift, in turn on night duty 6.0 p.m. to 6.0 a.m. for one week, on nursing and ante-natal duties from 6.0 a.m. to 6.0 p.m. for one week, on day call for cases, on relief for one week and a second week on nursing duties. The patients were given two telephone numbers, the midwifery office in Hatton Garden during office hours and the Ambulance Control office during the rest of the time. The scheme was made possible by the willing co-operation of the Chief Ambulance Officer and his staff, the ambulance office being given the names and telephone numbers of the midwives on duty.

Before the scheme started as many general practitioners as possible were visited by the non-medical supervisor of midwives and a letter was sent to all general practitioners explaining the scheme and asking for their co-operation, which was most willingly given.

For the first pilot scheme, four districts, where four midwives with cars covered a fairly wide area, were chosen. A fifth midwife, also with a car, was included so that there would always be one on relief. The midwives attended the ante-natal clinics of four doctors in their surgeries and also held a midwives' clinic to which each went in turn. In this way there was opportunity for all the patients to meet all five midwives. The scheme worked smoothly, but was found to require more staff, and a part-time midwife was included to help with nursing visits. Thus, it required five-and-a-half midwives to do the work done by four under the old scheme. The midwives found that they did not have the same continuity of care as formerly.

The second scheme was tried in a smaller, more congested area, where there were five midwives, none of whom was a car driver, and two pupil midwives. As before, the general practitioners were visited or received letters and in this case also they willingly assisted us. The ambulance office

ably dealt with the two schemes. Once again, the scheme worked well but additional staff were required, and one part-time midwife, sometimes two, helped with the nursings.

From the experience gained with these pilot schemes it was quite evident that, if for every four or five midwives additional staff was required, the schemes could not be extended to cover the city owing to shortage of staff. Thus, it was that on 11th July, a modified rota system came into operation and has continued ever since.

By calculation of the number of births likely to take place in 24 hours it appeared that these could amply be dealt with at night by half the staff. So in the modified scheme, during the daytime each midwife worked on her own district and her patients called her directly, but at night the midwives were on call alternate weeks, i.e., one half of the number on call, the other half off duty from 6.0 p.m. to 6.0 a.m. Once more the ambulance control agreed to take the calls from the patients and relay them to the midwife on duty. The supervisor of midwives supplied the ambulance office with a list each week so that it was kept up to date, taking into account holidays, sickness, etc. The supervisor's telephone number, or that of one of the assistant supervisors is on each list in case the ambulance officer finds himself in any difficulty.

From the patient's angle, they called their own midwife, or her relief, during the day, they also had the number of the midwifery office should there be any difficulty. At night they had one number only to remember, that of the ambulance section.

As far as possible the midwife of the area was sent to the patient who called and if she was out the next nearest was asked to go. In the morning the list of those midwives who had been called in the night was delivered to the supervisor, who then knew which districts required help and where to send the part-time midwives.

The midwives were encouraged to attend the doctors' clinics and to hold clinics of their own so that they saw the patients and the patients knew more than one midwife.

Under this scheme the off duty ran in a four-weekly cycle, and midwives had seven days off and two half-days in every 28, with fourteen nights on call and fourteen nights free from 6.0 p.m. In this way they could plan their leisure ahead and it was something they all appreciated.

In an effort to have everything at hand to benefit the mother and baby, **Equipment** this year it has been possible to start supplying the midwives with a portable oxygen apparatus. The apparatus, an Oxygen Infant Resuscitator, is taken to the delivery so that it is immediately on hand should the infant show any signs of asphyxia. Oxygen has been used on fourteen occasions and in each case with success. In one case it was used while conveying the infant to hospital.

In addition to pethidine and, in most cases, instead of pethidine, pethilorfan is now issued. This again is for the benefit of the baby. Pethidine or pethilorfan is administered to the mother for relief of pain in labour, but pethilorfan has a less depressive effect on the baby's respiration than pethidine by itself.

For many, many years Liverpool city midwives have worn the familiar **Uniform** blue coat and hat and grey dress. This year, however, saw their transition to the national grey uniform coat and hat and blue dress. While striving at all times to raise the status of the midwife, it was felt that with the donning of their distinctive uniform they should be known as midwifery sisters. This title is already used by the Liverpool Maternity Hospital District Midwives who also wear the national uniform. It makes the distinction of the "nurse" in training, the pupil midwife, and the "sister" the midwife who is trained. It is important that the patients know that the midwife who attends them has the same qualifications as the hospital midwifery sister.

The total domiciliary deliveries were 4,967, of which, 3,805 were delivered by municipal midwives and 1,162 by Liverpool Maternity Hospital district midwives. There were 49 fewer deliveries than last year. The midwives also carried out 4,167 visits to patients discharged from hospital before the tenth day of the puerperium and 5,402 visits to patients referred from hospital for the assessment of home conditions.

The Maternity Hospital district midwives also carried out 139 visits to hospital discharges and 51 home condition visits.

Due to the continuing shortage of midwives, a number of them delivered far more than the recommended case load of 66 per annum. Three delivered more than 150 cases, three between 120 and 150 cases and ten, more than 100. As often as possible these midwives were helped by part-time midwives who did the morning nursings.

Part of the shortage of working midwives was caused by the time lost by sickness and maternity leave; 545 days were lost by the sickness of full-time midwives and 256 by part-time midwives. Five midwives were on maternity leave at different times during the year, involving a loss of 528 working days.

Refresher courses were attended by ten midwives and one assistant supervisor.

Thirty-two midwives occupy Corporation houses or flats. At present the majority of midwives live in the areas in which they work, but it is becoming increasingly difficult to attract midwives to live in the poorer areas or to remain there even if they at first accept to do so. Midwives' houses have been broken into on three occasions and windows are frequently broken.

It has sometimes been possible to find more pleasant surroundings in which the midwife may live and yet work in the crowded parts of the city, as for example one flat in Sefton Park which is occupied by two midwives who work in the Dingle and Princes Park area.

There are now eighteen midwives who are car drivers and owners which greatly assists them in their work. The non-medical supervisor of midwives is also classified as an essential user and, being mobile, is much better placed to supervise the city as a whole and keep in contact with the midwives and the patients.

Liverpool midwives are constantly aware of the danger of cold injury to babies. They have been supplied with wall thermometers so that one may be left in each home in the room where the mother and baby are nursed. The importance of keeping an even temperature is explained to the parents and they are advised to keep the temperature at 65° Fahrenheit. The majority of patients co-operate well. Each day the midwife records the room temperature on a chart as well as the mother's temperature and the baby's temperature, the latter being taken with a special low reading thermometer so that any sign of chilling is noticed and steps can be taken to keep the baby warmer. As far as possible, thermometers for mother and baby are left in the house in a solution of disinfectant so that there is less risk of infection than in carrying them from house to house.

A change has been made in the antiseptic used by midwives and an antiseptic cream is also used by midwives to disinfect their hands before carrying out the baby's toilet. In this way a special effort has been made to avoid infection in babies.

Haemoglobin estimation.

This test is carried out to make sure that the expectant mother is not suffering from anaemia, or if she is, that she is treated before the baby is due. In order to facilitate these tests, blood is taken at the ante-natal clinics and tested in the midwifery office by the supervisors. They carried out 1,226 tests during the year, making a point of informing the appropriate clinics at once if the Haemoglobin level was low. As, however, this is not strictly a midwife's work and the number of tests carried out are increasing, arrangements are under way for the testing to be carried out in the laboratories of three hospitals.

Ante-natal care of the mother is carried out at 24 general practitioners' ante-natal clinics, at all local authority clinics and also in the course of the midwives' visits to the patients' homes. Midwives attended 1,041 sessions at general practitioners' surgeries and 891 at medical officers' clinics. They held 1,077 sessions at midwives' clinics and carried out 19,887 visits to patients' homes.

Doctors were booked under the Maternity Medical Service in 91 per cent of cases but were actually present at delivery at 7.4 per cent of all booked cases.

Medical aid was called on 1,721 occasions by the midwives when anything abnormal occurred. A table is given showing the reasons when there was an abnormality for mother or baby.

Gas and air continued to be available to all mothers who wished for it and was given to 3,319 mothers delivered by municipal midwives and 1,004 patients delivered by the Maternity Hospital district midwives.

The total number of patients who received pethidine or pethilorfan was 3,462.

For details of cases of puerperal pyrexia see Table 10.

The total number of notifications of puerperal pyrexia was 583, of which 554 occurred in hospitals, three in nursing homes and 26 in domiciliary practise.

Part II Training of Pupil Midwives.

The duties of the non-medical supervisor of midwives include that of tutor to the Part II pupil midwives, during their three months district training. Eleven midwives, who are approved as district teachers, trained a total of 36 pupils, 34 have qualified as midwives and three have joined the staff.

Haemoglobin Tests.

Haemoglobin Tests There were 1,226 tests carried out on blood taken at local authority clinics during 1960.

Transfusion Unit.

Transfusion Unit The transfusion unit was called on 52 occasions to 51 mothers and one baby. Five patients were transferred to hospital. Of the 52 patients, 23 had post partum haemorrhage, 26 had retained placenta, eleven with bleeding and fifteen without bleeding; one had a breech presentation and one a delayed second stage of labour. The baby had asphyxia neonatorum.

Emergencies The midwives were called to emergencies by the ambulance service on 44 occasions during the year.

Maternal Deaths.

There were five maternal deaths during the year, and of these, one was from haemorrhage. In this case the pregnancy was very early, not more than five weeks, and the patient did not realise that she was pregnant. The slight bleeding which occurred was thought to be a normal menstrual period, but was associated with diarrhoea and abdominal pain. The patient was seen by her doctor at 4 p.m. when her condition was satisfactory. At 6 p.m. she suddenly collapsed and the doctor, who was resummoned immediately, arranged for her admission to hospital. The patient was in extremis on admission. A plasma drip was set up immediately, but she died within 30 minutes of admission, before a blood transfusion could be given. The post mortem examination showed gross intra peritoneal haemorrhage from ruptured right tubal pregnancy. This was a first pregnancy.

There was one death from obstetric shock. The patient was an elderly primigravida aged 37 years who booked for a hospital confinement at five months. The pregnancy was complicated by multiple fibroids which made diagnosis of foetal presentation difficult. She was examined frequently both at hospital and by her doctor and her general condition was excellent. However, she was admitted to hospital in premature labour at the 36th week. One premature infant was delivered as a breech, when it was found that there was a second foetus with a compound presentation. A general anaesthetic was given and the second foetus delivered as a breech by the Senior Obstetric Registrar. The placenta was removed manually. The patient then collapsed and all attempts at resuscitation, including cardiac massage, failed and the patient died seventeen minutes later. A post mortem failed to find any cause of death.

There were three deaths from toxæmia of pregnancy. The first patient was a multigravida, aged 25 years, with her sixth pregnancy, who was seen by her doctor at the 14th week. A hospital confinement was advised by the doctor but refused. She was a bad attender at the doctor's antenatal clinic and attended irregularly four times in all. At the 30th week of pregnancy, she booked a midwife for a home delivery. At her last visit to the doctor at the 32nd week, she had severe toxæmia, blood pressure of 170/100, oedema of face, arms and legs and urine loaded with albumen. The previous week her blood pressure and urine had been normal. She was admitted to hospital immediately. For the first three days in hospital her condition improved in response to treatment, but on the fourth day the blood pressure started to rise again and she complained of headache, epigastric pain and vomiting. Labour was induced sixteen hours later at the 33rd week. The labour was normal but a few minutes after delivery she had twitching and collapsed. She appeared to have an acute circulatory failure. Permission for a post mortem examination was refused.

The second patient was a multigravida with her fourth pregnancy who had not booked a midwife until the 32nd week of pregnancy. She looked after her own three children and, in addition, her mother's five children, one a baby under a year old, while her mother went to work and had very little time to devote to herself. Two weeks before delivery the patient developed a urinary infection. The midwife visited and sent for patient's general practitioner, who visited and prescribed treatment.

Although the midwife told the patient to book her doctor apparently the booking form was not signed and no doctor was booked. The patient went into labour at term and had a normal delivery. She remained well until the fourth day of the puerperium, when she complained of severe pain above the right kidney and pain on passing urine. Her doctor visited and treated her. The following day the patient's condition was much worse, her temperature was 103.4, her colour very poor and her abdomen tender. She was transferred to hospital extremely ill, pyrexial, Hb only 36 per cent. Albumen and pus were present in the urine, and a sternal marrow puncture suggested megaloblastic anaemia. The patient became jaundiced, liver function tests suggested a non-obstructive jaundice. No improvement showed with treatment and on the 12th day a laparotomy was performed, but showed only a very large liver and bile-stained fluid. The patient died the following day. A post mortem examination revealed purulent bronchitis, haemorrhagic broncho pneumonia and enlarged kidneys with recent pyelonephritis. In view of low Hb of 36 per cent and sternal marrow findings, one of the causes of death in this case was an acute form of megaloblastic anaemia. Hb per cent estimation had not been done during the pregnancy.

The third case of toxæmia was a patient with her second pregnancy, who had booked a doctor and a midwife for a home confinement. She had no history of illness and a previous confinement was normal. The doctor was booked early in pregnancy and patient was examined frequently, about fifteen times in all, her blood pressure and urine being normal on every occasion until one week before delivery when her blood pressure rose to 140 and a trace of albumen appeared in the urine. The midwife was booked at the 34th week of pregnancy and examined the patient every week. At the 39th week patient's blood pressure was 145/100 and a trace of albumen in the urine. The midwife ordered patient to bed and sent for her doctor, who ordered a medical induction, castor oil, hot bath and enema and heavy sedation. Labour started the same day at 10.30 p.m. and the patient was delivered normally by the midwife. She was very drowsy throughout labour and after delivery. Four hours after delivery, the patient was talking to her husband, six hours later she was found to be dead. A convulsion was not noted but, with her history the most obvious cause of death was a post partum eclamptic fit. The case was discussed with the coroner and it was decided to issue a death certificate without a post mortem. The chances of this patient's survival would have been enhanced if she had been hospitalised.

Premature Infants.

There were 228 premature babies delivered at home and 178 of these were able to remain at home for nursing. 416 premature babies were born in hospital and discharged to the care of the premature baby team. Among these were 32 sets of twins and two sets of triplets.

**Premature
Babies Born
at Home**
**Premature
Babies Born
in Hospital**

The premature baby midwives made 1,985 visits to home deliveries and 3,514 visits to babies who were delivered in hospital and discharged home to the care of the premature baby midwives, making a total of 5,499 visits. They also made 199 visits to babies' homes to ascertain whether or not the conditions were suitable for their discharge from hospital.

Visits

During the year, eighteen blankets, 87 hot water bottles and covers, eighteen scales, twelve cots and 34 gowns were loaned to patients.

**Equipment
Loaned**

The Work of the Health Visitor.

This has been a year during which a concerted effort has been made by all the health visitors to catch up on work interrupted by the Mass Radiography Campaign which began towards the end of 1958 and ceased at the end of March 1959, and to which were seconded, full-time, half of the health visiting staff.

This secondment of staff meant, of course, that many children under the age of five years did not receive the amount of supervision they should have had during the course of a year. This was a gap that had to be bridged and, by 24,000 more visits to this group of children, 1960 went a long way towards this.

At the end of the year there were 77 health visitors, doing health visiting duties, and three full-time administrative staff. In addition to this there were three full-time S.R.N's and one part-time S.E.A.N., without whose services many of the ancillary duties of the health visitors' section could not have been carried out.

During the year in Liverpool 16,338 babies were born, and to these, 15,133 primary visits were made. To children under the age of five years the total number of visits was 176,268, and to the ever increasing work of a special nature, 11,208 visits—an increase of nearly 600—were made during

Types of work undertaken

the year. These special visits varied, and requests ranged from the man in the street to the many voluntary and statutory organisations who are interested in the welfare of the community. Being of a special nature, many hours, and sometimes days, were required of the health visitor's time.

In addition to the work with families in their own homes, health visitors are required to carry out duties in the 25 Maternity and Child Welfare centres provided for the community throughout the city. Each month 248 infant welfare and 92 ante-natal sessions are held and to these the health visitors made 8,883 attendances, to carry out general advisory duties and prophylactic measures and, in addition, to help cope with the many medical and social problems brought to the centres by all members of society.

Poliomyelitis immunisation

Special sessions for immunisation against poliomyelitis have been held regularly throughout the year at local authority clinics, schools and places of work and for these the health visitors have continued to prepare sterilised material and assist with 200 to 300 immunisations a session. In addition to this, all contacts of the eighteen notified cases of poliomyelitis were kept under surveillance and altogether over 100 visits were made.

Throughout the year, a senior member of the staff has continued to keep meticulous records of the amount of poliomyelitis vaccine received and used in the process of this work and to supply information to the Ministry of Health regarding same when it has been requested.

Follow up of diphtheria and other infectious diseases

In the autumn of 1960 a Liverpool child died of diphtheria, and with it came the endeavour to find the source and check the recurrence of the disease. 85 visits by two senior health visitors were made to the family and school contacts of the case, to observe their progress and assist with preventive measures. Within hours almost of the knowledge of this child's death, the clinics were inundated by thousands of mothers and children asking for prophylactic treatment. The result was that the health visitors coped with and assisted at the immunisation of over 15,000 children over a period of several weeks; to be repeated in most cases a second and a third time.

8,840 Cases of measles were notified to the Medical Officer of Health, and the health visitors continued to give help and advice where necessary. Assistance has been given to medical officers visiting factories and other places of work for the purpose of vaccinating personnel and other measures to do with the control of disease.

Throughout the year six health visitors have made regular visits to two of the city's maternity hospitals where, as well as practicing health education, they have given advice on many social problems and have been able to supply the obstetricians with valuable information which ultimately has been of benefit to their patients. This liaison with the hospital in this respect has been, without a doubt, a most important step towards the friendly relationship between hospitals and the local health authority, and as a result 3,000 attendances were made by mothers booked for hospital delivery, to mothercraft and health education classes held and conducted by the health visitors in the local authority clinics. Classes of six-eight are arranged and, in addition to simple exercises for the preparation of childbirth, talks are given on such subjects as personal hygiene, clothes for mother and baby, diet during pregnancy, sleep and rest, the mechanism of labour. Practical demonstrations are given on the handling and bathing of babies and instruction regarding the normal development of children. These classes have proved, without a doubt, that there has been a need, and that mothers have benefited from them, as can be seen from extracts of the many letters that have been received in appreciation—

"I would like to thank you all for the help you gave me at the relaxation class. I feel sure it helped tremendously and took away a lot of the fear and anxiety attached to childbirth. I only wish there had been classes in being when my other little girl was born."

"Your classes certainly helped me, and of course, knowing what was happening took away the fear."

"I feel I must send you a few lines to thank you all for all the good advice you gave me on what to do when I was ready to have my baby. The exercises helped me immensely, and now I am waiting to put all you have taught me into practice."

Two health visitors have continued their visits to the Royal Southern Hospital and Alder Hey Children's Hospital for the purpose of the "follow-up" of epileptics. Their work has been of particular value in the case of difficult patients, in that the health visitors have been able to persuade them, particularly the adults, to attend the hospital clinic at regular intervals. Some of them have found more interest by being introduced to social activities and the introduction of occupational therapy, and some by the assistance of the Disablement Resettlement Officer have been found jobs most fitted to their handicap.

**Health
Education**

**Health Visitor
dealing with
Epileptics**

In the case of child epileptics, work is concerned with the "follow-up" in their homes, at school and sometimes in residential homes. The hospital consultant is given a report of the child's general progress, his home environment, his relationships in the family and at school. The health visitor, where necessary, explains to the parents the importance of carrying out the treatment prescribed, and difficulties and misunderstandings have been resolved in this way. Visits have been made to absentees from the hospital clinic, to ascertain the reason for non-attendance and to make further appointments.

Many children who would not return otherwise will often do so when the parents know a personal interest is being shown to their child. Contact has been made with general practitioners with regard to their patients, the school health service and to schoolteachers where a particular facet of a child's background has been needed to complete the consultant's picture of the case.

**Health Visitor
dealing with
Diabetics**

The "follow-up" of diabetics has also continued throughout the year and altogether 552 men, women and children were visited, with a total number of 1,247 visits. Most of the cases dealt with have been those from the David Lewis Northern Hospital, but, since this is now a well established service, patients have been referred from many other sources, as well as being discovered by the health visitor herself. Much of the work has been with the elderly diabetic and full use has been made of all the available facilities for them.

**Chiropody
Service and
Diabetics**

The introduction of the chiropody service this year has proved invaluable to the foot care necessary in diabetes. Close liaison with family doctors is necessary in many cases where there are difficulties. In the case of one woman who was discharged from hospital, and who also had a malignant condition, it was found that her husband was having an extremely difficult time. After a period at home it was arranged by the doctor and the health visitor that the patient should be re-admitted to hospital for a short time to give the husband a rest. Circumstances worsened, however, when she discharged herself. A suggestion from the health visitor that she might be admitted to a private nursing home for a temporary period, or perhaps permanently, was accepted and arranged. The patient is now settled there, an arrangement which has proved beneficial all round.

Another interesting case is that of diabetes discovered in a young baby. She was treated in hospital and at the age of five months was discharged and referred to the health visitor for continued supervision. Although the mother had been carefully instructed in hospital regarding the baby's treatment and the giving of insulin she was completely at a loss when she got her home. Much explanation was necessary as to why specific things should be done, and much persuasion needed to encourage the mother to give the insulin; but gradually these difficulties were surmounted and now both mother and child have settled most satisfactorily.

A child aged six years was brought to the notice of the health visitor due to the fact that the parents were completely incapable of coping with the situation. There was a scene each time she had to have her insulin which in the end she refused to take. The health visitor called several mornings before the child went to school, insulin was given and advice to her parents regarding her diet. After consultation with the hospital registrar, and with the help of the district nurse, this little girl has now been taught to give her own insulin. She has settled down and is perfectly happy.

Liaison with the Disablement Resettlement Officer continues and some diabetics have been found suitable employment or training. One young man, however, who was sent to a government training centre in Leicester did not make the grade and he returned home in a very depressed state. The health visitor was successful in getting him a job in a Corporation department and has been rewarded by the complete success of this change, his diabetes has improved, he attends the hospital clinic regularly, and his family life is much more stable.

The health visitor has been largely responsible for the forming of the Liverpool Branch of the British Diabetic Association, in the early part of 1960. It was she who contacted the members who now serve on the committee and give guidance to those educational and social activities which are of benefit to people suffering from diabetes.

1960 has shown a marked increase in the work of the health visitor with the aged, and altogether nearly 3,000 visits were paid to elderly people needing help and advice. Many of the visits are of a friendly nature, where nothing more is done than giving an assurance to the old person that someone is interested and will give help when it is needed. The majority, however, are in need of that help when the first visit is made. They are

**Work with
the Aged**

old people who are living on their own and unable to care for themselves and the wheels of the welfare service must be put into motion. Supplementary allowances, meals on wheels, home help, district nurse and any other help which they may require.

In addition to this, the liaison work with the geriatric units at Newsham General Hospital has continued. The work of the health visitor visiting the hospital has increased and more visits of a special nature have been required of the health visitor generally. The geriatrician requires to know the home circumstances of all patients awaiting admission together with a clinical picture of their condition and the urgency of their needs. To meet these requirements over 40 special reports have been taken back to hospital. The following is a report of one of these investigations:—

"Mrs. X, aged 76 years, who is mentally confused, lives with her husband aged 75 years, who is employed as a night watchman, her son and her daughter-in-law, who goes out to work two days a week. The relationship between husband and wife has not been good for many years. Her married daughter draws her weekly pension and comes to see her mother twice a week but does not do anything for her. The general management is left to the daughter-in-law, aged 45 years, who strongly resents the responsibility, is very unhappy and says she cannot continue to live under such unhappy conditions and intends to leave her husband to look after his mother. She wept bitterly and said life was unbearable. She has no children of her own.

"*The Patient.*—Mrs. X's condition is poor, her breathing is distressed and her colour poor. She is generally confused and was noisy during my visit. She was unwashed and her bed looked as though it had not been made for several days. The bedroom was in great confusion. The windows were closed and the curtains drawn, ventilation was bad and there was a foul smell in the room. Mrs. X will not allow anything to be moved in the room and thinks her daughter-in-law wants to steal her few possessions. Arrangements have previously been made for the services of a home help but it was considered there was sufficient help within the family. Arrangements have also been made for the services of the district nurse, but the patient refused to have her. I consider the patient is in need of nursing care, and in view of the fact that she refuses this help at home it would be in her own interest if she could be admitted to the geriatric unit."

Supervision is continued of patients discharged from hospital, and as in the case of those waiting to go into hospital, implementation of all the services necessary for their comfort. In these cases the home nursing equipment loan service has proved invaluable and under the direction of one of the senior health visitors a service sufficient to meet an ever increasing demand has been maintained.

In April of 1960, by arrangement, three of the maternity hospitals began to notify the health department of the discharge of expectant mothers who had been admitted to hospital because of some complication of their pregnancy. This exchange of information has filled a great need in the supervision of expectant mothers in that many of them who had not understood the advice given them, or had thought fit to ignore such advice, were visited by the health visitors, who explained the importance of carrying out the instructions given to them by the obstetricians. These visits have been particularly helpful in the case of mothers who have found it difficult to rest as they had been advised, because of domestic difficulties at home and which can be appreciated from the following example:—

**Liaison with
Maternity
Hospitals**

"Mrs. Z is resting as much as she can but finds this is not so easy, because at the moment her husband is at home not well and she has three young children to care for too. She is taking her pills as prescribed but still her legs and feet are swelling. I have advised her to seek the advice of her own doctor and will arrange for her toddler to be admitted to the day nursery so that she can have the rest she requires during the day. Mrs. Z will attend the ante-natal clinic next week as advised."

Another is an example of a young mother expecting her first child who was terrified at the thought of going into labour, because of "old wives" tales that had been told to her. The health visitor spent some time with her and explained to her what was happening in the ante-natal period, what would happen when she went into labour and how she could help those assisting with her confinement. She was invited to go along to one of the local authority mothercraft classes, to meet other young mothers and to hear the talks given by the health visitor. Nearly 2,000 ante-natal visits were made during the year.

Hospital after-care has continued to play an important part in the work of the health visitor and altogether a total of 2,804 visits were made to children discharged from hospital. In this way the general progress of the

children has been kept under supervision, and reports sent back to the paediatricians. In some cases where progress has not been satisfactory the health visitors have consulted with the paediatrician, with the result that some children have been re-admitted to hospital.

Convalescence Under Section 22 of the National Health Service Act, 326 mothers and babies were sent away for a period of convalescence. This continues to be very helpful to tired mothers and frustrated children. If it was not available, it is certain that many homes and families would suffer as a result of a mother who feels she can no longer cope. As it is, these mothers have returned to their homes feeling refreshed and with renewed interest in their responsibilities.

At the other end of the scale, 125 aged and handicapped persons were referred for convalescence under Section 28 of the National Health Service Act. These were all visited by health visitors and assessed as to their suitability for admission to a convalescent home, arrangements were made for their travel and their clothing supplemented where necessary. Some, unfortunately, were thought to be not fit to travel or to be unsuitable subjects for convalescent homes, and domiciliary help was provided instead, but 65 men and women went away, many of them lonely, and returned looking much improved and much happier from having nursing care, the company of others, regular meals and comfortable accommodation.

**Problem
Families**

Families with problems still constitute a major part of the health visitors' work and much effort has been necessary to avoid a complete breakdown within the family group. This has only been achieved by intensified friendly visiting, giving practical assistance when it has been needed, close liaison, help and advice from other statutory and voluntary bodies, which has been invaluable and, without which, in many instances, success would not have been achieved. Some problems, however, were found to be impossible to solve, unless the mother could be given some more constructive help and advice in the managing of her home and family. To try to achieve this, thirteen families were sent to Brentwood Rehabilitation Centre in Cheshire, where they stayed for periods varying from one to two months to be taught house management, cooking, cleaning, laundering and the art of budgeting for their family's need. Some of these have returned having derived great benefit from the instruction given and have shown that, with help, they are able to support themselves and their families.

They will, we hope, eventually take complete charge of their own responsibilities. Others, as was expected, derived some benefit from the change from their own surroundings and the smooth running of someone else's home but returned home to the same conditions and will continue to need the friendly visiting and advice that the health visitors can give.

As in previous years the health visitors have taken an active part in the field of health education. As well as meeting the requests of many organisations to speak on the health services, home safety, parentcraft and the work of the health visitor they have assisted with the instruction of various types of students including medical students, D.P.H. students, social and domestic science students, and health visitor and student nurses.

In June of 1960 the section was fortunate to recruit a part-time S.R.N. for the purpose of the after-care and welfare work to do with persons suffering from venereal disease. This nurse has worked in very close contact with the health visitors and in some instances has been most helpful with difficult cases. Her work is mainly concerned with the interviewing of patients, tracing of contacts, and persuading defaulters to attend the clinic for treatment. From June to December she visited 205 cases which involved 504 visits. Of the cases visited, 83 reported for treatment and 30 promised to do so. The remainder were not contacted by reason of their removal or the nurse's inability to trace them.

LOCAL AUTHORITY CLINICS

1960 has shown an increase in the number of mothers and children attending the ante-natal and child welfare clinics throughout the city.

3,014 mothers attended the ante-natal clinics as compared with 1,846 in 1959 and 98,902 attendances were made by children under five years of age, as compared with 95,242 in 1959. Toddlers attendances have increased from 9,888 to 14,195.

Routine blood tests were carried out of all clinic mothers and, as in previous years, of all those referred by general practitioners, for the purpose of blood testing only. In all these latter cases—which numbered 789—the doctor was informed of the test results. Altogether 1,719 tests were made.

In addition to the above activities in the centres, the premises are being used increasingly for the purpose of private consultations. It is now becoming common knowledge that the health visitors are available each morning between 8.30 a.m. and 10 a.m. and each afternoon between 4 and 4.45 p.m. and parents are bringing problems which they feel can better be discussed in the clinic rather than in their own homes.

The health visitors themselves needing guidance in problems they meet during the course of their visiting, particularly behaviour problems in children, have the opportunity of fortnightly meetings with a child psychiatrist at one of the local health authority clinics.

Children under the age of five years who were found to be suffering from physical defects or who were thought to be mentally dull, were referred, by arrangement with the Education Committee, to the school health department for advice and possible treatment. The following cases were referred for advice for—

Defective vision ...	...	...	...	...	277
Orthopaedic defects ...	...	...	...	...	249
Mental assessment ...	...	...	...	...	63
Physical assessment ...	...	...	...	...	15
Hearing tests ...	...	...	...	...	35
Speech defects ...	...	...	...	...	26
Special schools ...	...	...	...	...	3

**Work of the
Clinic Medical
Officer**

The following is a typical description of the work of the doctor at one of the busiest child welfare clinics in a thickly populated part of the city.

During the year 1960, there were 6,057 attendances made by children. **Child Welfare Clinic**
 The age groups were approximately 62 per cent under one year, 13 per cent aged one-two years and 25 per cent from two-five years.

The general pattern of the clinic was that of mothers bringing babies for weighing and advice on feeding and weaning. Now that artificial feeding of the young baby is the accepted fashion among the less highly educated mothers, the technique of bottle feeding becomes increasingly important. Poor methods of feeding lead to vomiting and loss of weight and such babies become more susceptible to respiratory and gastro-intestinal infections.

The main feeding problems were due to inadequate teats, since boat-shaped bottles have been discarded. Two or three babies each week were fed in the clinic and holes in the teats increased so that the babies could get their feed easily.

Though the clinic is officially a "well baby" clinic, mothers do come with medical and social problems and some of these mothers are referred by the general practitioners. In addition, much of the work of the clinic involves the very early diagnosis of abnormalities before the mother has noticed that anything is wrong.

During the year, 28 patients were referred to hospital for surgical opinions. There were six cases of pyloric stenosis (all under four weeks of age), three herniae (inguinal) one of which was irreducible and operated upon as an emergency; one child of three months with an intussusception, one with a doubtful intussusception, seven who required circumcision, one dermoid cyst, two naevi, four with lax oesophagus, one with a Torticollis and one with a subdural haematoma.

Sixteen patients were referred to physicians, there were two with coeliac disease, one with fibrocystic disease of the pancreas, one Pink disease, four babies with congenital heart disease, two mental defectives, one speech defect and three with severe anaemia. Fourteen children were referred to the casualty department of a nearby hospital; nine with infections, three with abscesses, one marasmic child and one umbilical polyp. Blood for haemoglobin estimations was taken in eleven cases, the results varied from 30 per cent to 60 per cent.

Six children were referred for dental treatment. This does not reflect the absence of dental caries but is a result of the small percentage of toddlers seen. Twenty-four children were sent to a convalescent home on account of debility. Eighteen children were sent for orthopaedic advice, six with asymmetrical buttock creases which the orthopaedic surgeon referred for X-ray examination to exclude congenital dislocation of the hip. There was one child with a congenitally dislocated hip, four with knock knees, two with flat feet, one with club feet and two with delay in walking. There were four cases of scabies and one seborrhoeic eczema.

Twenty-two babies were sent to the ophthalmologist; twelve with strabismus (simple) one posterior polar cataract, one with a tumour of the orbit, one with a bilateral external rectus palsy and six children with markedly defective vision; one familial blindness, one albino with nystagmus, two with severe myopia and nystagmus, one mongol with cataract and one child blind following a fractured skull.

Sixteen children were referred to the general practitioners; two with whooping cough, two with otitis media and 12 with anaemia and debility. There were two children with defective hearing and four with suppurative otitis media.

Immunisation against diphtheria, whooping cough, tetanus, poliomyelitis and vaccination against smallpox also formed an important part of the work of the clinic doctor during the year.

Ante Natal Clinic

Blood tests were carried out on 789 mothers who were referred to the ante-natal clinics by general practitioners. Altogether 1,719 tests were made.

Dental Care of Maternity and Child Welfare Cases.

The return for dental inspection and treatment of maternity and child welfare cases for 1960 shows little change from those of the previous years.

The difference between those cases requiring treatment and those actually treated is less than in recent years, showing a welcome decrease in unkept appointments. Compared with 1959, the number of filling and extractions cases remained virtually static but there was a big increase in the number of scalings. The employment of an oral hygienist has been a help in impressing on the patients the value of keeping the mouth clean and healthy.

The policy of giving dental health lectures to women's organisations has continued during the year. Talks on dentistry were also given to the health visitors and later to the municipal midwives. Both these groups showed great interest in the talks and their co-operation in carrying the subject of dental health into the homes was valued and appreciated by the dental officers.

With an increasing number of patients obtaining private dental treatment, it is not anticipated that the future will result in any dramatic increase in maternity and child welfare cases attending the clinic. However, the local authority service can play a big part in stimulating interest in dental health; this is of particular importance for the pre-school child, as this class needs special care if we hope to improve the dental condition of the nation.

Three cleansing centres, for the purpose of dealing with verminous persons, continued to function throughout the year. These centres, situated at Lestock Street, Eldon Place and Everton Road, cater mostly for school children who have been examined in school by the school nurse and have been found to be in need of treatment, but there are also facilities for bathing and cleansing adults and pre-school children. 7,822 school boys and girls presented themselves, or were brought by their parents, for treatment, and 134 were treated for scabies. 193 pre-school children and 241 adults were also treated. Of the adults, 24 aged persons were referred by the welfare visitors, and in each of these cases a health visitor was in attendance in case any emergency arose. The majority of cases referred to these centres naturally come from the health visitors and school nurses, but a fair number are referred by hospitals, factories, welfare officers in catering establishments and multiple stores and the women police.

Cleansing
Centres

Group Discussions on Child Psychiatry.

The following is the report of Dr. M. K. Frazer, Child Psychiatrist—

During the year, a group of health visitors have met regularly a Child Psychiatrist, with the co-operation of the Regional Hospital Board, and at most meetings, the Local Authority's Psychiatric Social Worker has been present, together with the principal medical officer (mental health).

These meetings have taken the form of discussions about actual cases on the district, which health visitors were concerned about. The underlying purpose of these informal gatherings is to help the health visitor, as

the "family nurse", capable of understanding and helping in all the problems of the family. By discussing the family who worries the health visitor, whether it is because one of the children is unhappy, or because the whole family are always just one step ahead of the bailiffs, the group is able to become aware of personal feelings and frustrations, and their effect on inter-personal relationships at work and in the home.

The aim is not for the psychiatrist to produce a diagnosis, and decree treatment of the case, but for the health visitor most concerned with the family, to discover for herself, with the help and support of the group, what it is that worries her about the family, where she can help, and how she might best go about it. It is thought that members of the group, who change fairly frequently, find encouragement in knowing that others feel as nonplussed as they do when something occurs that is not in the text books: in knowing that the relationships they make by visiting and working in the most unpromising homes are of value in times of stress: and in discovering that their observations of normal children, do make them astute in detecting the abnormal.

In one family, where both parents had received treatment for severe mental illness, the health visitor noticed that the three-year-old boy was not receiving what she thought was enough stimulation. The parents would dutifully produce a few toys, but could not help him to play, nor have any reasonable relationship with him. The boy was hardly talking at all, although there was no physical impediment, and he appeared intelligent; as, however, both parents spent all their time together just sitting looking at one another, or pre-occupied with their own thoughts, this was hardly surprising. The mother was occasionally impulsively angry and violent with the boy's few normal childish actions, and she then became extremely anxious and guilty about her feelings and actions. She was only just able to care for the smaller child, a baby. They had refused other offers of help, but the health visitor managed to persuade the mother to take the child for play therapy, and had to accompany her frequently at first. After a little improvement in the boy, the mother was agreeable to seek more treatment for herself, and this has been extremely successful. As part of it, she has been introduced to a Mothers' Club, and on her first attendance, won first prize in a raffle. She copied the ice-cream dish demonstrated at the meeting, for her husband's tea that evening—the first time she had shown any

interest or initiative for over two years. Although this family still needs much help, the children have improved so much as to be nearly normal, and both father and mother are much better.

The health visitor can enlist the help of many agencies, if she thinks it necessary, but she must remain the co-ordinator of their efforts.

Medical Officers of the Maternity and Child Welfare Clinics sometimes attend, and the active help and support of the Principal Medical Officers (Maternity and Child Welfare and Mental Health) is most gratefully acknowledged.

Day Nurseries.

There are ten nurseries and child minders registered with the local authority under the Child Minders Regulation Act, 1948. The nurseries are visited regularly by one of the assistant medical officers, for the purpose of giving any necessary advice and help regarding the welfare of the children.

There are twelve day nurseries with places for 670 children. There was a considerable improvement in the staff situation during the latter part of the year, nursery assistants being replaced by experienced nursery nurses. This has been of considerable help to the matrons, particularly in the nurseries approved for training. The nursery nurses, however, tend to be of a younger age group than the nursery assistants and thus the loss through marriage is high.

In the Wavertree and Garston nurseries, improvements were made in the gardens so as to enable the children to have more space to play in the open air.

The Sarah McArd nursery continued to be a source of great interest to post-graduate students of the medical and nursing professions from Liverpool and other parts of England. Three visitors came from Russia and three from Czechoslovakia. They were all greatly impressed by the high standard of health of the children. The following case histories are typical of children who were admitted to the Authority's day nurseries.

1. Boy "A" was admitted for the first time when 22 months old, his parents had separated and his mother had to find employment so that she could support herself and her four children. After he had been in the

nursery for about a year, his parents were divorced. The alimony was, however, paid intermittently and the family were still dependent on the mother's earnings. Unless there is an unexpected change in the mother's financial state, he will continue to attend the nursery until he is five years of age.

2. Boy "B" was admitted at the age of eighteen months. His mother, who suffers from a progressive muscular disease, cannot care for an active child, and there are no relatives who can look after him. The mother's condition is slowly deteriorating. The father cares for the child in the evenings and at weekends.

3. Girl "C" was admitted to the nursery at the age of two-and-a-half years. Both her parents are alive and living together. An application for admission, supported by the general practitioner, was accepted as her father suffered from a chronic mental disability which leads to frequent absences from work and admission to hospital. This situation made it necessary for the mother to obtain regular work to meet the financial requirements of the family.

HOME NURSING

The Liverpool Queen Victoria District Nursing Service was taken over by the local authority on 1st January, 1960. The work of this service includes all types of cases under the headings of medical, surgical, maternal complications, gynaecological, infectious diseases, chronic illness and children's diseases. Nursing visits were made between the hours of 8.30 a.m. and 1.30 p.m. and 4.30 p.m. and 7.30 p.m. Morning and evening visits were always paid to ill patients requiring visits twice daily.

The nurses were based on ten centres situated at strategic points in the city and all staff were non-resident. **Nursing Centres**

The work of this centre has increased considerably during the year and the premises were too small for the volume of work which was carried out. It is hoped to move the centre to more commodious premises at 202, Grove Street during 1961. **3 Maynard Street**

A small centre was opened at 16, Deepdale Road, which is excellently sited and served the Gateacre, Lee Park and Childwall districts. It thus controlled quite a large area and many general practitioners called at the centre to discuss their patients and problems with the nurses. **Childwall Valley**

This new centre is situated approximately half way between the two district nursing centres north and south of the city: 1, Church Road, Walton, and 3, Maynard Street, Liverpool, 8. The area between them was formerly covered by the two centres with a dividing line somewhere around Netherfield Brow. It was realised that valuable nursing time was being wasted in travelling and that provision of a centre midway would allow nurses more time to spend with their patients. The centre at Netherfield Brow was, therefore, opened on 10th September, and twelve district nurses were based there. It consists of an administrative office, a combined briefing and district room, staff room and kitchen, and is easily accessible to the public. **73 Netherfield Brow**

Plans are well ahead for the transfer of the district centre at the nurse's private residence, 60, Manica Crescent, to the child welfare clinic in Formosa Drive. **Fazakerley Centre**

During the year a total of 330,430 nursing visits were made to 11,320 patients. In addition, late night visits between the hours of 8 and 10 p.m. were made to seriously ill patients requiring sedation. **Visits**

Training

A Queen's Nurse is a state registered nurse who has undergone a special course of training to enable her to apply the knowledge, gained in hospital, to nursing in the home under the directions of the patient's own doctor. The training also includes social legislation which enables her to carry out comprehensive nursing care.

The course of training is four months for state registered nurses or three months for nurses who are health visitors, midwives or district nurses with at least eighteen months' experience on the district. A block system of training is in use whereby the lecture course is concentrated into three weeks. During this period all lectures are given, the students doing purely theoretical work. The remainder of the training period is spent in tutorials, study classes, visits of observation and practical work. A comfortable hostel providing resident accommodation for seven students was opened at 1, Church Road, Walton, on 1st January, 1960, and the lecture centre is incorporated within the hostel.

During 1960, 23 nurses were trained as Queen's Nursing Sisters. Of these—

9 were trained for county authorities.

11 were trained for the Liverpool staff.

3 were trained for county boroughs.

There was one written credit in the May examination and one written and one double credit in the September examination.

Equipment

Miniature sterilisers were introduced to the service on 18th May, 1960; prior to this the syringe and needle were placed between two cups and boiled in a saucepan. The sterilisers have proved a most valuable piece of equipment to the district nurse, and three main points have emerged:—

Sterilisers

1. Saving of time.

2. Economical—

- (a) from patient's point of view—saving gas and electricity;
- (b) for local authority—syringes last much longer through protection of steriliser;
- (c) previous difficulty of obtaining cups from patients has been excluded.

The syringes were boiled on an average twenty times per day. They are small, compact and easy to handle.

Incontinent pads have been a valuable aid to the nursing of incontinent patients, saving a great deal of unpleasant washing for the relatives. They are made of several layers of absorbent paper. Being easy to place under patients, the relatives were able to change frequently without too much inconvenience to patients between the nurses' visits. They were a most valuable aid in the prevention of bed sores and the pads were easily burned.

The three following case histories are interesting examples of patients who were nursed in their own homes during 1960:—

1. Mr. W. Disseminated Sclerosis was diagnosed in 1952 and patient's condition gradually deteriorated during the subsequent two years. The district nurse was not called in until 1954, when the patient was discovered to be in a pathetic state. There were severe bed sores on his back and hips through lack of proper nursing attention. The knee joints were immobilised, being fixed in the flexed position. (He was also incontinent.) After months of daily treatment given by the nurses, the bed sores finally healed and his legs became a little more mobile. His general condition, however, remained weak and the nurses continued their daily visits. Both the patient and his wife were well aware that there was no hope of recovery. In view of this, in 1956, they made a desperate effort to go abroad for the purpose of visiting Lourdes and succeeded in doing so. When Mr. W. returned, he was found to have nine deep gangrenous bed sores, five of which exposed the bone. He remained critically ill for more than a year but, eventually, the bed sores healed. During 1958 his general condition improved sufficiently to allow of some mild physiotherapy. After some months of physiotherapy he was admitted to hospital for an assessment of his condition. On returning home he was found to have acquired a bed sore but this healed after some weeks of treatment. By the end of 1958 his legs were much straighter and his general health had improved sufficiently to enable him to sit in a wheel chair. Unfortunately, his sight was by this time beginning to fail. In 1959 he was visited by the occupational therapist. During 1959 and 1960 he gained two stones in weight.

In 1960 the district nurse made the following report:—

"Patient enjoying occupational therapy and longing to see a little of the outside world apart from short journeys in his wheelchair, so arrangements were made for patient and wife to have a fortnight's holiday at a

Southport Convalescent Home. Both returned invigorated, refreshed and happy. When I last saw them at 11.30 a.m. patient was whistling as he did his basketry, sitting in his chair by the fire, and patient's wife was shortening dresses which the nurses at the convalescent home had sent her as a present yesterday."

2. Baby E. born in November 1958, suffering from a congenital heart abnormality. Patient was in hospital for many months during 1959, being discharged and re-admitted on a number of occasions. During 1960 the child's parents became increasingly anxious to have him at home and, finally, the necessary arrangements were made for a three-day visit to his home.

The district nurse visited the child's home on 28th October, 1960, to advise the parents and make preparations for the arrival of E. on 31st October.

The room and cot were prepared and a stand, oxygen cylinder, polythene tubing and face mask supplied. The nurse instructed the parents on the use of oxygen. E. duly arrived by ambulance accompanied by a hospital nurse and soon settled in. The child was home for three days, the district nurse visiting twice daily to give any help and encouragement and offer advice. These three days were uneventful and E. was returned to hospital by ambulance.

In view of the previous visit which had proved satisfactory, arrangements were again made for the child to come home for one week over Christmas. Preparations were made and E. arrived home by ambulance on 22nd December, 1960. The nurse visited daily to give any help required. The child's condition remained static for the first five days, then, during the last two days the child seemed to be rather more drowsy and was returned to hospital on 29th December, 1960.

3. Mrs. A. was admitted to hospital suffering from a fractured femur but took her own discharge after only five days of hospitalisation. She returned home on a stretcher, a neighbour having accepted responsibility for her. Mrs. A. was 76 years of age and her husband 84. They were tenants of a small terrace house, but occupied only one room. The remaining rooms were neglected, dirty and without adequate lighting or heating. This couple refused all help and their general practitioner was refused

admission to the house. A few weeks after Mrs. A. returned home, her husband had a stroke and died in hospital 24 hours later. Mrs. A. was now living alone but continued to refuse all help except from a neighbour who visited her daily and supplied her with food. Two weeks after Mr. A's death the neighbour called in the district nurse.

The nurse was so appalled at the conditions that arrangements were made for the health department to be notified. The nurse also persuaded the patient to allow her general practitioner to visit her. Fresh bedding and clothing were obtained and nurse visited twice or three times a day to change her bed and dress her pressure sores and give any other necessary attention. Patient was also visited by one of the health department's medical officers who, after contacting the patient's general practitioner, arranged for Mrs. A's removal to hospital. Meanwhile, Mrs. A's daughter called and took her mother to her house just outside Liverpool.

Home Nursing Equipment.

During 1960, the demand for this service continued to increase and it was necessary to purchase a considerable quantity of new equipment so as to avoid any delay in the delivery of the various items necessary to the patients. Certain specialised equipment has been purchased for a few severely crippled patients who were receiving help and advice from the occupational therapists.

**Home
Nursing
Equipment**

Welfare Foods.

The function of this service is to arrange for the distribution to the general public of national dried milk, cod liver oil, vitamin tablets and orange juice. For this purpose, 57 distribution centres were in use throughout the city, classified as follows:—

- 17 full time
- 13 part time
- 2 mobile points
- 25 voluntary centres

The majority of the full-time and part-time centres were in clinic premises or church halls, but we are greatly indebted to two city stores for kindly providing facilities for the distribution of welfare foods on a full-time basis and to the numerous chemists who distribute the welfare foods on a voluntary basis.

The staff of 38 consists of two supervisors, one general assistant and 35 distributors, 24 of whom are full-time and eleven part-time employees.

The distribution figures for the past two years are as follows:—

	1959	1960
National dried milk (tins) ...	393,312	345,370
Cod Liver Oil (bottles) ...	41,247	40,425
Vitamins (packets) ...	36,940	38,837
Orange juice (bottles) ...	344,978	310,486

It will be noted that there has been an increase in the distribution of vitamin tablets but a decrease in the other welfare foods. On the other hand, the sale of proprietary brands of baby food in the clinics during the same period have increased, as shown in the following table:—

	1959	1960
Dried milk (packets) ...	103,945	122,008
Rose Hip Syrup (bottles)...	10,574	15,469

CHIROPODY SERVICE

On 1st July, 1960, under Section 28 of the National Health Service Act, 1946, the Health Committee inaugurated a chiropody service, free of charge, for aged persons, handicapped persons and expectant mothers, resident in the city. The Health Department took over, for this purpose, the Liverpool Foot Hospital premises at 202, Grove Street with their staff of eleven chiropodists and, without any break in the hospital's appointment system, but eliminating patients who were ineligible under the new scheme, started the new service.

Ideally, most patients require treatment at two-monthly intervals, some more often, but this has not always been possible owing to the heavy demand for treatment and the difficulty of obtaining suitably trained staff, with the qualifications laid down by the Ministry in their circular. Eight cases were booked for each operator at a session, but many patients failed to cancel their appointments in sufficient time to permit a replacement appointment being made, and later expected to receive an immediate fresh appointment themselves without making allowances for the fully-booked register and the heavy demand for treatment. These unreasonable patients were, however, far outnumbered by the many co-operative and grateful patients who continually expressed their appreciation of the service and praised the comfort and relief which they received.

During the first three months of the service, some 560 eligible applications for treatment were received, and new cases were referred by doctors, health visitors, hospitals and old age pensioners' clubs at the rate of about 50 a week.

In order to provide a more widely distributed service for the elderly and infirm, 23 chiropody sessions were opened at 13 peripheral clinics, thereby reducing travelling expenses and avoiding unnecessary fatigue for the handicapped. These have been proved of great value, particularly during the winter months. Appreciation is also expressed for the ambulance transport arrangements made for those patients unable to use public transport.

In 1961, it is planned to start additional sessions at some centres and to open a new clinic for chiropody at Sefton Lodge, Scotland Road. The number of district sessions will be adjusted according to demand and taking into consideration the availability of staff.

In January, 1961, three new chiropodists will take up duty, bringing the total staff to fourteen. By the middle of 1961, it is hoped that all districts will be adequately covered by the service and no elderly or infirm patient will need to travel unduly far to obtain chiropody treatment.

The provision of an adequate chiropody service for patients unable to leave their own homes presented a problem. Only one chiropodist was available for domiciliary visiting and, working only two days per week, she was able to treat only about fourteen patients per week. This left a growing waiting list for treatment. During 1960, 306 domiciliary chiropody treatments were given and 24 new patients were on the waiting list. The interval between treatments for these patients will naturally be longer than is advisable, but is, unfortunately, unavoidable at present. It is hoped that additional staff can be recruited in 1961.

Major structural alterations and complete redecoration of the premises, 202, Grove Street, were carried out during the year in order to accommodate a centre for the district nursing service on the first floor of the building and a central chiropody clinic and administration office on the ground floor.

HOME HELP SERVICE

The number of families provided with the services of a home help in 1960 was 3,048. **Home Help Service**

The following types of cases were helped:—

	1960	1959
Maternity	199	261
Tuberculosis	19	31
Chronic Sick and Aged ...	2,037	1,909
Others	793	645

There was a very heavy demand for the service during the year and it was necessary to recruit an additional staff of fifty home helps in order to provide even the minimum amount of help to those who needed it.

An additional visitor and a junior clerk were appointed in 1960 to deal with the increased pressure of work, resulting in an establishment of:—

1 Organiser

1 Assistant Organiser

3 Visitors

3 Clerks.

Home Helps employed at 31st December, numbered 270.

Urgent cases are visited on the day the application is received if this is possible and service provided the following day. Cases are usually referred to the section by the General Practitioner, hospital almoner, a relative or a neighbour. Service is provided usually for periods of one to four weeks but in many cases it is necessary to leave the home help for much longer periods.

There was a considerable decrease in the number of maternity cases assisted, despite the care taken to ensure that arrangements were completed before the expected date. Many of the cases booked for a home help did not apply when needed and it can only be assumed that the charge was the deciding factor. A lamentable feature of these un-supplied cases is that husbands frequently take time off from work rather than pay for help. **Home Confinements**

**Aged and
Chronle Sick**

As in previous years the care of aged persons absorbed most of the staff. The amount of service provided varies according to the individual needs and an asthmatical patient might have daily service during an attack, then reduced service until the next attack, and so on. The home helps are trained to notify the section immediately the health of a patient deteriorates and so prevent a delay in the provision of extra service.

Many of these old people have been assisted for years and would not have been able to live at home if help had not been available for them. A small number are notoriously difficult and the helper has to be changed at frequent intervals in order that they may be assisted. Since the introduction of the mobile meals service it has been possible to provide some applicants with help on alternate days, thus ensuring that a cooked meal was available on six days of the week.

**Dirty
Homes**

Provided that the householder is agreeable an attempt is made to cope with neglected homes and the home help is paid an extra 1s. per hour until she has made an improvement in the condition of the home. Verminous houses are referred to the disinfestation section, who are most co-operative and report when their job is completed. This is before service is supplied.

**Home
Helps**

The number of applicants interviewed during the year was 387 and of these 119 were recruited as home helps. Sixty-nine members of the staff left their employment for various reasons.

The congenial and un-congenial must be served and the latter frequently places too great a strain even on the most sympathetic nature. The work is largely unsupervised and so the staff must be of the highest integrity. A training course is not held but, prior to taking up employment, selected applicants are called in groups of three to ten and briefed by the organiser on their duties and the service generally, in a talk lasting approximately 1½ hours. Their first day is spent with an experienced home help whom they assist and who is able by example to teach them how to approach their patient, complete their time sheet, etc.

The following is a selection of the cases now attended by home helps:—

(1) An old lady aged 76 years, no relatives and devoted to her aged dog, who frequently spends nights sitting on seats in the city. She is well known to the police who keep an eye on her. She suspects that her neighbours will murder her and regularly packs her bag and threatens to leave home altogether.

(2) An old lady aged 76 years, blind and arthritic, living alone and without relatives; she has received daily service since March, 1960.

(3) A young woman aged 36 years suffering from disseminated sclerosis and with two children aged twelve and nine years. She was deserted by her husband whilst in hospital and has been assisted daily since June 1960 until provision of mobile meals in November, 1960, when service was reduced to two mornings per week. The boy of twelve years is abusive to his mother and difficult to handle. The co-operation of the welfare service section is appreciated in this case.

(4) An old lady aged 92 years with arthritic daughter aged 64 years, both now helpless. Help has been provided for six years in this case.

(5) An old lady aged 98 years who lives alone, and has no relatives. She did all her own work until October, 1960 when service was requested. She is very deaf and has had several falls but will not have more than four hours service for housework.

(6) A man and wife, both over 40, handicapped and chair-bound. The husband is in employment and the wife can manage cooking but not housework. Service has been provided since October, 1959.

General

HEALTH EDUCATION

Maternity and Child Welfare

A parents' club was formed at the Sarah McArd Day Nursery and also at the Norris Green Clinic. All meetings were held in the evenings, and both parents and the staff found the meetings interesting and stimulating.

The following is a list of the speakers at the two clubs.

Norris Green Parents' Club.

The Norris Green Parents' Club started on Wednesday, 9th March, 1960, and on the opening night Dr. Stark addressed the parents and gave a film show.

Further meetings were held as follows:—

Date	Speaker	Attendance
6th April, 1960	Dr. Fraser, Consultant Psychiatrist at Alder Hey Hospital	18 parents.
4th May, 1960	Miss Watson, Superintendent Health visitor.	20 parents.
1st June, 1960	Mrs. Kay, Psychiatric Social Worker ...	18 parents.
6th July, 1960	Mr. Potter, Police Liaison Officer.	12 parents.
	August—No meeting.	
7th September, 1960	Mr. Whitehead, Tutor Public Health Inspector	20 parents.
October, 1960	Dr. Hobday, Principal Medical Officer, Port Health... ..	22 parents.
22nd November, 1960	Dr. Fraser—discussion group.... ..	20 parents.
December, 1960	Children's Christmas Party	

Sarah McArd Day Nursery Parents Club	
Date	Speaker
15th June, 1960	Alderman Mrs. E. M. Braddock, M.P.
31st August, 1960	Mr. Roper, of the Architectural and Housing Department.
5th September, 1960	Mrs. Kay, Psychiatric Social Worker.
26th October, 1960	Miss Foster, a beauty specialist.
30th November, 1960	Mr. Tighe, Senior Public Health Inspector.

General

In addition, many members of the staff, including Medical Officers, the Chief Welfare Officer, the Chief Public Health Inspector, and the Principal Assistant (Admin.) gave many lectures on request to various church and social organisations. There is now an excellent collection of coloured film slides available for all senior members of the staff who need to lecture on the work of the department, illustrating the many activities upon which we are employed.

The work of the department covers many aspects which are of special interest to certain sections of the public, and requests were received for speakers on subjects of particular importance to the organisations concerned. Although a number of the requests were for talks on the general work of the section, food hygiene, offences and smoke abatement were the most popular subjects. The usual facilities have been provided for the training of inspectors, health visitors and nursing staffs.

With regard to cancer education the Medical Officer has often expressed the view that the public is not particularly interested in propaganda concerning the connection of smoking with lung cancer in spite of very considerable publicity. There is little real interest in the adverse effect of smoking on health. This was stated to the Ministry of Health as long ago as 1958. Nevertheless, it is anticipated that early in 1961 there will be a further meeting of the Working Committee on the Education of the public on Merseyside regarding cancer.

The Department once again exhibited at the Liverpool Show which was held on 14th, 15th and 16th July. The four aspects of the work which were exhibited in detail were:—

- (a) Occupational Therapy.
- (b) Handicapped Persons.
- (c) Maternity and Child Welfare.
- (d) Disinfestation.

The exhibits were housed in one large marquee and displayed in detail the main points of interest. A special poliomyelitis inoculation clinic was also installed in the same marquee. Alongside was a smaller tent in which a continuous showing of health education films was given.

INFECTIOUS DISEASE

Number of confirmed cases of infectious diseases reported during 1960:—

Diphtheria	...	...	...	...	6
Dysentery (Sonne)	...	...	...	...	515
Erysipelas	...	...	...	...	48
Food poisoning	...	...	...	...	147
Malaria (contracted abroad)	...	...	...	...	4
Measles & German Measles	...	...	...	...	8,840
Meningococcal meningitis	...	...	...	...	17
Ophthalmia neonatorum	...	...	...	...	96
Paratyphoid fever	...	...	...	...	19
Pneumonia—Acute primary and influenzal	...	...	...	...	335
Polomyelitis—Paralytic	...	...	...	...	3
Non-paralytic	...	...	...	...	1
Puerperal pyrexia	...	...	...	...	583
Scarlet Fever	...	...	...	...	476
Tuberculosis—Pulmonary	...	...	...	...	439
Other forms	...	...	...	...	44
Whooping cough	...	...	...	...	1,440

No cases of anthrax, acute infective encephalitis, plague, smallpox, typhoid or typhus fevers occurred during the year.

Throughout the year, a close and cordial co-operation has been afforded the department by Dr. A. B. Christie and Dr. H. E. Parry of Fazakerley Isolation Hospital, and by Professor D. T. Robinson, Dr. E. C. Armstrong and Dr. G. B. Bruce-White of the Public Health Laboratory Service, Liverpool.

Diphtheria.

Diphtheria Three confirmed cases (one fatal) and three carriers of diphtheria occurred during the year. They can be divided into two outbreaks and were of epidemiological interest. Details are as follows:—

Outbreak 1.

A family of four, comprising one adult and three children, aged fifteen, nine and seven years respectively, arrived in England on 7th July, 1960. They had travelled from Belgium by the Ostend-Dover night ferry; stayed one night in London and arrived in Liverpool the following day to spend a short holiday with relatives.

Case 1.

Case 1 Three days later (10th July) the nine year old girl developed a pyrexia and tonsillitis. She was examined by a doctor later in the day when it was found that she was gravely ill with a membranous pharyngitis. Antibiotic

treatment was started and the diagnosis of diphtheria confirmed by the finding of virulent corynebacterium diphtheriae virulent mitis on the throat swab. She was admitted to Fazakerley Isolation Hospital on 11th July, where she made an uneventful recovery.

In addition to her mother, brother and sister, who had journeyed with her from Belgium, known close contacts consisted of eleven persons of whom six were under the age of fifteen years. All gave no history of previous immunisation against diphtheria. These contacts were examined and throat swabs taken. A positive isolation of c. diphtheriae mitis was found in her seven year old brother's throat swab. The others were all negative. The brother gave a history of tonsillitis some two to three weeks before in Belgium. This may have been diphtheria, and if so, he may have infected his sister before their arrival in England. He was considered a carrier and was admitted to isolation hospital.

No further cases occurred and repeated throat and nasal swabs from the contacts were negative over a four week period.

Outbreak 2.

Case 2.

On 18th September, in a different part of the city, a schoolgirl aged **Case 2** eight years complained of a sore throat on returning home from school. Within 48 hours she developed a membranous pharyngitis and a "bull neck". A clinical diagnosis of diphtheria was made and admittance to Fazakerley Hospital arranged. The diagnosis was confirmed by the isolation of c. diphtheriae virulent mitis from both throat and nasal swabs. Despite treatment, she died ten days later from toxic myocarditis.

This case was not a contact of Case 1 or the carrier discovered in the first outbreak, and there was no connection between the two outbreaks.

Her 31 classmates were examined on 20th September. All were negative with the exception of an eight year old girl who had virulent c. diphtheriae mitis on her throat swab. She was a classmate and close companion of Case 2. She was symptomless; considered a carrier, and admitted to isolation hospital on 25th September. This carrier with her mother, father, brother aged six and sister aged nine years, had recently returned from a five week holiday in Cyprus (two weeks previously on 11th September). These con-

tacts were examined and throat and nasal swabs taken. A further carrier state was discovered in the sister aged nine years who was found to have *c. diphtheriae mitis* in her throat.

Both carriers were successfully treated in hospital.

Case 3.

Case 3

Virulent *c. diphtheriae mitis* were isolated on the 27th September from a throat swab taken from the six year old sister of the second case. On first examination on the 18th September she complained of feeling unwell and examination revealed a mild pharyngitis. She was admitted to isolation hospital and with treatment, made a successful recovery. This child had received one immunising injection of 1 c.c. TAF together with 500 units of Antitoxin. It was felt that this protection had possibly prevented a serious toxic form of diphtheria.

On a previous occasion (20th September) her throat swab had been negative for diphtheria. On both occasions the home contacts: mother, father, brother aged nine and sister aged thirteen years, were negative. In this second outbreak only the carriers gave a previous history of immunisation against diphtheria.

Protective Measures.

With Case 1 there was only eleven known contacts to be protected. With Cases 2 and 3 there were 40 close contacts and wide publicity followed the fatal termination of Case 2. Within seven days of this girl's death, 14,646 children were given primary immunisation and 9,559 received booster doses; a total of 24,205 children protected against diphtheria. Of this total, 14,220 were protected by the Health Department and 9,985 by general practitioners.

A full description of these protective measures are discussed in the Immunisation and Vaccination section, page 75.

Epidemiology of the Outbreaks.

In both outbreaks an unsuspected carrier was thought to be the source of the clinical disease.

Case 1 could have contracted her infection from her seven year old brother.

It would seem that the second case derived her infection from the class-mate carrier and Case 3 later developed the disease from her sister (the second case).

An interesting finding was the presence of two carriers in the same family (eight and nine years of age) both of whom gave a history of primary immunisation seven and eight years previously. The eight year old carrier was discovered at the first throat swabbing of her school class. Her nine year old sister was negative on this occasion, but positive for *c. diphtheriae* one week later on the second throat swabbing. Both these children had not received any form of booster protection against diphtheria following their primary immunisation as babies. It is interesting to speculate as to whether this nine year old carrier was indeed a carrier or a possible undiagnosed fourth clinical case. A common feature between the two outbreaks was the history of recent travel abroad. Here may lie the source of the carrier infection although the virulent mitis strain of *c. diphtheriae* has occurred within recent years in England, being last isolated in Liverpool in 1954. Both the single fatal case in Liverpool in 1955, and the carrier traced in 1959 were caused by the virulent intermedium type of *c. diphtheriae* and both incidents associated with cases in the Huyton area of Lancashire (cf. Annual Reports 1955 and 1959).

