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REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

FOR THE

YEAR

1959

BY

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

Medical Officer of Health

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PREFACE

My Lord Mayor, Ladies and Gentlemen,

I have the honour to submit my eighth annual report on the health and welfare services of the City of Liverpool for the year 1959, this being the 112th year reported on by the Medical Officer of Health.

It has been a very strenuous year for several reasons. First, the Mass X-ray Campaign, a vast joint enterprise with the Liverpool Regional Hospital Board extended our resources to the limit, and imposed a heavy physical strain on all the staff. We also had an unusual and somewhat worrying smallpox incident at the same time as the actual X-ray Campaign. The services continue to develop in a satisfactory manner, striving not only to prevent disease and suffering, but also actively combatting the progress of disease processes; assisting the mentally and phyically handicapped to overcome, or at least to make it easier to cope with, their disabilities.

Vital Statistics

During 1959 the birth rate rose slightly to 20·6 per 1,000 compared with 20·5 in the previous year. It is encouraging to report that the stillbirth rate has fallen during 1959 to 23·4 per 1,000 total (live and still) births. This is the lowest rate recorded during the past nine years and compares with a rate of 25·7 per 1,000 in 1958, 24·9 in 1957 and 24·1 in 1956.

There was a reduction in the total number of deaths registered in the City during the year and a reduction in the general death rate to 11·3 per 1,000 compared with 11·7 in the preceding year. There was a continued slight fall in the number of deaths occurring from tuberculosis to 105 compared with 109 in 1958 and 128 in 1957.

The infant mortality rate was reduced slightly to 27·4 per 1,000 live births compared with 27·7 in 1958. There was also a corresponding fall in the perinatal death rate from 41·4 in 1958 to 39·5 in 1959.

There was an increase in the number of deaths from cancer of the lung and these totalled 444 compared with 399 in 1958. This compares with the highest figure ever recorded of 448 in both the years 1956 and 1957.

Midwifery Services

During the year there was a reduction in the number of domiciliary births in the City and a total of 5,074 home deliveries were undertaken—this figure being 377 less than last year. The municipal midwives delivered 3,885 cases and the remainder were delivered by Maternity Hospital district midwives.

The main report contains considerable discussion on the problems facing the domiciliary midwifery service at present. It will be seen that recruitment is difficult and it has been necessary to retain the services of part-time staff, many of whom have long passed the usual age of retirement. Details are given of the individual case loads undertaken by midwives and it will be seen that in many instances unfortunately, they are considerably above the sixty-six per year figure recommended by the Ministry of Health.

Every step has been taken to ensure that the midwives can travel quickly to their cases and during the year all midwives with cars were classified as essential users and can now participate in the authority's assisted car purchase scheme which has been of great value. Arrangements are also made for taxi firms to be available for midwives who are not car owners so that transport can be obtained with the minimum amount of delay in emergency cases.

Cases of Hypothermia

Steps are particularly taken to reduce the danger of new born infants developing hypothermia during the winter months. Three such cases occurred on the district during the year. All domiciliary midwives have been supplied with low reading thermometers so that they can carefully watch the early development of this condition. Steps are also taken to ensure, that wherever possible, infants are nursed in rooms the temperature of which dies not fall below 65° Fahrenheit.

It is most satisfactory to report that, in practically 100 per cent of domiciliary deliveries, the rhesus factor is now known. All mothers readily accept the importance of such a blood test during the ante-natal period and this is a good example of the success of health education over the past years.

Co-ordination with General Practitioners

It is satisfactory to report that there has been an increased degree of co-operation between midwives and general practitioners throughout the year and in more and more cases, midwives are attending general practitioners' surgeries when they carry out ante-natal examinations.

Altogether general practitioners in thirty-two practices within the city now have midwives attending their ante-natal clinics. This development, which is recognised as a satisfactory solution, is encouraged.

Gas and air analgesia is available to all domiciliary cases and was administered to a large majority of them during the year. There was an increase in the use of the flying squad during the year and a total of sixty-five calls were undertaken compared with fifty-four in 1958.

Details are given of the five maternal deaths which occurred during the year.

Premature Infants

The year 1959 saw the end of the first five-year period, from 1955 to 1959 inclusive, in which special midwives had been available to look after premature infants born and nursed at home. A review is given in the report of the improvements which have taken place in the care of premature infants and the results of these changes. The results are most encouraging.

During this five-year period there has been little change in the percentage of premature births compared with normal births. The figure varying from 8·0 per cent to 8·2 per cent. At the same time, there has been little change in the number of premature infants born at home, the smallest number being 238 in 1955 and the largest 262 in 1958. Of the premature infants born at home during this period which, of course, includes quite a proportion who are immediately admitted to hospital, there has been a remarkable fall in the neo-natal death rate. In 1955 22 out of the 238 premature infants born at home failed to survive 28 days which gave a neo-natal mortality rate of 92·4. In 1959 out of 245 premature infants born at home, 16 failed to survive 28 days giving a neo-natal mortality rate of 65·3. Details are given of the variation in this rate in the five-year period but it is encouraging to note that the trend is improving.

Figures are also given of the results of those premature infants who are born at home and nursed at home. The neo-natal death rate in these instances has also fallen from 26·7 in 1955 to 20·1 in 1959. During the past five years there has been a total of 1,017 premature infants born at home and nursed wholly at home which gives for the whole five-year period a neo-natal mortality rate of 22·6.

Every effort is made to get the small premature babies weighing less than 4 lbs. 7 ozs. into hospital but a certain number of mothers always refuse to have their children admitted to hospital. The results in these instances for very small premature infants born at home have also improved and whereas in 1955, 17 such cases were nursed at home with four not surviving 28 days, by 1959 twenty-one babies under 4 lbs. 7 ozs. were nursed at home and three failed to survive. Details are given too of premature babies born and nursed in hospital during the five-year period. It is, of course, impossible to compare fairly the figures of the hospital and domiciliary cases as obviously the worst cases are always admitted to hospital.

Value of Special Premature Baby Nurses.

The development of this service is a most encouraging chapter in preventive medicine. Not only have the results of the premature babies nursed at home improved, but it is satisfactory to report that the number of babies discharged from hospital to the care of these nurses has increased markedly in this period. In 1955 forty-eight premature babies were discharged from hospital to the care of these nurses but this figure, by 1959, had risen to 439. During the five year period the total number of babies discharged from hospital to the care of the premature baby nurses was 1,218 and the neo-natal mortality of this group was nil.

At a time when, increasingly, hospital and public health authorities are seriously worried about the incidence of infections in maternity units, it is particularly important that no child, and least of all a premature baby, should be retained in hospital any longer than is absolutely necessary. It is, therefore, of great importance that the Liverpool hospitals can confidently discharge premature babies who are doing well, to the care of special nurses in the City. The results reported in the five year period speak for themselves and show only too clearly the confidence the paediatricians in the hospitals have in the care of of the premature baby nurses employed by the City Council.

Work of the Health Visitors

For the first three months in 1959 the health visitors' staff were particularly heavily committed with the large and very successful Mass X-ray Campaign which was carried out in the City. As explained in the Annual Report of 1958, forty health visitors were seconded to the the task of recruiting 11,000 voluntary workers from the general public who were needed to mobilise the complete population of Liverpool. This

target was reached early in January and in the six weeks before the Campaign started on 23rd February, the health visitors trained and organised these workers. As explained in the tuberculosis part of the report this mobilisation scheme worked extremely well and resulted in every house being visited up to five times before and during the X-ray Campaign.

It is remarkable that with all this extra work, there was hardly any reduction in the number of children under the age of five years who attended child welfare clinics. In particular the toddler clinic sessions increased and the number of sessions held was 868 compared with 437 in 1958. A total of 95,242 children under the age of five years attended child welfare clinics during 1959.

A good idea of the extremely varied nature of the health visitors work during 1959 is given in a number of interesting case reports in the full text of the report.

Liaison with Hospitals

Liaison with both paediatric and general hospitals dealing with epileptic patients has increased during the year and health visitors attend out-patients in such hospitals throughout the City. These arrangements have worked extremely well and have led to a much closer co-operation between the hospitals and domiciliary health services.

Close contact is also maintained between the child psychiatric clinic at Alder Hey Hospital and the Health department and arrangements have continued for a senior child psychiatrist to attend monthly sessions held at the local authorities clinics. This arrangement has proved to be most helpful to health visitors.

Health Visitor dealing with Diabetes

A full account is given in the text of the report of the work undertaken by the special health visitor who deals entirely with diabetes. She has continued to maintain a very close contact and liaison with the David Lewis Northern Hospital which treats so many diabetics in the City.

The problems which this health visitor has faced have been very varied throughout the year and have included employment difficulties, problems of the aged and much general welfare work for the diabetics. In many cases it has been found that there is a very real need for a close contact to be maintained with the home of this type of patient.

Instructions given in hospitals or by general practitioners are often only partly understood and, in many instances, the health visitor has had to repeat advice and demonstrate diets to patients in their own homes. Full details of many of the interesting cases dealt with are given in the report.

Problem Families

Problem families have continued to take up a great deal of health visitors' time during the year. Frequent visits have been made by health visitors to such families and informal discussions have been arranged with other social workers at the clinics. These conferences have been well attended and much help and guidance has been given to these families.

Convalescence

Fifty-six aged and handicapped persons have been sent away for periods of convalescence throughout the year under section 28 of the National Health Service Act. Many of the aged people sent away had been living on their own and were in need of a change and there is no doubt that they have benefited enormously from this arrangement. Convalescent holidays have also been arranged for pregnant and nursing mothers under section 22 of the National Health Service Act.

Assistant Medical Officers of Health working in maternity and child welfare centres have continued to attend Alder Hey Hospital from time to time and go to evening meetings arranged with the Professor of Child Health. In addition, monthly conferences have continued to be held at the Liverpool Maternity Hospital and Mill Road Maternity Hospital at which perinatal deaths have been discussed in detail. Assistant medical officers of health have attended these meetings and have found them interesting and instructive. Hospital staff have also attended meetings for domiciliary midwives during the year to assist in the in-service training of the domiciliary midwives.

Ante-Natal Clinics

There has been a reduction in the number of mothers attending the ante-natal clinics in 1959, and 1,846 mothers attended compared with 2,250 in the previous year. This change is a continuation of a trend which has long been recognised in the domiciliary midwifery services. At the same time, there has been a welcome increase, as mentioned earlier in the report, in the number of arrangements whereby domiciliary midwives attend general practitioner ante-natal clinics held in their own surgery.

Home Nursing

The report contains a short historical survey of district nursing in Liverpool. The home nursing service was transferred from the Liverpool Queen Victoria District Nursing Association to the City of Liverpool on the 1st January, 1960, just a hundred years after the inception of district nursing in Liverpool.

The home at 1 Church Road, Walton, was given, by the Liverpool Queen Victoria District Nursing Association free of charge, together with furnishings and fittings, to the City of Liverpool and the actual transfer took place in November, 1959. This home will take the place of the central home and in future will be the training headquarters of the home nursing service in the City.

District centres have been established mainly in corporation dwellings throughout the City and the main headquarters of the day to day home nursing service will, in future, be at 1, Rose Lane, where the department has a maternity and child welfare clinic. Alterations were undertaken during the year to convert the first floor of this building to make a most satisfactory headquarters.

Home Nursing Equipment

The administrative arrangements whereby home nursing equipment is loaned to patients, who are ill at home, was simplified during the year. No longer will any deposit be required and this has resulted in patients receiving their equipment with minimum delay. There has been an increase in the number of articles loaned during the year and 3,298 articles were lent to families compared with 2,385 in 1958. This service is very valuable to cases of serious and sudden illness at home and is developing most satisfactorily.

Welfare Foods

Details are given of the welfare foods' service arranged for the distribution to the general public of national dried milk, cod liver oil, vitamin tablets and orange juice. There was a reduction in the amount of National dried milk sold during the year although there was a corresponding increase in the amount of proprietary dried milks sold. The overall distribution of all types of food was very similar.

Day Nurseries

There are twelve municipal day nurseries in the City giving a total number of 670 places. Arrangements have continued whereby each nursery is visited by the same assistant medical officer of health who not only carries out routine medical inspections, but advises on the general welfare of the children in that nursery.

Home Help Service

There has been a further increase in the number of families helped by the home help service during the year. A total of 2,846 families were assisted in 1959 compared with 2,604 in 1958. The home help service has shown an annual increase of roughly 10% in the number of families helped during the past few years and every assistance is being given to increase service wherever possible.

The main limiting factor is the recruitment of suitable home helps as in all instances great care is taken to select the right type of person to act in this responsible position. During the year the number of home helps employed increased to 221 at the end of 1959 compared with 184 at the end of 1958. Towards the end of the year some difficulties were met in supervising staff and additional staff are being recruited to assist with this aspect of the service.

Details are given in the report of the type of cases assisted. They have changed very little in proportion during the year and the chronic sick and aged totalling 1,909 represents by far the largest group assisted. It is interesting to record that the Mass X-ray Campaign did not produce a large increase of applications for the home help service, the figure of tuberculous families helped during the year being thirty-one compared with eleven in 1958. Details are given in the report of two unusual cases helped and it is pleasant to record that many of the home helps devote a considerable amount of their spare time to their charges and that there is an extremely happy relationship between the staff and the families assisted.

Infectious Diseases

1959 has been an interesting year in the field of infectious diseases. A case of smallpox occurred in the City, the source of which was never traced. In addition there was an increase in the number of poliomyelitis cases recorded in the City.

Smallpox

Full details are given in the text of the report of the medical student who developed smallpox in March. The source of this infection was never traced. As the patient had been moving around in the City on the first day of illness, it was feared that further cases would occur and it was remarkable that there were no other cases. This probably was connected with the fact that the four very close contacts were given antivaccinial gamma globulin as soon as the diagnosis was made. The only other contact who was not given antivaccinial gamma

globulin was the photographer at Fazakerley Hospital. He had been vaccinated successfully in the past, and successfully re-vaccinated within the last two years. Although he was a close case contact, because of his multiple re-vaccination history he was not given antivaccinial gamma globulin. He did, however, give considerable cause for concern as he developed an intense rash with one or two other symptoms suspicious of prodromal smallpox. However, he did not develop the disease and he made a complete recovery within a short period of time.

Anthrax

The two confirmed cases of anthrax which occurred in Liverpool during 1959 showed clearly the close connection between occupation and this disease. The first case was a member of a gang of dock labourers handling mixed cargo including cow hides and it seems that the subsequent lesion on his neck was directly infected by carrying these hides.

In the second case, a general labourer employed in opening bales of infected wools before processing, developed an anthrax lesion on his forehead. Both cases, after treatment, made full recoveries.

Diphtheria

No case of diphtheria occurred in the City during 1959 but the report gives an account of a carrier of virulent diphtheria organisms who was traced following the case of diphtheria in the neighbouring Huyton area.

Typhoid Fever

One case of typhoid fever occurred in Liverpool during the year and resulted from a visit to Spain by a local resident. Full details are given of this case and it is interesting to note that this is yet another case that has resulted from travelling in Southern Europe without previously undergoing immunisation with T.A.B. vaccination, which is advisable before visiting remote areas where the water supplies and hygiene services are underdeveloped.

Paratyphoid Fever

Details are given of the eleven cases of paratyphoid fever which occurred in Liverpool during the year, together with two family outbreaks.

The first family outbreak resulted from the infection of a family by the mother who gave a history of having had an illness suggestive of enteric fever fourteen years previously in Germany. It seems clear that this person is a chronic carrier and the infection of her family followed.

The second family outbreak was connected with the gathering of infected cockles on the beach at Moreton, Wirral, which is a prohibited area. This incident showed how dangerous this practice can be for par-boiling of these cockles is not sufficient to render them safe.

It is of interest to note that the register of typhoid and para-typhoid carriers now contains seven names, all females aged between thirty-five and fifty-five. In six instances they are housewives.

Whooping Cough

Reference was made in last year's annual report to the spectacular reduction of whooping cough over the last six years but 1959 showed an increase in this disease when 1,488 cases were reported. The results during the years are as follows:—

1953	1954	1955	1956	1957	1958	1959
4,740	1,933	2,490	2,559	1,726	474	1,488.

It will be seen that the 1959 figure, although it rose considerably is still the second lowest figure in the last seven years. As the incidence of whooping cough is known to vary from year to year it will be interesting to see whether this is an isolated increase or whether the expected reduction continues.

Polio-myelitis

Twenty-seven confirmed cases of poliomyelitis occurred in the City during the year. This is an increase from the sixteen cases in 1958 but a reduction from the thirty-five recorded in 1957. The figures for the last seven years are as follows:—

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

It will be seen that the twenty-seven confirmed cases in 1959 is slightly less than the majority of figures recorded since 1953.

One very interesting feature of the poliomyelitis cases which occurred in 1959 is that out of the twenty-seven cases, nineteen (or 70%) were aged 0 to 5 years, and eight 5 to 15 years, while there were no cases aged 15 years and over. This is quite different from the usually recorded percentages. It is of interest to note that during the last ten years in Liverpool there have been a total of 441 cases of poliomyelitis recorded and that in this period 226 (or 51%) were aged 0 to 5 years, 131 (or 30%) aged 5 to 15 years and 84 (or 19%) aged 15 years and over. Looking at the figures of the years individually there is some indication that there

is a tendency for the cases to become more numerous in the youngest age group, 0 to 5 years, and least numerous in the 15 years and over group. If this is confirmed in subsequent years as a definite trend, it will be a complete reversal of the usual pattern which has been noticed in the country throughout the 1940s and early 1950s.

Food Poisoning

There was an increase in food poisoning during the year and 209 confirmed cases of food poisoning of all types were recorded compared with 131 cases in 1958. 72% of these cases of food poisoning were due to salmonella organisms, 24% to toxins of staphylococcus pyogenes, and 4% to toxins of clostridium welchii.

Once again investigations showed, in the case of the salmonella outbreaks of food poisonings, that sixty-nine symptomless excretors were traced out of 206 infections.

Descriptions are given of an interesting outbreak of salmonella food poisoning at Broadgreen Hospital which, but for the prompt and helpful co-operation of the physician superintendent, Dr. L. Findlay, would probably have spread considerably. However, with the ready assistance of all the hospital personnel this tricky outbreak was got under control within two weeks.

Dysentery

Cases of bacilliary dysentery occurring in Liverpool in 1959 showed a marked reduction, namely 534 cases of dysentery confirmed in the City compared with 931 cases in 1958. All cases were sonne dysentery in type with the exception of one case which was a flexner dysentery.

Weils Disease

There is a full account of an interesting case of Weils disease which occurred in Stanley Abattoir during the year. The case was quite a severe one but fortunately the patient made a full and complete recovery. Enquiry showed that this infection had probably been contracted by the patient, a slaughterman, being in the habit of wrapping old meat sacks round himself to protect his overalls when carrying sheep from the storage pens to the slaughter block. These sacks were found to be extremely dirty and soiled with blood and scraps of fat and meat. He was in the habit of collecting old sacks which were stored in an area of the abattoir which was known to be rat infested and it is felt that probably these sacks were contaminated with the urine from rats and in this way infected the slaughterman directly.

Immunisation

It is satsifactory to report a substantial further increase in the amount of immunisation carried out in the City during 1959 compared with previous years. The increase was particularly seen in relation to poliomyelitis immunisation although other immunisations continued at a high level.

Polio-myelitis Immunisation

1959 saw a very large increase in the amount of poliomyelitis immunisation carried out in the City. This increase followed quickly the death from poliomyelitis of a prominent footballer early in the year and for many weeks there was a constant stream of persons asking for poliomyelitis immunisation. Special sessions were arranged in the Health department and in clinics, and family doctors also helped to meet the increased demand. To meet the requests for poliomyelitis immunisation special mobile teams of doctors, nurses and clerks visiting popular dance halls for each night of one week and in this way 4,343 teenagers were immunised.

A further innovation during the year was the arrangement whereby a special mobile clinic was set up at the Liverpool Show (16th—18th July) in the Health department exhibition tent at Wavertree Showground. Poliomyelitis immunisation continued without registration or appointment throughout the opening hours of the show to all those within the eligible age groups who wished to avail themselves of these facilities and in all a total of 485 persón were immunised.

During the year 28,266 children up to the age of fifteen years completed a course of two injections and 41,235 adults were immunised with two injections including 1,250 expectant mothers. In addition, towards the end of the year a total of 65,000 third injections were given to all groups.

This satisfactory increase in the amount of poliomyelitis immunisation undertaken in the City means that by the end of the year approximately 154,000 Liverpool residents have been immunised since the poliomyelitis scheme was introduced in 1956 and at least 90,000 of these have had three injections.

A special study was made of the sensitivity reactions recorded and details of them are given in the general text.

Diphtheria Immunisation

Reference was made in last year's annual report to the welcome increase recorded in 1958 in the number of persons receiving primary inoculation against diphtheria. It is most satisfactory to report that in 1959 this figure was very largely maintained and a total of 14,145 children were given the primary inoculation against diphtheria and 4,291 received a booster dose. Bearing in mind that 1959 saw considerable dislocation of the normal preventive health services in February and March because of the large-scale Mass X-ray Campaign these figures are, in many ways, most remarkable.

Once again it is thought that the wider use of combined vaccines have helped to achieve a high percentage of immunisations and as a further inducement triple antigen giving protection against diphtheria, whooping cough and tetanus was introduced during the year.

Whooping Cough Immunisations

The number of infants immunised against Whooping Cough rose considerably in 1958 and the total number protected in this way has remained very similar during 1959. A total of 12,324 children have been immunised against Whooping Cough during the year.

Smallpox Vaccination

The level of smallpox vaccination has remained very similar during the year, 8,541 children under one year being vaccinated. This represents a slight increase on the previous year. There was a large decrease in regard to the number of adults vaccinated in 1959 compared with 1958 but this was, of course, due to the wide scale vaccinations carried out following the smallpox scare in Liverpool in 1958. The single case of smallpox in a medical student in March, 1959, did not affect the number of persons vaccinated to any great extent.

Radiation Monitoring

The radiation monitoring of all water supplies has continued throughout the year. Results have shown that the radiation beta activity has at all times been well below the safety levels recommended by the Medical Research Council for Thames Water Supply and also for the International Standard set up by the International Commission on Radiation Protection.

It is also satisfactory to report that there has been no increase at all in the number of cases of leukaemia recorded in Liverpool during the last ten years. Details of the number of deaths from leukaemia are given in the text of the report.

Training of staff, including medical officers, public health inspectors, and health visitors in the problems of measuring radio-activity have continued throughout the year and these officers have attended various courses so that now there is a nucleus of trained personnel to interpret these results.

Tuberculosis

As was expected the total number of cases of respiratory tuberculosis notified in 1959 rose sharply as a result of the Mass X-ray Campaign and 1,633 cases were notified compared with 795 in 1958. 904 of these cases were diagnosed during the Mass X-ray Campaign. This means that during the remaining eleven months of the year, 729 cases were discovered in the usual ways. It therefore seems likely that, but for the X-ray Campaign, the total number of cases found would have been roughly similar to those discovered in 1958.

The distribution of the new cases is shown in the main text of the report by a coloured map showing the wards and their individual incidence. In general, the highest rates are to be seen in the centre of the city and in those wards where there is a good deal of sub-standard housing and congested living conditions. Maps are also given showing estimates of all types of tuberculosis cases including new ones and those diagnosed in previous years. The St. James ward still has the largest incidence with over 23·41 cases per 1,000 population. This is an increase from 21·1 in this ward in 1958.

Methods of Diagnosis

An interesting finding is that during the remainder of the year following the Mass X-ray Campaign in March a very high proportion of the cases discovered were also diagnosed as a result of mass radiography. Of the 729 cases diagnosed outside the Mass X-ray Campaign 213 of them were diagnosed by routine mass radiography. This compares very favourably with the figure of 124 cases found in 1958.

Fewer cases of pulmonary tuberculosis were discovered as a result of an illness in 1959 than in 1958, 423 as compared with 593. This is almost certainly a reflection of the earlier diagnosis of many cases as a result of the campaign. In other words, many persons were diagnosed in the Mass X-ray Campaign without symptoms who would, but for the campaign, have fallen ill later in the year.

Age and Sex Incidence of New Cases of Pulmonary Tuberculosis

The distribution of new cases of pulmonary tuberculosis between the sexes has continued to be of the same pattern as reported in 1958. Of the new cases 58% were males and 42% females. This preponderance has been a feature of the pattern of tuberculosis in the City during the last few years. Even more striking is the rapid increase in incidence which occurs in males as age increases. Reference was made specially to this in the findings of the Mass X-ray Campaign, which showed a very marked difference in the incidence of tuberculosis discovered in males and females over the age of forty-five. For instance, in males between the ages of forty-five and fifty-nine there was a total incidence of all forms of pulmonary tuberculosis of 15·79 per 1,000 X-rayed and 9·17 per 1,000 X-rayed for females, and this difference rose even more dramatically in the age group sixty years and over, where there was an incidence in the male of 23·87 per 1,000 X-rayed compared with 9·03 per 1,000 X-rayed in the female. These trends which have also been noted in many parts of the country have a very great importance as they emphasise the need of concentrating preventive measures on this age group in men.

After-Care Visits undertaken by Tuberculosis Visitors

There was an increase in the amount of work undertaken by the tuberculosis visitors in 1959 and a total of 40,233 visits were made compared with 35,670 in the previous year. The tuberculosis visitors particularly, were extremely busy for some months following the Mass X-ray Campaign following up the large number of new cases suddenly found.

B.C.G. Vaccination

There has been a substantial increase in the number of children vaccinated with B.C.G. in the schools during 1959. Out of the total offered vaccination (14,074), 11,313 accepted representing a figure of 80·4% compared with the acceptance figure in 1958 of 75·3%. It is felt that this increased acceptance is probably due to the health educational aspect of the Mass X-ray Campaign. B.C.G. vaccination has continued to be offered and accepted by many mothers of babies born at the maternity units of several City hospitals into non-tuberculous households. At Sefton General Hospital there were 1,474 vaccinations, at Walton Hospital 309 and smaller numbers at Mill Road and Broadgreen Hospitals.

Compulsory Admission to Hospital

Three cases were compulsorily admitted to hospital under Section 172 of the Public Health Act, 1936, during the year. Details of these cases are given in the main text of the annual report. An interesting feature of these cases is that compulsory admission has resulted in them all accepting treatment afterwards in a voluntary way. There is no

doubt that the admissions have been most helpful. New arrangements were made during the year to modernise the arrangements for sputum disposal in the homes of tuberculous patients.

Mass Radiography

The Mass X-ray Campaign which took place in February and March, 1959, was a great success. 454,286 persons were X-rayed in four weeks of the Campaign plus 18,381 persons in the five weeks immediately before at the Health Department. This represents 76·5% of the available population of Liverpool over the age of fifteen years. In addition, 8,324 persons from neighbouring areas including Kirkby were X-rayed.

A complete report has been published and presented to the City Council in March, 1960, and it is not, therefore, intended to give full details in this report. It is, however, most satisfactory to recall that 1,045 cases of active tuberculosis were discovered in the campaign and in addition 1,731 cases were found who needed occasional supervision.

It is satisfactory to look back on the successful outcome of the campaign which was entirely organised locally by the City of Liverpool and the Liverpool Regional Hospital Board. Assistance in planning was given by the Ministry of Health, and the Central Office of Information, but the organisation was completely local and affords an excellent example of co-operation between the local Health Authority and the Liverpool Regional Hospital Board.

It seems likely that the City will reap a valuable harvest in the future in the reduction of tuberculosis as a result.

Venereal Diseases

It is satisfactory to report that during 1959 there was a reduction in the cases of venereal disease in the City. The number of cases of syphilis was reduced from 62 to 44 in males, with a slight increase in females from seven to eight, whilst cases of gonorrhoea fell from 1,381 to 1,171. Details are given of some of the interesting cases which the welfare officers of the Health department have dealt with in this field during the year. It is encouraging to note that in 1959 contact tracing was considerably more successful than in previous years.

Mental Health

The passing of the Mental Health Act was the great event of 1959 in mental health work. Although important sections have not yet come into operation, already many of the concepts embodied in that Act are in process of introduction. In June, 1959 a review of the mental health

service was undertaken at the request of the Ministry of Health, and this long document was printed and circulated both to the Ministry of Health and all members of the City Council. It is not proposed to repeat this information in the present report but it will be helpful if the information in that review is borne in mind when reading the mental health section of this year's annual report.

Informal Admissions

In October, 1959 the implementation of the new Act began with an order authorising hospitals to admit mentally disordered patients informally without use of procedures under the Lunacy and Mental Treatment Acts. The effect of this arrangement on the emergency procedure could not be accurately assessed in the short period before the end of the year. It is, however, interesting to note the comparison shown in the report between the number of people admitted under section 20 in 1959 compared with the number in 1949. In 1959 out of 1,324 people referred 850 were admitted under section 20, while ten years ago there were 561 admitted under section 20 out of 909 referrals.

Care and After-Care Work

There has been a satisfactory increase of more than 200 in the number of patients for whom care and after-care was carried out during the year. A total of 1,377 patients were helped in this way and in all 5,807 home visits were made.

The work of the employment officer continued to be of great value during the year and 39 posts were found through his agency for mentally disordered patients in 1959. The difficulty of placing mentally disordered people is emphasised when it is realised that this officer had over 700 interviews with patients and over 150 interviews with employers during the year. The difficulty is, of course, increased by the high unemployment rate in Liverpool compared with the rest of the country, but it is felt that, with the introduction of new industries, there will be greater opportunities for mentally disabled people in industry.

Two individual case histories are given in detail in the report illustrating some of the difficulties which are met by the mental health officers in rehabilitation and after-care work. It is hoped to introduce such case histories, from time to time, in subsequent annual reports so that those reading the report will be able to realise some of the human problems and tragedies involved in this work.

Training

For some years the annual report has emphasised the need for more training centre accommodation in the City, and the situation has grown worse during the year, and at the end of December, 1959, there were 130 on the waiting list. However, it is pleasant to record that during the year considerable progress was made with the scheme to adapt six new centres at the former Fazakerley Cottage Homes making eventually a total capacity for an additional 300 persons in training centres. It is expected that work on these centres will start towards the middle of 1960 and should be completed by the end of the year.

In the meantime, work at the three existing centres has continued. One of the innovations introduced into these centres during the year was the arrangement whereby older girls and women attending the centres were given training designed to improve their personal appearance, and instruction was given in the use of cosmetics, hair washing, etc., on the understanding that prior consent of the parents had been obtained.

Institutional Care

It is satisfactory to report that the waiting list for institutional care has again been reduced during the year and that now there are only 32 patients in the top urgency compared with 39 at the end of 1958, and 56 at the end of 1957. There are still some very serious cases amongst this smaller waiting list and it is hoped that the improvement noted in the last two years will continue.

Informal Stay

It is interesting to report that the informal admission to hospital without the formality of the compulsory procedure under the Mental Deficiency Acts authorised for the first time in 1958 has been working very satisfactorily in Liverpool. During the year, 50 out of the 78 admissions were arranged informally and now it seems clear that informal admission is the accepted normal procedure. The change has worked smoothly on the whole and there is no doubt that in the past many patients could well have been detained in hospital without orders of detention. There are, however, exceptions, and an interesting case is quoted in the report concerning a man of twenty showing reasons why it may still be advisable to retain compulsion for isolated unstable high-grade patients.

Staffing

There have been considerable changes in the staffing of the service during the year. These changes were anticipated in the last year's report, and during 1959 the staff of visiting officers was increased by the appointment of eight additional mental welfare officers making a full staff of sixteen men and seven women. In addition, a psychiatric social worker was appointed and took up duty in October. In addition to these increased appointments, greater mobility of the staff was obtained by arranging for all visiting officers who wished to do so to become essential car users. At the end of the year, already sixteen visiting officers are using their own cars in connection with official duties and this greater mobility of staff will also have the effect of increasing the turnover of work throughout the City.

Case Conferences

Case conferences have been held continuously during the year and have been most successful.

Mental Health Centre

During the year, progress was made towards the establishment of a mental health centre designed to effect co-ordination between the various agencies connected with mental health work, and to offer a friendly atmosphere for the patients. Although it is eventually intended that the centre shall form part of a very large proposed civic centre, plans are well advanced for a temporary structure to be erected at the rear of the present Health department to act as the mental health centre in the meantime.

Occupational Therapy

The occupational therapy service, first introduced in 1958, has developed rapidly during 1959. The staff was increased to three full-time occupational therapists, and a total of 4,356 visits were made during the year covering a total of 190 patients. In addition, supervisory work was maintained with the weekly handicraft classes arranged by the welfare service section of the department at the centres.

Type of Patient Helped

Full details are given in the body of the report explaining the work which this new section is undertaking. It will be seen that the work covers very many different types of case, including very crippled people, mentally handicapped people as well as persons who have lost a limb and need rehabilitation. There has been a constant demand for aids of all kinds to assist handicapped people to live more independently and the stock of aids available has been increased during the year. In

addition an electrically operated bed was obtained and lent to a very heavy and completely helpless male patient. This has made a great difference to this patient's life at home, and additional lifting hoists have been purchased for loan.

Alteration to Houses Supervised

A number of recommendations have been made for altering houses to enable them to be used by crippled and handicapped people. These include an especially adapted bathroom built on the ground floor for a paraplegic patient (paralysed) to enable him to perform his toilet requirements independently. Other alterations undertaken have been the widening of doorways to enable them to take more easily wheel chairs, the construction of ramps instead of steps at front and back doors, and power points and working surfaces at comfortable heights for those who are in wheel chairs or are unable to bend down. Agreement has also been reached with the Housing Committee for the construction of a certain number of houses for disabled people on their housing list.

Full details of four typical cases which have been helped by the domiciliary occupational therapy service are given in the report and make very interesting reading.

In addition a start has been made with occupational therapy in co-operation with the School Health Service for very handicapped children. It is hoped to be able, in this way, to start training such children at a very early age, bearing in mind the occupation which they may eventually be able to undertake.

Occupational Therapy Centre

Towards the end of 1959 plans were agreed for the construction of an occupational therapy centre to be built in the grounds of Westminster House. This will have two main purposes:—

1. It will provide a centre to which residents from Westminster House can come for occupational therapy, and

2. It will be used for the treatment of out-patients requiring group therapy or specific occupational therapy using apparatus impossible to supply in their homes.

It is hoped in this way to extend rapidly the scope of these important services in the City.

New Staff

Arrangements have been made to recruit additional staff, and the establishment of the section has been increased by a further three trained occupational therapists, making a full establishment of six in all. Two of the staff were appointed at the end of 1959.

There is little doubt that the first two years of the domiciliary occupational therapy service in Liverpool have uncovered a tremendous and very fruitful field for welfare work. In many instances these patients have been unable to benefit from the occupational therapy out-patients service at the hospitals. Already it has been possible to rehabilitate to ordinary life many crippled people, including many housewives.

In the new centre, it is planned to have an especially adapted kitchen where disabled housewives can be taught to use aids, thus enabling them to learn how to do their own cooking and housework even though they are very handicapped.

Welfare Services

Residential Accommodation

Reference was made in last year's annual report to the sudden great increase in the waiting list which had occurred during 1958 for residential accommodation. To relieve this pressure, progress has gone forward quickly in arranging for additional accommodation to be made available. In particular the extension connected with Brookside House has been progressing satisfactorily during the year and it is hoped to open it early in 1960. In addition, it is planned to erect new hostels in the West Derby and Fazakerley areas and in grounds connected with the existing hostels at Holt House, Croxteth Lodge and Westminster House. At the end of 1959 the waiting list stood at 213.

During the year a trial scheme for helping to find accommodation for old persons in private households ("boarding out" as it is sometimes known), was made with the assistance of the Liverpool Personal Service Society. It is too early yet to assess the effects of such a scheme although it is clear that in a City like Liverpool there are many difficulties facing its introduction.

It is of interest to note that during the year, 87 houses and flats were vacated by elderly persons being admitted to residential accommodation, compared with 84 in the previous year. The total number of persons admitted to residential accommodation in 1959 was 479, an increase over the 1958 figure of 404.

Up-grading at Westminster House

The final stages of the adaptation of house 12 at Westminster House were completed in December and 48 residents moved into their new surroundings just before Christmas. This portion of the up-grading of Westminster House completes a very significant part of the programme as this accommodation was amongst the worst in Westminster House before the upgrading. The changes introduced have been most striking and have converted this old-fashioned dormitory type of accommodation into a pleasant, airy, brightly coloured and decorated section of the establishment.

The new lift installed in the main building has been so successful that it has been decided to go further ahead with other lifts to facilitate the upgrading in Westminster House. Once again great assistance was given by the generosity of the Merseyside Hospitals Council during the year in providing television receivers, modern radio sets, and new pianos where required. These amenities were very keenly appreciated by the residents and together with the broadcast line still operating very satisfactorily at New Grafton House, continued to give pleasure to many old people.

Brookside Annexe

Good progress was made during the year in the construction of an Annexe for Brookside House and this will mean that when completed, 41 residents will be housed in this hostel.

Outings for Residents

During the past three years, changes have been made in arranging summer outings for the residents and improvements have been introduced wherever possible. In 1959, an innovation was the introduction of full-day outings for the residents to Fleetwood and North Wales and half-day trips to Southport and Chester. These have been a great success and have been much enjoyed by the residents, particularly enhanced by the exceptionally fine summer.

Chest X-Ray of Residents

Arrangements whereby all old people admitted to residential accommodation have a chest X-ray have continued very satisfactorily. As a result six cases of tuberculosis were discovered during the year and this must make a significant help to preventing the spread of infection in old people's homes. The results of the Mass X-ray campaign have high-lighted the very high incidence of tuberculosis amongst the elderly male person. For this reason the value of such an arrangement, which is very easy to carry out, is self-evident.

Temporary Accommodation

Once again it is most satisfactory to report the very large turnover in the temporary accommodation controlled by the Health Committee. The extent of this will be realised when it is reported that during the year 980 persons were admitted and 1,027 discharged from the temporary accommodation. These figures compare with the admission of 834 in 1958. The average figure at present in the accommodation is exactly the same as in the previous year—63. The average length of stay is fifteen days.

The success of the Liaison Sub-Committee of the Health Committee in keeping this problem down to such small limits and with such a large turnover is very obvious when these figures are considered.

During the year a small but difficult problem which occurred was the arrival of five families being repatriated to England from Burma and who had to be admitted to the temporary accommodation. These families had found life in Burma impossible due to the change in the political situation there and had obtained assisted passages to England. They were dealt with very successfully and it is pleasant to record that, after a short stay in the temporary accommodation, they all made their own arrangements to live and settled down in Liverpool or elsewhere.

Domiciliary Welfare Services

During the year new steps were taken to ensure that every old person in the city really knows the services available to help them. This was by an arrangement whereby in each retirement pension order book and non-contributory pension order book information cards were inserted giving details of some of the welfare services available to the elderly.

Details are given of six interesting cases which have been dealt with by the welfare visitors during the year, which will give a good insight into the variety and difficulty of the problems which are met.

Help with Flooded Families

In this respect it is interesting, in such a remarkably fine year, to record that, due to a quite exceptional thunderstorm in August, heavy flooding occurred in parts of the City and in particular in Rachel Street. The problems created were very great and the welfare visitors and other members of the Health department played a prominent part in helping the persons whose homes had been flooded. In particular it was found that the 'meals on wheels' service was of great help, and in this connection 875 meals were delivered free to the flooded victims during the period when repairs and decorations were being effected to the houses.

River View Rest Centre

The very fine summer saw the River View Rest Centre even more popular than ever before and there is no doubt that its success is very great indeed.

Sheil Park

In August a new rest centre was opened in Sheil Park which was run by the Women's Voluntary Services with the co-operation of the Health Committee. A prefabricated type of hut, the cost of which was borne by a grant from the King George VI foundation, forms a basis for the club and the club was opened in September by the Lord Mayor. The success of this club was already assured by a registration of a very large number of old people in the area wishing to take part in its activities. Towards the end of the year plans were under consideration by the Health Committee for the opening of two further Centres in existing buildings, one of which will be in the centre of the City.

Mobile Meals

Considerable comment was made last year in the annual report about the development of the mobile meals service and it is most satisfactory to report that the development envisaged and planned last year has extended quickly, so that by early 1960 a daily total of 360 meals will be delivered compared with 100 meals at the end of 1958. This has been possible by the use of the kitchen attached to New Grafton House and by a greatly increased turnover of mobile meals from both the New Grafton House kitchen and the Westminster House kitchens. New vehicles and staff to drive them have been recruited and mobile meals are now being supplied on every week-day, Monday to Saturday inclusive.

A large-scale kitchen has been included in the hostel plan for Leyfield site, West Derby, and it is hoped that when this is completed it will be possible to extend even further the mobile meals service. There is no doubt that this service is of very great value to the welfare service of this City and has, in many cases, enabled an old person successfully to stay at home, which they prefer, rather than be admitted to residential accommodation.

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

During the year it was necessary to remove, compulsorily from their homes, nine persons under the provisions of section 47 of the National Assistance Act, 1948. This is a reduction of four compared with the previous year. This section of the Act continues to be of great value in exceptional cases, although it is, of course, important to realise that many more persons at first refuse to be admitted but are persuaded to do so without recall to section 47 of the National Assistance Act.

Blind Welfare

The downward trend in the number of persons registered as blind did not continue during 1959. The figure in 1959 was similar to the average recorded before 1957. 214 persons were referred to the department because their vision was defective and 143 of these were registered as blind (compared to 112 in 1958), 53 as partially sighted (compared to 40 in 1958). There is no apparent reason for these fluctuations in the number of blind people found and referred.

Employment of Blind Persons

The satisfactory trends towards more and more people to be employed in open industry and fewer in sheltered workshops have continued. By the end of the year the number of blind persons employed in sighted industry was 109 and those in sheltered workshops 75. This is a most satisfactory change and quite a dramatic one when it is realised that only a few years ago more people were employed in sheltered workshops than in open industry.

It is a pleasure to record the work of the blind placement officer of the Royal National Institute for the Blind who has been so successful in making this change possible. It is also important to realise how such a change has resulted in more blind people living independently within the community.

Sir Robert Jones' Workshops

These workshops cater for just over fifty severely handicapped people who are employed mainly in the trade of book-keeping but also in printing and Christmas card renovation. During 1959 the City Council have contributed the sum of £5,887 to the running of these workshops. In many recent annual reports the value of these workshops has been emphasised and they continue to play an essential part in the rehabilitation of the severely handicapped within the City. As well as the number of severely handicapped persons who are employed there, it is important to remember that others are rehabilitated, through the workshops, back to normal employment.

Deaf and Dumb Welfare

The Deaf and Dumb welfare in Liverpool has continued to be carried out during the year most satisfactorily both by the Liverpool Deaf and Dumb Benevolent Society and the Catholic Deaf and Dumb Society of St. Vincent de Paul. The grant during the year has continued at £5 per head. Towards the end of the year arrangements were made to increase this further for 1960.

In the autumn the second annual general meeting of the five constituent local authority representatives was held in Birkenhead when the representatives of all the authorities and their officers were entertained to a lunch by the Mayor of Birkenhead. Both before and after the luncheon, meetings were held in connection with Deaf and Dumb welfare. These meetings were most useful and formed a centre for discussion by all constituent authorities of the problems of the deaf and dumb in the area.

Generally Handicapped

There has been a great increase in the work undertaken for the handicapped people in the City during the year. Reference has already been made to the increased work being done by the occupational therapy section of the department and in addition, three weekly centres for handicapped people have been opened in the City and have been attended by up to thirty people each week. These centres are catering for those handicapped people who are capable of reaching the centre although in many cases transport has had to be provided. Instruction has been undertaken by handicraft instructors under the skilled supervision of the head occupational therapist and classes have progressed satisfactorily. In addition, at Christmas, a most successful party of all handicapped people was held at 100, Walton Village attended by 85 people. There was no doubt that the changes in the year have been very greatly appreciated by the handicapped persons in the City.

Epileptics

There are 71 adult epileptics maintained by the local authority in colonies established for the purpose of providing residential care and attention and 21 persons were allocated vacancies in such colonies during the year.

The Merseyside Epileptics Association, to which reference has been made in the last annual report, has continued to function on Merseyside during the year. Various meetings have been held and accommodation provided by the department for the association free of charge.

The Handicapped Persons Services Sub-Committee of the Health Committee made arrangements to visit Maghull Homes and spent a useful and profitable afternoon with the staff there seeing the work which is carried on in this colony.

The arrangement continued whereby the premises of the local authority at 100, Walton Village have been made available to various clubs for their use during the year and this has proved most valuable.

Problem Families

Fourteen case conferences were held during the year on various problem families which came to the notice of the Corporation departments for various reasons. These meetings, attended by Corporation officers from many departments and many social workers in voluntary and other organisations, have proved to be valuable as a means of assessing the welfare work needed and co-ordinating the work to be carried out for such persons.

Ambulance Service

During 1959 a new record total in the number of patients moved by ambulance was reached when 226,095 persons were moved compared with 217,979 in 1958. This represents an increase of 3·7%. It is interesting to note that this increase is greater in proportion than the increase noted last year. The total mileage travelled by the ambulance vehicles also showed an increase by 5,256 miles to a total of 965,520 miles. However, there was an economy in the fuel used, and there was a fuel reduction during the year of 5,213 gallons. This has largely resulted from the introduction of smaller petrol engines in new sitting case ambulances and the conversion of more stretcher case ambulances to diesel type vehicles.

The increased load of patients moved has produced greater difficulties in meeting all demands throughout the year and, towards the end of the year, decisions were taken to increase both the staff and number of vehicles to meet this increased demand.

A change has been made during the year by introducing a new type of mobile radio equipment needed to meet the standard set by the General Post Office by 1962. During the year eight vehicles were supplied with the new sets.

Ambulance Stations

During the year, the central ambulance station, Stanhope Street, was re-opened after the fire and began functioning completely as a general and emergency service. In addition, the Westminster Ambulance Station has opened for full use as an ambulance station and to it have been transferred the infectious disease ambulances which used to operate from Gascoyne Street. This new arrangement will undoubtedly effect an economy and increase the efficiency of the ambulance service.

The ambulance service has also moved a number of very handicapped persons to welfare centres and handicraft classes in the City throughout the year and a total of 340 patients were moved in this way.

Housing Points Scheme

There was a reduction in the number of general medical cases dealt with in the housing points section during the year. 4,482 general medical cases were assessed compared with 5,231 in 1958. There was, however, an increase in the number of tuberculosis cases assessed and in 1959 there were 789 pulmonary tuberculosis cases and 32 non-pulmonary tuberculosis cases assessed compared with 667 and 45 respectively in 1958. This increase was connected with the increased number of cases discovered, largely due to the Mass X-ray Campaign carried out in the year.

Six examples are given in the report of the type of cases dealt with in the medical points scheme and the results which have been achieved. It will be noted that either by referral direct to the Allocation Special Sub-Committee of the Housing Committee or by arrangement for priority to be given to those already on the allocation housing list, it has been possible to arrange a priority system for those in urgent need of medical care.