It must be considered fortunate that the second outbreak did not spread. This may well be due to the vigorous measures instituted. There is no doubt that the occurrence of the earlier case in Liverpool and the knowledge that diphtheria was prevalent in other parts of the country had alerted the local health and medical practitioner services.

Paratyphoid Fever.

During 1960, nineteen clinical cases of *salm. paratyphi B.* were notified and confirmed in Liverpool. This is an increase of eight over the 1959 notified cases. These cases were discovered following routine sampling of stools of patients suffering from gastro-enteritis. During these investigations, six symptomless excretors were traced. The details are as follows:—

**Paratyphoid
Fever**

Patient	Age	Sex	Clinical Case	Symptomless Excretor	Site	Phage Type
1	6 weeks	F	+	—	Family Outbreak	Dundee
2	10 years	M	+	—		
3	7 years	M	+	—		
4	3 years	F	+	—		
5	6 years	F	+	—		
6	5 years	F	—	+		
7	31 years	F	—	+		
8	10 years	M	+	—	Isolated Case	Dundee
9	2 years	M	+	—	Isolated Case	Dundee
10	38 years	F	+	—	Isolated Case	I Var. 6
11	12 years	M	+	—	Isolated Case	I Var. 6
12	24 years	M	+	—	Isolated Case	I Var. 6
13	2 years	M	+	—	Isolated Case	I Var. 6
14	1 week	M	+	—	Isolated Case	I Var. 6
15	16 years	F	+	—	Isolated Case	I Var. 6
16	5 months	F	+	—	Isolated Case	I Var. 6
17	68 years	F	+	—	Isolated Case	I Var. 6
18	1 year	M	+	—	Family Outbreak	Dundee
19	57 years	M	—	+		
20	36 years	F	—	+		
21	9 years	F	—	+		
22	4 years	F	—	+		
23	3 months	F	+	—	Isolated Case	I Var. 6
24	11 years	F	+	—	Isolated Case	Beccles I Var. I
25	48 years	F	+	—	Isolated Case	I Var. 6

Family Outbreak of Salmonella Paratyphi B, phage type Dundee.

On the 21st February, a six weeks old baby developed severe symptoms of gastro-enteritis. The family doctor notified the child to the Health Department as a suspected case of dysentery and she was admitted to Rathbone Hospital on 23rd February. Stool specimens were obtained from the baby and seven members of the family.

The bacteriological examination of the baby's stools was negative on the 24th February, but the following day three members of the family (brothers aged ten and seven and sister aged two years) developed gastro-enteritis and their stool specimens were positive for *salm. paratyphi B*, phage type Dundee. A third sister, aged four years, developed diarrhoea the following day (26th February) and her stools also showed *salm. paratyphi B*, phage type Dundee. A fourth sister, aged 6 years, developed similar symptoms the next day and was also found to be excreting this organism. On the 2nd March, the baby first admitted to hospital was found to be excreting *salm. paratyphi B*, and subsequently the mother, aged 31 years, was found to be a symptomless excretor of this organism. Her husband, aged 35 years, was examined on repeated occasions and neither developed the disease nor excreted salmonella organisms. These five cases and two symptomless excretors were successfully treated in hospital.

Enquiry into possible sources of infection revealed a very interesting possibility. The family was very fond of marshmallows, but unfortunately there was none of these confections in the house at the relevant time of investigation for examination. In the preparation of marshmallows desiccated coconut is sprinkled on to the upper surface of the mallow before being packed for sale. This form of cake is not subjected to any form of baking during its preparation.

Positive sampling of desiccated coconut, imported through the Port of Liverpool, has shown the presence of salmonella organisms in various shipments and *salm. paratyphi B*, phage type Dundee was one of the strains of salmonella organisms isolated. Details of salmonella infection of desiccated coconut is referred to on page 64. Although there was no definite proof that marshmallows had been the source of this outbreak, epidemiologically, there would appear to be a possible relationship.

A further two cases of *salm. paratyphi B*, phage type Dundee, occurred in September, involving two children aged ten and two years respectively. These children were not related and were not known contacts of the above outbreak. Although the children were questioned as to the possibility of eating marshmallows, no connection could be established; neither was it possible to elicit a history of eating desiccated coconut in any other form of confection. It was not possible to establish the source of these children's infection, all home contacts were negative on examination.

Salmonella paratyphi B., phage 1, var. 6.

Ten clinical cases and four symptomless excretors of salmonella paratyphi B., phage type 1, var. 6, were traced in Liverpool between 22nd June and the 12th October.

The first case discovered on the 22nd June was an isolated one, unrelated to those that followed. A further eight clinical cases occurred between the 15th and 28th August, and, finally one clinical case and four symptomless excretors in one family were investigated between the 5th and 12th October. These cases are now considered in more detail.

The first case of salm. paratyphi B, phage type 1, var. 6, occurred on the 22nd June. A 38 year old woman developed gastro-enteritis some four days following the eating of canned salmon. She was notified as a case of food poisoning by her general practitioner. Stool examination showed the presence of salm. paratyphi B., phage type 1, var. 6. She was admitted to isolation hospital and made a successful recovery. Stool examination of home contacts was negative. None of the canned salmon suspected as a possible source of her enteritis had been kept for examination and she was the only person who had eaten any of this fish. It is interesting to note that she only ate a portion as the centre of the salmon was found to be "badly discoloured"; this fact had discouraged the rest of the family from eating it. No further evidence as to the source of her infection was forthcoming and it was doubtful whether the salmon had caused the illness.

Between the 15th and 28th August, eight further clinical cases of salm. paratyphi B., phage type 1, var. 6, were found in Liverpool. All were isolated cases and despite extensive enquiries no common source of infection could be detected. All but one (a woman aged 68 years) made satisfactory recoveries. This elderly woman however, developed a carrier state and was added to the Liverpool register of chronic carriers. During this period over 600 stool specimens were examined and some 167 contacts interrogated. The following interesting history was found during the investigation of these cases:—

An unmarried mother was in the ante-natal ward of a large Liverpool hospital for a number of weeks before the birth of her child, who was born on the 20th August. The baby's condition was satisfactory until five days

old when a loose motion was passed. On the 26th August, the diarrhoea re-appeared and the motions contained blood. Two swabs were taken from the child and one from the mother and all were negative.

The child was transferred to a children's hospital on the 27th August as this was thought to be a surgical condition, but further bacteriological examination of the child's motions now revealed a growth of paratyphoid organisms and as a result the child was admitted to Fazakerley Isolation Hospital. It was thought that the mother may have been an intermittent excretor of paratyphoid organisms. With this in mind she was examined serologically for evidence of recent carrier infection with negative results. Similar tests were conducted on both hospital staff and patients in contact with both mother and baby with similar results. This case is of great interest in that it would appear that the disease developed in the baby well within the normally accepted incubation period for paratyphoid fever.

A small family outbreak consisting of six cases and four symptomless excretors was investigated between the 5th and 12th October, as follows:— A one year old boy was admitted to a children's hospital on 30th September as a suspected case of acute bronchiolitis. He subsequently developed enteritis on the 3rd October and a stool specimen showed the presence of salm. paratyphi B., phage type 1, var. 6. He was transferred to isolation hospital where he made a complete recovery. Examination of home contacts showed the same strain of salm. paratyphi B. in the stools of four of the family of six. All four were symptomless excretors. They gave an interesting history:—

On the 24th September, six members of the family (the exception being the one year old boy—the clinical case), ate cold pork for the evening meal. The following day the mother, father, son aged nine and daughter aged four years, complained of "indigestion" which lasted intermittently for about one week, but they had no history of enteritis or fever. The rest of the pork was destroyed the following day as they felt that it was unpalatable. From this history it would appear possible that they had contracted a paratyphoid infection—not sufficient to cause clinical illness but sufficient to produce symptomless excretors. Cross-infection to the one year old baby could be explained by the very apparent lack of personal hygiene practised in this household. A thorough investigation was now made into the source

of the pork and although discovered rather late as a possible source of disease, the butcher's shop was visited—food handlers were examined and samples of various meats including pork submitted for bacteriological investigation—all with negative results.

At the same time unsuccessful enquiries were made to try and establish a connection between this family outbreak and the other isolated cases of this strain of salmonella paratyphi B. in Liverpool.

Despite strenuous efforts it was not possible to trace the source of infection in these outbreaks. Even with the outbreak due to salm. paratyphi B. type Dundee, the connection between actual cases and coconut covered marshmallow biscuits, although of strong epidemiological inference was not definitely proved.

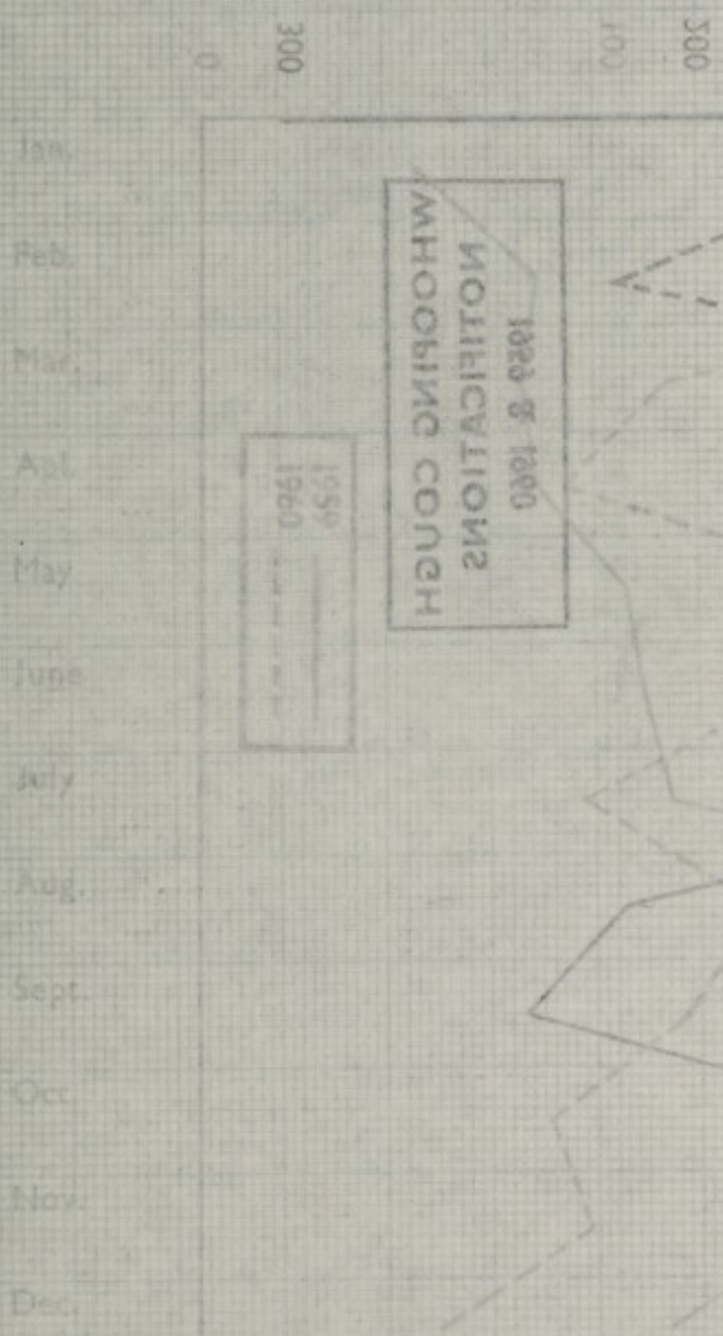
Finally, an isolated case of salm. paratyphi B., type 1, occurred in a woman aged 48 years. She had a very interesting clinical history even though the source of infection was not traced.

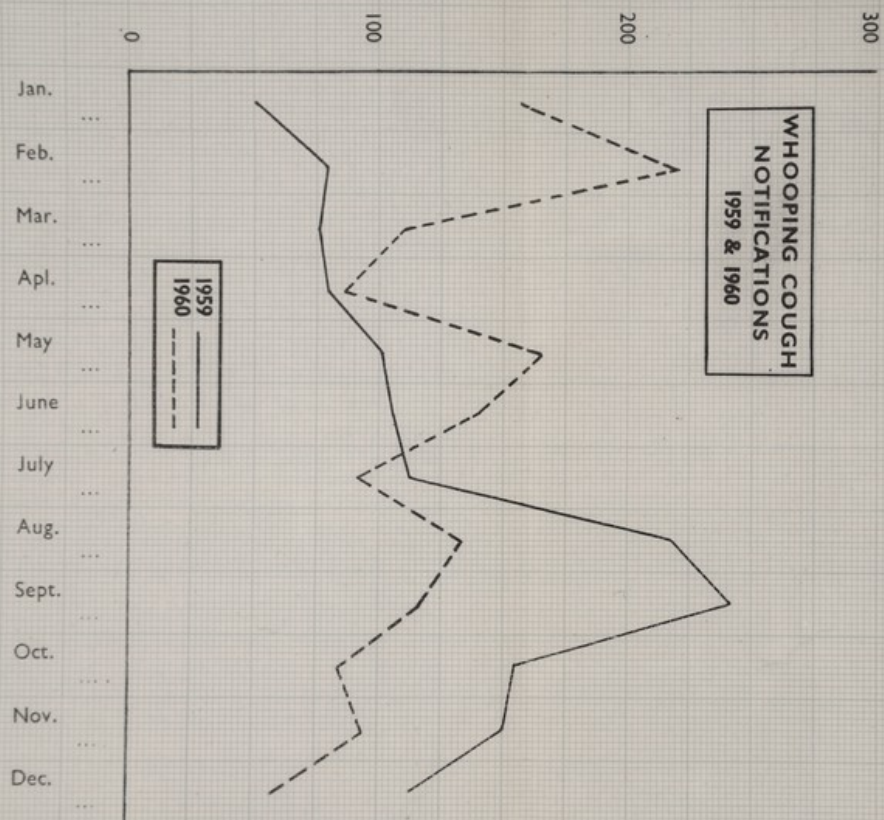
The patient was admitted to a general hospital in Liverpool on 10th October as a pyrexia of unknown origin. On admission, she had clinical signs of consolidation at the right base but later developed jaundice. A provisional diagnosis of acute cholecystitis was made. She was pyrexial for several weeks with one bout of diarrhoea. An X-ray of her gall bladder showed that it failed to concentrate, and therefore, it was presumed pathological. She was considered a possible paratyphoid carrier, the organisms being in the gall bladder. Despite treatment with chloramphenicol she is still excreting paratyphoid organisms. She was offered a cholecystectomy operation, which she refused, and her name has been added to the list of known chronic carriers.

Register of Chronic Typhoid and Paratyphoid carriers.

Chronic Carriers

Examination of one chronic typhoid carrier and eight paratyphoid B carriers has continued throughout the year. During the year, two new paratyphoid B carriers were added to the list. Cholecystectomy operation was offered in one case and refused. The details of the present known chronic carriers in Liverpool are listed below.





CHRONIC CARRIERS

No.	Disease	Date First Positive	Age	Sex	Occupation
1	Para. B. (1) ...	1941	56 years	F	Housewife
2	Para. B. (1) ...	1941	63 years	F	Housewife
3	Para. B. (1) ...	1958	71 years	F	Housewife
4	Para. B. (untyped) ...	1956	37 years	F	Research Worker
5	Para. B. (1) ...	1958	36 years	F	Housewife
6	Para. B. (1, Var. 2)	1959	36 years	F	Housewife
7	Para. B. (1, Var. 6)	1960	68 years	F	Housewife
8	Para. B. (1) ...	1960	48 years	F	Housewife
1	S. Typhi (E.I.) ...	1928	47 years	F	Housewife

Whooping Cough.

During the year 1,440 cases of whooping cough came to the notice of the Health Department, representing a case rate of 1.9 per 1,000 of the population, as compared with 1.96 per 1,000 in 1959. The total of 1,440 cases shows little change from the 1,488 cases notified in 1959. There were three deaths attributable to whooping cough representing a death rate of 0.004 per 1,000 of the population.

**Whooping
Cough**

The chart illustrates the monthly incidence of cases in 1960 compared with 1959. It will be seen that in 1959 the peak of infection was reached in September, followed by a rapid decline during October, November and December. Notifications again rose until a peak was reached in February, 1960 (approximately 40 cases less than the previous peak period in September, 1959). It is interesting to note the pattern during the remainder of the year, when increases occurred at three-monthly intervals, in May, August and November, each of these increases being smaller than the last.

Measles.

During the year, 8,840 cases of measles were reported, representing a case rate of 11.7 per 1,000 population as compared with 8.31 per 1,000 in 1959. This was an increase of 2,532 (40 per cent) in the number of notified measles

Measles

cases over the 1959 figures of 6,308. There was one death from measles representing a death rate of 0·001 per 1,000 population. The following table shows the incidence of measles during the past eight years.

INCIDENCE OF MEASLES CASES AND RATE PER 1,000 POPULATION.

Year ...	1953	1954	1955	1956	1957	1958	1959	1960
Cases ...	10,090	8,599	5,998	6,662	10,180	7,189	6,299	8,835
Rate per 1,000 population ...	12·8	10·9	7·7	8·6	13·2	9·4	8·3	11·7

From these figures it would seem that the pattern of this disease in Liverpool is for epidemics of over 10,000 cases in a year to appear every fourth year, but reference to the annual number of cases over a long period does not support this assumption. During the last 42 years, epidemics have occurred in 1920, 1923, 1925, 1927, 1929, 1934, 1940, 1951, 1953 and 1957.

Scarlet Fever.

Scarlet Fever

Notifications of this disease showed a marked decrease from 973 in 1959 to 476 in 1960, the lowest figure for many years. This represents a case rate of 0·6 per 1,000 population as compared with 1·28 per 1,000 in 1959. No deaths were attributed to scarlet fever during the year as has been the case for the previous eight years.

Poliomyelitis.

Poliomyelitis

Five patients were originally notified as suffering from poliomyelitis, but in only four cases was the diagnosis actually confirmed. Three were paralytic cases and one a non-paralytic case. There were no fatal cases. In the previous year there had been 23 paralytic (one fatal) and four non-paralytic cases.

This is a very welcome improvement as a comparison with the figures for the last eight years show:—

1953	1954	1955	1956	1957	1958	1959	1960
38	35	46	32	32	16	27	4

It is believed that this improvement is connected with the introduction of poliomyelitis vaccination in 1956.

The following table is a summary of the four cases:—

Date of onset of disease	Age	Type	Site of Paralysis	City Ward
24.5.60	18 years	Non-paralytic	—	Old Swan
27.6.60	4 years	Paralytic	Left Arm	Kensington
4.8.60	28 years	„	Right leg. Left arm.	Gillmoss
13.8.60	4 years	„	Not known	Smithdown

It is interesting to record that all four cases had no history of immunisation with poliomyelitis vaccine.

Food poisoning Investigations.

Since the Food Hygiene Regulations 1956, came into operation on the 1st January, 1956, 39,706 specimens from 22,702 persons have been examined bacteriologically in connection with gastro-enteritis investigations. Of this number, 6,656 specimens from 4,494 persons were in respect of the year 1960. Investigation has been undertaken by medical and public health inspectorial staff.

During the year, lecture courses have been arranged for staffs of food premises. Better standards have been noted among food handler staff and there has also been an improvement in the standard of hygiene of food premises.

233 cases of food poisoning were traced in Liverpool during 1960; of which 147 were officially notified to the Health Department. 38 symptomless excretors of food poisoning organisms were found amongst their family contacts. Of the total number of cases of food poisoning, 121 (52 per cent) were due to salmonellae, 94 (40 per cent) to the staphylococcus toxin and 18 (eight per cent) to chemical poisoning (copper sulphate).

Of the 121 isolations of salmonellae, 83 were from clinical cases (of which 74 were notified and nine discovered by the department) and 38 were symptomless excretors. The details are given below:—

FOOD POISONING STATISTICS

Salmonella phage type	Notified Cases	Discovered Cases	Symptomless Excretors	Total
Salmonella				
„ agama	1	—	—	1
„ derby	—	—	1	1
„ dublin	1	—	—	1
„ enteritides... ..	1	—	—	1
„ heidelberg... ..	—	1	—	1
„ ibadan	1	—	—	1
„ infantis	1	—	—	1
„ london	3	—	—	3
„ muenchen... ..	2	—	—	2
„ poona	1	—	—	1
„ thompson	5	—	—	5
„ typhi-murium	57	8	37	102
„ unidentified	1	—	—	1
	74	9	38	121

This is a considerable improvement on the previous year when 206 isolations of salmonellae occurred: 137 from clinical cases and 69 from symptomless excretors. In both years, salm. typhi-murium was the commonest strain isolated (180 in 1959 and 121 in 1960); salm. newport was second in 1959 (five isolations) and salm. thompson second in 1960 (five isolations).

This improvement may be due to several factors:—

- (1) The constant vigilance exercised by the department in following up cases, the finding of symptomless excretors and their immediate treatment.
- (2) The detection of salmonellae in certain imported foodstuffs by the port health authority; detention pending sampling and release to the trade only when the department is satisfied that the foodstuff is free of infection.

(3) The growing appreciation by the food trade of the constant necessity of observing personal hygiene at all times, especially when preparing or handling foods for consumption by the public.

Every notified or suspected case of gastro-enteritis has been fully investigated. The general practitioners are notified of all results and where a case occurs within a family, all family contacts within the household are examined bacteriologically for evidence of cases and symptomless excretors. As the above table illustrates, this has brought to light a considerable number of symptomless excretors of salmonellae, many of whom were food handlers.

Co-operation during the year from general practitioners, food firms, restaurants and hospitals concerned in the investigation of outbreaks has been helpful and cordial.

Salmonella typhi-murium outbreak at a Cafeteria.

A small but interesting outbreak of food poisoning due to *salm. typhi-murium*, phage type 9, occurred at a mail order company's cafeteria in Liverpool. Details are as follows:—

**Salmonella
typhi-murium
outbreak**

Over a seven day period (13th to 20th January, 1960) four persons experienced moderate to severe gastro-enteritis 24—36 hours following the eating of cottage-pie at the firm's cafeteria. Their illness lasted on average ten days. Examination of stool specimens from these four victims showed the presence of *salm. typhi-murium*, phage type 9.

The victims were the only persons to have eaten cottage-pie. Unfortunately, there was no remnant of pie left, but examination of the ingredients used in the pies (minced fresh and cooked meats, reconstituted dried potatoes) were negative. The pies were prepared daily and any pie remaining at the end of the day was destroyed.

25 food handlers at the cafeteria submitted stool specimens and one of these proved to be a symptomless excretor of *salm. typhi-murium*, phage type 9. This person had prepared the cottage-pie eaten by the victims and it is likely that she was the source of infection; the pies being the vehicle. Despite careful questioning, it was not possible to trace the source of her infection; neither did she give a history of recent enteritis. Eleven home contacts of the four victims were asked to submit stool specimens. Although

they gave no history of enteritis or had eaten cottage-pie, six of these contacts were found to be excreting salm. typhi-murium, phage type 9 and it was presumed that they had contracted this infection from the victims.

The finding of these symptomless excretors amongst the home contacts illustrates the degree of cross-infection that often occurs within the homes of clinical cases of salmonella infection. These symptomless carriers remain a potent source of further infection, and may give rise to sporadic outbreaks within the community. Certainly, the cafeteria food-handler was a symptomless excretor of salm. typhi-murium, infected the pies she handled, and these were eaten by four victims, who in turn infected a further six persons at home.

**Staphylo-
coccal
toxin
outbreak**

Staphylococcal toxin food poisoning.

On the 29th December, 21 out of 29 girls at a Liverpool factory developed moderate to severe symptoms of gastro-enteritis one and a half to four hours following the eating of steak pies.

Enquiry showed that it was the regular practice at this factory for the female employees to buy warm meat pies (usually steak or pork) from a nearby butcher's shop to eat at their mid-morning lunch break.

On this particular occasion, it was found that 48 steak pies had been freshly baked between eight and nine a.m. on the morning of the 29th December. 30 were sold by the butcher for use at the factory canteen; two were sold over the shop counter to the general public, and the remaining sixteen, which had been unsold, were seized by the Health Department, examined and later destroyed.

Investigations.

(1) Steak Pies.

It was fortunate that two portions of pie, partially eaten by two of the victims, had been saved and these were examined. One pie was infected with staphylococcus pyogenes. A portion of pie meat and four of the sixteen pies seized at the butcher's shop were found to be infected with staphylococcus pyogenes.

(2) Victims.

Staphylococcus pyogenes was isolated from the stools of five victims. The stools of the other sixteen victims were negative.

(3) *At the Butcher's Shop.*

(i) *Preparation of pies*—Over the Christmas period, the butcher had bought 30 pounds of steak meat for pie filling from a friend who was also a Liverpool butcher. This steak was delivered from one shop to the other on the 24th December, and it was intended to place it in the refrigerator until required. There was some doubt as to whether or not this was done, and the shop assistants thought that it may have been overlooked during the heavy Christmas trade.

(ii) *Food handlers*—Hand swabs and faecal specimens were obtained from the eighteen food handlers employed at both butchers' shops. *Staphylococcus pyogenes* was isolated from the hands and faeces of two and from the hands only of three of the nine food handlers working at the shop at which the pies were made. This same organism was isolated from the faeces only, of three of the nine food handlers employed at the shop from which the pie meat came.

There was, therefore, ample evidence of staphylococcal infection at both shops. The pie meat could have been infected during the pre-Christmas period when owing to increased trade, personal hygiene is often neglected. Failure to place the meat in the refrigerator for several days before use, would account for the production of toxin sufficient to cause illness.

Phage typing of the staph. *pyogenes* was undertaken. This was rather disappointing as the common strain 52a/79 was found in:—

- (i) the steak pie meat
- (ii) the food handlers' faeces
- (iii) the hands of one food handler

but did not appear in any of the faecal specimens of the victims examined. Although this absence indicated the lack of conclusive evidence that strain 52a/79 was the causative agent, nevertheless there is sufficient epidemiological evidence to account for the outbreak.

Acute Copper Poisoning.

An outbreak of eighteen cases of gastro-enteritis occurred in a Liverpool factory canteen following the contamination of tea by copper from a corroded geyser. A full report was published in "The Lancet" on 24th September, 1960, the following being a brief description of the investigation.

Acute copper poisoning

On 10th June, eighteen of 150 workers in a Liverpool factory collapsed with moderate to severe gastro-enteritis five to ten minutes after drinking tea in the factory canteen. Their symptoms suggested acute chemical poisoning, confirmed by the finding of copper in concentrations of 80 and 50 parts per million (p.p.m.) in the stools of two victims transported to hospital. Over the next four weeks, chemical analysis of the faeces showed decreasing quantities of copper—confirming the diagnosis of acute rather than chronic copper poisoning.

Enquiry showed that during their morning canteen break the 18 victims had drunk tea from the same teapot this being the last pot of tea made that morning. Although the residue from the teapot had been discarded the water from the geyser contained suspended particles of copper sulphate, the concentration in 44 p.p.m. of water being (Ph λ 6.7).

Examination of the dismantled geyser showed the presence of copper sulphate deposits encrusted over the top of the boiler lid and around the opening for the float control arm. To one side of this opening there was what appeared to be a fresh bare patch from which it was thought a portion of the copper sulphate had broken off. It was possible that this chemical had become dislodged by some sudden disturbance such as the jarring of a teapot against the boiler outlet tap. The copper sulphate would then fall into the boiling water within the geyser and, the tap being open, the current of flow may have enabled the chemical to pass from the boiler through the tap into the teapot. An interesting feature was that this particular geyser had never been dismantled for cleaning or scaling since its installation in 1949, despite the recommendation of the makers that the boiler required cleaning every 3—4 months in hard water districts to remove deposited scale. The mode of this chemical poisoning would indicate the possibility that this form of poisoning is more common than is supposed.

Dysentery

Statistics: During the year, 515 cases of sonne dysentery were notified in Liverpool.

In addition, 120 clinical cases and 260 symptomless excretors of shigella sonne were discovered following upon investigation of cases of gastro-enteritis and their home contacts; thus making a total of 895 known

excretors of shigella organisms in Liverpool. This was an increase of 91 (ten per cent) in the number of known cases as compared with the 1959 figure of 804.

There were four deaths attributable to dysentery during the year, representing a death rate of 0.005 per 1,000 population. There were no deaths from this cause in 1959.

Dysentery in Day Nurseries.

During the year, eight outbreaks of sonne dysentery occurred in seven day nurseries, making a total of 124 cases. Two of the outbreaks occurred in the same nursery. This was an increase of 68 (121 per cent) in the number of cases as compared with the 1959 figure of 56. This increase bears a relationship to the general increase of sonne dysentery within the city during 1960.

The following table summarizes these eight outbreaks.:—

Nursery	Onset of first case	Date when nursery clear of infection	Clinical cases		Symptomless Excretors		Totals
			Staff	Children	Staff	Children	
A	5.2.60	5. 2.60	—	7	2	4	13
B	18.1.60	16. 3.60	1	18	3	4	26
C	29.1.60	2. 2.60	—	1	1	—	2
D	4.4.60	19. 5.60	3	15	4	5	27
E	6.4.60	3. 5.60	1	8	3	2	14
F	13.7.60	8. 8.60	—	10	1	3	14
G	6.10.60	29.10.60	1	11	—	2	14
B	27.10.60	20.11.60	2	7	3	2	14
			8	77	17	22	124

Of the total of 124 cases, 85 (69 per cent) were clinical cases and 39 (31 per cent) were symptomless excretors. Of the 85 clinical cases, eight were staff employed at the nurseries and 27 were amongst the children. Of the 39 symptomless excretors, seventeen were staff and 22 were children.

Control measures.

There has been no change in the control measures first instituted in 1955 and the following summarizes the procedure adopted. :—

To eliminate outbreaks caused by symptomless or convalescent carriers amongst newcomers to the nursery, stool specimens are examined for a week before the child is due to enter. By this means, a considerable number of carriers are prevented from entering nurseries and starting outbreaks. Should an outbreak occur, then all children in contact with enteritis have stool specimens examined on at least three separate occasions following the initial occurrence of infection. Every case of diarrhoea (even quite mild) in a day nursery is always stooled. Infected children are excluded and remain absent from the nursery until three consecutive negative results have been obtained. (This is extended at discretion). Co-operation with general practitioners is well established and cordial, and specimens from families are examined and the practitioner notified of the results.

Salmonella Infection of the River Alt.

Salmonella Infection of the River Alt

In my annual report for 1958, the salmonella contamination of the River Alt was first reported. This investigation had been initiated following an outbreak of paratyphoid fever in Crosby traced to a person who was a member of a yachting club situated at the mouth of the river. This person had contracted his infection from the contaminated water of the River Alt. During 1959/1960, a complete investigation of the River Alt and its main tributaries within the city boundaries was undertaken by the Health Department.

Results of Investigation.

During this two year investigation, 136 samples of sludge and 68 samples of water from the river within the Liverpool boundary were submitted for bacteriological examination. 72 samples of sludge (53 per cent) and eight samples of water (twelve per cent) were found to be infected with salmonella organisms, the most important being salmonella paratyphi B. Full details of salmonellae isolated are as follows:—

POSITIVE SPECIMENS FROM THE RIVER ALT

Salmonella organisms isolated			Water	Sludge
Salm. paratyphi-B.	type 1	...	3	17
"	"	type 2	1	1
"	"	worksop	—	1
Salm. anatum	...	...	—	4
aberdeen	...	...	3	23
braenderup	...	...	—	1
give	...	...	—	2
havana	...	...	—	1
heidelberg	...	...	—	2
ibadan	...	...	—	1
idikan	...	...	—	1
manchester	...	...	—	1
meleagridis	...	...	—	3
menston	...	...	—	1
muenchen	...	...	—	1
newington	...	...	—	1
cranienberg	...	...	—	1
panama	...	...	—	2
st. paul	...	...	—	1
thompson	...	...	—	3
typhi-murium	...	...	2	19
not typed	...	...	1	1

A number of samples contained more than one type of organism.

It will be seen that nineteen isolations of salm. paratyphi B (26 per cent) were found in the 72 salmonella infected sludge samples and four isolations (50 per cent) of this organism in the eight salmonella infected water samples. 23 isolations of salmonella aberdeen and nineteen isolations of salm. typhi-murium were the commonest types of salmonellae found in the sludge and water. Sixteen different serotypes of salmonellae were also isolated from the sludge (of which full details are given in the table).

Although the river was examined throughout its whole length within the Liverpool boundary, it was noted that excessive contamination occurred where the river passed through a large housing estate between Coronet Road and the East Lancashire Road in the Gillmoss Ward. It had also been noted throughout this investigation, that this area of the river was a playground for children especially in the summer months and on fine week-ends. The banks and water of the river were accessible to these children as the wire netting erected to keep them away had been broken down.

The outfall from the West Derby Sewage Works enters the river near the East Lancashire Road and, therefore, having regard to the many possible sources of contamination, there would appear to be constant invasion of this river by infectious organisms.

The serious contamination of the river has only recently become apparent and during the last few years there have been sporadic cases of paratyphoid fever and other salmonellae infections in the city. Although in many cases the possible source has been ascertained there has been an increase in recent years in the number of cases in which the source was unidentified. There is a possibility that some of these cases might have been associated with the River Alt and there is no doubt that future cases will now have to be investigated with this possibility in mind, to find whether there is any direct association with the river.

The results of this investigation was reported to the Health Committee on the 16th September, 1960, and it was resolved that the Medical Officer of Health confer with other Chief Officers and representatives of the Mersey River Board.

These officers recommended that some strong permanent protection should be erected to prevent children gaining access and thus minimise the risk of infection. In the meantime, the systematic bacteriological examination of sludge and water supplies from the tributaries of the River Alt is continuing, thus building up a seasonal pattern of infection within the river.

Salmonella infection of imported Desiccated Coconut.

**Salmonella
infection of
imported
Desiccated
Coconut**

Salmonella infections in imported foodstuffs continues to be a serious problem—especially for the food trade. This was first brought to prominence with the discovery of these infections in imported egg products and discussed in my annual reports of 1955 to 1957. It has now been followed by the discovery that desiccated coconut imported from Ceylon is similarly contaminated with these pathogenic organisms.

During 1960, a total of 8,265 samples of imported desiccated coconut were bacteriologically examined in Liverpool and of these 479 (5·8 per cent) were subsequently found to be infected with salmonella organisms. Salm. paratyphi B were isolated from 42 (8·8 per cent) of the positive isolations.

The following table shows various phage types of salm. paratyphi B and salm. typhi-murium (in addition, there were 39 different serotypes of salmonella which were not included in the table).

Salmonella Paratyphi-B			Salmonella Typhimurium		
Phage type beccles ...	...	7	Phage type I ...	...	9
Phage type beccles Variant 4	...	1	Phage type Ib ...	...	2
Phage type dundee ...	...	7	Phage type 4a ...	...	2
Phage type dundee Variant 1	...	2	Phage type B ...	...	1
Phage type jersey ...	...	1	Phage type U90...	...	1
Phage type odense ...	...	4	Phage type untypable ...	...	3
Phage type scarborough	...	5			
Phage type untypable	...	4			
Phage type I ...	...	2			
Phage type I variant 9	...	3			
Phage type I variant 10	...	3			
Phage type 3b ...	...	2			
Phage type 3b variant 10	...	1			
		<hr/>			<hr/>
Total ...		42	Total ...		18
		<hr/>			<hr/>

Desiccated coconut is an important foodstuff for it is widely used as an ingredient in the manufacture of sweets, biscuits, cakes, and pastries in addition to its use as a decoration on cakes, custards, trifles and jellies. It is also available in small packets for household requirements.

As a result, routine sampling of biscuits in which desiccated coconut was an ingredient, commenced in November, 1960. A sample taken on the 21st November was found to be contaminated with salmonella paratyphi B, phage type beccles, var. 4. The local manufacturer of these biscuits was visited and it was clearly demonstrated that the desiccated coconut used in the biscuit manufacture was similarly contaminated with this phage type of salm. paratyphi B.

These investigations are continuing and will be reported in full at a later date. In the meantime, the firm has withdrawn all its suspected biscuits and has abandoned the use of desiccated coconut.

Influenza.

There was no apparent increase in influenza in Liverpool in 1960. The numbers of sickness claims received at the Ministry of Pensions and National Insurance Offices in Liverpool during the year did not indicate any rise above that which is normally accepted.

Serological isolations.

During the year, a total of 18 influenza infections, as compared with 23 in 1959 and 128 in 1958, were diagnosed serologically by Dr. G. B. Bruce-White of the Public Health Laboratory Service. Of these, twelve were due to Influenza C, five to Influenza A and one to Influenza B and C combined. These isolations were spread over the months of January, February, April, June, July and September, and the sources of these cases are shown in the following table. All with one exception were isolated from cases in seven Liverpool hospitals.

**Influenza infections diagnosed serologically in Liverpool
1960**

Week ended	Influenza type	Number	Source
16.1.60	B & C	1	RS
30.1.60	C	1	H
	C	1	W
6.2.60	A	1	C
	A	1	LM
20.2.60	C	1	B
	C	1	W
27.2.60	C	1	W
2.4.60	C	1	W
23.4.60	C	1	W
30.4.60	A	1	C
11.6.60	C	1	S
2.7.60	A	1	S
	C	1	W
	C	1	RLC
30.7.60	C	1	S
3.9.60	A	1	S
	C	1	RLC

Key to source:—

- B Broadgreen Hospital
- C Chest Hospital
- H Health Department
- LM Liverpool Maternity Hospital
- RLC Royal Liverpool Children's Hospital
- RS Royal Southern Hospital
- S Sefton General Hospital
- W Walton Hospital

Infectious Disease Consultations.

Infectious Disease Consultations During 1960, 74 visits were made to private houses by the medical staff at the invitation of general practitioners, as follows:—

Chickenpox	...	...	...	47
Herpes Zoster	...	...	...	5
Measles	...	...	...	15
Non-paralytic poliomyelitis	...	...	...	3
Rheumatic Fever	...	...	...	4

RADIATION MONITORING

During the year, regular tests to measure the radioactivity in Liverpool's water supply have been undertaken by the City Analyst. The testing of Liverpool's water supply in this manner was commenced in 1958. The main purpose of these tests is to measure the amount of background radioactivity in the water supply so that any change can be readily detected.

The results are recorded in Table A. There were six sources from which water samples were obtained and examined, namely, Vyrnwy Aqueduct; Rivington Aqueduct; Green Lane Well; Dudlow Lane Well; main tap at City Laboratory, Mount Pleasant; and the River Dee at Eccleston Ferry.

The results give the total artificial beta-activity expressed in micro-curies per litre ($\mu\mu\text{C}/\text{l}$).

The results for the year were very satisfactory when compared with those for the corresponding periods in 1959. The highest results were noted in January, 1960 when the total beta-activity in the samples from Vyrnwy Aqueduct, Rivington Aqueduct, tap at City Laboratory and water from the River Dee were 5, 6, 8 and 10 $\mu\mu\text{C}/\text{l}$ respectively. For the same period the previous year, they were 11, 5, 5 and 11 respectively and in May, 1959 (the highest monthly results) 20, 7, 7½ and 19 $\mu\mu\text{C}/\text{l}$. It has been found that Liverpool's water supply, being a lake supply is low in radiation.

Accepted Standard.

For comparison with the results there are the two following standards:—

1. The international commission on Radiological Protection has published a list of maximum permissible levels for radioactivity in drinking water. In it the lowest level for beta-emitting radio-isotopes is that for Strontium 90 which is 80 micro-micro-curies per litre of water.

2. The Medical Research Council has laid down an even more stringent standard for Strontium 90 in River Thames water. According to this standard the beta-activity due to Strontium 90 should not exceed 20 micro-micro-curies per litre of water. The British Water Works Association proposed in 1958 that it be accepted generally. This is a quarter of the International maximum permitted level.

RADIO-ACTIVITY IN LIVERPOOL'S WATER SUPPLY

TABLE "A"

January to December, 1960

(The results below give the total artificial beta activity expressed in micro-micro-curies per litre ($\mu\mu$ c/l) based on the assumption that it was due entirely to Strontium 90, but it is known that only a small part of such activity is caused by Strontium 90.)

Source of water	January	February	March	April	May	June	July	August	September	October	November	December
Vymwy Aqueduct ...	5 (6%)	2 (3%)	2½ (3%)	1½ (2%)	1½ (2%)	1 (1%)	2 (2%)	Less than 1 (Less than 1%)	1 (1%)	Less than 1 (2%)	1½ (2%)	approx 1 (1%)
Rivington Aqueduct ...	6 (7%)	Less than 2 (2%)	5 (7%)	1½ (2%)	1½ (2%)	2 (2%)	2 (2%)	1 (1%)	1 (1%)	Less than 1	1½ (1%)	Less than 1
Green Lane Well...	*	*	*	*	*	*	*	*	*	*	*	*
Dudlow Lane Well ...	*	*	*	*	*	*	*	*	*	*	*	*
Main tap City Lab. ...	8 (10%)	Less than 2 (2%)	2½ (3%)	1 (Less than 2%)	½ (1%)	1 (1%)	1 (1%)	Less than 1 (Less than 1%)	1 (1%)	1 (1%)	½ (½%)	Less than 1
River Dee ...	10 (12%)	2 (3%)	2 (2%)	1 (Less than 2%)	1 (2%)	2 (2%)	Less than 1 (Less than 1%)	3 (3%)	1 (1%)	Less than 1 (1%)	—	Less than 1

* Dudlow Lane and Green Lane Wells not in action.

Figures in brackets show percentage of the International maximum permitted limit for radioactivity in drinking water.

It should be noted that water is not the only item of diet from which there is a body intake of Strontium 90: it is, in fact, one of the less important sources of intake of this isotope. The amount of estimated daily intake of Strontium 90 by human diet in the United Kingdom falls very far below the internationally accepted permissible level which is considered acceptable for continuous consumption over a lifetime of 70 years.

Any radioactive damage from cumulative build-up in the body would take a number of years to develop. Moreover, there has been no increase in Leukaemia in the past nine years in Liverpool. The following table shows the number of deaths which have occurred in the city since 1951 from this disease.

TABLE "B"

Year	Number of deaths from Leukaemia in Liverpool.
1951	34
1952	51
1953	45
1954	51
1955	37
1956	42
1957	41
1958	35
1959	41
1960	48

The incidence is similar to that in other County Boroughs and in other parts of the country. There is no greater prevalence of Leukaemia in Liverpool than in towns deriving their water supply from deep wells where there is even less radioactivity than exists in water supplies like Liverpool coming from upland sources.

During the year, medical officers, public health inspectors and health visitors have attended courses on radioactivity so that there is a nucleus of personnel who have considerable knowledge and experience to interpret changes which would require a more detailed investigation.

**Training of
staff**

During 1960 it was decided that for the present it was not intended to examine sewage, effluents, trade waste or samples of food. It was considered that they were adequately covered by national arrangements. The Ministry of Housing and Local Government, in consultation with local authorities are responsible for the examination of sewages, effluents and trade wastes. The examination of food supplies is the responsibility of the Ministry of Food (carried out by the Agricultural Research Council Radiobiological Laboratory). Arrangements, however, have been made to carry out from time to time, a few investigations on imported foods and other articles with the aid of the Radioactivity Department of the Liverpool College of Technology.

IMMUNISATION AND VACCINATION

Poliomyelitis Immunisation.

The immunisation of children and adults continued throughout the year.

On 1st March, 1960, the age limit for poliomyelitis immunisation was raised from 26 to 40 years, and a new group of priority persons introduced. The response, however, to this raising of the age group has not been very encouraging; a total of 13,758 attending for inoculations compared with 41,235 in 1959.

There has been no alteration in the immunisation procedure. The initial course of two injections separated by a four-week interval is followed by a third injection seven months later. Immunisations have continued to be carried out at all child welfare and school clinics in addition to those given by general practitioners.

The poliomyelitis clinic at the Health Department, Hatton Garden, has continued but with revised hours, i.e. 1 p.m. to 2 p.m., Monday to Friday, and Wednesday evenings from 5 p.m. to 6 p.m. The Saturday morning clinic was abolished when the five-day week was introduced in May 1960.

The success of the special poliomyelitis immunisation clinic during the three days of the annual Liverpool Show, 1959, encouraged the department to repeat this experiment in 1960. "On the spot" immunisations were made available throughout the opening hours of the Show, and during the three days a total of 285 persons within the eligible age groups were immunised; subsequent injections being given at the Health Department Clinic at Hatton Garden.

Arrangements were again made for university students, hospital staffs and other priority groups to be immunised, either at the University and respective hospitals or at the central immunisation clinic at the Health Department.

By special arrangement, seventeen industrial firms and large city offices were visited during the year by a Medical Officer from the Department to give poliomyelitis injections to the staff.

The supply of poliomyelitis vaccine of British manufacture continues to be plentiful, although there has been a shortage of penicillin-free vaccine, particularly in single dose ampoules (which is used in allergic cases). This vaccine is of Canadian manufacture and the Ministry of Health has imported very limited quantities. It is understood, however, that the Ministry are introducing a penicillin-free vaccine of British manufacture early in 1961 and that a good proportion will be in single dose ampoules.

POLIOMYELITIS INOCULATIONS GIVEN DURING 1960
to children up to 15 years of age.

TABLE A.

Year of Birth				Immunised at clinics	Immunised by Private Doctors	Total Number of completed inoculations
1943	...	...	...	140	94	234
1944	...	...	...	149	84	233
1945	...	...	...	156	187	343
1946	...	...	...	156	130	286
1947	...	...	...	157	239	396
1948	...	...	...	237	155	392
1949	...	...	...	193	182	375
1950	...	...	...	206	273	479
1951	...	...	...	283	203	486
1952	...	...	...	220	242	462
1953	...	...	...	292	237	529
1954	...	...	...	283	259	542
1955	...	...	...	391	306	697
1956	...	...	...	419	264	683
1957	...	...	...	430	459	889
1958	...	...	...	750	762	1,512
1959	...	...	...	1,630	1,397	3,027
1960	...	...	...	193	183	376
Totals	...	...	...	6,285	5,656	11,941

ADULTS: 16—40 years including Ante Natal cases.

Clinics	...	...	...	10,206
Private Doctors...	...	...	...	3,552
				13,758

Statistics**0-15 years Group**

During the year a total of 11,941 children up to fifteen years of age completed the course of two injections; a decrease of 16,325 on the 1959 figures. There is no doubt that the successful response in 1959 was due, in no small measure, to the publicity both local and national that occurred following the untimely death from poliomyelitis of a well known footballer.

15-40 years Group

A second explanation as to the decrease in poliomyelitis immunisation was the occurrence of six cases of diphtheria during the year which necessitated the postponement of poliomyelitis immunisation sessions at the child welfare clinics for approximately three months.

The number of adults immunised was 13,758: of these, 958 were expectant mothers. In addition, a total of 41,125 third injections were given to all age groups. The total number of persons who have been immunised with two injections since 1956 when the scheme began, is now approximately 180,000 and 131,000 have had a third injection.

Towards the end of the year a complete analysis of the percentage of poliomyelitis immunisation in the City was undertaken. This was to enable the Department to assess those wards to which particular attention should be directed to increase poliomyelitis immunisation.

It will be seen that ten wards of the City: Sandhills, Picton, Abercromby, Melrose, Broadgreen, Princes Park, Westminster, Smithdown, St. James and St. Marys have the lowest overall acceptance rate and a campaign to increase poliomyelitis immunisation in these areas is planned for May and June, 1961.

TABLE B.
POLIOMYELITIS INOCULATIONS

Percentage of Population Inoculated against Poliomyelitis in City Wards in Age Groups.

	0—5 years	5—15 years	15 years and over
1	Woolton ... 61.6	Gillmoss ... 81.0	Allerton ... 72.0
2	Gillmoss ... 58.75	Allerton ... 78.2	Aigburth ... 57.25
3	Speke ... 53.0	Childwall ... 71.4	Church ... 57.0
4	Allerton ... 52.4	Speke ... 71.0	Woolton ... 53.6
5	Aigburth ... 52.25	Woolton ... 70.2	Arundel ... 53.4
6	Childwall ... 49.0	Dovecot ... 69.5	Childwall ... 52.6
7	St. Michael's ... 47.0	Low Hill ... 67.7	Everton ... 50.5
8	Croxteth ... 44.5	Croxteth ... 66.7	Breckfield ... 44.4
9	Warbreck ... 43.0	Tuebrook ... 65.7	Smithdown ... 44.0
10	Breckfield ... 42.75	Netherfield ... 63.4	Croxteth ... 42.0
11	Tuebrook ... 42.0	St. Michael's ... 62.7	Clubmoor ... 38.2
12	Everton ... 40.8	Melrose ... 62.5	Gillmoss ... 38.2
13	Central ... 39.6	St. Mary's ... 62.0	Dovecot ... 37.2
14	Church ... 38.4	Westminster ... 61.25	Dingle ... 36.8
15	Granby ... 37.5	St. Domingo ... 60.0	St. Michael's ... 34.2
16	County ... 37.2	Aigburth ... 59.75	Warbreck ... 33.0
17	Fairfield ... 37.2	Fazakerley ... 59.4	Fairfield ... 32.6
18	Westminster ... 37.1	Pirrie ... 56.5	Picton ... 32.4
19	Fazakerley ... 37.0	Everton ... 55.0	Broadgreen ... 31.8
20	Anfield ... 35.7	Warbreck ... 54.75	Fazakerley ... 31.1
21	Arundel ... 35.25	Old Swan ... 53.4	Pirrie ... 29.2
22	Netherfield ... 34.7	St. James ... 51.0	County ... 28.8
23	Low Hill ... 34.4	Kensington ... 49.75	Tuebrook ... 27.8
24	Dingle ... 34.3	Clubmoor ... 49.4	Kensington ... 27.5
25	Old Swan ... 34.0	Anfield ... 49.4	Speke ... 27.3
26	Vauxhall ... 34.0	Central ... 49.3	St. Domingo ... 25.6
27	Kensington ... 33.75	Dingle ... 49.25	Granby ... 24.65
28	Dovecot ... 33.5	Sandhills ... 49.1	Low Hill ... 24.0
29	Sandhills ... 33.5	County ... 49.0	Old Swan ... 23.9
30	Broadgreen ... 32.4	Breckfield ... 48.6	Anfield ... 22.3
31	Smithdown ... 32.4	Smithdown ... 48.3	Netherfield ... 20.4
32	Clubmoor ... 32.0	Church ... 47.75	Abercromby ... 19.3
33	St. Mary's ... 32.0	Picton ... 45.7	Central ... 18.85
34	Melrose ... 31.8	Granby ... 45.6	St. Mary's ... 15.35
35	St. Domingo ... 31.8	Arundel ... 44.8	Vauxhall ... 14.55
36	Pirrie ... 31.65	Broadgreen ... 44.25	Westminster ... 12.2
37	Picton ... 30.9	Vauxhall ... 44.25	Melrose ... 10.7
38	St. James ... 30.0	Fairfield ... 44.0	Princes Park ... 10.45
39	Princes Park ... 28.6	Princes Park ... 40.6	St. James ... 10.1
40	Abercromby ... 24.7	Abercromby ... 36.8	Sandhills ... 9.4

Yellow Fever Vaccination *Yellow Fever, etc.*

On the 1st July, 1960, the functions of the National Blood Transfusion Service, in respect of yellow fever vaccination, required for international travel, were transferred to local authorities on the recommendation of the Minister of Health.

To meet this requirement the temporary clinic which was set up in the basement of the Health Department in 1958 to cope with the sudden demand for immunisation against poliomyelitis, has been extended and modernised as a permanent structure. A full-time Assistant Medical Officer and Nurse were engaged for this service and for general vaccination and immunisation duties.

Before the transfer on 1st July, yellow fever vaccination was given free of charge to the general public and ships crews by the Blood Transfusion Service, but the overall cost of this service is now the responsibility of local authorities. In order to recover part of this expenditure—and at the same time give a better service—a charge of 25s. per complete vaccination was authorised by the Liverpool City Council.

In addition to yellow fever vaccination it was decided that, for the benefit of travellers, protection against certain tropical diseases, required by International Sanitary Regulations, e.g., cholera, smallpox, typhoid and paratyphoid, be made available at the following fees:—

Cholera (two injections)—7s. 6d. each injection.

Typhoid and Paratyphoid (two injections)—7s. 6d. each injection.

Smallpox (one vaccination)—7s. 6d.

The following table shows the number of these injections given in 1960.

TABLE C.

**Inoculations, by months, since the opening of the Vaccination Centre,
Hatton Garden, on the 1st July, 1960**

Month	Yellow Fever	Smallpox	T.A.B.	Cholera	Total
July ...	227	44	13	32	316
August ...	197	47	24	29	297
September ...	246	22	12	7	287
October ...	226	39	14	24	303
November ...	230	41	21	21	313
December ...	169	22	19	23	233
Total ...	1,295	215	103	136	1,749

The Clinic is open each day, Monday to Friday, from 2 p.m. to 4.30 p.m., and attendances are regulated, by appointment. This is not always possible, especially in the case of ships' crews and passengers who are sailing at very short notice, and arrangements have been made from time to time for a Medical Officer to give the injections on board ships in dock, especially when there has been a last-minute change in sailing orders.

Diphtheria Immunisation.

Diphtheria immunisation has continued as in previous years at the child welfare clinics, schools and by general practitioners. A total of 25,946 children were given primary inoculation during the year and 12,342 received a booster inoculation.

Diphtheria Immunisation

It will be noted that there was a considerable increase on the 1959 figures of both primary and booster inoculations. This was mainly due to the increased demand for diphtheria immunisation following the occurrence of two outbreaks of diphtheria (three cases: three carriers) in Liverpool in 1960. Epidemiological details of the diphtheria outbreaks are considered in the Infectious Disease Section, page 44. The following is a résumé of the protective measures undertaken. In the first outbreak, there were only eleven known contacts and these children were protected by simultaneous administration of antitoxin and antigen. A.P.T. was chosen as the antigen as it was considered that A.P.T. would lead to a satisfactory level of immunity in the presence of a small amount of antitoxin. In the second outbreak there were many more contacts and, following wide publicity, within fourteen days of the fatal case, 14,646 children were given primary diphtheria immunisation, and 9,559 received booster doses. Children up to five years of age were given D.T.P. (Diphtheria-Tetanus-Pertussis). The five to ten age groups were given combined diphtheria-pertussis prophylactic or F.T. (the choice of antigen depended upon whether or not there had been a previous history of whooping cough). T.A.F. was given to young persons over ten years of age.

Schick testing was carried out in cases where there was a doubtful history of previous immunisation or a known history of allergy. During this period 210 school children were schick tested, of whom 83 gave a positive (susceptible) schick reaction; these were protected as above.

The age groups of the children inoculated during the year, together with an estimate of the percentage of the child population immunised during the past five years is given in Table D below:—

TABLE D.

	Under 1 year	1—4 years	5—9 years	10—14 years	Total under 15 years
Primary inoculations completed in 1960	8,369	5,201	7,257	5,139	25,946
Booster inoculations completed in 1960	—	751	7,265	4,326	12,342
Percentage of child population immunised during past 5 years	54.7%	71.5%	47.8%		—
Percentage of child population immunised	68.0%		93.3%		—

Schick Testing of Nurses

During 1960, a total of 28 probationer nurses were schick tested at the Royal Southern Hospital. Of these, twelve were schick positive and susceptible to diphtheria and sixteen were schick negative and immune. The twelve susceptible nurses were offered protection with T.A.F.

Whooping Cough Immunisation.

During the year the campaign against this disease continued and the same arrangements were made as for diphtheria; a total of 15,159 receiving protection with three injections of either combined or triple antigen. The inoculations were given at the child welfare clinics and by general practitioners.

Smallpox Vaccination.

Vaccination against smallpox continued at the child welfare clinics and by general practitioners. During the year a total of 6,654 persons were vaccinated against smallpox: of these, 5,874 were children under the age of one year. This is a considerable decrease on a normal year's figures and is no doubt due to the postponement of other inoculations for three months whilst the greatly increased numbers of diphtheria immunisations were completed.

TABLE E.
Diphtheria Immunisation — 1951-1960.

Where or by whom immunised	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Immunisation Clinics ...	6,442	5,316	4,896	3,920	3,974	4,547	4,479	6,861	5,789	13,091
Schools ...	2,941	3,307	3,586	3,732	2,943	2,070	3,008	2,316	3,245	3,926
Medical Practitioners ...	2,396	2,579	2,694	2,973	3,212	3,702	3,713	5,761	5,102	8,929
Miscellaneous... ..	283	109	—	—	—	—	—	—	—	—
Totals ...	12,062	11,311	11,176	10,625	10,129	10,319	11,200	14,938	14,145	25,946

TABLE F.

1960—WHOOPING COUGH IMMUNISATION

AGE GROUPS	0—4 Years	5—14 Years	TOTALS
	12,315	2,844	15,159

TABLE G.

1960 — Vaccinations.

	1957	1958	1959	1960
Births	16,044	15,662	15,615	15,961
No of Primary Vaccinations	8,250	11,112	9,777	6,654
No. of Re-vaccinations	107	4,128	1,179	169
	8,357	15,240	10,956	6,823
No. Vaccinated at Clinics... ..	3,614	9,914	5,480	2,980
No. Vaccinated by General Practitioners	4,743	5,326	5,476	3,843
	8,359	15,240	10,956	6,823

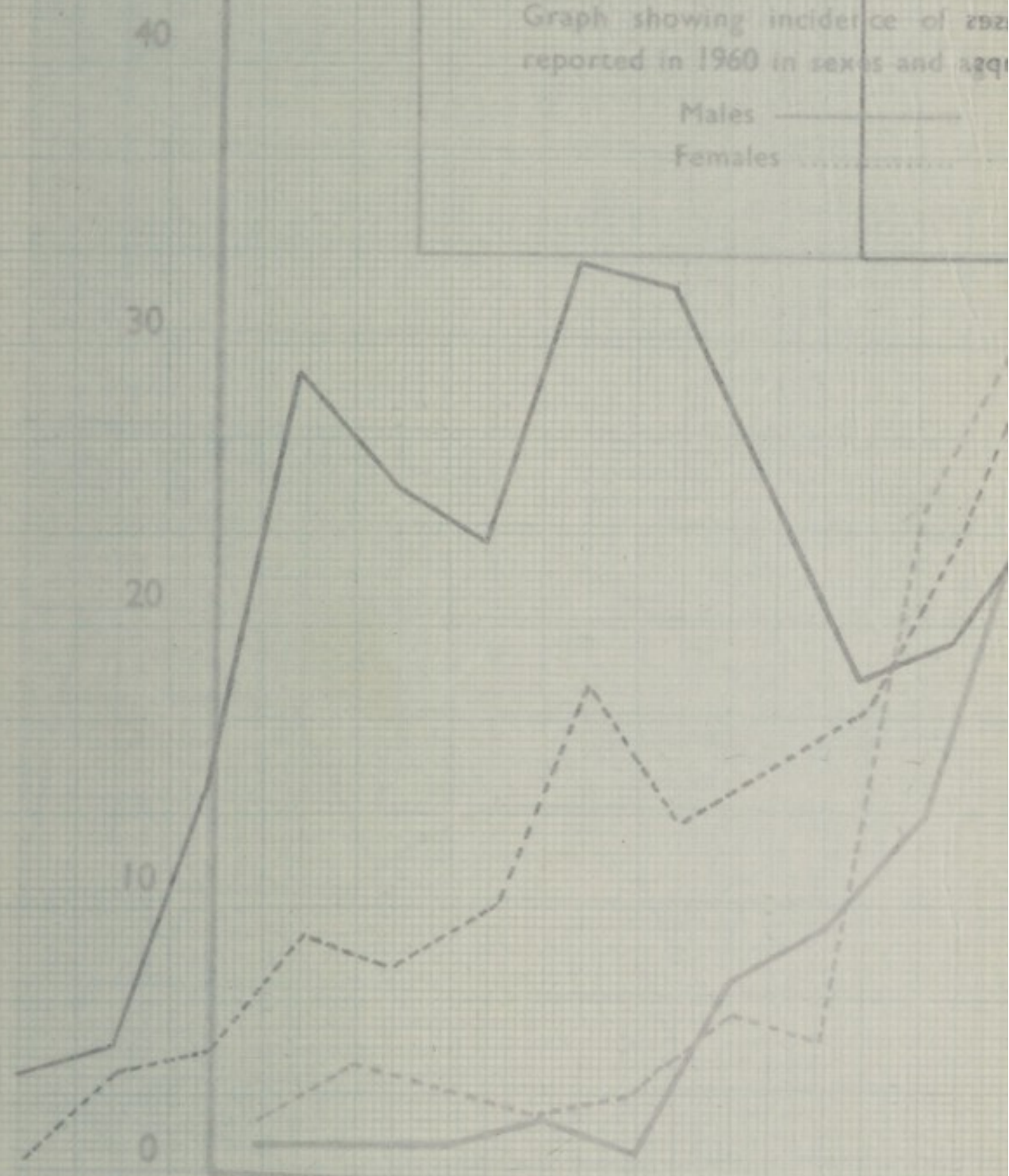
TUBERCULOSIS—1960

Graph showing incidence of TB reported in 1960 in sexes and age groups

Males

Females

80 years 12-15 16-19 20-24 Under 1 year 22-24 2 years 20-24 3 years 42-44 4 years 40-44 5-9 32-34 10-14 30-34 15-19 25-29



TUBERCULOSIS—1960

Graph showing incidence of new cases reported in 1960 in sexes and age groups.