Medical Examinations

In 1959, the first full year in which medical examinations have been carried out by the doctors of the Health department, 2,488 medical cases were seen and examined. These personnel are examined for one of three reasons :—

(*a*) entry into the Corporation service for officers

(*b*) entry into the Superannuation scheme for manual workers, and

(*c*) for assessment of extended medical sickness cases.

Every person examined has, in addition to a full clinical examination, a mass miniature radiography carried out which has resulted, during the year, in the discovery of two patients with carcinoma of the lung and three cases of pulmonary tuberculosis. Full details of the results found by medical examination are given in the text of the main report.

Environmental Health Control

During 1959 the work of the Public Health Inspectors' section has shown great diversity. The Mass X-ray Campaign gave a good example of how valuable and useful is this section. In particular the public health inspectors under the Chief Public Health Inspector mobilised industry widely and arranged for a very large number of persons to be X-rayed during their working hours directly from their workplaces. In addition to this the control of the public at each Mass X-ray unit was undertaken by a team headed by public health inspectors. The prize fund was also handled by public health inspectors entirely and, in a likewise way, they undertook the wide distribution of much of the publicity material including the delivery of the two hundred and twenty thousand fellow citizen letters and the bulk of the small posters to shops and houses. Much of the loudspeaker equipment was entirely handled by public health inspectors.

The Mass X-ray Campaign showed only too clearly what can be achieved by complete mobilisation of a staff and it was interesting to note the enthusiasm and energy of many of the staff and how well they were able, with their wide experience of handling the public, to exercise control tactfully and helpfully.

Training Scheme for Assistant and Trainee Public Health Inspectors

The training scheme has continued most successfully throughout the year and resulted in twenty-five assistant inspectors completing their training and obtaining their certificate of the Public Health Inspectors Education Board qualifying them for appointment as public health inspectors. In addition ten qualified inspectors obtained the Meat and Other Foods Certificate of the Royal Society of Health and are now able to take their turn in carrying out food inspection duties at the abattoir and markets.

During the year, the training scheme has been extended to include pupils between sixteen and eighteen years of age. This new method of recruitment has provided a sound source of entrance for young persons with educational qualifications which comply with the requirements of the Public Health Inspectors Education Board.

Work Carried Out in Default

The use of the special powers given the Corporation of Liverpool under the Corporation Act 1955 have continued to be of great value during 1959 in enabling work which landlords have failed to carry out, to be undertaken and the cost recovered in default by collecting rents. In

1959 it was necessary to carry out repairs in default of owners to 259 houses involving expenditure of approximately £2,500 all of which eventually will be recovered.

Infectious Disease Enquiries

The infectious disease enquiries undertaken by public health inspectors have continued throughout the year. Considerable extra work was undertaken towards the end of March by the discovery of a case of smallpox which is referred to in detail in another part of the annual report. In addition the public health inspectors staff has continued to carry out extensive work in connection with ingestion disease enquiries. Altogether 6,931 specimens fom 3,578 persons were submitted for bacteriological examination and as a result 1,502 specimens from 848 persons proved positive.

Common Lodging Houses

The inspection of the twelve registered common lodging houses in the City has continued throughout the year and 267 visits carried out at both night and day-time have resulted in forty-two notices being served in respect of infringements. There was a welcome reduction from fifty-six to twenty-nine in the number of beds found to be verminous in 1959 compared with 1958. Arrangements were made for both bedding and the lodgers found to be verminous to be cleansed by the local authority.

In addition inspections were carried out continuously on the fourteen seamen's lodging houses on the register of the City and a total of 296 day and night inspections undertaken.

Housing and Slum Clearance

Notable landmarks were passed during 1959 when the ten thousandth slum dwelling was reported to the Council since slum clearance recommenced after the Second World War.

Although this marks a tremendous step there is still a great deal remaining to be done as the rate of deterioration in many of the older houses is still considerable and this coupled with the ever increasing difficulty of finding sites for housing accommodation means that slum clearance in the future is likely to be more difficult than in the past.

During the year, thirteen clearance areas were represented under section 42 of the Housing Act 1957 which included 769 houses containing 3,311 persons. Orders in respect of 1,607 houses containing 4,677 persons were received from the Ministry.

Public enquiries were held in respect of twelve compulsory purchase orders and a further five compulsory purchase orders were unopposed. The Minister's inspector visited the site to inspect properties in respect of applications by owners and occupiers for well maintained payments.

Rent Act, 1957

Work under the Rent Act, 1957, has continued during 1959 although this year showed a reduction in the activity under the provisions of this Act in comparison with the previous year. Since the inception of the Act approximately 25,000 visits have been made and many tactical difficulties have arisen invariably due to irregularities in the procedure to be carried out by the tenants. Full details are given in the text of the report in regard to the work undertaken in this respect.

Improvement Grants

Very full details are given in the text in respect of the improvement grants and in particular an explanation between the changed standard and discretionary improvement grants is given in detail. During the year twenty-two applications were received for standard grants and twelve grants were made; 197 applications were received for discretionary grants and 160 grants made. The total number of inspections carried out in response to enquiries about standard and discretionary grants carried out in 1959 was 631.

Loans on Mortgage

The work under the Housing (Financial Provisions) Act, 1958, has continued during the year and there has been an increase to 704 inspections undertaken in connection with this Act and of these 505 were approved for loans.

Factory Inspection

The work undertaken in relation to factory inspection is dealt with in detail in the text of the report. A very close liaison is maintained with H.M. Inspectors of Factories and it is most satisfactory to recall that although the powers and responsibilities of the local authority are limited in relation to factories, the services of the Health Department are frequently called upon by managements and H.M. Inspectors in respect of problems affecting the arrangement of building and processes, smoke emissions, industrial nuisances and the layout and construction of canteens.

Food Factories

Details are given in the text of the work undertaken by the public health inspectors in relation to food factories and particularly in connection with bakehouses and preserved meat premises. It is satis-

factory to report that most of the preserved cooked meat sold in the City is prepared in factories where the supervision is highly organised and the code of hygiene strictly enforced. In this class of factory it is found that managements are well aware that contamination of meat products is an important health factor and, in general, employees have been trained by their employers to appreciate this fact.

Industrial Nuisances—Noise

Complaints about noise from industrial premises has continued throughout the year. The extremely fine warm summer certainly led to an increase in this type of complaint. This was connected with the necessity to keep windows open for long periods in the very hot weather. Details are given of two unusual cases which arose and in one instance it was necessary to serve a statutory notice to achieve a reduction in the noise.

Offices and Work Places

The welfare of clerical workers and the environmental conditions in offices has been the subject of much work undertaken by the public health inspectors during the year.

It is of interest that the situation in Liverpool was referred to during the year in connection with the presentation of a Private Members Bill in the Houses of Parliament in connection with objective welfare legislation for this class of workers. Although there are as yet no legislative powers to ensure adequate lighting, heating, washing facilities and other requirements in offices, for many years these problems have been improved in Liverpool by the co-operative efforts of employers and managements with the health inspectors. It is most satisfactory that the majority of firms in Liverpool have accepted the advice of the Health Department in this respect and that conditions are considerably better than in many parts of the country.

3,569 visits were made during the year to offices and workplaces and this in itself shows the attitude of the department to this type of employment. In this connection it is interesting to note that the very good relations between the public health inspectors and the employers led to the very satisfactory result during the Mass X-ray Campaign when managements of offices proved very ready to allow their workers to come forward for X-ray in office hours wherever possible.

Hygiene in Licensed Premises

During the year increased efforts have been made by brewery companies to maintain a good standard of hygiene in licensed premises. This problem is dealt with in detail in the report and it is

particularly stressed that in many instances it is the customer who negatives the good effect of the management. This is especially so in relation to the question of ventilation which is becoming more and more a problem in licensed premises. Overcrowded rooms, thick with tobacco smoke require very frequent air changes but these can be interfered with by customers closing windows unknown to the management. These problems have required many visits from the public health inspectors during the year and no fewer than 1,084 inspections were made to public houses in this connection.

Administration of the Shops' Act, 1950, and the Young Persons' (Employment) Act, 1938

During the year there has been an increase in the number of visits paid in connection with the Shops Act, 1950, and the Young Persons (Employment) Act, 1938, and a total of 90,922 visits have been paid compared with 72,111 in 1958. This great increase in the number of visits has been made possible by the change in the administration which took place three years ago whereby specialisation has continued and all the duties were allocated to the inspectorate geographically. This arrangement has not only had the advantage of increasing the amount of visits possible, but has improved the good public relations between the staff and shopkeepers. The report mentions the difficulty in carrying out the duties under this Act which by reason of many of its anomalies and requirements, is considered by some shopkeepers to be restrictive. Considerable tact, patience and perseverance have been needed at all times in carrying out this work. In particular complaints have been received about the demonstration of cars and television sets during the hours when shops should be shut.

Hairdressers and Barbers

During the year thirty-five new registrations of hairdressers and barbers were dealt with and the total number on the register at the end of the year was 622. In addition 838 inspections of hairdressers shops have been carried out compared with 324 in 1958 and this action has resulted in 230 infringements being recorded and being dealt with by warning letters. Experience of this registration since its introduction three years ago has demonstrated the value it has had in raising the standards of hygiene in these shops without interfering unnecessarily with the trade.

Atmospheric Pollution

Once again it is very pleasant to be able to report a great increase in the achievements of the department in connection with atmospheric pollution in 1959. During the year the largest smoke control area in

were packed in a wet condition, so that, by the time they reached the wholesale market in this country they were mouldy and had started to fall from their clusters, features which rendered them unfit for sale or even salvage.

Details are also given of the 308 complaints received from members of the public during the year in respect of foodstuffs which had been purchased within the City boundary.

An interesting finding this year was connected with an unusual mould *monilia sitophila* on bread. This outbreak was clearly connected with the unusually warm conditions of the exceptionally good summer of 1959 and it is interesting to recall that the last widespread appearance of this mould in the City was in 1955 when there was also an exceptionally warm summer.

Details are also given of the work undertaken in the inspection of food purchased by the central purchasing department of the Corporation and it is satisfactory to note that the arrangements with the United Liverpool Hospitals Board whereby twice monthly visits of inspection are made to hospital premises, have continued throughout the year.

Meat Inspection

1959 saw a large increase in the number of sheep and lambs slaughtered at Stanley Abattoir. The total was 361,848 which represented an increase of 145,938 on the previous year. This was due to the long and dry summer which made pastures very dried up and withered and this combined with an acute shortage of water, resulted in an increased number of sheep and lambs being sent for slaughter.

Another interesting feature of the year was the number of cows slaughtered under the Tuberculosis (Slaughter of Reactors) Order which resulted in 194 cows being slaughtered compared with the 60 slaughtered in this way in 1958. This increase was due to the anticipation of the final assault on bovine tuberculosis due to be held in March, 1960.

It is most satisfactory to record that the arrangement which was in its third year of operation whereby trainees and public health inspectors from the City assist in meat inspection at Stanley Abattoir has worked most successfully. The twelve trainees were successful in obtaining the certificate of competency in meat and food inspection issued by the Royal Society of Health, and the shortage of full-time meat inspectors

has entirely been overcome by the wide use of general public health inspectors all fully qualified. This has the added advantage of providing these young inspectors with wide experience of all types of work including meat inspection and it has provided a most satisfactory reserve of trained personnel to meet any emergency.

Milk Supplies

The changed delegation of duties which came into effect in 1957 has continued to operate most satisfactorily during the year. The general public health inspectorial staff have continued to be responsible for the supervision and inspection of milk supplies. Full details of the work undertaken in this context are given in the text. One item of great interest during the year was the fact that the daily consumption of milk in Liverpool rose from 91,870 gallons to 105,514 gallons. As will be seen from the text of the report, the vast majority of this is pasteurised or T.T. pasteurised milk.

Rodent Control

The drive to eliminate rats is gaining momentum and there were many signs during 1959 that the rat and mice population is considerably less than it was a few years ago. It is encouraging to note that more and more are the services being called by private individuals in their dwelling houses. All services to private individuals in their dwelling houses are given free of charge. During the year 4,582 buildings and lands were disinfested from rats and mice.

Disinfection and Disinfestation

Full details are given of the work of this section at the end of the report. Work undertaken in many aspects has shown a further increase during 1959.

It will be seen that this section undertakes many other quite different duties from disinfection and disinfestation itself. These include delivery of many vital supplies to the other sections, including poliomyelitis vaccine, home nursing equipment, food supplies to the old people's hostels, welfare foods and the collection of human breast milk for delivery to the milk bank. In addition, this section has increasingly undertaken the work of delivering "meals on wheels" and during 1959 a large increase in this respect was seen. A total of 19,729 visits were paid in relation to the delivery of mobile meals compared with the figure of 11,573 in 1958.

This section has also been extremely actively concerned with the very successful health exhibit at the Liverpool Show and has the responsibility of constructing, storing and setting up the various stands for that Show.

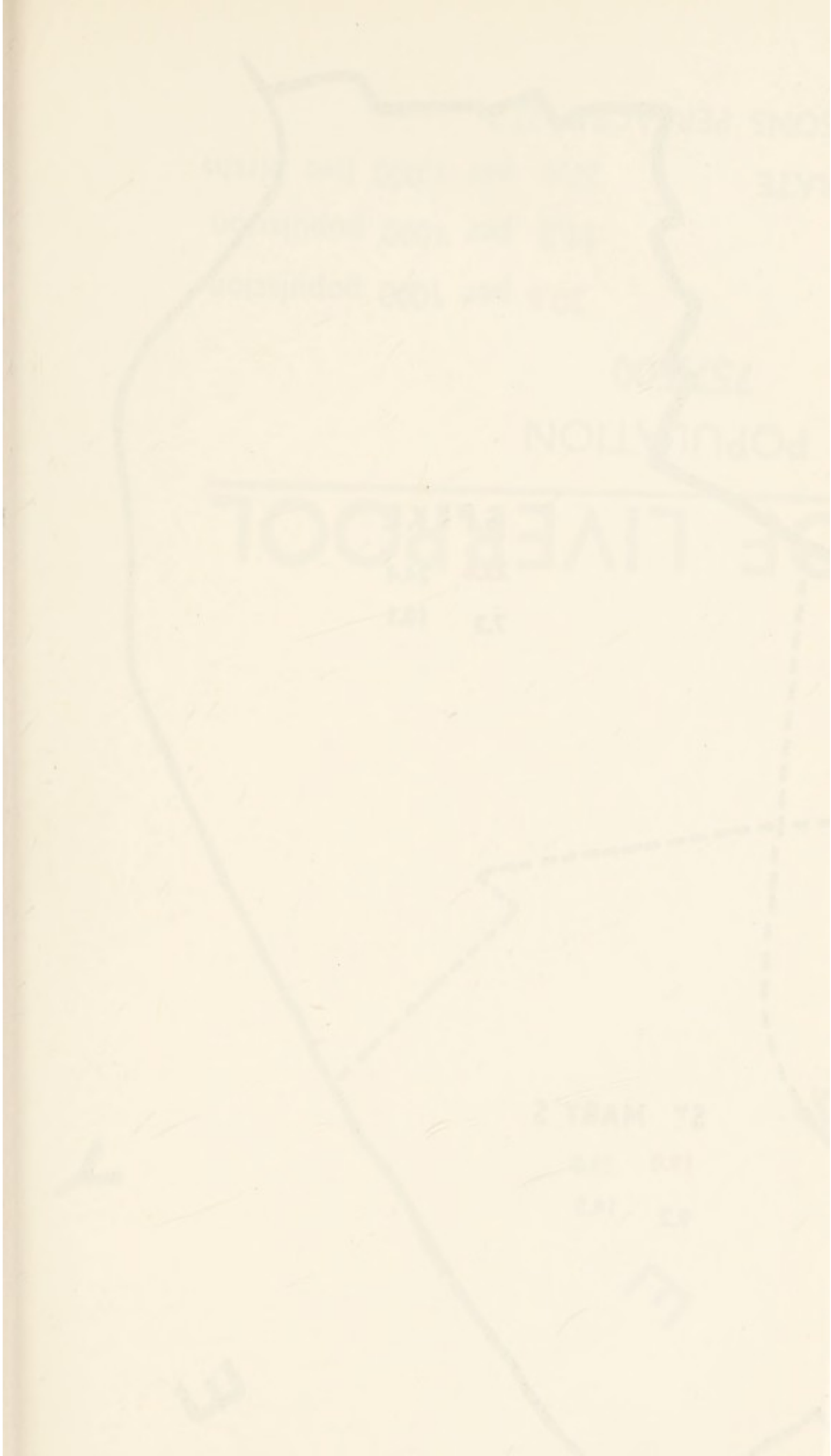
I wish to acknowledge the help given during the year by the Chairman, Alderman Alexander Griffin, and the Deputy-Chairman, Alderman Michael J. Reppion, who have devoted so much time and energy to the work of the department. Also, I wish to record my thanks to my deputy, Dr. J. B. Meredith Davies and all the members of the staff of the Health Department for their hard work and loyal support during the year. My thanks are also due to the other corporation departments for their assistance when required. Finally, I wish 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.



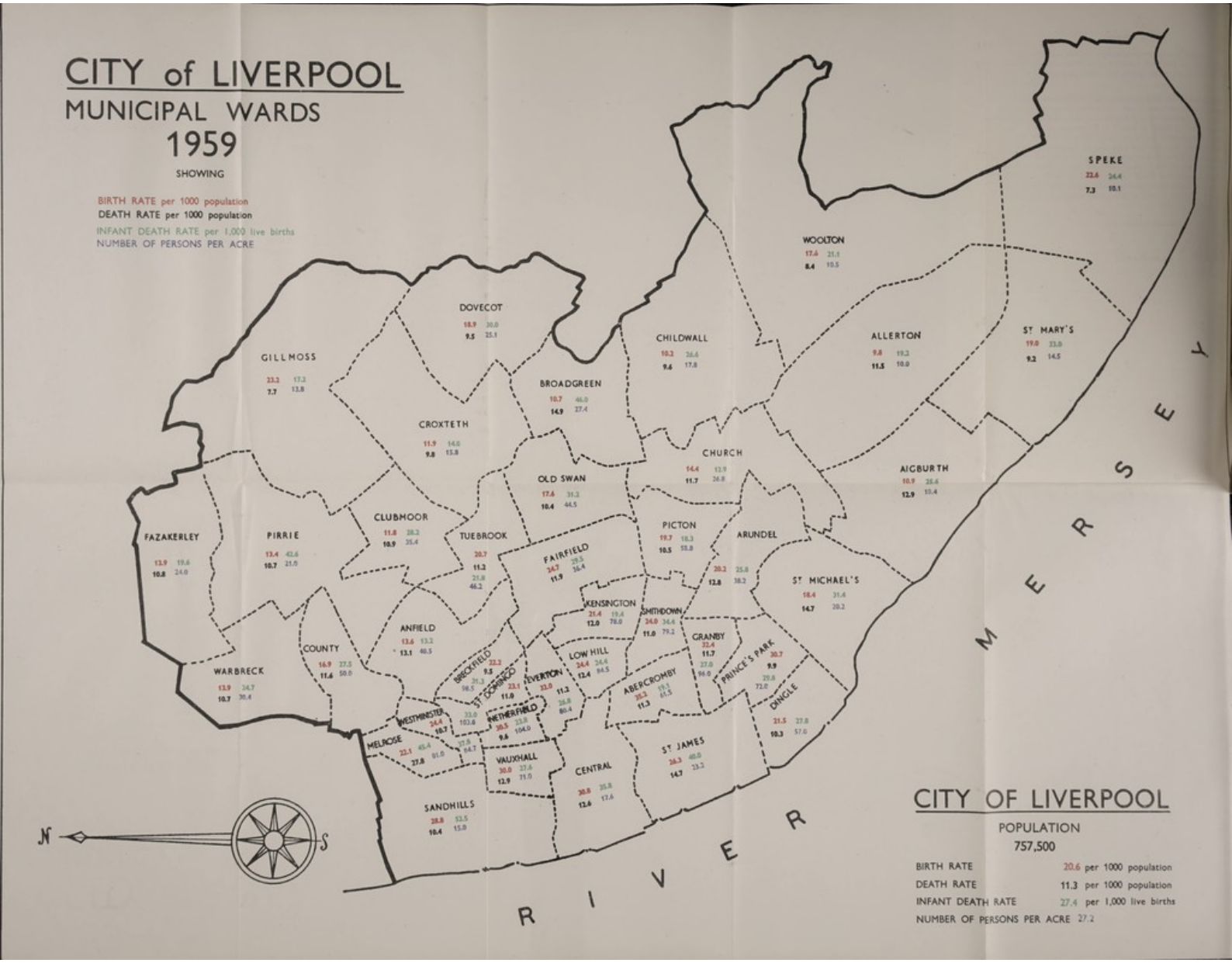
CITY of LIVERPOOL

MUNICIPAL WARDS

1959

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
757,500

BIRTH RATE	20.6 per 1000 population
DEATH RATE	11.3 per 1000 population
INFANT DEATH RATE	27.4 per 1,000 live births
NUMBER OF PERSONS PER ACRE	27.2

CITY OF LIVERPOOL

SUMMARY

OF

VITAL STATISTICS FOR 1959

Area (land and inland water)	27,818 Acres
Population (Estimated by Registrar-General)	757,500
Deaths (all causes)	8,587
Death rate per 1,000 population	11·3
Live Births	15,615
Live Birth rate per 1,000 population	20·6
Stillbirths	375
Stillbirth rate per 1,000 total (live and still) births	23·4
Total Births	15,990
Infant Deaths (under one year)	428
Infant Mortality rate per 1,000 live births	27·4
„ „ „ „ 1,000 legitimate births	27·1
„ „ „ „ 1,000 illegitimate births	33·1
Neo-natal Mortality rate (First four weeks) per 1,000 related live births	19·6
Early Neo-natal Mortality rate (First week) per 1,000 related live births	16·4
Perinatal Mortality rate (stillbirths + deaths during first week) per 1,000 total live and stillbirths	39·5
Percentage of illegitimate live births	5·2
Maternal Deaths	5
Maternal Mortality rate per 1,000 total births	0·31
Deaths from:—Pulmonary Tuberculosis	102
Death rate	0·135
Non-pulmonary Tuberculosis	3
Death rate	0·004
Respiratory Diseases	1,554
Death rate	2·05
Cancer (all forms)	1,647
Death rate	2·17

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, 15,615 live births were registered within the City which represents a birth rate of 20·6 per 1,000 of the estimated mid-year population. 7,997 of these births were male and 7,618 were female. 5·2 per cent of the total live births (815 births) were illegitimate live births. These figures show a slight increase in the birth rate for the year compared with 1958. 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 16·5 per 1,000. The variation in births and stillbirths from 1938 to 1959 inclusive is given in the graph on the page facing.

Stillbirths.

Stillbirth Rate

There were 375 stillbirths registered in the City during the year, representing a stillbirth rate of 23·4 per 1,000. This is a reduction on the figure of 25·7 for the preceding year. The stillbirth rate among legitimate babies was 23·2 per 1,000 and among illegitimate babies was 28·6 per 1,000.

Mortality.

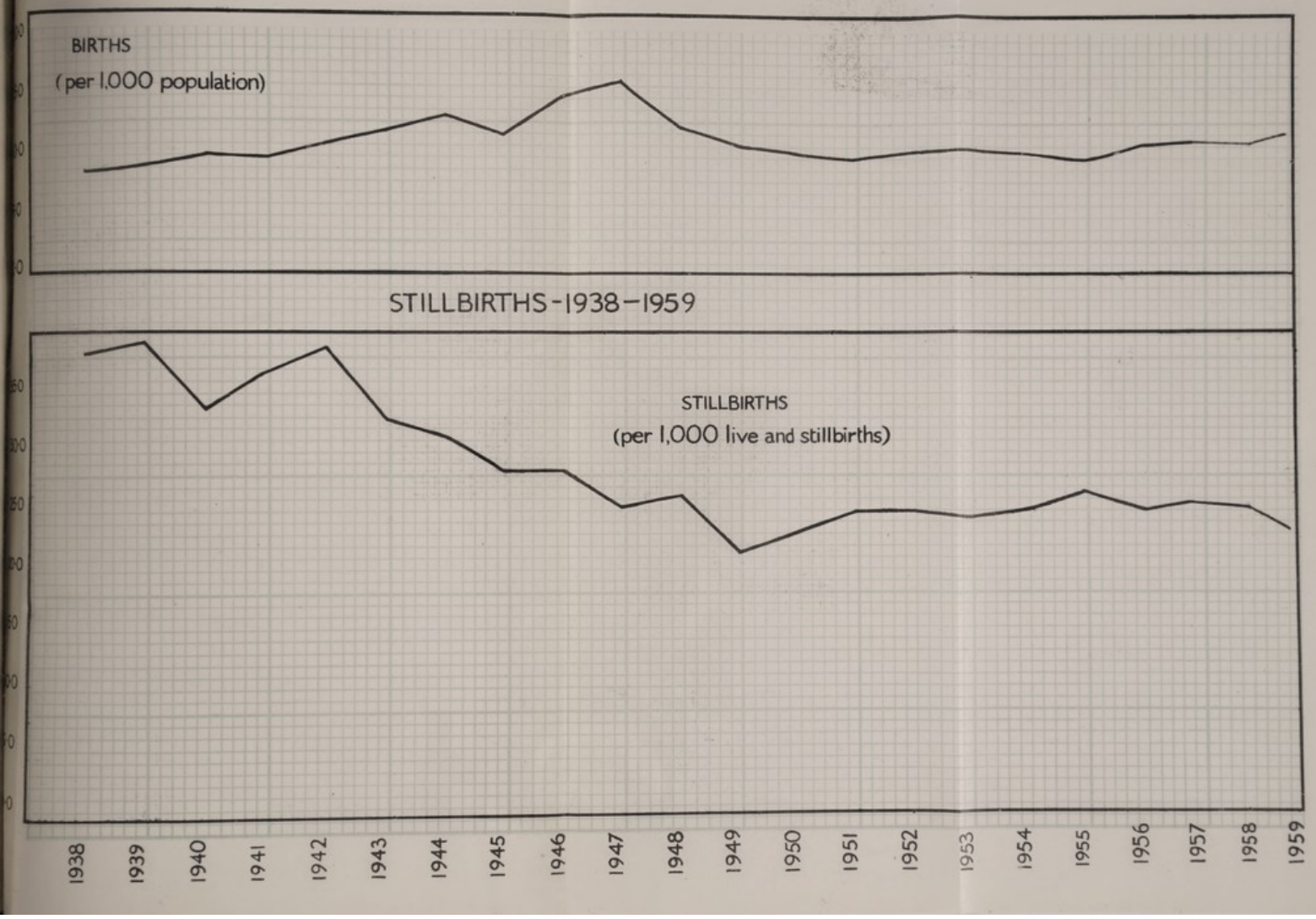
General Death Rate

There were 8,587 deaths registered within the City during the year, 4,505 males and 4,082 females. This gives a general death rate of 11·3 per 1,000 as compared with a death rate of 11·7 for the preceding year. The number of deaths from cancer of the lung was 444. 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 105 compared with 109 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

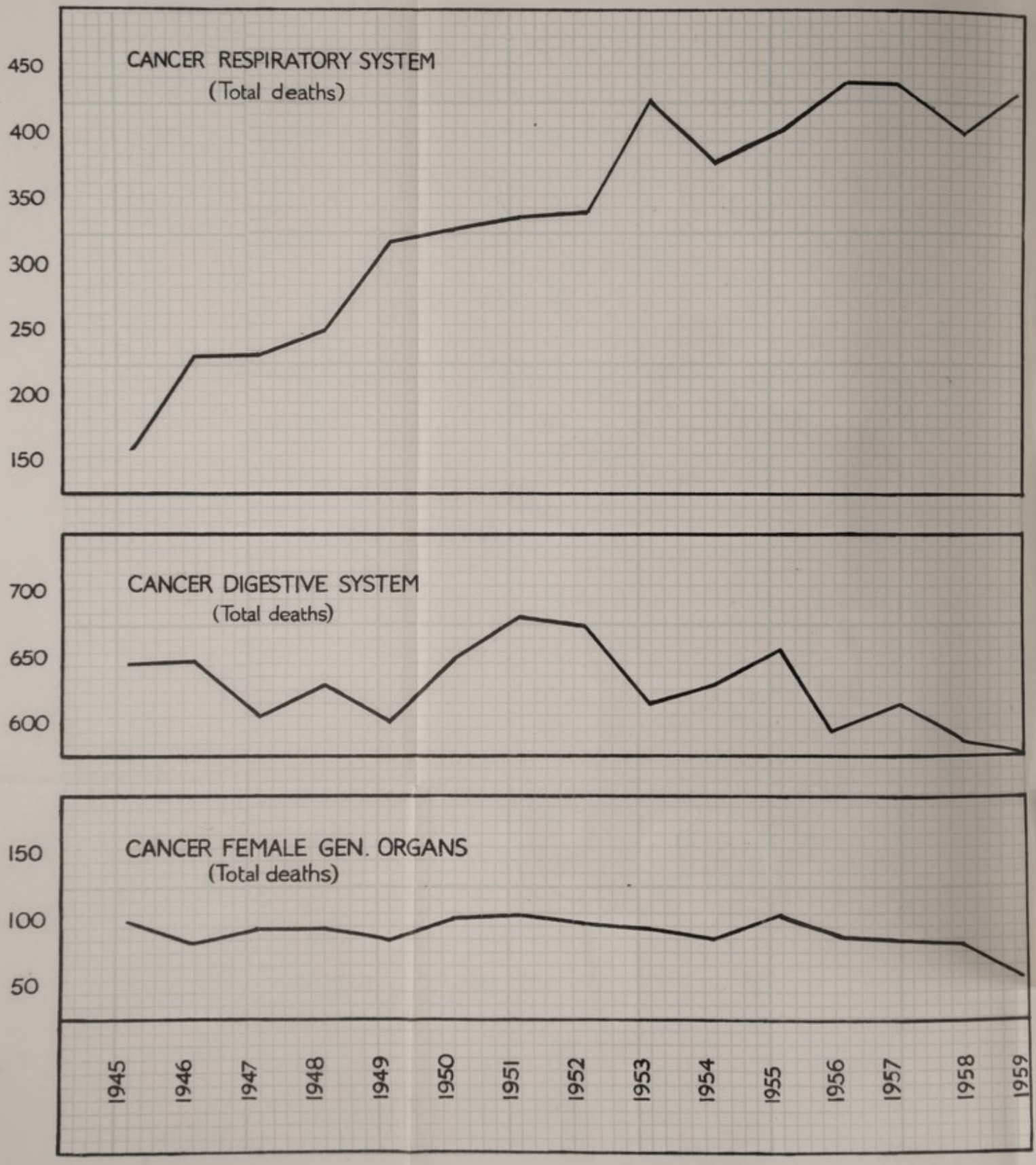
BIRTHS – 1938 – 1959



STILLBIRTHS - 1938 – 1959

TRENDS OF MORTALITY - LIVERPOOL

1945 - 1959

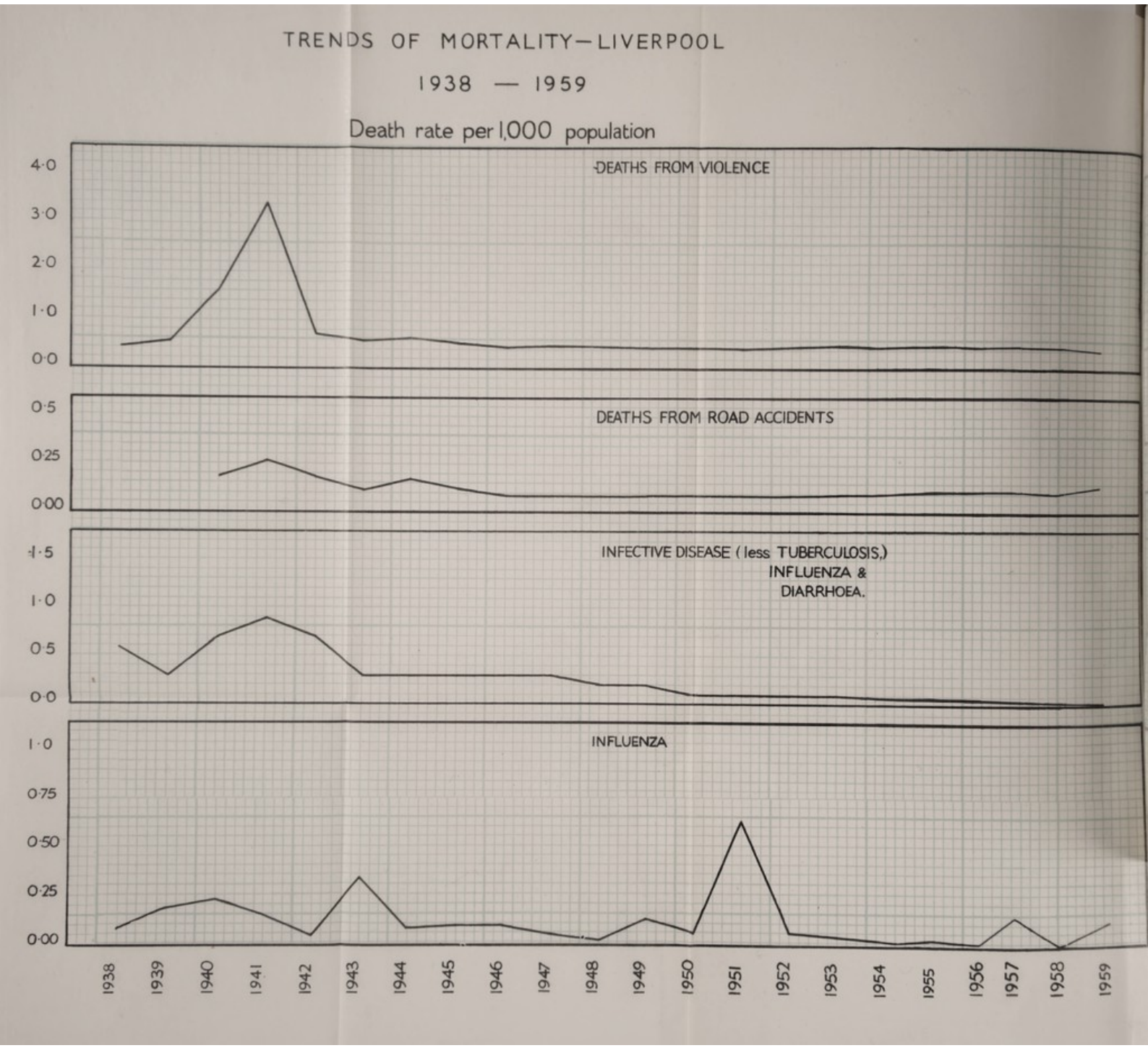


CAUSES OF MORTALITY—LIVERPOOL

1938 — 1959

Death rate per 1,000 population

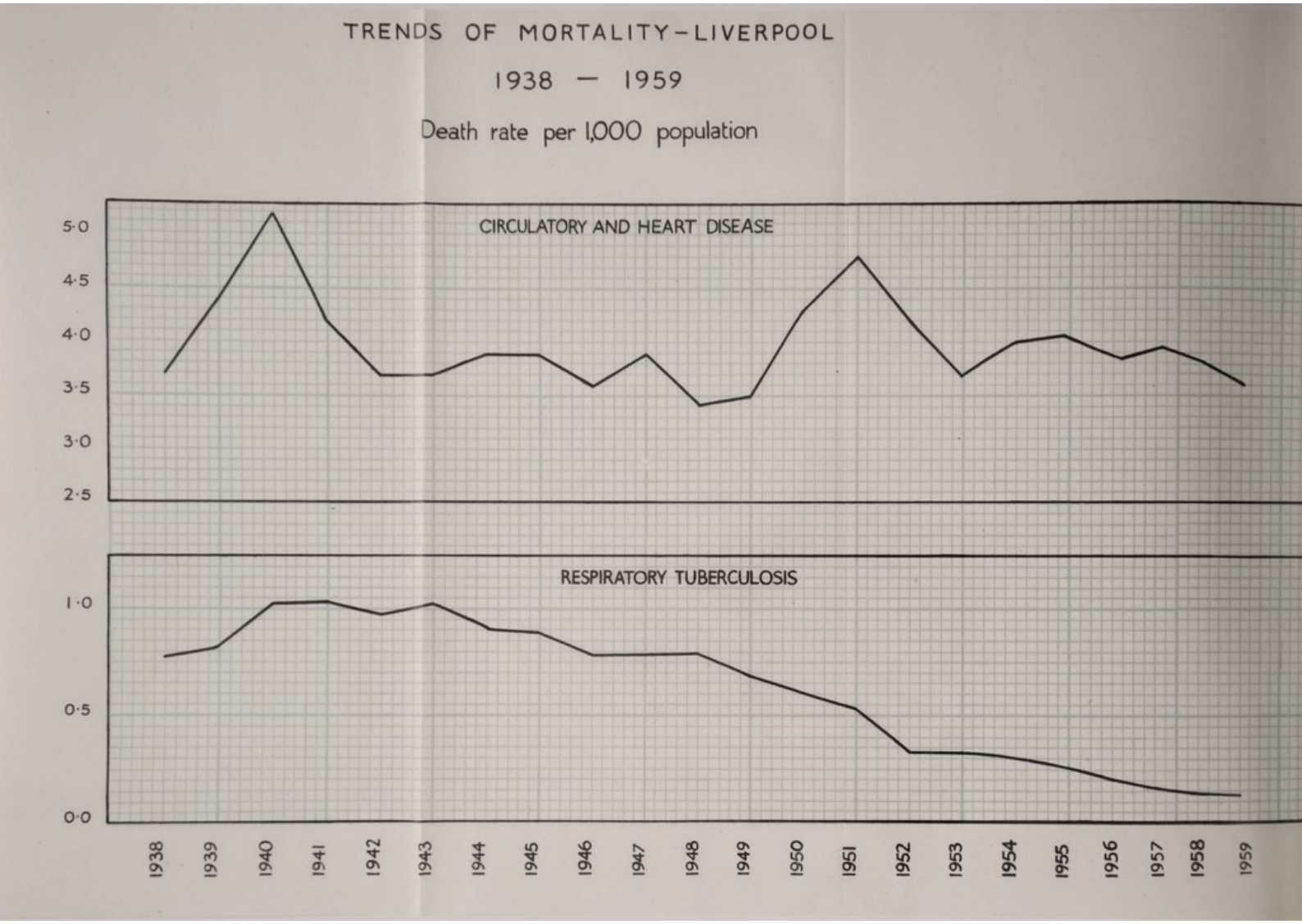



TRENDS OF MORTALITY—LIVERPOOL
1938 — 1959
Death rate per 1,000 population
DEATHS FROM VIOLENCE
4·0
3·0
2·0
1·0
0·0
DEATHS FROM ROAD ACCIDENTS
0·5
0·25
0·00
INFECTIVE DISEASE (less TUBERCULOSIS, INFLUENZA & DIARRHOEA.
1·5
1·0
0·5
0·0
INFLUENZA
1·0
0·75
0·50
0·25
0·00
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959

...S OF MORTALITY – LIVERPOOL

1938 — 1959

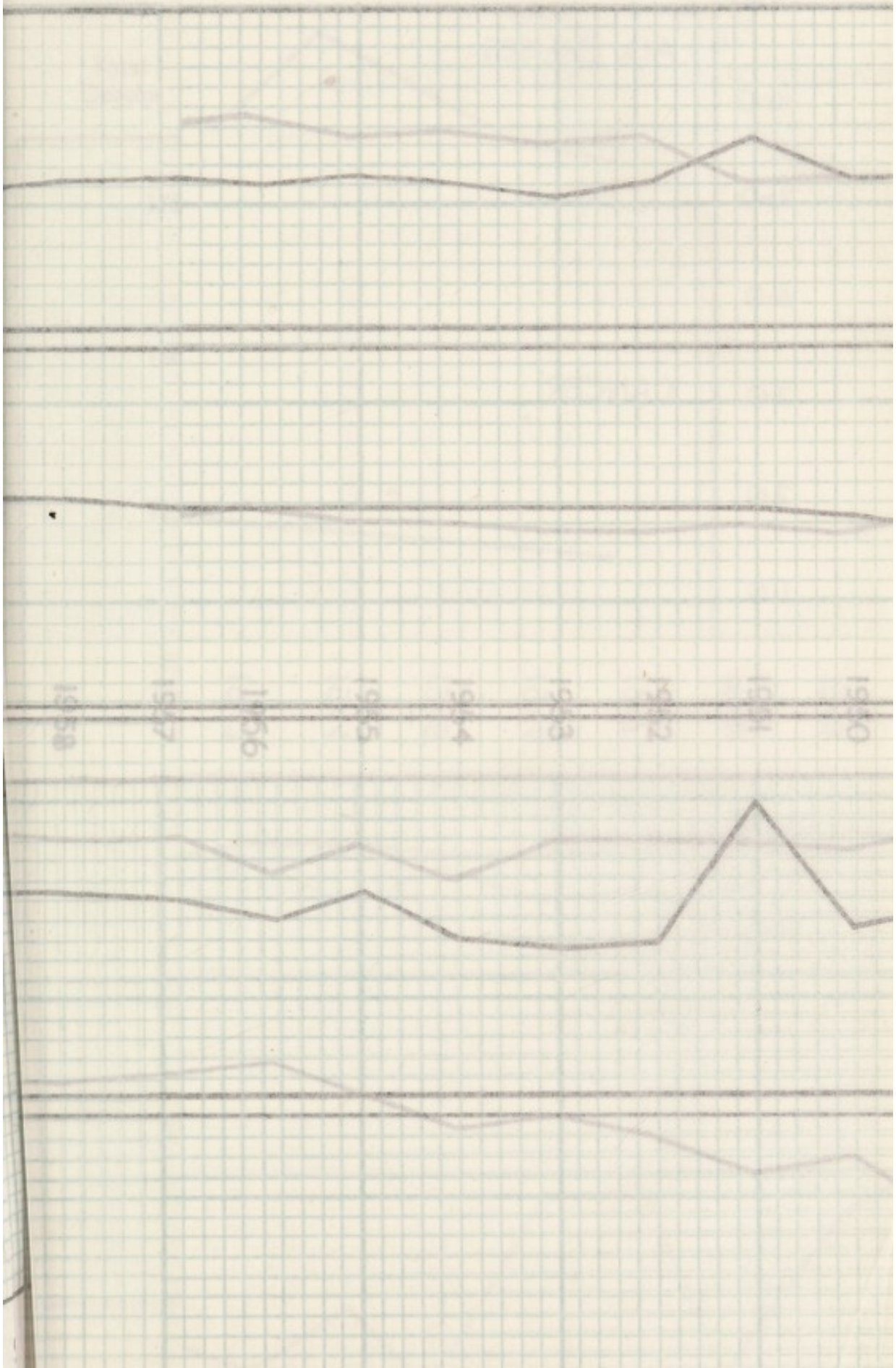
Death rate per 1,000 population

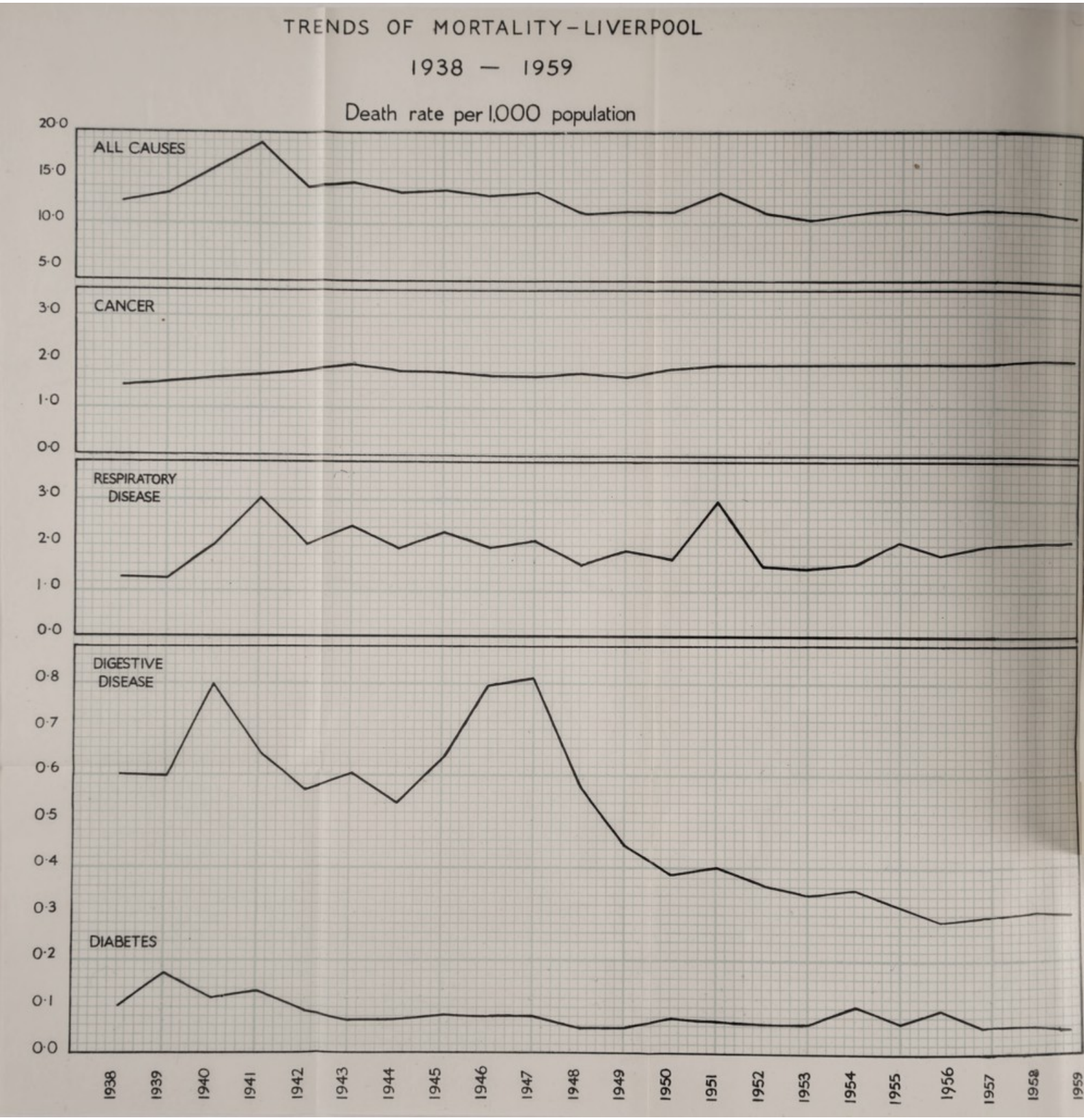

TRENDS OF MORTALITY – LIVERPOOL
1938 — 1959
Death rate per 1,000 population
CIRCULATORY AND HEART DISEASE
5·0
4·5
4·0
3·5
3·0
2·5
RESPIRATORY TUBERCULOSIS
1·0
0·5
0·0
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959