Males —————
Females

40

30

20

10

0

Under
1 year

1 year

2 years

3 years

4 years

5—9

10—14

15—19

20—24

25—29

30—34

35—39

40—44

45—49

50—54

55—59

60—64

65—69

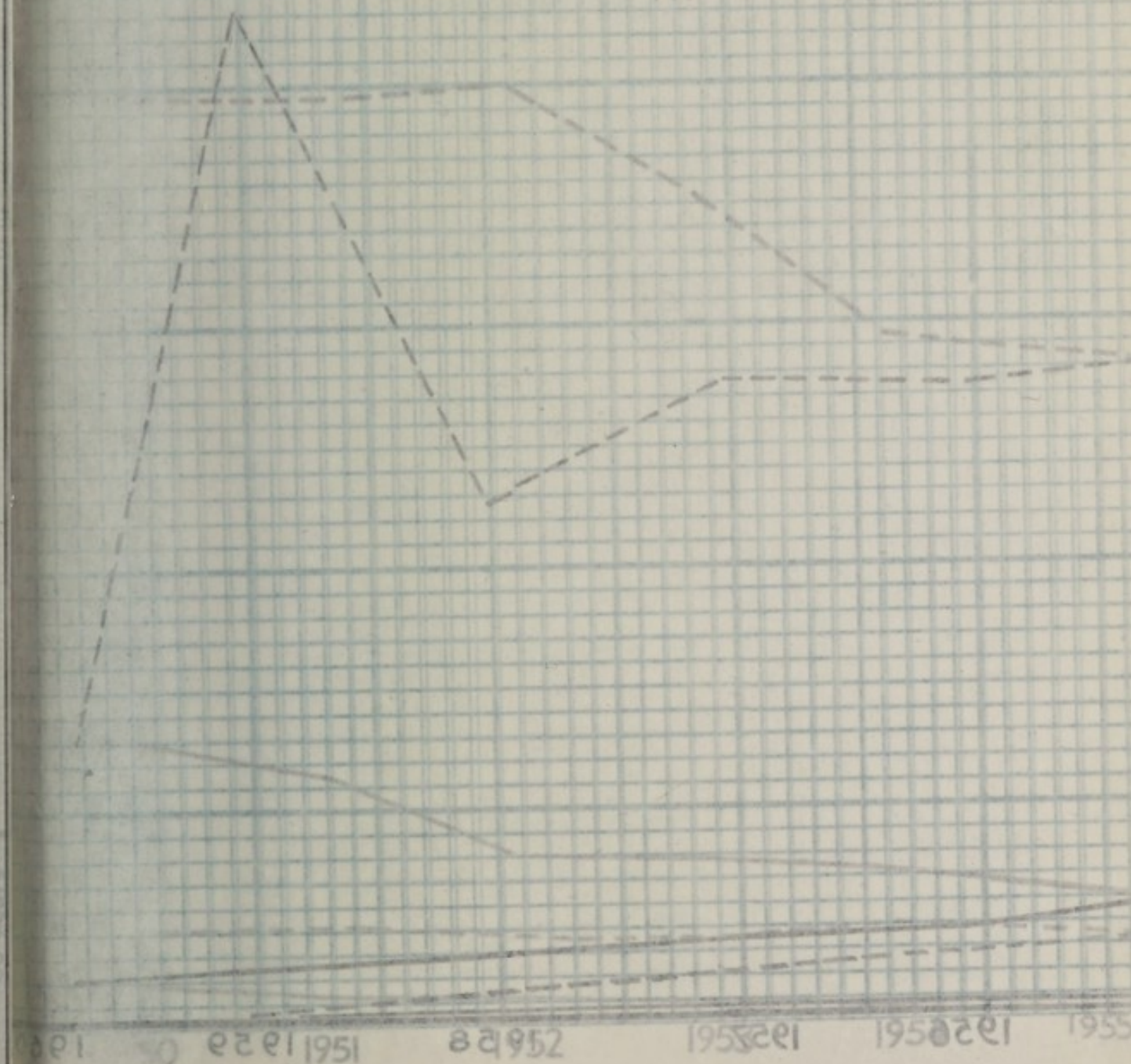
70—74

75—79

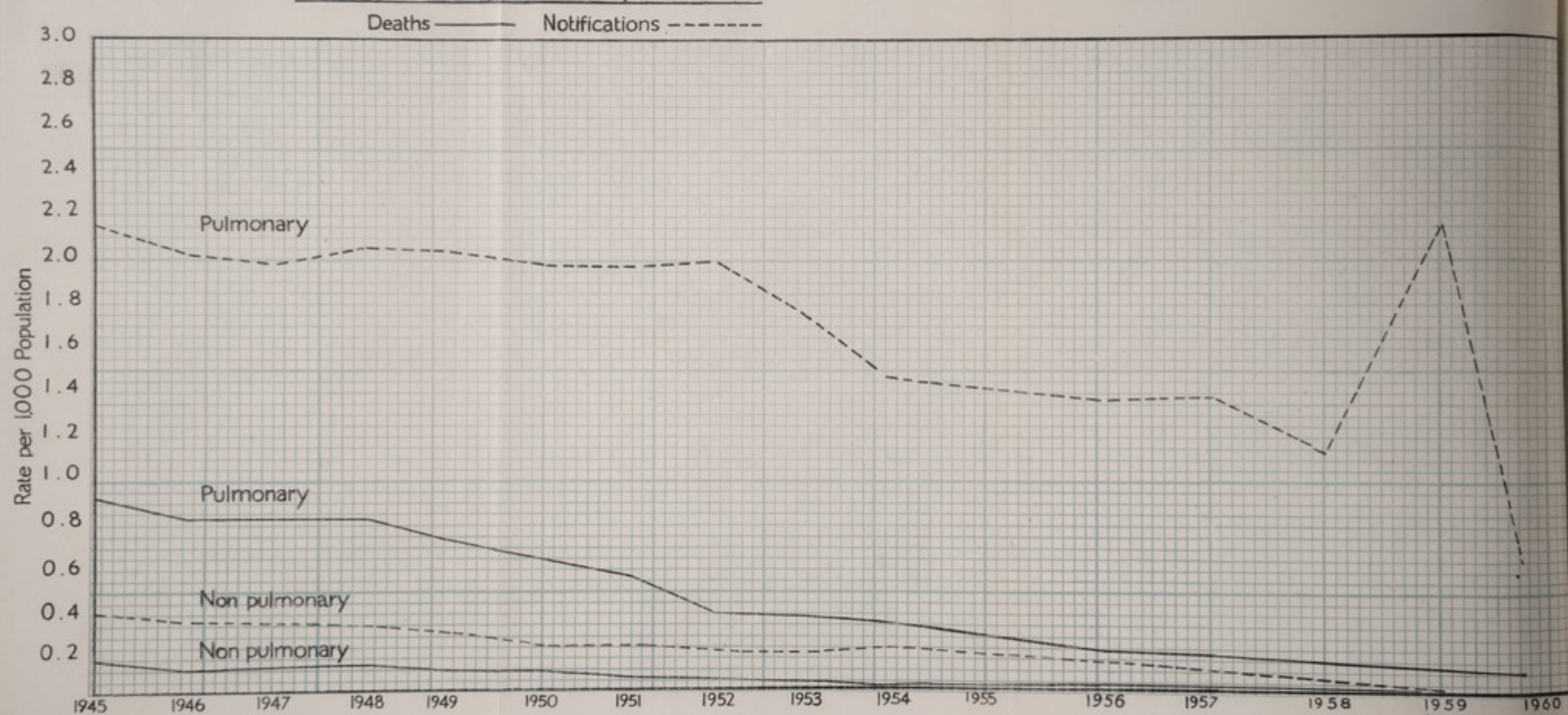
80 years
& over

Cloudiness. 1945-1960

Corrections -----



Tuberculosis Mortality and Morbidity, 1945-1960



TUBERCULOSIS

1960 was the first complete year following the successful mass X-ray **New** campaign, and as 1959 was an abnormal year for notifications as a result of **notifications** this campaign, it is intended to compare statistics with those for 1958.

In 1960 there were 489 new notifications. This figure is made up as follows:—

Respiratory tuberculosis	...	...	...	...	424
Non-respiratory tuberculosis	...	...	...	...	53
Cases notified after death	...	...	...	...	6
Cases who had left this district before contact could be made with them the Medical Officer of Health to whose area they had moved being informed in each case.	...	...	...	...	6
TOTAL	...	...	...	...	489

In 1958 there were 874 new notifications, 795 being respiratory tuberculosis and 79 non-respiratory tuberculosis.

Table 71 in the statistical appendix is a detailed analysis of the 1960 figure while the accompanying map A relates the cases to the ward population in each of the forty wards of the City.

This substantial fall in the number of notifications of new cases can undoubtedly be related to the successful mass X-ray campaign, when it will be recalled that 1,045 new cases of tuberculosis were discovered in four weeks. All these cases have been under supervision since that time and gratifying though the decrease in new notifications may be, the figures for 1960 show that tuberculosis in Liverpool is still a problem of considerable magnitude and that there is certainly no room for complacency.

Map A indicates the whereabouts of the known new cases of tuberculosis discovered during 1960. Reference to the map will show that environmental conditions play an important role in tuberculosis, e.g., it will be seen that new cases occur more frequently where living conditions are congested and where houses are substandard. Infections occur less frequently in the residential suburbs where overcrowding is exceptional and housing standards are good. Map C compares the rate per 1,000 of new notifications over the past five years by wards.

**Distribution
of new cases**

**Distribution
of total cases
on the
registers**

Rehousing of established cases of tuberculosis is also largely responsible for maintaining the high totals of cases on the register in the Corporation estates. It will be seen from map B that most of these estates show a fairly high figure by comparison with the residential areas where there are no large numbers of corporation houses. It is impossible to avoid this state of affairs which is more than counter-balanced, however, by the fact that recovery is greatly facilitated in the improved living conditions enjoyed by those who are rehoused and by the reduced danger of their spreading infection to others.

The high figure in St. James and other central wards is associated with the living conditions and standards of many of their residents.

**The diagnosis
of new cases**

The following table shows clearly that, notwithstanding the substantial fall in notifications, there have been no remarkable changes in the manner in which the disease was discovered:—

	1960	1958
Found as a result of illness	319 (67%)	593 (66%)
Found as a result of examination of contacts	32 (7%)	83 (10%)
Found as a result of mass miniature radiography	82 (17%)	124 (14%)
Found as a result of adult routine examination	27	51
Found as a result of examination at child welfare clinic	1	1
Found as a result of school medical examination	1	7
Others (e.g. General Practitioner examination, Shipping Federation examination etc.)	15	15
Notified after death	6	—
Left district before contact	6	—
TOTAL	489	874

The number of new cases found as a result of illness deserves comment. Of the 67 per cent (319), 77 cases were X-rayed during the campaign and pronounced clear and they have contracted the disease since the date of the campaign. 185 cases discovered this year were for one reason or another not X-rayed during the campaign, whilst 57 cases discovered this

year were in young people who were under fifteen years of age at the time of the campaign and were thus not eligible for X-ray at that time. This means that of 319 new cases discovered as a result of illness this year, 242 (76 per cent) were not X-rayed during the campaign. It is considered that once again this figure highlights the importance as an infector pool of the 24 per cent of the population of Liverpool who were not X-rayed during the campaign of 1959.

In 1958, 83 new cases were discovered as a result of contact examination, in 1960 the figure was 32. This decrease was expected and is due to the fact that such a large number of active cases were removed from the population of the city during last year as a result of the campaign.

Only one case was found as a result of routine school medical examinations. This is a most encouraging indication of the improvement in the health of our school population.

**Distribution of population in social classes related to the distribution of new cases of tuberculosis in these classes.
1958 and 1960 Compared**

**Relationship
to the Social
Groups and
Housing
Conditions**

Social Group	I		II		III		IV		V	
Year	1958	1960	1958	1960	1958	1960	1958	1960	1958	1960
No. in each class per 1,000 population based on last available census ...	19	19	102	102	503	503	131	131	245	245
No. of cases in each class per 1,000 new notifications ...	9	14	43	71	463	373	150	281	335	261

The distribution of cases between the sexes is almost the same as in 1958, when males formed 59 per cent and females 41 per cent of the total figure. This year the distribution of new cases was as follows, 58 per cent males and 42 per cent females. The peak incidence for women was again sharp and occurred between the 20th and 24th years. It is the usual finding all over the country.

**Age and Sex
Incidence**

Incidence amongst men again differs somewhat from the national picture, which shows a peak in the fifth and sixth decades. The Liverpool figures have two peaks, the incidence being more or less elevated from fifteen years to 64 years. These points are well illustrated in the accompanying graph.

**Tuberculosis
Death Rate
(Provisional
Figures).**

There were 81 deaths from respiratory tuberculosis and three from non-respiratory disease during 1960. These figures represent 0.107 and 0.004 per 1,000 population respectively. They are compared, with those for the preceding twelve years, in Tables 21 and 22 of the appendix, whilst Table 18 gives details of the ages at death from the various forms of tuberculosis.

**Morbidity and
Mortality
Compared**

The incidence of, and deaths from tuberculosis in Liverpool for the last thirteen years are illustrated in the accompanying graph. We now hope to enter a period of progressive improvement which will reduce the problem of tuberculosis to a level consistent with modern methods of diagnosis, treatment and after-care.

Tuberculosis After-Care and Prevention.

**Work of the
Tuberculosis
Visitors**

One new tuberculosis visitor was appointed during the year. This appointment was made to fill a vacancy due to a resignation. The number of visitors, therefore, remains at eighteen, fifteen female and three male, working from the four chest clinics; five are attached to the South and East and four to the North and Central Clinics. This disposition is based upon the actual numbers of cases on each of the clinic registers. Whilst the number varies to some extent from clinic to clinic, on average each visitor has some 440 cases to look after. About 80 per cent of these are quiescent and visited at home once every six months. Visits are allocated centrally by use of a card index system which ensures that no known cases are missed and that visits are paid at fixed intervals of time. In addition to these regular visits, visits are made to contacts, those discharged from hospital, defaulters at clinics, and as an investigation for housing applications.

The total number of visits made during the year was 38,014. Access was not obtained in 4,440 of these. Each visitor thus made an average of 41 visits each working week. The reduction in the number of visits compared with 1959 when a total of 40,233 were made, is due to a number of factors. In the first place there were fewer new cases notified and this reduced the number of contact visits. Secondly, the improved housing situation has reduced the number of environmental visits necessary. Such a reduction is, of course, welcome, as it means that more time can be spent at each visit.

The essential contact between the visitors and the clinic staffs, more especially the chest physicians, has been maintained, as in the past, by

attendance at contact clinics, which averaged out at rather less than two such sessions per visitor each week, as in 1959.

The scheme under which occupational therapy is available to handicapped persons has now been extended to patients suffering from tuberculosis. During the year, eighteen patients received regular visits at home from the occupational therapists. Eight patients attended the occupational therapy unit regularly. Two patients, although recommended by the chest physicians for occupational therapy, have so far failed to avail themselves of the service. The chest physicians are convinced of the value of this service, and it is anticipated that in future many more tuberculosis patients will be recommended for this form of therapy.

Occupational Therapy

Tuberculosis and Housing.

During 1960, the problem of priority rehousing of tuberculosis patients and other medical grades was reviewed by the City Council. It was decided that the allocation of housing for active tuberculous cases be given immediate priority. In order to do this, six per cent of the annual available tenancies in Liverpool are now allocated specifically for this purpose. This means that approximately fifteen to seventeen houses are available for letting each month for tuberculous patients. It is now possible for active tuberculous cases to be rehoused within a maximum three months period from the date of recommendation. For priority to be recommended, it is considered that the degree of infectivity of the patient must be one of the main deciding factors as well as overcrowding, slum clearance property, etc. To prevent the spread of tuberculosis, it is essential that patients with positive sputum be rehoused in such circumstances that the spread of infection is reduced to a minimum. All recommendations made since October 1960, have consisted only of cases with a positive sputum. A few patients refuse an offer of new accommodation under this new scheme, especially if they do not appreciate the general housing problem and are trying to "hold out" for a special district, etc. Should an offer be refused, then the property offered is inspected by a medical officer or tuberculosis visitor and an assessment is made on medical grounds, as to whether or not the offer is reasonable and should be accepted. Should it be decided that the accommodation offered is not suitable, then liaison exists with the City Architect and Director of Housing's Department so that an alternative offer is made. In this way, delay is reduced to a minimum and patients are rehoused in accommodation which suits their special needs.

Housing of Tuberculosis Patients

It is hoped that the operation of this new scheme will have solved, within the course of the next few months, the problem of rehousing positive sputum cases within the City and attention will then be directed to rehousing the most deserving negative sputum cases.

Disposal of Sputum by Tuberculous Patients.

**Sputum
Disposal**

The problem of safely disposing of infected sputum is largely one of educating individual patients in a satisfactory regime, and without their co-operation no scheme can be successful. Most patients have been very willing to play their part and they have been constantly reminded of their obligations towards others by the tuberculosis visitors.

Polythene flasks and a solution of hypochlorite is the method adopted for sputum disposal in this city, the cost of the flasks and solution being borne by the local authority, and the patient's supplies replenished, as necessary, about once a month. 216 patients on domiciliary treatment were supplied with sputum disposal flasks during the year.

Drug Resistance.

**Drug
Resistance**

There has been increasingly an expanding use of domiciliary treatment in active tuberculosis. This by itself indicates the immense therapeutic strides that have occurred in recent years. With advances in treatment, tubercle bacilli have shown increasing drug resistance and this is mainly due to patients not taking the drugs prescribed by the chest physician in a correct manner. For example, they may take a much smaller dose, or they may take the full dose but only spasmodically.

It is important, therefore, in the prevention of tuberculosis, that supervision of domiciliary treatment is undertaken. This is a difficult problem and one that has exercised the minds of many concerned with the prevention of this disease in these days.

A scheme has, however, been devised, in which such supervision can be brought about, and this depends on a reagent stick which can detect the presence of anti-tuberculosis drugs in the urine of a patient on treatment.

This scheme is about to be put into operation, firstly in a pilot area based on the Central Chest Clinic, and will entail the collection and testing of the urine of all patients who are receiving chemotherapy on a domiciliary basis.

Such a scheme will entail a considerable amount of extra work for the district nurses, tuberculosis visitors and the administrative staff, but it is considered that this is well justified, preventing as it will, the production of resistant organisms, for it must be remembered that once an organism is drug-resistant it tends to remain so, and a healthy person being infected by such an organism would not derive any benefit from the anti-tuberculous drugs concerned. Every step must, therefore, be taken to avoid the occurrence of such a tragedy.

Canine Tuberculosis.

In November, 1960, the Liverpool University Veterinary Department informed the Health Department that a post-mortem examination of a dog revealed that death had been due to tuberculosis. The owners of the dog were visited and the home contacts examined. The dog was owned by a family consisting of man, wife, and three young children; sharing the house with them was a man of 64 years of age and an unmarried man of 38 years.

Canine
Tuberculosis

Examination of these persons showed that the youngest child, aged six years, was Mantoux positive and X-ray revealed an active primary tuberculous lesion in the right upper lobe of her lung. She is being treated at home on chemotherapy. The young man of 38 years of age was also found to have active tuberculosis of the right upper lobe. He was admitted to hospital where he is making satisfactory progress. The man of 64 years was also Mantoux positive and X-ray revealed suspicious pulmonary pathology, but his specimens of sputum were negative for tubercle bacilli. This man is being kept under close observation by the Chest Clinic. One child was Mantoux negative and was given protection with B.C.G. The remaining child and the parents, although Mantoux positive, were radiologically clear of tuberculosis.

The results of these investigations showed the value of these "follow-ups" and emphasised the importance of contact tracing.

B.C.G. Vaccination.

The scheme for vaccinating school children, operating under Section 28 of the National Health Service Act, continued to be highly successful. Vaccination was offered to 17,187 children between the ages of 13 and 14, and 13,829 parents signed the consent form. This number (13,829) were Heaf tested. 2,076 were positive reactors and these were X-rayed to exclude the

B.C.G. in
schools

possibility of tuberculosis. There were 11,753 negative reactors and these were offered B.C.G. 10,569 actually received vaccination, leaving 1,184 still due to be vaccinated. These are at present being done as and when opportunity arises.

Vaccination of New Born

B.C.G. was again offered to the babies born at the Sefton General Hospital maternity unit into non-tuberculous households, and 1,963 were vaccinated during their first week of life. As the Ministry have ruled that follow-up skin tests are unnecessary in these cases, the mothers were asked to bring their babies back, for inspection only, after six weeks. 1,412 did so, while 45 moved to other local authority areas before the six weeks had elapsed. Their record cards were sent to the Medical Officers of Health concerned. B.C.G. was also given to 163 babies born in the maternity unit at Walton Hospital, 150 at Mill Road Hospital, and 225 at Broadgreen Hospital.

The Unco-operative Tuberculosis Patient and Section 172 of the Public Health Act, 1936.

During the year, it was only necessary to invoke Section 172 of the Public Health Act, 1936 on one occasion. Details are as follows: A man of 48 years, found to have advanced active pulmonary tuberculosis during the 1959 Mass X-Ray Campaign, became completely unco-operative and refused to enter hospital or to take any form of treatment. He was completely indifferent to the danger his infective condition caused to other people. He was interviewed by the Assistant Medical Officer (Tuberculosis) on many occasions and finally requested that action be taken against him under Section 172 of the Public Health Act, 1936. He appreciated his own weaknesses and feared that if he entered hospital voluntarily, he would be unable to remain there and would be likely to take his own discharge, but if he were compulsorily admitted he would be unable to do this. He understood that under these circumstances he would stand a better chance of recovery in that he would remain in hospital an adequate length of time for his treatment to be effective. A Magistrate's Order was obtained and he was compulsorily admitted into hospital. Later, the Order was extended for a further period of three months, after which time the man had settled down in hospital and it was not necessary to extend the Order further.

During the year a further 38 unco-operative patients were dealt with by the Department; these cases being referred from the four chest clinics. Many of these cases had been unco-operative for some considerable time, but

after visits by the Medical Officer they were persuaded either to enter hospital or to accept treatment at home and attend the chest clinic regularly, whichever course of action the chest physician decided was necessary. This success was a very satisfactory one, especially as it was not necessary to invoke Section 172 of the Public Health Act, 1936, in these cases.

It is interesting to speculate as to the reason for this success. One suggestion might be that the 1959 Mass X-Ray Campaign considerably changed the public's attitude towards tuberculosis. The success in treating the active cases discovered during the campaign is now common knowledge and this has undoubtedly created less fear of the disease in the minds of the citizens of Liverpool than had existed previously.

Mass Radiography.

The Liverpool Regional Hospital Board administer the mass radiography **Mass Radiography** services within the City and in the surrounding districts. There is a static unit operating in Hood Street and three mobile units, one of which has its headquarters at Park Hospital, Orphan Drive. The static unit examines individuals from three main sources:—

- (a) Cases referred by general practitioners, mainly within the City;
- (b) National Service recruits;
- (c) Business firms in the City and adjacent areas.

During 1960, this unit made 43,733 such examinations, of which 26,450 were referred by general practitioners, 9,660 were National Service recruits and 7,623 were from business firms.

All prospective employees of the City Nursing Service are X-rayed by the Hood Street unit before their engagement, as are candidates for employment as school teachers, and recruits to the City Police Force. The entry medical examination of Corporation employees now includes a chest X-ray and all these are done at Hood Street, as are the chest X-rays for Corporation superannuation medical examinations and those required for other reasons to corporation employees.

The three mobile units, more particularly the No. 4 unit from Park Hospital, co-operate to the full with the Health Department by arranging visits to factories and other premises when cases of tuberculosis have been discovered there. The numbers X-rayed by each unit are as follows:—

No. 2 unit ... 39,413

No. 3 unit ... 39,200

No. 4 unit ... 35,094

X-ray examination of school children has been replaced by a more selective examination of those children who are found to have positive Mantoux reactions at the routine annual testing of the 13-14 year age group.

Tuberculosis Welfare.

Tuberculosis Welfare

During 1960, 324 cases have been the subject of reports to the National Assistance Board with a view to determining their eligibility for the special rates of allowances applicable to cases of tuberculosis. The National Assistance Board constantly reviews persons in receipt of allowances and requests confirmation that the individuals are still receiving treatment or are under the supervision of the Chest Physician. The department co-operates to the full in this matter and supplies the Board with the information required.

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

Summary of cases dealt with during the year 1960:—

Rehabilitation A.	Total cases referred by the Ministry of Labour to Tuberculosis Officers	...	317
	(a) Examined and found fit for light, part-time or full-time employment	...	293
	(b) Not fit for employment	... ..	3
	(c) Failed to attend for examination	... ..	1
	(d) Certified as non-tuberculous	... ..	6
	(e) Cases not yet examined	... ..	14
B.	Actual numbers of patients reported by Ministry of Labour as placed in employment	... ..	98

Work of the Chest Clinics.

A statistical survey of the work done during 1960 at the four chest clinics is given in Table 19 of the Appendix.

The chest physicians have kindly contributed the following reports.

**Reports of the
Chest
Physicians**

Dr. F. E. Crawley, from the South Chest Clinic writes—

During the past year we have been able to assess to some extent the **South Clinic** immediate effects of the 1959 Mass Radiography Campaign, which accounted for the greater part of the 525 new cases of pulmonary tuberculosis diagnosed in that year in the area served by the Clinic.

For some time the incidence of tuberculosis in all forms has been tending to decrease, but in 1960, there were only 112 new cases of pulmonary tuberculosis compared with 215 in 1958. This immediate effect of the X-ray campaign cannot be expected to continue so dramatically over the next few years. There is a possibility that next year's figures may even show some increase as those who eluded the drag-net of the Campaign spread their infection in a population which may be a little over-confident in the knowledge of a clear X-ray two years ago.

The work of the Clinic shows a small decline in the number of attendances as a result of the fewer number of new cases discovered, but the number of cases on the Clinic Register is now almost exactly that of 1958 as a result of the removal from supervision of over 300 patients cured during the year. From now on it can be expected that the number of patients under supervision will steadily fall.

It has been for some time apparent that the greatest incidence of pulmonary tuberculosis is in men over forty, a group in which chronic bronchitis is also common. Though cure of the tuberculosis infection is a confident expectation when adequate treatment is accepted, there is in this group a general tendency for healing to leave some scarring of the lungs which appears to increase a susceptibility to the development of chronic bronchitis, the consequences of which may cause as much disability as tuberculosis itself, though fortunately without the possibility of harm to the family and other contacts.

A present feature of the sanatorium wards is the high proportion of patients in the over 60 age group, suffering from disabling chronic bronchitis, who have been readmitted during the colder months of the year, and in whom tuberculosis infection is well advanced in cure, but because of relatively recent tuberculous infection, even though now free of the danger of infecting others, are considered unfit for admission to the acute wards of

a general hospital. Many such elderly patients living alone or otherwise lacking adequate facilities for care at home are readmitted and retained in hospital for many months and even longer when, but for recent past history of tuberculous infection, they would be candidates for care in old folks' homes.

With the more frequent discovery of tuberculous infection in relatively slight form, domiciliary treatment is proving more often adequate.

The popularity of B.C.G. vaccination of children born in the Sefton General Hospital Maternity Department is increasing, the parents of 1,963 infants requesting this protection in 75 per cent of all infants born in the hospital.

Dr. D. Osborne Hughes, from the East Chest Clinic writes—

East Clinic

The work done at the Clinic in the past year expressed in figures seems to compare unfavourably with 1959, but in fact the return to normal working only emphasises the magnitude of the efforts made in 1959.

Once more new cases of tuberculosis show a welcome decrease, the total of respiratory cases at the end of the year was below 2,000 for the first time.

It is somewhat disappointing to find that the new positive sputum cases have not fallen to an even smaller figure, there has been a marked reduction in the number of new sputum negative cases—the 1960 figures showing a reduction of 47 per cent compared with 1958, whereas for positive cases the reduction is only 22 per cent.

This suggests that in the 24 per cent of the population not X-rayed during the Campaign, there still remains a substantial pool of undiagnosed cases and every effort should be made to ensure that any patient with any symptoms whatsoever, if he or she failed to have a film during 1959, is X-rayed as soon as possible.

Now that electricity is available in nearly every house and portable X-ray machines to hand—not even the housebound or bedridden should go unexamined.

B.C.G. vaccinations carried out at the clinic show a fall of about 150, or three a week—some of this may be due to the increase in anti-diphtheria inoculation which resulted after the finding of a few cases of diphtheria in the city; in addition fewer contacts were examined because fewer new cases

were diagnosed. Every effort will be made to recover the ground lost because, as the chance of a naturally occurring infection diminishes, the dangers to the individual who has become infected are increased.

The X-raying of school children found tuberculin positive and of school contacts has added to the work, but making the Chest Clinic the centre of anti-tuberculosis activity has many advantages.

Treatment during the year has changed very little, patients on chemotherapy at home are, in general, co-operative; it is useful to be able to confirm or otherwise statements that drugs are being taken regularly.

Our patients, when fit to return to work, seem on the whole to obtain suitable employment, although the position is not quite so easy as in previous years; patients are now encouraged to use the Occupational Therapy Centre if they are unemployed for more than a few weeks.

It is in the re-housing of the tuberculous that the greatest progress has been made; the realisation that an infectious disease cannot be adequately dealt with by a points scheme was long overdue and it might well be that houses would be more equitably allocated if medical standards of need were adopted generally, and not merely in case of tuberculosis.

Dr. W. D. Gray of the North Chest Clinic, writes—

In commenting on our statistics for 1960, I have decided to compare them **North Clinic** with the figures for 1958, as 1959 was an abnormal year, in view of the vast number of new patients discovered in the Mass Radiography Campaign, and the extra work in contact examination that this entailed.

During 1960 we discovered 133 new cases of pulmonary tuberculosis as compared with 180 during 1958. It is hoped that this downward trend will continue, but it is obvious that tuberculosis as an infectious disease is by no means finished. We had 75 cases at home with a positive sputum, fifteen of them with resistant organisms. Further efforts to persuade some of these patients to come into hospital for treatment are being made and I should like to thank the Medical Officer of Health's Department for co-operating in dealing with difficult patients.

Sixty patients died in the area suffering from pulmonary tuberculosis during the year, but 31 of these deaths were due to other causes. Corresponding figures for 1959 were 46, twelve from other causes. So that the death rate due to tuberculosis as a primary cause is slightly less.

It is a pleasure now to record the help that we are receiving from the Health Department in re-housing the active cases of tuberculosis and their families with much more speed.

The number of new contacts examined in 1960 was 480, of whom two adult women and two children were found to be tuberculous. The contact ratio for 1960 is 3.2 as compared with 4 in 1959. Although this does not appear to be entirely satisfactory, I think that it is partly due to the fact that the Liverpool area served by the North Chest Clinic does not contain much new housing and the number of families with young children are diminishing. The position in Kirkby is very different where we had 26 new cases and examined 476 new contacts which gives a contact ratio of about eighteen. This lessening of children found for examination is also shown in the B.C.G. figures which show that 204 were vaccinated in 1960 at the Clinic at Walton Hospital, as compared with 284 in 1959 and 140 during 1958. 761 tuberculin tests were done at the Clinic as compared with 922 in 1958.

The total attendances for Liverpool patients during 1960 were 7,169, as compared with 6,974 in 1958. 1,135 of these attendances were for chest conditions other than tuberculosis, including chronic bronchitis and carcinoma of the lung. This compares with 6,974 attendances in 1958 as 629 were for other chest conditions, 345 of these being new patients.

Owing to the extending need of follow-up of patients who are well and working, it has been necessary to increase our evening clinic session from one a month to two a month for most months of the year. This service improves the efficiency of the after-care and lessens the rate of non-attendance considerably.

Dr. F. J. Welton of the Central Chest Clinic, writes—

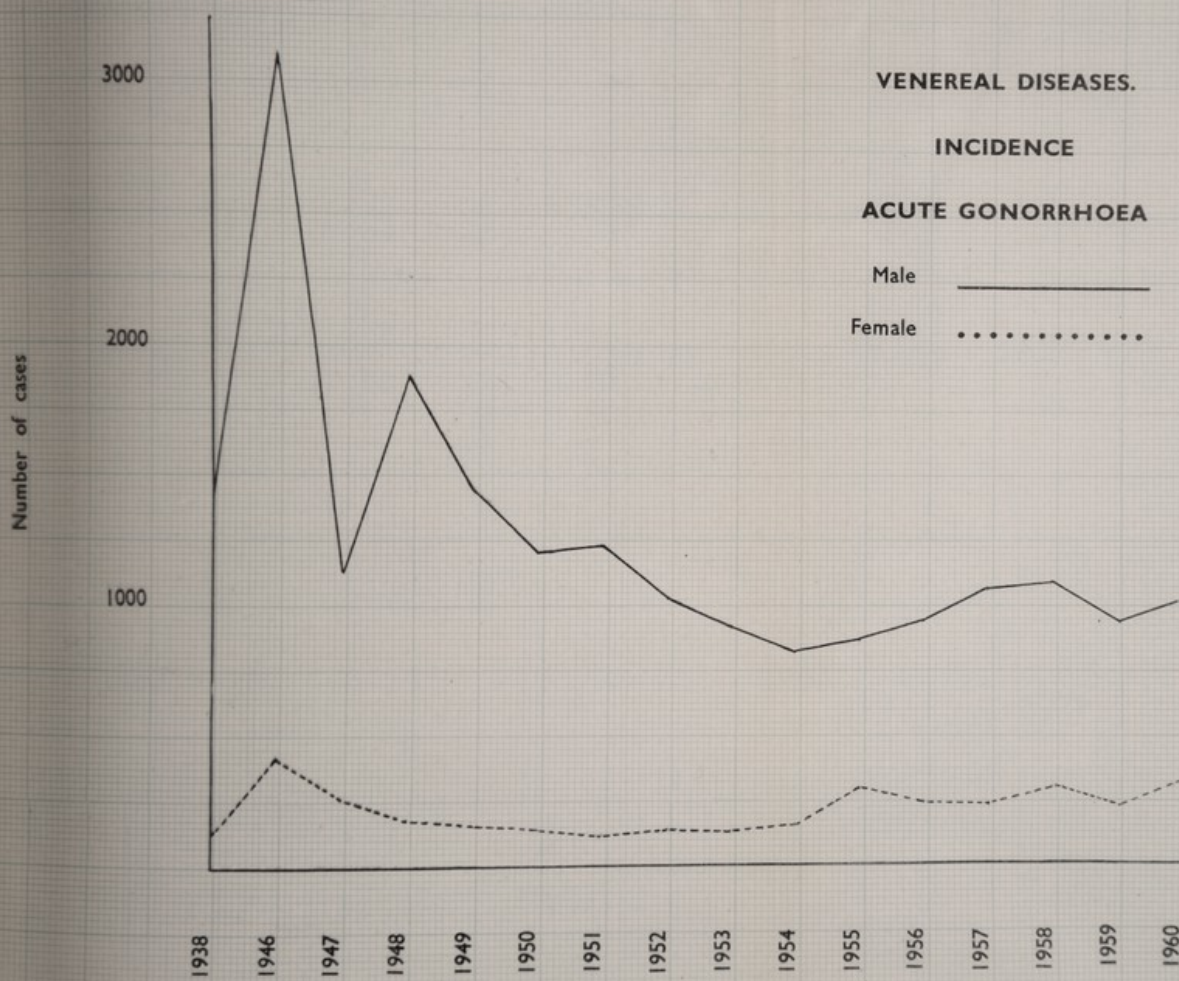
Central Clinic The Central Chest Clinic, which is a separate unit from the Chest Hospital, though sharing the same building and X-ray department, serves a population of 142,300 in the very densely crowded cosmopolitan, dockland area of the city. Mere figures are inadequate to describe the year's work and, as in other areas, any comparison with the previous year is invalid owing to the extra numbers of cases dealt with during the 1959 Mass Radiography Campaign. As was to be expected, there were considerably fewer new cases of tuberculosis brought to light in 1960—165 in all, but the totals of contacts examined, tuberculin tests and B.C.G. vaccinations performed remained

much the same as 1958—i.e., the year before the Mass Radiography Campaign. A very significant figure was that for sputum-positive (ie., infectious) patients. 97 were known to be sputum-positive at some time during the year, and of these, the sputum of 23 patients contained organisms of tuberculosis which were resistant to some or all of the three first-line anti-tuberculosis drugs. A total of 222 cases received treatment with these drugs during the year, most of these fortunately with the benefit which has come to be expected of this highly successful treatment. There is, however, another side of the picture, which is very disturbing. Unless drugs are taken conscientiously, in the doses prescribed and at the proper intervals, their full effect is lost, and the dangerous state of drug resistance is liable to occur. Unfortunately, many of our patients have proved disappointing in the taking of these anti-tuberculous drugs, which it must be admitted, sometimes demands an exceptional degree of personal discipline. Hence, a great deal of careful encouragement and supervision needs to be given to the patients who are receiving these drugs, to ensure that the treatment the patient actually receives is adequate to cope with the disease from which he suffers. Another disturbing feature is the fact that not infrequently a "new" case of pulmonary tuberculosis is diagnosed for the first time in which the disease affecting both lungs is very advanced and cavitating. These cases must have been infectious over long periods before being brought to light, and it is difficult to assess how many other people have been infected before they have been diagnosed. The known pool of tuberculosis infection in the centre of the city is serious enough. The number of unknown cases must still be very considerable and together with the known cases they constitute a total "infecter pool" which will long continue to call for sustained and energetic action on the part of the clinic staff.

The steady flow of seamen from all parts of the world, arriving in Liverpool and referred to the clinic either by general practitioners or the medical officers of shipping companies is maintained and it is very rarely that a single clinic session goes by without one of these patients—from Africa, India, the Far or Middle East being seen. They require special attention at the clinic in view of the fact that frequently there is a quick turn-around of their ships and speed in diagnosis and disposal is essential. A complete diagnosis is not always possible, of course, but the clinic has long become accustomed to dealing with these seafarers, and the answer to their immediate need is usually forthcoming quickly enough, and with a

minimum of trouble to the companies concerned. In this connection, too, the opportunity is taken to pay tribute to the medical officers of the Shipping Federation, the National Dock Labour Board and other industrial medical officers, for their ready interest and help in the rehabilitation of selected patients who become fit for work. Unfortunately, experience has shown that the greatest majority of male patients in this area who become fit for work meet with disappointment and fail to find suitable employment. This is not the fault of the Disablement Resettlement Officers of the Labour Exchange—the reason is to be found in a number of causes, the two most important being the relatively high rate of unemployment existing in the central area and the poor employment qualities of our patients quite apart from their physical limitations.

The numerous common lodging houses present a peculiar problem with their shifting population, among whom it is known that there is a higher incidence of tuberculosis than in the community as a whole. All these problems, mainly relating to human behaviour, present a challenge which is not allowed to go unheeded, but it will be realised that the efforts which are demanded to deal with them frequently appear to be unrewarding and apparently in large measure wasted. It is only in retrospect that the sustained effort of the years can be seen to be bringing its results, and consideration of the problem of tuberculosis in central Liverpool still requires a very long-term view, by comparison with other areas in the country where progress towards final eradication has been more rapid in the absence of difficulties mentioned in this report.



VENEREAL DISEASES.

INCIDENCE

ACUTE GONORRHOEA

Male

Female

0000

0000

0001

Number of cases

1923

1925

1921

1957

1920

1958

1942

1959

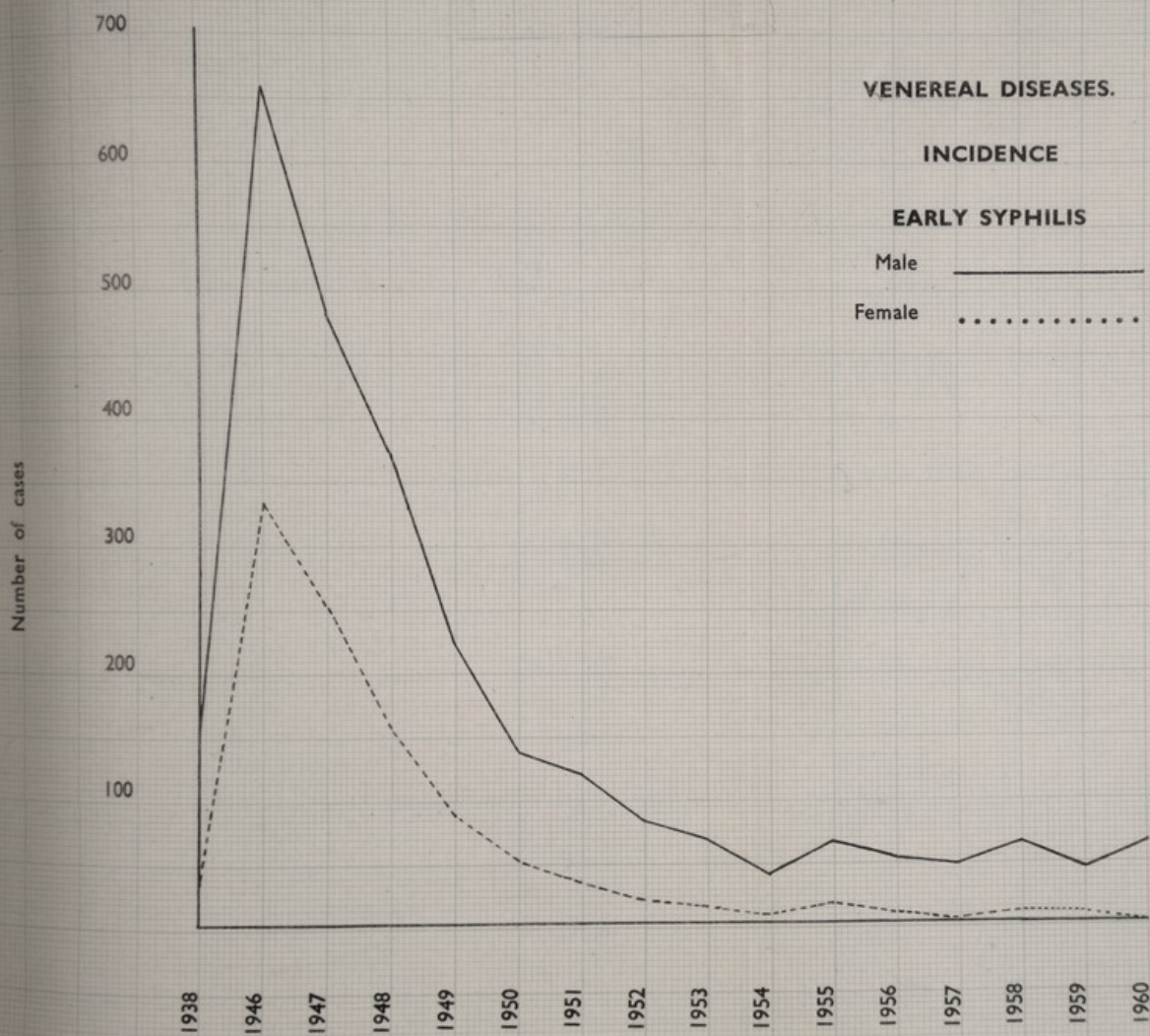
1948

1960

1941

1949

1938



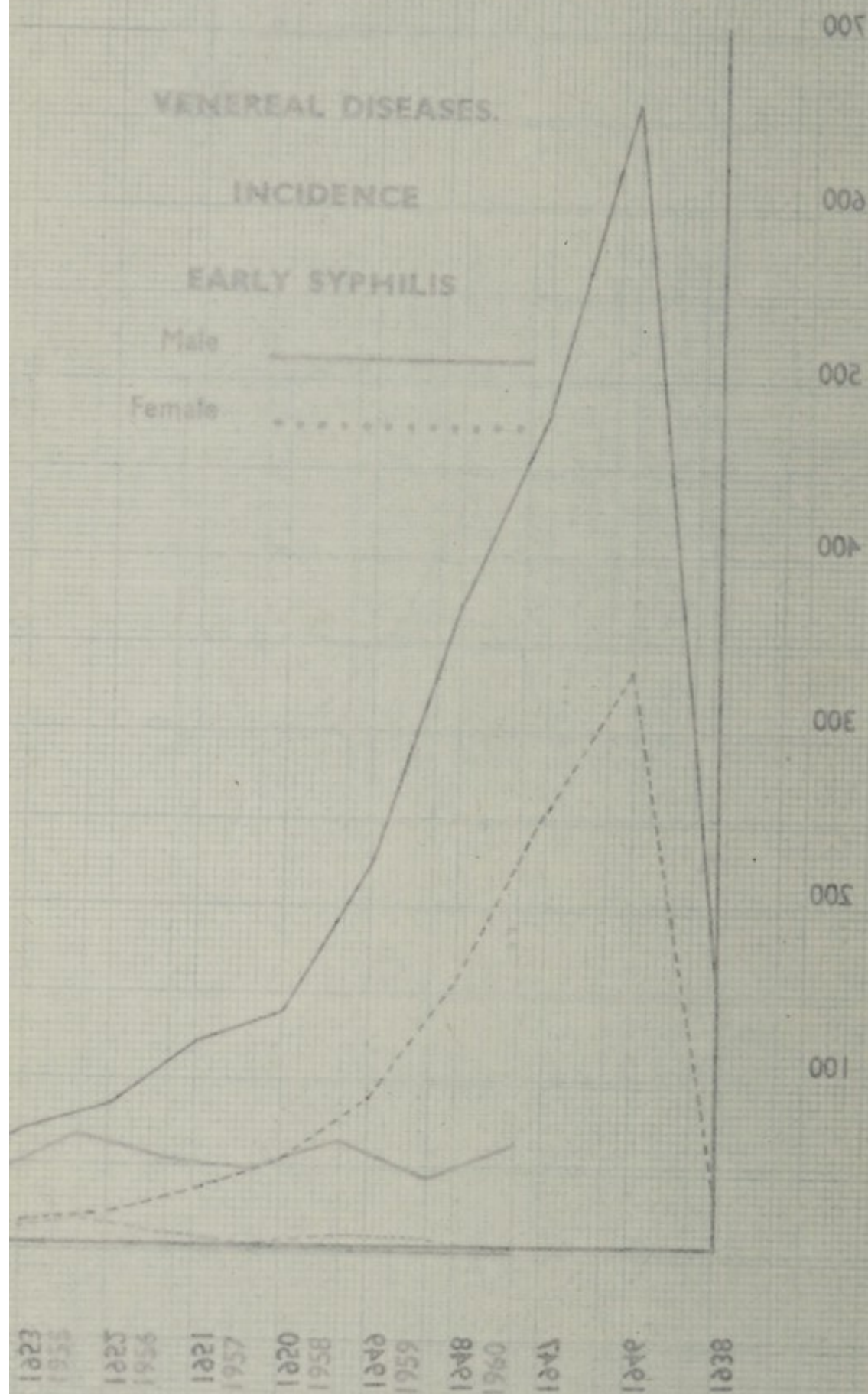
VENEREAL DISEASES.

INCIDENCE

EARLY SYPHILIS

Male

Female



VENEREAL DISEASES—AFTER-CARE AND WELFARE

Although the treatment of venereal disease is the responsibility of the Liverpool Regional Hospital Board and the Board of Governors of the United Liverpool Hospitals, the after-care and welfare work associated with these diseases is carried out by the local health authority. The staff employed to undertake this work consists of a senior male welfare visitor and one female welfare visitor. In addition, the services of the female welfare visitor attached to the Royal Infirmary V.D. Clinic are available.

**Venereal
Diseases.
After-Care
and Welfare**

The work entails the interviewing of patients, tracing of contacts, writing to and visiting defaulters from treatment, follow-up of patients who have failed to attend following reference to the clinics, and generally assisting patients where social problems exist, especially when these would appear to interfere with clinic attendance. The work embraces also the welfare needs of in-patients of the V.D. wards. At all times, close co-operation with the medical officers of the various treatment centres is maintained.

Tables 24 and 25 in the statistical appendix and the following graphs illustrate the pattern of incidence in early syphilis and acute gonorrhoea for the immediate pre-war full year 1938, peak year 1946, and subsequent years to that under review. It is gratifying to report that only one female case of early syphilis, the lowest total recorded, came under treatment during the year. This trend was not reflected in the case of male syphilis which showed an increase of 22 (50 per cent) on the 1959 total of 44. Reference to the graph shows that over the past eight years there has been a steady fluctuation in the number of cases. This is to be expected at a large port catering, as Liverpool does, for seamen of all nationalities.

In regard to acute gonorrhoea, the female incidence increased by 70 (30·3 per cent) on the 1959 total of 231, the corresponding increase in male gonorrhoea was 73 (7·7 per cent) on the 1959 figure of 940. Again a comparison with the incidence over the past eight years shows a similar pattern of infection. A more detailed comparison of the incidence of acute gonorrhoea in both male and female for the years 1959 and 1960, as compared with 1955 during which year female incidence rose steeply following several years of decline in both sexes, is shown in the following table.

TABLE "A"

	1955		1959		1960	
	Male	Female	Male	Female	Male	Female
Under 15 years ...	—	6	—	2	1	2
15-17 years ...	20	31	16	17	27	15
18-20 years ...	113	63	131	71	116	77
21-25 years ...	237	78	281	79	340	122
26-30 years ...	194	56	225	36	227	54
31-35 years ...	148	30	128	16	133	17
36-40 years ...	71	10	75	7	98	8
41-45 years ...	35	6	43	2	33	2
46 years and over	44	7	41	1	38	4
TOTAL ...	862	287	940	231	1,013	301

*The Teenager and Venereal Disease.***The teenager
and venereal
disease**

The welcome decline in the incidence of acute gonorrhoea in the lower, female, teenage group first shown in 1959, was further maintained in 1960. A comparison of the years 1958, 1959 and 1960, in the groups up to and including the age of 17, showed a consistent decrease in percentage rate of totals, 16 per cent (1958), 8.2 per cent (1959) and 5.6 per cent (1960). This trend in Liverpool has not been experienced in England and Wales as a whole, and it may be that with Liverpool being a major seaport the various agencies, both local authority and voluntary, have succeeded in publicising the dangers of promiscuity to the teenage girl.

Males, for the same period and age group, represented 1.3 per cent (1958), 1.7 per cent (1959) and 2.7 per cent (1960) of the total male cases and were comprised mainly of seafarers who did not contract their infection in Liverpool. Although this was an increase, it was relatively a low one.

*Contact Tracing.***Contact
tracing**

During 1960, there were no notifications of syphilis; in every instance the gonococcus was the causal organism of notified V.D. The following two case histories are illustrations of the work of the V.D. welfare visitors in tracing contacts:—

A foreign seaman contracted gonorrhoea a week after his arrival in Liverpool. He visited the Seamen's Dispensary where a diagnosis of gonorrhoea was confirmed. He was admitted to hospital for treatment. In addition to the gonococcal infection it was found that he was also infected with early syphilis. His exposure to infection with a Liverpool prostitute was admitted and arrangements were made to trace this woman so that a serological examination could be made. **Case 1**

The patient was able to give a clear description of the contact, but was unable to give the address where exposure took place; he was, however, sure, that "it was a corner house". Repeated visits to the district in question with the seaman did not result in a positive identification of the house. This was followed by a systematic visit to all known or suspected clubs and other premises, and eventually the welfare visitor was able to trace and interview the contact. She admitted sexual intercourse with the seaman but claimed that she visited a local hospital within a week of exposure where a diagnosis of salpingitis was made. She was admitted to hospital and successfully treated with the appropriate antibiotic. The facts were verified with the hospital concerned and it was explained to her that, although the gonococcal infection had been cured, there was still the possibility that she may have contracted syphilis from the seaman. In view of this suspicion, it was vital that her surveillance be extended for a period of six months. She agreed and promised to attend at the special clinic within three days.

She failed to attend and subsequent enquiry showed that she had left Liverpool. Four-and-a-half months later, she was traced to Oxford following information from another prostitute. There was a suggestion that the contact had received treatment in Oxford and confirmation was requested from the hospital concerned. The hospital had no record of a case in the name that this woman used in Liverpool, but as her address was known, she was visited and persuaded to attend the special clinic at the hospital. The contact's serology proved to be negative at 14th December, 1960, which was a full six months after exposure to infection.

A commercial traveller from Middlesbrough developed gonorrhoea. His contact was a "pick up" in a "shady" club in Liverpool. He knew her only by nick-name but was able to give a description of the house where intercourse had taken place. Following several unsuccessful visits, access was finally gained to the premises and a girl answering to the patient's description interviewed. **Case 2**

The welfare visitor still had some doubt as to whether or not this girl was the "pick up" until, in the course of conversation, she referred to someone who had recently left Liverpool for Middlesbrough thus naming the town from where the original notification had come. Identity was regarded as established and she was requested to attend a special clinic for investigation. When this was recommended, the contact stated that she had recently received treatment from a local general practitioner following a letter received from the commercial traveller urging her to undergo treatment. The welfare visitor insisted that surveillance was still necessary despite the treatment so that an effective cure could be established. Failure of the contact to act upon this advice had necessitated further visits.

Results from contact tracing are shown in Table 26 in the statistical appendix.

Patient Defaulters.

Patient Defaulters

Results obtained, following reference of patients in default, are shown in Tables 27 and 28. Two specimen case-histories are presented to illustrate the nature of this branch of V.D. Welfare.

Case 1

A female teenager attended at the special clinic with a request for investigation as she had recently been exposed to infection. She was instructed to re-attend for the results of the tests, but failed to do so. As these proved to be positive, the patient was immediately visited. She was found to be lodging in one single room, having left home and given up her employment some three weeks previously. In view of both background and clinical condition, she was offered hospital accommodation. This was at first refused. The welfare visitor persisted in explaining the need for admission, and eventually gained the patient's confidence and a promise of co-operation, on the understanding that her parents were not to be informed of her whereabouts. This was agreed to in order to gain both her confidence and admission to hospital for treatment.

Several days after admission to hospital, the patient demanded her discharge but was prevailed upon to remain. Later, her demand was renewed and at this stage it was felt opportune to ask the patient to agree to the parents being approached. Eventually she agreed to this and a home visit was made, both parents being interviewed by the welfare visitor, who felt that the home conditions left much to be desired. The

parents were encouraged to overlook their daughter's lapse and she was subsequently discharged from hospital to her home. Employment has been resumed, and contact with the patient is being maintained by the welfare visitor.

A male patient attending a clinic in a northern city was found to be **Case 2** suffering from early syphilis; shortly after commencing treatment, he defaulted. He was a resident of the Merseyside area and the venereologist of the clinic communicated with the senior V.D. consultant of the Liverpool Region requesting that he might take such action as was possible to bring the case under control. Details were passed to the V.D. welfare officer and the man visited at his home. He was made fully aware of the urgent necessity for a resumption of treatment, and particular stress was laid on the importance of continuity. A promise was made to attend at a clinic in the Merseyside area, but the patient failed to report and series of contacts were ineffectual. Eventually, the welfare visitor collected and escorted the patient to the special clinic where he commenced, and subsequently completed, the recommended course of treatment. Results of follow-up are shown in Tables 27 and 28 in the statistical appendix.

Cases referred by Ante-Natal Clinics.

A total of eleven cases were referred for further investigation following upon doubtful serology at ante-natal clinics. In ten cases specific disease was excluded. The remaining case was found to be congenital in origin and placed under treatment. **Cases referred by Ante-Natal Clinics**

Neo-Natal Cases referred.

Eight cases of gonococcal ophthalmia neonatorum were transferred from maternity units for in-patient treatment. In each instance the mother accompanied her infant, and where hospital discharge was taken against advice, the case was followed up by the welfare visitor. In no instance had the mother attended a Liverpool V.D. clinic during pregnancy. **Neo-Natal cases referred**

General After-Care.

A number of home visits were made in respect of babies born of mothers with a history of positive venereal disease. In all such cases, it was subsequently shown that the babies were clear of venereal disease on serological examination. **General After-care**

In addition to the normal duties of the V.D. welfare visitors outlined in the previous paragraph, a variety of interesting follow-up cases were undertaken. In the case of adoptions for example, a number of escort duties were performed in addition to the necessary liaison with the adoption societies.

The value of what might be looked upon as "extended after-care" particularly in regard to early syphilis, is illustrated by the following case history:—

Case History A young female came under treatment for secondary syphilis early in 1959; she received incomplete treatment and failed to attend for follow-up. This girl was, by Court Order, under the supervision of the Probation Officer and despite her efforts, and the repeated visits of the welfare visitor, the patient refused to attend for further examinations. Eight months later the welfare visitor, after repeated efforts to make contact, finally persuaded the girl to visit the clinic and further necessary treatment was resumed. This outcome is highly satisfactory since the patient has expressed her intention of marrying in the near future.

MENTAL HEALTH SERVICE

As the Mental Health Act did not come into full operation until 1st November 1960 it will be necessary to wait another year before the annual report can contain an account of its full effect. **Mental Health Act**

During the year, however, the "schemes" of local health authorities for developing their community services under the Act were drawn up and a description of Liverpool's scheme can be given. The very extensive plans will take several years to complete but certain progress has already been made and an account of this is included.

The report is divided under headings corresponding to the two groups of responsibilities which the Act places on Local Health authorities, viz. (a) the care of mentally disordered people in the community (i.e. those not under treatment in hospitals), and (b) the arrangements for admitting people to hospital who, even under the new Act, are recognised to need some compulsion to enable them to be given care and treatment.

Community Care.

1. Visiting.

In previous years the work of the visiting officers has been shown under "supervision of the mentally defective" and "care and after-care of the mentally ill", the duties being performed under different Acts. The Mental Health Act has drawn the two together, rendered practically obsolete the forbidding title of statutory supervision and put on the same friendly and voluntary footing the community care of people suffering from all forms of mental disorder. Community care is now "statutory" only so far as it relates to compulsory attendance of mentally subnormal children at training centres (bringing them into line with schoolchildren) and to persons under guardianship. No change of methods has been necessary in Liverpool as the same officers have always dealt with patients of all types. **Informal nature of visiting work**

The number of visits has been growing steadily as the following figures show:— **Increase in visiting work**

1950...	...	...	...	6,976 visits
1955...	...	...	...	9,753 „
1959...	...	...	...	12,739 „
1960...	...	...	...	19,011 „

The sharper increase in the year under review reflects the work done by the additional staff appointed in anticipation of the passing of the Mental Health Act. It cannot be said that all the additional work for which they were appointed has yet materialised but one of the main objects has been achieved—by the reduction of the "case-load" of each officer more intensive and effective visiting has been done and there has been better co-operation with other services for the patient's benefit. At the end of the year 3,384 people were on the visiting list as compared with 3,211 at the end of last year.

**Effect of
home
visits**

What is achieved by home visiting? The Mental Health Act implies that it is too narrow a view to think of treatment as being only treatment in hospital or clinic. Effects and causes in mental illness are so intermingled that they often cannot be separated—can it be said even, that the chat over a cup of tea is "treatment" if it means that a lonely person on the brink of mental breakdown feels he is supported by friends and can share his anxieties instead of keeping them to himself; can the finding of a job be "treatment" if it results in bringing back self-respect and confidence?

Again, as in previous years, it must be emphasised that cold statistical records cannot show the effects of visits. If one of the more immediately successful cases is given below as an example of the work done this is not to denigrate the many where success is less evident, or even those where failure must be admitted.

Mrs. X a married woman of 34 came to the notice of the service two years ago after her mental health had broken down under the stress of domestic problems, including rent arrears. Her husband was unemployed. After attempting suicide she was admitted to a psychiatric hospital. After three weeks she was discharged but visits to encourage her were not successful and she again made a suicide attempt which was followed by another short period of hospital treatment. It was felt that the husband's unemployment was a contributory cause and at length a job was found for him. A threatened eviction was avoided after efforts made by the officer supervising the patient.

The foundation was thus laid for Mrs. X's rehabilitation. She was visited regularly, encouraged to interest herself in her home and, after she had expressed a desire for work, she was placed in a department store over Christmas. This seemed to effect a remarkable change and when the

temporary staff was discharged Mrs. X was retained. Assisted by the officer she has since put her affairs in order, rent arrears are being paid off and the latest information is that she is being considered for a more senior post in her employment.

Turning to visiting of the mentally subnormal there is an obvious need in many cases for help and support for the family who have the task of looking after the subnormal person whether child or adult. In other cases it may be essential for protection and welfare. There are, however, many parents who are fully capable of rearing such a child and who need help only during periods of temporary crisis. Frequency of visiting may therefore differ widely. In all 9,463 visits were paid to the homes, an average of 5 per annum. To illustrate the differing need two cases may be taken:—

Visits to
mentally
subnormal

Mr. B is in business for himself, a normal individual living normally in a comfortable middle-class environment. His wife is pleasant, capable and smart. There are three children, two of whom are doing well at school but the third is a mongol. The home is well run and the family does not lack material comforts. They understand fully the problems involved in bringing up the subnormal child, who leads a happy and developing life, attending a training centre and being fully accepted in the home. In these circumstances the department's work is limited to providing training at the Centre and the officer's home visits, though welcome, need be no more than annually.

In the case of the C family, visits, enquiries and assistance continued regularly through the year and indeed have gone on continually since 1956 when Joan, a severely subnormal child, was referred. There are five other children at home, Joan being the youngest. The domestic background is full of friction and instability. Both parents change their minds frequently about Joan's future—one moment begging for hospital care, the next refusing it. Their quarrels and changeable attitude have had a bad effect on the child who is pleasant and well spoken of by those in charge of her when she has had periods of short-term care. At home, however, she is subject to hysterical outbursts.

In 1958 Joan was given extended hospital care but the parents took her home against medical advice. Since then they have bombarded the officer with requests for further care. Many short periods have been given and recently the child was again placed on the list for extended care. Such

care, with the opportunity it would give for training and stability, could effect a great deal of improvement; meantime the mental welfare officer continues to do her best to help the family as a whole and induce a more helpful attitude in the parents.

Work of Psychiatric Social Worker

The year under review was the first full year in which the services of a psychiatric social worker were available. She has been working with patients presenting special difficulties and has also collaborated with mental welfare officers on some of their cases. In addition a successful liaison was established with Health Visitors who were able to discuss psychiatric problems among the families they visited and thus take part in the prevention and after-care work of the service.

An example of this work was the case of a partially handicapped young mother of three children under the age of five, who was visited regularly because of a tendency to become very tearful and depressed. A contributory cause of her depression was found to be certain matrimonial difficulties in which both families took sides. The husband and relatives were interviewed and his point of view was explained to his wife; the co-operation of the matrimonial section of the Probation service was enlisted so that the wife's difficulties were explained to the husband. As a result of this work certain financial disagreements were completely resolved, the couple are able to work together more amicably and the wife's depression has not recurred in spite of a trying time with the children's ailments during the winter.

2. *Training.*

Training

An important part of Liverpool's plans for future development is concerned with the training of the mentally disordered. In the immediate future the emphasis will be on the mentally subnormal but eventually mentally ill people will also be given the opportunity of training and sheltered employment.

This problem of training is often thought of as being mainly that of the mentally subnormal child and certainly that is an essential part of it—there is no doubt that the parents of a mentally subnormal child are entitled to expect that the Health Department shall take up where the Education Department leave off—in other words that if the child is excluded from school he will automatically continue his "education" at a training centre. Indeed the new Act makes attendance compulsory under certain circumstances for the first time, so that there is now more urgency than ever to

provide the extra training centre accommodation which has been so badly needed in Liverpool for a number of years. As will be seen below there is every indication that this need will be met during the coming year.

It is important to emphasise once again, that training concerns adults as well as children. Whilst the normal child leaves school at 15 (or a higher age) and soon becomes self-supporting, the subnormal child may grow into manhood or womanhood without being able to achieve independence. Some can—and of course the primary object of the service is to ensure that this number is as large as possible—but some cannot. Though they live in the community, they still need occupation, training or employment where they are not frustrated by their lack of ability to compete.

**Training of
Adults**

There are in fact in Liverpool 1,482 mentally subnormal adults (16 and over), of whom only about 300 are regularly employed as against 361 children (0-15). Even in the existing training centres there are more adults and adolescents attending than children so that plans for the future must recognise that here is a problem just as important as the training of the child of school age.

In considering progress made during the year and the plans in the Liverpool "scheme" the training can be discussed under the following headings:—

(a) Training of children.

The adaptations to six "villas" at New Hall, Fazakerley, commenced in June 1960 and were in an advanced stage by the end of the year. These will be opened as six training centres with places for up to 350 mentally subnormal persons. Three of them—Lilac House, Laburnum House and Cherry Tree House, will be for children, and will provide a total of 170 places. Their situation as part of the overall plan for the Fazakerley estate is shown on the sketch map.

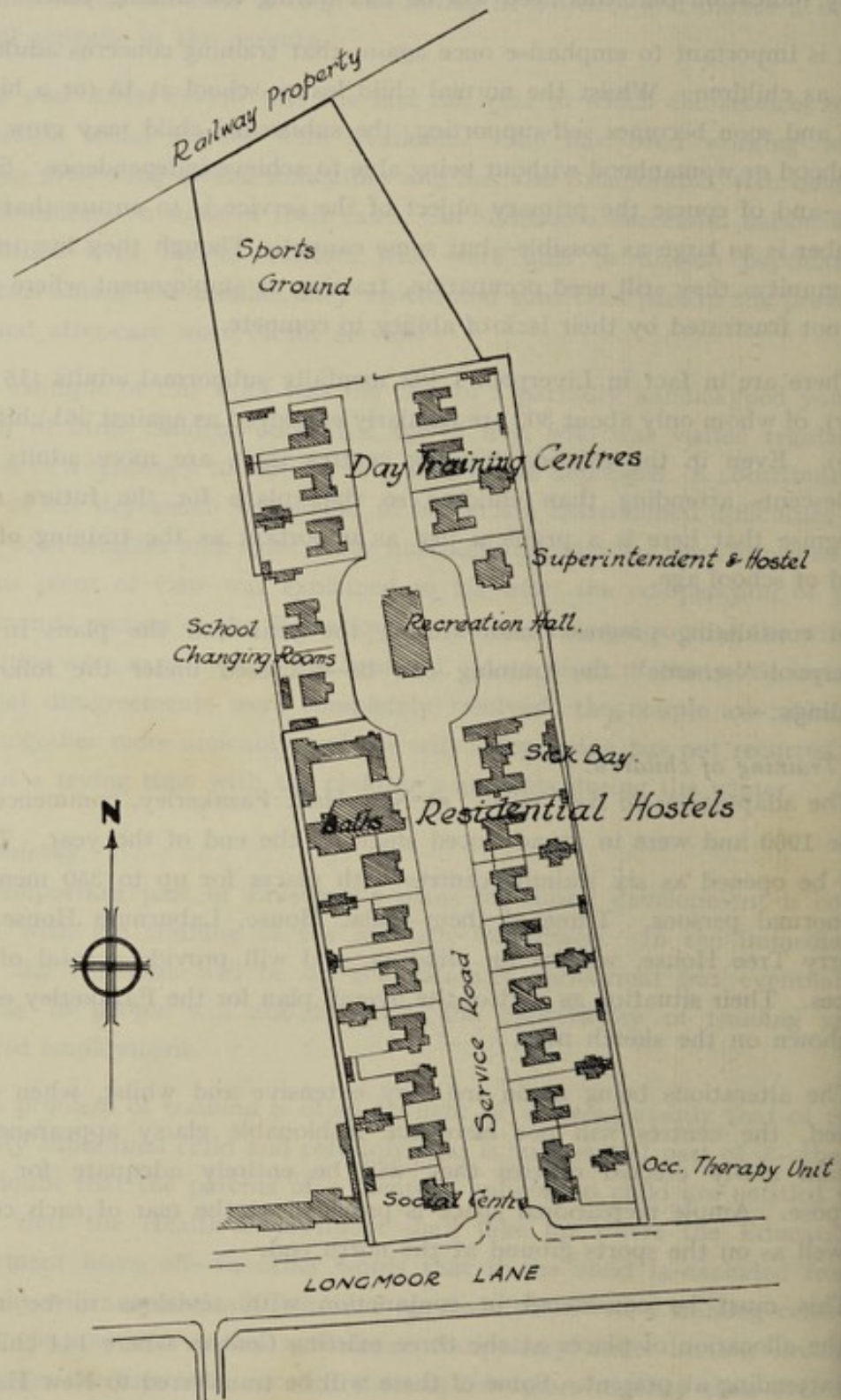
**New Hall
Centres**

The alterations being made are very extensive and whilst, when completed, the centres will not have the fashionable glassy appearance of certain newly erected centres they will be entirely adequate for their purpose. Ample recreational space is provided at the rear of each centre as well as on the sports ground at the north end.