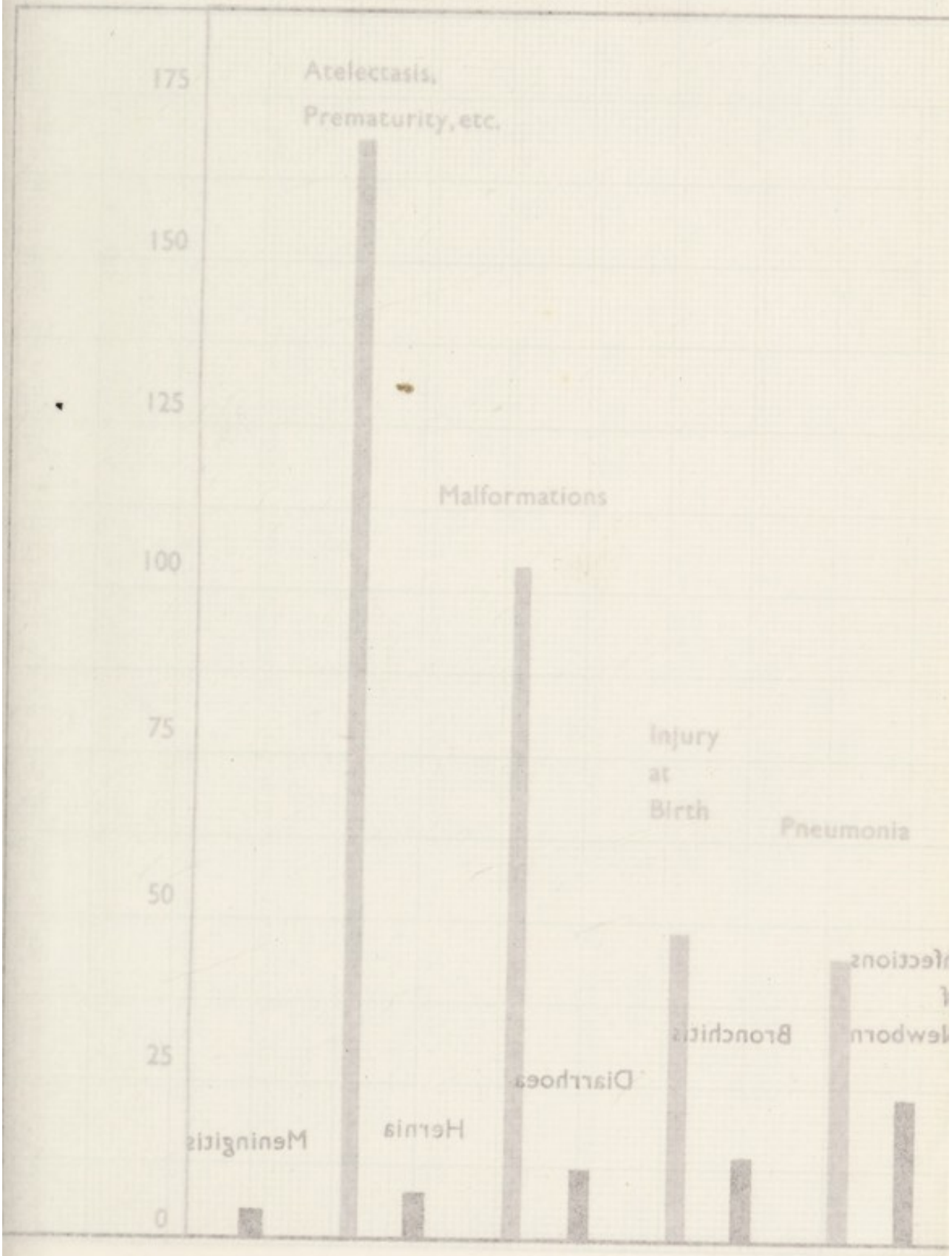
NDS OF MORTALITY - LI

1938 — 1959

Death rate per 1,000 population

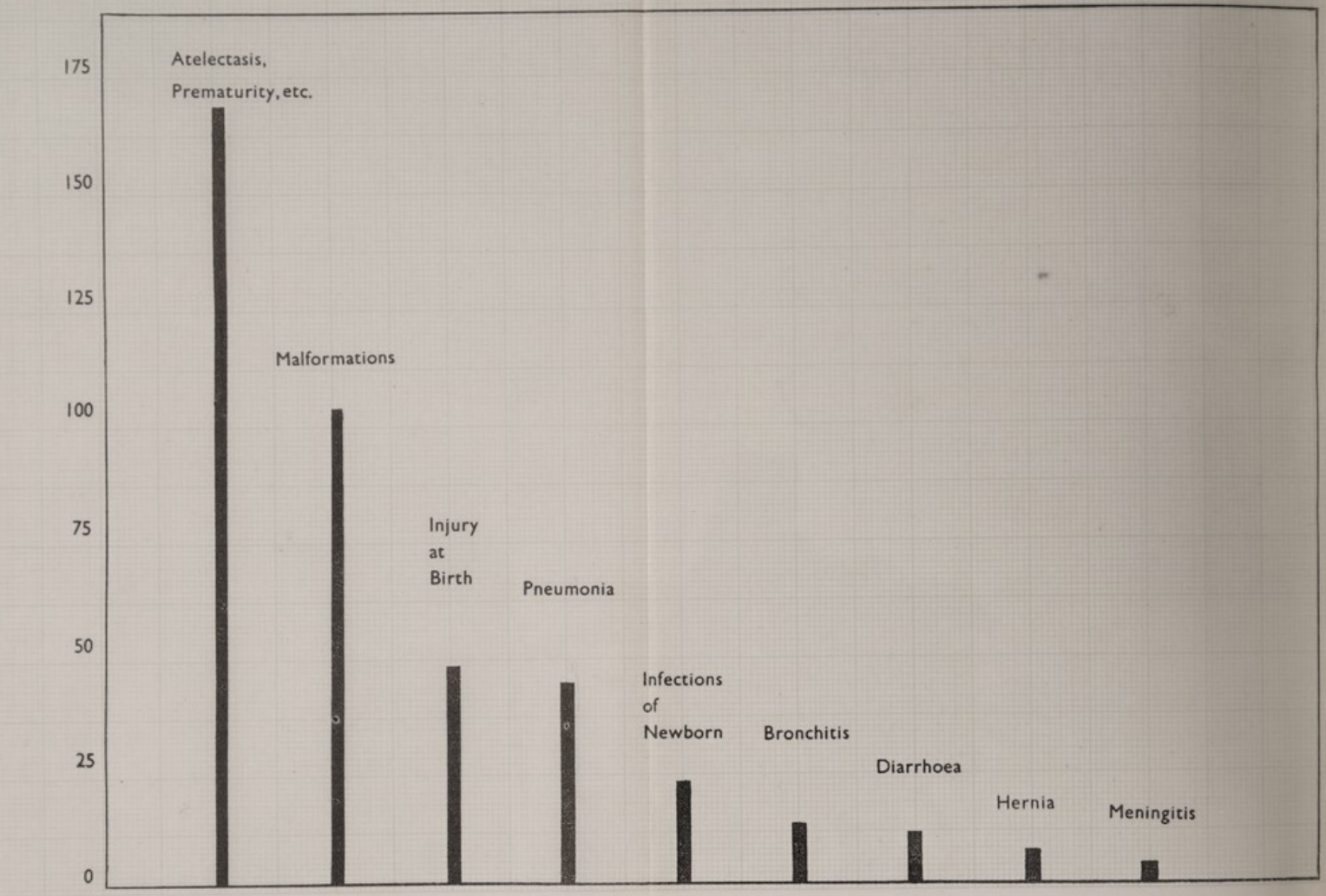



TRENDS OF MORTALITY – LIVERPOOL
1938 — 1959
Death rate per 1,000 population
ALL CAUSES
20·0
15·0
10·0
5·0
CANCER
3·0
2·0
1·0
0·0
RESPIRATORY DISEASE
3·0
2·0
1·0
0·0
DIGESTIVE DISEASE
0·8
0·7
0·6
0·5
0·4
0·3
DIABETES
0·2
0·1
0·0
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959


Total Deaths
175
150
125
100
75
50
25
0
Atelectasis, Prematurity, etc.
Malformations
Injury at Birth
Pneumonia
Meningitis
Hernia
Diarrhoea
Bronchitis

CITY OF LIVERPOOL

PRINCIPAL CAUSES OF INFANT MORTALITY—1959

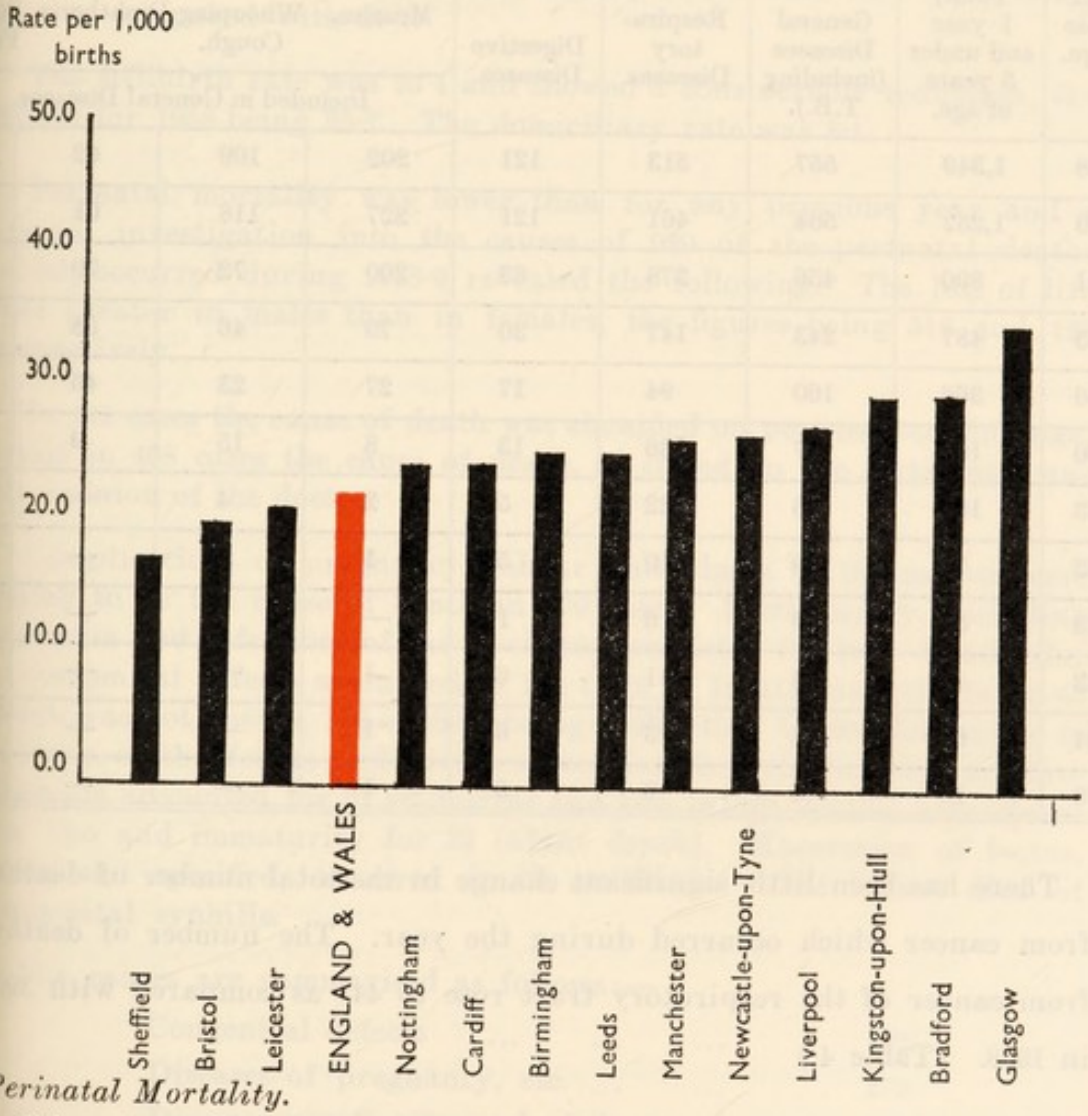


Infant Mortality.

The infant mortality rate fell slightly during the year to 27·4 per 1,000 live births. A total number of 428 infant deaths occurred, of which 27 were illegitimate children. This represents an illegitimate infant mortality rate of 33·1 compared with a legitimate mortality rate of 27·1. The principal causes of infant mortality 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.

Infant Mortality Rate

CHART SHOWING INFANT MORTALITY RATE FOR A NUMBER OF THE LARGER AUTHORITIES FOR THE YEAR 1959



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 1959 the rate was 39·5 compared with 41·4 in 1958.

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 fell from 60 to 48 in 1959.

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

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.	Sc Fe
						Included in General Diseases.			
1920-24	2,278	1,349	557	513	121	202	109	62	
1925-29	1,879	1,252	564	461	121	227	118	61	
1930-34	1,601	890	456	278	63	200	72	79	
1935-39	1,283	487	243	147	30	79	46	58	
1940-44	1,140	366	160	94	17	27	23	45	
1945-49	1,100	168	67	36	13	8	15	9	
1950-54	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	—	—	

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 444 as compared with 39 in 1958. (Table 4.)

MATERNITY AND CHILD WELFARE

Births

During the year, there was a slight reduction in the birth rate. The total figure for live and stillbirths was 15,990. The total number notified was 19,017. The disparity between these two 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 5,074 this being 377 less than last year. The total number of multiple births delivered on the district was 20.

Infant Mortality

The infant mortality rate was slightly lower than last year, being 27·4 as compared with 27·7.

Stillbirths

The stillbirth rate was 23·4 and showed a considerable reduction, the figure for 1958 being 25·7. The domiciliary rate was 8·1.

Perinatal Mortality

Investigation into certain Perinatal Deaths 1958-59

Perinatal mortality was lower than for any previous year and a special investigation into the causes of 939 of the perinatal deaths which occurred during 1958-9 revealed the following. The loss of life was greater in males than in females, the figures being 516 and 423 respectively.

In 441 cases the cause of death was classified on post mortem findings, while in 498 cases the cause of death, as stated on the certificate, was the opinion of the doctor.

Complications of pregnancy, labour and illness of the mother were stated to be the cause of death in 279 cases. Birth injury, including asphyxia and infections of the newborn, accounted for 183 Deaths due to congenital defects amounted to 162 (17%). In 112 cases the cause of death was not known, 106 of these being stillbirths. Of 203 deaths due to diseases of the foetus and diseases peculiar to early infancy, erythroblastosis accounted for 27 stillbirths and two infant deaths, kernicterus for two and immaturity for 33 infant deaths. Maceration of foetus, cause not specified, occurred in 68 stillbirths. One infant died of congenital syphilis.

The causes are summarised as follows:—

Congenital defects	162
Diseases of pregnancy, etc.	279
Diseases peculiar to early infancy	203
Birth injury, asphyxia and infections of the newborn	183
Unclassified	112

MIDWIFERY

During the year, 309 midwives notified their intention to practice midwifery in the city. The corresponding figure for 1958 was 324.

About 70 per cent of all births took place in hospital. In spite of this, the demand for hospital beds was, from time to time during the course of the year, a source of embarrassment to all concerned with the midwifery service. This was inevitably associated with an increasing number of early discharges from hospital.

Domiciliary Midwifery.

Staff

At the end of the year there were 48 midwives engaged on full time midwifery duties, three premature baby nurses and two full time and four part time staff employed on nursing visits and the home visiting of patients referred from hospital ante-natal clinics. The part-time staff comprised three retired midwives, whose ages ranged from 67 to 74 years and one midwife suffering from a disability consequent on multiple injuries as a result of a car accident. These four midwives did excellent work, but the work which they were able to do was of necessity limited to a maximum of 30 hours per week.

During the year one midwife was superannuated on account of ill health, two left the service on reaching the age for retirement, one left to take up a supervisor's post in another authority, one was appointed a supervisor with this authority and three left to take up other posts.

Non-Medical Supervisor

The Non Medical Supervisor of Midwives left the service on 25th November on reaching the age of retirement after 18 years service.

Sick Leave

The service was also depleted by an increase in the time lost due to sickness and maternity leave. Altogether, a total of 229 weeks were lost in this way. A still further depletion was caused by the fact that

Refresher Courses

it was necessary to send more midwives to refresher courses than in previous years.

Case Load

It is not, therefore, surprising to find that the case load, in respect of many of the midwives, has been very considerably above 66, which is the number recommended in the Rushcliffe report published in 1949. It must, however, be remembered that, at that time, it was not envisaged that the midwives would also be expected to undertake the

present load of visits to patients referred from hospital ante-natal clinics for assessment of home conditions, in addition to the increasing numbers discharged early in the puerperium.

It is thought that it might be interesting to record some of the case loads of the different midwives:—

1	delivered	142	cases
1	„	125	„
1	„	124	„
7	„	over 100	cases
7	„	„ 90	„
3	„	„ 80	„
8	„	„ 70	„

The shortage of staff engenders a vicious circle, for the heavy case load has been associated with a rise in the sickness rate, besides having an adverse effect on recruitment. Midwifery pupils who take the second part of their training with the domiciliary midwifery service are so dismayed by the long hours of duty associated with the work, that they find permanent posts in other branches of nursing.

Deliveries

The total domiciliary deliveries were 5,016, of which 3,855 were delivered by the municipal midwives and 1,131 by the Maternity Hospital district midwives. There were 355 fewer domiciliary deliveries than last year. The midwives also carried out 2,706 visits to patients discharged from hospital before the tenth day of the puerperium and 5,707 visits to patients referred from hospital for the assessment of home conditions.

Houses for Midwives

Twenty-nine midwives occupy Corporation houses or flats in different parts of the City. Some applicants for midwifery posts refused to accept vacancies in the densely populated districts and two candidates each refused the offer of a Corporation flat, but stated that they would accept a house. Unfortunately, few houses are available in the parts of the City where midwives are urgently required.

Transport

All midwives who are car owners are now classified as essential users. Midwives may also participate in the authority's assisted car purchase scheme, which has been of great value, and during the year three midwives have been helped in this way. Arrangements have also been made with certain taxi firms for midwives who are not car owners to obtain transport for all emergency cases.

Equipment

Besides the delivery and nursing bags, the midwives are all supplied with baumanometers and Minnitt analgesic machines.

Sterile maternity outfits of excellent quality are provided by the local authority to all cases delivered at home. They contain the necessary accouchement sheet, pads, wool, ligatures and cord dressings. Midwives no longer carry ligatures or cord dressings in their bags, these are available only in the sterilised outfit provided.

Urine Testing Material

In order to facilitate the routine urine testing of ante-natal patients, the midwives are all supplied with modern equipment in the form of strips of absorbent paper impregnated with the required reagents. These are supplied in a very compact and convenient form.

Care of the Baby

The midwives are becoming increasingly conscious of the danger of newborn infants developing hypothermia during the winter months.

Hypothermia

Three cases occurred on the district during the year. In order to assist in the early diagnosis of this condition, all domiciliary midwives have been supplied with low reading thermometers, in addition to the ordinary clinical thermometers for taking the temperature of the mother. Parents are also advised to make an effort to keep the room at a more or less constant temperature and they are supplied with wall thermometers with a red mark at 65° F. They are advised not to allow the temperature of the room to fall below this point and generally speaking, the husbands and relatives of patients have been most co-operative. In one or two all electric houses, a suitable small electric heater was not available and difficulty was experienced in keeping the room at a reasonable temperature in cold weather.

Sepsis

It has not been possible to keep detailed records of the incidence of sepsis, similar to last year, but the general impression was that fewer babies have suffered from skin sepsis. Every effort was made to see that the midwives had an adequate supply of gowns and masks so that they could maintain a high standard of work.

Blood Tests

The procedure was that if the patient's doctor did not take the blood himself, he referred the patient to hospital, or to a local authority ante-natal clinic. In cases where the patient was referred to the ante-natal clinic, copies of the results of the blood tests were sent to the midwife booked for the case and also to her partner or partners. The patient's general practitioner was, of course, notified immediately the result was known.

The rhesus factor was known in practically 100 per cent of domiciliary deliveries. It is now accepted among the mothers on the district that it is essential to have a blood test during the ante-natal period, and this is, no doubt, due to the excellent health education carried out by the midwives among their patients.

If a mother is rhesus negative, a second test is carried out at about the 34th week of pregnancy. If antibodies are present, the mother is referred to hospital for delivery. On rare occasions, such a mother has refused to go to hospital, in spite of the entreaties of both midwife and doctor. The senior non-medical supervisor of midwives visits cases of this kind as a routine and if the patient continues to resist advice, then the nearest hospital is given due warning of the case. Arrangements are also made for the speedy transport, by taxi if necessary, of the cord blood to the hospital laboratory. If a woman is rhesus negative and has no antibodies, she may be delivered at home if she so desires. In all such cases, the cord blood is sent to the laboratory as a routine measure.

Ante-Natal Care

The midwives are very conscious of the importance of meticulous ante-natal care. The midwives visit patients in their homes and see them at the general practitioners' clinics and midwives' clinics, or the local authority doctors' clinics. A total of 16,325 visits were made by midwives to patients in their homes.

It is the policy of the authority to give the midwives every encouragement to see their patients at the general practitioners' ante-natal clinics. It is not always possible for the same midwife to attend each clinic, but they work in groups of two or three, and one midwife from each group attends whenever possible. The general practitioners in 32 group practices have midwives attending their ante-natal clinics, and the total numbers of visits paid by the midwives to these clinics was 1,094. The midwives are asked to discuss with the general practitioners the necessary ante-natal care for each patient, so that future visits to the general practitioners' and the midwives' clinics or the local authority doctors' clinics, can be tentatively planned. Patients attend the midwives clinics only when the general practitioner is undertaking full ante-natal care.

Medical Aid

The midwives called in medical aid for 1,893 different abnormalities. In some cases there was an abnormality of both mother and baby and in

other cases the mother suffered from more than one obstetric abnormality. An analysis of the requests for medical aid for 1,499 abnormalities in mothers, and 394 in infants, is given in Table 11 in the statistical appendix of this report.

Analgesia

Gas/air analgesia was administered to 3,322 mothers delivered by municipal midwives and 962 patients delivered by the Liverpool Maternity Hospital district midwives. The total number of domiciliary patients who received pethidine was 3,520.

Flying Squad

During the year there was a total of 65 calls. In 59 cases the doctor was booked for the delivery; in 4 a midwife only was booked and 2 were unbooked emergencies. Seven patients were transferred to hospital. Of the 65 cases, 2 had ante-partum haemorrhage, 2 had bleeding before the 28th week, there was one forceps delivery, two were twin deliveries and 60 were normal vertex deliveries. None were born before the arrival of the midwife. Blood transfusions were given in 27 cases, saline in 3 cases.

The primary reasons for calling the flying squad are shown in the following table:—

Ante-partum bleeding	2
Intra-partum bleeding	18
Post-partum bleeding (breech)	20
Retained placenta (without bleeding) ...	21
Failed forceps	1
Undiagnosed twins	2
Impacted shoulders	1
	65

Puerperal Pyrexia

During 1959 there were 629 notified cases of puerperal pyrexia. The cause in 128 of these was urinary infection, in 252 pelvic infection, in 121 respiratory infection and in 38 breast infection, thrombosis in 4 and severe anaemia in 5. The cause was not known in the remaining 81 cases.

Part II Training of Midwives

The Part II midwivery school, in conjunction with Sefton General Hospital, trained 36 pupil midwives and 35 were successful in their examination.

Maternal Deaths.

Maternal Deaths

There were five maternal deaths during the year. Two of these deaths were from haemorrhage. In one case, a second pregnancy, the patient was booked for home delivery. At the 36th week of pregnancy she had a slight blood loss, the midwife was summoned and on arrival was impressed by the patient's rapid pulse rate and, on the advice of the doctor, the patient was transferred, very much against her wishes, to hospital. A caesarean section was performed and the condition was found to be a mixed accidental haemorrhage. The concealed haemorrhage was considerable and despite blood transfusion prior to operation, the patient collapsed and failed to respond to resuscitative measures and cardiac massage.

In the second case, the patient was a primigravida booked for hospital delivery. At the 36th week of pregnancy the patient developed backache and was treated by her own doctor for pyelitis. She collapsed suddenly at home and was immediately transferred to hospital. After a blood transfusion, laparotomy was performed and the abdomen was found to be full of blood due to the rupture of an aneurysm of the splenic artery. This is a very rare complication of pregnancy and almost invariably fatal. The patient died one hour after commencement of the operation.

There were two deaths from sepsis, one being associated with a criminal abortion. The second case was a patient with her seventh pregnancy. The patient had booked a midwife for home delivery and had a normal confinement at term. The placenta was carefully examined and thought to be intact and complete. Sixteen days later the patient was admitted to hospital with general peritonitis, and died. At the post mortem a small placental cotyledon was found in the uterus.

There was one death from toxaemia. The patient, a primigravida, developed signs of toxaemia from the fourth month of pregnancy. She was treated in hospital, but the response was poor. At the 32nd week she went into premature labour. During the puerperium, albuminuria and hypertension persisted, but despite medical advice, the patient discharged herself from hospital on the tenth day. Two weeks later she was admitted with a chest infection to the medical ward of another hospital, and died ten days later from uraemia.

One other death was reported to this department, the cause of death being given as renal failure, toxaemia of pregnancy and hypertensive encephalopathy. On investigation, it was found that this patient's last pregnancy had occurred eleven years previously and in the opinion of the consultant obstetrician, it was not a maternal death.

Premature Infants.

It is known that many of the deaths in early infancy are still associated with prematurity, and for this reason, a brief review of the premature births during the past five years has been made.

The percentage of premature births for the years 1955-1959 was as follows:— 1955—8·2 per cent, 1956—8·2 per cent, 1957—8·2 per cent, 1958—8·2 per cent, 1959—8·0 per cent.

Premature Infants Born at Home

All mothers booked for a domiciliary delivery are transferred to hospital if they go into labour prematurely, provided, of course, that the birth is not imminent when the midwife is called to the case. If, however, it has not been possible for the premature delivery to take place in hospital, the patient's general practitioner then decides whether the mother and baby shall go to hospital or not. In addition, every effort is made to see that all abnormal cases are referred to hospital in the ante-natal period. During the past five years there appears to have been remarkably little variation in the number of premature infants born at home, the smallest number being 238 in 1955, and the greatest number being 262 in 1958. The figure for 1959 was 245. See Table 6.

Neo-natal Mortality of Premature Infants Born at Home

In 1955, out of 238 premature infants born at home, 22 failed to survive 28 days, giving a neo-natal mortality rate of 92·4. The corresponding neo-natal mortality rates for premature infants born at home in 1956, 1957, 1958 and 1959, were 91·9, 68·6, 106·8 and 65·3 respectively.

Premature Infants Born at Home and Transferred to Hospital

The above figures include, of course, the babies born at home who were immediately transferred to hospital. Between 40 and 50 premature infants are born at home and transferred to hospital each year. The majority of infants who are born at home and nursed at home, survive.

Premature Infants Born at Home and Nursed at Home

In 1955, of 187 premature infants born at home and nursed at home, 182 were alive at the end of 28 days. In 1956, there were 203 premature infants born at home and nursed at home, and only two died during the first month of life. In 1957, of 208 births, six died before the 28th day.

The corresponding figures for 1958 were 220 births and 6 deaths, and for 1959, 199 births and 4 deaths. The neo-natal mortality rates for the five years were 26·7, 9·8, 28·8, 27·6 and 20·1 respectively.

It is apparent from these figures that the neo-natal mortality rate for premature infants born at home and nursed wholly at home is remarkably low.

During the past five years, there was a total of 1,017 premature infants born at home and nursed wholly at home, with a neo-natal mortality rate of 22·6.

Among the above there was a small number of infants weighing less than 4 lbs. 7 ozs. While every effort is made to get the very small babies into hospital, a certain number of mothers refuse hospital care each year.

Premature Infants Under 4 lbs. 7 ozs. at Birth and Nursed at Home

In 1955, the number of premature infants with birth weight less than 4 lbs. 7 ozs. and who were nursed at home, was 17. Four of these did not survive 28 days. In 1956, 28 were nursed at home and 26 were alive at the end of 28 days. In 1957, 22 were nursed at home and two failed to survive 28 days. In 1958, the figures were 29 births with four deaths and in 1959, there were 21 babies under 4 lbs. 7 ozs. nursed at home and three failed to survive 28 days.

Taking the five-year period, the neo-natal mortality rate for the total of 117 infants was 128·2.

The highest death rate occurred in the group of infants born at home and immediately transferred to hospital (see Table 7) on account of illness, or extreme prematurity, or adverse home conditions; it is felt that the circumstances of these babies' care merits further consideration.

Premature Infants Born in Hospital

The number of premature infants born in hospital during the past five years varied from 988 to 1,063, the highest figure being in 1957 and the lowest in 1959. It is, therefore, apparent that there is little variation in the numbers of premature infants born either in hospital or at home. The neo-natal mortality rates of the babies born in hospital during the years 1955 to 1959 were 164·5, 140·8, 155·2, 146·1 and 183·2.

Neo-natal Mortality

Since 1955, an increasing number of babies have been discharged from hospital to the care of the three premature baby nurses who are employed exclusively on the home care of premature infants. The

Number Discharged from Hospital to Premature Baby Nurses

number of babies discharged from hospital to the care of these nurses has increased steadily from 48 in 1955 to 439 in 1959. During the five year period, the total number of babies discharged from hospital to the care of the premature baby nurses was 1,218 and the neo-natal mortality in this group was nil. Further details of the premature infants born in hospital and at home are shown in Table 7.

Premature Baby Nurses

It should perhaps be noted here that the first premature baby nurse took up duty on 29th June, 1955, followed a year later by the second premature baby nurse and on 8th April, 1957 the third nurse joined the service.

The duration of attendance on these babies depends on a variety of factors, e.g. the condition of the baby, the type of home and the ability of the mother to look after her baby. The training of the mothers to look after their very small babies is accepted by the nurses as one of their most important duties. At the end of their period of care the nurses pass the cases over to the health visitors.

Vitamin and Iron Supplements

Provision has been made for the babies to have vitamin preparations and iron as required, from the local authority clinics, but these are, of course, only issued on the instructions of either the baby's general practitioner, or if the baby is not under his care, the baby is seen by the clinic medical officer before these preparations are issued. This procedure ensures medical supervision of the vitamin intake of these infants.

The Work of the Health Visitor.

1959 brought with it the continued effort on the part of the 40 health visitors seconded to the work of the Mass Radiography Campaign, to recruit the remainder of the 11,000 voluntary workers needed to help to get the population of Liverpool X-rayed during the four-week campaign in February and March.

Mass Radiography Campaign

This was indeed a difficult task and called upon endless hours of the health visitors' time to find the helpers and sustain their interest until the start of the actual operation. They had to be instructed regarding their part in the programme and their method of approach to the public. During the operation, these health visitors helped to man the forty X-ray units throughout the City and, in addition, did house to

house visiting to persuade the public to come forward for X-ray. They played a great part in making the crews of the visiting units welcome and seeing to their comforts during their four weeks' stay in our City.

During this time, the remainder of the staff continued with the ordinary work of the health visitors' section and also helped in manning the X-ray units throughout the campaign. In spite of these many diversions and seconding of staff, 14,729 primary visits were made to newly born infants. To children under the age of 5 years, the total number of visits was 153,179, and 45,557 families were visited during the year. In addition to this, 10,625 visits of a special nature were made. These special visits varied and requests for information and help from statutory and voluntary organisations, hospital consultants and other sources were followed up.

Poliomyelitis

Visiting to observe the contacts of poliomyelitis cases continued and during the year, 1,055 visits were paid.

Measles

All cases of measles notified to the Medical Officer of Health were made known to the health visitors and, where necessary, advice and help given.

Liaison with Hospitals

This year has seen a long awaited liaison with the ante-natal departments of the hospitals and, during the year, arrangements were made for health visitors to go into the ante-natal clinics of two of the maternity hospitals in the City. Here, the health visitors practice health education and give advice on social problems as well as supplying information to the obstetricians. This has proved to be a very valuable new step and one which is particularly appreciated by the nursing staff of the hospitals.

Relaxation Classes

As a result of this new link with the ante-natal clinics in the hospitals, more expectant mothers have come forward for relaxation exercises in classes which were held in ten of the local authority clinics. These classes were conducted by a qualified physiotherapist and were coupled with health education talks given by the health visitors. Subjects such as personal hygiene, clothes for mother and baby, diet during pregnancy, sleep and rest, the mechanism of labour and bathing a baby were included in these talks. During the year, 556 mothers attended these combined classes and made 2,637 attendances. 354 came via the hospitals and general practitioners, and 202 from the local authority clinics. The physiotherapist has been a valuable member of the team

Health Education

and has done much by her visits to hospitals and doctors to improve the relationship between them and the local authority on the subject of relaxation exercises.

Work with the Aged

Also instituted during the year was the liaison between this department and the geriatrician of Newsham General Hospital. Work of great value has been done by a health visitor who visited the hospital and conveyed information regarding elderly people, both inside and outside the hospital. Visits were paid by the health visitors to the homes of these elderly people and their relatives to ensure their adequate care, to arrange for nursing equipment, home help, extra nourishment in the form of "meals on wheels", and any other extras which they may have required. In addition to this, the general work with the aged has continued and visits to them have increased considerably. Altogether, 1,997 visits were made.

Chiropody for the Aged

A chiropody service for the aged, arranged by the Personal Service Society, was available at one of the local authority clinics for those who were ambulant, and for those who were housebound, arrangements were made for the chiropodist to visit them in their own homes.

Accidents in the Home

The survey of home accidents continued throughout the year and altogether 1,046 visits were made to cases involving accidents to persons up to 55 years of age. If the person involved in the accident was over 55 years of age he or she was visited by a member of the staff of the welfare section.

Paediatric Clinics

Two senior health visitors have continued to pay weekly visits to two hospital consultants' paediatric clinics and maintained close contact with the hospital almoners, thus enabling an exchange of the knowledge, advice and treatment given to individual cases, and the supply of valuable information concerning social conditions in the homes of the patients.

On the request of the paediatricians, many persistent defaulters from the hospital clinics were encouraged by the health visitor to re-attend and, occasionally had to be escorted to ensure attendance, which in some cases necessitated the child's admission to hospital for treatment.

Follow up of Epileptic Cases

Regular attendance by two health visitors has continued at the Royal Southern Hospital and at Alder Hey Children's Hospital, for the follow-up of epileptic cases. The health visitor working with adult

epileptics did valuable work by her close liaison with the hospital and the disablement resettlement officer and by her association with the social activities for epileptics. She has been welcomed by the patients in their homes and has done much to encourage them to renew their interest in life.

The parents of the children were visited in their own homes and much was done by the health visitors to help them to understand their children's handicap and to educate and encourage them in their dealings with them.

Follow-up of Diabetic Cases

Liaison with hospitals, general practitioners, statutory bodies and voluntary organisations has been continued throughout the year for the after-care of diabetics by the health visitor delegated to do this work. Sociological accounts of home conditions and circumstances have been given to the consultants and written reports have been placed in the patients' case sheets, thus supplementing the duties of almoners in the care and after-care of patients.

Contact has been kept with patients admitted to hospitals other than the David Lewis Northern Hospital, where they have normally attended as out-patients. In this way a more successful follow-up of patients admitted suddenly has been possible.

Valuable assistance has been given by the health visitor in a recent survey carried out by the hospital staff. Several patients in need of convalescence have been brought to the notice of consultants and almoners and arrangements have been made on their behalf. To prevent absenteeism, arrangements have been made with the general practitioners for patients to have transport where necessary to the diabetic clinic. Regular visits to the out-patient departments and to the wards have been made, together with discussions with the ward sister, dietitian and almoner.

Meals on wheels have been obtained for, and have proved beneficial to, some of the older diabetics, and occupational therapy for the younger unemployed patients has proved invaluable in boosting their morale.

Chiropody has been provided by both domiciliary visits and by transport to the Foot Hospital. All patients with foot lesions were persuaded to attend the hospital.

By her co-operation with other departments, the health visitor has often been instrumental in enabling blind patients to receive a pension and other facilities which the aged are often too proud to apply for themselves.

Discussions with the disablement resettlement officer and personnel manager have often resulted in the employment of a registered disabled diabetic. During the year, the health visitor has visited 83 new cases and altogether paid 1,489 visits. Explanation of, and discussion about, diets has had satisfactory results and this proved most reassuring to new diabetics. Initial contacts were made at hospital out-patients' departments and the promise of home visits has always been welcomed and helped to allay the patients' fears. Group talks by the health visitor with people waiting for hospital clinic sessions to begin have been invaluable.

This link by the health visitor with the hospitals and the general practitioners has proved to be most helpful to the welfare of the patient.

The following are examples of cases dealt with during the year:

1. Mr. S, a young man living in a common lodging house, was discharged from hospital (quiescent tuberculosis) and found to be taking double his prescribed quantity of insulin.

He was persuaded to attend the diabetic clinic, his general practitioner was contacted and the tuberculosis visitor stated that his tuberculosis had again become active and he was due for admission to hospital. The doctors at the David Lewis Northern Hospital diabetic clinic were informed by the health visitor of his condition so that contact with other diabetics at the crowded clinic could be avoided, hence he was seen first. He was later admitted to Walton Hospital and went into a coma shortly after admission. At his request, the health visitor visited him in hospital and gave him a diet sheet as he had failed to take his own diet sheet with him. The male charge nurse was informed of his circumstances and the health visitor contacted his various relatives and persuaded them to visit him in hospital.

2. An elderly diabetic lady was recommended for convalescence under Section 28 by her own doctor. On visiting, she was discovered to be an absentee from Walton Hospital diabetic clinic. After becoming

stabilised, arrangements were made through the almoner for her to go to Hesketh Park Convalescent Home in Southport. The old lady, however, decided that she could not possibly leave her husband, from whom she had not been parted for fifty years. Following consultation with the general practitioner, accommodation was arranged for the husband at an address near his wife. Transport was arranged for the couple to travel together and they enjoyed and benefited from the change.

3. Mrs. S, aged 81 years, diabetic, almost blind, living with her husband of 78 years. The old couple were in receipt of a pension only, and had been too proud to apply for National Assistance. The old lady was referred for Blind Registration and since then the Blind Welfare Association have provided necessities in kind. The facts of the family circumstances were made known to the National Assistance Officer, resulting in the weekly income being increased by £2 9s.

Care of Illegitimate Children

The care of the illegitimate child has continued to be an important part of the health visitor's work and throughout the year special attention has been paid to this group of children. The health visitors worked closely with the voluntary organisations associated with moral welfare, and much has been done to help those unmarried mothers, who by reason of their pregnancy, have become enstranged from their families. In many cases, accommodation has been found for them, or arrangements made for them to enter mother and baby homes provided by the vountary organisations. The City Council has subscribed towards the maintenance of cases who are residents of Liverpool. Altogether, 115 girls were provided for in this way until such time as other arrangements could be made for them, either to have their baby adopted, or to return home with the baby.

Convalescence

Under Section 28 of the National Health Service Act, 56 people, including the aged and handicapped, were sent away for convalescent periods, through the agency of the voluntary organisations. This has been a service which has been particularly welcomed by the ageing groups of our community and one which has been greatly appreciated by the health visitors, who, as already stated, are doing more and more work with the aged. Many of these aged people living on their own, are in need of a change and those who have been able to go away for a convalescent holiday have benefited immensely from the company

of others and regular meals. For the handicapped too, this has been a welcome service and many have derived great benefit from periods of convalescence at suitable homes where handicapped people can be accommodated.

Convalescence has continued to be provided for pregnant and nursing mothers who were overtired by reason of their harrowing household and domestic affairs. All returned to their homes feeling refreshed and knowing that whilst they were away, many of their young children have also derived benefit from the same facilities.

Problem Families

Families with problems took up a great deal of the health visitors' time, both in their homes and in liaison work with other statutory and voluntary bodies involved in the welfare of these families. Much help and guidance was obtained from the informal discussions arranged by the health visitors at their centres, and many contributions were made by the health visitors at the case conferences held at a high level. Families in trouble by reason of rent arrears were made known to the health visitor and in some cases, by help and advice, serious action was averted.

In 1955 there were 15 problem families in an outlying estate. Today, only two of these families rank as problems. The other families have been won from their anti-social way of life and have proved themselves able, with support, to manage their families and their homes in such a way that they can now take their place in the community. They have become acceptable neighbours and their children welcome playmates.

Health Education

The health visitors, during the year, have taken a new and active part in the field of health education. They have met the requests of various organisations to speak on such subjects as the work of the health visitor, parentcraft, home accidents, diets for the aged, and health services. In addition to this, they have assisted with the instruction of numerous groups of students, including medical students, D.P.H. students, health visitor students, social science students and student nurses. Programmes have also been drawn up in the field of public health for several overseas visitors to the city.

LOCAL AUTHORITY CLINICS

The numbers of mothers and children attending the ante-natal and child welfare clinics throughout the city have hardly dropped during the year.

Ante-Natal Clinics

1,846 mothers attended the ante-natal clinics as compared with 2,250 in 1958, and 95,242 children under the age of five years attended the child welfare clinics as compared with 96,761 in 1958. As the toddler clinic sessions have increased, 868 as compared with 437 in 1958, so also have the attendances, whilst the attendances generally of this age group has risen from 8,725 to 9,888.

Child Welfare Clinics

X-rays

Of the mothers attending the ante-natal clinics who were referred for X-ray, only 50 per cent attended. This may be explained, however, by the fact that many of them were already X-rayed during the campaign.

Blood Tests

As in previous years, many general practitioners sent their ante-natal cases along to the district ante-natal clinics for the purpose of blood testing only. In all cases they were informed of the test results. Testing for anaemia continued and increased during the year, and altogether nearly 200 tests were made.

Psychiatric Clinic

Behaviour problems in children were brought forward by the health visitors for discussion and guidance by a senior child psychiatrist at monthly sessions held at one of the local authority's clinics. These sessions provided much help and guidance to the health visitors.

Pre-school Children Referred to the School Health Department

By arrangement with the Education Committee, 551 children under the age of five years suffering from physical defects, or who appeared to be mentally dull, were referred to the School Health Department for advice and possible treatment, compared with 476 children referred in 1958.

The following is an analysis of the cases referred:—

Defective vision	237
Orthopaedic defects	219
Speech defects	13
Hearing tests	24
Mental assessments	30
Mentally subnormal	7
Dull	4
Ineducable	13
Physically handicapped	4

Refresher Courses.

The following members of the maternity and child welfare section attended refresher courses during the year :—

Assistant Medical Officer	Manchester	One week
Health Visitor Tutor	Manchester	Two days
Superintendent Health Visitor	London	Two weeks
Assistant Non-Medical Supervisor of Midwives	London	One week
6 Midwives	Kingston-upon-Hull	One week
5 Midwives	Birmingham	One week
3 Midwives	Bristol	One week
3 Midwives	Bradford	One week
Day Nursery Matron	London	One day
Day Nursery Matron	Llandudno	Three days

Membership of the Paediatric Club has been extended to the assistant medical officers in the maternity and child welfare section, and this is a welcome step towards a closer liaison between the health and hospital services. The health department staff also received invitations from the Professor of Child Health to attend evening meetings at the Department of Child Health in Alder Hey Hospital. The assistant medical officers have expressed their appreciation of the courtesy shown to them by the paediatricians and the hospital staff, and they have found the meetings of great interest.

Alder Hey Hospital

Maternity Hospitals

Monthly conferences have been held at the Liverpool Maternity Hospital and Mill Road Maternity Hospital to discuss the perinatal deaths which occur in the hospitals. The assistant medical officers who have been able to attend these meetings have found them most interesting and instructive.

Midwives' Meetings

Meetings of domiciliary midwives have been held from time to time, when items of special or local interest were discussed. A speaker has usually been arranged for these meetings and sometimes films have been shown.

In January, 1959, an Assistant Medical Officer gave a lecture to midwives on the subject of maternal mortality. The department was fortunate in obtaining a series of interesting and instructional films which were shown during the year, as follows :—

26th January	Management of Streptococcal Infection and its complications.

9th February	... Routine Use of Ergometrine in the Third Stage.
28th September	... Lifting Patients (In Hospital). Lifting Patients (In the Home).
19th October	... Breast Feeding. Toxaemia of Pregnancy
26th October ...	... Simple Nutrition. The Golden Age. The Management of Twins in Pregnancy and Labour.
14th December	... Hospital Sepsis—A Communicable Disease.

Dental Care of Maternity and Child Welfare Cases.

Once again there is little change to report in the dental treatment given under the maternity and child welfare scheme. There has been a slight decrease in the number of expectant and nursing mothers seeking treatment. This trend has been noted in previous years and is, no doubt, associated with the fact that an ever increasing number of patients are attending private practitioners for their treatment.

The equipment in the clinics has been gradually modernised. A dental unit was installed in one clinic and others will be receiving similar equipment in the near future. The important matter of adequate lighting has been under constant review and four new operating lights have been installed. The demand for X-ray examination has not been high and the machine at the central clinic has been adequate for present requirements. The appointment of medical consultant anaesthetists has been of considerable help to the service.

Whilst the amount of treatment given has not been large, it must be realised that the local authority dental service plays an important role in dental health education. Talks on this subject have been given to certain women's organisations and the appointment during the year of a dental hygienist has assisted in this work. The staff have shown no slackening in their efforts to give a comprehensive and efficient service to those patients who still prefer clinic treatment. The standard of treatment must be maintained as high as possible and improved if it is found necessary. The need for operative dentistry is ever present, but there must be no relaxation in the furtherance of dental health education. Only when extractions and dentures are the exception can there be any real thought of success.

Details of treatment given to mothers and children are shown in Tables 17 and 18 in the statistical appendix.

HOME NURSING

Queen Victoria District Nursing Association.

This service will be taken over by the local authority on the 1st January, 1960, just 100 years after the inception of the service.

Historical Survey of District Nursing in Liverpool

The work of district nursing was first started in Liverpool in 1859 and was organised and financed by the late Mr. William Rathbone. The work done by the district nurses continued to increase during the subsequent years and in 1898 the Liverpool Queen Victoria District Nursing Association was formed.

In 1948, the association became the agents of the local authority for the purpose of providing a home nursing service. At that time, the city was divided into eight nursing districts, each with a district centre at a convenient focal point. Two of these centres were in small houses occupied by one or two nurses and six were in large nurses' homes, each of which had residential accommodation, in one case for as many as 20 nurses.

The need for residential accommodation gradually diminished as an increasing number of nurses expressed a preference for living in their own homes. Four nurses' homes were closed between 1951 and 1957, Newsham Park and Kirkdale in 1951, the Derby Home in 1954, and the Lady Williamson Home in 1957. These were replaced by Corporation houses and also the premises at 58 Queens Drive (purchased by the association in 1956).