This must be considered in conjunction with revisions to be made in the allocation of places at the three existing Centres where 144 children are attending at present. Some of these will be transferred to New Hall to

**Position at
New Hall**

NEW HALL - FAZAKERLEY
MENTAL HEALTH SERVICE PROJECTS.



make room for others from the waiting list and a general reorganisation will take place, numbers being reduced at the existing centres. New transport arrangements will be necessary and in fact, the whole scheme for training in the city will be changed.

The proposed new distribution of children is shown in the following Table but this plan can be changed easily as experience shows the need.

Centre	No. of places	
	Nursery and special care	Junior and intermediate
Princes Road	10	40
Dovecot	10	40
Garston	10	50
Cherry Tree House ...	50	—
Lilac House	—	60
Laburnum House ...	—	60
	80	250

The total of 330 places will make it possible to absorb the whole of the present waiting list of 115 and leave some room for children as they are referred in the future.

There should be no shortage of places for suitable children under these arrangements but the margin is not large and, dependent on the demand for adult centres, which it is difficult to forecast, further accommodation for children may become necessary within the next few years.

(b) Training Centres for adults.

Hitherto the training of adults has been confined to the mentally sub-normal and, as no specialised accommodation has been available, the arrangements have been far from satisfactory. At Princes Road Centre in particular there are over 50 adult males in the same centre as young children and it reflects credit on the staff not only that the standard of training has been kept so high but also that there have been no incidents or complaints.

Three of the New Hall Centres, Oak House, Poplar House, and Hawthorn House, are intended for adults, and the Liverpool plan also provides for one or more workshops either at New Hall or elsewhere in the city. It will be possible to train men and women at the New Hall Centres and assess their suitability for entry into either a sheltered workshop or open industry.

At the end of the year upwards of 100 men and 80 women were available either by transfer from existing centres or from the waiting list and it had been decided that the adult New Hall Centres would open first—probably after Easter 1961. After reorganisation at the existing Centres the following will eventually be the new allocation of places for adults:—

Centre	No. of places	
	Youths and men	Older girls and women
Princes Road	—	30
Dovecot	—	10
Garston	—	—
Oak House	60	—
Poplar House	60	—
Hawthorn House	—	60
	120	100

It will be seen that the training of men will be entirely concentrated at New Hall and the accommodation should be considered in conjunction with the plan to open a workshop, described below.

(c) *Workshops.*

Workshops

This country has lagged behind others in providing sheltered work, as opposed to unremunerative occupation, for the mentally subnormal. REMPLOY factories absorb a small proportion of people recovering from mental illness but even less provision of this nature is made for the subnormal and severely subnormal for whom local health authorities have responsibility. In Liverpool attempts have been made to place those who have the slightest

chance to work in open industry (see the report on the work of the Employment Officer below) but there is a need for sheltered work which the mentally subnormal person can do at his own pace and in the company of people similarly handicapped.

This is an important new field of responsibility to be explored, but it is considered that the opening in the near future of at least one sheltered workshop would be justified in Liverpool and this part of the scheme under the Act was under active consideration at the end of the year. A possible site in a central area was viewed and it is hoped that progress will be made in 1961.

(d) Occupational Therapy.

During the year a number of mentally ill and mentally subnormal people were referred to the department's Home Occupational Therapy section. Some were given occupation in their homes, others attended the new Unit at Westminster House.

In this period of upheaval the training at the existing training centres has continued along well-established lines. In July, as part of the National Mental Health week, centres were thrown open to the public but there was a very poor response. This apathy contrasted strangely with the interest shown by many people in the display of articles made at the centres which formed part of the Health Department's exhibit at the Liverpool Show during the same week.

3. Employment.

The number of patients referred to the employment officer had grown so much that in August it was decided to allocate a second officer to this work. The work done by the two officers can be illustrated by the following figures:—

Patients on employment officers' registers at 31.12.60 ...	536
Referred during the year	137
Placed in employment	61
Found employment after consultation	19
Lost employment found for them	25
Found to be unemployable	31

It is felt that this service has well justified its existence over the past eleven years. The number of jobs found in that time—569—may seem modest but in the context of the difficulties constantly met it represents a real achievement.

Difficulties of Employment Officer

Subnormal and mentally ill patients are referred in about equal numbers. Among the subnormal, illiteracy and near illiteracy are all but universal, accompanied in many cases by physical disability. With people suffering or recovering from mental illness, the difficulties are more likely to be instability or a pathetic reluctance to accept that illness may have limited their usefulness. On the other hand a common plea is "I'm only fit for light work" or "I just want a simple, fresh-air job". The belief that such jobs are to be had for the asking is unfortunately common among relatives as well as patients.

Perhaps instability is the biggest worry to the officers—all too often they have the discouraging experience of finding a suitable job for a patient only to see him leave it on the flimsiest of pretexts. Most difficult of all to deal with is the psychopath, known to be unreliable, yet needing work even if only for the sake of his family. The officers have a duty to employers as well as patients and it says much for their tact and the employers' sympathy that so much good is done with such unskilled, unpredictable and unreliable material.

4. *Hostels.*

Hostels

One important recommendation made by the Royal Commission and incorporated in the Mental Health Act is that residential hostels should be provided by local authorities which would give sufficient protection and supervision to enable many patients hitherto spending long periods, and sometimes their whole lives, in hospital, to live within the community. Such hostels should also be used as a means of avoiding recourse to hospital in cases where the specialised nursing and psychiatric care available in hospitals is not needed.

A survey of hospital patients was requested to enable the Health Department to obtain a detailed idea of the demand for hostel accommodation and this had not been completed by the end of the year. It was quite evident, however, that a substantial number of patients was involved and that Liverpool must plan accordingly.

Part of the New Hall estate having already been allotted for mental health purposes it was natural that the remainder of the "villas" should be thought of as possible hostels. The Health Committee had to balance, against some misgivings about having a group of hostels somewhat isolated from the general public, the undoubted advantage that these excellent buildings were already in existence on a site capable of communal development.

**Hostels at
New Hall**

The advantages were considered to outweigh the disadvantages and the plan to open thirteen hostels at New Hall was submitted to the Ministry, who agreed to it in principle, though only on the understanding that additional amenities would be provided. At the end of the year an amended plan was under consideration and, if this is approved, it is hoped that the first phase of the extensive adaptations will begin about the middle of 1961. Accommodation will be provided under this plan for about 150 residents with, among other amenities, a social club, shop and tearoom, occupational therapy unit, swimming bath, gardens, a putting green and a bowling green. The layout is shown in the sketch plan on page 106.

The next stage in the hostel programme provides for the building of private houses as hostels on Corporation housing estates.

**Private
Houses
as
Hostels**

5. *Mental Health Centre.*

The plan for a full-scale mental health centre, mentioned in last year's report, has had to be modified, the City Council agreeing that a temporary structure should be built pending inclusion of such a centre in the projected Civic Centre. Erection of a comparatively small two-storey building situated in Johnson Street at the rear of the present Health Department offices has been approved.

Some of the refinements of the original plan have had to be shelved but it is hoped that the centre, which was in course of erection at the end of the year, will be a focal point for mental health effort in the city and that the social club which forms part of it will help greatly in preventive and rehabilitation work.

6. *Hospital and Short-term Care for the Mentally Subnormal.*

Nearly all mentally subnormal children and most adults who need hospital care are now admitted informally and more than half of those already in hospital are no longer under any form of detention, as can be seen from Table 29 in the statistical appendix.

There were still cases in which mental welfare officers gave heartrending accounts of homes disrupted and parents distracted by the presence of a "difficult" mentally subnormal patient, and though the waiting list was again reduced it still contains 25 in the "most urgent" category.

Short-term care continued to be a useful help to parents and use was made of the facilities available as follows:—

	No. of patients	Total length of stay. Weeks.
Regional Board Hospitals	50	203
Orchard Dene and other voluntary homes ...	97	236

Hospital Admission Procedure.

Compulsory Procedure

One of the avowed objects of the Mental Health Act is to ensure that any mentally ill patient not unwilling to have treatment shall be able to enter hospital without the formalities which had been necessary under the Lunacy Act and, to a lesser extent, under the Mental Treatment Act. Even with this wider interpretation of willingness the Act recognises that compulsion will remain necessary in some cases but it has substituted medical recommendation for the much criticised "certification".

It will be of great interest to see to what extent compulsory action is found necessary and, as soon as possible, statistical comparison between the old and new procedure should be made. With this in mind detailed figures have been given in Table 30 in the statistical appendix and though full comparison must be postponed until next year as the new procedure only came into operation on 1st November, the following notes can be made at this stage and examined later to see whether the tendencies shown are significant or merely a temporary phase:—

(i) It can be seen from the following figures that the new procedure has not yet resulted in any significant diminution in the number of cases in the community referred for possible "compulsory" action.

	Jan.-Oct.	Nov.-Dec.
Number of patients referred	1,000	186
Of these, number admitted under "compulsory" procedure	632 (63%)	147 (79%)

It will be noticed that the percentage of cases "compulsorily" admitted was actually much higher under the new procedure. This does seem to suggest that the mental welfare officer who, under the old procedure, used his discretion against making a compulsory order in many cases, does not feel able, under the new procedure, to disregard the medical recommendations. It is, of course, this recommendation and not the lay officer's order, that is now the basis for emergency admissions under compulsory procedure.

(ii) The higher proportion of very old people admitted under compulsion is a somewhat disturbing feature of the working of the new procedure so far. Seventeen people over the age of seventy were so admitted in November and December as against thirty-two from January to October. This may suggest that the medical practitioner faced with the problem of finding hospital accommodation for an old person is using the new Act as a means of ensuring that the necessary hospital care is obtained.

As well as possible difficulties in admission procedure, the question of Hospital Discharges from hospital and the relation of the mental health service to people discharged is one which is at present causing concern. To provide a comprehensive after-care service the Health Department is dependent upon information about discharged patients supplied by the hospitals. Unfortunately this information is not being received in some cases and, in consequence, some patients discharged are not being visited.

There appears to be a divergence of opinion as to how the local health authority's after-care services should be used. The ideal would be, of course, for most if not all patients due for discharge to be referred, but unfortunately this is not happening in practice.

The result is that a number of patients are being discharged from psychiatric hospitals and then later either they or their relatives are approaching the mental health service for help. One must therefore wonder

whether there are other patients in similar circumstances who do not call on the mental health service but try to cope without the help which can so easily be obtained.

This is part of the larger question of the continuance of interest in the patient and his family during periods of hospital care and a *modus operandi* is badly needed by which the local health authority can be brought into the picture at all stages whilst at the same time the patient's wishes, and those of his family, can be respected.

Summarising the main points made in this report it may be said that the year has seen the introduction of plans designed to place the city in a position to implement fully the principles of the Mental Health Act and that good progress has already been made. Some of the growing pains of the new procedure have been pointed out and it is hoped that a much clearer picture of the whole pattern of the mental health service under the new legislation will emerge.

AMBULANCE SERVICE.

The overall number of patients carried by the ambulance service again increased in 1960 which suggests that the demand for ambulance transport has not yet reached its peak. The increase in the number of patients carried reflected in the mileage covered by the fleet which rose to 1,004,804 miles, the first time in the history of the service that over 1,000,000 miles have been covered in any one year.

The ten-seater sitting-case vehicle, which was first introduced in 1956, has proved its worth from the point of view of running cost and economy in manpower, and, more important, the comfort of the patient. Ten vehicles of this type were delivered in 1960, as almost 75 per cent of the patients carried are straightforward sitting cases. There was a need for a greater proportion of this type of vehicle in the fleet and a corresponding reduction in the proportion of stretcher ambulances.

The service dealt with three major accidents during the year. On the 22nd June, 1960, fifteen ambulances were immediately detailed to the tragic Henderson fire—after a quick survey, five ambulances were placed strategically round the block and the remainder deployed back on general duties. The number of casualties amounted to fourteen, of which eight were fatal.

Vehicles also attended an omnibus crash in Picton Road involving 36 casualties. In addition, two ships collided in the River Mersey and eleven casualties were conveyed to hospital.

The year saw the resignation of Mr. A. Orton, M.B.E., who was appointed Ambulance Organiser to the Lancashire County Council Ambulance Service. Mr. A. Guinney, Assistant Ambulance Officer, was appointed in his place and commenced duties on the 1st February.

The staff of 120 male and 22 female driver/attendants perform duty on **Staff** a rota system covering 24 hours. Whilst practically all the driver/attendants

are qualified in first aid it was considered desirable to encourage them to a better standard, and first aid classes were arranged in which 52 members of the service enrolled. One hundred per cent successful results were gained. In addition, a course started in September under the direction of the Education Department in preparation for the Associateship examination of the Institute of Certified Ambulance Personnel to be held in April 1961. Fourteen male driver/attendants enrolled and authority was given for financial assistance under the scheme. Successful candidates will go forward for the Diploma examination in October 1961 or April 1962.

With effect from 1st April, 1960, employees with ten years or more continuous local authority service have been granted an additional three days annual leave and working hours will be reduced from 44 to 42 per week with effect from 2nd January, 1961.

Vehicles

The vehicle fleet now totals 78, consisting of 43 stretcher case ambulances, ten sitting case cars and 25 sitting case ambulances which continue to be housed at Headquarters; Central Depot; Westminster Depot and four accident stations. All major repairs are carried out at Headquarters and the servicing arrangements are done at Central Depot. The full cycle of maintenance and repairs is as follows:—

Maintenance and Repair of Vehicles.

Period	Carried out by	Routine Inspection
A—Daily	Ambulance Personnel	Internal cleaning of vehicle, check engine oil, water and fuel, check electrical equipment.
B—After 2,000 miles	Greaser and Mechanic	Oiling, greasing, check fluid leaks. Mechanical defects. Road test and general inspection.
C—After 5,000 miles		Incorporate B routine plus engine examination and adjustment. Check electrical equipment dynamo, starter.
D—After 10,000 miles		Complete check and overhaul.

At 31st December, 1960, the ages of the ambulances were as follows:—

Age of Ambulance in Years.

	Under One	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Over Ten	Total
Number of Vehicles	13	7	1	7	6	16	4	7	7	4	6	78

Considerable savings have been made by the use of diesel engine vehicles. Comparative statistics for 1959 and 1960 are as follows:—

Type of Vehicle	Average Annual Mileage		Percentage increase/decrease on 1959
	1959	1960	
Ambulance Petrol ...	11,096	11,173	+ 0.65%
Diesel... ..	14,214	19,652	+ 38.5%
Sitting case ambulances ...	14,114	16,891	+ 19.7%
Sitting case cars	12,867	6,856	— 46.0%

Total petrol consumption during 1960 increased by 90 gallons or 0.15 per cent to 57,966 gallons, and the diesel fuel consumption increased by 1,920 gallons or 45.9 per cent to 6,100 gallons. Fuel Consumption

The average performance of the vehicles were as follows:—

Stretcher case ambulances ...	Petrol	12.4 miles per gallon
	Diesel	25.8 „ „ „
Sitting case ambulances ...	Petrol	17.8 „ „ „
Sitting case cars... ..	Petrol	21.9 „ „ „

During 1960 the number of accidents reported involving Ambulance Service vehicles numbered 45, a decrease of three on 1959. The staff were considered blameworthy in twelve instances. Accidents and Insurance Claims

The following table analyses accidents reported during the past four years.

Month	1957		1958		1959		1960	
	Blame-worthy	Not Blame-worthy	Blame-worthy	Not Blame-worthy	Blame-worthy	Not Blame-worthy	Blame-worthy	Not Blame-worthy
January	1	—	1	3	3	9	—	1
February	—	—	—	6	—	—	—	3
March	2	3	—	5	1	4	3	3
April	2	—	1	2	1	3	—	—
May... ..	1	3	1	4	—	1	2	4
June... ..	2	1	1	3	1	5	1	3
July... ..	2	1	1	4	2	2	1	3
August	—	5	1	1	2	—	2	5
September	2	3	—	3	1	—	1	2
October	—	1	1	1	—	1	—	1
November	3	4	1	4	—	2	1	7
December	3	—	—	—	—	4	1	1
Totals	18	21	8	36	11	31	12	33

Generally speaking cases fall into three broad categories and for the past five years are as follows:—

Year	Section 27 cases		Total	Cases chargeable to other departments and authorities
	Emergency	Non-Urgent		
1956... ..	9,603	204,115	213,718	592
1957... ..	10,202	202,829	213,031	178
1958... ..	10,065	207,914	217,979	294
1959... ..	11,088	215,007	226,095	353
1960... ..	12,347	217,663	230,010	384

Liaison with Hospitals

It is very essential to maintain a close liaison with hospitals. Very few hospitals have appointed a transport officer as recommended by the Ministry of Health in Circular 5/56, and difficulty is experienced in accepting calls from unauthorised individuals resulting in constant delays to the patient. In order to obviate this, negotiations were opened with officers of the United Liverpool Hospitals and the Hospital Management Committees of the Regional Hospital Board with a view to the appointment of a senior member of the ambulance service as hospital transport officer in each of the larger hospitals in the city area. An agreement was successfully reached, and because of the advantages to both parties it was also agreed that the individual Hospital Management Committee should pay 50 per cent of the total cost.

Communications

All calls for ambulance transport are received at ambulance headquarters on two P.B.X. 10×50 switchboards operated on a 24 hour rota.

Emergency calls are received on special instruments direct to the G.P.O. emergency block. Details of emergency calls received for 1960 are as follows:—

Month	Calls	False calls with good intent	Malicious
January ...	848	54	11
February ...	838	30	3
March ...	916	35	2
April ...	985	42	2
May ...	1,031	29	2
June ...	1,090	46	0
July ...	1,057	45	1
August ...	1,098	34	4
September ...	954	39	6
October ...	1,031	42	4
November ...	979	35	0
December ...	1,241	42	5
Total ...	12,068	473	40

The transport of infectious patients has continued to be dealt with by a separate staff and vehicles and is now operated from the Westminster Station.

The total number of infectious cases carried during the year are as follows:—

Month	Outside Area	Admissions	Transfer	Hospital to Home	Total
January ...	14	385	60	155	614
February...	14	362	93	132	601
March ...	16	342	54	122	534
April ...	11	417	47	125	600
May ...	13	386	41	136	576

Month	Outside Area	Admissions	Transfer	Hospital to Home	Total
June	3	336	44	111	494
July	11	332	30	93	466
August	11	360	53	146	570
September	7	350	40	128	525
October	8	366	39	128	541
November	6	348	26	64	444
December	7	275	26	42	350
Total	121	4,259	553	1,382	6,315

The service transported handicapped persons to welfare centres in the City and a total number of 3,031 persons were taken to and from the undermentioned centres.

Month	Wilson Hall Speke Road		Knotty Ash Village Hall		Domestic Mission Mill Street		100 Walton Village		TOTALS MONTHLY	
	Cases	Mileage	Cases	Mileage	Cases	Mileage	Cases	Mileage	Cases	Mileage
January	96	373	60	162	54	118	—	—	210	653
February	92	333	96	219	54	103	6	16	248	671
March	106	293	88	175	86	135	30	94	310	697
April	96	327	58	99	68	152	24	89	246	667
May	106	310	90	166	62	114	24	71	282	661
June	96	300	54	106	* { 48 } 62	* 159 133	22	77	* { 48 } 234	* { 159 } 616
July	118	392	48	131	60	124	16	37	242	684
August	92	311	74	155	74	155	24	79	264	700
September	122	338	54	120	44	74	42	107	262	639
October	88	323	70	134	46	68	24	83	228	608
November	88	295	54	102	68	96	31	81	241	574
December	72	246	48	77	38	68	58	177	216	568
Cases	1,172	—	794	—	*48	—	301	—	*48	—
Mileage	—	3,841	—	1,646	716	*159 1,340	—	911	2,983	*159 7,738

* Refers to outing to Bettws-y-Coed/Llandudno and return.

OCCUPATIONAL THERAPY

The Occupational Therapy Service has made further advances during 1960 with the addition of three more qualified occupational therapists, bringing the establishment up to six, and with the building of the new Occupational Therapy and Rehabilitation Unit in Rumney Road, North Liverpool, which is described later in this report. Four of the therapists are employed in domiciliary work and are based on the Health Department in Hatton Garden, while the other two are working full time at the Unit.

For convenience, the City was divided into three working areas with a therapist to each area, although it is not always practical to keep strictly to the boundaries. The Head Occupational Therapist has found that, with the growth of the section, she is increasingly confined to the office, and has had to pass over to the other therapists many of her regular patients in order to concentrate on the consultant type of case which can be fitted in as time allows.

Each therapist treats all types of patients within her area, and her day may consist of giving a hemiplegic patient exercise for a paralysed limb, finding occupation of interest and variety to keep a tubercular patient happy during his treatment at home, advising an arthritic patient with stiff limbs on ways of feeding and dressing, training with infinite patience a mentally subnormal person, giving training to a physically handicapped child in co-operation with the school health service, providing therapy for the mentally sick patient, who is not ill enough to be in hospital nor well enough to return to work, advising on adaptations to houses or introducing a patient to the outside world after years of illness.

During 1960, 5,389 visits were made covering a total of 316 patients. It is not the policy of this section to try to cover an increasing number of patients, except when the addition of staff, or the discharge of a patient, makes this possible. Results cannot be assessed by the number of visits made, neither is it feasible to assess the results in figures. The aim is to return people to a normal life where possible, but where this is not practical to provide a full and interesting life within the patient's limitations. This work cannot be done satisfactorily by rushing in and out of a patient's home, the average visit is half-an-hour but sometimes it is necessary to spend an hour or more on one visit.

Aids

Sixty-nine aids have been supplied during the year to enable people to be more independent in one way or another. Bath seats, "Helping Hands" which enable people to reach things from a distance, and one-handed potato peelers, appear to be the most used aids, but many varied articles have been supplied from elastic laces to specially designed trolleys. Some of these articles can be purchased ready to use, but many have to be designed and made by the therapists to suit the individual needs of the patient.

Housing the Disabled

Once again a number of adaptations to houses have been recommended, and advice given on the re-housing of handicapped people. The Head Occupational Therapist has a very good liaison with the officers of the Housing department and they work together on re-housing people who, because of their physical disabilities, have special requirements. The therapist determines what these requirements are and discusses the case with the Lettings Officer who then tells her of the accommodation available which may be suitable. The therapist then visits the accommodation and decides whether or not this is so. If considered suitable, the accommodation is offered, and unless a valid reason is given for refusing the offer, it is felt that the obligations of the Local Authority have been met.

In 1959 it was found that certain patients, especially those in wheelchairs, could not be found suitable accommodation and committee approval was given to the alteration of plans to certain flats and houses before building had actually been commenced. This allows for internal walls to be moved back, or in some cases done away with altogether, for doorways to be widened and for bathroom furniture to be situated in such a way that the patient can complete his entire toilet independently.

New Unit

The Occupational Therapy Rehabilitation Unit was planned in 1959 and building commenced in April, 1960. The Unit is prefabricated with the outside walls in cedar wood with brightly-painted panelling below the windows. It consists of one large workroom with windows down two sides, and a french window opening out into the garden. On one side of the door into the workroom is the office which has an observation window on to the main room which allows the therapists to be aware of any emergency should they be called to the telephone, etc. On the other side of the door is the rehabilitation kitchen which has a hatch on to the workroom. Apart from its normal function of serving, this allows the therapist working in the kitchen to be aware of what is happening in the workroom. The storeroom

proved to be quite inadequate and a further one is being built at the end of the building. Two patients' toilets are provided, each having space beside the lavatory for a wheelchair, and fitted with lifting chains and handles to help paraplegic patients to lift themselves on and off the lavatory. A staff cloakroom is also provided.

The Unit was occupied in October by the two therapists specially employed for the work, and the first patients were received in November. Numbers have increased each week and it will not be long before the Unit is running to capacity. All types of patients are being treated together, mental and physical cases working side by side, and a very happy and cheerful spirit prevails throughout. Patients are received each morning from 9.30 a.m. onwards, and leave again at about 4.0 p.m. Some make their own way while others are brought in by ambulance. Most patients bring their own lunch and cups of tea are provided, but a few patients cook a mid-day meal as part of their treatment. Many types of occupations and recreations are used in the therapy and rehabilitation of the patients.

A patient, aged 85 years, has had operations on both her hips which make bending impossible and walking difficult. She lives alone on the ground floor of her home, having her bed in the living-room. There is a small step from the living-room into the kitchen which she was unable to negotiate. This meant that she was completely confined to the living-room, and relied on a home help, and a neighbour, who she had to pay, to look after her. A ramp and handrail were fitted over the step and the patient was taught to walk up and down it with safety. A trolley was specially designed, and the order placed with the Ministry of Labour Training Centre. This trolley is sufficiently high enough to enable the patient to use it as a walking aid, and hooks are attached to the side to carry her walking sticks so that they are always available when she has finished with the trolley. A deep edging is provided on one side of the shelf to prevent dishes sliding off when the trolley is on the ramp. After a few training sessions this old lady was considered safe to use the trolley on her own, since when she has become progressively independent. Through the welfare section, electric light was installed on the ground floor of this house as it was felt that the patient could not safely stand to light the gas. She now has a home help for only an hour a day and has dispensed with the services of the neighbour. She is able to cook light meals for herself and do small jobs about the home.

A girl, aged nine years, was referred for domiciliary occupational therapy by the mental health section. She had been under the care of a Child Psychiatrist, spending some time in psychiatric units. She had been discharged home but was unsuitable to return to school. The aim of occupational therapy was to prevent boredom and frustration in this child, who has a very active mind, while her future was being decided. When first visited, the patient would not even speak to the therapist, and refused to enter the room when she was expected. However, very slowly, some contact was made and the child began to concentrate for short periods between tantrums. Over several months her behaviour has improved and the activities progressed from jig-saws to craftwork and eventually to school work. She now shows a lively interest in Nature Study but also does English and Arithmetic fairly well. The sessions have been increased from one to three per week and she now has homework to do. Occasionally she still rebels but mostly seems to prefer doing some work to spending the day doing nothing.

A man aged 49 years, who suffers from pulmonary tuberculosis and has undergone a thoracoplasty has not worked for many years. He becomes extremely breathless on exertion and is unfit for any sort of active work. Following the operation the patient noticed numbness and lack of co-ordination in the ring and little finger of his left hand. This patient has been lent a typewriter and is learning to type with a view to obtaining typing jobs at home. Since working on the typewriter he has noticed a marked improvement in the movements of the partially paralysed fingers.

A boy of eleven was referred by the School Health Service. He was suffering from renal rickets and when visited was found to be unable to walk and to have very little power in his upper limbs. His condition has caused considerable stunting, a physical deformity, and he is little bigger than a child of three years. He could feed himself but not dress himself or get to the toilet unaided. It was suggested to his mother that he should have shorts with zip fronts instead of buttons, and when these were bought it was found that he could manage his toilet with a bottle and no longer had to be carried to the toilet. Aids are being supplied to assist him with various personal activities such as cleaning his teeth, and it is hoped that it will be possible to adapt or design some form of chair to enable him to move about the home independently. He has been taught basketry which it is hoped, with other activities, will increase the range and improve the

power of his arms and hands. It was felt that the wider social contacts possible at the Unit would help to give this child confidence and encourage him to mix freely. He now attends the Unit once a week and already a marked improvement is apparent. He is a great favourite with the other patients.

A girl, aged 26 years, with congenital deformities of upper and lower limbs was first referred as a social problem. She had been expelled from a residential home in London for temper tantrums. Her family did not want her at home, and she was extremely unhappy with them. It was felt that she would be better off living in rooms, but before she could do this she had to be taught to cook and look after herself. She had never had to do this previously and her disabilities made it difficult for her to manage. She is now attending the Unit daily, learning to cook all types of meals and being taught ways of overcoming her disabilities. In co-operation with the welfare section it is hoped to find her suitable accommodation where she can live a life of her own.

It is anticipated that further progress will be made in the Occupational **The future** Therapy section during 1961 when the establishment is to be raised to ten and certain posts re-graded. Two of the staff will be employed in the new Mental Health Centre to be opened during that year at the rear of the Health Department in Hatton Garden.

WELFARE SERVICE

Residential Accommodation.

Residential Accom- modation

There was no relaxation during the year of attention given to the problem of providing residential accommodation for elderly persons needing care and attention. At the same time plans were made ultimately to close the large establishment at Westminster House. So far as the immediate future was concerned the necessary approvals were received for the building of a new hostel in West Derby and operations were due to start early in January, 1961.

The long term planning was on the basis of an estimated need to provide in the period up to 1970 about 500 additional places for aged persons living in the City. As it was also contemplated that the number of residents in Westminster House would be reduced by 200 by the end of 1970 the total number of new places which would be required at the end of the decennium would be 700, involving the building of new hostels at the rate of two per year for some time to come. The need to provide for so many new establishments is not entirely unrelated to the availability of suitable sites, and it may be that, in the future, consideration will have to be given to a departure from the two-storey premises to higher buildings.

Following upon the preliminary inquiries in 1959 the scheme to "board out" elderly persons in private households became a permanent effort of the Department. It was only possible during the following year to give serious consideration to a small number of persons who applied to be boarded out, of whom two were placed and only one remained for a brief period. The impression so far gained is that difficulties which are being met with in Liverpool are similar to those experienced in other urban areas; and, although success in the scheme is likely to be limited, the experiment is being continued.

It has been the practice for some years to insert in the report a table showing the number of houses and flats vacated by elderly persons on their admission to residential accommodation, giving the effect of making the premises free for others. This table, No. 34, is again repeated, and shows that houses and flats vacated totalled 75. The total in the previous year was 87. The total number of persons admitted to residential accommodation was 446, compared with 479 the previous year.

The upgrading of Westminster House was taken a step further by the modernisation of Houses 5 and 6, and plans were drawn up for modernising House 8. Steps were also taken to create a unit of special accommodation for approximately twelve "anti-social" residents, and to centralise the various stores at the establishment. In the previous report reference was made to the proposed installation of two additional lifts, and one of these became ready for use at the end of the year, the other being due for completion during 1961.

With regard to the administrative staff at Westminster House, the opportunity arose during the year to give consideration to its complete re-orientation, and with the aid of a report by the Organisation and Methods Section of the Town Clerk's Department, the staff was re-organised on a sectional basis, the Matron being recognised as the senior officer in the organisation and responsible for everything concerning the welfare of the residents, with an Administrative Officer responsible for the administration of all services, maintenance of the premises, records, etc.

A great deal of attention was paid to the catering arrangements at the establishment and the Department had the benefit of consultation with advisory representatives of the Ministry of Health as a result of which plans have been made for a complete overhaul of the kitchen arrangements involving upgrading of equipment, modernisation of kitchens and improvement in the staffing.

The opening of the extension to Brookside House took place in June, and Hostels the enlarged building now accommodates forty residents of both sexes.

In addition to the arrangements for half-day trips to Southport and Chester and a whole day outing to Fleetwood or North Wales consideration was given to a summer holiday for those in residential accommodation. In order to gain experience of what would be involved the experiment was tried of sending twenty residents for a week's holiday at Llandudno in October. So successful was the experiment and so useful was the experience gained that it has been decided to arrange for over 200 residents to enjoy a holiday at Llandudno sometime between April and October 1961.

At Christmas time a number of gifts were received from members of the public either for needy people in their own homes or those in residential accommodation and the innovation was tried, also with success, of inviting into the establishments on Christmas Day a number of elderly people living outside.

Once again the benevolence of the Merseyside Hospitals Council was demonstrated in another gift which enabled pianos, television or radio sets to be installed, or replaced, in some of the establishments.

**Upkeep of
Gardens**

Towards the end of the year arrangements were made whereby the upkeep of the gardens at the small hostels was transferred to the Parks and Gardens Department.

Table 35 indicates the extent to which the Department make use of the facilities afforded by voluntary organisations for the reception of elderly persons needing care and attention. The financial arrangement between the local authority and the voluntary body provides for the payment in individual cases to enable a resident to pay the agreed weekly cost for maintenance. The admission is subject to prior approval in every instance by the Health Department.

Chest X-Ray

During 1960, a total of 334 aged persons were X-rayed at Hood Street etc. prior to entry into aged persons' homes. Of these, eleven were shown to have signs of inactive (quiescent) pulmonary tuberculosis and two cases were diagnosed as active tuberculosis.

Temporary Accommodation.

**Lower Breck
Road**

Table 36 gives the statistics in regard to admissions to and discharges from temporary accommodation.

The number of admissions and readmissions totalled 909 and the number of discharges 886. The maximum number of persons accommodated at any one time was 67 (22 women and 45 children) and the minimum was 24 (10 women and 14 children). The greatest number ever accommodated was 219 in May, 1952. The daily average accommodated throughout 1960 was 47 (16 women and 31 children). The average length of stay of all families was 13 days the longest stay being 27 weeks.

The question of improving the condition of the accommodation received the attention of the Health Committee, and it was decided to spend over £1,000 in painting and decorating and providing new equipment and improved services.

Domiciliary Welfare Service.

In order to cope with the ever increasing demands on the staff of field workers authority was obtained to vary the establishment by appointing

three additional welfare visitors, one of whom now devotes a good deal of her time to work among the residents of Westminster House. Later in the year it was also agreed to appoint three welfare assistants whose duties, as indicated in the Younghusband report for staff in this class, involve routine visiting under supervision of persons requiring care.

The Department's propaganda towards advising elderly persons of the welfare services which can be provided still continues by means of the insertion of a suitable information card in pension books, with permission of the government departments concerned and also by means of business reply cards. Advantage of this service has been taken by many people who have subsequently been visited and helped by the field workers—or social welfare officers as they are now known.

The following is a selection from among the many problems dealt with during the year by the staff:—

1. A middle-aged lady, suffered from a crippled hip condition, and although she could get about the house quite well could not walk more than a few yards unaided. Domiciliary services, i.e. home help and mobile meals, were provided and the Ministry of Health agreed to supply a motorised invalid carriage. The garaging of the vehicle presented a problem because the lane leading to the house was too narrow. Inquiries were made and a very co-operative owner of a nearby yard gave permission for the invalid carriage to be housed there. The handicapped person was then able to get out to do her own shopping and attend the handicrafts centre.

2. For some years a man approaching middle-age, who lives alone, has been known to the Welfare Service Section. Although his general health seems satisfactory he cannot be induced to go out, in spite of the efforts of medical and social workers, because he has a phobia about leaving his house and meeting people. The district welfare visitor calls to see him each week and attends to his shopping needs, and an elderly relative sees him about once a month.

3. It was reported that an elderly lady had not been seen for some days but the district welfare visitor was able to gain access. The old lady had been suffering from a malignancy for five months but had not told anybody of her condition. Because she was too ill to look after the house its condition had deteriorated and her sensitive temperament did not allow her to contact neighbours. Despite pain and weakness she managed to do her

shopping. Medical attention was sought and the old lady was admitted to hospital for X-ray therapy. Convalescence followed and she became a different person mentally and physically, but after returning home a rapid deterioration set in and she lost all interest in living. Her death took place soon after readmission to hospital.

4. A young married couple were referred to the Welfare Service Section for advice. They had entered into a contract to buy their house from the landlord but had got into arrears with the weekly purchase payments. The husband was unemployed and seemed to lack the spirit to pull himself together. Contact was made with the landlord who agreed on a trial period in which the couple could make regular payments, and the co-operation of the National Assistance Board was sought in regard to financial assistance. Steps were taken with the object of finding the husband a job and at the time of writing he was awaiting a post in the Merchant Navy. Arrangements were also in hand for the wife to be admitted to a rehabilitation and training centre.

5. The Welfare Service Section was asked to try and help in the case of a blind man who also had disseminated sclerosis which confined him to a wheel chair. He had been physically handicapped since his marriage, had become resigned to his condition and the strain of caring for him had brought his wife to breaking point. The aid of the occupational therapist was sought who taught the husband basketwork and his outlook on life brightened. A ramp was also fitted at the rear door to enable his wife to push his wheel chair in and out of the house.

A holiday was next arranged for the couple in a convalescent home and a clothing grant arranged for them. During the afternoons the husband was taken care of and his wife then had the first opportunity for some freedom since marriage. Not only was it the first time they had had a holiday together but the first time they had been away from home. These efforts improved the man's outlook considerably and restored the health of his wife.

6. A man aged 37 years, deformed by hydrocephalus, had been cared for by his mother until her sudden death. He was incapable of taking care of himself but was intelligent and possessed of his normal faculties. The offer of suitable residential accommodation was rejected by the man,

understandably, and as his mother had been the tenant the Housing Department agreed to transfer the tenancy to him. Home help was supplied, a friendly neighbour was found who agreed to do the shopping etc., and her son promised regular evening visits. Another neighbour agreed to take on cooking and laundry, mobile meals were supplied and an appropriate grant was obtained from the National Assistance Board to meet the necessary expenses.

This man had always led a sheltered lonely life, but the welfare visitor gained his confidence, encouraged him to meet and talk to people, and he is now leading a life which is happy and as near to normal as possible.

7. The section was asked to supply mobile meals to a man aged about 40 years who suffered from disseminated sclerosis. He had lost the use of his legs and had only limited use of his hands. His wife had died and his mother who tried to look after him was very strange and confused in her manner. Until coming to Liverpool he had lived for many years elsewhere and had lost touch with his friends.

The section was able to put him in touch with a society of which he had once been a member, he has been provided with a typewriter and a substantial annuity. Many friendly contacts have been made and this man is now visited regularly by a wide circle of friends. He feels that there is now something to live for and there is a possibility of him making a start on journalism with the aid of his typewriter. The occupational therapist arranged for the supply of a bed trolley to hold the machine. Mobile meals were provided and also home help.

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

During 1960 it was necessary to remove compulsorily from their homes seventeen persons under the provisions of the National Assistance Acts, 1948 and 1951. They were either suffering from grave chronic disease, or were aged, infirm etc., and were living in insanitary conditions, or a combination of these circumstances existed. All were not able to devote to themselves or were not receiving from other persons proper care and attention. Orders were obtained in sixteen cases for removal to hospital and in one case to residential accommodation. Seven of the patients subsequently died, eight were still in hospital accommodation at the end of the year, and two were discharged home.

Mobile Meals.

The original experiment to provide a small number of meals to needy elderly persons in a restricted area provided very useful experience; and because of the realisation how useful domiciliary services could be towards preventing a decline in the health of elderly people energetic steps have been taken to extend the scheme to as many areas in the city as possible. Based on Westminster House, New Grafton House, and in the near future on Holt House, for meals, it is hoped that about 450 persons will be receiving mobile meals on three days per week. In this service the department has the welcome co-operation of the Women's Voluntary Service who provide the necessary servers. A garage will form part of the new hostel to be built in the West Derby area which will then become the centre of a meals distribution scheme in the neighbourhood.

Rest Centres for Elderly Persons.

River View.
Sheil Park
Paradise
Street

The ever-popular River View Centre at the Pier Head, facing the River Mersey, has lost none of its attraction to the countless number of elderly people who make it a resting place in the day time, especially during the summer months, and enjoy light refreshments and recreation. During the early summer another centre was opened in Paradise Street, in the heart of the City, and these two centres together with the Sheil Park Club for elderly persons, opened in 1959, have given great pleasure to many old folk. Another venture was the opening of a further centre in the Norris Green area, but owing to counter-attractions in the neighbourhood in the way of other clubs for old age pensioners the attendance was so small that after a brief period it was decided to close the centre.

Registration of Disabled Persons' and Old People's Homes.

At the present time 29 homes are registered with the local authority, 18 being administered by voluntary bodies and the remainder by private individuals. Regular inspection is carried out by officers of the department to see that satisfactory standards are being maintained.

Welfare of Handicapped Persons.

Four centres are now being conducted where instruction in handicrafts is given to a number of handicapped persons. The enthusiasm of the staff, referred to in a previous report, is still a noteworthy feature of the scheme, and the numbers attending the classes are still maintained. Where

individuals are unable to reach the centres under their own powers transport is arranged through the ambulance service. During the summer a day trip was arranged to North Wales for about 60 who were able to make the journey and various members of the staff helped to make it a very successful outing. The experiment of arranging a Christmas party was repeated and again a very enjoyable evening was experienced, this time in the premises generously lent by the Adult Deaf and Dumb Benevolent Society.

The following organisations still make good use of 100 Walton Village for recreational purposes:—

Infantile Paralysis Fellowship (Merseyside Branch).

Liverpool Spastic Fellowship (Day Centre).

Merseyside Hard of Hearing Club.

Merseyside and Wirral Group Invalid Tricycle Association.

During the year some redecoration of the building was carried out and additional heating installed; and it is proposed to improve still further the amenities in 1961.

During the year, 234 persons were referred to the department because their vision was so defective that they might be regarded as blind or partially sighted. They were examined by ophthalmic surgeons and 148 were found to be blind, 67 partially sighted and 19 not blind. Results of examinations of this nature during the last three years were as follows:—

Blind
Welfare
Statistics

Year	Number Examined	Registered as Blind	Registered as Partially Sighted	Not Blind
1958	162	112	40	10
1959	214	143	63	8
1960	234	148	67	19

Statistical tables in regard to registered blind and partially sighted persons are contained in the appendix.

Blind Employment.

Blind Employment

The following are details in respect of the numbers of blind persons who were engaged at the 31st December, 1960, in various trades operated in the two workshops for the blind in Liverpool:—

Workshops for the Blind, Cornwallis Street :—

*Basket making	...	...	...	13
Brush making	...	...	...	22
Mat making	...	...	...	28
Upholstery	...	...	...	7
				—
				70

Catholic Blind Institute, Brunswick Road :—

Basket making	...	...	...	2
Mat making	...	...	...	4
Machine knitting	...	...	...	2
				—
				8

TOTAL ... 78

*Includes one employee, partially sighted.

The following numbers of blind persons were engaged in sighted industry :—

Basket making	...	...	...	1
Clerks/Typists	...	...	...	7
Dealers, Tea Agents, etc.	...	...	...	4
Factory operatives	...	...	...	57
Home Teachers	...	...	...	3
Legal profession	...	...	...	1
Masseurs	...	...	...	2
Musicians and Music Teachers	...	...	...	2
Piano Tuner	...	...	...	1
Porters, packers, cleaners	...	...	...	9
Schoolteachers	...	...	...	1
Telephone operators	...	...	...	13
Open employment	...	...	...	3
Miscellaneous...	...	...	...	6
				—
				110

This is an increase of one over the previous year. The tendency is still being maintained for more blind persons to be employed in sighted industry than in sheltered workshops.

The following persons were employed in the Home Workers' Scheme and their earnings supplemented by the City Council:—

Braille copyist	...	...	...	1
Hawker and newsvendor	...	...	...	1
Machine knitters	...	...	...	3
Musicians and Music Teachers	...	...	...	3
Shopkeeper	...	...	...	1
				<hr/>
				9
				<hr/>

Sir Robert Jones Workshops.

At the time of writing this report fifty-nine severely handicapped persons were employed at this workshop and four others were undergoing instruction. Twelve months ago the respective figures were fifty and four.

Of the fifty-nine workers forty-one were employed in the book-binding department, six in the printing department and twelve were engaged in the renovation of Christmas cards, etc. This workshop has for some time received considerable financial assistance from the local authority and at the present time the amount involved is about £9,980 annually.

Quarterly returns are submitted from the workshops to the local authority setting out the trading position in each department and also the current financial state of the organisation.

Deaf and Dumb Welfare.

The welfare of the adult deaf and dumb, about 600 Liverpool persons in number, is in the hands of two voluntary organisations, namely, the Liverpool Adult Deaf and Dumb Benevolent Society and the Catholic Deaf and Dumb Society of St. Vincent de Paul. Residents of other local authorities are included in the arrangements and there is an agreed per capita payment to the organisations concerned on an appropriate apportionment basis. The amount paid by the City Council is about £4,000 per year.

There is a Consultative Committee formed of representatives of the Merseyside local authorities and the voluntary bodies and arrangements are made to hold an annual meeting in the area of each authority in turn. The local authority representatives have a discussion on matters of common interest concerning the welfare of the deaf and dumb and at a meeting of the Consultative Committee arrangements are made for a speaker to talk upon some aspect of deaf and dumb welfare.

Epileptics.

During the year twenty adult epileptics needing residential care were placed in epileptic colonies and the total of persons handicapped in this way who are maintained by the local authority is 86.

Under the aegis of the Merseyside Epileptics' Association a club is run especially for epileptics which has a programme of entertainment and facilities for table tennis, billiards, etc. This is particularly useful because persons with a similar handicap can share common interests. A public meeting was organised in June by the Association when Mr. R. H. Hannah, F.R.C.S., gave a very interesting talk on "Epilepsy—Past and Present" to an appreciative audience at the Town Hall.

Protection of the property of persons admitted to hospital or residential accommodation and Estates of Deceased Persons.

During the year 275 cases were referred to the welfare service section where it was necessary to take action, under the provision of sections 48 and 50 of the National Assistance Act, 1948, for the temporary protection of the property of persons admitted to hospital or residential accommodation or for the recovery, where possible, of expenses incurred in the burial or cremation of a deceased person undertaken by the local authority. This involved the securing of premises, notification to the police of the absence of the occupant from a house, and taking into safe custody such items as cash, jewellery, securities, etc. Other reasonable precautions included shutting off of gas and electric supplies, drainage of water tanks and co-operation with owners, solicitors, etc. in regard to any necessary urgent repairs to houses. Furniture was removed to store when it became necessary to do so.

Where funerals had been carried out by the local authority contact was made with any next of kin who could be traced, or legal personal representatives and, where the estate was solvent and no will or next of kin could be traced reporting the circumstances to the Duchy of Lancaster. The amount of cash recovered during the year from persons' effects and placed with the City Treasury for safe keeping was £1,720.

Of the total cases dealt with of all kinds, fifty-five were referred by the police which included thirty-six persons who had been found dead at home or elsewhere, and nineteen who had been taken ill at home or outside and removed to hospital.

The large amount of cash sometimes found on deceased aged persons or in their effects, and bank balances untouched for some time, indicate that many people still set aside funds for a "rainy day" which never comes, and which could otherwise have helped to brighten their remaining days.

Problem Families.

Since 1957 forty requests have been made for case conferences to discuss problem families, largely due to need for rehabilitating families because of difficulties arising from lack of parental control, budgeting difficulties, inadequate housing, non-attendance at school, neglect of the home by parents, rent arrears, mental instability in a member of the family, danger of family break-up, moral danger to children, etc.

The conferences have been very valuable because of the opportunity of pooling the knowledge of many case workers concerned with particular families and have helped to suggest possible solutions.

HOUSING POINTS SCHEME

Statistics General

During 1960 a total of 4,511 general medical cases, 500 pulmonary tuberculosis and 21 non-pulmonary tuberculosis cases, applied for assistance in rehousing, there being an increase of 29 (0·6 per cent) in the number of general medical cases, a decrease of 289 (36·6 per cent) in the cases of pulmonary tuberculosis and a decrease of eleven (34·4 per cent) in the non-pulmonary tuberculosis case figures for 1959.

Medical

972 general medical cases were awarded points; 89 of these were recommended to the City Architect and Director of Housing for submission to the Allocation (Special) Sub-Committee.

Transfers

1,754 general medical cases applied for transfer during the year. Of these, 839 (47·7 per cent) were recommended to the City Architect and Director of Housing. 96 tuberculosis cases were also recommended for transfers.

Overcrowding

A further 326 applications were received in respect of non-medical cases and reports concerning 420 grossly overcrowded families were forwarded to the City Architect and Director of Housing.

Method of Allocation of points

The allocation of points is designed to enable the Medical Officer of Health to give assistance in those cases which, for reasons of health, should receive some degree of priority in rehousing. There are three forms which this assistance may take:—

(1) Additional points may be awarded and added to the applicant's basic points. For general medical cases a maximum of two points can be given and for tuberculosis cases up to five points. In many cases this brings the applicant into the allocation group and he is assured of rehousing.

Allocation Special Sub- Committee

(2) All general medical cases of special urgency are now submitted to the Allocation (Special) Sub-Committee. In previous years only those not included in the allocation group were submitted for special consideration, but now all cases, no matter what group they are allotted to, are submitted. This new procedure has been devised to ensure that each case is given priority consideration on the medical factors alone, and an equal chance of being rehoused within a reasonable period of time.

Six per cent Tuberculosis Priority Scheme

(3) During the year a new and improved scheme was also devised to ensure that all tuberculosis cases meriting urgent rehousing were given an equal chance of being accommodated within a reasonable period of time.

At a meeting of the Housing Committee held on 22nd September, 1960, it was resolved that up to six per cent of municipal housing accommodation which becomes available for letting or re-letting be reserved specifically for the rehousing of tuberculosis patients. The City Architect and Director of Housing was authorised to rehouse tuberculous patients who are recommended by the Medical Officer of Health without further recourse to the Allocation (Special) Sub-Committee or the City Council. It was also resolved that the six months' waiting period before inclusion in the Housing Register be waived in respect of tuberculous cases specifically recommended for special priority by the Medical Officer of Health.

In all cases recommended for special priority, the City Architect and Director of Housing notifies the Medical Officer of Health whenever an offer of accommodation is made to the patient. This is followed a little later by a notification of acceptance or refusal on behalf of the patient. If the offer has been declined, the City Architect and Director of Housing is notified whether or not the refusal is justified on medical grounds. If this is so, then an offer of more suitable accommodation is made as soon as possible.

As examples of the type of case assisted during 1960, particulars are given of the following six cases:—

- (1) A young schoolmaster, who was becoming increasingly disabled by disseminated sclerosis, was accommodated in a ground level flat near to his school to enable him to continue with his career.
- (2) An old lady, living alone in a large old house, was crippled by generalised arthritis. In addition she was almost blind due to cataracts of both eyes. She was allocated a ground level old age pensioners flat.
- (3) An elderly man was paralysed following cerebral arteriosclerosis. He was permanently confined to the top floor above licensed premises. He was accommodated in a ground level old age pensioners flat.
- (4) A patient, paralysed in one arm and leg following meningitis, was accommodated from one top floor room to a ground level flat.
- (5) A man, suffering from active pulmonary tuberculosis, lived in one room with his wife and two children. One of his children was suffering from spastic monoplegia. There was a strong family history of tuberculosis as five of his sisters had had the disease. This family was granted a three-bedroomed house.

**Six
Represent-
ative
Typical Cases**

(6) A married lady, suffering from active pulmonary tuberculosis was insensitive to all tuberculosis drugs and likely to remain infectious. She had no accommodation of her own and was sharing a bedroom with her sister and brother. Her husband was obliged to sleep at his parents' home. This couple were accommodated in a two-bedroomed flat so that the patient could have her own bedroom. All these cases were granted special priority consideration by the City Architect and Director of Housing.

In all the general cases a medical certificate (form H.1) submitted by medical practitioners serves as the starting point of the enquiry. Most tuberculosis cases are also initiated by a form H.1, the remainder being first brought up by the tuberculosis visitors. All cases are investigated in the first instance by a public health inspector who completes a report on the housing conditions. This report includes such details as the size of the family, type of house and number of rooms occupied, extent of overcrowding, condition of house and state of cleanliness, w.c. accommodation, etc.

In tuberculosis cases a report is also submitted by the tuberculosis visitor, given such details as the type and extent of the disease, state of infectivity, family history of tuberculosis, etc. Extra housing points may be awarded as already indicated, while those cases which appear to be sufficiently urgent are visited personally, with a view to including them in the six per cent tuberculosis priority scheme. Special care is taken to ensure that the housing department is notified of any additional points granted for medical conditions.

**Residents
Outside City
Boundary**

Where an applicant is a sub-tenant in one of the new Liverpool housing estates outside the City boundary and is on the City housing register, contact is made with the local authority concerned and a housing report and medical certificate obtained. The case is then assessed in the usual manner.

Transfers

For housing applicants who already live in Corporation property and for medical reasons request a transfer, a close liaison exists with the Housing Department. A letter of recommendation from the medical officer is usually sufficient to obtain the necessary transfer.

MEDICAL EXAMINATIONS

Medical examinations of Corporation employees have continued to be carried out by Assistant Medical Officers of the Health Department during 1960, and a final assessment of each case is made either by the Medical Officer of Health, the Deputy Medical Officer of Health or the Principal Medical Officer (Epidemiology). These examinations consist of three classes:—

1. For entry into the Corporation service.
2. For entry into the Superannuation Scheme.
3. By reason of extended medical sickness.

During 1960, 2,603 medical cases (an increase of 4·6 per cent over the **Statistics** 1959 figure of 2,488) were dealt with by this section from all departments of the Corporation—2,274 medically examined, 286 arranged but later cancelled, and 23 reports obtained from hospitals and other sources. In addition, twenty candidates were examined on behalf of other local authorities. Of the examinations undertaken, 646 were for new appointments, 1,106 for admission to the Superannuation Scheme, and 522 for extended medical sickness. Included in the above figure is a total of 49 Mersey Tunnel workers who had their usual periodical check because of the nature of their work in the polluted atmosphere of the Mersey Tunnel. For full details, see Table A.

TABLE A.

Medical Examination of Staff and Entrants to the Corporation Service

Department	New appointments	Extended Sickness	Suitable to continue	Super-annuation	Total
Mersey Tunnel	6	3	*51	34	94
City Treasury	53	3	2	—	58
Museums	5	—	—	—	5
Health	230	5	33	56	324
Magistrates... ..	10	—	—	—	10
Parks and Gardens ...	44	9	16	52	121
City Lighting	4	—	2	33	39
Baths and Public Laundries	7	4	5	23	39
Libraries	53	—	9	3	65

TABLE A—continued

Department	New appointments	Extended Sickness	Suitable to continue	Super- annuation	Total
City Architects	20	10	61	153	244
Children's	39	3	8	4	54
Fire Services	25	9	5	4	43
City Engineer's	58	126	72	217	473
Town Clerk's	21	4	3	2	30
City Analyst's	1	—	3	—	4
Markets	—	—	2	11	13
Weights and Measures ...	6	—	—	2	8
Education	2	1	23	82	108
Building Surveyor's ...	1	—	—	—	1
Water	31	22	5	18	76
Passenger Transport ...	1	1	22	388	412
Art Gallery... ..	4	—	—	5	9
Police	18	—	—	19	37
Probation	7	—	—	—	7
TOTAL	646	200	322	1,106	2,274

Unfit for work 144

Unfit for superannuation 48

Unfit for appointment 8

 200

* Includes 49 for usual periodical check.

It was decided, after examination, both by consultation with the candidate or patient's own doctor and/or hospital, that 144 (126 in 1959) were permanently unfit for work and should be retired; 48 (40 in 1959) were unfit for entry into the Superannuation Scheme, and eight (two in 1959) candidates were unfit for their new appointments. This totals 200 persons

(8.7 per cent of the total examined) who were declared unfit during the year, an increase of nineteen per cent over the 1959 figure of 168. A list of their medical conditions is enumerated in Table B below:—

TABLE B.

Medical Reason for being declared Permanently Unfit.

RESPIRATORY SYSTEM	Carcinoma of lung...	5	ABDOMINAL SYSTEM	Carcinoma of stomach ...	3
	Bronchiectasis ...	1		Gastric Ulcer ...	2
	Chronic bronchitis and emphysema...	54		Duodenal ulcer ...	2
	Asthma ...	3	CENTRAL NERVOUS SYSTEM	Cerebral thrombosis ...	2
CARDIO- VASCULAR SYSTEM	Coronary thrombosis	14		Paralysis agitans ...	2
	Angina pectoris ...	6		Epilepsy ...	3
	Auricular fibrillation	1		Paranoia ...	2
	Hypertension ...	44		Psycho-neurosis ...	1
	Myocardial degeneration ...	4		Sub-acute degeneration of cord ...	1
	Arteriosclerosis ...	2		Poliomyelitis ...	1
	Aortic stenosis ...	1		Anxiety state ...	2
	Intermittent claudication ...	2	SKIN	Varicose eczema ...	3
SKELETAL SYSTEM	Rheumatoid arthritis	4		Chronic leg ulceration ...	1
	Acute rheumatism...	1		Dermatitis ...	1
	Osteo-arthritis ...	6	EAR, NOSE AND THROAT	Chronic otitis media	2
	Myotonia dystrophica	1		Chronic sinusitis ...	1
	Chronic lumbago and neuritis ...	1		Loss of sense of smell and hearing	1
	Chronic Sciatica ...	1		Prostatectomy ...	2
	Varicose Veins ...	8	OTHERS	Gangrene of foot ...	1
	Kypho-scoliosis ...	2		Diabetes ...	1
				Chronic nephritis ...	3
				Ophthalmic herpes	1
				Haemorrhoids ...	1

It will be seen that 54 cases of chronic bronchitis and emphysema (42 cases in 1959 and 34 cases in 1958) were the main reasons for the declaration that a patient was unfit; 44 cases of hypertension (as compared with 33 cases in 1959 and 23 cases in 1958); and fourteen cases of coronary thrombosis (as compared with eleven cases in 1959), being second and third, respectively. Five carcinomas of the lung were discovered whereas in 1959 only two were traced. There were no cases of pulmonary tuberculosis discovered in 1960,

whilst in 1959, three cases had been found. In two of the carcinoma of the lung cases, the routine chest X-ray accompanying the medical examination revealed the disease at an early stage, thus enabling prompt treatment to be given.

Throughout the year there has been a most cordial relationship between the candidate or patient's general practitioner, the hospitals and the examining medical officers. In all cases, before an approach was made to a hospital for a confidential report, the consent of the general practitioner and the patient was obtained.

ENVIRONMENTAL HEALTH CONTROL

The Offices Act, 1960 comes into force on the 1st January, 1962 and provides for regulations to be made by the Secretary of State for securing the health, safety and welfare of persons employed in offices. This is a major step forward in the control of premises which previously were only subject to limited action. **New Legislation**

The deplorable environmental conditions under which many clerical and other non-industrial workers are compelled to earn their livelihood has given the department much cause for concern in the past years and, notwithstanding the lack of enforcement powers to remedy the situation, every effort has been made by the inspectorial section to improve conditions by recourse to means of persuasion during contact with occupiers of business premises.

Although this action has achieved a measure of success it is clear that there is a real need for obligatory legislation to secure satisfactory environmental working conditions and there is no doubt that the new Act is welcome for that reason. Believing that this form of protective legislation was long overdue and that sufficient factual information should be available to support any official move in this direction, nearly 5,000 visits and pilot surveys have been carried out in representative business areas in the city and there is ample proof that the information which was obtained was an invaluable aid in the progress of the Offices Bill through the House of Commons.

The Noise Abatement Act received the Royal Assent on the 27th October, 1960 and came into operation on the 27th November, 1960. The Act empowers the local authority to deal with any noise or vibration which would amount to a nuisance at common law, as a statutory nuisance, under the Public Health Act, 1936. Provision is also made for controlling the use of loud speakers in streets.

Preparations have continued throughout the year in connection with the campaign for clean air. A Public Inquiry was held in December concerning the very large proposed smoke control area in the southern part of the city, and confirmation of the Order is now awaited. When confirmation is received it will be possible to push ahead with the extensive conversions and alterations to the appliances in this area. In the meantime, surveys of additional areas are continuing.

**Recruitment
and Training**

The training scheme has continued to provide a steady supply of qualified inspectors to replace normal wastage. Nine assistant inspectors completed their training and obtained the Certificate of the Public Health Inspectors Education Board, qualifying for appointment as public health inspectors. Sixteen qualified inspectors obtained the Meat and Other Foods Certificate of the Royal Society of Health.

A new system of training and examination for the diploma for appointment as public health inspector has now been introduced by the Public Health Inspectors Education Board. The period of training extends over four years and an examination is held at the end of each year of training. A course, in accordance with the new Diploma Course, commenced in Liverpool during September, and eighteen student inspectors from the department are attending the classes. Student inspectors who commenced training under the original system are to be allowed to complete their training, but no examinations under this scheme will be held after 1965.

**General
Health
Education**

The work of the department covers many aspects which are of special interest to certain sections of the public, and requests were received for speakers on subjects of particular importance to the organisations concerned. Although a number of the requests were for talks on the general work of the section, food hygiene, offences and smoke abatement were the most popular subjects. The usual facilities have been provided for the training of inspectors, health visitors and nursing staff.

**Liverpool
Show**

The section's exhibit included specimens of live insect pests. The serious damage which they cause was depicted by the use of photographs and models. The public showed great interest and many enquiries were received from visitors whose premises were suffering damage due to infestation. Inspectors were on duty to give practical advice on methods of disinfection and there is no doubt the public are very appreciative of exhibitions of this nature which assist to overcome particular problems affecting comfort and health.

**Summary of
Inspections**

A total of 42,303 requests were received from occupiers, or owners, for inspectors to visit premises to investigate unsatisfactory conditions. The investigations necessitated a total of 121,334 visits before the matters could be considered satisfactorily completed. Every effort is made to investigate complaints within 24 hours of being received, as the complaints are frequently in respect of very urgent matters from occupiers who are suffering discomfort,

due to defective roofs, choked drains, etc., and it is only when the inspection is made that the urgency of the complaint can be established. Altogether a total of 459,980 visits and inspections were carried out under the various enactments and 25,209 notices were issued under the Acts and Byelaws.

The majority of property owners complied with the requirements of the statutory notices, but where necessary, legal proceedings were taken against defaulters. During the year, 111 prosecutions were taken under the Public Health Act, 1936, the Shops Act, 1950, the Food and Drugs Act, 1955 and the Clean Air Act, 1956 and Regulations. Penalties amounted to £242 10s. 0d. (see Table No. 54, Statistical Appendix).

Where statutory notices have been issued the local authority is entitled to carry out the work on request of the owner and also in cases where owners have ignored notices or where property has been abandoned. This procedure materially assists occupiers who may otherwise suffer prolonged discomfort due to insanitary conditions, defective roofs, etc. It was necessary to carry out repairs in default of owners to 359 houses involving expenditure of approximately £3,000 which will subsequently be recovered.

The cost is recovered through the procedure incorporated in the Public Health Act, 1936 and the amount concerned is also registered against the property in the Local Land Charges Register in accordance with the Land Charges, Act, 1925. This provides for ultimate recovery and therefore there can be no loss to the local authority.

The provisions of Section 19 of the Liverpool Corporation Act, 1955, authorises the Corporation to clear drains after giving 48 hours' notice of their intention. This procedure ensures the clearing of drains in a relatively short period either by the owner or the Corporation. Notices were issued and 1,463 choked drains were cleared during the year. 135 drains were cleared by the local authority in default of the owners and the costs will be recovered in accordance with the provisions of the Act.

Rodent infestation is often due to rats gaining access to buildings through defective drains. In connection with rodent infestation, percolations of water and subsidence, etc., 1,942 drainage systems were tested. Notices were issued in respect of 962 drainage systems which were found to be defective. The assistance of the City Engineer and Surveyor's Department

has been utilised whenever flushing has been required. Twenty-three defective public sewers requiring urgent attention and eleven other defective public sewers were referred to the City Engineer and Surveyor's Department, under the provisions of Section 24 of the Public Health Act, 1936.

Special Sub-Committee

The value of the weekly meeting of the Special Sub-Committee cannot be over-emphasised. This Sub-Committee authorises immediate action to clear choked drains and to remedy other urgent defects and the spending of sums of money to alleviate distress when owners default or houses are abandoned. Urgent matters under the various enactments requiring the service of notices are also dealt with. The Sub-Committee has also dealt with all applications for various certificates under the Rent Act, 1957.

Departmental References

It is pleasing to record the assistance given by other departments who co-operated by forwarding 14,180 references in respect of various matters requiring the attention of the inspectors, and 6,859 references were sent by the Health Department to other departments.

Infectious Disease Enquiries

The following table indicates visits made by inspectors to houses where infectious disease has occurred and the number of enquiries made regarding contacts of infectious disease.

Number of investigations relating to cases of infectious diseases				2,052
Number of enquiries regarding contacts of infectious diseases				6,342

The figure 6,342 is a decrease on 1959 when 9,441 enquiries were made.

Food Poisoning

Investigations in connection with ingestion disease enquiries require specialised knowledge, as the inspectors must be able to assess, without delay, the importance, or otherwise, of information received during discussions with patients, contacts and managements. 6,656 specimens from 4,494 persons were submitted for bacteriological examination and 1,404 specimens from 853 persons proved positive. Detailed enquiries were made into all confirmed cases of Salmonella infections.

Moveable Dwellings

There are no licensed sites within the city, but itinerant traders occasionally park caravans on small plots of unfenced land. Following the Committee's refusal to authorise the use of certain land to site a moveable dwelling, the applicant appealed to the Court of Summary Jurisdiction. The hearing was adjourned for three months and at the end of this period the caravan

had been removed, and the appeal was withdrawn. The legislation controlling moveable dwellings was amended during the year by the Caravan Sites and Control of Development Act, 1960. A total of 156 visits were made to sites where caravans were parked and all the caravans were subsequently removed.