In 1958 the service was functioning from nine centres in all, the Central and the Walton Homes, together with seven new centres, the siting of which had been carefully chosen, after taking into consideration the shift of the population to the new housing estates. All the new centres, with the exception of 58, Queens Drive, were in Corporation houses.

Closure of the Central Home

Owing to the fact that the Central Home will not be available after 31st December, 1959, it was thought desirable to find alternative accommodation at an early date. Application was, therefore, made for Corporation premises, and a two-bedroomed flat at 5, Maynard Street was allocated on 20th April, 1959. The former nursing area of the Central Home was transferred to Maynard Street early in May, 1959.

This serves as a district nursing centre and clinic and does not provide any residential accommodation. The clinic is very well attended and the premises have been found to be inadequate to serve both as a nursing centre and a treatment clinic. It is hoped that this centre will eventually be transferred to larger premises.

The centre at 58 Queens Drive was transferred to 1 Rose Lane at the end of September, 1959. Walton Home continued to function as a district centre. The six remaining centres are in Corporation houses, two of which have been successfully converted into two flats. It is hoped to carry out a similar conversion in respect of another two houses. The nurses at Belle Vale work from their own homes.

Re-organisation of the Service.

Netherfield Road

It is thought that, in view of the large re-housing scheme in operation, a new centre is required in this district. Accordingly, a ground floor flat in one of the new blocks is being allocated to the district nursing service and is expected to be ready for occupancy some time next year.

Queens Drive

The centre at 58 Queens Drive was transferred to the Rose Lane Child Welfare Clinic and has been functioning as a centre and treatment clinic.

Childwall Valley Estate

The building of Childwall Valley estate is nearing completion and it is planned to have a centre there. Plans have been drawn up for the conversion of one of the houses into two flats, the lower flat to function as a centre and a nurse will occupy the upper flat. It is hoped that this will be completed by next year.

Croxteth Estate

Mill Street Health Centre

It is anticipated that a centre will be required on Croxteth estate, whilst a room has been allocated for the use of the district nurse in the Mill Street Health Centre.

Walton Home

The Walton Home will continue to function as a nursing centre. There is no residential accommodation for the nurses working in the district as the residential part was converted for use as a training centre and Queen's student nurses' hostel.

Manica Crescent Fazakerley

The Fazakerley centre in Manica Crescent serves as a residence for two nurses and also a nursing centre. It is anticipated that this house might in future be used as a residence only and that the centre will be transferred to the child welfare clinic at Formosa Drive.

The centres at Ashcombe Road, Knotty Ash, and Hillfoot Avenue, Woolton, have been converted into two flats and have proved eminently satisfactory. A similar conversion is planned for the Corporation houses at 192 East Lancashire Road and Malleson Road.

Administrative Centres

The main administrative centre will be at the Health Department, Hatton Garden. The day to day work of the nurses will be administered from the centres at Maynard Street and Rose Lane. The latter will be the headquarters of the Senior Superintendent.

Training.

The residential home at 1 Church Road, Walton, was presented free of charge, together with furniture and furnishings, to the Corporation. The actual transfer took place in November, 1959.

Following this, it was necessary to carry out certain adaptations and repairs. Some of the structural timber had to be replaced and this involved the taking up of floors, the temporary removal of windows and breaking down of ceilings. Wash hand basins with hot and cold water were installed in all the bedrooms on the first floor. It was also necessary to carry out extensive alterations to the kitchen in order to bring it into line with modern requirements. Improvements were also carried out in the heating arrangements for the nurses' bedrooms.

Little change has been made in the general arrangement of the rooms themselves. The large front bedroom on the first floor will function as a lecture room and the small room next door will be the tutor's office. The large back bedroom on the first floor will be a bed sitting room for the housekeeper. The hostel was ready for occupancy on 31st December, 1959.

It is hoped to train up to 20 nurses at a time, and three courses of training will be held each year. The former arrangements will continue, whereby outside authorities may send candidates for training, with appropriate financial arrangements. Residential accommodation is available for seven students only and it may be considered necessary at a later date, to extend this. The majority of Liverpool students prefer to live at home, or in their own accommodation.

Visits

During the year, a total of 342,014 nursing visits were made to 14,398 patients.

Nursing visits continued to be made twice daily between the hours of 8.30 a.m. — 1.30 p.m., and 4.30 p.m. — 7.30 p.m. In addition, an emergency staff on duty each evening from 7.30 made a total of 2,285 late visits for the purpose of giving sedative injections and emergency nursing treatments.

A total of 1,444 visits were paid to children under one year, of whom 1,053 were under one month old.

Minor Ailments Clinics

The minor ailments clinics at 3 Maynard Street, 1 Church Road and 1 Rose Lane, treated 278 patients, giving 9,435 treatments.

Training

The course of Queen's training was six months for the state registered nurse and four months for those nurses who are either qualified as health visitors, or midwives, or have had at least 18 months' experience on the district.

During 1959, 25 nurses qualified as Queen's nursing sisters, of these, 16 were trained for the Liverpool staff, and eight on behalf of various authorities — Cumberland, North Riding, East Sussex, Westmorland, Southport and Cambridge, with one independent student.

The block system of training continued in use, under which the lecture course is concentrated into one month, during which period all lectures are given and students do purely theoretical work. The remainder of the training period is spent on tutorials, test papers and study classes, visits of observation and practical work on the district.

Inspection by Queen's Institute of District Nursing

In June and July, the usual biennial visit was made from the Queen's Institute of District Nursing to observe the district nursing service, and the report was as follows:—

"During the recent visit to Liverpool, rounds were made with a cross section of the staff. A great variety of work was seen and the nursing care was of a high standard. The nurses worked with interest, enthusiasm and thought for the individual needs and social welfare of their patients. Excellent training continues to be given to the students, whose work seen during the year gives evidence of careful teaching and supervision. The records were well kept, up to date and readily available, and the equipment in order".

Home Nursing Equipment.

Home Nursing Equipment

The scheme for the loan of home nursing equipment established in accordance with the provisions of Section 28 of the National Health Service Act, 1946, to patients being nursed in their own homes, functioned very satisfactorily during 1959. The scheme was supervised by one of the deputy superintendent health visitors.

No charge was made for the loan of equipment, nor was any restriction placed on the number of different articles which could be borrowed by any one patient. During the year, the necessity for the payment of a deposit on articles costing more than two pounds was dispensed with, and resulted in patients receiving equipment with the minimum of delay. Loans were made initially for a period of three months, but extensions were granted at the request of the patients' doctors.

The demand for this service continued to grow and each year it has been necessary to increase the stock of equipment. During 1959, 3,298 articles were loaned and necessitated 2,587 visits for the purpose of providing or collecting the equipment.

A health visitor called on patients to assess their needs and to advise on the use of the equipment. Frequently the health visitors were able to give assistance with other problems affecting the mental and physical comfort of the patient.

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, 54 distribution centres were in use throughout the city, classified as follows:—

17 full time
13 part time
2 mobile points
22 voluntary centres

The majority of the full time and 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 disposal 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, 21 of whom are full time and 14 part time employees.

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

	1958	1959
National dried milk (tins)	435,242	393,312
Cod liver oil (bottles)	43,124	41,247
Vitamins (packets)	34,675	36,940
Orange juice (bottles)	352,723	344,978

It will be noted that there has been a decrease in the distribution of welfare foods compared with the previous year. On the other hand, the sale of proprietory brands of baby food in the clinics during the same period have increased, as shown in the following table:—

	1958	1959
Dried milk (packets)	93,369	103,945
Rose Hip Syrup (bottles)	7,242	10,574

Day Nurseries.

Private Day Nurseries

There are ten nurseries and child minders who are 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.

Local Authority Day Nurseries

There are twelve day nurseries with places for 670 children. The main problem in this section has been shortage of staff, as it is becoming increasingly difficult to find suitable staff for the junior posts. This is a source of anxiety to the more senior members of the day nursery staff, who are making every effort to maintain the highest possible standards of hygiene and general care in the nurseries.

The children attending day nurseries may be vaccinated and immunised at the request of the mothers. These procedures are carried out by one of the assistant medical officers attached to the maternity and child welfare section.

The charges for admission to the nurseries are 3s. per day for one child and 2s. 6d. for each subsequent child from the same family. Only children belonging to the priority groups as laid down by the City

Council are admitted, that is generally speaking, the children of mothers who are dependent on their own earnings, or in any case of illness of the mother. Priority is given to mothers who are in the latter weeks of pregnancy and where the doctor has recommended some extra rest.

One or two nurseries are allocated to each of the assistant medical officers, who not only carry out routine medical examinations, but advise on the general welfare of the children. In addition, they advise the matrons on the general administration of the nurseries and the matrons greatly appreciate the help they receive.

Both doctors and matrons pay particular attention to the choice of toys appropriate to the different age groups. Suitable play material can contribute greatly to the happiness and mental welfare of the children.

HOME HELP SERVICE

Home Help Service

2,846 families were assisted in 1959. This compares with 2,604 families helped in 1958. Included in these figures were:—

Maternity Cases	261
Tuberculosis Cases	31
Cancer Cases	31
Chronic sick and aged Cases	1,909
Other illnesses	614

Types of Cases assisted—Maternity

Included in this category were several cases of toxaemia of pregnancy, where weekly service of two mornings was given for a period of about three months prior to the confinement, to relieve the expectant mother of her heavier chores.

Tuberculosis

The Mass Radiography Campaign did not produce the large number of applications expected, although the figure of 31 cases is an increase of 20 more than in 1958.

Cancer

The number shown represents only the patients who were critically ill and who were provided with daily service for as long as it was needed.

Other Illnesses

In this category are included acute illnesses of short duration and help was given for periods ranging from one to four weeks.

Chronic Sick and Aged

These are all patients who needed a little assistance for a long time. Some of them were unable to light fires and prepare meals and needed assistance daily. Others were able to manage with help once or twice weekly for housework and shopping. This service absorbed most of the staff, as it has done for the past six years and enabled a large number of people to remain at home who would otherwise have had hospital or hostel accommodation. Because of the ever growing demand for this "helping hand" service it was reserved for the applicants who were without families.

Charges

The standard rate of 3s. per hour was charged in some cases but most applicants requested a reduction in the charge. There was dissatisfaction with the amount to be paid in some instances but the present scale of assessment has proved to be very satisfactory in general.

Several non-payers were taken to court by the City Treasurer's department. The minimum charge is 4s. *per week* and in cases where the applicant received National Assistance the Area Officer concerned was notified and the amount added to the allowance of the applicant. The Home Help Section has appreciated the co-operation of the National Assistance Board in these matters.

Administrative Staff

The administrative staff at the end of the year consisted of:—

1 Organiser

1 Assistant Organiser

2 Visitors

2 Clerks

In order to deal with the progressive increase in applications an additional visitor was appointed to commence on 1st January, 1960.

Home Help Staff

The number of Home Helps employed at 31st December was 221, and by the time this report appears at least 250 will be employed. With the small number of visiting staff available very little supervision was possible and it is pleasing to report that few complaints were received. Many of the helpers have devoted their free time to the pensioners and it is no longer surprising to hear that they have wallpapered a room, "permed" hair and cut toe nails as well as performing many other unofficial acts of kindness.

Among the more unusual cases assisted during the year were the following:—

(1) A lady of 76 years allowed her sub-tenant to take the tenancy of the house and was promptly removed to a furnished room elsewhere and left to her own devices. She has one son who called very rarely and did not appear concerned about her. She was referred for service by the Welfare Service section as suffering from malnutrition and neglect. She refused hospital treatment. Mobile meals were arranged and the home help attended daily to give personal and general attention. After attending for several days the home help reported that the old lady was almost blind and subsequently an eye specialist was called who wished to operate, but again the patient refused hospital treatment. Her National Assistance allowance was increased and a grant made for extra clothing which was purchased by the home help. The district

nurse was also asked to call to give a bed bath. This old lady was a particular responsibility because of her helplessness and because it was quite unsafe to leave money or anything of value in the room whilst she was unattended as it disappeared. This case is still proceeding.

(2) A mother of 30 years of age had recently been confined, was suffering from pleurisy and there were four other children. Her husband was in prison for robbing gas and electric meters, including his own, and consequently the family were without heat and light. It was difficult to care for them without cooking facilities and the visitor from this section contacted the North Western Gas Board and explained the position at the same time requesting that a large gas cooker should be exchanged for a smaller and more economical one. The Gas Board were unable to assist until the bills were paid, so the Personal Service Society and Catholic Social Service Bureau were approached and between them paid the bill. This negotiation took seven days, during which time the home help cooked as best she could on the fire in the living-room. Help was provided daily for five weeks at a cost of 4s. per week, which was re-imbursed to the patient by the National Assistance Board.

HEALTH EDUCATION

During the year the Health Department has undertaken much general health education. On many occasions speakers have been provided on various health topics throughout the City. Requests for expert speakers are increasing year by year as this service is becoming more widely known. Requests have come from many different organisations and for discussions on many topics including maternity and child welfare, infectious diseases, preventive mental health, tuberculosis, immunisation and vaccination, smallpox, food hygiene, atmospheric pollution and slum clearance. In every case a speaker has been provided to meet each request.

Much valuable health education was undertaken in the course of the Mass X-ray Campaign. Much of this work was, of course, in connection with tuberculosis but also many other questions were raised by both voluntary workers and householders and health education generally throughout the City received a great impetus from this campaign.

Home Accidents

In the clinics throughout the City efforts have continued to stress the importance of health education in the prevention of home accidents. Displays are continually set up in the clinics illustrating the various hazards which may be found in many homes and which result in repeated accidents. Increasing stress is being laid on the use of clothes made from modern non-inflammable materials particularly in relation to children's night attire and there are signs slowly that such clothes are becoming more popular.

Liverpool Show

Once again the Liverpool Show, held from 16th to 18th July, 1959, provided a large-scale all-out effort of health education and one tent 120 ft. by 40 ft. was well attended throughout the show by the public interested in the health education exhibits shown there. In addition there was a cinema tent continuously showing films on health educational topics.

This year the Show highlighted the problems of the aged, the problems of vaccination and immunisation and also the question of radiation hazards.

In addition a complete clinic was built at the end of the tent, including a wooden floor and wooden roof and, throughout the Show immunisation was offered against poliomyelitis and resulted in a number of young people being immunised. Finally there was a small exhibit dealing with the after-care of tuberculosis as it was felt that this was of particular importance following the successful Mass X-ray Campaign earlier in the year.

INFECTIOUS DISEASE

SUMMARY

Number of confirmed cases of infectious diseases reported during 1959 :—

Anthrax	2
Diphtheria	1
Dysentery (Sonne)	407
Enteric Disease: Typhoid fever	1
Paratyphoid fever	11
Erysipelas	46
Food poisoning	160
Malaria (contracted abroad)	6
Measles	6,299
German Measles	9
Meningococcal Meningitis	21
Ophthalmia Neonatorum	104
Pneumonia, Acute Primary and Influenzal	451
Poliomyelitis—Paralytic	23
Non-Paralytic	4
Puerperal Pyrexia	629
Scarlet Fever	973
Smallpox	1
Tuberculosis—Pulmonary	1,633
Other forms	48
Whooping Cough	1,488

No cases of Plague, Typhus Fever or Acute infective encephalitis occurred during the year.

Throughout the year, a close and cordial co-operation has been afforded the department by Dr. A. B. Christie and colleagues 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.

Smallpox.

On Saturday, 28th February, a medical student aged twenty-one years, fell ill whilst on a shopping expedition in Liverpool. He suffered from headache, backache and joint pains. As his father had been away from work four days earlier with influenza, the student thought he was developing a similar condition. He returned home the same evening and went to bed. He remained in bed on Sunday and was seen by his general practitioner on Monday. A rash appeared on his arms and forehead on Monday evening (2nd March), which faded but left behind

a feeling of spots on his brow and his arms. By the Wednesday (4th March), there was a definite maculae rash on the body. The doctor was not satisfied with either the rash or the sequence of symptoms and invited a second medical opinion on Thursday (5th March). Following upon this consultation, provisional diagnosis of severe chickenpox was then made. On the following day (6th March) the rash became vesicular, but there was no cropping: the distribution was centrifugal. It was thought that the case might still be one of atypical chickenpox and specimens were taken from the vesicles for microscopic examination. The following morning (7th March), the case was seen by a second consultant who invited Professor Downie of the Department of Bacteriology, University of Liverpool, to visit and take specimens from the lesions. During Saturday morning, a number of photographs of the skin lesions were taken by a hospital photographer. By mid-afternoon, however, it was reported by Professor Downie that the smears were positive for smallpox. The case was then reported to the Health Department and seen by Professor Semple who made a diagnosis of moderately severe smallpox. The patient was admitted that evening to New Ferry Isolation Hospital.

He had been vaccinated successfully twenty years earlier. He made an uneventful recovery from his exanthema which was shown to be due to the variola major virus. The source of infection was never found, but there was no doubt either clinically or virologically, that he had smallpox.

Source of Infection

It was calculated that the student had been infected during the period 15th-18th February. A detailed questioning showed the following:—

15th February (Sunday) —Did not leave house except for visit to Church and confirmation class in the evening—no visitors recollected.

16th February (Monday) —Pathology lecture at University. Clinical surgery class at Royal Southern Hospital. Visited Walton Hospital (to see sick relative) in the evening. No visitors recollected.

17th February (Tuesday) —Pathology lecture at University. Coffee in Students Union. Visited three wards of the Royal Southern Hospital. Tutorial in Radiology at Royal Southern Hospital. Lunch in hospital. Clinical surgery class in hospital in the afternoon. Basket Ball practice in the evening. Met friend at 8.30 p.m., and returned home. Coffee in City milk bar. Returned home by bus.

18th February (Wednesday)—Pharmacology lecture in University. Clinical class Royal Southern Hospital. Lunch in hospital. Ward round. Returned home. No visitors recollected.

Investigations into Source of Infection.

Investigations into Source of Infection

The following groups of persons were visited by doctors and health visitors of the public health staff, questioned, examined and offered vaccination.

(1) Members of his University class and basket ball team.

(2) All those who had either attended as surgical out-patients or had been surgical in-patients at the Royal Southern Hospital between the 16th and 18th February.

(3) Members of the confirmation class of Sunday, 15th February.

(4) Patients who were in the ward of Walton Hospital visited by the case on the 16th February.

(5) The staff of the milk bar opposite Central Station.

None of these enquiries suggested that anyone of those known to be in contact with the case on the days in question was suffering from smallpox in any form.

February 28th. This was the first day of his illness. He attended a medicine lecture at the University. Walked to a large music store; a bookshop; a coffee house; met friends; visited a large multiple store

(bought food and a greetings card). On his journey home, he called at four local shops, visited a Chinese laundry and called at his doctor's surgery (did not enter). He did not leave home again before the final diagnosis of smallpox was made.

Preventive Action.

(1) All houses within fifty yards radius of his home were visited on Sunday, 8th March and the occupants offered vaccination to ensure that the chances of airborne spread of smallpox were minimized. **Preventive Action**

(2) All bedding, etc., from the patient's bedroom was fumigated.

(3) Details of the case were notified to adjoining Medical Officers of Health and movements of known contacts were similarly notified. A warning notice was circulated to all general practitioners in the area.

(4) *Surveillance.* Four separate groups of persons were now considered to be at risk of smallpox:— **Surveillance**

(i) University students who attended classes attended by the case on the 28th February.

(ii) Assistants in the shops visited on the 28th February.

(iii) Close contacts who visited his home between 28th February and 7th March.

(iv) The laundry staff and everybody who was known to have collected or handled laundry which had been exposed to contamination.

Contacts of groups (i) and (ii) were traced, visited, vaccinated and kept under daily surveillance for twenty-one days. Smallpox did not develop amongst these contacts. Close Contacts of group (iii). Five people were particularly subject to risk in this group—as follows:— **Close Contacts**

(i) The daily help: last vaccinated forty-five years ago.

(ii) The patient's mother: last vaccinated forty-three years ago.

(iii) The family doctor: vaccinated fifty-seven years ago and revaccinated thirty-six years ago.

(iv) The patient's father, vaccinated forty-nine years ago and revaccinated seventeen years ago.

(v) The hospital photographer, vaccinated in childhood and revaccinated on numerous occasions, the last occasion being within the past two years.

The mother and father had been in daily contact with their son, the doctor had examined the boy at home on several occasions during his illness, and the daily help had visited the bedroom regularly during this period. All four were vaccinated on the 7th March, although this was not, at least, until the fifth day of exposure when little protection could be anticipated. Because of this, it was decided to increase their protection by the use of antivaccinial gamma globulin (used successfully during the 1958 Bebington outbreak of smallpox). A total of 1.5 g. of the serum dissolved in 15 ml. distilled water was given by deep intramuscular injection to these four contacts. (A full report was published in "The Lancet", 11th July, 1959).

Daily visits were made to these four contacts until the 27th March which was twenty days after the last date of exposure. All remained perfectly well, without symptoms or signs suggesting infection.

Suspected smallpox case

On Tuesday, 17th March, the hospital technician at Fazakerley Hospital who had visited the medical student in his home on the 7th March to take photographs, developed an intense rash and certain other prodromal symptoms of smallpox. He was admitted to New Ferry Isolation Hospital, but a focal rash did not develop and he made a complete recovery within a short time. This man had been well vaccinated in the past and had been successfully revaccinated within the past two years. Although a case contact, because of this history of multiple revaccination, he was not given antivaccinial gamma globulin.

Chinese laundry contacts

Whilst the young man had been ill at home he was sick and vomited several times on his bed sheets. These were frequently changed and the soiled linen taken by his mother on Wednesday, 4th March, to a local Chinese laundry. Here they were laundered and the clean linen collected on Saturday, 7th March. This rendered the laundry a dangerous and potential source of smallpox. All the twenty-five workers in the

laundry were visited and vaccinated on Saturday night, 7th March, and arrangements were made for their daily surveillance. The laundry itself was closed for three days, thoroughly disinfected, all the linen there being steam disinfected. All recent customers of the laundry (over 200) were traced (in this, the local press were most helpful and co-operative) and arrangements made for their vaccination. An offer was also made to disinfect any laundry which customers had received during the period of risk. A good response was achieved to these measures and no further cases arose in association with either the staff of the laundry or the customers.

All contacts and others associated with this outbreak (a total of approximately 300 persons) were kept under daily surveillance for twenty-one days. No further cases of smallpox were reported.

Although a large scale outbreak of smallpox in Liverpool was again feared, it never occurred, due in no small measure to the precautions and action taken.

Anthrax.

Two confirmed cases of Anthrax occurred during the year. The first case was employed as a dock labourer by the National Dock Labour Board and the second case was employed at the Government Wool disinfecting station. **Anthrax**

The history of these two cases may be of interest:—

Case I.

The s.s. "Indian Renown" from Bombay and Calcutta with a general cargo including four bales of Indian cow-hides, docked at Huskisson dock on the 25th March, 1959. The patient—a holdsman aged fifty-five years, was a member of one of two gangs making up slings of the mixed cargo including the cow-hides. They worked from 10 a.m. to 7 p.m., on the 25th March clearing this cargo. The case reported for duty the following day, but complained of feeling unwell and went to the dock clinic; from there he was referred to the Stanley Hospital. Five days later a typical anthrax pustule appeared on his neck and he was admitted to Fazakerley Isolation Hospital on the 31st March, where a clinical diagnosis of anthrax was confirmed. Under the appropriate treatment he made a satisfactory recovery. **Case I**

Case II

Case II

On the 25th December, a general labourer aged forty-five years, who was employed in opening bales of infected wools before processing (at the Government Wool disinfecting station), developed a small pimple on the centre of his forehead. By the 28th December, the lesion had developed into a large malignant pustule with severe oedema of the eye-lids. He was referred by his doctor to the Liverpool Royal Infirmary out-patients department where a clinical diagnosis of anthrax was made. This was confirmed by a positive culture from the pustule. On the 29th December, he was admitted to Fazakerley Isolation Hospital where under the appropriate penicillin therapy he made a satisfactory recovery.