During the year two seamen's lodging houses closed, but one was subsequently registered as a common lodging house and there are now only thirteen registered common lodging houses in the city, twelve providing accommodation for 923 male lodgers and one for 94 female lodgers. Applications for renewal of registrations were received in respect of these thirteen registered common lodging houses. Applications were also received from keepers of such lodging houses for renewal of registration as keepers and were granted for a further period of twelve months. The public health inspectors made 282 visits both by day and night resulting in 48 notices being served in respect of byelaw infringements. Out of a total of 8,182 beds examined, 47 were found verminous and the occupants and the beds cleansed by the local authority.

There are twelve seamen's lodging houses on the register, six of which are not licensed under the byelaws as seamen's lodging houses. Accommodation is provided for British, Chinese, Arab, Somali and Indian seamen. The total accommodation available is 971. Public health inspectors made 168 day and night inspections. Byelaw infringements were dealt with either verbally or by the service of notice. The inspectors examined 3,180 beds and appropriate action was taken where necessary.

Official notice was received in respect of two fumigations under the regulations and inspectors attended the fumigation of the premises in each case.

Under the terms of licences issued from the Home Office, inspectors supervised the exhumation of four bodies during the year. The remains of two persons were shipped abroad, one to Italy and one to Norway.

The Docks and Inland Waterways Executive, North Western Division, are the proprietors of the Leeds and Liverpool Canal, the only canal having direct communication with Liverpool. The length of the waterway within the city (exclusive of the locks communicating with the Dock Estate) is approximately three miles.

Common
lodging-
houses

Seamen's
Lodging-
houses

The Hydrogen
Cyanide
(Fumigation
of Buildings)
Regulations,
1951

Removal of
Remains

Canal Boats

Liverpool is one of several registration authorities for boats used as dwellings plying on the Canal. The details of the boats registered by the authority are indicated in Tables A and B.

**Number of
Boats**

TABLE A

Boats on the register, 1st January, 1960 ...	354
New boats registered	Nil.
Boats removed from the register	2
Boats on register 31st December, 1960 ...	352

Two boats ceased to be used as a dwelling during the year and were removed from the register by letter at owner's request.

**Type of
Boat**

TABLE B

Number and type registered:—

Motor-propelled boats	90
Steam-propelled boats	58
Motor towed boats	41
Steam towed boats	121
Horse-drawn boats	42
	<hr/>
	352

**Number of
boats
inspected**

317 inspections of canal boats were made during the year and the places of registration were as follows:—

TABLE C

Number of boats visited	161
Registered at Liverpool	99
Registered at Runcorn	15
Registered at Manchester	14
Registered at Leeds	Nil.
Boats not registered and not used as dwellings	33

All boats were "wide" boats, fifty-eight being motor propelled, ten steam propelled, sixty-four motor towed, twenty-nine steam towed.

Contraventions of the Act and Regulations were found on nine boats all of which were registered by the local authority, the contraventions being shown in the following Table:—

TABLE D

Contra-
ventions

Nature of Contravention	Reported	Remedied
No certificate of registration on board ...	6	6
Leaking decks	1	1
Defective stove or stove pipes	5	5
Miscellaneous	3	3
	15	15

Nine written notices with respect to the contraventions were sent to the owners concerned and all have been complied with. No information was laid during the year against either owners or masters for infringements of the Act or Regulations.

The inspectors of the Port Health Authority made seventy-three inspections of canal boats in the docks during the year, five contraventions were found, all of which were subsequently dealt with. The figures are included in Table D.

Inspections by
Port Health
Authority

No case of infectious sickness was reported as having occurred during the year on any canal boat visiting the district.

Infectious
Disease

The number and sex of persons found in occupation of the 161 canal boats used as dwellings are included in the following Table:—

Population
of Canal
Boats

TABLE E

Population of canal boats: Men ...	...	322
Women ...	...	Nil.
Children ...	...	Nil.
Total ...	...	322

Distributed as under:—

Males over 14 years of age	...	...	322
Males over 5 years of age and under 14 years	...	...	Nil.
Males under 5 years	...	...	Nil.
Females over 12 years	...	...	Nil.
Females over 5 years and under 12 years	...	...	Nil.
Females under 5 years	...	...	Nil.

NOTE.—Males attaining the age of 14 years and females attaining the age of 12 years, living on a canal boat are regarded as adults and recorded as such in the foregoing Table. No children of school age were found on canal boats during the year.

Public Health Act, 1936, Section 54.**Filled-up Ground**

Inspections of trial holes were made on forty-nine filled-in sites to ascertain whether the ground was free from faecal or offensive animal or vegetable matter, and that the sites were suitable for building purposes.

Miscellaneous.**Stables
Marine stores
and Poultry
stores**

Routine visits were made to stables, marine stores and poultry stores to supervise the general cleanliness of the premises and to ensure that no offensive matter was allowed to accumulate.

Schools

Frequent visits were made to school buildings for observing the general standard of sanitation, also for the inspection of canteens and kitchens under the provisions of the Food Hygiene (General) Regulations, 1960. The standard of cleanliness was found satisfactory.

Sewerage**Sewage
Disposal**

The provision of sewerage facilities in the city is reasonably adequate. The present provision at the two main sewage disposal works is not adequate but a new sewage disposal works is in one case under construction and in the other case an extension scheme has been approved in principle by the Ministry of Housing and Local Government.

HOUSING AND SLUM CLEARANCE

The year 1960 saw the end of the first five year period, following upon the housing survey which was carried out in accordance with the provisions of Section 1 of the Housing Repairs and Rents Act 1954 requiring the Council to submit to the Minister proposals for dealing with those houses which were unfit for human habitation.

The slum clearance proposals which were submitted to the Minister required action in respect of 7,025 houses in this period. Of this total there were already some 4,827 houses represented as unfit for human habitation and during the five years a further 5,462 houses have been represented to the Council either in clearance Areas or individually. Although the 1,103 dwellings which were represented during 1955 do not come within the five year period they must, of course, be considered in relation to the clearance and demolition of slum properties, making a total of 11,392 dwellings available for clearance, which has provided sufficient dwellings for the current programme and future action.

The survey indicated that there were 5,692 houses to be acquired for patching during the period 1956 to 1960. The report also mentioned that the initial cost would be high and because of this and other hazards associated with this scheme, alternative action has been taken and by use of the Public Health Act 1936, Liverpool Corporation Act 1955, and the strict application of the Rent Act, together with improvements under the provisions of the Housing Acts, some 6,488 houses which were included in the survey as unfit, have now been repaired and are providing a good standard of accommodation. Although the hard core of typical slum dwellings of court type and single-back type houses built with so little air space are rapidly disappearing, much remains to be done.

The continuing difficulty of the shortage of land for housing development is still very apparent and this is even more aggravated at the present time by the ever growing demands on the land available for schools, hospitals and other building projects and although these difficulties tend to retard clearance of unfit dwellinghouses, the number of representations during the five year period is better than that envisaged in the five year proposals.

**Housing and
Slum
Clearance**

**Progress of
Slum
Clearance
during the 5
year period
January 1956
to
December
1960**

**The Housing
Problem**

With these ever increasing demands and the diminishing area of land available for housing development, particularly in the central area, even closer liaison must be maintained between all those concerned with slum clearance and redevelopment.

**Slum
Clearance
Progress**

Although this critical shortage of land, coupled with the demands tend to retard the representation of unfit properties, some 1,281 houses were surveyed in detail to ascertain the standard of fitness or otherwise, and 837 dwellings were represented in fourteen Clearance Areas during the year.

**Compulsory
Purchase
Orders made**

Ten Clearance Areas in which there were included 351 dwellinghouses were made the subject of Compulsory Purchase Orders and some 1,835 houses included in a further thirty-seven Clearance Areas are still pending further action.

**Orders
submitted for
confirmation**

A total of eleven Clearance Areas in which there are 396 houses included in nine Compulsory Purchase Orders were submitted to the Minister of Housing and Local Government for confirmation.

**Public
Inquiries**

Of the Orders submitted for confirmation two were unopposed and Public Inquiries were held in respect of nine Compulsory Purchase Orders. The Minister's Inspector carried out an inspection of all the properties involved in these Orders.

**Orders
Confirmed**

Thirteen Confirmation Orders were received from the Minister during the year in respect of twelve Compulsory Purchase Orders and one Clearance Order, containing a total of 737 houses.

Rehousing

There is still a considerable delay occurring from the time of confirmation to the rehousing of the families occupying the condemned properties and the problem is an increasing one due in some measure to the demands for central area accommodation which is so scarce. During this period the hazard of maintaining these condemned houses is most difficult particularly when abandoned by the owners and any shortening of this time lapse between confirmation and rehousing would be invaluable.

**Individual
unfit houses**

There has been continued action in the closing and demolition of individual dwellings and indeed considerable progress has been maintained in regard to those small conurbations of unfit houses situated on land zoned for purposes other than housing and which, therefore, cannot be dealt with under the Compulsory Purchase Order procedure.

During the year, 245 dwellings were represented to the Demolition and Closing Orders (Special) Sub-Committee as unfit for human habitation under the provisions of Sections 16 and 18 of the Housing Act 1957. Following upon the representations, the Committee considered the condition of the properties. 84 were made the subject of Demolition Orders and Closing Orders were made in respect of a further 63 premises. At the end of the year the remainder of the houses which had been represented had still to be considered by the Committee.

Demolition and Closing Orders made during the year

In accordance with the provisions of the Housing Act properties subject to Closing Orders may be repaired and the premises rendered fit for human habitation. Two houses were the subject of revocation Orders granted by the Committee on the application of the owners who had carried out works of repair conforming to the standard of fitness.

Revocation of Closing Orders

Following upon the housing of the occupants from those dwellings subject to operative orders nineteen houses were demolished and seventy closed.

Demolition and Closing of Individual Houses

Any room used as a separate dwelling and which is unfit for human habitation can be dealt with under the Closing Order provisions of Section 18 of the Housing Act 1957. Of those rooms represented to the Demolition and Closing Orders (Special) Sub-Committee the conditions in respect of eighty-seven lettings were considered and Closing Orders were made in each case. Eighteen representations remained to be considered by the Committee at the end of the year.

Basement rooms and parts of premises unfit for habitation Orders made

During the year, seventy-four families were rehoused from rooms subject to Closing Orders and the rooms closed in accordance with the Order.

Rehousing of families from rooms subject to Closing Orders

There appears to be an ever increasing exchange and sale of properties and this is most noticeable from the large number of enquiries which are received from prospective buyers. Here the housing survey register proves invaluable, particularly when the enquiry refers to the poorer type of property and the register reveals that the life of the premises is limited.

Property Enquiries

The Rent Act 1957, came into operation on the 6th July, 1957, and since that date 7,651 applications for certificates of disrepair have been received which have necessitated some 27,000 visits. During the year 662 applications received have been investigated and reported to the Committee and approximately 2,500 visits have been made in connection with inspection and reports under this enactment.

Rent Act, 1957

As a result of action taken many houses are now well maintained and in good repair. Repairs carried out to controlled dwellings include, in many instances, new roofs, pointing of external brickwork, the rebuilding of boundary walls and repair of internal door and window furniture. As a direct result of this Act, progressive dilapidations have been halted and many premises have undoubtedly been given a new lease of life.

Certificates of Disrepair

In order that the tenant may be able to withhold payment in whole or part, of an increase of rent on the grounds that the house is in a state of disrepair, the tenant must first serve on the owner a list of defects (form 'G') which he considers to be reasonable, having regard to the age, character and locality of the dwelling. After service of the form 'G' on the landlord, a period of six weeks is allowed to enable the owner to give an undertaking (form 'H') to carry out all the necessary repairs. The tenant must keep a copy of the notice he serves to produce to the local authority with his application for a certificate of disrepair if the landlord fails to carry out the repairs or give the appropriate undertaking.

Notice to Landlord of intention to issue certificate of disrepair

Following the receipt of the applications all premises were inspected and a report submitted to the Special Sub-Committee of the Health Committee who determine, where appropriate, to issue a notice (form 'J') of the local authority's intention to issue a Certificate of Disrepair in respect of the tenant's application.

Number of applications received

As a result of 615 form 'J' notices being issued, undertakings on the appropriate form 'K' were received within the statutory period of twenty-one days in respect of 431 cases and 184 certificates of disrepair (form 'L') were subsequently issued where no action had been taken by the landlord to comply with the requirements of the Act.

It should be remembered that the tenants when specifying defects do not convey to the owner, in many instances, the actual defects or repairs required in accordance with the Act and it is necessary for the inspector to transcribe the items into the correct terminology. This involves a considerable amount of work in checking applications to ensure that all the items enumerated on the tenants' application are included in the certificate.

Landlord's failure to comply with undertaking

Under the provisions of this enactment owners have a period of six months in which to repair all the defects specified in their undertakings. However, should an owner fail to remedy all the defects, the tenant can reduce the rent to one and one-third the gross rateable value of the

dwelling, plus any addition for rates, services or improvements, while the defects remain unremedied. Further, the tenant can recover, by deduction from the rent, any past rent which he would not have had to pay if a certificate of disrepair had been issued on the date on which he applied for it. The amount which may be deducted from each payment of rent must not exceed the amount by which the rent is adjusted as a result of the failure of the landlord to comply with his undertaking and the deduction cannot continue after the defects have been remedied.

The tenant can, if he so desires, apply to the local authority for a certificate to the effect that the repairs have not been completed. These certificates (form 'P') are useful to the tenant, should the owner subsequently take action through the County Court. Similarly, the owner can apply for a Certificate indicating that all the repairs specified in the undertaking have been satisfactorily remedied.

During the year 186 applications (form 'O') were received from tenants and in 185 cases the appropriate certificate (form 'P') was issued. Following 357 applications from landlords during the year and other applications held over from the previous year, 402 form 'P' certificates were issued during 1960.

Certificates can be cancelled by the County Court on the grounds of the wrongful inclusion of defects in the certificate, and by the local authority when the defects have been remedied subject to the tenant's right of appeal to the County Court, on the grounds that the defects have not been satisfactorily remedied.

Cancellation of Certificates of Disrepair

During the year, 176 applications (form 'M') were received from owners for the cancellation of Certificates of Disrepair and following the procedure under the Act, notices of intention to cancel were sent to the occupiers of the dwellings concerned. As a result of these notices, eighty-two objections were received from tenants dissatisfied with the repairs carried out. However, upon investigation the department was satisfied that in 167 cases the certificate should be cancelled.

If the local authority do not cancel the certificate after the landlord has applied to them to do so, the landlord may apply to the County Court. If the Court is satisfied that the certificate ought to have been cancelled by the local authority, the Court shall order that the certificate shall cease to have effect from the date of the order, or any earlier date which may be

specified. It is pleasing to note that in no case has this procedure been necessary as upon further investigation, owners have been satisfied that the applications have been premature and the necessary instructions have been issued for the repairs to be completed to the satisfaction of the tenants and the local authority.

Improvement Grants

Once again it has been noticeable that investment property owners are not taking advantage of the financial help available for the improvement of dwellings, and so lengthening the life of their properties. The vast majority of enquiries were received from owner/occupiers, but unfortunately the cost of maintenance repairs which would have to be borne by them compelled a number of withdrawals from the scheme.

Several enquiries had to be rejected in view of the premises being in districts in which clearance area action is contemplated within fifteen years. Whilst this may seem harsh treatment to persons willing to improve their property, it has to be realised that public money is being used, and in the event of these premises being included in a Compulsory Purchase Order more money would have to be spent by the local authority in compensation.

Following upon the passing of new legislation in the previous year which requires local authorities to give grants in respect of five standard improvements, ninety-nine applications were received as against twenty-two in 1959. During the year, 660 premises were inspected regarding enquiries for Improvement Grants and of 195 applications for Discretionary Grants, 159 were approved. Standard Grants produced ninety-nine applications of which ninety-three were approved. It will be noticed from the foregoing that 294 applications were made, of which 252 were approved.

Loans on Mortgage

The local authority is empowered by parliamentary legislation to advance loans on mortgages for the purchase of dwellinghouses, and it is pleasing to realise the extent to which the public are taking advantage of the Corporation's help in this respect. There has been an increase in the number of applications made this year, with a higher proportion being in respect of the older types of premises.

The houses which are the subject of such applications must conform to the standard of fitness as laid down in the Housing Act, 1957, and following each inspection a schedule of any work required to be carried out is drawn up and the necessary works completed before the loan is finalised. During the year 864 houses were inspected in respect of applications for loans on mortgage.

The shortage of houses inevitably leads to overcrowded conditions in many of the older large type of premises. There is a general lack of amenities in these houses and kitchens and sanitary accommodation are frequently shared between families. Very careful consideration is given to each individual problem and in serious cases of overcrowding a report is forwarded to the City Architect and Director of Housing requesting him to give consideration to the rehousing of the family. As a result of enquiries 420 cases of overcrowding were reported to the City Architect and Director of Housing. The last comprehensive overcrowding survey was carried out in 1936 and considerable changes have taken place since that time.

Basement rooms occupied as separate dwellings contravene the provisions of the Liverpool Corporation Act 1921 and action is continually being taken under Section 469 of this Act, together with the application of Section 18 of the Housing Act 1957 to reduce the number of families occupying such dwellings.

Under the provisions of the Housing Act 1957 landlords are required to enter in the rent book the name and address of the Medical Officer of Health, a summary of the overcrowding legislation and also the permitted number. When an inspection of a house is carried out the inspector examines the rent book to see that these provisions are complied with. Any contravention is dealt with formally.

The total number of houses and flats owned by the local authority at the 31st December, 1960, excluding 3,500 temporary bungalows, was 72,078. The number of houses built in the last three years under the Housing Act 1957, Part V, is 6,146 and the number of houses built under the provisions of the Housing Subsidies Act 1956 is 5,922.

During the year fourteen Clearance Areas were represented under Section 42 of the Housing Act 1957, which included 837 houses containing 3,470 persons. Orders in respect of 351 houses containing 1,512 persons were made and thirteen Confirmation Orders in respect of twelve Compulsory Purchase Orders and one Clearance Order comprising 737 dwellings and 3,106 persons were received from the Minister.

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

The duties of the inspectors of this department in the enforcement of the Shops Act, 1950 and the Young Persons (Employment) Act, 1938, entail

Overcrowding

Cellar
DwellingsHousing Act
1957 Sections
8 and 81Houses
owned by the
local
Authority

Summary

Inspector's
duties

the administration of all provisions imposed upon local authorities. There are no divided duties, and therefore the unsatisfactory consequences of two or more inspectors dealing with the same premises for matters closely associated with each other are obviated.

Affect of anomalies

The department, whilst bound by its legal obligations is always mindful of the manner in which enforcement is carried out. Every effort is made to promote a satisfactory understanding between all persons affected by this legislation, so that the effect of its anomalies and the highly controversial atmosphere which surrounds it, is reduced to a minimum.

Inspections

Shops and similar premises are visited from time to time by inspectors during the course of normal district duties, and all infringements are dealt with appropriately either by notice, informal intimation, or, if necessary, by Court proceedings.

The work carried out during the year indicates that regular visits are essential in order to ensure that the various requirements of the Acts are observed. Many works of maintenance and improvement have been carried out which would not otherwise have been dealt with by the responsible person. There are many owners of shop premises or businesses who prefer to wait for official action before carrying out large structural alterations.

Co-operation of shopkeepers and others

On the other hand, of course, a very considerable number of shopkeepers and property owners are not only fully co-operative, but fulfil their obligations entirely on their own initiative.

Difficulties of Shops Act Enforcement

The extremely unsatisfactory position pertaining to street and Sunday trading has brought a number of protests from responsible persons, and some amendment to the present Shops Act in order to bring street trading within its scope would seem to be urgently needed.

Complaints of late trading

The concern which still remains among many shopkeepers is indicated by the complaints frequently received regarding trading after hours especially in the evenings. Such complaints, and also those affecting the early closing day and Sundays, are fully investigated. It is not easy to obtain sufficient evidence for court action, as, in some instances, shopkeepers are careful to conceal illegal transactions in a manner which defeats the efforts of the inspectors, and whatever may indicate that an offence has been committed, the absence of proof prevents further action.

Complaints concerning street traders have also been received, but there are indications that most shopkeepers now accept the problem and realise the inadequacy of the law which exposes some of them to unfair competition. **Mobile Shops and Street Trading**

A total of 55,577 visits to retail shops of all classes, cafes, clubs, hair-dressers, warehouses, pet shops, also places of entertainment have been made during the year. In addition 10,069 shops were entered during special visits on the early closing day, during the evening, and on Sundays. **Inspections**

The general pattern of trading has remained fairly static, and there has been no marked increase in the tendency for sales after 1 p.m., on the weekly half-holiday. Such trading which does occur after the closing hour takes place in general shops and usually from tea-time onwards. Special duties are carried out by inspectors to deal with this problem. **Half-day closing**

The provisions relating to evening closing hours are well observed by the majority of shopkeepers, but the difficulties associated with the mixed trades shops continue. There is a slight increase in the trend towards late trading in these general shops, especially in certain localities near to the city centre. **Evening closing**

Inspectors are engaged on evening duties for the purpose of dealing with complaints and making regular routine visits to shops. Altogether 423 contraventions have been dealt with, mainly by warning letters. It should be mentioned that the majority of these contraventions relate to the display of forms and notices.

The experiences and conditions referred to in respect of evening and half-holiday closing also relate to Sunday trading. The law affecting exempted commodities on Sundays is particularly unsatisfactory, and gives rise to frequent misunderstandings by traders, and certain difficulties of enforcement. Again this is a matter which will only be overcome by the introduction of realistic legislation. In the meantime, however, inspectors perform the necessary duties, and as a result have dealt with 363 contraventions of the Act. **Sunday Trading**

Welfare Arrangements.

The welfare provisions of the Act dealing with sanitary conveniences, washing facilities, heating, ventilation, lighting and the facilities for the taking of meals, have been given attention during the year. Again it has **General**

been revealed that continuous supervision is required in order to ensure that these benefits to shop assistants are properly maintained. Whilst in all but a few instances, the basic requirements are fulfilled, there are a number of cases in which satisfactory maintenance of the facilities would otherwise have been neglected but for periodical inspections by this department.

It is, however, interesting to record that few complaints are made by shop assistants concerning the welfare arrangements provided for them, but this is not necessarily an indication that all is satisfactory. It is regrettable that some people fail to appreciate the benefits these welfare arrangements are intended to provide, and thereby allow the facilities to deteriorate through neglect or misuse.

Alterations to premises

Attention is also given to alterations and additions to premises, in so far as they affect the welfare arrangements. In this connection plans are examined and any matters which do not meet the requirements of any particular legislation are brought to the attention of the appropriate person.

There is a considerable degree of co-operation between architects, property and business owners, contractors and this department, which results in the benefits of saving time and reducing costs, in work being completed to the satisfaction of the local authority.

Statutory half-holiday

The Shops Act has two distinct provisions relating to the weekly half-holiday. One requires all shops, not exempted from the closing provisions of the Act, to be closed at 1 p.m., on one week-day, irrespective of whether assistants are employed or not. The other provision requires all shop assistants to be given a weekly half-holiday on a day to be indicated on the prescribed notice. This latter requirement is known as the Statutory half-holiday. There have been no recorded infringements during the year and no complaints have been received from assistants or other interested persons.

Meal Times

The requirements of the Act concerning intervals for meals have been well observed, and, again, no infringements have been recorded. Enquiries have, however, been made in respect of complaints which concerned the employment of young persons in restaurants, but the allegations could not be substantiated.

Sunday Employment

All persons employed in shops which are open on Sunday for the serving of customers must be given a compensatory holiday on a week-day preceding or succeeding the Sunday. This holiday must be additional to the

statutory half-holiday. Inspectors on Sunday duty pay full attention to this requirement, and examine the Shops Act records required to be kept concerning the number of hours worked on the Sunday and the date of the compensatory holiday. If necessary, the assistants are questioned in order to see that the record is correct in all respects.

This is one of the more important duties imposed by the Act, and one which warrants the maximum supervision possible.

Employment of Young Persons.

The supervision of the hours of employment of young persons under eighteen years of age is considered to be a matter of primary importance. Whilst the conditions of employment of these young people are, on the whole, very satisfactory, full attention is given to all the requirements of the Shops Act and The Young Persons (Employment) Act, 1938. The appropriate records are examined and when necessary the young persons are questioned to ensure that the records are correct.

The employment of young persons in restaurants and certain other establishments is also checked from time to time to ensure that they are not employed later than those hours prescribed by the Act, **Night Employment**

There is also full co-operation between this department and the Director of Education through the Youth Employment Bureau, and matters affecting each department are referred for appropriate action. **Co-operation with Director of Education**

Hairdressers and Barbers.

The provisions of the Liverpool Corporation Act, 1955, relating to Hair-dressers and Barbers, and the Byelaws associated therewith, have been implemented and routine inspections of these establishments made in connection with the general conduct of the premises and the hygienic practices of the personnel. **General**

During the year 52 new and transfer registrations were reported to the Committee, and the total number of hairdressers on the register at the end of the year was 659. 519 inspections of hairdressers shops were made, and 156 infringements recorded and dealt with by informal letter.

Places of Entertainment.

- Routine supervision** Routine visits to cinemas, theatres and dance halls have been made during the year in accordance with the arrangements with the Licensing Justices. Attention has been given to the cleanliness of the auditoria, seats, sanitary conveniences, staff and projection rooms, and to the maintenance of adequate ventilation and a suitable temperature. There are now 48 cinemas and theatres in the City compared with fifty-seven last year, and there is a further possibility of more cinemas being closed.
- Closing of cinemas, etc.**
- Inspection** During the year 151 evening visits were made to these establishments, nineteen defects being found and satisfactorily dealt with by the managers concerned. In addition a notice was served to provide adequate ventilation to the cloakroom in a ballroom, and involved trunking through the roof void to the external air. This work was completed to the satisfaction of the department.

Pet Animals Act, 1951.

- Licensing** Fifty-one licences were issued during the year to persons carrying on business as dealers in pets. 269 visits were made to these premises to ensure that the provisions of this enactment were complied with satisfactorily and fifty-two infringements were dealt with by informal action.
- Fire precautions** The requirements of the Act with respect to fire precautions are dealt with by the Liverpool Fire Service who recommend measures for reducing fire risk and action to be taken in the case of fire. These recommendations are made special conditions on the licences affected and steps are taken to ensure compliance with these requirements.
- Curb-side trading** Special attention was given to the sale of pets at St. John's Market on Saturday afternoons in order to investigate the curb-side trading attempted by unauthorised persons. For several weeks, in co-operation with the City Police, and subsequently by our inspectors working alone, observations have been carried out each week-end throughout the year. Early in the year a number of men and a woman were seen attempting to sell dogs and puppies by standing on the pavement in Market Street and moving about among the crowd. No sales were seen to take place but the names and addresses obtained from these persons proved to be false. As a result of this continuous effort the practice has ceased, at least for the time being.

The pet stalls in Market Street were also kept under observation and the **Pet Stalls** heating, feeding arrangements, and the general conditions under which the animals were kept in the cages were given special attention. Puppies were checked to ascertain whether they were capable of feeding themselves, and appeared to be in normal health.

In accordance on the instructions of the Health Committee, action has **Sunblinds** been taken to have external sun blinds fitted to pet shops not already possessing them, and this requirement is also made a special condition of the licence.

Factories Inspection.

Under Section 128 (3) of the Factories Act, 1937, the Medical Officer of **Co-operation with government inspectorate** Health is required to furnish H.M. Inspector of Factories each year with information relating to the administration of the Act by the local authority. The prescribed particulars are given in the statistical appendix (Table 51).

Co-operation between H.M. Inspector of Factories, the Alkali Works Inspector and the public health inspectors is considered to be an important factor, owing to the wide variety and large number of factories in the City and the possibility of industrial nuisances, the source of which frequently concern the three administrations.

In investigating complaints of dust and effluvia in an industrial area, the public health inspector found one cause was due to an emission of dust from a plant grinding metallic alloys. The Inspector of Factories was advised and following an examination of the process by both officers, it was decided that the recognised methods of dust extraction might give rise to possible explosion hazards. A conference was therefore held with the directors of the firm concerned who agreed to transfer this particular process to another works.

Food factories present problems so far as this department is concerned. **Food Factories** Apart from the administration of certain provisions of the Factories Act, 1937, which affect the health and welfare of employees, the Food Hygiene (General) Regulations, 1960, controlling the manufacture and supply of clean and safe food, necessitate regular visitation of food factories to ensure that the provisions of the regulations are being complied with at all stages of production.

**Preserved
Meat
Premises**

Factory premises concerned with the manufacture of cooked meats, sausages and meat pies are most important from a food hygiene point of view. Wherever these commodities are produced great care is necessary to see that the standard of hygiene is irreproachable and every effort is made by the inspectors, at the time of their visits, to impress proprietors and workers as to the significance of cleanliness and basic hygienic requirements in the preparation and supply of made-up foods of this character.

Outworkers

The Factories Act, 1937, requires employers of outworkers to submit returns giving the names and addresses of persons who undertake this work. The premises where they operate are examined to ensure that environmental circumstances are satisfactory.

Details of the returns are as follows:—

Number of outworkers returns for the year	430
Number of outworkers returns received from other authorities	22
Number of outworkers referred to the Medical Officers of Health of districts outside the city	65

Industrial Nuisances.**Effluvia**

Fat melting and fat extraction plants were again responsible for complaints of obnoxious smells, particularly those by-products and ancillary trades located at Stanley Abattoir which process animal offal and waste material.

One of the most difficult problems in dealing with these trades is concerned with the human element. Careless use or mishandling of plant can cause momentary emissions of an offensively smelling vapour which will drift slowly in certain weather conditions and takes some time to disperse. The detection of the culprits or even the precise operation of plant where this occurs is most difficult and in order to minimise the risk of such happenings, inspectors have found it necessary to keep all by-products plants under continuous observation during the summer months whilst other inspectors have patrolled the district lying to the windward of the abattoir. This practice has certainly had a marked effect, but it is unfortunate that there is no known foolproof or automatic method of controlling these plants so that emissions can be prevented without having to depend on the activities of non-technical and disinterested workers and the constant attention of the public health inspectorate.

This irritating and annoying factor in life is becoming more and more **Noise** important to the average individual. Public opinion has been roused to such a degree that new legislation—the Noise Abatement Act, 1960—was passed and came into force in November. In addition to industrial and other extraneous noises which are a nuisance to residents in the vicinity, the Act is also concerned with the use and operation of loudspeakers in the street and on the highway.

In this city, powers have been available since 1955 under a local act to deal with excessive and unreasonable noise caused by industrial activities and several complaints have been investigated during the year. These included noise from plant, machinery and high speed fans in a large industrial establishment, packing and grinding plant in the factory of a cattle food manufacturer, machinery in a box-making factory, the clatter of bottles and shouting of workers at a milk depot during early morning delivery and the movement of lorries and other vehicles in the early hours of the day.

There is no general panacea for minimising or abating a nuisance caused by noise and each case must be dealt with on its merits. Careful enquiries and approach are essential when investigating subjective matters such as noise. In one case an elderly lady complained bitterly to this department and to the police about noise and vibration due to the operation of machinery in a nearby factory during the evening and night. Subsequent investigation showed that the factory did not operate after 7 p.m.; neither was any person in the works after that time. Inspectors interviewed the complainant in the evening when all was quiet, but notwithstanding this fact the lady still insisted that she could hear an excessive noise from the works. It was eventually learned that this person was receiving medical attention.

The number of complaints of nuisances from industrial dust have been **Dust** relatively few during the year and this may have been due to the periods of abnormal rainfall. Matters dealt with include dust arising during the demolition of buildings, cement mixing and the loading and unloading of vehicles carrying meal and flour. Abatement notices were served in two cases, but personal contact with management in nuisances of this nature usually achieves the desired result.

Offices and Workplaces.

In previous annual reports extending over many years, repeated references have been made to the fact that legislation with regard to the welfare, health and safety of persons who are engaged in non-industrial employment was relatively non-existent. Numerous complaints have been received in the past by the department with respect to such matters as inadequate heating, washing facilities and lighting in offices and similar premises, but little could be done to remedy these conditions without powers of enforcement. It has therefore, given the department much satisfaction to see that a private members bill in the Commons dealing with the protection of office workers was successful in obtaining the necessary support and has been entered on the Statute book as The Offices Act, 1960.

Offices Act, 1960

The Act provides for the making of regulations by the Secretary of State in respect of many environmental conditions in addition to the provision of first aid, washing facilities, inspection of electrical equipment, fire precautions and other matters directly affecting office workers. The Act, does not however, come into operation until January, 1962, by which time, the necessary regulations will have been made. There is however, the possibility that the Government may sponsor a comprehensive bill covering shop, clerical and many other types of non-industrial workers who are not covered by the new Offices Act and in this event the new Act will be superseded.

Information which has been gained by the public health inspectors during routine and systematic inspection of business buildings during the past few years was carefully collated and proved to be of value to the promoters of the bill and was referred to on more than one occasion in the House and during the Committee stages of the bill. The fact that 4,758 visits were made to offices during the year indicates the importance that the department attaches to this subject.

Conditions in many offices and workplaces are sub-standard and are not conducive to the maintenance of a normal health standard. When powers to deal with these conditions are available, substantial improvements will have to be made in this type of premises. In others the work will not be so onerous, but there is little doubt that some improvement will be required in the majority of offices to meet with minimum standards. The supervision of this work and the responsibility of securing compliance with the proposed legislation will eventually lay a heavy burden on the inspectorial staff.

Workplaces.

There are many other classes of non-industrial workers, other than those engaged in offices and shops, who do not enjoy the advantages of protective legislation and in view of the support given to the offices bill, the time appears to be opportune for similar action in respect of other employment. Examples of non-industrial employment yet to be considered are those where persons work in warehouses, on railways, in coal and building contractors yards, and in premises where laundry, dry-cleaning and shoe repairs are received. Washing facilities, meal rooms, heating are some of the amenities which are urgently needed for such workers as these are basic health requirements in view of the character of the work and powers of enforcement are essential to see that these are provided.

Bakehouses.

When considering the question of clean food attention must of necessity be focussed to some degree on the baking industry and in particular the confectionery trade which produce foods containing custard, cream, synthetic cream, gelatine and meat which have so often proved to be the offending foods in outbreaks of food poisoning.

**Contamin-
ation
hazards**

Cleanliness is of paramount importance in the confectionery trade and, apart from its public health aspect has a definite business advantage. Cleanliness of premises combined with cleanliness in production pays dividends that come from the improved quality of the finished product and the increased efficiency of employees.

Proper cleansing will minimise the possibility of contamination and an important feature of the systematic visits made by inspectors to bakehouses which numbered 387 in the year is to remind proprietors and supervisors of this fact.

A clean, light and bright environment is an established psychological factor. Dirty and dingy equipment, plant and structural surfaces are likely to promote carelessness and slovenly habits on the part of food handlers, whereas clean plant in a good environment with sanitary working conditions usually inspire a sense of pride of workmanship and result in a higher standard of hygiene.

**The effect of
clean
premises, etc.
on employees**

Supervision

With the gradual absorption of small baking concerns by large organisations, the trend is to centralise production in factories where supervision can be specialised and several firms have arranged for responsible members of their staff to attend the courses on food hygiene held at the Liverpool University School of Hygiene so as to be in a position of having qualified assistance in supervising this important aspect of food production.

Packaging of confectionery

For many years the pre-packing of baked confectionery products was believed to be impracticable, but research has shown that this is not necessarily the case. Many bakeries are now producing a wide range of lines pre-packed in cellophane or in cartons and one firm in the city has experimented to such a degree that 95 per cent of confectionery is now sold in this condition. This method of retailing is a noteworthy step in the prevention of contamination.

Licensed Premises.**Inspection**

Systematic visits, numbering 1,234 have been made to public houses and other types of licensed premises during the year to ensure that a satisfactory standard of hygiene is maintained in places where intoxicating liquor is sold. Although it has been found necessary on occasions to administer verbal caution and in some cases to serve written notices in respect of unsatisfactory conditions, the trade does maintain a reasonably good standard of cleanliness and repair. Frequent visits by experienced supervisors from the respective brewery companies do much to check any noticeable deterioration in this respect, as this would be regarded as a serious matter by the owners who are anxious to avoid giving cause for complaint.

Supervision by brewery companies

The advice of the department has been sought on occasions when problems have arisen with regard to hygiene and sanitary matters. Inspectors have accompanied the supervisors during enquiries as to effective methods of the cleansing of beer glasses and the location and character of personal washing facilities. Recommendations of the department in such cases are invariably accepted and implemented.

Bar parlours and lounges

An important feature of public houses so far as regular customers are concerned is the standard of comfort which is presented in the bar parlours and lounges and similar rooms. Licensees and owners appear to recognise this fact and special attention has been given to rooms of this type. From

a health point of view this is an advantage, as furnishings, decoration and cleanliness, heating and ventilation in these rooms are generally satisfactory even in licensed premises in poor neighbourhoods.

Although male customers still predominate in most public houses, there has been a noticeable increase in recent times in the number of females who frequent this class of premises and this has its effect on the control and conduct of businesses. There is, for example, the necessity for providing additional and better standard toilet accommodation, cleaner and brighter interiors, especially in parlours and the higher proportion of wine and smaller drinking glasses which draws attention to the need for the thorough cleansing of drinking utensils owing to traces of lipstick and the presence of the sticky and adhesive nature of the ingredients in certain drinks.

**The effect of
the female
customer**

The use of contaminated drinking vessels is recognised as a hazard to public health and there is a legal and moral obligation for all caterers, whether they are licensed or not, to see that customers are served with clean utensils.

**Washing of
drinking
utensils**

Methods of washing beer and other glasses is noted by the inspectors at the time of routine visits to public houses and observation is frequently carried out during the busy periods to ensure that the work is done in a thorough manner. A verbal caution to the licensee is usually sufficient to effect an improvement in any case where the cleansing process is not considered to be satisfactory. Several sub-standard public houses in congested areas have been closed in the past year and the licences either surrendered or transferred to new premises in the suburbs. Future developments in housing, scholastic establishments and road widening will also affect other licensed premises.

Food Vehicles.

Contamination of food can and does occur at all stages in its journey from the point of production or importation to the consumers table and care during transport is a factor which must not be overlooked. Recent legislation in the form of The Food Hygiene (Docks, Carriers etc.) Regulations, 1960, has had the effect of controlling by powers of enforcement the handling and movement of food in places and under conditions which were not previously covered by statute and it is now possible to ensure the protection of food before it reaches the wholesaler and distributor.

**The transport
of food**

**Inadequately
protected
commodities**

The fact that so much food is pre-packed by manufacturers and before importation is a distinct hygienic advantage, but there is still a substantial quantity being distributed which is not protected adequately and so far as this type of food is concerned, supervision must be maintained, especially during its conveyance in vehicles. The main commodities which merit attention are bread, confectionery, meat and groceries. These articles of food are not only carried between the various distributors, but are now sold retail direct to the public from travelling shops, particularly in

**Food vehicle
inspection**

suburban areas. In these circumstances, it is necessary for inspectors to keep a watchful eye on a wide range of food vehicles throughout the city to ascertain if the interiors are soundly constructed and whether the standard of handling and protection is satisfactory. Observation has shown that there is a marked improvement in the construction of many types of food vehicles and that conditions, so far as the sale and handling of food in the open air is concerned, have also improved. The delivery and conveyance of certain food however, leaves much to be desired from a health point of view and constant vigilance is necessary.

**Bread
delivery**

The wrapping of all bread and confectionery would undoubtedly be a great asset in the retail delivery and sale of this food as it is virtually impossible for van salesmen to keep their hands clean at all times. Economics appear to be the main objection and the education of the public in the hygienic value of this step appears to be called for. When the principle has been accepted, it may well be that the housewife will not be unwilling to pay for the service and this will solve one of the problems of a clean food supply.

Agriculture (Safety, Health and Welfare Provisions) Act, 1956.

It is the duty of the local authority to enforce the provisions of this act which relate to sanitary accommodation for employees who are engaged in certain agricultural activities. The administration of the act in this City presents little difficulty as there are no extensive farming areas. During the year fifty-two visits were made to nursery gardens, farms, market gardens and small holdings and all were found to comply with the requirements of the Act.

Employment Agencies.

These agencies are licensed annually and controlled by bye-laws made under the Liverpool Corporation Act, 1927. Periodical visits are made to

ensure that the conduct of these businesses are satisfactory and that the provisions of the bye-laws are being observed. At the end of the year thirty licenses were in force permitting agencies of this character to operate within the city.

Rag Flock and Other Filling Materials Act, 1951.

The act applies to filling materials which are used in the making of upholstery, bedding and toys.

Manufacturers of these articles are required to be registered and premises where rag flock is made, stored or sold have to be licensed. The number of firms operating under these conditions are:—

Licensed to manufacture rag flock...	...	1
Licensed to sell rag flock	... ..	8
Registered for the use of filling materials...		84

Samples of filling materials which are taken for testing in accordance with the terms of the act must conform with the standard of cleanliness laid down by regulations.

The following thirty-five samples were submitted to the prescribed analyst during the year:—

<i>Filling Materials</i>	<i>Number of samples</i>
Rag Flock	18
Layered Cotton felt	2
Coir fibre	6
Layered flock	6
Cotton felt (linters)	2
Algerian fibre	1

One sample of rag flock contained 0.4 per cent of soluble extracted matter and forty-four parts of Chlorine in excess of the amount stated in the regulations made under the Act; a warning letter was sent to the supplier in respect of this sample.

ATMOSPHERIC POLLUTION

First large Domestic Smoke Control Area This year has been an eventful year in the efforts to reduce atmospheric pollution in the city. Preliminary approval of the proposals of the City Council to declare the first large area of domestic premises a smoke control area, was received from the Minister of Housing and Local Government. This proposed area is the largest in the country. The Council submitted the formal order in July and in December a Public Inquiry was held as a result of fourteen objections. The decision of the Minister is now awaited.

Central Area Smoke Control Progress The continued co-operation between public health inspectors and managements together with the foresight of so many people in carrying out alterations before an order has been submitted is ensuring steady progress in the central smoke control area programme.

Industry and Smoke Abatement Improvement continues in the industrial field, by the renewal or modification of existing plant which is not capable of being operated successfully within the terms of present-day requirements. New oil-burning furnaces, gas-fired boilers and changes from hand-firing to mechanical stokers have assisted in the progress which is continually being achieved toward a cleaner and healthier atmosphere.

Statistics There are now nine operative smoke control areas and a further five have been surveyed. Twelve of the areas are situated in the central part of the city, the remaining two cover a large area in the southern part of the city and consist mainly of domestic premises.

Corporation owned boiler plants The City Council has continued to authorise modernisation of installations under its control and this year the Central Library new boiler installation came into operation as did new installations at baths and laundries, at the following locations:—

Westminster Road, Burroughs Gardens, Clare Street and Woolton Street.

Shipping Daily observations on shipping have been maintained, and it is pleasing to report that a considerable improvement has taken place during the latter half of the year. Seven new oil-fired tugs, two new diesel tugs and two new diesel dredgers are now in service. Nine tugs have been converted from coal to oil and six more vessels are to be converted.

The domestic problem, which is responsible for over half the smoke pollution of this city, was tackled under the programme set out in 1959 for smoke control areas, and there is already co-operation from householders who are making the necessary alterations to their fireplaces in advance of the official requirements.

The Clarence Dock Power Station is still a formidable problem. The application of new engineering techniques aimed at reducing the smoke emissions from the chimneys has given some improvement but, until the load is reduced to suit the capabilities of the plant and the fuel with which it is supplied, there will not be sufficient progress to give appreciable indication to the general public that pollution from this source is being reduced.

Atmospheric pollution is one of our major evils, and its numerous problems have been tackled by a staff of young public health inspectors vigorously and conscientiously during the past twelve months. Already in the industrial, commercial and domestic areas, progress is ensuring a cleaner atmosphere for the future.

The Clean Air Act has been in operation now for four years and progress can be measured by the visibility in the central areas, and statistical information now available. Nevertheless, the areas are still too small for any dynamic improvement to be completely conclusive to the general public.

Smoke Control.

Provisional clearance was received for the No. 10 Smoke Control Area details of which were submitted to the Minister of Housing and Local Government during 1959. In accordance with the procedure laid down, an order was made by the City Council and submitted to the Minister for confirmation. After the publication of the Council's intention, objections were made to the Minister with the result that a public inquiry was held on Thursday, 8th December, 1960. The decision of the Minister is awaited and it appears that, if the Order is confirmed, the original date of operation will be extended.

In accordance with the approval by the City Council of the five year programme on Smoke Control, the survey of the area comprising the second stage was completed and the details presented to the Health Committee.

This area is the second largest domestic area to be proposed and includes the following wards:—

Church, Childwall and the remainder of St. Michael's, Allerton and Woolton which were not included in the No. 10 area.

**Smoke
Control
Survey**

The survey indicated that the area covers 3,677 acres and includes a total of 18,651 premises of which 17,732 are dwellings. There are 11,450 dwellings which require adaptation to the living-room firegrates, in order to comply with the requirements of the smoke control order. The total estimated cost for the conversion of these dwellings is £226,303 being approximately £20 per dwelling.

**Preliminary
Survey**

A preliminary survey of the third stage of the programme has been commenced covering the following wards:—

Arundel, Picton, Broadgreen and Dovecot.

Special Problems.

**Clarence
Dock
Power
Station**

The decision of the Central Electricity Generating Board to spend some £50,000 on modification of boiler plant at Clarence Dock Power Station has resulted in the implementation of a new boilerhouse technique to a number of furnaces. It is not possible to comment on the success or otherwise of this approach, as we have not had the full effect of winter load which is the period when emissions from the three chimneys cause a problem in the city, and public comment is made.

**Control of
Power
Station by the
Local
Authority**

After the approach which was made by the Council to the Minister of Housing and Local Government in respect of an Order which would allow the local authority to exercise control over this power station, the Minister did in fact make the Order which reverted his previous decision and decided that this authority had public health inspectors qualified in smoke prevention and capable of controlling processes which are essentially questions of fuel combustion. Since this order was made, continual visits to the station have been made by the inspectors.

Action taken

Having received notification of change of control from the Alkali Inspectorate to the local authority, meetings and discussions have taken place on the site, which have resulted in close liaison between the officers of both departments together with the setting up of observation points

which provide for the station engineer to be informed immediately the smoke emission becomes dark, thereby ensuring that necessary adjustments are made immediately.

After many years of complaint about smoke nuisances from certain Liverpool Hospitals, it is pleasing to report that work has started on the new boilerhouse at Oxford Street which will replace the old hand-fired boilers at the neighbouring hospitals. A supply of superior grade fuel has now been allocated to the Liverpool Maternity Hospital thereby ensuring a considerable reduction in the density of smoke emissions, and it is hoped this will continue until such time as the boilerhouse is finally closed down.

Smoke emissions still occur from steam locomotives and give cause for complaint and, although work of electrification of the main line services still progresses, this form of pollution is one which is most difficult to control due to the inspectors being unable to identify the engines as they travel out of the city. The use of multiple diesel units in place of steam locomotives for short haul and shunting duties has improved conditions considerably.

A total of 1,218 visits were made to industrial and commercial premises and dwellings to investigate complaints of smoke nuisances. Advice was given on technical difficulties and new installations were examined so as to ensure that they complied with the specification submitted for approval. It was also necessary to examine the plant installed for which approval had not been sought.

During the past year, it has been necessary to issue twenty-six warning letters in consequence of the inspector observing smoke in excess of the permitted maximum.

Routine observations of rivercraft were made daily and a total of 336 minutes were recorded out of a total of 1,416 ships observed. In two of these cases it was necessary to take legal action as the owners of the particular vessels had been warned previously on numerous occasions about the emissions of smoke from their vessels. The cause of black smoke issuing from the funnels of ships is due to insufficient care when raising steam on hand-fired boilers. The progress reported last year in the commissioning of oil-fired and diesel propelled vessels continued to contribute to cleaner atmospheric conditions on the river.

**Observations
on Shipping**

The inspector has the task of keeping a vessel under constant observation when smoke is emitted. The regulations allow three minutes black smoke in any half-hour, but it is difficult to find a suitable vantage point in order to maintain observation for this period on ships moving on the river.

**Domestic
Smoke**

The open firegrates of the dwellinghouses which continue to consume bituminous coal still present an atmospheric pollution problem of great magnitude. The domestic areas, when viewed from a height, give cause for grave concern as the pollution occurs at a low level resulting in a blanket of smoke over the areas concerned. This phenomena can be observed from any elevated site in the city.

Atmospheric Pollution Measurement.

**Warren
Spring
Laboratory**

The investigation of atmospheric pollution measurement is continuing with close co-operation by the Warren Spring Laboratory, Atmospheric Pollution Division. The quantity of solid suspended matter and gaseous impurities are measured by various types of instruments situated over a wide area of the city.

**Volumetric
Instrument**

This instrument is capable of measuring both solid and gaseous impurities and it is possible to ascertain the concentration of smoke and gas in a known quantity of air. Over a period of twenty-four hours, an electric pump draws a measure of air through a filter paper which retains the smoke particles, after which the air passes through diluted hydrogen peroxide which retains the sulphur dioxide by oxidizing it to sulphuric acid.

**Concentration
of Smoke**

Each day the density of the smoke stain is determined by a standard reflectometer from which the concentration of smoke in milligrams per 100 cubic metres of air can be recorded.

**Concentration
of Sulphur
Dioxide**

The concentration of sulphur dioxide is determined by titrating the acidic liquid with an alkali solution from which is obtained the concentration in milligrams per 100 cubic metres of air.

**Standard
Deposit
Gauge**

Three standard deposit gauges are maintained by the department at Aigburth Vale, Oxford Street and Hatton Garden. These instruments collect suspended solids, whether soluble or insoluble associated with rain. Differences of readings month by month according to heavy or light rainfall

**Co-operation
with the
Central
Electricity
Generating
Board**

indicate the pollution occurring at low level at times of adverse weather conditions. A total of seven standard deposit gauges are maintained by the Central Electricity Generating Board and situated at various sites throughout the city.

This instrument, one of the early devices for measuring smoke is sited in Dale Street and indicates the concentration of smoke in the atmosphere once every hour by means of the suction of a measured quantity of air through a filter paper. At the end of each twenty-four hour period the filter paper is removed and the stain which occurs each hour is correlated with a standard scale of shades and, by a small calculation, the concentration of smoke in milligrammes per cubic metre can be determined.

Owen
Automatic
Filter

This instrument consists of exposing to the air 100 sq. centimetres of prepared lead peroxide spread on tapestry cloth and fixed to a porcelain cylinder. At the end of each month's exposure the lead peroxide has been chemically changed to barium sulphate due to the concentration of sulphur dioxide which has reacted with the paste. After analysis, the amount of sulphur trioxide as milligrammes per 100 sq. centimetres is recorded. This instrument determines the trends of emission of sulphur dioxide, due to seasonal variations in industry and the variations of weather conditions.

Determination
of Sulphur
Dioxide by
Lead Peroxide
Method

Inspectors' Visits.

A total of 18,470 visits have been made in connection with the Smoke Control survey and 99,937 appliances were examined by the inspectors who advised owners and occupiers of the adaptations necessary in order that authorised fuels could be burned satisfactorily.

190 visits were made by inspectors in response to complaints of excessive smoke emission and the necessary action taken. A further 5,415 visits were made in connection with matters appertaining to atmospheric pollution. In order to ensure that the necessary adaptations and improvements recommended by the inspectors as a result of observations were carried out it was necessary to make 609 revisits.

Special
Complaints

As a result of requests from owners and engineers for an inspector to visit and advise on new proposals 178 visits were made during the year.

Advisory
Visits

Routine observations have been maintained by the inspectors to ensure that remedial action is taken when heavy smoke emissions occur and resulted in 3,390 observations on industrial chimneys and 1,416 on shipping.

District
Inspectors

It is the duty of a person who proposes to instal a furnace to notify the Health Department and that person may, if he so desires, submit details of the proposal for approval. A total of seventy-eight new furnaces were

New
Installations

installed during the year of which details were submitted for approval in respect of seventy-two installations. Of these sixty-three were approved by the Committee without modifications, seven approved after modification, and two withdrawn.

Height of Chimneys

Where plans are deposited under the Building Byelaws and show an erection of a chimney stack, the plan may be rejected unless the local authority are satisfied that the height is sufficient to allow efficient dispersal of the products of combustion, having due regard to the locality in which the erection is proposed and the purpose for which the chimney is to be used.

During the year it was necessary to examine ninety-seven plans which had been deposited with the City Building Surveyor of which eighty-five were considered to comply with the requirements of Section 10, Clean Air Act, 1956. In twelve cases the chimney was considered to be too low and after consultations with the architect and engineer, increases in height were made in respect of ten chimneys and the plans approved. In the other two cases a different form of heating was decided upon.

Rodent Control.

The work of rodent destruction on lands, in buildings and in sewers was carried out continuously throughout the year. In addition steps were taken where and when necessary with a view to preventing infestation of sites, and this aspect of the work is considered to be of the utmost importance and essential in order to maintain adequate rodent control in the city.

The great over-all reduction in the rat population, especially noticeable in the dockside districts and in the central area, continues. Rodent infestation generally and rat infestation in particular have declined in severity and it is significant to note that no major infestations were reported during the year.

Systematic survey of lands and buildings in the dockside and central areas and in other places where rodents are likely to be found was again carried out. A great deal of importance is attached to the work of survey, for by this means infestation is detected and remedied before it has time to develop to serious proportions.

The surveys continue to reveal that many sites that were subject to recurring infestation are still trouble free since they were disinfested some years ago. The marked improvement brought about is in no small way attributable to the value of block control applied by the staff to remedy all infestations found, however slight; also to the respective treatments prescribed and applied, and to the subsequent measures taken to prevent infestation.

Whilst the means is not yet provided for a spectacular wiping out of the rat and mouse population, the momentum in the reduction of their numbers may be further increased by the maximum effort on the part of the general public, not only for the destruction of rats and mice; but also in taking precautionary measures to discourage and prevent infestation. The continued advancement of scientific and technical knowledge in the field of rodent control must also have beneficial results.

Although there is a considerable reduction in the number of rats in sewers since the work was centralised in 1953, the disinfestation of sewers in some districts is handicapped by difficulties of a practical nature, consequently the problem continues to receive the serious attention of the technical officers.

**Infestation
in Sewers.**

The very wet conditions in some sewer manholes makes the effectual baiting of bench or tray impracticable and a large amount of experimental work was again undertaken to provide a solution to the problem. Several types of bait container fitted to an adjustable climbing rope for rats and placed in the most sheltered positions in the very wet manholes were again used before deciding upon the best type of container for the job. The type of bait container found to be the best so far is easily fitted into position, practicable in its application, and producing very satisfactory results.

The special bait containers used during the last three treatments totalled 350, 455 and 503 respectively, and many comparatively large poison takes were recorded where previous treatments had been unsuccessful. The number will be further increased should this be found necessary to counter the difficulty of destroying rats resorting to the very wet sewer manholes.

Every local authority is required under the Prevention of Damage by Pests Act, 1949, to take steps to secure, so far as practicable, that their district is kept free from rats or mice and to enforce the duties of owners and occupiers under its provisions. The Act also requires occupiers to

**Duties
of Local
Authorities
and
Occupiers**

notify the local authority when rats or mice are living on or resorting to buildings and lands in their occupation or under their control in substantial numbers.

However, to rely entirely upon enforcement of the Act by issuing either informal or formal notices to remedy or prevent infestation would considerably retard the work of disinfection by the exacting process of prescribing the requisite treatments and by the subsequent visitation necessary to ensure that the requirements were being carried out. Such procedure would in turn slow up any major rodent campaign, which primarily depends upon speed of action for success. It is considered therefore that the most effective approach to speed in disinfection is by the prompt assistance given to many occupiers by the rodent control section in the actual destruction of rats and mice.

Many thousands of requests to the department for assistance have been received from occupiers both of business premises and dwellinghouses since special action was taken against rodents from 1943 onwards, without the slightest recourse to formal action. The credit for this worthy achievement must be given to the tactful approach, good advice and practical assistance given during the years by the rodent control staff, who are now enjoying the benefit of a confident public. Occupiers of premises readily avail themselves of the service provided, not only for assistance in the destruction of rats and mice but also for advice to prevent infestation.

**Co-operation
of
Corporation
Departments**

The department received the fullest co-operation from other Corporation departments in the destruction of rats and mice, and the district operatives carried out treatments as and when required on a variety of sites. These included public buildings, schools, school meal centres, abattoir and markets, public baths, parks and public gardens, Mersey Tunnel, controlled tips, sewage farms and housing development sites.

Co-operation was also readily received from hospital management committees for treatment of hospitals in the city as and when required, and also from Electricity and Gas Boards for premises and sites under their control.

**Food
Premises**

The possibility of food contamination by rats and mice always exists where they are present, and routine surveys were carried out at food factories, warehouses, retail food shops and catering establishments as a preventive measure.

Continuous attention to defective drains and sewers together with the remedying of defects found, in conjunction with systematic treatment of lands, buildings and sewers, has done much to remove the health dangers from rodents and the risk of food contamination by them.

Complaints relating to rats and mice to the total of 5,724, an increase of **Complaints** 731 from the previous year, were received and promptly investigated. The complaints now relate more and more to dwellinghouses and many of these were in connection with mice.

Precautions Against the Spread of Disease.

General Rodent Control Precautions.

Precautions are taken against the spread of plague, a disease which **Action** may be brought into the port by rodents, and specimens of rats and mice **against** collected were sent to the Public Health Laboratory for examination. It **Plague** is satisfactory to report that all the rodents submitted during the year were found to be free from plague.

Rats are carriers of the organism leptospira icterohaemorrhagiae causing **Precautions** Weil's disease, and in order to safeguard not only the public but the sewer **against** worker, who is required to enter sewers where he may become in contact **Weil's** with the organism, specimens of rats caught in sewers and on the surface **Disease** were submitted for examination. Although poisoning is the chief method used for rat destruction in sewers in the city, spot trapping was again applied in advance of poisoning treatments to obtain specimens for examination as a precautionary measure against the spread of infection.

During the year twenty-four rats (fifteen from sewers and nine from lands and buildings) were submitted for examination, and five of these (i.e. 20·8 per cent) were found to be positive carriers of leptospira icterohaemorrhagiae. Four of the affected rats were from sewers in the north end and south end of the city, and the other was caught in the cellar of a dwelling-house in Dingle Ward, into which it was believed to have entered from a sewer via a defective drain. Immediate action was taken and the buildings and lands in the districts concerned were specially surveyed for rats and mice. The vertical block control system was applied to remedy the infestations found, which means that treatments for the destruction of rodents in the sewers, buildings and lands were carried out at one and the same time. This procedure was also adopted wherever there was indication that surface infestation was linked with the sewers.

Systematic Survey.

The rodent control staff examined 25,735 sites during the year in connection with systematic survey and investigation of complaints. A further 65,172 visits were made entailing operational work and re-examination of buildings and lands during or following treatments. Public health inspectors also made, in conjunction with other matters, 103,374 inspections under the Act.

Rodent Infestation.

**Infestations—
Buildings and
Lands** During the year 4,746 sites were found to be infested (2,305 by rats, 97 by rats and mice, and 2,344 by mice only), the majority very slightly, and the details are shown in the statistical appendix. The main sites affected were warehouses and factories within the dockside wards as may be expected, but with a continual fall in severity, the central areas still maintain their remarkable decrease in rodent infestation as a result of the action taken year by year.

The city, as an important port, is a major centre for the receipt and despatch of goods, and rodents, due to their migratory habits, may be brought in by road, rail or sea. There was further indication during the year of the transportation of rats and mice conveyed when goods were delivered to premises, but on a reduced scale. Infestations brought about in this way, although believed to be few in number, would account for ship rats being found some distance away from the dockside districts.

In some cases premises that had been successfully treated were subject to reinfestation by this means, particularly by mice. Where evidence indicated that rats or mice had been conveyed to premises in this way enquiries were made relating to the consignor so that appropriate action could be taken at the source by the local authority concerned.

The rat infestations found within the middle belt of the city were again principally very slight and for the most part were external infestations confined to yards and public passages. The rats generally had escaped from sewers and drains due to underground defects and then been attracted to food waste often supplied by careless persons depositing it in places available to rats, particularly in public passages.

As part of the investigations to trace the source of these infestations by the common rat, references to the total of 1,282 were sent to the public health inspectors relating to the drains of such sites, 990 relating to dwelling-houses and 292 to business premises. Drainage tests were subsequently applied and defects were found in 550 and 151 cases respectively, and the necessary action was taken to have these remedied.

The importance of the effectual sealing of disused drains, especially at the connections to the sewer, on sites where buildings are being demolished must be stressed. Failure to do so may result in outbreaks of rats on the site from an underground defect which may be very difficult to trace, and several rat infestations during the year were eventually found to be due to this omission.

It is also essential for drains undergoing construction or repair to be temporarily capped when the work is to be left incomplete, especially overnight, as a precautionary measure against the escape of rats either from or into the sewers. Where infestation occurred on such sites the necessity of temporary sealing was pointed out to the persons responsible.

The outer districts of the city were again subject generally to very slight rat infestation, mostly by rats living in their natural habitats in banks of brooks, ditches and other lands and attracted to near-by premises, particularly gardens, in search of food which is often supplied quite unintentionally by persons throwing out bread for birds.

Development of agricultural land for new housing estates may cause a disturbance of rats from their customary habitats and result in their visitation to sites of premises under construction and to occupied dwelling-houses nearby to seek food and fresh quarters. Sporadic outbreaks of minor infestation occurred from time to time on these new estates.

Complaints received are thoroughly investigated, which sometimes necessitates survey over a large area for the detection of rodents. Many of the complaints received related to a stray rat being seen in yards, public passages, gardens, etc., and much time is spent by the rodent control staff in dealing with this type of complaint. The sites affected, however slightly, are treated for rodent destruction without delay as the presence of only one rat in a dwelling-house can be a very disturbing experience for the occupants.

Although rats were again reported in connection with a large number of dwelling houses, the majority by far were small external infestations. The limited supply of food and facilities for harbourage for rats in such places necessitates their taking a wide range of movement in search of food and cover, thereby increasing the number of places showing traces of the pests without concentrated areas of infestation.

The prompt action of occupiers in reporting the presence of rodents enabled the rodent control section to take the necessary steps to remedy infestations before they developed to serious proportions. Occupiers generally throughout the city have now grown accustomed to availing themselves of the services of the department and request assistance on the slightest sign of rats or mice on or near their premises.

A report on the conditions and extent of infestation was made in every case, including the prescribed treatment to effect a speedy remedy together with such reasonable and practicable recommendations as may be considered necessary for preventing a recurrence. Details of infestations and disinfestations are shown in the statistical appendix.

Rodent Disinfestation.

Disinfestation of Buildings and Lands	During the year 4,863 buildings and lands were disinfested from rats and/or mice.
Dwelling-houses	The practice of providing free assistance to the occupiers of dwelling-houses was continued during the year, with a slight decrease in the number requiring attention both for the destruction of rats and mice.
Business Premises	Owners or occupiers of buildings or lands other than private dwellings who desire the department's assistance for the destruction of rats or mice are required to reimburse the local authority for the expenditure incurred. The demand for such assistance is quite appreciable and 1,950 requests, an increase of 170 from the previous year, were received. Many occupiers in addition requested the department to examine their premises at regular specified intervals on a servicing basis in order to maintain expert supervision, detect the slightest indication of rodent activity and give prompt and skilful attention when disinfestation is required. A wide variety of premises in all districts of the city were serviced in this way and the full cost of both the inspection and operational service was charged to the occupiers concerned, the work being in no way subsidised out of the rates.

The treatments for the destruction of rats and mice were prescribed and applied in accordance with the most modern methods of rodent destruction prevailing and the infested sites within each area were dealt with at one and the same time to prearranged timetables under the block system of control. Whilst disinfestation was proceeding non-infested sites bounding those under treatment were re-examined periodically as a precautionary measure.

Infestations are not considered to be remedied until there has been no further trace of rodents for a period of at least three to four weeks after treatment has been completed. The reason for this requirement is to rule out, in the event of a further outbreak, any suggestion of a build-up by breeding of rodents escaping treatment. Any further infestation would be classed as reinfestation and receive the closest investigation to trace its origin.

All of the occupiers concerned readily agreed to the recommendations of the department for the actual destruction of rats and mice and it was therefore not necessary to serve notices for treatments under the Act.

Method of Destruction.

Buildings and Lands—Poisoning.

The principal and most effective method employed for rat and mouse destruction is by the proper application of poisons. Quick acting (or "acute") poisons and slow acting (or "chronic") poisons are used for this purpose. The "acute" poisons are zinc phosphide and arsenious oxide for both species of rats and for mice, and Antu (alpha naphthyl thiourea) for the common rat.

Two other rodenticides, sodium fluoracetate (1080) and fluoracetamide (1081) have also been recommended, particularly for sewer treatments. These poisons, especially the former, are highly dangerous and require extreme care in handling and the most rigid safety precautions, for there is no known antidote for humans or animals who may have accidentally taken them. Their general use in large scale operations to the extent that would be required for the treatment of sewers in Liverpool is not advised at the moment, for it is considered that the hazards would be too great.

The use of acute poisons for rats other than "1080" and "1081" necessitates pre-baiting the site undergoing treatment with unpoisoned bait in

token form for several days before poison is applied. In this way rats are conditioned to eat sufficient poison bait when it is applied and the danger of their taking a sub-lethal dose that would exist by direct acute poisoning is removed.

Pre-baiting is also practised against mice but only for one day, which is normally sufficient, and provides a useful guide to operators in deciding the right places at which to place the poison baits.

Red squill poison, much used in the past, is not now recommended for rodent destruction on account of its unreliability of toxicity. Although it was of some value in minor common rat infestations, particularly on sites where putting acute poisons would have been dangerous, it has been replaced by a more efficacious rodenticide in the form of Warfarin, a slow-acting poison at the percentage used. Warfarin is a blood anti-coagulant which, when ingested regularly in small amounts over a period of days, causes gentle but fatal haemorrhage in both rats and mice. The small quantity of poison required, when applied in the form of "chronic" baiting, induces little or no bait shyness by taste, which enables it to be used without the need of conditioning the rodents beforehand to feed from unpoisoned baits.

The chief advantages of Warfarin are its effectiveness against species of rats and mice and its comparative safety for application in dwellinghouses, schools and on other sites where it would be dangerous to use an acute poison. Nevertheless it is necessary to take every precaution when laying poison bait of any type, especially where it would be accessible to domestic animals or birds, and in such circumstances the baits are put into containers accessible only to rodents as a safety measure. Special arrangements are made where there would be the least likelihood of contact with poison, even in the mildest form, by children.

All bait used by the operatives are granular in form for two special reasons. Firstly to enable the poison to be mixed evenly throughout the bait and thereby reduce the danger of rodents taking a sub-lethal dose, which may occur when using solid bait with poison adhering only to the outer surfaces. The other reason is to remove the danger that would exist by rats and mice being able to carry away solid baits and deposit them in places dangerous to humans, animals and birds.

Of the 5,096 infestations and reinfestations remedied during the year 4,529 were treated by the department's operatives. Of these 4,516 were cleared by the use of poisons and the remaining 13 were remedied by trapping only. The effectiveness of rodenticides properly applied is apparent when consideration is given to the large number of infestations remedied by one poisoning treatment, 3,754 out of a total of 4,516. Of the others 650 required two treatments, 93 three treatments, and 19 four or more treatments.

Trapping is normally applied only as a secondary treatment to deal with a residual number of two or three rats or mice which have escaped poisoning treatment. Break-back traps of the treadle type are used and, to a much less extent, sticky trays where conditions are favourable for this form of treatment. The remaining 567 infestations were remedied either by the occupiers under the guidance and supervision of the rodent control inspectors or by proofing, which mainly entailed the repair of defective drains under the supervision of the public health inspectors.

Calculating the Kill.

It is estimated, using the appropriate formula for calculating the kill, that at least 14,462 rats in buildings and on lands were destroyed during the year as the result of poisoning treatments. 2,070 dead rats were actually collected after poisoning and a further 190 were caught in traps. The species of rats collected were 1,450 *rattus norvegicus* ("brown" or "common" rat) and 810 *rattus rattus* ("black" or "ship" rat). A percentage of rodents collected (301 rats and 4 mice) were sent as usual to the Public Health Laboratory for examination and the remainder burnt.

Although there is no reliable formula available for calculating the kill in relation to the poisoning of mice, there can be no doubt that the number destroyed by this method is quite considerable when taking into account the large amount of poison bait actually consumed by mice, namely 10,352 ounces. 1,261 dead mice were collected as the result of poisoning and 72 were caught in traps.

Rat Destruction in Sewers.

Contrary to the popular belief, rats found in sewers are in no way fundamentally different from the common or brown rat in buildings in towns or in the countryside. Sewer rats are of the same species, *rattus*

norvegicus, and are known to use the sewers as the means of traverse from one site to another through defects in drainage systems. Therefore there is a definite link between sewer and surface infestations and it is extremely important for the work of rat destruction on the surface and in the sewers to be closely co-ordinated in order to maintain a high standard of rodent control in the city.

With the main object of reducing rat infestation of buildings and lands that may have its source from the sewer, maintenance treatments for the destruction of rats in sewers were again applied during the year with satisfactory results as indicated in the table in the statistical appendix. There appears to be no doubt that the continual drive, during recent years in large scale rat destruction in sewers is accomplishing its purpose by greatly reducing the breeding and migration of rats from sewers and drains into buildings.

Modification of Control Methods

Baiting for rats in sewers is for all practical purposes limited to the number of suitable manholes available for treatment. This has much influence on the work of rat destruction and it is most essential for the maximum number of manholes to be effectively baited. Progress in this connection was made during the year by the adoption of adjustable suspended baiting points for the treatment of exceedingly wet manholes where bench or tray baiting had been more or less impracticable. The field work in this connection continues.

It will be seen therefore that rodent control technique must be kept under constant review and revised, as and when necessary, to embrace any advancement in scientific and technical knowledge.

A problem yet to be completely solved is the destruction of rats between manholes which may be a long distance apart, and where the rats have a plentiful supply of food and abundant harbourages, especially if they have access to and from the surface via underground defects, as in such conditions the rats may very infrequently visit the baiting points. With a view to overcoming these factors the extended period of baiting was again adopted, which allows a pre-baiting period with unpoisoned bait of at least seven days to attract rats to the feeding points before subsequent replacement by poison bait.

The extended period of baiting has been made possible by the addition of a chemical known as paranitrophenol at 0.25 per cent to the bait, which

acts as a mould inhibitor without any appreciable loss of palatability of the bait as far as rats living under sewer conditions are concerned. Damp baits without such additive become sour and mouldy after two or three days, especially under sewer conditions, and would be quite unacceptable to rats. The mould inhibitor was also added to the bait used during the annual test baiting of sewer manholes in districts previously found to be free from rats, which allows the bait to be left down in good condition for a longer period than would be possible without the additive and is therefore a more exacting test for the presence of rats.

There are 25,819 sewer manholes in the city and the total baits eaten or partly eaten by rats during the three maintenance treatments applied during the year were 3,997, 3,536 and 4,498 respectively, compared with 9,329 in the initial treatment in the year 1953.

Included in the total of 4,498 takes during the third treatment are 228 takes recorded after treatment of the part or whole divisions not normally treated but dealt with by annual test baiting.

The very wet weather prevailing during the third treatment probably has some bearing on the substantial increase in recorded takes over the total for the second treatment. The improved baiting points in the very wet sewer manholes also contributed to the increase by having takes where hitherto the baits had been recorded as "washed off".

As a general rule, in order to observe the strictest economy in the work without in any way impairing efficiency, visits are not made to manholes after treatment has been applied, for the purpose of recording poison takes to estimate the kill. However, spot checks of the manholes were regularly made after as well as during treatments to ensure that the work was being done properly and adequately.

In the outer districts of the city where sewers had been previously found to have little or no rat infestation, and in the divisions in which sewers had been disinfested by maintenance treatments, the annual test baiting was applied as a precautionary measure to discover whether there had been any change of migration of the rat population into those areas, and details are shown in the statistical appendix. Where evidence of rats was found during the test baiting, treatments were applied to remedy the localised

infestation, however slight. Of the 76 divisions wholly or partly test baited, no takes were recorded in 48 divisions containing a total of 7,375 manholes.

**References
to the City
Engineer and
Surveyor**

During the work of preparing sewer manholes for baiting it was necessary to send to the City Engineer and Surveyor's Department 841 items requiring attention to assist the work of rat destruction. The items referred to the easing of manhole covers, removal of rubbish from manholes and the clearing of choked or partly choked sewers, and prompt attention was generally given to these matters.

Preventative Measures.

Conditions likely to lead to infestation or hinder the work of disinfection were at once brought to the notice of the owner or occupier of the building or land concerned. Preventative measures and works of proofing wherever reasonable and practicable were carried out during or immediately following the work of disinfection as required. The immediate works undertaken included the provision of suitable containers with tight fitting lids for food waste and improved hygiene by the removal of scraps of food, etc. Advice was also given where necessary for the proper storage and stacking of goods to allow of ready accessibility for proper rodent control treatment.

The more permanent works done included the proofing of food stores; the repair of defective drains; the fixing of metal plates to the bases of doors; the proofing of windows and ventilators in external walls and on roofs by protecting them with small mesh wire guards; the proper sealing of openings in walls and around waste pipes, overflows and service pipes; the provision of wire cages to the inlets and outlets of stack pipes, etc.; the abolition of all unnecessary harbourages both temporary and permanent; and generally the building out of rodents wherever this was practicable.

Most owners and occupiers of premises showed a readiness to comply with the suggestions and good advice given to them by the rodent control staff. However, where they failed to co-operate statutory action was taken by the public health inspectors, and five notices, all for non-structural matters relating to dwellinghouses, were served under the Act, these being in addition to the action taken under the Public Health Act, 1936, to have the many defective drains remedied. It is pleasing to note that during the year it was not necessary to institute legal proceedings.

SUPERVISION OF FOOD SUPPLY

Detailed supervision of the city's food supplies has been maintained **General** throughout the past year by public health inspectors with additional qualifications as meat and food inspectors. In this respect, daily visits have been made to the Wholesale Fish Market, St. John's Retail Market, Queen Square, and the Wholesale Fruit and Vegetable Market at Cazneau Street, in addition to wholesale warehouses situated throughout the city. Investigations into food complaints originating from members of the public have been undertaken together with special and routine inspections of fish, poultry, fruit, vegetable and canned goods.

The retail and various wholesale markets are supervised each morning between the hours of 8 to 11 a.m., for the purpose of inspecting the food commodities offered for sale. Individual premises are visited within the markets and, where necessary, advice is offered to the wholesalers and retailers whilst at the same time complaints regarding doubtful supplies are investigated and judgment passed as to their fitness or otherwise.

During the remainder of the day investigations of special complaints, originating from wholesale and retail food suppliers outside the markets, are undertaken and dealt with as speedily as possible to discourage the accumulation of unsound goods on food premises and secure their quick disposal. In the year under review, 3,142 special complaints of this nature have been dealt with satisfactorily, in addition to the routine daily calls of inspection to the various city markets.

The substitution of windows in St. John's Market in lieu of the unsuitable **St. John's** roof louvres has now been completed and resulted in a marked improve- **Retail** ment in natural lighting and draught exclusion. In the interests of food **Market** hygiene the vacuum cleansing of the roof, supporting cross members, and the tops of stalls in the market has been continued with success. In the latter months of the year, work was commenced to improve the existing washing facilities on the west side of the market with the construction of a new washing bay which is capable of dealing with the large utensils used by the market tenants.

In the Wholesale Fish Market cleansing and decorating works have been undertaken on the roof and supporting cross members. All poultry and **Poultry** game entering the wholesale market is examined prior to sale to the retail **Inspection**

trade. As is the usual practice, special attention was again paid to the entry of imported sub-standard poultry and thorough examination of these birds was undertaken. As reported in previous years these birds are mainly forwarded by breeders as make-weight in consignments of First Grade Poultry and are frequently found to be unsuitable for human consumption by reason of injury and bodily complaint.

The detailed inspection of such birds resulted in 189 head of poultry being rejected for the reasons set out as follows:—

Arthritis	...	...	...	...	2
Decomposition	...	...	...	...	1
Emaciation	...	...	...	...	101
Ill bleeding	...	...	...	...	3
Injury	...	...	...	...	49
Lymphadenoma	...	...	...	...	33
TOTAL...	...	...	...	...	189

It should be pointed out that this figure is comprised of birds from eleven cases only, and is in itself a large percentage of the total number of sub-standard birds reaching the market.

In addition to the rejection of sub-standard poultry, 12,125 head of high grade poultry and game at a weight of approximately nine and a half tons were also rejected upon inspection. This sharp increase in the number of high grade birds destroyed as being unfit for human consumption is due to two particularly large consignments which the inspectors were requested to view and pass an opinion upon.

The first instance involved a shipment of eviscerated fowl which had been despatched by sea from Ireland. Extremely heavy weather had been experienced in the crossing of the Irish Sea, and the deck cargo had been swamped by high waves. The birds were packed in cardboard containers which readily admitted the sea water to the poultry. Upon inspection it was found that not only were the outer surfaces of the fowl contaminated, but being eviscerated the body cavities were harbouring sea water in substantial quantities. In view of this fact it was judged to be unwise to permit the birds to be sold, and the whole consignment of 2,275 birds was destroyed.

The second major consignment of poultry to be rejected as unfit for human consumption, consisted of 7,460 chickens in the possession of a wholesale firm. The inspectors were notified that there had been a breakdown in the refrigeration plant where the birds were being stored. The breakdown had occurred over the week-end and had not been discovered until the following week. An immediate examination was undertaken by the inspectors who found that the birds had completely thawed out and that putrefaction had set in. In view of these circumstances, there was no possible hope of salvaging any part of the consignment and condemnation certificates were issued to the wholesale firm once the birds had been destroyed.

Details as to the rejection of first grade poultry and game, rejected as being unfit for human consumption, are set out below:—

Chickens	...	...	...	...	8,287
Fowl	...	...	...	...	3,558
Ducks	...	...	...	...	137
Geese	...	...	...	...	2
Turkeys	...	...	...	...	136
Grouse...	...	...	...	...	4
Pheasant	...	...	...	...	1
TOTAL				...	12,125

The Wholesale Fish Market supplies an extensive retail trade throughout Merseyside and surrounding areas. During the past year a total of 11,606 tons of fish was handled, in addition to some 65,285 packages of rabbits, poultry and game. The inspection of fish, poultry, game and rabbits resulted in the rejection of some 4,657 packages at a weight of some 60 tons as unfit for human consumption. (See Table No. 67, Statistical Appendix.) As in previous years it has been of interest to note that a few isolated fish have been affected with sarcoma, carcinoma, or melanotic sarcoma lesions or growths.

The inspection of fruit and vegetables at the North Market, Queen Square, and the various wholesale storage warehouses throughout the city, has been maintained during the past year. The daily inspections of fruit and vegetables has resulted in 18,486 packages at a total weight of 341 tons being rejected as unfit for human consumption. (See Table No. 67, Statistical Appendix.)

**Fish
Inspection**

**Fruit and
Vegetable
Inspection**

Following the sharp increase in the rejection of fruit during the previous year, market conditions became more favourable over the past twelve months and the rejection of fresh fruit reverted to its normal tonnage. Conversely, there was a slight increase in the total weight of vegetables rejected, and this can be almost completely accounted for in two isolated consignments occurring several months apart.

There was a small incidence of blight in Spanish potatoes during the early part of the year, which fortunately proved not too serious as it was possible to inspect almost the whole importation at one source and secure its destruction before the potatoes reached the retail market.

The second large scale rejection concerned a consignment of onions which it was also possible to examine in one warehouse, over a period of several days, whilst sorting and repacking were in operation. The unsalvageable portion of this consignment was rejected at the close of sorting and destroyed at a Corporation controlled tip.

It was noticeable that an unusual quantity of melons were featured in the rejection of fresh fruit, forming a considerable proportion of the tonnage destroyed during the course of the year. Enquiries instituted as to the reason for this increase revealed that there had been an exceptionally heavy crop of melons during the season and the market had been flooded to saturation point. An effort to force the satisfactory disposal of the fruit by drastically reducing the selling price proved to be of no avail owing to their rather limited appeal, and large quantities were despatched to the tip following inspection.

Canned Goods and Sundries Inspection

The daily inspection of canned goods and sundries has been maintained throughout the year at a variety of premises including food factories, warehouses, and shops within the confines of the city boundary. The greater proportion of the canned foodstuffs rejected as being unfit for human consumption have been disposed of directly at a Corporation controlled tip. Smaller consignments, which were brought directly to the office for inspection, were removed by the City Engineer and Surveyor's (Cleaving) Department and subsequently tipped under their supervision.

There have been nine cases during the year where the food inspected has been found unfit for human consumption but suitable for animal feeding, manure, or soap making. In these instances the foodstuffs concerned have

been released to the respective pig breeders, farmers, or manufacturers under a signed "Guarantee of Unsound Food" for conversion into their respective functions.

The examination of canned goods and sundries resulted in the rejection of 60,503 cans and packages at a total weight of some 59 tons. (See Table No. 67, Statistical Appendix.) A breakdown of this weight into the various categories of canned foods and grocery sundries rejected during the year is set out below:—

			<i>lbs. wt.</i>
Canned meats	...	...	65,823
Canned fruit	...	...	21,390
Canned vegetables	...	...	15,266
Canned fish, milk, soup	...	...	10,027
Meat and dry groceries	...	...	18,997

Altogether 11,374 certificates of condemnation were authorised and issued to wholesalers and retailers in respect of the rejected foodstuffs mentioned above.

Unlike previous years, it has been noticeable that there have been no large consignments of any one particular commodity requiring inspection due to processing faults. This is especially gratifying when taking into consideration the vast amount of canned goods consumed in a city of this size, where the slightest fault would be noticeably reflected in numerous individual complaints from the wholesale and retail trade.

The duties of the inspectors do not rest solely with the examination and rejection of obviously unsound foodstuffs. By far the greater part of the actual inspections carried out are concerned with goods over which doubt as to fitness has been expressed by the firms concerned. This facet of inspection calls for a fine degree of technical judgment for there are two main factors to be borne in mind on every occasion where doubt might exist. Point one is concerned with the safety of the general public and its dependence on a correct decision being reached by the examining inspector. Point two concerns the manufacturer who also depends upon the judgment of the inspector as to the final outcome of his product. It is within these accepted confines that by far the greater part of food inspection is carried out on behalf of the public and trade.

Frozen foods A recent trade survey, nationally published, drew attention to the increasing popularity amongst consumers of pre-packed frozen foodstuffs. Yet another report quotes a rise in sales from £150,000 in 1946 to an estimated £57,000,000 in 1961; a remarkable increase over a period of fifteen years. This trend had been noticed in Liverpool in 1958 and the comments made then seem to have been confirmed by the data since released. There would appear to be few limits to the varieties of dishes now available, ranging from the fish to sweet and fruit stages of a full course meal. Out of season fresh soft fruits and spring vegetables are made available to the consumer the whole year round, and in addition to this feature they are hygienically packaged and attractively presented.

Frozen foods are not as commonplace as the established canned foodstuffs, nor are they likely to replace that particular form of presentation—but they are a welcome addition in an essential service. Rejection of this range has so far been confined to consignments which have been involved in refrigerator breakdowns, for it is not practical to refreeze the foodstuffs once partially or completely thawed.

**Merchandise
Marks Act,
1887**

During the course of the year, 12,243 visits of inspection were made under the provisions of the Merchandise Marks Act, 1887 to provision merchants, butchers and greengrocers to ensure compliance with the enactment. Particular regard was paid to the marking of imported meat, tomatoes and oranges offered for sale in retail shops. In cases where infringements were found these were corrected immediately by the vendors, and routine revisits showed that the instructions which had been issued were closely adhered to in all instances.

**Goods for
Export**

Full examinations have been carried out during the past year in respect of foodstuffs which are intended for exportation from this country and which require a certificate of soundness to accompany them to their destination. In the main, the items which required pre-export inspection were canned meats and soups, dried and salted fish, and animal carcasses or parts thereof. In all instances the goods examined were found to be fit for human consumption and export from this country and the necessary certificates were issued.

**Food
Complaints**

252 complaints were received from members of the public during the past year, involving items of foodstuffs which had been purchased within the confines of the city boundary. The complaints were notified to this

department for such reasons as mould formations, extraneous matter, suspected vermin contamination, damage and false labelling. Each complaint which was received was fully investigated and careful consideration of all aspects was given in an attempt to achieve a satisfactory conclusion. Nearly all the complaints involved visits to two or more establishments before a final decision was reached and a report made possible. In every instance the complaint was traced via the retailer to the manufacturer or importer of the product. Wherever it was possible to do so an examination of the premises, plant and processing was carried out under the provisions of the Food Hygiene (General) Regulations, 1960. This initial inspection was followed up by revisits at later dates to ensure the adoption of any advice or suggestions which had been made at the original visit.

Where the processing of the foodstuffs concerned had been carried out in another part of the country a different procedure was followed. Details of the complaint were forwarded by letter to the firm concerned and a request made for an interview to be arranged in Liverpool with a representative of the firm concerned. In addition to informing the firm of the complaint, a further letter was sent to the local authority within whose province the manufacture or packing was carried out requesting details as to the conditions and safeguards existing at the particular premises. It has been found that co-operation is willingly given in these matters by the firms in question, and on most occasions a desire is expressed to contact the complainant in order to apologise and replace the defective commodity.

Most of the complainants contacting this department do so in order that others may not experience the same inconveniences they have suffered. In certain cases, however, there might be grounds for claimage of lost wages due to enforced absence from work, and in these circumstances the complainant is advised to contact a solicitor as the department is not empowered to seek compensation on behalf of an individual. When this occurs an inspection of the plant is still carried out under the provisions of the Food Hygiene (General) Regulations, 1960, independent of any further action the complainant may contemplate.

Regular inspections continue to be made of the 148 establishments where food is prepared for human consumption. These premises are controlled by various departments of the Corporation, i.e., School Meals, Health Department, Special Schools and Children's Department, which are situated

**Central
Purchasing
Scheme**

throughout the city and suburbs. Specific food complaints lodged by the Central Purchasing Department are also dealt with promptly in a manner similar to that involving complaints by the general public.

United Liverpool Hospital Board

Visits of inspection are made to ten hospital premises under an agreement with the United Liverpool Hospitals Board. The purpose of these visits is the examination of foodstuffs and the checking of requirements under the Food Hygiene (General) Regulations, 1960.

General Observations

It is estimated that during the past twelve months £66,000 value of unsound foodstuffs, excluding fresh or frozen meat, were rejected upon inspection. A table of the total weights of foodstuffs, with the exclusion of fresh or frozen meat and offal, rejected over a period of the past four years is listed below.

1957	...	...	433 tons
1958	...	...	368 tons
1959	...	...	506 tons
1960	...	...	459 tons

A continued analysis of commodity weights shows that generally they remain fairly constant over the whole period. The main groups where a wide degree of fluctuation exists are those dealing with fresh fruit and vegetables. Storage and unseasonable climatic conditions play an important part in the holding qualities of these foodstuffs, as fruit in particular is possessed of a short marketable life. These factors accounted for a sudden upward surge in the rejection of soft fruits during the previous year due to the packing abroad of moist fruit aggravated by the hot summer at home. During this past year neither of these features were especially prominent and the rejections returned to their more normal level.

Meat Inspection.

In reviewing briefly the year's work, the striking feature is the increase in the number of carcasses rejected for pathological conditions. The number of whole carcasses condemned as unfit for human consumption was 2,854, together with part carcasses from 12,136 animals. The comparative figures for the previous year was 1,891 carcasses and 7,531 part carcasses.

The number of animals slaughtered and inspected was 482,856, which is comparable with other years after allowing for the unprecedented wholesale slaughter of sheep and lambs during the drought of 1959, when an additional

145,000 sheep were dealt with at Stanley. During the year the number of sheep carcasses totally rejected rose from 1,242 to 1,812; that for calves from 165 to 297, whilst pig carcase rejections rose from 213 to 528. **Brief review of the year**

The reason for the increase in sheep carcase condemnations was the generally poor, emaciated oedematous condition particularly of rams following last year's drought. For example, in three weeks during the national tup or ram sales at the end of the year, the number of carcasses condemned as unfit for human consumption was 228 out of some 500 rams.

Pig carcase condemnations showed a striking increase from 213 to 528, and this was due mainly to the slaughter of large numbers of pigs affected with swine fever.

Condemnation of calf carcasses rose sharply from 165 to 297; the two main reasons for rejection being infections of umbilical pyaemia (joint ill), or acute enteritis, both conditions pointing to lack of proper cleanliness in the keeping or feeding arrangements, but it may also be due in some part, to a lack of interest in bull calves which are sent for slaughter at the earliest opportunity to avoid using milk for their subsistence. The number of cow carcasses totally condemned for tuberculosis shows a satisfactory decrease from 81 to 44, and this underlines the success of the measures taken throughout the country under the government tuberculosis eradication scheme.

This year was the fourth year of the operation of the training scheme approved by the City Council in 1956. Of 25 trainees, 23 were successful in obtaining the certificate of competency in meat and food inspection issued by the Royal Society of Health. **Training Scheme**

Knackers' Yard

During the year at the one knackers' yard in the city, 331 animals or carcasses were dealt with satisfactorily. These comprised 98 cattle; 17 calves; 52 horses; 7 ponies; 5 donkeys; 147 pigs; 2 sheep; 2 goats, and 1 bear. Consequent on the changing pattern of this particular style of business, the board of the company operating the knackers' yard decided that this side of their activities would cease as from 31st December. It is pleasing to note that during many years, the trustworthy and understanding relationship between the company and the health department has ensured the hygienic disposal of carcasses, safeguarded the operatives and maintained the high standards of which the company are justifiably proud. **Knackers Yard**

Private Slaughterhouse

Private slaughtering

There is only one private slaughterhouse in the City at which during the year, 29,048 pigs were slaughtered in a humane hygienic manner. All the carcasses and offals were inspected at the time of slaughter and dressing.

Stanley Abattoir

City Abattoir slaughtering

The number of animals slaughtered at Stanley Abattoir was 453,808 detailed as follows:—

Bulls	Bullocks	Cows	Heifers	Calves	Pigs	Sheep
194	35,556	30,205	736	15,733	71,921	299,463

Sunday slaughtering

Slaughtering at the City Abattoir and at the Woolton slaughterhouse took place on Easter, Whit and August bank holidays as well as each Sunday.

The number of animals slaughtered on these days was 109,703 or approximately 23 per cent of the total kill of 482,856 animals.

Diseased Conditions

Diseased Meat

The carcasses of 125,637 animals, approximately 26 per cent of the total 482,856 slaughtered and inspected at the private slaughterhouse and City Abattoir showed diseased conditions and a detailed examination was made in each case.

The number of whole carcasses rejected as being unfit for human consumption was 2,854 together with part carcasses from 12,136 animals.

(Table 68, Statistical Appendix.)

Condemned Meat and Offal.

Condemned meat and offal

The total quantity of diseased meat and offal found to be unfit for human consumption at the time of slaughter or rejected on the meat market, was 642 tons, comprising 178 tons of meat and 464 tons of offal. In addition to this meat offal, some eight tons of canned meat was rejected as unsound. All this meat and offal was voluntarily surrendered, and in no case was it necessary to apply for a magistrates' order for formal condemnation. This reflects the confidence of the wholesale meat traders, farmers, and dealers in the fair judgment of the meat inspection staff and provides the highest standard of protection for the meat consuming public served by the Liverpool Market.

(Table 68, Statistical Appendix.)

Custody of Detained Meat

Diseased carcasses from which portions have to be cut for example chest walls, forequarters, or hindquarters, are detained overnight for cooling and setting. The carcasses are railed into a special detention cage and locked up. The following morning, each carcass is re-examined and meat suitable for human consumption is released to the meat market for sale. All diseased or unsound meat as well as offal, is conveyed to the Council's by-product plant in the Abattoir and is there rendered down to produce inedible tallow and meat meal. The meat traders as agents or owners of this meat and offal are paid, by the Council, for the weight of meat and offal, condemned, as certified by the meat inspection records, payment being made by the Markets Department.

Stanley Meat Market

The frozen or chilled meat, offal, and poultry "pitched" daily on the meat market is subject to inspection for mould, brine damage, contamination, or decomposition, and all carcasses brought in dressed from outside areas, are re-inspected. The importance of this re-inspection can be judged from the fact that two firms receiving regular deliveries from outside areas voluntarily surrendered some five tons of meat found to be diseased when examined at Stanley, and not a small part of these carcasses bore an official inspection stamp.

The total amount of meat, offal, and poultry rejected as unfit for human consumption in the meat market was:—beef 10,115 lbs; pork 5,916 lbs; mutton and lamb 7,228 lbs; poultry 428 lbs; veal 513 lbs; offal 1,551 lbs; a total of eleven and a half tons.

Carcasses and meat dealt with at the meat market excluding the 453,808 animals slaughtered in the abattoir was as follows:—

	Beef quarters	Veal carcasses	Mutton carcasses	Lamb carcasses	Beef (pieces)	Pig carcasses
Imported frozen/ chilled ...	138,936	2	146,654	826,344	11,148	2,382
Slaughtered outside Stanley Abattoir	75,734	6,166	10,024	165,560	8,688	77,452

In addition some 213,000 packages or boxes of meat, poultry, and offal were dealt with.

Boneless Fresh Meat

Boned-out Meat

The increasing demand for boneless meat by manufacturers has continued. Boned-out cow carcasses meet a ready sale owing to the absence of bone and trimmings. The whole sides are quartered, i.e., cut into fore and hind, the bones completely removed and the lean meat packed in boxes, white stockinette bags, or plastic covers. Much of the carcass meat brought into the market from outside areas is thus treated, and in addition, about one quarter of the 30,205 cows slaughtered in Stanley are utilised in this way.

Pharmaceutical Products

Medicinal Products

A very considerable quantity of bovine liver, approximately 97 tons affected by distomatosis, was sent to the pharmaceutical manufacturers for processing into liver extract.

In addition the various glands used for medicinal extracts, for example thyroids, ovaries, adrenals, pituitaries, pancreas, taken from sound carcasses were collected and sent for processing.

Supply of Specimens

Specimens

Blood, intestines, eyes, pancreas, uteri, spleens, hearts, cysts, tumours, and meat specimens were provided during the year for research work and use in the various departments of the Liverpool University, and hospital laboratories. Morbid specimens are also set up for the examination of the Royal Society of Health and the Veterinary School of the Liverpool University.

Tuberculosis (Slaughter of Reactors) Order 1950

Bovine reactors (Tuberculosis)

The number of bovine animals sent into Stanley for slaughter and inspection under the tuberculosis eradication scheme was 352. This figure was nearly double that for the previous year (194), and more than five times the number dealt with in 1958. This large number of animals were culled from Cheshire herds which was one of the last and largest eradication areas to be tackled. A detailed post mortem inspection was made in each case and the nature and extent of the infection reported to the Ministry's officers.

As a result of inspection, twenty carcasses were totally condemned for acute or widespread infection, and portions from 129 other carcasses. In most other cases, organs only were inspected.

Slaughter of Animals Acts 1933-1954

The acts require that no person may proceed to stun or slaughter an animal in a slaughterhouse or knackers' yard unless he holds a licence granted by the Local Authority. During the year 128 licences were issued to slaughtermen. In addition, 285 licences were issued to Mohammedans, mainly seamen, for the ritual slaughter of sheep in Stanley Abattoir, subsequently destined for the meat of ships' crews.

**Slaughter
Licences**

The Slaughterhouse (Hygiene) Regulations, 1958.

The regulations came into force by stages, commencing January, 1959 and are designed to secure hygienic conditions in the slaughter of animals and the handling of meat for human consumption, hygienic practice in the cleanliness of operatives, lighting, drainage and construction of slaughtering establishments and the equipment or appliances used therein.

As previously reported the comprehensive reports prepared in respect of the private slaughterhouse and Stanley Abattoir, after consultations with organisations and authorities concerned have now been sent to the Ministry.

**Slaughter-
house
Regulations**

In the meantime, work required has proceeded, the private slaughterhouse now complies in all respects with the requirements of the Act, and at Stanley the piggery block is almost complete and work on the drainage improvement is nearly finished. Much careful work has been carried out on the problem of lighting and after detailed experiments, the answer to the problem of true colour and requisite intensity has been found.

**Private
Slaughter-
house**

It is essential that true colour appraisal can be made of offal, carcasses, and glands, on the slaughter floor, where work goes on under artificial light. For instance, jaundice colouration in calf carcasses was only seen with great difficulty under one particular system of fluorescent lighting, and yellow tubercle nodules appeared to be green; haemorrhagic tumours (angiomas) in livers did not show at all. There is still much to be done in Stanley Abattoir and the various problems are accentuated by the necessity of providing slaughtering facilities on a large scale where Saturday is the only day free from major operation.

**Stanley
problems**

In March this year, the entire slaughtering personnel and ancillary workers employed by the Utility Company—the slaughtering organisation at Stanley—were equipped with rubber boots; peaked white drill caps; blue short sleeved or khaki overalls, and white nylon aprons. This compliance

**Protective
clothing for
Operatives**

with the requirements of the regulations has proved most satisfactory. Clothing is completely changed and laundered weekly, or oftener in individual cases if necessary. Locker room accommodation, and facilities for body cleanliness has been improved, and the morale and efficiency of the workers has benefited in turn. It is fair to say that the Liverpool organisation can handle livestock with an efficiency which is unequalled throughout the country.

Meat Transport

All vehicles working out of Stanley meat market are regularly inspected to see that the requirements of the Food Hygiene Regulations, 1955 are observed. In the main, the vehicles are satisfactory, especially the long distance transport. From time to time, however, minor breaches of the regulations are remedied after infringements are reported, but it has not been necessary to take any legal action.

Foot and Mouth Disease.

Foot and Mouth Outbreaks

Towards the end of the year in November, extensive foot and mouth disease outbreaks occurred through large areas of the country extending from Aberdeen, southwards to Norfolk, and threatened the fresh meat supply. The Liverpool Abattoir was the only large slaughtering centre which was fully operational; and although peak kills were the order of the day, bold measures were taken which probably saved the meat supplies of many cities and towns of the country.

In a report of the Medical Officer to the Health Committee the facts were stated as follows:—

Committee Report

"Briefly, the circumstances were that from 6th November to 13th November, some 100 cases of foot and mouth disease had been confirmed in an area extending from Norwich to Aberdeen, and standstill orders of the Ministry of Agriculture were in force.

The livestock arrivals at Stanley Abattoir, despite peak slaughtering, continued to increase and on Monday, 14th November, it was obvious that unless drastic measures were taken, the possibility of the disease being imported to Stanley Abattoir was grave and would mean complete closure for some six weeks, with stoppage of meat supplies and resultant loss of earnings.

Accordingly, on Monday, 14th November, 3,325 animals were slaughtered and the next day a further 3,113, a total of 6,438 animals in nineteen working hours, or some 338 per hour. The crux of the problem and key to the success of such an undertaking was to maintain efficient inspection of offal and carcase meat, in order to enable delivery to Liverpool and other markets, for example, London, Birmingham, Glasgow and Sheffield, to be made. This intensive effort was made by the meat inspection staff who worked long hours (7 a.m. to 6 p.m.) under difficult conditions to maintain 100 per cent inspection with through put speed.

Complete disinfection of knives and equipment was carried out before leaving the slaughter floor, and all clothing (overalls and caps) was collected for washing and boiling, enabling all the slaughtering personnel and ancillary workers to recommence work on Thursday, 17th November, with clean clothing and equipment, in a slaughterhouse which had also been completely cleaned and disinfected.

Since then all livestock arriving at Stanley Abattoir has been slaughtered within 24/72 hours of arrival, and disinfection carried out at the end of each day's work. It is pleasing to record that the complete and willing co-operation of the wholesale meat traders, the trades union, the health department, and the markets department, ensured the success of measures which unless boldly taken, might have meant that a large area of the country would not today continue to be supplied with meat from Liverpool Abattoir''.

The area organiser of the Union of Shop, Distributive and Allied Workers wrote to the Medical Officer of Health on 17th November, expressing on behalf of the Stanley branch committee of the Union, their appreciation of the advice, co-operation and assistance rendered by the Medical Officer's staff; and requested that the contents of his letter be conveyed to the Health Committee. This, of course, was done, and subsequently, after approval by the City Council, the formal appreciation of the Health Committee and the Medical Officer, of the excellent services rendered by the inspectors at Stanley Abattoir during this period was received with satisfaction by the meat inspection staff.

**Trade Union
appreciation**

Meat and Food Inspection

Classes in Meat and Food Inspection

The course of instruction for persons preparing for examinations in meat and food inspection or food hygiene were well attended. 60 students received a sound grounding in the theory and practice of meat inspection, fish inspection, control of food and milk supplies and the law relating thereto. During the course the students visited food factories, milk pasteurising plants, dairies, ice cream factories, ships and docks where meat and other foodstuffs are unloaded, handled and examined. In addition to local students, those attending included students and public health inspectors from Cheshire, North Wales, Lancashire and Cumberland.

The Adulteration of Food and Drugs.

Food Sampling

The Medical Officer of Health is responsible for ensuring the safety of food supplies, and the public health inspectors specially qualified in food sampling carry out the routine duties to implement the legal requirements of the Food and Drugs Act, 1955, and the various Regulations and Orders made under this Act. During the year, more public health inspectors have been trained in this work and throughout the department we now have a large reserve of personnel able to step in and take over the sampling duties at a moment's notice. Responsibilities under the Food and Drugs Act, entail the constant vigilance of the inspectors who procure samples of foodstuffs and drugs and submit them to the Public Analyst whose duty it is to test for adulteration or impurities. Appropriate action is taken in cases where samples are found not to be genuine. In some cases legal proceedings are instituted; in others advice is offered to the vendor and a cautionary letter sent; whilst in other instances the manufacturer or packer is advised of irregularities or technical labelling offences. During the year 3,915 samples of food and drugs were taken or purchased and of this number 206 or 5.2 per cent were found not to be genuine or otherwise irregular. This represents an increase on last year's figure which was 3.05 per cent.

Milk Sampling

Routine samples of milk were taken daily from producers sending milk to Liverpool from Cheshire, Lancashire, Flintshire, Denbighshire and Shropshire. The 3,915 samples obtained included 1,154 formal and 2,761 informal. An informal sample is one procured without intimation to the vendor that it is to be analysed. Valuable information as to irregularities is obtained this way, and a variety of food and drug preparations are checked.

Prosecutions were instituted in respect of sixteen samples of milk which contained added water, and fines totalling £48 0s. 0d. with £24 0s. 0d. costs were imposed. One summons was issued against a manufacturer for selling beef sausages deficient of meat. A fine of £5 0s. 0d. with £1 15s. 0d. costs were imposed.

During the year 511 samples of ice cream, ice lollies and frozen confections were submitted for chemical analysis or bacteriological examination. Of this number 336 ice creams were examined bacteriologically and 229 were found to be Grade One; 53 Grade two; 29 Grade three and 25 Grade four. Samples in Grades one and two can be classed as satisfactory. In those cases where the bacteriological results were found to be consistently unsatisfactory, visits were made to the manufacturing premises and advice given. 26 ice creams were examined for food poisoning organisms and all proved negative. Ice lollies and frozen confections submitted for bacteriological examinations proved as a whole satisfactory. Analysis of 119 ice cream samples proved only two to be below standard; all other samples complied with the requirements of the Food Standards (Ice Cream) Regulations 1959. Analysis of 56 ice lollies and frozen confections proved that only one was contaminated with lead. The manufacturer has had certain moulds retinned.

**Ice Cream
and
Ice Lollies**

During the year one of the most modern and hygienic ice lolly making plants has been installed in the ice cream section of a main dairy. The output of this machine is 14,000 ice lollies per hour. The required quantity of liquid is automatically injected into the moulds, the wooden sticks inserted and the frozen lollies bagged by machine, the product thus being untouched by hand during the process.

In addition to the bacteriological examination of milk and ice cream, during the year 218 samples of other foods were examined for suitability for human consumption, including examination for food poisoning organisms. The types of food selected were those which were to be eaten uncooked or without further preparation and included meat pies, sausage rolls, cooked meats, cream trifles, cream filled cakes, shellfish, meat and fish pastes. The results, as a whole, were satisfactory, in no case was Salmonella contamination reported. The above total includes samples which were examined bacteriologically as a result of complaints made by the general public and enquiries incidental to food poisoning.

**Bacteriological
examination
of foodstuffs**

Bacteriological examination of Milk

Regular routine samples were taken from milk processing firms and producers within the city and the standard of cleanliness and efficiency of pasteurisation is highly satisfactory. The total number of milk samples submitted to the Public Health Laboratory for examination was 2,375 comprising 2,175 heat treated milks, 172 tuberculin tested milks and 28 undesignated raw milks.

Four of the 2,175 heat treated milks examined failed to satisfy the phosphatase test for efficiency of pasteurisation and 68 failed the methylene blue test (for bacterial quality). 46 of these failures were from samples of milk procured from automatic milk vending machines, and 30 from samples of milk processed outside the city area. 25 tuberculin tested milks failed the methylene blue test and the result of guinea pig inoculation of the milks tested for the presence of tubercle bacilli proved negative in every case.

Milk Supply to Hospitals and Aged Persons Hostels

The milk supplied to hospitals and aged persons hostels is regularly sampled at the time of delivery and 131 samples were tested chemically and bacteriologically. Two samples were found to be inefficiently pasteurised and representations were made to the firms concerned. Further samples proved satisfactory.

Milk Supply to Schools, Day Nurseries and School Canteens

There were 191 samples taken at these establishments and all proved satisfactory bacteriologically. One sample of school milk was found to contain added water and immediate investigations were made to ascertain the cause. A slight fault was found in the processing plant and steps were taken by the processor to rectify this fault immediately. Further samples from the plant proved to be genuine.

Milk and Dairies General Regulations 1959

The whole of the city is a specified area in which only heat treated milk or raw milk of tuberculin tested designation may legally be sold to the public, and a small percentage of the daily consumption consists of this raw milk. 172 samples of tuberculin tested milk were taken and 128 were specially tested for brucella abortus infection. These samples were taken from milk produced within the city and from farm bottled milk from outside areas. The milk from one city herd was found to be infected with brucella abortus. Immediate measures were taken to isolate the infected cow by individual sampling. By this means the suspected animal was isolated at once and, with the co-operation of the producer, slaughtered. The milk from one herd outside the area was found to be infected with

brucella abortus, the Medical Officer of Health for the area was notified and with his co-operation further samples proved negative. It was not necessary to send a notice requiring heat treatment of the milk.

All samples taken from city herds were found to be free from Mycobacterium tuberculosis. **Bovine tuberculosis**

Liverpool is a centre for the milling of animal feeding stuffs. The manufacture of fertilisers is also carried on. During the year 50 samples of feeding stuffs and fertilisers were obtained for analysis. All samples, with minor exceptions, were found to conform with the manufacturers' statutory statements. **Fertilisers and Feeding Stuffs Act, 1926**

The Pharmacy Poisons Act, 1933, together with the Poisons Rules, regulates the sale of poisons. It is the duty of a local authority to carry out the provisions of Part II of the Act, which deals with the registration of persons selling Part II poisons. The number of listed sellers on the current register is 649. It was not necessary to take any legal proceedings. **Pharmacy and Poisons Act, 1933**

Milk Supplies

Duties include the administration of legislation governing the registration of milk distributors and their premises, and during the year, 133 new registrations were issued for the sale and heat treatment of milk. **The City's Milk Supply**

The measures to be taken with regard to the securing of a clean and wholesome milk supply are most important in view of the vital nature of this important food and most careful supervision is essential at every stage from its receipt at the processing plant for heat treatment, bottling and storage, down to the delivery to the consumer, who may be in the home, school, hospital or factory canteen. Public health inspectors keep a close watch on all the links in the chain of milk handling, treatment, storage, and distribution, as it is incumbent on each inspector to be assured that the requirements of the Milk and Dairies (General) Regulations, 1959, the Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations 1949, are at all times being strictly complied with. **Milk Distribution**

All milk is produced under the supervision of the Ministry of Agriculture, Fisheries and Food, who register all such producers as dairy farmers, but the handling, treatment, storage and distribution of milk, other than that **Registration of Dairies**

which is produced and distributed by the registered dairy farmer, is controlled and supervised by the local authority in whose area the premises are situated and they must be both registered and licensed by that authority.

This entails a frequent check on all registered premises and routine visitation revealed that thirteen businesses had ceased to operate, 52 dairies required to be transferred from one person to another, and 133 new registrations were required to be effected. All premises were inspected on receipt of registration application and when the requirements necessary were completed they were recommended for approval.

Designated Milks and Licensing

All milk distributed under a special designation according to its treatment and all milk distributors must hold a licence in respect of each particular designation handled. These licences are renewable annually and are collected for endorsement and re-issue by the inspectors, who examine the premises to ensure that conditions continue to be satisfactory for the storage and sale of milk. During the year 4,019 visits were made to premises at which milk is handled, treated, stored or sold. From the 1st January, 1961, under the Milk (Special Designation) Regulations 1960, licences for designated milk will be issued for a period of five years.

Registered dairies and distributors

Number of registered dairies	...	...	...	...	...	723
Number of registered distributors	...	...	...	...	...	742
Number of dairies which ceased to operate	...	...	...	...	...	13
Number of dairies newly registered	...	...	...	...	...	133
Number of distributors who ceased to operate	...	...	...	...	...	13
Number of dairies transferred from one person to another	...	...	...	...	...	52
Number of licensed distributors (who have no premises in Liverpool but who daily bring in supplies to the city) and have accordingly been licensed by this authority	...	...	...	...	...	16

There are 145 distributors of Cream (as distinct from registered milk distributors) in the City.

Milk Pasteurisation

Inspection of dairies and plant

During the year, 495 visits were made to pasteurising plants for the purpose of sampling when the installations were in operation. Visits were also made at times when the plants were in process of dismantling for cleaning and sterilising, special attention being paid to the temperatures and functioning of the indicating and recording instruments during the water runs on re-assembly of the plant. Holding times were also checked. Checks on thermographs revealed that in two instances careless handling

of the recording arm had resulted in the arm being bent, thereby causing a higher reading than in fact was the case. In both cases these were rectified by the operator at the time of visit.

418 visits were made to sterilising plants for the purpose of sampling and checking the component parts of each plant. Indicating and recording thermometers were checked and so inaccuracies were observed.

A thorough examination of all plant and utensils in each dairy is carried out from time to time. These inspections include the examination of bottle and churn washing machines and the use of efficient and approved sterilising agents and detergents. Balance tanks, both for raw milk on receipt and for processed milk on completion of pasteurisation, are examined for deposits of milk solids and for cleanliness. Bottle filling machines and capping units are carefully inspected for inaccuracies such as ineffective capping, etc.

There are five high temperature short time pasteurising plants in the city consisting of a number of separate units of capacities varying from 850 gallons per hour to 2,500 gallons per hour. In each instance the units are coupled with mechanical bottle washing plants of equal capacity, automatic filling and capping machines, together with the necessary conveyor belt systems to adjacent cold rooms. In addition to the foregoing units four establishments are fitted with holder or batch type pasteurisers, consisting of eight separate units of from 100 to 200 gallons capacity. In each instance the premises are fitted with mechanical bottle washing plant, filling and capping machines and adequate cold room facilities. During the year one of these processors ceased to operate.

There are four mechanical tunnel type washers in operation for the washing and sterilising of milk churns in addition to two rotary washers and six jet and steaming stool washers fitted in the smaller establishments. These fitments are very effective in their operation and are at all times well maintained.

A large increase in the sales of milk from automatic vending machines has been observed this year. A total of six dairies (two outside the city area) are supplying milk in sealed cartons to twenty automatic vending machines sited outside shops and in factories in the city area. The machines are sited with the approval of the local authority and are open for inspection and examination as and when required. Each vendor is registered by the

**Milk
Sterilisation**

**Inspection of
Dairies**

**Pasteurisation
and
Sterilisation
of Milk**

**Churn
Washing and
Sterilising
equipment**

**Distribution
of Milk in
cartons by
automatic
dispensing
machines**

local authority and licences issued under the Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949. As was to be expected slight troubles were encountered during and after the siting of the machines early in the year, such as leaking cartons, bacterial contamination and vandalism by certain members of the public. Advice was given by this department and a gradual improvement has been maintained. A refrigeration unit is fitted in each machine, and a half pint carton of Tuberculin Tested Pasteurised Milk may be obtained for the price of 6d. Special attention has been paid to the sampling of milk from the machines and during the year 48 samples failed the methylene blue test for bacterial quality. 748 visits were made during the year for the purpose of sampling and inspection.

Frozen milk in cartons

The demand for one pint and one quart cartons of frozen milk remains steady. The milk processed, cartoned and frozen outside the city area is stored in a deep freeze plant in the city and used entirely for export and by shipping companies for use on voyages. No milk under this heading is sold in the city area. The output of this plant is approximately 300 gallons per day.

Milk (Special Designation) (Raw Milk) Regulations, 1949.

Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949.

Milk Licences

A person who registered as a milk distributor must also hold a licence in respect of each designation of milk which he handles and any person who sells sterilised milk only must hold a licence as a vendor of this particular type of designated milk. Persons operating pasteurising or sterilising plants must hold appropriate licences. Licences issued during the year to conform with these Regulations totalled as follows:—

Dealer pasteurisers	...	...	...	...	...	...	9
Dealer sterilisers	...	...	...	...	...	...	3
Vendors of tuberculin tested raw milk	...	...	...	...	...	...	19
Vendors of tuberculin tested farm bottled milk	...	...	...	...	...	...	76
Vendors of tuberculin tested pasteurised milk	...	...	...	...	...	...	732
Vendors of pasteurised milk	...	...	...	...	...	...	728
Vendors of sterilised milk	...	...	...	...	...	...	705
Vendors of Sterilised Milk only	...	...	...	...	...	...	1,060

During the year 197 businesses were transferred from one person to another involving the cancellation of 301 licences and the issue of new licences to the new proprietors. An extensive building programme is in operation at one of the main dairies. A large new wing is being added to the main building in which will be housed a new ultra high temperature milk sterilising plant, and an enlarged cream department complete with a new cold store and laboratory.

DAILY CONSUMPTION OF MILK IN LIVERPOOL

	Gallons	Daily consumption of Milk in Liverpool
Tuberculin tested milk (farm bottled)	1,033	
Tuberculin tested milk (bulk)	345	
Tuberculin tested milk (pasteurised) ...	38,937	
Pasteurised milk	45,404	
Sterilised milk	16,180	
Total number of gallons	101,899	

There are some 1,335 gallons of milk produced daily in the city of which approximately 485 gallons are sold as Tuberculin Tested Milk (farm bottled), the balance over this figure is absorbed by one or other of the pasteurising establishments for heat treatment. The ungraded milk produced in the city, some 215 gallons, is collected by the wholesalers for pasteurisation. Approximately 550 gallons of cream are produced daily in the city.

This Act empowers the Liverpool Corporation to grant licences to all persons keeping dairy cows, store cattle (other than dairy cows) and pigs, subject to the premises being of the standard required. At the end of 1960 the following table of licences was operative for the keeping of cattle and/or pigs in the city area:—

Licences to keep cattle	23
Licences to keep pigs	44
Number of dairy cows permitted on licences	519
Average number of dairy cows kept	320
Number of store cattle permitted on licences	292
Average number of store cattle kept	120
Number of pigs permitted on licences	3,358

Liverpool Corporation Act, 1921 Sections 475-483.

Premises used for housing of cattle

Average number of pigs kept	...	...	...	...	...	1,990
Number of licences forfeited on ceasing to keep cattle	...	...	...	...	...	6
Number of cattle involved in these licences	...	...	...	...	...	217
Number of licences forfeited on ceasing to keep pigs	...	...	...	...	...	5
Number of pigs involved in these licences	...	...	...	...	...	188
Number of cattle licences transferred from one person to another	...	...	...	...	...	1
Number of pig licences transferred from one person to another	...	...	...	...	...	3

Routine visits were made to these premises during the year and all infringements were dealt with to the satisfaction of the department.

Number of visits made to cowsheds	...	...	...	...	...	97
Number of visits made to piggeries	...	...	...	...	...	164

FOOD HYGIENE

The important subject of food hygiene has been in the forefront of the **General** department's activities. Although there has not been a special drive during the year, food premises have been given the maximum possible attention.

Taking a general view of the trends in the progress of cleanliness and hygienic food handling one is aware that persons in the food trades are steadily improving their standards of hygiene.

The distributive food trades form a major part of the nation's economy, and the work in all its branches is as important as that of any other occupation. This truth is even more profound in its application to the food trades, and it would appear that the time is fast approaching for positive action to be taken to establish the processes whereby acceptance for employment in the food trade is dependent upon an appropriate qualification and training. **Need for new educational approach**

The work of the department has been of a twofold character, enforcement and educational. The two aspects have, more or less, progressed simultaneously, so that where infringements have been found the opportunity has been taken to explain the dangers and counter measures needed to avoid such incidents. Generally, information and advice is readily accepted and appreciated, and many make a genuine endeavour to put it into practice. There is an encouraging degree of co-operation on the part of proprietors, managers and personnel which is the true indication that progress is being made in spite of the apparently insurmountable problems. **Enforcement Co-operation**

From time to time enquiries are made by those seeking to arrange some form of staff training, or proposing structural or functional improvements. Guidance is always readily given, and much goodwill and practical understanding is derived from this aspect of the department's work.

During the year 22,674 visits were made to retail food shops, cafes, bake-houses, licensed premises, food factories, street traders, milk establishments, etc., and 2,309 infringements were dealt with in respect of these premises. Special attention has been given to cafes and restaurants, etc., in order to ensure compliance with the Food Hygiene Regulations, 1955, and later in the year, the Food Hygiene (General) Regulations, 1960, and 1,293 routine visits have been made to these premises apart from general observations during the course of other duties such as those under the Clean Air Act. **Inspections of food premises**

Clubs

There are approximately 320 clubs in the city, including licensed establishments and 259 visits were made to them during the year. These premises are usually open at night only, but whenever possible inspections are made during the day, and if this is not practicable, evening visits are made.

Changes in occupation

A recent development has been observed in the opening of new private clubs. A number of new licensed clubs have been formed but they sometimes prove to be of short duration. It is regretted that basements are proving attractive for the establishment of licensed clubs.

Inspectors have been instructed to look for new clubs on their districts and when they are found, an inspection follows and infringements are dealt with appropriately.

Problem premises

Many clubs are well appointed and conducted, but there are a number where the standard is not so satisfactory. These premises present a problem because of the low financial position of the clubs and the unsuitable, sometimes worn-out, condition of the structure.

Every effort is made to improve these unsatisfactory conditions but progress is slow because of the limited resources and abilities of the persons responsible.

Restaurants, cafes, snack bars, etc.

Work in connection with cafes, restaurants, snack bars and similar premises has been confined to routine duties. These premises are always given some priority attention because of the special nature of the business carried on in them. This class of trade, like most other businesses, require regular supervision. There is, of course, every indication that the proprietors of these establishments are as concerned as ever about the way in which their businesses are conducted, but with all their endeavours there is many a breakdown of the methods intended to ensure safe food handling.

Problems

A number of problems continue to present considerable difficulties in this trade, especially those associated with the type of persons usually employed for kitchen duties. Unfortunately, the temporary character of the work may cause bad practices to develop in the food rooms of cafes or restaurants. It is also regrettable that it is extremely difficult to instruct kitchen staff in the details of good practice. This is one of the weak links in the food hygiene chain, and one which is unquestionably a matter for serious consideration.

In contrast to the foregoing problem it is very gratifying to be able to record the progress being made in connection with the Catering and Food Hygiene Course held at the University School of Hygiene for persons engaged in the many branches of the food trade. Members of many staffs have responded well and with encouraging success and already some 200 personnel have availed themselves of this training. The value of this course is immeasurable, for there is now being developed a nucleus of trained personnel who can assist in spreading the essential facts concerning food poisoning. By their knowledge, providing they are prepared to enlarge and use it, others can be influenced to do their job properly and seek the advantages of this specialised course of training.

Some 7,000 retail shops in this city are engaged in the various food trades and all have been inspected during the year. Supervision is essential in many cases, because there is always the risk of standards not being maintained. The factors which retard progress are the same as those affecting other branches of the food trade. The staffing of many of these shops by the more suitable type of person is extremely difficult, and the economic aspect, associated with wages and the other overhead costs, all present their special difficulties which are almost insurmountable. The general orderly and hygienic conduct of some businesses is adversely affected by the lack of sufficient space for the storage of stock and returnable cartons and boxes. This causes difficulty in carrying out thorough cleaning and sometimes obstructs access to handwashing facilities.

These are some of the conditions which necessitate regular supervision by the department. Happily, there is considerable willingness by most shopkeepers to comply with the department's suggestions and requirements and they endeavour to maintain a good standard, although there is, in some instances, a deterioration between the visits by inspectors.

Whilst there is co-operation on the part of a few firms in notifying the department of certain infections, as required by Regulation 11 of the Food Hygiene (General) Regulation, 1960, employers and employees generally have not responded in the manner required of them. It is appreciated that most of the sicknesses are of a very minor character and are not treated by a doctor. Thus the true nature of the indisposition is not ascertained. There were, however, 87 notifications received and appropriately dealt with by the department during the year.

Fried Fish Shops.

Inspections The inspection of fried fish shops has been carried out during the year in accordance with the desire to give as much attention as possible to all classes of food premises. A total of 589 visits were made to these shops, apart from incidental visits made for other purposes. The general standard of hygiene was found to be satisfactory, but in older premises where modernisation has not been fully carried out and in those shops where there is limited space because the remaining rooms of the property are used for living purposes, there is cause for detailed attention.

The trend towards improving shops and food preparation rooms by tiling walls, laying new floor surfaces and installing improved equipment and lighting, continues in various parts of the city. The proprietors of these better establishments have set a challenge to other traders which appears to have been taken up and there is some encouraging progress to report.

Ice Cream Retail Trade.

Registrations and inspections The registration of ice cream vendors and manufacturers is regulated in this city by the Liverpool Corporation Act, 1936, and there are now some 1,800 premises registered. There were 198 new registrations during the year.

General Ice cream is sold in a vast variety of shops and other premises, and such establishments are also inspected for many other purposes by inspectors of this department. The risk of contamination of ice cream is now almost removed by reason of the control now exercised in all the processes from manufacture to storage and sale. There is an impressive improvement in the methods of sale by retail, and even in street trading the vehicles are, in the main, attractive and well equipped, including facilities for hand washing. In this field there is, of course, reason for more improvement and every effort is being made to bring about this requirement both in respect to premises and vehicles and also regarding the personal hygiene of certain types of persons who work in this trade in a casual capacity.

Street Trading.

Supervision of street traders Street trading presents a particularly difficult problem to the department, and action has been taken in order to improve some of the more unsatisfactory aspects of this class of trading. A number of mobile shops are extremely well conducted and equipped, but there are many which leave a

lot to be desired. The latter are most difficult to locate and supervise and in many instances disappear once they have come under the attention of the department.

Many traders are willing to co-operate, and some even bring their vehicles to the department's office for inspection. The advice given to the traders in these instances is always acted upon. In this way more is usually achieved than required by the regulations. There are some 107 barrows and carts and approximately 100 mobile shops operating in the city and 259 special visits have been made during the year, together with 12,730 visits and observations for other purposes. Altogether 67 infringements were dealt with satisfactorily.

Co-operation

Inspections

Trading from barrows presents problems quite distinct from those found in premises and mobile shops. The major problem relates to the storage of goods and containers especially at the place of trading. Action has been taken in conjunction with the City Police and by inspectors of this department in respect of fruit being kept in open boxes on cleared sites and on the roadway beneath the barrows. In one instance where the risk of contamination was found to be serious, court proceedings were taken against the street trader. Boxes of various sizes containing a selection of assorted fruits were found on the ground of a cleared site on which the trader's handcart was standing for trading purposes. Eight of these boxes had no lids and the fruit in the boxes (apples, plums and also some tomatoes) was exposed to blowing dust and debris and a thin film of dust was seen to have formed on the food. Flies were also crawling on the fruit and nearby was some dog excreta which also had flies on it. Flies were seen to go from the excreta to the fruit. No effort had been made to protect the exposed fruit. The Stipendiary Magistrate found the case proved and imposed a fine of £3. The proceedings were taken under Regulation 8(a) of the Food Hygiene Regulations, 1955.

Problems

Storage arrangements

Court proceedings

Street trading, with all its undesirable weaknesses, is still a considerable factor in the supply of food to the consumer in the new estates. Such trading is essential in localities where shops are few and far between and these traders, the more satisfactory ones, are able to provide a necessary and sometimes cheaper, service to the housewife.

The department will continue to take appropriate action in dealing with the infringements of the Food Hygiene Regulations, but will also endeavour to study the special problems in order that some practical means may be devised to ensure satisfactory trading practices and conditions.

DISINFECTION AND DISINFESTATION

It may be thought that the title of this section has become somewhat outdated, because, although disinfestation is still one of the primary functions, disinfection is now no longer required to the same extent as hitherto, and has been replaced in importance by a wide variety of duties connected in a greater or lesser degree with every function and service in the Health Department.

The duties which are controlled by this section are enumerated below:—

1. Inspection of premises for verminous condition.
2. Disinfestation treatment of verminous premises.
3. Disinfestation treatment of verminous furniture, etc.
4. Disinfestation and disinfection stations.
5. Disinfection of infectious premises.
6. City Mortuary.
7. Burials Service.
8. Storage, distribution and collection of Home Nursing Equipment.
9. Mobile Meals Service.
10. Food and General Store.
11. Poliomyelitis Immunisation—Transport.
12. Milk Bank.
13. Miscellaneous Services.
14. The Liverpool Show.

1. *Inspections for Verminous Condition.*

As a regular function of this section, inspections of a wide variety of premises continued in a similar degree to that obtaining during earlier years. Although the number of premises treated for vermin maintains about the same average as before, this does not imply that general cleanliness is not showing any improvement, but, on the contrary, that the general public is becoming more aware that vermin in any form constitutes a danger to health.

The categories into which inspections may be divided are:—

- (a) The majority of inspections of dwelling houses are made on behalf of the Housing Department and carried out with the intention of obtaining information regarding the verminous condition of furniture

and effects belonging to families recommended for rehousing. These inspections are carried out on all housing estates irrespective of their location, inside or outside the City boundaries.

(b) Public interest in the cleanliness of dwelling houses is reflected in the growing number of requests received from owners or occupiers who suspect that the premises are vermin infested. If, in fact, these premises are found to be verminous and disinfestation treatment is requested, the cost of such treatment is debited to the complainant.

(c) Hospital Management Committees continue to request inspection and treatment of those hospital premises where cockroach or steam-fly infestation is suspected.

(d) Inspection of staff canteens is a regular feature of this branch of the service, as these premises frequently become infested with steam-flies or cockroaches. The cost of any treatment required is debited to the owner of the premises.

(e) Food manufacturers frequently call upon the services of the section when it is suspected that minor infestations of vermin are occurring in the premises.

Infestation at a Refuse Tip.

A threatened plague of crickets at the Otterspool refuse tip was prevented by urgent effective disinfestation methods which were put into effect by the combined efforts of the Cleansing Department and staff of this section.

2. Disinfestation Treatment of Verminous Premises.

Following inspections, disinfestation treatment was carried out in the following cases:—

(a) 681 dwelling houses at the request of the Housing Department.

(b) 631 dwelling houses treated at the request of owners or occupiers.

(c) 317 treatments of hospitals, staff canteens, factory premises, etc.

a total of 1,629 treatments.

3. Disinfestation Treatment of Verminous Furniture, etc.

The disinfestation of dwelling houses includes the treatment of furniture, bedding and personal effects. The method of treatment is for furniture,

bedsteads, pictures, etc., to be treated on the premises but it is necessary for mattresses, bedding and soft furnishings to be removed to a disinfection station for adequate treatment. The latter process is carried out with the minimum amount of inconvenience to the occupants of the premises. The furniture and effects of 973 families were treated in this manner during the year.

Welfare Cases.

On behalf of the Welfare Section of the Health Department, an increasing number of dwellinghouses and apartment rooms are disinfested. These are premises from which the occupants have been removed to hospital or were unfit to clean their accommodation adequately.

4. Disinfestation and Disinfection Stations.

The stations at Smithdown Road and Charters Street were able to cope with all the infectious and verminous articles collected from premises and ships in the area controlled by the Local Authority and the Port Health Authority.

A small income accrues to the department from the precautionary disinfection of articles which are intended for export and for which the importing country demands a certificate of adequate disinfection.

In this connection the stations dealt with the following items during the year.

9,963 verminous articles disinfested.

14,404 infectious articles disinfected.

53 infectious library books.

4,289 articles disinfected as a precautionary chargeable measure.

1,055 tons of miscellaneous goods, the outer wrappers of which are disinfected as a precautionary chargeable measure.

5. Infectious Premises and Contents.

The disinfection of premises where infectious disease has occurred is still a primary function of the section and it is the duty of the staff to remove infectious articles to a disinfection station and to carry out the required terminal disinfection of premises.

During the year, 1,725 infectious premises were dealt with in the prescribed manner.

When requests are made for precautionary treatment of premises, where a non-infectious disease has occurred, the department is willing to co-operate, but is obliged to levy a charge for such service.

6. *City Mortuary.*

The control and staffing of the City Mortuary is the responsibility of the section. Two experienced full-time attendants are employed on a rota of early and late duties and are on call should an emergency arise outside their normal working hours.

The mortuary is used for the reception from the city or from the river, of bodies of persons who have died as the result of accident, violence, etc.

During the year, 580 bodies were received and 522 post-mortems were held. Close liaison is maintained with the City Coroner's Office for the effective functioning of this service.

7. *Burials and Cremations.*

The department maintains an effective service for the burial or cremation of persons who die in the City, where it appears that no suitable funeral arrangements are being made by relatives or friends. Section 50 of the National Assistance Act, 1948, places the responsibility for this duty on the Local Authority and the service is functioning under the control of this section of the Health Department.

During the year burials or cremations were arranged in cases involving 133 adults and children.

Although cremation is the policy advocated by the Department where religious or other convictions permit, the wishes of relatives or friends are strictly respected, and at no time is pressure brought to bear to enforce this policy.

Arrangements are still in being with local Hospital Management Committees for the conveyance of bodies from hospital to hospital. In this connection 108 bodies were transferred during the year.

8. *Home Nursing Equipment.*

The purpose of this service is to provide equipment which may be necessary for the efficient nursing of persons who are ill at home. The

demands for this equipment are growing year by year and during 1960, 3,016 visits were made for the purpose of issuing or collecting the various items.

The administration of this service is performed by staff of the Maternity and Child Welfare Section, but the practical work, involving the storage, distribution, collection and maintenance of equipment, is performed by staff of this section.

9. *Meals on Wheels.*

Meals are provided under this scheme to the homes of persons who are in need of the undoubted benefits to be derived from the provision of a hot cooked meal. The service is maintained by vans from this section, each van being staffed by a departmental driver and a volunteer assistant from the Womens Voluntary Services. During the year, 47,793 visits were made and a corresponding number of meals supplied, five vans being used for this purpose.

The further increase in this service which was suggested in the report for 1959 took place during the year, and it is hoped that, as the necessity arises, the service may be further expanded by coping with other areas of the City for which no provision can at present be made.

10. *Food and General Store.*

This is situated at Gascoyne Street Depot, and continues to function in an expanding and satisfactory manner.

Food, cleaning materials, chandlery, medical and general stores are supplied to 179 establishments, principally those under the control of the Health Department, Children's Department and one police establishment.

The value of goods supplied during the year was £24,250 and the establishments supplied were:—

Maternity and Child Welfare Section	...	...	43
Welfare Section	...	...	16
Domiciliary Midwives	...	...	60
Mental Health Section	...	...	3
Education and School Medical Departments	...	...	34
Children's Department	...	...	9
Other Establishments	...	...	14

Staff employed on stores duties are one storekeeper and three assistants.

11. *Poliomyelitis Immunisation.*

The programme which is now in being for Poliomyelitis Immunisation depends on prompt and urgent transport of the required vaccine and equipment. The almost continual daily requirements in this respect are provided by staff and vehicles from this section.

12. *Milk Bank.*

The section is responsible for the collection and transport from home to hospital of breast milk required for the feeding of babies who are hospital patients.

13. *Miscellaneous.*

- (a) The collection and removal of furniture and equipment to and from Aged Persons Hostels.
- (b) Collection, repair and delivery of Day Nursery equipment and furniture, and repairs to furniture, etc., at the office building, Hatton Garden.
- (c) Transport of equipment on behalf of the Mental Health Service.
- (d) Various transport duties on behalf of the Children's Department.
- (e) The movable property of persons admitted to hospital or to accommodation provided under Part III of the National Assistance Act, 1948, is conveyed where necessary, to and from store.
- (f) The residents in Aged Persons Hostels are provided with facilities for obtaining books from public libraries. The transport required for this service is provided by this section.
- (g) The transport of Port Health personnel continues in a satisfactory manner by means of a vehicle from this section.
- (h) A variety of other transport duties necessary for establishments under the control of the Health Department.
- (i) Maintenance of gardens at day nurseries and clinics.

15. *Liverpool Show.*

The department's exhibits continue to attract more attention each year, principally because the subjects displayed are of topical interest, and the increasingly attractive manner in which they are presented.

The equipment used is made and erected by the staff, and the general presentation and layout are controlled by this section.

Present intentions are to make further improvements in presentation without incurring any large expenditure, the equipment thus provided being available for future exhibits, not only at the Liverpool Show, but at other exhibitions where health education can play a conspicuous part.

Staff.

The wide varieties of duties listed above is performed by a staff of 50, consisting of:—

Administrative

- 1 Chief Inspector
- 4 Inspectors
- 1 Copy Typist
- 3 Foremen
- 1 Storekeeper

Operational

- 2 Mortuary Attendants
- 1 Mechanic
- 1 Joiner
- 2 Boiler Attendants
- 16 Drivers
- 18 Disinfestors, Disinfectors, etc.

Vehicles.

Nineteen motor vehicles are engaged in the work of the section and are completely maintained by the staff at Gascoyne Street Depot. During the year these vehicles covered 158,381 miles and consumed 10,227 gallons of petrol.

CIVIL DEFENCE

Two separate courses for newly joined members of the Civil Defence Corps, Welfare Section, on "Evacuation and Care of the Homeless" were held. One of these courses is still in progress. Welfare
Section

For fully trained members of the Welfare Section a monthly refresher course was held.

The issue of Certificates and Proficiency Badges was made to members of the Welfare Section who qualified during the year.

During October, 1960, members of the Welfare Section participated in a full scale exercise in the grounds of Aintree Hospital, which was attended by all Sections of the Liverpool Civil Defence Corps, in addition to a Forward Medical Aid Unit from hospitals in the Liverpool region.

A "Combined First Aid and Home Nursing" Course was also held.

The Full First Aid Course mentioned in the report for 1959 was concluded in January, 1960, and 22 members of the Welfare Section were issued with a Full First Aid Certificate.

There was no training undertaken by this small section during the year as the numbers did not warrant it. Shelter
Welfare
Section

The outstanding feature of the Ambulance and Casualty Collecting Section during the year was the introduction of Ministry of Health circular 9/60 which dealt with the organisation and operational control of the Ambulance and Casualty Collecting Services. This is recognised in two ways: Ambulance
and Casualty
Collecting
Section

- (1) The name of the Ambulance and Casualty Collecting Section is to be changed to "Ambulance and First Aid Section".
- (2) First Aid Parties are to be formed within the Ambulance and First Aid Section.

The new arrangements adapted for providing emergency hospital accommodation and, especially, the new concept of forward medical aid, place greater emphasis on the first aid responsibilities of these services.

Extensive training of members has continued throughout the year and the following training courses were arranged:

	Invited	Attended
Scarlet Flash 3. }	151	13
Scarlet Flash 4. }		15
Scarlet Flash	55	26
A.19 P.T.	16	8
A.18/P.T.	29	25

Twenty members of the section attended Exercise "Signal Fire" at Civil Defence Headquarters, "Balliol", which lasted from 1300 hours Saturday, 9th April, to 1100 hours Sunday, 10th April. In addition, the section was invited to assist in Exercise "Aintree II" the object being to develop team work within the Civil Defence Corps Section and to give enrolled members an opportunity of exercising in a war time role and also to afford an opportunity of working with one forward medical aid unit provided by the Liverpool Regional Hospital Board.

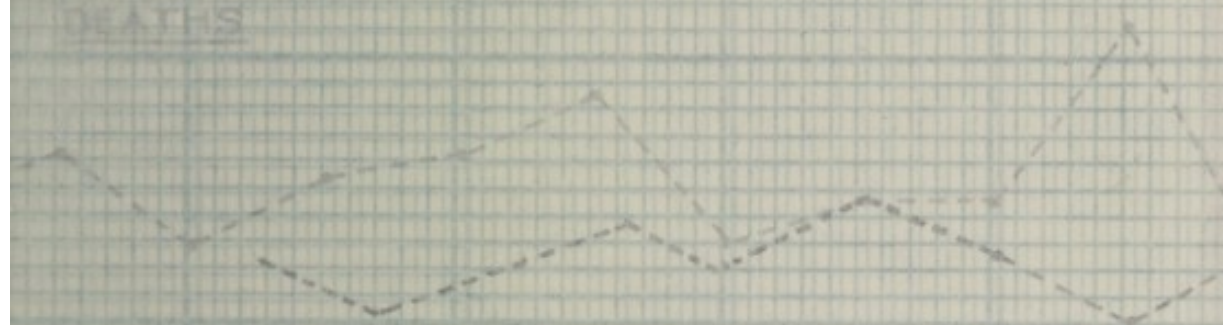
The exercise commenced at 1200 hours on Sunday, 2nd October and finished at approximately 1500 hours. 73 members took part, of whom 48 performed operational duties and 25 acted as casualties.

A canvass had been made of those volunteers who, since joining, have failed to attend for instruction and as a result of this, 289 disinterested persons have been removed from the strength.

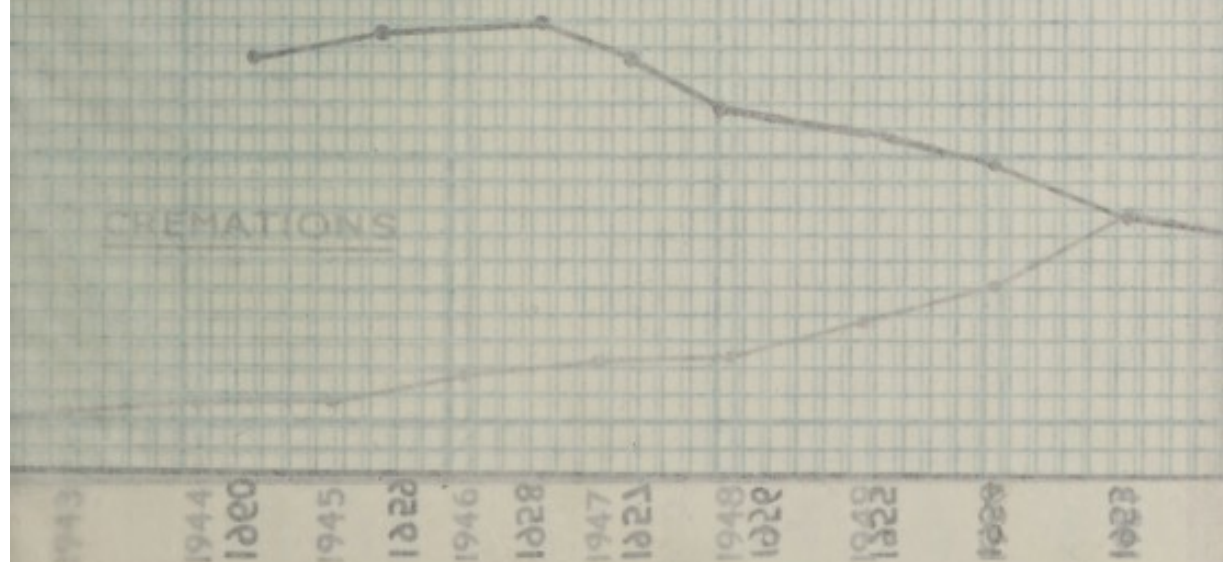
The total strength of the section on the 31st December, 1960, was 1109 volunteers.

IS OCCURRING IN LIVERPOOL AND NEAR AT LIVERPOOL CREMATORIUM DURING 1934 - 1960

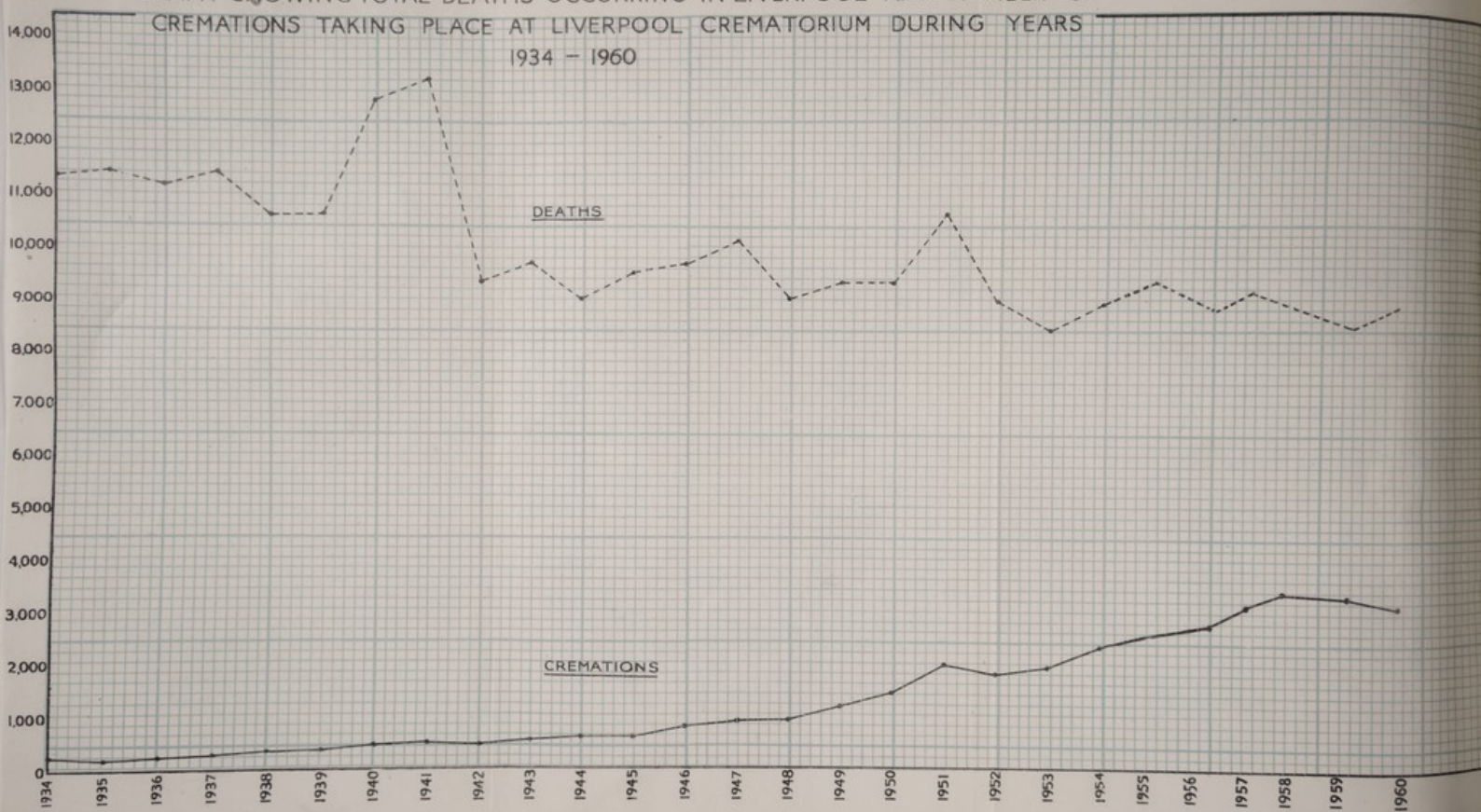
DEATHS



CREMATIONS



GRAPH SHOWING TOTAL DEATHS OCCURRING IN LIVERPOOL AND NUMBER OF
CREMATIONS TAKING PLACE AT LIVERPOOL CREMATORIUM DURING YEARS
1934 - 1960



CREMATION

The Medical Officer of Health continued to act as Medical Referee to the Liverpool Crematorium. The Deputy Medical Officer of Health and the Principal Medical Officer (Epidemiology) act as deputy medical referees. The documents, which are statutory, are scrutinised at the central offices of the Health Department before the Medical Referee gives authority to cremate.

The number of cremations carried out in the Liverpool Crematorium has shown a slight decrease during 1960. 3,114 cremations were undertaken as compared with 3,239 during 1959. However, this was the first full working year of the two new crematoria at Southport and Widnes, and the decrease can be accounted for by these crematoria being used for their own local cases, which formerly would have been brought to Liverpool.

Many interesting cases were discovered from the documentation point of view. During the month of May, documents were received for the cremation of a ship's steward who had died whilst at sea. The certificates, however, were not acceptable as no specific cause of death was given. It was necessary, therefore, to arrange a post-mortem examination to be carried out in Liverpool to ascertain the cause of death before the cremation could be allowed to take place. In addition, in two other cases, post-mortem examinations were ordered before the Medical Referee was satisfied that the cremations could proceed. The co-operation of Dr. A. H. Cruikshank of the Liverpool University Pathological Department in connection with these cases proved to be most helpful.

The introduction of the five-day week scheme throughout the Corporation Service in May did not affect the carrying out of cremations which continue to take place on Saturdays. A rota of duty medical officers and clerical staff was arranged to deal with cases to be cremated on Saturdays. A notable feature was the increase in the number of requests from persons expressing a desire for cremation, on decease, by forwarding to the department a signed certificate to be filed for future reference.

WATER SUPPLY

The water supply in the area during 1960 was satisfactory both in quality and quantity.

During the year, 3,209 bacteriological examinations were made on samples of water from the aqueducts, wells, storage reservoirs, trunk mains and the distribution system. Of the 576 samples taken from the water distributed in Liverpool 99·7 per cent were free from B.Coli and 91·8 per cent were free from coliform organisms. Of 1,239 samples taken from the trunk mains serving the city and other parts of the area of supply, 99·6 per cent were free from B.Coli and 83·5 per cent were free from coliform organisms. 58 chemical analyses were made and the results were satisfactory.

For plumbo-solvency 268 analyses were made. The average amount of lead absorbed in those samples of water that had passed through test lengths of lead piping was 0·11 parts per million. The supplies from both Rivington and Lake Vyrnwy were treated with hydrated lime in order to raise the pH value. No unusual form of contamination necessitated any special action.

The number of dwellinghouses, including shops with domestic living accommodation and flats, supplied from the public water mains in Liverpool was 205,509. None were supplied by stand pipes. The population of the city as estimated by the Registrar General for 30th June, 1960, was 754,670.

PUBLIC SWIMMING BATHS

There are thirteen public baths establishments in Liverpool housing 28 plunges with an annual attendance of 2,000,000 bathers. All but one of these establishments use mains water, and the other uses salt water from the River Mersey.

Break-point chlorination has been standard practice for more than thirteen years. Bacteriological examinations are carried out at approximately two-weekly intervals during the summer season, and throughout the current year have indicated entirely satisfactory conditions.

The filter plants all operate with turnover periods in the order of three to four hours. The frequency at which the plunges are emptied is usually dictated by the necessity of carrying out repairs, to the tiling, etc., but usually the period varies from one year to three years.

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1946	16,551	20.7	942	5.7
1950	16,110	20.1	905	5.0
1951	15,795	19.9	879	5.5
1952	15,439	20.0	870	5.5
1953	15,022	20.3	873	5.4
1954	15,742	20.5	847	5.4
1955	15,303	19.6	785	5.1
1956	15,944	20.6	801	5.0
1957	16,041	20.9	854	5.3
1958	16,003	20.5	799	5.1
1959	15,815	20.6	815	5.2
1960	15,951	21.1	835	5.4

STATISTICAL APPENDIX.

TABLE 1
BIRTH STATISTICS

	LIVE BIRTHS			STILLBIRTHS		
	Males	Females	Total	Males	Females	Total
Legitimate ...	7,921	7,172	15,093	189	165	354
Illegitimate ...	449	419	868	10	13	23
	8,370	7,591	15,961	199	178	377

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
1954	15,742	20.5	847	5.4
1955	15,268	19.6	785	5.1
1956	15,944	20.6	801	5.0
1957	16,044	20.9	854	5.3
1958	15,662	20.5	799	5.1
1959	15,615	20.6	815	5.2
1960	15,961	21.1	868	5.4

STATISTICAL APPENDIX

TABLE I

Year	Registered Live Births	Registered Stillbirths	Total Births	Stillbirths per 1,000 Live and Stillbirths
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
1954	15,742	400	16,142	24.8
1955	15,268	408	15,676	26.0
1956	15,944	394	16,338	24.1
1957	16,044	409	16,453	24.9
1958	15,662	413	16,075	25.7
1959	15,615	375	15,990	23.4
1960	15,961	377	16,338	23.1

TABLE 2

Analysis of causes of Infant Mortality in successive quinquennia 1896-1955,
and the years 1956, 1957, 1958, 1959, and 1960.

(A.)—Recorded Deaths.

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tubercu- losis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respira- tory Diseases	7 Digestive Diseases (including Diarrhoea.)	8 Malforma- tions Premature Birth, Maras- mus &c.	9 External Causes.
1896/1900	111,700	21,160	1,508	698	2,476	3,575	6,376	5,698	819
1901/1905	118,801	20,353	1,546	644	2,516	3,484	5,187	5,732	565
1906/1910	118,313	17,739	1,613	465	2,052	3,146	3,902	5,520	539
1911/1915	111,872	15,458	1,309	345	1,432	2,916	3,635	4,953	426
1916/1920	99,451	11,510	1,116	202	1,083	2,821	1,872	4,107	179
1921/1925	104,217	10,497	1,066	200	573	2,776	1,786	3,764	120
1926/1930	95,701	9,002	978	109	401	2,553	1,670	2,981	81
1931/1935	88,644	7,904	902	82	368	2,050	1,184	3,125	67
1936/1940	80,936	6,226	573	74	519	1,457	698	2,691	84
1941/1945	71,648	5,512	341	71	403	1,704	548	2,193	131
1946/1950	88,788	5,034	311	47	213	1,109	963	2,226	111
1951/1955	78,464	2,626	83	10	28	480	132	1,792	63
1956	15,944	413	8	—	6	75	9	300	8
1957	16,044	423	6	—	8	80	15	302	7
1958	15,662	434	3	—	5	76	20	321	6
1959	15,615	428	4	—	3	59	18	340	3
1960	15,961	451	10	—	2	94	20	313	6

TABLE 2—*continued.*

Analysis of causes of Infant Mortality in successive quinquennia 1896-1955,
and the years 1956, 1957, 1958, 1959, and 1960

(B.)—Death Rates per 1,000 Births.

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 Extern Cause
1896/1900	*33.4	189	12.7	6.2	22.1	32.0	57.1	51.0	7.3
1901/1905	33.4	172	13.0	5.5	21.2	29.3	43.7	48.1	4.7
1906/1910	32.2	149	13.6	3.9	17.4	26.6	33.0	46.7	4.6
1911/1915	29.3	137	11.6	3.1	12.8	26.1	32.5	43.1	3.8
1916/1920	24.9	116	11.1	2.0	10.9	28.4	18.8	42.0	1.8
1921/1925	25.1	100	10.2	1.9	5.5	26.6	17.1	36.1	1.2
1926/1930	22.1	94	10.2	1.1	4.2	26.7	17.4	31.1	0.8
1931/1935	20.5	89	10.1	0.9	4.2	23.1	13.4	35.3	0.8
1936/1940	19.4	77	7.0	0.9	6.4	17.9	8.8	32.9	1.0
1941/1945	21.3	78	4.8	1.0	5.6	24.1	7.7	30.7	1.8
1946/1950	22.9	56	3.4	0.5	2.3	12.3	10.5	25.1	1.2
1951/1955	20.1	33	1.0	0.1	0.3	6.1	1.7	22.8	0.8
1956	20.6	26	0.5	—	0.4	4.7	0.6	18.8	0.5
1957	20.9	26	0.4	—	0.5	5.0	0.9	18.8	0.4
1958	20.5	28	0.2	—	0.3	4.9	1.3	20.5	0.4
1959	20.6	27	0.3	—	0.2	3.8	1.2	21.8	0.2
1960	21.1	28	0.6	—	0.1	5.9	1.3	19.6	0.4

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

TABLE 3

ANALYSIS OF CAUSES OF MORTALITY.

Deaths from certain Groups of Diseases in each decade from 1871 to 1950, and during the years 1951, 1952, 1953, 1954, 1955, 1956
1957, 1958, 1959, and 1960

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
1954	66	244	1,251	275	1,836	1,582	8,946
1955	65	204	1,589	245	2,103	1,601	9,289
1956	56	144	1,458	215	1,873	1,590	8,842
1957	42	128	1,558	236	1,964	1,603	9,093
1958	40	116	1,554	258	1,968	1,643	8,930
1959	42	105	1,554	242	1,943	1,647	8,587
1960	39	84	1,641	226	1,990	1,617	8,891

TABLE 3—*continued*.
Deaths expressed as a percentage of total deaths from all causes (Proportionate Mortality).

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	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
1954	0.7	2.7	14.0	3.1	20.5	17.7	100.0
1955	0.7	2.2	17.1	2.6	22.6	17.2	100.8
1956	0.6	1.6	16.5	2.4	21.2	18.0	100.0
1957	0.5	1.4	17.1	2.6	21.6	17.6	100.0
1958	0.4	1.3	17.4	2.9	22.0	18.4	100.0
1959	0.5	1.1	18.1	2.8	22.6	19.2	100.0
1960	0.4	0.9	18.5	2.5	22.4	18.2	100.0

TABLE 4

Report for Years 1950-1954
MATERIAL MORTALITY

TABLE 4
DEATHS FROM CANCER

Organs Affected	Number of deaths
Buc. cavity and pharynx	26
Oesophagus, stomach, intestines and rectum	534
Larynx, trachea, bronchus and lungs ...	457
Cervix and uterus	66
Breast	105
All other sites	344
Leukaemia and aleukaemia	48
Lymphosarcoma	37
Total	1,617

TABLE 5
MATERNAL MORTALITY.

Year.	BIRTHS REGISTERED.			MATERNAL MORTALITY.	
	Live Births.	Stillbirths.	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
1954	15,742	400	16,142	8	0.49
1955	15,268	408	15,676	9	0.57
1956	15,944	394	16,338	7	0.43
1957	16,044	409	16,453	7	0.42
1958	15,662	413	16,075	4	0.25
1959	15,615	375	15,990	5	0.31
1960	15,961	377	16,338	5	0.31

TABLE 6
Requests for Visits to assess Home Conditions for Confinements.

Total Requests ...	2,882
No contact ...	168
Home confinement booked ...	767
Hospital confinement booked ...	1,947
No. of visits paid by Part Time Midwives ...	5,087
No. of visits paid by Full Time Midwives ...	315

TABLE 7
ANALGESIA

	Year	Doctor present at delivery	Doctor not present at delivery	Total
Liverpool Maternity Hospital				
District Homes				
Gas/Air ...	1958	34	990	1,024
	1959	43	919	962
	1960	50	1,112	1,162
Pethidine ...	1958	19	727	622
	1959	26	697	727
	1960	32	720	752
Municipal Midwives				
Gas/Air ...	1958	314	3,140	3,454
	1959	290	3,032	3,322
	1960	259	3,060	3,319
Pethidine ...	1958	277	2,584	2,861
	1959	350	2,473	2,823
	1960	230	2,480	2,710

TABLE 8

Twins Born at Home during the Year.

Number of living twins born at home	...	18
Number of stillborn twins born at home	...	1
Number of twins born at home when one was born alive and one stillborn...	...	1
Total	...	<u>20</u>

TABLE 9

MILK BANK.

No. of Donors.				Amount of Milk.	
January...	...	1	...	157½	ozs.
February	...	1	...	87	"
March	...	3	...	265	"
April	...	1	...	102	"
May	...	1	...	36	"
June	...	1	...	19	"
July	...	0	...	0	"
August	...	1	...	130	"
September	...	1	...	22½	"
October...	...	2	...	125	"
November	...	0	...	0	"
December	...	0	...	0	"
Total				<u>944</u>	ozs.

TABLE 10

Puerperal Pyrexias Notified during 1960.

Uterine infection	...	...	...	...	...	...	196
Infected episiotomies and periniums	...	...	...	...	...	...	9
Septic abortions	...	...	...	...	...	...	2
Retained products	...	...	...	...	...	...	4
Wound infection after Caesarian Section	...	...	...	...	...	...	14
Reaction to Caesarian Section	...	...	...	...	...	...	7
Urinary infections	...	...	...	...	...	...	110
Pyrexias of unknown origin	...	...	...	...	...	...	90
Breast infections	...	...	...	...	...	...	32
Respiratory infections	...	...	...	...	...	...	67
Coryza	...	...	...	...	...	...	8
Pleurisy and Pneumonia	...	...	...	...	...	...	8
Throat infections	...	...	...	...	...	...	5
Reaction to transfusion	...	...	...	...	...	...	2
Ovarian abscess	...	...	...	...	...	...	1
Myrocytic anaemia	...	...	...	...	...	...	1
Anaemia	...	...	...	...	...	...	1
Thrombo phlebitis	...	...	...	...	...	...	5
Paralytic ileus	...	...	...	...	...	...	2
Cellulitis	...	...	...	...	...	...	1
Intestinal infection	...	...	...	...	...	...	2
Staphylococcus A & B	...	...	...	...	...	...	1
B Coli Infection	...	...	...	...	...	...	5
Separation of symphysis pubis	...	...	...	...	...	...	1
Reaction to blood loss due to pregnancy in the peritoneal cavity	...	...	...	...	...	...	1
Total							583
Occurred in hospital	...	...	...	...	...	...	554
Occurred in nursing homes	...	...	...	...	...	...	3
Occurred at home	...	...	...	...	...	...	26

TABLE 10

Postnatal Pyrexia: Months during 1960.

TABLE 11

Reasons for Requests from Domiciliary Midwives for Medical Aid.

Mothers.			Babies.		
Ante partum haemorrhage ...	103		Rh incompatibility (cord blood) ...	2	
Post partum haemorrhage ...	47		Mastitis ...	6	
Premature rupture of membranes ...	46		Stillbirths ...	3	
Foetal distress ...	64		Respiratory infections and complications ...	58	
Delayed labour ...	125		Gastric complications ...	7	
Disproportion... ...	1		Umbilical infections and complications ...	7	
Premature labour ...	39		Ophthalmia neonatorum ...	128	
Malpresentations ...	99		Scalds (B.B.A.) ...	1	
Eclamptic toxæmia ...	27		Prematurity and Immaturity ...	18	
Post maturity ...	2		Oedema ...	5	
Domestic difficulties ...	2		Haemorrhagic complications ...	14	
Rh incompatibility ...	1		Hypothermia... ...	2	
Hydramnios... ...	2		Congenital abnormalities ...	30	
Extra sedation ...	5		Septic skin infections ...	39	
Twin pregnancies ...	3		Jaundice ...	6	
Eclamptic fit ...	1		Not passed urine ...	1	
Epileptic fit ...	1		Cerebral irritation ...	5	
Abortions ...	27		Asphyxia ...	22	
Retained placenta ...	26		Cyanosis ...	21	
Retained products ...	15		Poor condition ...	10	
Ruptured perineums... ...	499				
Born before arrival ...	6				
Uterine infection ...	16				
Pyrexia ...	91				
Mastitis ...	25				
Urinary infection ...	15				
Suppression of lactation ...	13				
Chest complications ...	4				
Septic spots ...	5				
Slow pulse rate ...	1				
Rapid pulse rate ...	1				
Pallor and general malaise ...	2				
Cyanosis ...	2				
Diarrhoea ...	1				
Thrombo phlebitis ...	18				
Multiparity ...	1				
Total ...	1,336		Total ...	385	
Mothers ...	1,336				
Babies ...	385				
Total ...	1,721				

TABLE 12

CONSULTANTS CALLED TO MOTHERS AND BABIES.

Mothers.	Babies.
1 Breech presentation	1 Reluctant to feed, lethargic
1 Prolonged first stage	2 Convulsions
1 Extensive laceration of perineum	1 Persistent jaundice
1 Face presentation and foetal distress	1 Spasmodic twitchings
3 Eclamptic fit	1 Umbilical hernia
3 Prolonged second stage	1 Congenital heart
1 Difficulty in walking	1 Poor general condition
1 Oedema	1 Talipes right foot
2 Phlebitis	1 Persistent offensive umbilical discharge
1 Persistent Pyrexia	2 Flaccid lethargia
6 Postmaturity	1 Deviated hands
1 Haemorrhoids	1 Prematurity and grunting respiration
1 Premature rupture of membranes	2 Vomiting blood and melaena
1 Multiparity	1 No formation of stools
1 Postmaturity and disproportion	1 Hydrocele (breech delivery)
1 Perineum not healed	1 Cerebral irritation
1 Antipartum haemorrhage	1 Deformity of tibia, right leg
1 Unstable lie	
2 Foetal distress	
1 Abortion	
31 Total	20 Total

8 babies only admitted to hospital.

5 mothers and babies admitted to hospital.

9 ante natal mothers admitted to hospital.

TABLE 13

Domiciliary Patients Transferred to Hospital.

Pre eclamptic toxæmia 85	Eclampsia 1
Foetal distress 14	Post eclamptic toxæmia 2
Post Maturity 58	Paralysis of left side... .. 1
Abortions 11	Thrombo phlebitis 3
Premature labour 35	Hydramnious 11
Prolonged labour 75	Premature rupture of membranes ... 49
Disproportion... .. 21	Previous obstetric history 14
Malpresentations 129	Perineal repair 2
Chest complications 3	B.B.A. Hypothermia 1
Cardiac complication 4	Asphyxia pallida 2
Gastric complications 5	Haemorrhagic vomiting (infant) ... 1
Prematurity 6	Convulsed infant 1
Domestic reasons 39	Feeble infant 1
Multiplicity 38	Meningitis 1
Multiparity 8	Nervous debility 3
Post partum haemorrhage 4	Dermoid cysts and cervical polyps... 6
Ante partum haemorrhage 88	Cervical dystocia 1
Anaemia 19	Atelectasis 1
Rh incompatibility 26	Retained placenta 1
Placenta praevia 6	Congenital abnormalities 5
Epilepsy 1	Urinary infection 4
Appendicectomy 1	Exploration of uterus 1
Intra Uterine death 8	Unable to contact midwife 5
Pyrexia 1	
Total ... 802	

TABLE 14

ANTE-NATAL CLINICS.

	1959	1960
Total number of centres at which ante-natal clinics were held ...	20	20
Number of clinic sessions held per week (Medical)	23	23
Number of new cases attending ante-natal clinics (Doctor's Sessions)	1,846	1,521
Total attendances at ante-natal clinics	9,739	9,290
Total attendances at post-natal clinics	303	274
Total number of new cases attending midwives' ante-natal clinics	706	1,068
Number of midwives' clinics	6	8
Number of midwives' clinics at which Health Visitors were in attendance to practice health education	2,816	5,150
Number of centres at which health visitors conducted relaxation and mothercraft classes	—	14
Number of mothers attending relaxation and mothercraft classes	—	715
Total number of attendances of mothers booked for hospital delivery	—	3,000
(At one centre two classes were held for fathers—6 attended.)		

TABLE 15

CHILD WELFARE CLINICS

	1959	1960
Total number of centres at which child welfare clinics were held...	25	25
Number of clinic sessions per week	62	62
Number of new cases: Under 1 year of age	8,616	8,669
Aged 1-5 years	473	572
Total attendances: Under 1 year of age	76,772	75,192
Aged 1-2 years	8,582	9,515
Aged 2-5 years	9,888	14,195
Total under 5 years	95,242	98,902

TABLE 16
NUMBER OF CASES OF CERTAIN INFECTIOUS DISEASES REPORTED DURING 1960

	January	February	March	April	May	June	July	August	September	October	November	December	TOTALS
Scarlet Fever ...	66	81	78	32	30	26	21	20	19	22	48	33	476
Measles and German Measles ...	233	354	660	870	767	1271	1059	701	322	628	936	1039	8,840
Diphtheria ...	—	—	—	—	—	—	2	—	4	—	—	—	6
Cerebro-spinal Fever	2	3	2	1	4	—	—	—	1	1	1	2	17
Poliomyelitis													
Paralytic ...	—	—	—	—	—	—	1	2	—	—	—	—	3
Non-paralytic ...	—	—	—	—	1	—	—	—	—	—	—	—	1
Pneumonia and Influenzal Pneumonia	28	63	48	40	26	20	10	9	15	11	26	39	335
Dysentery ...	53	103	130	103	25	16	20	13	10	19	14	9	515
Whooping Cough ...	156	214	106	87	166	140	91	131	116	83	92	58	1,440
Food Poisoning ...	10	3	9	6	5	7	12	25	24	15	18	12	147

Agent identified	Agent not identified	Notified	Otherwise Ascertained	Total No. of Cases
...	...	147	5	152

Agents

Staph. pyogenes ...	75	Salmonella organisms ...	75
---------------------	----	--------------------------	----

Type			
Sal. agona	1	Sal. london	3
Sal. dublin	1	Sal. muenchen	2
Sal. enteritidis	1	Sal. poona	1
Sal. heidelberg	1	Sal. thompson	5
Sal. typhosa	1	Sal. pythium	81
Sal. infantis	1	Sal. unidentified	1

TABLE 17

ANNUAL RETURN OF FOOD POISONING NOTIFICATIONS
COUNTY BOROUGH OF LIVERPOOL, 1960

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Food Poisoning Notifications (Corrected)					
As returned to Registrar General ...	22	19	61	45	147
Cases Otherwise Ascertained ...	4	18	4	22	48
Fatal Cases ...	—	—	—	—	—

Symptomless Excretors ... 38

PARTICULARS OF OUTBREAKS

	No. of Outbreaks		No. of Cases		Total No. of Cases
	Family Outbreaks	Other Outbreaks	Notified	Otherwise Ascertained	
Agent identified					
(a) <i>Copper sulphate</i> ...	—	1	—	18	18
(b) <i>Salmonella</i> <i>typhimurium</i> ...	—	1	—	4	4
(c) <i>Staphylococci</i> ...	—	1	—	21	21
TOTAL ...	—	3	—	43	43

SINGLE CASES

	No. of Cases		Total No. of Cases
	Notified	Otherwise Ascertained	
Agent identified ...	147	5	152
Agent not identified ...	—	—	—

AGENTS

Staph. pyogenes ... 73 *Salmonella* organisms ... 79

TYPE

<i>Sal. agama</i> ...	1	<i>Sal. london</i> ...	3
<i>Sal. dublin</i> ...	1	<i>Sal. muenchen</i> ...	2
<i>Sal. enteritides</i> ...	1	<i>Sal. poona</i> ...	1
<i>Sal. heidelberg</i> ...	1	<i>Sal. thompson</i> ...	5
<i>Sal. ibadan</i> ...	1	<i>Sal. typhimurium</i> ...	61
<i>Sal. infantis</i> ...	1	<i>Sal. unidentified</i> ...	1

TABLE 19
TUBERCULOSIS CASES ON REGISTERS OF CHEST CLINICS

DISEASE	RESPIRATORY						NON-RESPIRATORY						TOTAL			
	Adults			Children			Adults			Children			Adults		Children	
	M.	F.					M.	F.					M.	F.		
A—New Cases examined during the year (excluding contacts) (Definitely Tuberculosis) ..	236	163		36	17	13	5						223	183		41
B—CONTACTS examined during the year:																
(a) Definitely tuberculous ..	8	12		12									8	12		12
(b) Diagnoses not completed ..	202	84		1,635									202	84		9
(c) Non-tuberculous ..																1,635

TABLE 18

AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1960

Age Periods.	RESPIRATORY		MENINGES AND C.N.S.		OTHER FORMS	
	Males.	Females.	Males.	Females.	Males.	Females.
0—1	—	—	—	—	—	—
1—4	—	—	—	—	—	—
5—9	—	—	—	—	—	—
10—14	—	—	—	—	—	—
15—19	—	—	—	—	—	—
20—24	—	—	—	—	—	—
25—34	—	3	—	—	—	—
35—44	5	6	—	—	—	—
45—54	8	4	1	—	—	—
55—64	18	3	—	—	—	1
65—over	29	5	—	—	—	1
TOTALS ...	60	21	1	—	—	2

ANALYSIS OF NON-NOTIFIED TUBERCULOSIS CASES 1960

DISEASE	No. of notified before death	No. of cases not examined (includes Coroner's cases)	Diagnosis made at a post-mortem examination	Diagnosis delayed owing to clinical difficulties	Diagnosis thought cases had been notified by Registrar	Notified—dead before notification could effect	Reason for Non-Notification
Respiratory	81	10	2	—	—	—	—
Non-Respiratory	2	1	1	—	—	—	—

TABLE 19
TUBERCULOSIS CASES ON REGISTERS OF CHEST CLINICS

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) (Definitely Tuberculosis) ...	236	165	36	17	18	5	253	183	41	477
B.—CONTACTS examined during the year:										
(a) Definitely tuberculous ...	8	12	12	—	—	—	8	12	12	32
(b) Diagnosis not completed...	—	1	6	—	—	—	—	1	6	7
(c) Non-tuberculous ...	262	647	1,635	—	—	—	262	647	1,635	2,544
C.—CASES written off the Dispensary Register as Recovered ...	280	342	107	35	28	26	315	370	133	818
D.—NUMBER OF CASES on Dispensary Register on Dec. 31st, 1960:—										
(a) Definitely Tuberculous ...	3,855	3,220	488	173	214	100	4,028	3,434	588	8,050
(b) Diagnosis not completed...	10	6	1	—	—	—	10	6	1	17
Number of attendances of patients at the Chest Clinics during the year 1960 ...			30,457	Number of patients under medical treatment at home on 31st December, 1959 ...						1,020
Number of visits paid by the Tuberculosis Medical Officer to the homes of patients during 1960 ...			790							
Total number of cases vaccinated with B.C.G. during 1960:—				Total number of visits paid to the homes of patients by Tuberculosis Visitors during 1960 ...						38,014
Children ... 3,697*			4,072							
Others ... 375 }										

* Includes 2,126 newly born babies in Maternity Wards in Sefton General Hospital and Walton General Hospital.

TABLE 20
ANALYSIS OF NON-NOTIFIED TUBERCULOSIS CASES 1960

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 ...	81	10	2	—	—	—	8
Non-Respiratory ...	3	1	1	—	—	—	—

TABLE 21
DEATHS FROM RESPIRATORY TUBERCULOSIS 1948-1960

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
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
1954	1,135	1.44	232	0.29	0.16
1955	1,082	1.39	185	0.24	0.13
1956	1,016	1.31	137	0.177	0.109
1957	1,021	1.33	123	0.160	0.095
1958	795	1.04	109	0.143	0.089
1959	1,633	2.15	102	0.135	0.077
1960	439	0.58	81	0.107	0.068

TABLE 22
DEATHS FROM NON-RESPIRATORY TUBERCULOSIS 1948-1960

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
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
1954	147	0.19	12	0.01	0.02
1955	118	0.15	19	0.02	0.01
1956	101	0.13	7	0.009	0.012
1957	96	0.12	5	0.006	0.012
1958	79	0.10	7	0.009	0.011
1959	48	0.06	3	0.004	0.008
1960	44	0.06	3	0.004	0.007

TABLE 23
NUMBER OF NEW CASES OF TUBERCULOSIS FOR 1960

Age Periods	Under 5 yrs.	5-14 yrs.	15-24 yrs.	25-44 yrs.	45-64 yrs.	65 yrs. & over	Total	Total Respiratory
Respiratory—								
Males	5	13	30	76	111	24	259	} 439
Females ...	12	11	47	62	38	10	180	
Meninges and C.N.S.								
Males	—	2	1	—	—	—	3	} 44
Females ...	—	1	1	—	—	—	2	
Other Forms								
Males	2	1	3	6	3	1	16	
Females ...	1	1	8	5	8	—	23	

CASES OF EARLY SYPHILIS, 1958-1960

					Males	Females
1938	...	...	...	...	147	32
1946	...	...	...	...	655	331
1947	...	...	...	...	481	248
1948	...	...	...	...	370	155
1949	...	...	...	...	219	85
1950	...	...	...	...	136	50
1951	...	...	...	...	118	33
1952	...	...	...	...	80	18
1953	...	...	...	...	65	13
1954	...	...	...	...	38	6
1955	...	...	...	...	62	15
1956	...	...	...	...	51	8
1957	...	...	...	...	45	3
1958	...	...	...	...	62	7
1959	...	...	...	...	44	8
1960	...	...	...	...	66	1

CASES OF ACUTE GONORRHOEA, 1958-1960

					Males	Females
1938 ...	...	...	...	...	1,422	141
1946 ...	...	...	...	...	3,112	422
1947 ...	...	...	...	...	1,134	272
1948 ...	...	...	...	...	1,933	174
1949 ...	...	...	...	...	1,441	159
1950 ...	...	...	...	...	1,204	140
1951 ...	...	...	...	...	1,240	113
1952 ...	...	...	...	...	1,026	133
1953 ...	...	...	...	...	910	128
1954 ...	...	...	...	...	816	148
1955 ...	...	...	...	...	862	287
1956 ...	...	...	...	...	932	246
1957 ...	...	...	...	...	1,059	241
1958 ...	...	...	...	...	1,089	292
1959 ...	...	...	...	...	940	231
1960 ...	...	...	...	...	1,013	301

TABLE 26

VENEREAL DISEASE—CONTACT TRACING

	Males	Females
No. of reports of alleged source of infection	2	24
No. of cases traced and interviewed	1	17
No. of cases traced, not interviewed to date	—	1
No. of cases reporting for investigation following interview	1	16
No. of cases untraced	1	6
No. of visits carried out (home, lodging, club etc.)	7	86

TABLE 27

VENEREAL DISEASE—PATIENT DEFAULTERS

	Male	Female	Con- genital	Total
No. of cases written to	787	780	48	1,615
No. of letters despatched	834	1,488	83	2,405
No. of cases reporting in response	371	487	38	896
No. of letters returned to Dead Letter Office	48	36	—	84
No. of cases traced and transferred	7	6	—	13

TABLE 27

MENTAL SUBNORMALITY.

Liverpool Patients in Hospitals at 31.12.1909.

MENTAL SUBNORMALITY												Grand Total
Liverpool Patients in Hospitals at 31.12.1909.												
Patients in hospitals for subnormality	Under 16				Over 16				Grand Total			
	Male		Female		Total	Male		Female		Total		
	Det.	Inf.	Det.	Inf.		Det.	Inf.	Det.	Inf.	Det.	Inf.	
(a) Liverpool R.H.B.												
Newchurch	—	—	—	—	—	—	—	—	—	—	—	—
Greenwich Hall	—	—	—	—	—	—	—	—	—	—	—	—
Admission House	—	—	—	—	—	—	—	—	—	—	—	—
The Manor	—	—	—	—	—	—	—	—	—	—	—	—
St. George's	—	—	—	—	—	—	—	—	—	—	—	—

TABLE 28

VENEREAL DISEASE—RESULTS OF HOME VISITS

	Male	Female	Con- genital	Total
No. of cases visited	362	344	15	721
No. of visits made	947	876	43	1,866
No. of cases attending following visits	117	145	13	275
No. of cases promising to attend but failing to do so	27	47	1	75
No. of cases removed or not known at address given	105	86	1	192
No. of cases not contacted, no access, away from home, etc.	59	32	—	91
No. of cases who refused to re-attend	38	24	—	62
No. of cases removed and transferred for follow-up	13	—	—	22
No. of cases deceased	3	1	—	4

TABLE 29

MENTAL SUBNORMALITY
Hospital Admissions and Discharges in 1960.

Hospitals.	ADMISSIONS.										Total	Discharges (all year) to community
	Informal	January/October					November/December					
		Under M.D. Acts.					Informal	Under M.H. Act Sec. 61.				
		Sec. 3.	Sec. 6.	Sec. 7.	Sec. 8.1.b	Sec. 9.						
Liverpool R.H.B.												
Thingwall Hall	8	—	—	—	—	—	—	2	—	10	1	
Greaves Hall ...	10	1	—	1	—	—	—	2	—	14	8	
Newchurch	1	—	—	—	—	—	—	4	—	5	—	
The Manor	—	—	1	—	—	—	—	—	—	1	—	
Ashton House	1	—	—	—	—	—	—	1	—	2	1	
St. Joseph's	—	—	—	—	—	—	—	1	—	1	—	
Whitecross	2	—	—	—	—	—	—	1	—	3	1	
Ormskirk	—	—	—	—	—	—	—	1	—	1	—	
Manchester R.H.B.												
Calderstones	1	—	6	—	8	—	—	1	—	16	6	
Brockhall	3	—	—	—	2	—	—	—	1	6	8	
Mary Dendy	2	1	—	—	1	—	—	—	—	4	1	
Swinton	1	—	—	—	—	—	—	—	—	1	—	
Cranage Hall	1	—	—	—	—	—	—	—	—	1	1	
Royal Albert	—	—	—	—	—	—	—	—	—	—	2	
Special Hospital.												
Moss Side	—	—	—	—	—	—	1	—	—	1	—	
TOTALS	30	2	7	1	11	1	1	13	1	66	29	

TABLE 30

MENTAL SUBNORMALITY.

Liverpool Patients in Hospitals at 31.12.1960.

1. Patients in hospitals for subnormality	Under 16				16 and over				TOTAL		GRAND TOTAL
	Male		Female		Male		Female				
	Det.	Inf.	Det.	Inf.	Det.	Inf.	Det.	Inf.	Det.	Inf.	
(a) Liverpool R.H.B.											
Newchurch ...	—	1	2	4	—	2	46	57	48	64	112
Greaves Hall ...	3	7	2	7	20	41	6	20	31	75	106
Ashton House ...	—	—	—	—	—	—	1	19	1	19	20
The Manor ...	—	—	—	—	—	—	13	4	13	4	17
St. Catherines ...	—	—	—	—	1	5	—	2	1	7	8
Thingwall Hall ...	—	7	—	—	—	35	—	—	—	42	42
Whitecross ...	—	9	—	10	—	3	—	2	—	24	24
Olive Mount ...	—	14	—	—	—	—	—	—	—	14	14
Ormskirk ...	—	3	—	2	—	—	—	—	—	5	5
Crow Wood ...	—	3	—	3	—	—	—	—	—	6	6
St. Joseph's ...	—	—	—	9	—	—	—	—	—	9	9
Rathbone ...	—	1	—	1	—	—	—	—	—	2	2
Total ...	3	45	4	36	21	86	66	104	94	271	365
(b) Manchester R.H.B.											
Calderstones ...	1	—	—	—	195	72	127	56	323	128	451
Brockhall ...	3	6	1	5	49	151	64	117	117	279	396
Cranage Hall ...	—	2	—	—	5	15	1	3	6	20	26
Mary Dendy ...	—	—	—	—	1	18	1	9	2	27	29
Royal Albert ...	1	2	—	2	16	10	2	1	19	15	34
Swinton ...	—	—	—	—	1	3	—	6	1	9	10
Lisieux Hall ...	—	—	—	—	39	—	—	—	39	—	39
Gillibrand Hall ...	—	—	—	—	—	—	9	9	9	9	18
Chorley ...	—	—	—	—	1	—	3	18	4	18	22
Ulverston ...	—	—	—	—	—	—	—	9	—	9	9
Atherleigh ...	—	—	—	1	—	—	—	—	—	1	1
Offerton House ...	—	—	—	—	—	10	—	—	—	10	10
Total ...	5	10	1	8	307	279	207	228	520	525	1,045
(c) Hospitals of Other R.H.B's...											
...	—	—	—	—	5	2	15	2	20	4	24
(d) Special Hospitals											
Rampton ...	—	—	—	—	6	—	8	—	14	—	14
Moss Side ...	—	—	—	—	8	—	3	—	11	—	11
2. Patients in Psychiatric Hospitals ...											
...	—	—	—	—	—	5	1	7	1	12	13
3. Patients in Non-mental subnormality accom- modation (indefinite stay) ...											
...	—	1	—	—	—	33	—	9	—	43	43
Totals ...	8	56	5	44	347	405	300	350	660	855	1,515

NOTE.—Figures include 25 patients on licence and 5 escaped.

Det. = Detained Inf. = Informal

TABLE 31

MENTAL SUBNORMALITY

WAITING LIST FOR HOSPITAL CARE

Waiting list at 31.12.60	...	...	...	57 comprising:—
Urgency 3 (highest)	...	...	...	25
Urgency 2	...	...	...	11
Urgency 1	...	...	...	15
Urgency 0	...	...	...	6

These figures can be classified as follows:—

(a) *In age and sex groups.*

Urgency	Under 6		6—15		16 and over		Total
	male	female	male	female	male	female	
3	5	1	8	3	3	5	25
2	—	3	2	3	1	2	11
1	2	1	3	1	1	7	15
0	—	1	1	2	2	—	6
Totals	7	6	14	9	7	14	57

(b) *Time on waiting list.*

Urgency	Over 3 yrs.	2—3 yrs.	1—2 yrs.	6 mths—1 yr.	Under 6 mths.	Total
3	5	4	6	2	8	25
2	1	1	2	4	3	11
1	—	2	3	4	6	15
0	3	—	2	1	—	6
Totals	9	7	13	11	17	57

(c) *Grade.*

Urgency	High grade	Medium Grade	Ambulant low Grade	Cot & Chair Grade	Total
3	—	13	10	2	25
2	1	3	4	3	11
1	—	9	5	1	15
0	—	4	—	2	6
Totals	1	29	19	8	57

TABLE 32

MENTAL ILLNESS.

Patients referred in 1960 and action taken.

References January/October (Lunacy and Mental Treatment Acts)	...	...	1,000
References November/December (Mental Health Act)	...	...	186
		Total	1,186

1. Admitted to Psychiatric Hospitals.

				Numbers Admitted	In age groups.				
					—16	16/59	60/64	65/70	Over 70
(a) January/October.									
Section 20 Lunacy Act ...				620	6	495	46	41	32
(emergency)									
Section 16 Lunacy Act ...				12	3	8	—	—	1
(direct)									
Informal				34	—	31	—	2	1
Total				666	9	534	46	43	34
(b) November/December.									
Sec. 29 Mental Health Act ...				135	3	99	9	7	17
(emergency)									
Sec. 25 Mental Health Act ...				12	—	11	—	—	1
Sec. 60 Mental Health Act ...				2	—	2	—	—	—
Sec. 61 Mental Health Act ...				1	—	1	—	—	—
Informal				8	—	8	—	—	—
Total				158	3	121	9	7	18
TOTAL FOR WHOLE YEAR ...				824*	12	655	55	50	52

NOTE.— * Of this total 465(56%) had previously been referred to the Mental Health Service.

TABLE 32—continued.

2. Not admitted to Psychiatric Hospitals.

	Total	In age groups.				
		—16	16/59	60/64	65/70	Over 70
(a) January/October.						
Referred to Psychiatric Clinic	10	—	10	—	—	—
Referred to Welfare Services						
Section	29	—	5	4	2	18
Referred back to patients						
doctor	67	1	40	2	5	19
Referred for community care	77	—	69	4	2	2
Admitted to non-psychiatric						
Hospital	17	—	7	2	—	8
Sec. 16 action dismissed	7	—	5	—	1	1
No further action	127	2	102	9	3	11
Total	334	3	238	21	13	59
(b) November/December.						
Referred to Welfare Services						
Section	2	—	—	—	—	2
Referred back to patient's						
doctor	5	—	5	—	—	—
Referred for community care	6	—	6	—	—	—
No further action	15	1	13	1	—	—
Total	28	1	24	1	—	2
TOTAL FOR WHOLE YEAR ...	362*	4	262	22	13	61

NOTE.— * Of this total 182 (50%) had previously been referred to the Mental Health Service.

TABLE 33

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

TABLE 33

RESIDENTIAL ACCOMMODATION—AGED PERSONS

The total accommodation available for use on 31st December, 1960, was as follows :—

Establishment.	No. of Beds.	Date of Opening.
Westminster House	715	5. 7.1948*
Aigburth House	52	16. 7.1953
Altcross House	57	11. 4.1957
Beechley	41	9.11.1950
Brookfield	19	21. 1.1952
Brookside House	41	5. 3.1957
Croxteth Lodge	31	17.12.1956
Holt House	58	24. 9.1953
Lismore	36	10.12.1951
Moreno House	32	14. 1.1949
New Grafton House	110	5. 7.1948*
New Parkfield House	27	18.12.1950
Park House	20	30.12.1949
Ullet Grange	29	13.11.1957
Total	1,268	

* In occupation by the Local Authority prior to 5th July, 1948.

TABLE 34

**PARTICULARS OF PERSONS ADMITTED TO RESIDENTIAL ACCOMMODATION AND
DESCRIPTION OF THE PREMISES FROM WHICH THEY WERE ADMITTED**

	1	2	3	4	5	6	
1960	Vacated Private House	Vacated Corpora- tion House	Flat	Living with Relatives	One Room	Misc. Lodgings Res. Accom. etc.	Total
January ...	7	—	1	4	1	24	37
February ...	5	—	1	5	1	18	30
March ...	3	—	—	9	—	25	37
April ...	8	—	2	7	1	8	26
May ...	9	1	7	14	2	35	68
June ...	11	—	1	14	5	16	47
July ...	2	1	—	13	1	21	38
August ...	2	—	—	15	—	11	28
September	2	—	1	5	1	21	30
October ...	2	1	1	2	—	28	34
November ...	3	—	1	6	—	28	38
December ...	2	—	1	4	1	25	33
TOTAL ...	56	3	16	98	13	260	446

TABLE 35

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

Authority or Organisation	Remaining 31.12.59	Ad- mitted	Dis- charged	Died	Remaining 31.12.60
British Legion Home, Ripon ...	1	2	—	—	3
British Legion Home, Bwlch ...	1	—	—	—	1
Charles Best House, Parkgate ...	2	4	—	—	6
Church Army Home, Bootle ...	4	—	—	—	4
Convent of the Good Shepherd, Liverpool ...	5	—	1	—	4
Maryland, Formby ...	1	1	1	—	1
Methodist Home, Liverpool ...	8	2	1	—	9
Methodist Home, Colwyn Bay ...	1	—	—	—	1
Red Cross Home, Buxton ...	1	—	—	—	1
Red Cross Home, Portmadoc ...	1	—	—	—	1
52/54 Croxteth Road, Liverpool (Old People's Hostels Association) ...	12	3	3	1	11
25/27 Sefton Drive, Liverpool (Old People's Hostels Association) ...	10	4	2	—	12
Salvation Army Home, Bootle ...	7	6	2	2	9
Salvation Army Home, Liverpool ...	14	—	—	2	12
Salvation Army Home, Penketh ...	3	—	3	—	—
Salvation Army Home, Ripon Lodge ...	1	—	—	—	1
Salvation Army Home, Wicksted Hall ...	2	—	1	—	1
Salvation Army Home, Mowbray ...	—	1	—	—	1
"Stapely" Home for Aged Jews, Liverpool ...	28	8	10	4	22
"Sundale", Liverpool ...	1	5	—	—	6
Turner Memorial Home, Liverpool ...	22	12	13	—	21
W.V.S., "St. Michael's Mount", Liverpool ...	8	4	3	—	9
W.V.S. "Warriston", Liverpool ...	5	4	2	—	7
Sundene Lodge, Waterloo ...	1	—	—	—	1
Redhill Bethesda Home ...	1	—	1	—	—
"Woodlands", Edinburgh ...	1	—	—	—	1
Mutual Aid Homes Ltd., Minehead ...	2	—	—	—	2
Pomeroy House, Devon ...	—	1	—	—	1
Royal Alfred Home, Kent ...	—	2	—	—	2
Pentecostal Home, Wrenthorpe ...	—	1	—	—	1
Bootle Corporation ...	3	1	1	—	3
Bristol Corporation ...	1	—	—	—	1
Caernarvon County Council ...	1	1	1	—	1
Cheshire County Council ...	1	—	—	—	1
Chester Corporation ...	1	—	—	—	1
Clackmannan County Council ...	1	—	—	—	1
Cumberland County Council ...	1	—	—	—	1
Glamorgan County Council ...	1	—	—	—	1
Lancashire County Council ...	1	—	1	—	—
Merioneth County Council ...	1	—	1	—	—
Portsmouth Corporation ...	1	—	—	—	1
St. Helens Corporation... ...	1	—	—	—	1
Staffordshire County Council ...	1	—	—	—	1
Worcestershire County Council ...	2	—	—	—	2
TOTALS ...	160	62	47	9	166

TABLE 36
TEMPORARY ACCOMMODATION PROVIDED AT LOWER BRECK ROAD
UNDER SECTION 21(1)(b) OF THE NATIONAL ASSISTANCE ACT

Remaining 31.12.59	Admitted	Discharged	Remaining 31.12.60
34	909	886	57

TABLE 37
WELFARE VISITORS

The following table includes details of some of the work of the welfare visitors and the property officer during the year:—

Number of personal applications for advice and help	...	1,285
Number of visits paid (including 179 visits to handicapped persons)	...	3,250
Number of revisits (including 689 revisits to handicapped persons)	...	14,946
Number of persons admitted to:—		
(a) residential accommodation	...	446
(b) hospital	...	42
Number of visits and revisits in connection with the protection of the property of persons admitted to hospital etc., and the effects of deceased persons with no known relatives	...	1,755
Requests for assistance, either by letter or telephone, during the year numbered	...	3,539

TABLE 38
REGISTERED BLIND PERSONS

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

Age	Males	Females	Total
0	—	—	—
1	—	—	—
2	—	—	—
3	—	1	1
4	1	1	2
5—10... ..	17	14	31
11—15... ..	10	6	16
16—20... ..	5	6	11
21—29... ..	20	20	40
30—39... ..	53	32	85
40—49... ..	56	64	120
50—59... ..	110	94	204
60—64... ..	70	64	134
65—69... ..	69	96	165
70—79... ..	132	300	432
80—84... ..	64	127	191
85—89... ..	18	77	95
90+	7	23	30
TOTALS ...	632	925	1,557

TABLE 39
REGISTERED BLIND PERSONS—NEW CASES 1960

The following table shows by age-groups the number of newly-blinded added to the register during 1960:—

Age Groups			Males	Females	Total
0	...	...	—	—	—
1	...	...	—	—	—
2	...	...	—	—	—
3	...	...	—	—	—
4	...	...	—	—	—
5—10	...	...	2	—	2
11—15	...	...	—	1	1
16—20	...	...	—	—	—
21—29	...	...	2	—	2
30—39	...	...	2	3	5
40—49	...	...	2	2	4
50—59	...	...	7	6	13
60—64	...	...	3	4	7
65—69	...	...	7	5	12
70—79	...	...	16	34	50
80—84	...	...	13	13	26
85—89	...	...	2	19	21
90+	...	...	2	3	5
TOTALS ...			58	90	148

TABLE 40
PARTIALLY-SIGHTED PERSONS

The following table shows the number of registered partially-sighted persons in Liverpool:—

Age Groups			Males	Females	Total
0—1	...	...	—	—	—
2—4	...	...	1	—	1
5—15	...	...	50	26	76
16—20	...	...	17	13	30
21—49	...	...	26	18	44
50—64	...	...	24	24	48
65+	...	...	34	122	156
TOTALS ...			152	203	355

TABLE 41

PARTIALLY-SIGHTED PERSONS—NEW CASES 1960

The following table shows by age groups the number of new cases of partially-sighted persons added to the register during 1960:—

Age Groups				Males	Females	Total
0—1	...	...	...	—	—	—
2—4	...	...	...	4	1	5
5—15	...	...	...	6	4	10
16—20	...	...	...	—	—	—
21—49	...	...	...	2	—	2
50—64	...	...	...	3	5	8
65+	...	...	...	10	32	42
TOTALS				25	42	67

TABLE 42

FOLLOW-UP OF REGISTERED BLIND AND
PARTIALLY-SIGHTED PERSONS

(i) Number of cases registered during the year in respect of which Section F of Form B.D.8 recommends :—	Cause of Disability			
	Cataract	Glaucoma	Retrolental Fibroplasia	Other
(a) No treatment	24	4	—	48
(b) Treatment (medical, surgical or optical) ...	53	17	—	69
(ii) Number of cases at (i) (b) above which on follow-up action have received treatment	26	15	—	53

TABLE 43

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

STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS

Authority or Organisation	Remaining 31.12.59	Ad- mitted	Dis- charged	Died	Remaining 31.12.60
Catholic Blind Institute, Liverpool ...					
Herefordshire County Association for the Blind	23	5	4	1	23
Jewish Blind Home, Surrey	1	1	1	—	1
Royal National Institute for the Blind, Hoylake	3	2	2	—	3
Royal National Institute for the Blind, West Kirby	1	—	1	—	—
Royal School for the Blind, Leatherhead	—	1	—	—	1
"Angers House" for Spastics, Liverpool	2	1	—	—	3
"Ponds" Home for Spastics	3	5	2	—	6
David Lewis Epileptic Colony	1	—	—	—	1
Langho Epileptic Colony	8	4	3	—	9
(Manchester Corporation)	19	1	1	—	19
Maghull Homes for Epileptics	50	15	7	2	56
St. Elizabeth's School and Home for Epileptics, Much Hadham	2	—	—	—	2
Ashley House, Bognor Regis	1	—	—	—	1
Amphill Cheshire Home	1	—	—	—	1
"Honresfeld" Cheshire Home	1	1	—	—	2
Cotebrook Home for Cripples	1	1	—	—	2
Hostels for Crippled and Invalid Women Workers, London	1	—	1	—	—
Ernest Ayliffe Home for the Deaf	1	—	—	—	1
Alexian Bros. Home, Manchester	2	2	—	—	4
National Institute for the Deaf, Barrowford	1	—	—	—	1
National Institute for the Deaf, Bath	1	—	—	—	1
National Institute for the Deaf, Working Boys' Hostel, London	1	—	1	—	—
TOTALS	124	39	23	3	137

TABLE 44

HOUSING POINTS SCHEME—SUMMARY OF STATISTICS FOR THE YEAR 1960

	Nos. Dealt With	Nos. Awarded Points	Nos. Awarded No Points
RESPIRATORY SYSTEM—			
Upper Respiratory Tract Infections	93	—	93
Bronchitis/Emphysema	323	181	142
Asthma	118	102	16
Bronchiectasis	23	21	2
Pneumonia	16	8	8
Bronchial Carcinoma	1	1	—
CARDIOVASCULAR SYSTEM AND BLOOD DISORDERS—			
Acute Rheumatic Fever	9	9	—
Angina	1	1	—
Coronary Thrombosis	20	20	—
Hypertension	50	49	1
Valv. Disease of Heart	121	121	—
Varicose Veins/Ulcers	16	12	4
Pernicious Anaemia	5	5	—
Anaemia	34	17	17
DIGESTIVE SYSTEM—			
Gastric Ulcer	23	9	14
Diabetes	6	6	—
Gastro Enteritis and Colitis	47	14	33
Gastric Carcinoma	7	7	—
GENITAL URINARY SYSTEM—			
Nephritis	4	4	—
Kidney Removal	2	1	1
FEMALE GENITO URINARY SYSTEM—			
Uterine Carcinoma	1	1	—
ENDOCRINE SYSTEM—			
Thyrotoxicosis	8	6	2
C.N.S.—			
Disseminated Sclerosis	5	5	—
Poliomyelitis	12	12	—
Spastic Paraplegia	20	20	—
MUSCULO SKELETAL SYSTEM—			
Arthritis	77	71	6
Rheumatism	40	29	11
Amputation	12	11	1
Muscular Dystrophy/Spondylitis	3	3	—
MENTAL DISEASES—			
Anxiety State and Nervous Debility	13	6	7
Neurasthenia	18	12	6
Mental Defectives	16	16	—
OTHERS	978	192	786
<hr/>			
TOTAL	2,122	972	1,150
Transfers—Recommended 839 } TOTAL	1,754		
Not Recommended 915 }			
Cases recommended to Allocation (Special)			
Sub-Committee	89		
Cases pending completion	546		
<hr/>			
GRAND TOTAL	4,511		

TABLE 45
Compulsory Purchase Orders Confirmed—1960.

Date Confirmed	Order.	Houses	Population
4.1.60	Upper Beau Street No. 2 Clearance Area Compulsory Purchase Order	40	196
5.1.60	Barlow Street No. 1 Clearance Area Compulsory Purchase Order	99	361
21.1.60	Boundary Street East Clearance Area Compulsory Purchase Order	21	77
25.2.60	New Henderson Street Area Compulsory Purchase Order	36	167
29.2.60	Upper Beau Street No. 3 Clearance Area Compulsory Purchase Order	273	1,079
11.3.60	Leighton Terrace Clearance Area Compulsory Purchase Order	61	287
6.4.60	Robertson Street Clearance Area Compulsory Purchase Order	44	192
3.5.60	Windsor Street No. 6 Clearance Area Compulsory Purchase Order	13	87
19.5.60	Rhyl Street Area Compulsory Purchase Order ...	42	175
20.7.60	New Henderson Street No. 3 Clearance Area Compulsory Purchase Order	14	73
21.11.60	Prince William Street No. 3 Area Compulsory Purchase Order	18	85
14.12.60	Jordan Place Clearance Area Compulsory Purchase Order	68	285
		729	3,064

TABLE 46
CLEARANCE ORDERS CONFIRMED—1960.

Date Confirmed	Order.	Houses.	Population
18.1.60	Birch Street No. 2 Clearance Order	8	42

TABLE 47
CLEARANCE AREAS IN ABEYANCE—1960.

Area.	Houses.	Population
Amity Street No. 1 Clearance Area 1958	45	176
Amity Street No. 2 Clearance Area 1958	14	43
Birch Street No. 1 Clearance Area 1958	18	63
Devonport Street Clearance Area 1958	30	115
Foley Street No. 2 Clearance Area 1958	25	110
Lincoln Street Clearance Area 1958... ..	26	138
Malta Street No. 1 Clearance Area 1958	35	162
Malta Street No. 2 Clearance Area 1958	12	65
Malta Street No. 3 Clearance Area 1958	7	27
Sellar Street Clearance Area 1958	13	59
Smith Street No. 2 Clearance Area 1958	4	15
Whittle Street No. 2 Clearance Area 1958	18	61
Abram Street Clearance Area 1959	15	69
Dinorbin Street Clearance Area 1959	47	178
Grosvenor Place Clearance Area 1959	28	127
Melbourne Street Clearance Area 1959	113	461
Radcliffe Street Clearance Area 1959	112	411
Radcliffe Street No. 2 Clearance Area 1959	40	165
Radcliffe Street No. 3 Clearance Area 1959	234	1,013
St. Georges Hill No. 2 Clearance Area 1959	16	97
Smith Street No. 4 Clearance Area 1959	18	73
Upper Mann Street Clearance Area 1959	22	92
Woodruff Street Clearance Area 1959	106	456
Baker Street No. 1 Clearance Area 1960	195	681
Baker Street No. 2 Clearance Area 1960	8	33
Baker Street No. 3 Clearance Area 1960	150	453
Berkley Street Clearance Area 1960... ..	97	784
Church Flags Clearance Area 1960	3	7
Greenwood Street No. 1 Clearance Area 1960	192	683
Greenwood Street No. 2 Clearance Area 1960	6	29
Netherfield Road North No. 4 Clearance Area 1960	5	23
Palatine Street Clearance Area 1960	82	296
Plumpton Street Clearance Area 1960	11	65
Plumpton Street No. 2 Clearance Area 1960	10	71
Rankin Street Clearance Area 1960... ..	37	179
Stebble Street Clearance Area 1960	20	111
Winter Street Clearance Area 1960	21	55
Totals	1,835	7,646

TABLE 48

PARTICULARS OF SHOPS INSPECTIONS

TOTAL NUMBER OF SHOPS—15,000 (APPROX.)

INSPECTIONS				NOTICES	
					Issued
Retail food shops	...	...	11,971		
Retail non-food shops	...	...	5,518		
Cafes, restaurants, etc.	...	...	1,293	Shops Act, 1950.	425
Fried fish shops	...	...	589	Food Hygiene Regulations, 1955	798
Clubs	...	...	258	Food Byelaws	49
Hairdressers	...	...	519		
Pet Stores	...	...	149		
Wholesale shops	...	...	23,531		
Wholesale warehouses	...	...	1,145		
Street traders	...	...	259		
Places of entertainment	...	...	151		
Merchandise Marks Act	...	...	12,730		
Special visits	...	...	240		
Half-holiday Closing.					
Visits to shops after 1 p.m.	...	...	32,146		
Evening Closing.					
Visits to shops	...	...	44,862		
Sunday Closing.					
Visits to shops on Sunday	...	...	3,639		

TABLE 50

RETAIL FOOD BUSINESSES

Licensed premises	...	...	...	...	...	...	...	1,342
Off-licence premises	...	...	...	...	...	...	...	171
Ice cream vendors...	...	...	...	...	...	...	...	1,854
Bread and confectionery	...	...	...	...	...	...	...	408
Butchers and cooked meats	...	...	...	...	...	...	...	795
Cafes, snack bars, etc.	...	...	...	...	...	...	...	400
Dairies (Registered)	...	...	...	...	...	...	...	723
Fishmongers and poulterers	...	...	...	...	...	...	...	204
General	...	...	...	...	...	...	...	1,350
Greengrocers	...	...	...	...	...	...	...	882
Grocery and provisions	...	...	...	...	...	...	...	951
Sweets, minerals, etc.	...	...	...	...	...	...	...	1,285
Fish frying establishments	...	...	...	...	...	...	...	483

TABLE 51

FACTORY INSPECTION

FACTORIES ACTS, 1937 AND 1948

Part I of the Act

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

Premises (1)	Number on Register (2)	Number of		
		Inspec- tions (3)	Written Notices (4)	Occupiers prosecuted (5)
(i) Factories in which Sections 1, 2, 3, 4, and 6 are to be enforced by local authorities ...	1,024	858	13	—
(ii) Factories not included in (i) in which Section 7 is enforced by local authority	3,142	5,514	121	—
(iii) Other premises in which Section 7 is enforced by the local authority (excluding outworkers premises)	63	156	4	—
TOTAL	4,229	6,528	138	—

TABLE 52
FACTORIES ACTS

2. CASES IN WHICH DEFECTS WERE FOUND

Particulars (1)	Found (2)	Number of Cases in which Defects were found			Number of Cases in which Prosecu- tions were instituted (6)
		Remedied (3)	To H.M. Inspector (4)	By H.M. Inspector (5)	
Want of cleanliness (S.1) ...	10	9	7	1	—
Overcrowding (S.2) ...	—	—	—	—	—
Unreasonable temperature (S.3)	4	4	—	—	—
Inadequate ventilation (S.4) ...	2	2	2	—	—
Ineffective drainage of floors (S.6) ...	—	—	1	—	—
Sanitary Conveniences (S.7)—					
(a) Insufficient ...	6	6	—	4	—
(b) Unsuitable or defective ...	101	97	—	20	—
(c) Not separate for sexes ...	5	5	—	3	—
Other offences against the Act (not including offences re- lating to outwork) ...	—	—	20	1	—
TOTAL ...	128	123	30	29	—

TABLE 53
FACTORIES ACTS
Part VIII of the Act
OUTWORK
(SECTIONS 110 AND 111)

Nature of Work (1)	SECTION 110		No. of prosecu- tions for failure to supply lists (4)	SECTION 111		Prosecu- tions (7)
	No. of out- workers in August list required by Section 110 (1) (c) (2)	No. of cases of default in sending lists to the Council (3)		No. of instances of work in unwhole- some premises (5)	Notices served (6)	
Wearing apparel— making, etc. ...	225	—	—	—	—	—
TOTAL ...	225	—	—	—	—	—

TABLE 54

Act	Section	No. of Informations or Complaints	Penalties	Costs	Orders
			£ s. d.	£ s. d.	
Public Health Act, 1936 ...	75	11	6 10 0	—	—
Public Health Act, 1936 ...	94	39	75 0 0	—	25
Public Health Act, 1936 ...	95	2	7 0 0	—	—
Public Health Act, 1936 ...	290(6)	29	66 0 0	—	—
Shops Act, 1950 ...	Evening Closing	1	3 0 0	—	—
Shops Act, 1950 ...	Half-holiday				
	Closing	3	12 0 0	—	—
Food and Drugs Act, 1955	Beef sausage deficient in Meat ...	1			
	Adulterated				
	Milk ...	22	60 0 0	28 18 0	—
Food and Drugs Act, 1955, and Food Hygiene Regulations, 1955 ...	—	1	3 0 0	—	—
Clean Air Act, 1956, and Regulations ...	(a) Furnaces working engines of steamboat ...	1	—	6 6 0	—
	(b) Furnaces working dredging machinery...	1	10 0 0	—	—
TOTALS ...		111	£242 10 0	£35 4 0	25

TABLE 55

Industrial									
New oil fired boilers installed	...	...	...	...	...	...	...	...	73
Boilers converted to oil firing	...	...	...	...	...	...	...	...	9
Existing boilers converted to Chain Grate Stokers	...	...	...	...	...	...	...	...	2
Gas fired boilers installed	...	...	...	...	...	...	...	...	10
Coke fired boilers installed	...	...	...	...	...	...	...	...	1
Gas fired Incinerators installed...	...	...	...	...	...	...	...	...	3
Oil fired Incinerators	...	...	...	...	...	...	...	...	4
Boilers provided with gas ignition	...	...	...	...	...	...	...	...	23
									125

TABLE 57

SMOKE CONTROL AREAS CONFIRMED AND OPERATIVE DURING 1960.

Area.	Date Confirmed	Date Operative	Industrial Premises	Commercial Premises	Dwellings.	Others (Local Authority and Crown).
No. 8 Smoke Control area bounded by Stafford Street, Islington, Moss Street and London Road	28.7.59	1.5.60	21	108	166	1
No. 9 Smoke Control Area bounded by New Quay, Bath Street, Gibraltar Row, Old Hall Street and Chapel Street	16.10.59	1.5.60	16	437	7	2
Totals			37	545	173	3

TABLE 58

ORDERS MADE AND SUBMITTED TO MINISTER DURING 1960.

Area	Date Order made and submitted	Industrial Premises	Commercial Premises	Dwelling	Others (Local Authority and Crown.)
No. 10 Smoke Control Area bounded by River Mersey, Dingle Lane, Aigburth Road, Aigburth Vale, Elmswood Road, Rose Lane, Railway Line, Heath Road, High Street, Acrefield Road, Gateacre Brow, Belle Vale Road, Naylors Road and the city boundary to its junction with the River Mersey at Speke...	6.7.60	166	1,158	27,212	138
No. 11 Smoke Control Area bounded by Old Hall Street, Leeds Street, Pall Mall and Tithebarn Street ...	6.7.60	25	303	29	8
No. 12 Smoke Control Area bounded by Hanover Street, Duke Street, Upper Duke Street, Hope Street, Hardman Street, Leece Street, Berry Street and Seel Street ...	5.10.60	66	330	214	19
Totals ...		257	1,791	27,655	165

TABLE 59

PRELIMINARY DETAILS SUBMITTED TO MINISTER OF HOUSING AND LOCAL GOVERNMENT DURING 1960.

PROPOSED (NO. 13) SMOKE CONTROL AREA.

Area	Date Submitted	Industrial Premises	Commercial Premises	Dwellings	Others (Local Authority and Crown.)
Proposed No. 13 Smoke Control Area bounded by London Road, Boundary Place, Pembroke Place and Monument Place ... ..	...	16	64	25	2
Type of Premises	Total	Exempt	Smokeless	Change of Fuel	Adaptations
Industrial	16	1	4	—	11
Commercial... ..	64	—	47	—	17
Private owned dwellings	21	—	1	—	20
Corporation owned dwellings	4	2	—	—	2
Other premises (Local Authority and Crown)	2	—	—	—	2
Vacant	4	—	—	—	—
Totals	111	3	52	—	52

TABLE 60

SMOKE CONTROL AREAS.

Adaptations of Dwellings, 1960.

No. 4. Smoke Control Order 1958.

Made	...	...	...	...	...	2nd October, 1958
Confirmed	...	...	...	...	...	26th March, 1959.
Operative	...	...	...	...	...	1st October, 1959.
Number of dwellings converted	...	...	...	...	...	11
Claims received for grant aid	...	...	...	...	...	11
Total cost of works of adaptation	...	...	...	...	...	£191.10.6
Total amount awarded as grant	...	...	...	...	...	£134. 1.2.
Total amount recoverable as Exchequer Grant	...	...	...	...	...	£76.12.2.
Claims for grant aid from charitable organisations	...	...	...	...	...	2
Total grant aid paid to charitable organisations	...	...	...	...	...	£66.18.8.

No. 5. Smoke Control Order 1958.

Made	...	...	...	...	...	2nd October, 1958
Confirmed	...	...	...	...	...	26th January 1959.
Operative	...	...	...	...	...	1st August 1959.
Number of dwellings converted	...	...	...	...	...	1
Claims received for grant aid	...	...	...	...	...	1
Total cost of works of adaptation	...	...	...	...	...	£25. 5.0.
Total amount awarded as grant	...	...	...	...	...	£17.13.6.
Total amount recoverable as Exchequer Grant	...	...	...	...	...	£10. 2.0.

No. 6. Smoke Control Area, 1958.

Made	...	...	...	...	...	5th November, 1958.
Confirmed	...	...	...	...	...	27th February, 1959.
Operative	...	...	...	...	...	1st August, 1959.
Number of dwellings converted	...	...	...	...	...	2
Claims received for grant aid	...	...	...	...	...	2
Total cost of works of adaptation	...	...	...	...	...	£25. 4.10.
Total amount awarded as grant...	...	...	...	...	...	£17.13.4.
Total amount recoverable as Exchequer Grant	...	...	...	...	...	£10. 1.11.

No. 7. Smoke Control Area, 1958.

Made	...	...	...	...	...	5th November, 1958.
Confirmed	...	...	...	...	...	25th May, 1959.
Operative	...	...	...	...	...	1st December, 1959
Number of dwellings converted	...	...	...	...	...	5
Claims	...	...	...	...	...	5
Total cost of works of adaptation	...	...	...	...	...	£51. 3.7.
Total amount awarded as grant	...	...	...	...	...	£35.16.5.
Total amount recoverable as Exchequer Grant	...	...	...	...	...	£20. 9.5.

TABLE 60—*continued*.**No. 8. Smoke Control Area, 1959.**

Made	...	...	...	...	...	...	1st April, 1959.
Confirmed	...	...	...	...	...	...	28th July, 1959.
Operative	...	...	...	...	...	...	1st May, 1960.
Number of dwellings requiring conversion	...						13
Number of dwellings converted without applying for grant aid...	...	...	...	...	...		3
Estimates received	...	...	...	...	...		18
Claims received for grant aid	...	...	...	...	...		13
Total cost of adaptations...	...	...	...	...	...		£210.13.9.
Total amount awarded as grant...	...	...	...	...	...		£147. 9.6.
Total amount recoverable as Exchequer Grant							£84. 5.5.

No. 9. Smoke Control Area, 1959.

Made	...	...	...	...	...	...	1st July, 1959.
Confirmed	...	...	...	...	...	...	16th October, 1959
Operative	...	...	...	...	...	...	1st May, 1960.
Number of dwellings requiring conversion	...						5
Number of dwellings converted without applying for grant aid	...	...	...	...	...		2
Estimates received	...	...	...	...	...		2
Claims received for grant aid	...	...	...	...	...		2
Total cost of adaptations...	...	...	...	...	...		£35.10.0.
Total amount awarded as grant...	...	...	...	...	...		£24.17.0.
Total amount recoverable as Exchequer Grant							£14. 4.0.

TABLE 61
ATMOSPHERIC POLLUTION MEASUREMENT
STANDARD DEPOSIT GAUGE

The results are quoted in tons per square mile per month and the averages are as follows:—

Location of Instrument	Tons per Square Mile
Oxford Street	23·73
Aigburth Vale	11·39
Clarence Dock	77·96
Love Lane	36·13
St. Domingo Road	29·42
Fairclough Lane	22·27
Dunbabin Road	14·33
Rocky Lane, Childwall	13·54
Mill Lane, West Derby	16·69
Hatton Garden... ..	27·65

TABLE 62
ESTIMATION OF SULPHUR TRIOXIDE POLLUTION
LEAD PEROXIDE METHOD

The daily average for the year is quoted in milligrams per 100 square centimetres.

[illegible]

TABLE 63

ATMOSPHERIC POLLUTION MEASUREMENT

Smoke and Sulphur Dioxide Volumetric Filter

Site : HEALTH DEPARTMENT, HATTON GARDEN

SMOKE : CONCENTRATION milligrammes per 100 cubic metres												
	J.	F.	M.	A.	M.	J.	JI.	A.	S.	O.	N.	D.
Average Value ...	22.2	21.6	14.9	10	9	4	2	2.5	1	17.0	17	33
Highest Value ...	56.0	54.0	23.0	21	20	9	3	9.0	4	3.2	36	80
Lowest Value ...	12.0	8.0	5.0	4	2	1	1	0	0	0	7	6

SULPHUR DIOXIDE : CONCENTRATION parts per 100 million parts of air												
	J.	F.	M.	A.	M.	J.	JI.	A.	S.	O.	N.	D.
Average Value ...	24.7	22.0	19.5	15.1	14.5	10.6	9.5	10.0	14.1	24.6	26.5	24.8
Highest Value ...	75.5	41.7	30.0	28.0	22.6	16.1	14.7	15.3	22.9	39.4	50.9	92.4
Lowest Value ...	13.3	12.3	11.9	7.6	10.6	5.4	6.5	4.8	6.4	11.9	14.9	7.0

TABLE 64

SUMMARY OF RODENT INFESTATIONS AND DISINFESTATIONS OF BUILDINGS AND LANDS DURING THE YEAR 1960

Description of Premises	Infestations				Reinfestations during the Year				Category		Total infestations and reinfestations	Total remedied
	Premises	Rats	Rats and Mice	Mice	Premises	Rats	Rats and Mice	Mice	Major	Minor		
Shops	519	163	10	346	21	5	—	17	—	541	541	571
Factories	303	146	18	139	39	20	2	29	—	354	354	378
Warehouses	216	119	12	85	30	17	—	15	—	248	248	251
Dwelling-houses	2,765	1,450	25	1,290	54	28	1	29	—	2,823	2,823	2,889
Other buildings and lands	943	427	32	484	55	15	—	55	—	1,013	1,013	1,007
Food premises (included in above)...	(687)	(255)	(24)	(408)	(41)	(16)	(1)	(31)	(—)	(735)	(735)	(695)
TOTAL	4,746	2,305	97	2,344	199	85	3	145	—	4,979	4,979	5,096

NOTE :—Infestations remedied include 653 outstanding from 1959.

TABLE 65
RAT DESTRUCTION IN SEWERS.
MAINTENANCE TREATMENTS.

Sewer Manholes treated	Initial Treatment 1953	MAINTENANCE TREATMENTS		
		1960 (1)	1960 (2)	1960 (3)
Pre-baited... ..	16,378	12,144	12,146	13,513
Pre-bait taken	9,329	3,997	3,536	4,498
Poison baited	11,141	6,414	5,782	6,717

TABLE 66
RAT DESTRUCTION IN SEWERS
ANNUAL TEST BAITING

Test Baiting Divisions	Year 1953	Year 1958	Year 1959	Year 1960
Total number of manholes	6,337	12,810	11,852	11,686
Number of manholes tested	797	1,451	1,313	1,419
Number of manholes showing takes ...	68	98	23	78

TABLE 67

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

					Tons	Cwts.	Qrs.	Lbs.
Beef, Veal, Mutton, Pork	...	...	...	...	178	—	—	—
Offal	...	...	...	...	464	—	—	—
Fish (Wet)	...	...	...	...	43	1	—	4
Fish (Dry)	...	...	...	...	3	11	3	12
Shellfish	...	...	...	...	3	12	—	7
Poultry	...	...	...	...	9	10	1	27
Game	...	...	...	...	—	—	—	20
Rabbits and Hares	...	...	...	...	—	—	3	6
Fruit	...	...	...	...	108	6	1	8
Vegetables	...	...	...	...	213	11	1	7
Nuts	...	...	...	...	19	3	—	15
Dried Fruits	...	...	...	...	—	1	1	11
Canned Goods	...	...	...	...	58	6	1	7
Sundries	...	...	...	...	8	9	2	13
Total quantity	...	...	...	...	1,109	14	1	25

TABLE 68

CARCASSES AND OFFAL INSPECTED AND CONDEMNED IN WHOLE OR IN PART

	Cattle excluding Cows	Cows	Calves	Sheep and Lambs	Pigs	Horses
Number killed ... 482,856 ...	36,486	30,205	15,733	299,463	100,969	—
Number inspected 482,856 ...	36,486	30,205	15,733	299,463	100,969	—
All Diseases except Tuberculosis and Cysticerci.						
Whole carcasses condemned ...	9	120	295	1,812	513	—
Carcasses of which some part or organ was condemned ...	4,891	11,263	1,005	89,839	8,237	—
Percentage of the number inspected affected with disease other than tuberculosis and cysticerci ...	13.2%	37.6%	8.3%	30.6%	8.6%	—
Tuberculosis only.						
Whole carcasses condemned ..	42	44	2	—	15	—
Carcasses of which some part or organ was condemned ...	1,324	4,263	—	—	1,958	—
Percentage of the number inspected affected with tuberculosis ...	3.7%	10.9%	0.01%	—	2.0%	—
Cysticercosis.						
Carcasses of which some part or organ was condemned ...	4	1	—	—	—	—
Carcasses submitted to treatment by refrigeration ...	4	1	—	—	—	—
Generalised and totally condemned ...	—	—	—	2	—	—

TABLE 69

METEOROLOGICAL SUMMARY, 1960,

Recorded at Liverpool Observatory and Tidal Institute, Bidston.

Month	Mean Barometric Pressure in.		Temperature °F			Rainfall in.		No. of days with rain	Sunshine hrs.	
			Mean	Mean Max.	Mean Min.					
	1960	Normal	1960	Normal	1960	1960	Normal	1960	Normal	
January	29.94	29.92	41.0	39.7	44.2	36.7	4.36	40.4	51.6	
February	29.73	29.93	39.8	40.2	43.7	35.4	1.39	70.2	66.7	
March	29.87	29.91	43.2	42.4	48.4	38.8	1.43	63.8	110.6	
April	30.07	29.92	48.4	46.7	53.5	43.4	1.14	180.6	162.0	
May	30.07	29.97	55.1	52.1	62.3	49.1	2.45	200.7	202.3	
June	30.05	29.99	60.4	57.3	67.6	54.3	0.83	298.8	208.3	
July	29.80	29.95	58.9	60.2	64.5	54.4	3.10	185.9	183.5	
August	29.83	29.92	58.4	59.8	63.8	54.1	3.61	161.4	167.9	
September	29.94	29.97	55.7	56.3	60.4	51.2	3.25	160.3	132.0	
October	29.64	29.90	51.0	50.1	54.5	47.5	3.34	58.3	95.7	
November	29.55	29.88	45.4	44.3	48.7	41.4	5.74	57.8	59.1	
December	29.71	29.86	40.3	41.1	43.9	36.7	2.36	72.0	41.5	
Year	29.85	29.93	49.8	49.2	54.6	45.3	33.00	1550.2	1481.1	

The normal is the long period average for that time of year.

[illegible][illegible]

TABLE No. 71.

* NOTE: This figure includes six cases who left the district before contact could be made.

TABLE 72.
TABLE SHOWING POPULATION, BIRTH-RATES, DEATH-RATES, INFANT AND MATERNAL MORTALITY RATES, ETC., OF A NUMBER OF THE LARGER AUTHORITIES FOR 1960.

Name of Authority	Birmingham	Bradford	Bristol	Cardiff	Kingston-upon-Hull	Leeds	Leicester	Liverpool	Manchester	Newcastle-upon-Tyne	Nottingham	Sheffield
Registrar General's estimated population for 1960	1,093,160	289,860	433,750	255,470	302,400	514,760	273,370	754,670	665,590	268,970	313,760	499,610
Comparability factor—												
(a) Births	0.95	1.00	1.00	0.94	0.96	0.98	1.01	0.93	0.96	0.97	0.96	1.01
(b) Deaths	1.15	0.99	0.98	1.11	1.22	1.13	1.00	1.22	1.17	1.12	1.13	1.10
Crude birth rate per 1,000 population	19.00	18.76	15.88	18.92	19.12	17.1	16.63	21.15	18.92	18.70	18.26	15.67
Birth rate as adjusted by factor... ..	18.05	18.76	15.88	17.78	18.35	16.8	16.80	19.67	18.16	18.14	17.53	15.83
Crude death rate per 1,000 population	11.03	12.91	12.13	10.99	10.55	11.2	12.64	11.78	12.42	12.66	10.97	11.63
Death rate as adjusted by factor	12.68	12.78	11.89	12.21	12.88	12.7	12.64	14.37	14.53	14.17	12.39	12.78
Infant mortality rate per 1,000 live births	22.57	28.32	19.7	24.62	23.34	22.6	24.42	28.26	29.06	26.65	23.22	19.93
Neonatal mortality rate per 1,000 live births	15.98	20.60	14.4	18.41	15.91	14.9	16.72	18.9	18.82	19.09	15.36	14.18
Stillbirth rate per 1,000 total births	19.86	20.18	14.45	21.46	22.13	18.2	22.58	23.07	25.30	23.15	19.68	18.68
Perinatal mortality rate per 1,000 total births	34.01	37.84	26.9	36.64	34.00	30.3	37.63	38.86	41.01	37.55	31.66	31.34
Maternal mortality rate per 1,000 total births	0.53	0.00	0.14	0.202	0.84	0.22	0.65	0.306	0.38	—	0.51	—
Tuberculosis rates per 1,000 population												
(a) Primary notifications—												
Respiratory	0.71	0.66	0.46	0.59	0.51	0.63	0.57	0.58	0.59	0.758	0.564	0.61
Non-respiratory... ..	0.08	0.09	0.06	0.09	0.07	0.07	0.095	0.058	0.05	0.112	0.086	0.06
(b) Deaths—Respiratory	0.07	0.07	0.058	0.11	0.11	0.07	0.080	0.107	0.12	0.089	0.080	0.11
Non-respiratory... ..	0.01	0.003	0.007	0.01	0.01	0.01	—	0.004	0.00	0.015	0.006	0.00
Death Rates per 1,000 population from—												
Cancer (all forms including Leukaemia and Aleukaemia)	2.07	2.31	2.18	1.976	2.24	2.03	2.40	2.14	2.44	2.49	2.062	2.22
Cancer of Lungs and Bronchus	0.54	0.49	0.47	0.414	0.6	0.52	0.519	0.60	0.67	0.73	0.548	0.56
Meningococcal infections	0.01	0.00	0.002	0.004	0.007	0.01	—	0.006	0.01	—	0.006	—
Whooping Cough	0.00	0.00	—	—	0.004	—	—	0.004	0.00	—	—	0.00
Influenza	0.03	0.01	0.02	0.023	0.07	0.004	0.015	0.02	0.02	0.037	0.028	0.01
Mexalus	—	0.003	—	—	—	—	—	0.001	0.00	—	—	—
Acute Poliomyelitis and Encephalitis	0.01	0.003	—	—	0.004	—	—	—	—	—	—	—
Diarrhoea (under 2 years)	0.01	0.01	0.002	0.004	0.02	0.01	0.007	0.026	0.02	0.007	0.016	0.00
Diarrhoea (under 2 years) (per 1,000 live births)	0.77	0.73	0.15	0.207	0.96	0.57	0.44	1.253	1.19	0.40	0.873	0.38

TABLE 73
NOTIFIABLE DISEASES (OTHER THAN TUBERCULOSIS) DURING THE YEAR 1960.

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—	
Scarlet Fever.....	476	1	16	46	53	60	223	66	6	5	—	—	—	—
Diphtheria	6	—	—	—	—	—	6	—	—	—	—	—	—	1
Enteric Fever (including Paratyphoid)	19	3	1	2	1	—	3	4	1	1	1	1	1	—
Puerperal Pyrexia.....	583	—	—	—	—	—	—	—	88	433	61	1	—	—
Pneumonia	335	58	27	23	9	12	30	13	9	26	19	65	44	83
Cerebro-spinal Fever	17	6	—	5	—	—	3	1	—	2	—	—	—	5
Poliomyelitis (Paralytic)	3	—	—	—	—	2	—	—	—	1	—	—	—	—
Poliomyelitis (Non-paralytic)	1	—	—	—	—	—	—	—	1	—	—	—	—	—
Dysentery	515	38	55	54	39	32	139	65	18	41	14	11	9	4
Ophthalmia Neonatorum	96	96	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	48	—	—	—	—	—	—	2	1	2	9	22	12	—
Malaria	4	—	—	—	—	—	—	—	—	2	1	—	1	—
Measles	8835	489	1203	1383	1391	1143	3148	62	9	4	1	2	—	1
Whooping Cough	1440	191	220	214	207	179	399	25	2	2	—	1	—	3
Food Poisoning.....	147	23	23	7	4	3	19	19	9	16	7	14	3	—
TOTALS.....	12525	905	1545	1734	1704	1431	3970	257	144	535	113	117	70	97

CITY OF LIVERPOOL

TABLE 74.

Infant Mortality during the year 1960.

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
“ Meninges, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
“ Intestines, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
“ Other Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Meningococcal Infections	—	—	—	—	—	—	—	—	—	1	1	—	1	—	—	—	—	—	1	—	1	—	4
Acute Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Psychosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis (non-tubercular)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Influenza	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	13	21	8	6	3	2	3	2	1	1	—	60
Bronchitis	—	—	—	—	—	—	—	—	—	—	—	7	5	7	6	4	2	1	—	—	—	—	32
Enteritis	—	—	—	—	—	—	—	—	—	—	—	3	2	3	1	4	—	1	2	—	—	—	16
Malformations	24	5	3	2	1	4	1	6	7	1	54	6	6	4	3	—	1	2	—	—	—	—	76
Injury at Birth	30	8	7	—	1	2	1	2	1	—	52	1	—	—	—	—	—	—	—	—	—	—	53
Infections of Newborn	3	3	1	1	1	—	—	3	4	5	21	—	—	—	—	—	—	—	—	—	—	—	21
Other Diseases of Early Infancy	103	17	21	9	5	—	—	7	—	—	162	—	—	1	—	—	—	—	—	—	—	—	163
Other Causes	5	—	—	—	—	—	—	—	—	—	5	4	3	3	1	—	—	1	1	3	1	—	22
Totals	165	33	32	12	8	6	2	18	12	7	295	34	39	26	19	11	6	8	6	4	3	—	451
258 (Total Deaths under 7 days)																							

Net Births in the year { Legitimate ... 15,093
 { Illegitimate ... 868

Net Deaths in the year of { Legitimate Infants 423
 { Illegitimate Infants 28

NAME OF DONOR		AMOUNT		DATE		TOTAL	
The Board of Directors		100.00		1901		100.00	
The Trustees		50.00		1902		50.00	
The Executive Committee		25.00		1903		25.00	
The Finance Committee		15.00		1904		15.00	
The Library Committee		10.00		1905		10.00	
The Building Committee		5.00		1906		5.00	
The Education Committee		3.00		1907		3.00	
The Social Service Committee		2.00		1908		2.00	
The Publicity Committee		1.00		1909		1.00	
The Research Committee		.50		1910		.50	
The Administration Committee		.25		1911		.25	
The Audit Committee		.10		1912		.10	
The Legal Committee		.05		1913		.05	
The Planning Committee		.02		1914		.02	
The Development Committee		.01		1915		.01	
The Evaluation Committee		.01		1916		.01	
The Monitoring Committee		.01		1917		.01	
The Reporting Committee		.01		1918		.01	
The Communication Committee		.01		1919		.01	
The Information Committee		.01		1920		.01	
The Knowledge Committee		.01		1921		.01	
The Understanding Committee		.01		1922		.01	
The Awareness Committee		.01		1923		.01	
The Attitude Committee		.01		1924		.01	
The Behavior Committee		.01		1925		.01	
The Performance Committee		.01		1926		.01	
The Contribution Committee		.01		1927		.01	
The Participation Committee		.01		1928		.01	
The Involvement Committee		.01		1929		.01	
The Commitment Committee		.01		1930		.01	
The Dedication Committee		.01		1931		.01	
The Devotion Committee		.01		1932		.01	
The Affection Committee		.01		1933		.01	
The Fondness Committee		.01		1934		.01	
The Love Committee		.01		1935		.01	
The Affection Committee		.01		1936		.01	
The Devotion Committee		.01		1937		.01	
The Affection Committee		.01		1938		.01	
The Devotion Committee		.01		1939		.01	
The Affection Committee		.01		1940		.01	
The Devotion Committee		.01		1941		.01	
The Affection Committee		.01		1942		.01	
The Devotion Committee		.01		1943		.01	
The Affection Committee		.01		1944		.01	
The Devotion Committee		.01		1945		.01	
The Affection Committee		.01		1946		.01	
The Devotion Committee		.01		1947		.01	
The Affection Committee		.01		1948		.01	
The Devotion Committee		.01		1949		.01	
The Affection Committee		.01		1950		.01	
The Devotion Committee		.01		1951		.01	
The Affection Committee		.01		1952		.01	
The Devotion Committee		.01		1953		.01	
The Affection Committee		.01		1954		.01	
The Devotion Committee		.01		1955		.01	
The Affection Committee		.01		1956		.01	
The Devotion Committee		.01		1957		.01	
The Affection Committee		.01		1958		.01	
The Devotion Committee		.01		1959		.01	
The Affection Committee		.01		1960		.01	
The Devotion Committee		.01		1961		.01	
The Affection Committee		.01		1962		.01	
The Devotion Committee		.01		1963		.01	
The Affection Committee		.01		1964		.01	
The Devotion Committee		.01		1965		.01	
The Affection Committee		.01		1966		.01	
The Devotion Committee		.01		1967		.01	
The Affection Committee		.01		1968		.01	
The Devotion Committee		.01		1969		.01	
The Affection Committee		.01		1970		.01	
The Devotion Committee		.01		1971		.01	
The Affection Committee		.01		1972		.01	
The Devotion Committee		.01		1973		.01	
The Affection Committee		.01		1974		.01	
The Devotion Committee		.01		1975		.01	
The Affection Committee		.01		1976		.01	
The Devotion Committee		.01		1977		.01	
The Affection Committee		.01		1978		.01	
The Devotion Committee		.01		1979		.01	
The Affection Committee		.01		1980		.01	
The Devotion Committee		.01		1981		.01	
The Affection Committee		.01		1982		.01	
The Devotion Committee		.01		1983		.01	
The Affection Committee		.01		1984		.01	
The Devotion Committee		.01		1985		.01	
The Affection Committee		.01		1986		.01	
The Devotion Committee		.01		1987		.01	
The Affection Committee		.01		1988		.01	
The Devotion Committee		.01		1989		.01	
The Affection Committee		.01		1990		.01	
The Devotion Committee		.01		1991		.01	
The Affection Committee		.01		1992		.01	
The Devotion Committee		.01		1993		.01	
The Affection Committee		.01		1994		.01	
The Devotion Committee		.01		1995		.01	
The Affection Committee		.01		1996		.01	
The Devotion Committee		.01		1997		.01	
The Affection Committee		.01		1998		.01	
The Devotion Committee		.01		1999		.01	
The Affection Committee		.01		2000		.01	
The Devotion Committee		.01		2001		.01	
The Affection Committee		.01		2002		.01	
The Devotion Committee		.01		2003		.01	
The Affection Committee		.01		2004		.01	
The Devotion Committee		.01		2005		.01	
The Affection Committee		.01		2006		.01	
The Devotion Committee		.01		2007		.01	
The Affection Committee		.01		2008		.01	
The Devotion Committee		.01		2009		.01	

TABLE 79.
CITY OF LIVERPOOL.

DEATHS REGISTERED DURING THE YEAR 1960

CAUSE OF DEATH	SEX		AGE—BELOW																											TOTAL
	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	4552	4339	451	31	9	5	9	24	27	31	40	52	54	116	162	276	439	620	911	1042	1276	1394	1138	582	202	8801				
Class I.—Infectious and Parasitic Diseases	83	40	10	1	1	1	1	1	1	2	1	2	1	5	9	10	8	10	16	19	14	8	2	...	...	123		
II.—Neoplasms	918	720	1	2	1	2	1	6	3	7	7	10	11	28	47	95	136	182	259	243	232	201	112	38	12	1638				
III.—Alcohol, Metabolic Diseases, etc.	21	65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	88
IV.—Diseases of the Blood	5	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
V.—Diseases of Psychomotoric System	30	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
VI.—Diseases of Nervous System	547	730	2	3	...	...	...	...	4	1	...	5	4	11	13	17	44	57	121	151	242	249	210	129	23	1777
VII.—Diseases of Circulatory System	1452	1401	1	...	...	...	...	...	1	1	4	7	8	32	59	81	137	205	297	362	428	469	416	228	89	2833
VIII.—Diseases of Respiratory System	842	799	94	9	2	1	2	3	1	3	2	1	4	9	13	23	162	143	180	241	294	265	126	32	1641					
IX.—Diseases of Digestive System	116	110	20	4	1	...	...	...	1	3	2	1	4	5	5	3	4	10	11	14	19	28	28	6	4	226	
X.—Diseases of Genito-urinary System	92	69	2	1	...	...	...	...	1	3	2	1	4	5	5	3	4	10	11	14	19	28	28	6	4	161
XI.—Diseases of Pregnancy	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XII.—Diseases of Skin	5	12	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	2	...	2	1	4	2	2	1	17
XIII.—Diseases of Bones	7	15	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	1	5	3	2	1	2	2	32
XIV.—Congenital Malformations	52	44	76	3	...	...	...	...	1	3	1	2	1	...	2	1	2	1	...	...	...	...	...	...	...	96
XV.—Diseases of Early Infancy	138	99	237	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	237
XVI.—Suicide and Ill-defined Diseases	20	27	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47
XVII.—Deaths from Violence	219	178	6	8	4	5	12	9	11	21	15	11	16	9	27	26	23	27	25	33	33	41	22	297			
Class I.—Tuberculosis of Respiratory System	60	21	...	...	...	...	...	...	...	...	...	...	2	1	4	7	5	7	7	14	14	12	7	1	...	81
Tuberculosis of Meninges, etc.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tuberculosis of Intestines, etc.	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Tuberculosis of Other Organs	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Dysentery	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Diphtheria	1	2	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Whooping Cough	4	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningeal Infections	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Acute Polymyositis	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Infectious Diseases	8	10	3	...	1	...	...	...	1	2	1	...	...	1	...	3	1	1	1	1	1	...	...	...	...	18
Class 2.—Malignant Neoplasm of Bone, Cavity	15	11	...	...	...	...	...	...	...	...	...	...	1	1	4	7	5	7	7	14	14	12	7	1	...	26
Malignant Neoplasm of Digestive Syst.	257	277	...	...	...	...	...	...	1	...	2	4	3	4	11	27	34	41	67	88	83	86	52	24	7	534
Malignant Neoplasm of Respiratory Syst.	393	64	...	...	...	...	...	...	...	...	...	...	3	9	13	31	45	73	99	69	63	33	14	4	1	437
Malignant Neoplasm of Breast	...	105	...	...	...	...	...	...	...	...	...	...	1	...	1	3	2	10	13	17	16	11	12	12	6	105
Malignant Neoplasm of Female G. Organs	...	66	...	...	...	...	...	...	...	...	...	...	...	1	5	6	8	7	8	8	5	8	5	4	4	96
Malignant Neoplasm of Other Organs	217	164	1	2	1	1	4	...	...	4	3	4	2	7	15	6	31	38	59	50	56	33	28	6	2	381		
Leukemia	27	21	...	...	...	...	...	...	...	...	...	...	...	1	2	1	5	3	2	7	6	6	2	2	...	48
Scirrhus Neoplasm	9	12	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	3	1	7	5	1	...	...	...	21
Class 3.—Typhoidosis	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	...	1	7
Diphtheria	11	40	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	1	1	6	8	4	12	9	1	51
Other Allergic diseases, etc.	12	18	...	...	...	...	...	...	...	...	...	...	...	3	2	1	...	3	3	3	2	3	5	3	...	30
Class 4.—Anemia	5	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	5	6	4	...	17
Other Diseases of Blood	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class 5.—Psychosis and Psychoneurotic Disorders	30	10	1	1	...	3	6	10	12	5	40			
Class 6.—Vascular Lesions of Central Nervous Syst.	521	700	...	...	...	...	...	...	2	1	...	3	4	7	9	13	38	54	113	145	238	245	209	117	23	1221
Menstrual	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Epilepsy	4	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
Other Diseases of Nervous System	18	24	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Class 7.—Rheumatic Fever	9	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
Chronic Rheumatic Heart Disease	37	99	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	136
Arteriosclerosis, etc. Heart Disease	1177	952	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2089
Other Diseases of Heart	86	141	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	277
Hypertensive Disease	97	156	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	253
Other Diseases of Circulatory System	46	86	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	132
Class 8.—Influenza	5	10	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
Bronchopneumonia	339	476	56	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	815
Pneumonia	28	40	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	68
Bronchitis	424	238	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	662
Pleurisy	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Other Respiratory Diseases	44	35	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79
Class 9.—Ulcer of Stomach	40	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	58
Gastritis	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	2	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
Intestinal Obstruction and Hernia	24	29	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33
Gastro Enteritis	23	25	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48
Cerebral of Liver	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
Cholelithiasis	6	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12
Other Diseases of Digestive System	9	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
Class 10.—Acute and Chronic Nephritis	37	46	2	1	2	2	1	4	5	4	2	3	5	7	6	10	6	10	6	4	3	83			
Other Diseases of Kidneys	8	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
Hypertrophy of Prostate	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34
Other Diseases of Genito-Urinary System	13	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
Class 11.—Deaths of Pregnancy	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Other Diseases of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class 12.—Diseases of Skin	5	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17

TABLE 16
MATERNAL DEATHS, 1960

Cause of Death	Age	Social Class	Leg. Dis.	Parity	Gest. Wks.	ANTE-NATAL CARE								DELIVERED		DEED		Previous Health	Child	Delivery Type	Labour Hours	Death Post Partum	Anaesthetic	PERIOD OF PREGNANCY AT DEATH			Post Mortem	Remarks
						NO. OF EXAMINATIONS								Home	Hospital	Home	Hospital							R.M.P.				
						Hospital		Milewide		L.A.A.N.C.		R.M.P.												Before 30.05	After 30.05	Before 30.05		
HAEMORRHAGE—1 Haemorrhage due to ruptured R. uterine pregnancy.	35	II Wife of School Teacher	Leg.	1	9												x	Fairly good	Ectopic Pregnancy				5 weeks	—	—	Grav intra-peritoneal haemorrhage from ruptured R. uterine pregnancy. All other organs showed no evidence of disease.	Unprovoked Death. Patient in collapse on admission, plasma set up at once. Patient died within 30 minutes of admission before blood could be given.	
EMBRYOTIC BRUSH—1 Obstetric shock. Onset after Post Mortem.	37	IV Wife of Bricklayer, at Electric Factory	Leg.	1	28	9	Deliv. at 28 weeks							Pre-spect		x	Good but multiple fibroids	Premature twins 2 lb. 4 oz. 2 lb. 1 oz.	Asolated Brush. Jaws for several years and manual removal of placenta	0.40 mins.	17 mins.		N ₂ O Ether	2.4 months	Not booked	21 weeks	Failed to find any cause of death.	Unprovoked Death. Elderly primipara, multiple pregnancy, multiple fibroids. General anaesthetic for several years and manual removal of placenta. Collapsed after removal of placenta.
TOLERA OF PREGNANCY—3 Eclampsia. Pre-eclampsia toxemia.	35	IV Wife of Electrician's Mate	Leg.	6	32	Admitted at 32 weeks	1			Did not attend	4			x		x	Pre-eclampsia toxemia	Premature 2 lb. 10 oz.	Induced spontaneous delivery	0.40 mins.	39 mins.	Nil	13 weeks	20 weeks	Emergency admission at 32 weeks	Refused.	Unprovoked Death. Probably acute convulsive eclampsia.	
Pink Strep. Septic Chills. Toxic Shock Syndrome.	35	IV Wife of (General A.C.C.)	Leg.	4	40	Not Booked	2	2	Not attended	Not booked			x	x	Urinary infection 10-12°C, on admission to hospital 3 days post partum	Normal 9 lbs.	Normal	11.00 mins.	13 days	Gas and Air	Not booked	32 weeks	Not booked		Leaves—perforated bronchitis, haemorrhagic bronchitis pneumonia, areas of collapse. At autopsy—300 c.c. other life stained fluid in peritoneal cavity. Lungs—moderately enlarged, no abnormality on section. Gall. Bladder—enlarged 3x usual volume. Kidneys—enlarged recent gross nephritis. Prostate—normal. Uterus—normal.	Atypical Death. Hx, not reported during pregnancy, found to be BP, on admission to hospital. Manual removal procedure suggested, subsequently aborted. Cause of Death—Acute Myocardial Infarction. Pyelonephritis. Terminal bronchitis pneumonia.		
Pot Eclampsia.	38	IV Wife of Farmer, L.C.F.T.	Leg.	2	40	Not booked	2	3	Not attended	9 approx.	6 approx.		x	x	Pre-eclampsia toxemia BP 145/100 Bk. + + +	Normal 8 lb.	Normal After delivery B.P. 180/100	2.5 mins.	31 hours approx.		Nil	Early in pregnancy	34 weeks		This case was discussed with Governor and it was decided to issue a Death Certificate without a post mortem.	Atypical Death. Pre-eclampsia toxemia and eclampsia. Chance of patient's survival would have been enhanced if patient had been hospitalized.		

No.	Name	Age	Sex	Occupation	Date of Birth	Date of Death	Cause of Death	Place of Birth	Place of Death	Burial Place	Remarks
1	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
2	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
3	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
4	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
5	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
6	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
7	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
8	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
9	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	
10	Wm. H. HARRINGTON	35	M	Teacher	1850	1900	Heart Disease	Wm. H. HARRINGTON	Wm. H. HARRINGTON	Wm. H. HARRINGTON	

TABLE 77
AMBULANCE SERVICE — PATIENT REMOVALS — 1960

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Non-infectious cases removed from													
Home to Hospital ...	8,079	8,486	9,175	7,937	8,517	8,527	7,900	8,154	8,621	8,660	8,813	8,117	100,986
Hospital to Home ...	6,729	6,831	7,314	6,306	7,099	6,793	6,896	6,838	7,345	7,321	7,427	6,475	83,374
Maternity cases...	591	551	543	520	530	556	534	575	547	602	560	605	6,714
Infectious cases removed from Home to Hospital	385	362	342	417	386	336	332	360	350	366	348	275	4,259
Mental cases removed from Home to Hospital ...	28	10	12	14	12	13	7	10	4	20	23	21	174
Accident cases removed from Home, Street, etc. to Hospital ...	827	846	923	989	1,084	1,126	1,080	1,130	970	1,055	1,003	1,314	12,347
Inter-Hospital Transfers ...	1,158	1,273	1,127	1,082	1,299	1,333	1,113	1,159	1,127	1,121	1,198	1,148	14,138
Removals from places outside the City ...	139	159	168	170	193	186	149	177	183	160	192	170	2,046
Removals to places outside the City ...	435	528	504	424	499	480	553	529	503	477	556	484	5,972
Total ...	18,371	19,046	20,108	17,859	19,619	19,350	18,564	18,932	19,650	19,782	20,120	18,609	230,010
Cases requiring the service of Midwives													
Hospital ...	3	1	—	—	1	—	—	—	—	—	—	—	5
Domiciliary ...	8	3	1	3	3	4	2	4	3	2	14	6	53
Total ...	11	4	1	3	4	4	2	4	3	2	14	6	58
Removals outside the City													
25 miles radius ...	561	679	662	590	669	647	679	691	674	622	734	639	7,847
50 miles radius ...	11	6	9	4	21	17	22	14	10	15	10	14	153
Over 50 miles radius ...	2	2	1	—	2	2	1	1	2	—	4	1	18
Patients to Railway Station to entrain ...	18	6	28	18	30	22	39	38	44	32	27	24	326
Handicapped Persons to and from Centres ...	210	248	310	246	282	282	242	264	262	228	241	216	3,031

TABLE 78
AMBULANCE SERVICE — STATISTICAL REPORT 1948—1960.

	Year 1960	Year 1959	Year 1958	Year 1957	Year 1956	Year 1955	Year 1954	Year 1953	Year 1952	Year 1951	Year 1950	Year 1949	Year 1948
Non-infectious cases from													
Home to Hospital ...	100,986	98,718	97,186	92,953	92,347	88,965	82,710	68,124	52,768	45,726	38,690	39,204	27,262
Hospital to Home ...	83,374	82,972	79,956	75,507	75,692	75,186	69,600	55,890	38,995	31,719	23,703	16,494	8,148
Maternity Cases...	6,714	6,763	6,513	6,952	7,405	7,165	7,288	6,847	6,437	6,582	8,043	8,317	
Infectious cases from													
Home to Hospital ...	4,259	3,832	3,848	4,463	5,049	7,616	8,584	8,824	8,188	7,572	5,074	4,545	4,706
Mental cases from...													
Home to Hospital ...	174	480	640	566	390	535	349	337	295	204	373	377	211
Accident cases from Home, Streets, etc. to Hospital	12,347	11,088	10,065	10,202	9,603	9,393	8,742	8,531	7,865	8,082	7,494	6,862	6,159
Inter-Hospital Transfers ...	14,138	14,379	11,399	12,383	13,194	12,702	12,386	12,045	9,846	9,498	10,417	8,172	7,169
Removals from places out- side the City... ..	2,046	1,709	2,464	3,348	3,207	2,969	2,752	2,209	798	662	480	2,729	308
Removals to places outside the City	5,972	5,336	5,908	6,657	6,831	6,652	6,833	6,650	4,303	4,196	3,790		
Merseyside Hospitals Council Cases... ..	—	—	—	—	—	—	—	*19,111	55,759	50,161	44,979	43,912	39,508
Removals to and from X-ray Units	—	†818	—	—	—	—	—	—	—	—	—	—	—
Total	23,0010	226,095	217,979	213,031	213,718	211,183	199,244	188,568	185,254	164,402	143,043	130,612	93,471
Cases requiring the Service of Midwives—Domiciliary Hospital	53 5	119 23	139 118	162 387	175 651	186 744	163 675	115 554	121 438	— —	— —	— —	— —
Total	58	142	257	549	826	930	838	669	559	—	—	—	—
Removals outside the City													
25 miles radius ...	7,847	6,846	8,138	9,630	9,431	8,988	8,945	8,171	4,400	4,110	3,351	1,853	308
50 miles radius ...	153	161	202	284	258	249	281	342	299	352	468	535	
Over 50 miles radius ...	18	38	32	91	349	384	359	346	402	396	451	341	
Patients to Railway Stations to entrain ...	326	268	628	639	432	350	314	296	254	—	—	—	—
Handicapped Persons to and from Centres ...	3,031	—	—	—	—	—	—	—	—	—	—	—	—

†Period 24.2.1959 to 20.3.1959.

*Period 1.1.1953 to 31.4.1953.

TABLE 79
AMBULANCE SERVICE—PETROL, DIESEL & OIL CONSUMPTION, 1960.
Vehicle Mileage.

Note.—Figures in brackets show petrol obtained from other local authorities.

Ambulance.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Non-Infectious Diesel ...	12,121	12,462	13,121	11,773	12,267	11,233	11,375	11,755	10,738	11,010	14,370	14,260	146,485
Petrol ...	28,551	29,254	31,810	27,708	32,668	29,745	30,788	30,335	28,743	29,220	27,136	27,989	353,947
Infectious ...	5,220	4,310	3,922	4,936	5,292	4,867	4,684	4,026	4,555	4,920	4,902	4,246	55,880
Accident Diesel ...	353	355	457	535	476	559	424	1,380	1,355	1,410	1,646	1,783	10,733
Petrol ...	3,831	3,662	3,631	3,882	4,631	4,951	5,056	3,524	3,334	3,668	3,852	4,241	48,263
Sitting Case Cars ...	6,967	5,257	6,648	5,383	4,891	4,861	5,639	4,437	5,223	6,103	6,671	6,483	68,563
Sitting Case Ambulances ...	22,723	24,972	26,862	22,094	26,486	26,817	26,967	27,662	29,006	29,757	31,192	26,386	320,933
Total ...	79,766	80,272	86,451	76,311	86,711	83,033	84,942	83,119	82,954	86,088	89,769	85,388	1,004,804

VEHICLE—PETROL & DIESEL CONSUMPTION.

Ambulance.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Non-Infectious Diesel ...	469	464	481	427	457	381	430	440	423	440	586	604	5,602
Petrol ...	2,365	2,314	2,639	2,204	2,538	2,425	2,444	2,360	2,342	2,357	2,269	2,385	28,642
Infectious ...	448	390	307	375	406	323	334	242	219	346	365	333	4,088
Accident Diesel ...	20	17	21	30	22	31	21	62	59	60	78	77	498
Petrol ...	336	337	309	319	372	384	391	332	366	293	314	353	4,106
Sitting Case Cars ...	310	252	298	237	213	197	271	199	(4) 227	282	(9) 315	321	(13) 3,122
Sitting Case Ambulances ...	1,376	1,388	1,547	1,249	1,420	1,479	1,476	1,484	1,599	1,612	1,754	1,611	17,995
Total ...	5,324	5,162	5,602	4,841	5,428	5,220	5,367	5,119	(4) 5,235	5,390	(9) 5,681	5,684	(13) 64,053

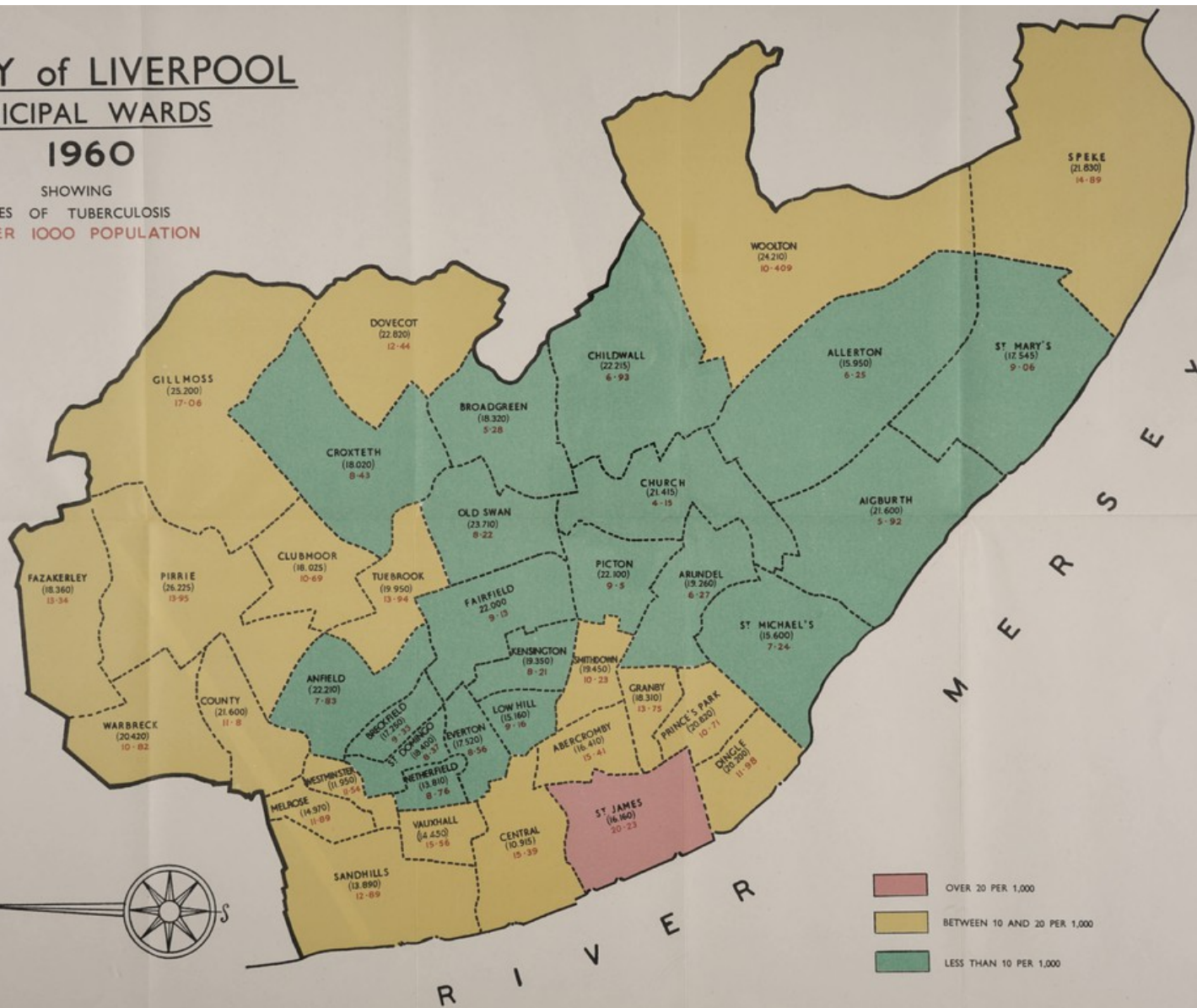
VEHICLE—OIL CONSUMPTION (QUARTS).

Ambulance.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Non-Infectious Diesel ...	29½	14½	22½	47	28	53½	41	51	48	48½	23	35½	442
Petrol ...	161	133½	228	183	150	174½	192½	135½	184	184½	88	116½	1,931
Infectious ...	26	43	45	35½	33½	40½	29½	19	26	34½	38	28	398½
Accident Diesel ...	1	½	3	1½	2	3	4½	2½	5	8½	1½	2½	35½
Petrol ...	16	17	26	18½	21½	31	30	19	20	15½	11	20½	246
Sitting Case Cars ...	19½	27	25	41	21½	22	23½	14	20½	41	15	18½	288½
Sitting Case Ambulances ...	90	108	154	106½	126½	104½	122	77½	121	129½	60½	73	1,273
Total ...	343	343½	503½	433	383	429	443	318½	424½	462	237	294½	4,614½

CITY of LIVERPOOL MUNICIPAL WARDS

1960

SHOWING
CASES OF TUBERCULOSIS
RATE PER 1000 POPULATION



OLD OUT

FOLD OUT

FOLD OUT

TO BE 1.000

AND 10 PER 1.000

26892
(17820)
19-82

ST. HART'S
19-82

Y

M

P

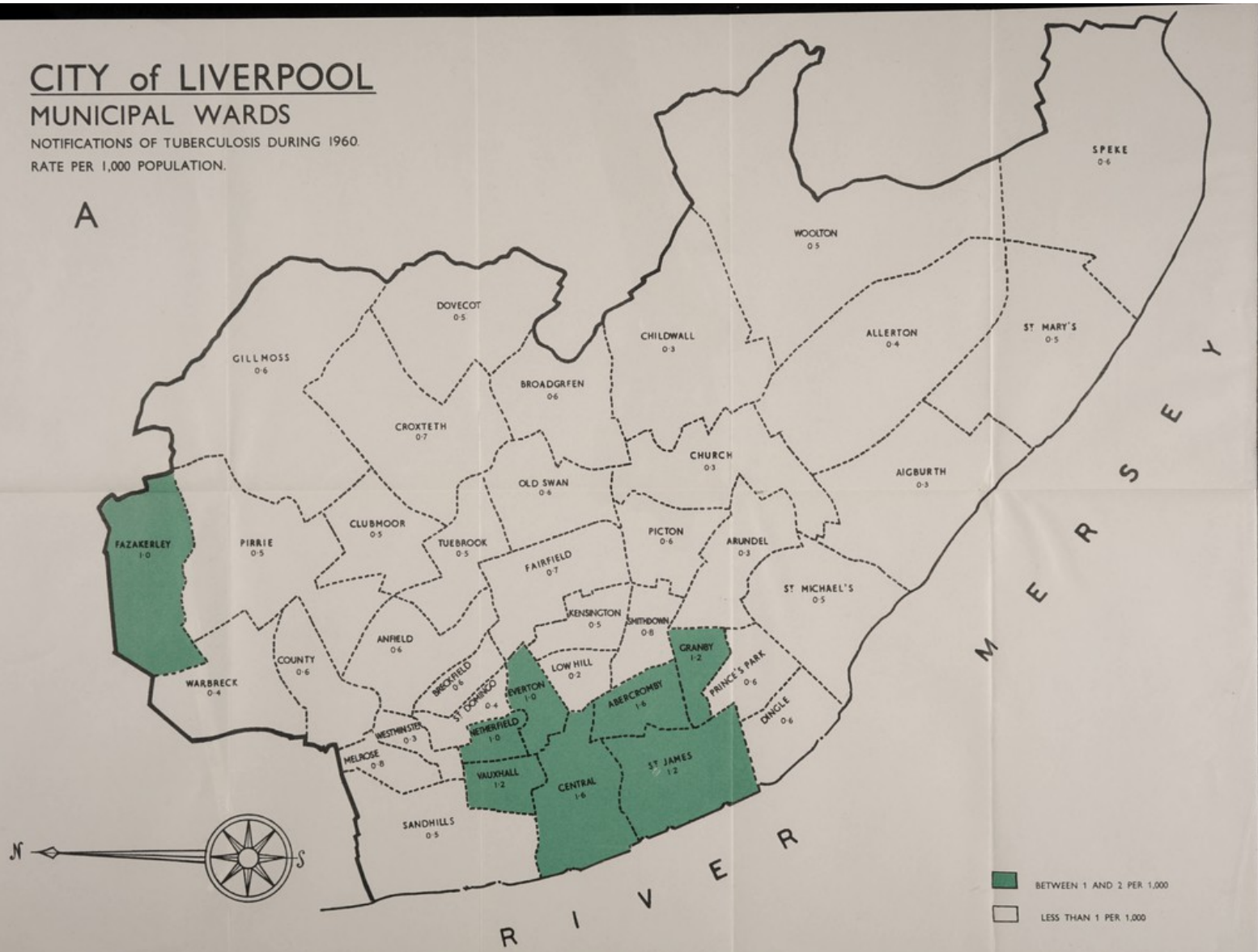
CITY of LIVERPOOL

MUNICIPAL WARDS

NOTIFICATIONS OF TUBERCULOSIS DURING 1960.

RATE PER 1,000 POPULATION.

A



1960	1959
1958	1957
1956	1955

ST. MARY'S

1958
1957

1956

1955

1954

B

CITY of LIVERPOOL MUNICIPAL WARDS

NOTIFICATIONS OF TUBERCULOSIS 1956 — 1960.
RATE PER 1,000 POPULATION.



LESS THAN 1 PER 1,000

BETWEEN 1 AND 2 PER 1,000

2 PER 1,000

0.2

ST. MARY'S

0.2

3

R

2