These two cases illustrate the occupational hazard to anthrax experienced by handlers of infected cargoes and materials prior to disinfecting processes. It would seem desirable that these groups should be protected with anti-anthrax vaccine.

Diphtheria.

Diphtheria

During 1959, one carrier of diphtheria was traced in Liverpool. The discovery of this carrier state in a young girl aged seventeen may be of interest.

On 3rd August, a young man aged twenty-one, living in the Huyton area, was taken ill with a sore throat. A throat swab showed the presence of virulent intermedius diphtheria bacilli. He was admitted to St. Helens Isolation Hospital for treatment.

It was later found that he had been staying the previous weekend with his fiancee at her home in Liverpool. Nasal and throat swabs were taken from this young girl. The throat swabs were negative, but the nasal swabs were positive for the same strain of diphtheria bacilli. She had never experienced (to her knowledge) recent symptoms suggestive of diphtheria or upper respiratory infection and it was considered that bacteriologically she was a nasal carrier of intermedius diphtheria. Arrangements were made for her to undergo treatment in Fazakerley Isolation Hospital. Further investigations of her home contacts in Liverpool produced repeated negative results. As is often the case, both case and carrier had never received diphtheria immunisation during their lifetime.

Typhoid Fever.

One case of typhoid fever occurred in Liverpool during the year. This case is of interest as the victim was one of twelve cases that contracted the disease while on a coach tour in Spain. **Typhoid Fever**

The history of the case is as follows:—

On 8th September, notification was received from the Medical Officer of Health for Cheltenham to the effect that a Liverpool man aged twenty-two years had been a contact of two confirmed cases of typhoid fever in Cheltenham following a London to Spain coach tour between 24th July and 8th August.

He was visited on the 9th September and gave a history suggestive of recent enteric fever, consisting of a severe pyrexial illness, associated with diarrhoea, abdominal pains, nausea and vomiting, lasting sixteen days (August 14th—30th). During this period, he had lost nearly two stone in weight.

Bacteriological investigation now showed that his stools were positive for Salmonella typhi, vi-phage type 38. (The same phage type as the salmonellae excreted by the other victims). Blood agglutination was also positive in the following dilutions:—

H. agglutinin at a dilution of 1/640
O. „ „ „ „ 1/320

Although he had served in H.M. Forces, he had not been abroad before, nor received T.A.B. vaccine. The patient was transferred to Fazakerley Isolation Hospital where he made a full recovery following appropriate treatment.

Enquiry into his home and work contacts revealed no further cases of typhoid fever. It was considered that he had contracted his infection during his holiday in Spain. It is of interest to note that a total of twelve clinical cases of typhoid fever (including this Liverpool case) were traced amongst the thirty-four members of this coach tour.

This case history, once again emphasises the advisability for prospective holidaymakers intending to visit Southern Europe to undergo immunisation with T.A.B. vaccine.

Paratyphoid fever.

During 1959, eleven clinical cases of salmonella paratphi B. were notified and confirmed in Liverpool. This is a decrease of seven over **Paratyphoid Fever**

the 1958 notified cases. These cases, with two exceptions, were discovered following routine stool sampling of patients suffering from gastro-enteritis. During these investigations, five symptomless excretors including one chronic carrier were discovered. The details are as follows:—

	Patient	Age in years	Sex	Clinical case	Symptomless excretor	Site	Phage type
	1	1	F	—	+	Isolated case	1
	2	1	F	—	+	Family	1 var 6
	3	2	—	—	+	outbreak	1 var 6
A	4	36	M	+	−	Family outbreak	3al var 2
A	5	35	F	−	+ (Chronic) (carrier)	Family outbreak	3al var 2
A	6	12	F	+	−	Family outbreak	3al var 2
A	7	65	F	−	+	Family outbreak	3al var 2
	8	18	F	+	−	Isolated case	1 var 6
B	9	40	F	+	−	Family outbreak	1 var 6
B	10	14	M	+	−	Family outbreak	1 var 6
B	11	8	F	+	−	Family outbreak	1 var 6
B	12	4	F	+	−	Family outbreak	1 var 6
B	13	2	F	+	−	Family outbreak	1 var 6
	14	10	M	+	−	Isolated case	1 var 6
	15	71	M	+	−	Hospital case	1
	16	4	F	+	−	Hospital case	1 var 6

Two of the family outbreaks may be of interest:—

Family outbreak A.

On 12th August, following a meal of soused herrings, a man aged thirty-six and his daughter aged twelve, developed severe symptoms of gastro-enteritis. Three other members of this family who had also eaten of this fish did not experience untoward symptoms. **Family outbreak A**

Their family doctor notified the two cases to the Health Department as suspected cases of food poisoning. Unfortunately, as is often the case, there was no remnant of fish left for examination and the wife could not recall where she purchased the fish.

Stool specimens were examined from all six members of the family, and salmonella paratyphi B. phage type 3a1 var 2, was isolated from the two clinical cases and the wife (symptomless excretor); those of the grandmother, aged sixty-five; sister, aged forty-three, and baby, aged eleven months, were negative. Subsequently, on the 16th November, after eight negative examinations, the stools of the grandmother (who was symptom free) showed salmonella paratyphi B, phage type 3a1 var 2.

Under appropriate treatment, all but the wife finally produced negative stool specimens. It was considered that the wife was a chronic paratyphoid carrier and had caused the outbreak.

Close questioning of this person revealed an interesting history. She was of German nationality and fourteen years previously while in Germany, she had suffered an illness suggestive of Enteric fever.

It would seem that she had been in a chronic carrier state since then, because despite prolonged and varied treatment, she has remained a symptomless excretor of salmonella paratyphi B. Accordingly she has been added to the list of chronic carriers.

Family outbreak B.

During the night of 29th/30th August, a boy aged fourteen and his mother aged forty, experienced severe gastro-enteritis lasting twenty-four hours. The following day, the three remaining children (aged eight, four and two years) of the family developed similar symptoms. **Family outbreak B**

Bacteriological examination of their stool specimens showed salmonella paratyphi B, phage type 1 var 6.

The only person in the family with no enteric symptoms and with negative stool specimens was the father aged forty-four years.

The source of their infection was considered to be infected cockles. Enquiry showed that the family had visited Moreton, Wirral, for a picnic on the 9th August, and had collected cockles at low tide from the foreshore close to the main sewer outfall. These shellfish had been eaten after par-boiling on 10th August by all the victims with the exception of the father.

Under appropriate treatment, the five cases recovered and negative stool specimens were obtained from all by the 30th September.

The history of this outbreak, emphasises once again, the danger of collecting and eating shellfish from unsafe areas.

Register of Chronic Typhoid and Paratyphoid carriers.

Register of Chronic carriers

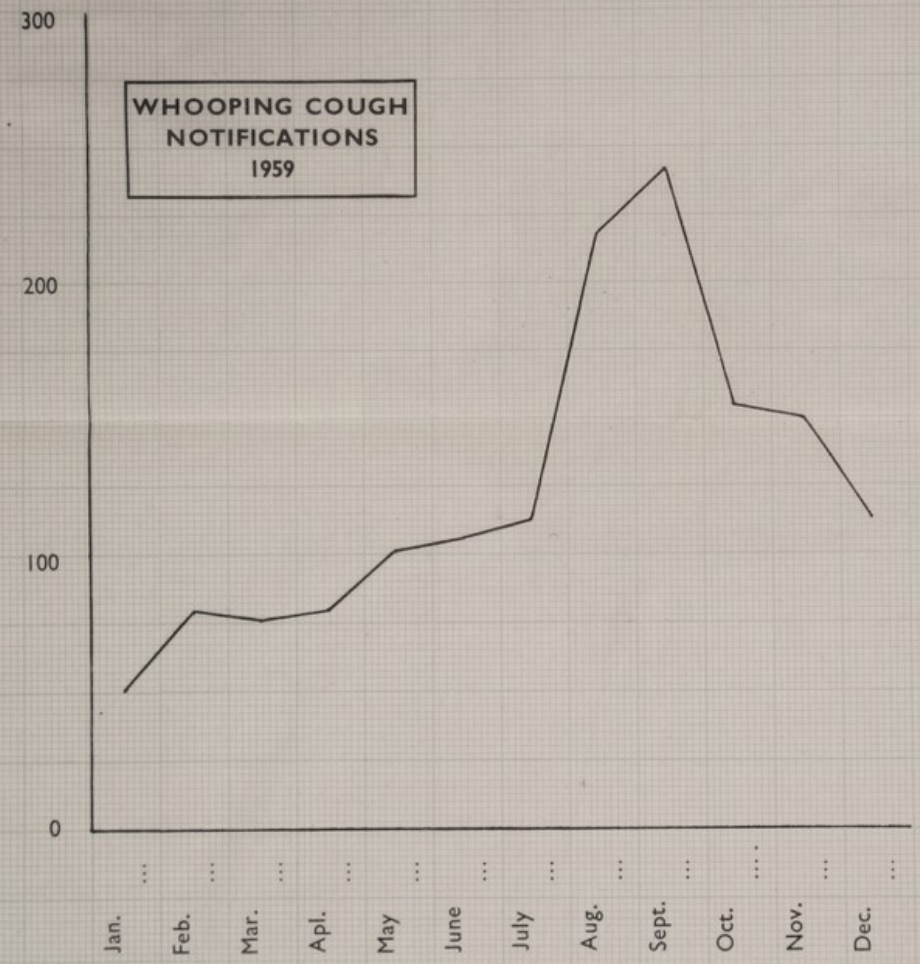
Examination of one chronic typhoid carrier and six paratyphoid B carriers has continued throughout the year. During the year, one chronic typhoid carrier was removed from the chronic list having submitted repeated negative stool and urine specimens over a period of eighteen months following Cholecystectomy operation. One new paratyphoid B carrier was added to the list.

The details of the present known chronic carriers in Liverpool are listed below:—

No.	Age	Sex	Date first positive	Disease	Phage type	Occupation
1	55	F	1941	Paratyphoid	1	Housewife
2	62	F	1941	,,	1	,,
3	69	F	1958	,,	1	,,
4	36	F	1958	,,	1	,,
5	36	F	1956	,,	Untyped	Research worker
6	35	F	1959	,,	3al var 2	Housewife
1	46	F	1928	Typhoid	E.1	Housewife

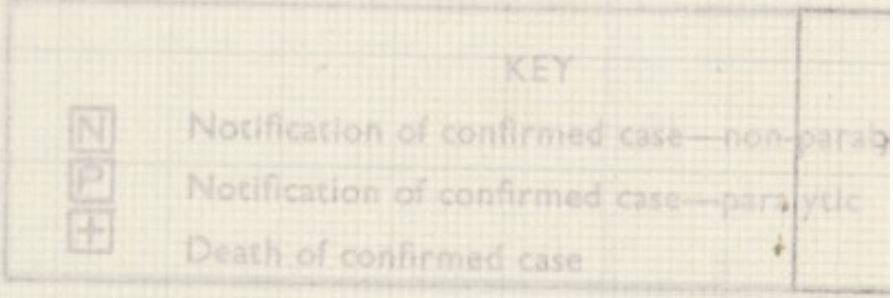
It is interesting to note the striking preponderance of female carriers due in all probability to the increased incidence of gall bladder disturbances in females rather than males.

300
200
Jan.
Feb.
Mar.
Apl.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
NOTIFICATIONS
1951
WHOOPING COUGH


WHOOPING COUGH
NOTIFICATIONS
1959
300
200
100
0
Jan.
Feb.
Mar.
Apl.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.

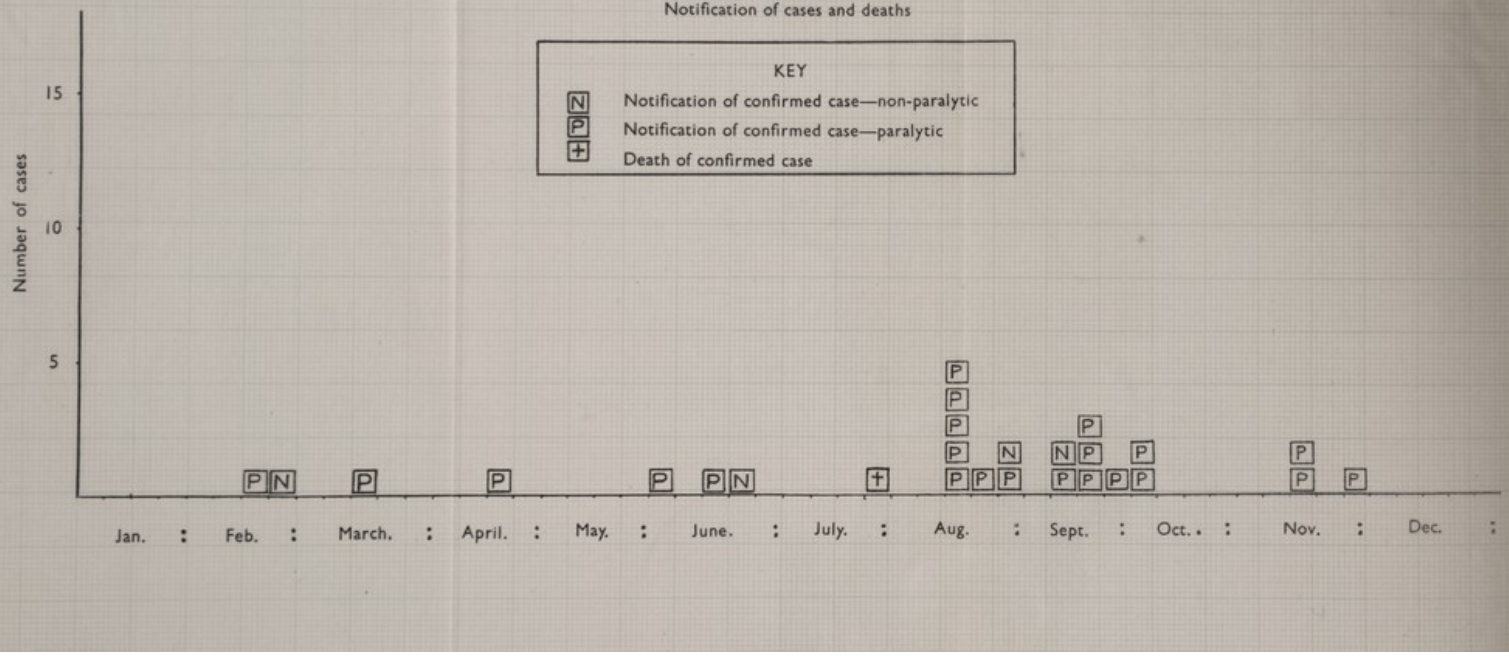
POLIOMYELITIS—1959

Notification of cases and deaths



POLIOMYELITIS—1959

Notification of cases and deaths



Whooping Cough.

Whooping cough

During the year, 1,488 cases of Whooping cough came to the notice of the Health Department, a figure representing a case rate of 1.96 per 1,000 of the population.

This was an increase of 1,014 (214 per cent) cases compared with the 1958 figure of 474.

The chart illustrates the monthly incidence of cases. It will be seen that a significant increase in notification occurred towards the end of July which rapidly rose to reach its peak towards the middle of September. There was a rapid decline from then until the middle of October; with a further decline during November and December.

It is of great interest that the seasonal incidence was quite unusual and no explanation was found.

Measles.

Measles

During the year, 6,299 cases of measles were reported, representing a case rate of 8.3 per 1,000 of the population. There was a decrease of 890 in the number of notified measles cases as compared with the 1958 figure of 7,189.

The following table shows the incidence of measles during the past eight years:—

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

Year	1952	1953	1954	1955	1956	1957	1958	1959
Cases	8,768	10,090	8,599	5,998	6,662	10,180	7,189	6,299
Rate per 1,000 population ...	11·1	12·8	10·9	7·7	8·6	13·2	9·4	8·3

Poliomyelitis.

Poliomyelitis

Fifty-four patients were originally notified as suffering from poliomyelitis, but in only twenty-seven cases was the diagnosis actually confirmed. Twenty-three were paralytic cases and four non-paralytic cases. This is an increase of nine paralytic cases and two non-paralytic cases on the 1958 figures of fourteen and two respectively. Despite this overall increase, there was, however, only one fatal case, as compared with two in 1958. These twenty-seven positive cases were spread over

seventeen of the City's forty wards; there being four cases in Vauxhall ward. The chart illustrates the monthly incidence of confirmed cases. August was the peak month with eight cases. Six cases occurred in September with two cases in October and three cases in November. During the early part of the year, January to July, single monthly cases occurred (June being the exception with two cases). No cases occurred in December.

This increase in morbidity may be due to the prolonged dry warm months of August, September and October as compared with the "poor summer" of 1958.

The following is a summary of the age incidence of cases. There were nineteen patients under the age of five years; six in the age group five to nine, one aged eleven and one aged fourteen.

Poliomyelitis 1959.

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-35	35+
MALE								
Paralytic	11	5 (1 died)	1	—	—	—	—	—
Non-paralytic ...	1	—	—	—	—	—	—	—
FEMALE								
Paralytic	5	1	—	—	—	—	—	—
Non-paralytic ...	2	—	1	—	—	—	—	—

It would appear that poliomyelitis in Liverpool is becoming clinically more prevalent in the under ten year age group.

Five of the paralytic cases and one of the non-paralytic cases had been immunised with poliomyelitis vaccine.

Fatal case of Poliomyelitis.

Fatal case

One fatal case occurred during 1959 as follows:—

A male child aged five years, complained of a sore throat on the 18th July. He developed a temperature and headache and on the 22nd July was admitted to Fazakerley Isolation Hospital. Paralysis developed in his right arm and his condition gradually deteriorated ending with his death on the 25th July. Home and school contacts were kept under surveillance for three weeks, but no further cases occurred. This child had not been protected with poliomyelitis vaccination.

Food poisoning Investigations.

Food poisoning investigation

Since the Food Hygiene Regulations 1955, came into operation on the 1st January, 1956, 33,050 specimens from 18,208 persons have been examined bacteriologically in connection with ingestion disease investigations. Of this number, 6,931 specimens from 3,578 persons were in respect of the year 1959.

As in previous years public health inspectors have assisted in the investigations both in tracing and following up contacts.

Intensive health education lectures to the food trade by the medical staff and public health inspectors continued throughout the year. There is no doubt that Liverpool's drive to better the standards of hygiene amongst food handlers has resulted in a great improvement in the standard of hygiene in food premises.

Food poisoning statistics

Two hundred and nine cases of food poisoning were traced in Liverpool during 1959, of which 160 were officially notified to the Health Department. In addition, 76 symptomless excretors of food poisoning organisms were found amongst their family contacts. From this total of 285 cases of food poisoning, 206 (72 per cent) were due to salmonellae. 68 (24 per cent) to staphylococcus toxin and 11 (4 per cent) to Clostridium Welchii. Of the 206 isolations of salmonellae, 137 were from clinical cases and 69 were symptomless excretors. The details are given below.

Food poisoning

Salmonella phage type	Notified cases	Discovered cases	Symptomless excretor	Total
Salmonella				
,, anatum ...	—	1	—	1
,, bareilly ...	—	—	1	1
,, enteritides ...	1	—	2	3
,, give ...	1	—	—	1
,, heidelberg ...	1	1	2	4
,, infantis ...	—	1	—	1
,, kottbus ...	—	1	—	1
,, montevideo ...	—	3	—	3
,, newport ...	1	2	2	5
,, poona ...	—	1	—	1
,, thompson ...	3	—	—	3
,, typhi murium	85	33	62	180
,, unidentified ...	—	2	—	2
Total:	92	45	69	206

This 22 per cent increase in notified food poisoning isolations, as well as those discovered and not notified, may well be due to the long dry summer experienced during 1959 and to the attention directed in Liverpool both to food hygiene and the bacteriological investigation of all cases of gastro-enteritis.

Every notified or suspected case of gastro-enteritis has been exhaustively 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, especially among 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.

Clostridium Welchii food poisoning at a store canteen

Outbreak of Clostridium Welchii food poisoning

During Sunday night (6th—7th September) forty-two out of 131 female employees of a large mail order company experienced symptoms of gastro-enteritis occurring between nine and twelve hours after eating the midday canteen meal. Their gastro-enteritis was mild and all but seven resumed work on the Monday; six of these returned to work the following day. The remaining victim resumed employment after an absence of four days.

The meal consisted of :—

> Cold roast lamb, potatoes, peas and gravy; Apple tart and custard or rice pudding. As alternatives to the lamb, minced meat pie or boiled ham were available.

All forty-two victims had eaten lamb, while sixty of the eighty-nine who escaped illness ate the alternative meat dish. The remaining twenty-nine although they had eaten roast lamb, experienced no untoward symptoms.

Both the roast lamb and apple tart had been prepared twenty-four hours previously on the Saturday, left over-night in the warm kitchen and served cold for the Sunday meal. In contrast, the minced meat pie was served hot and the boiled ham was freshly sliced having been in a refrigerator over-night.

Food from this Sunday meal was available for bacteriological examination and samples of lamb, apple tart and minced-meat pie were sent to the Public Health Laboratory. The results were as follows:—

1. Minced-meat pie and apple tart:—
Free from food poisoning organisms.

2. Cold roast lamb:—
Heavily contaminated with *clostridium welchii.*

The stools of victims and kitchen staff were examined bacteriologically.

Clostridium Welchii (phage type II) were found in four of the seven stool specimens obtained from victims. This organism was also isolated from three of the seven stool specimens taken from the kitchen staff; one of these positive isolations was of the same phage type II as that isolated from the victims. Hand swabs taken from the kitchen staff were negative.

All seven kitchen staff had eaten the cold roast lamb, but only two had prepared it. Incidentally these two were among the three positive excretors of clostridium welchii. None of the seven kitchen staff experienced gastro-enteritis.

It would appear that the meat may have been contaminated with clostridium welchii when introduced into the kitchen and so infected the food handlers. If the meat infected with clostridium welchii had entered the kitchen, then roasting would have destroyed the majority of these organisms. If the food handlers had contaminated their hands with these bacteria from the meat, then they could have re-infected the meat on withdrawal from the oven.

Specimens taken from victims and food handlers after the interval of one week were all negative.

This outbreak served to emphasise once again the necessity of constant cleanliness in handling food; the need for fresh preparation of food and the use of refrigeration for any food which is intended for serving cold on a later occasion.

Salmonella typhimurium outbreak in Broadgreen Hospital.

Hospital outbreak of salmonella typhimurium

During November 1959, a sharp outbreak of salmonella typhimurium affected one of the medical wards in Broadgreen Hospital. Three clinical cases occurred and during this period ten symptomless excretors of salmonella typhimurium were discovered within the ward following routine bacteriological examination of stool specimens. The outbreak is of interest as it illustrates the danger of possible rapid spread of enteric infection within a modern hospital by infected medical and nursing staff.

Details are as follows:—

On the 7th November, a woman aged 39 years was admitted to a medical ward in Broadgreen Hospital as a chronic case of ulcerative colitis. She had had surgical treatment twelve months previously and because of a persistent discharging sinus, further medical treatment was considered necessary.

On admission, she was found to have diarrhoea and vomiting. A routine stool specimen was found to be positive for salmonella typhimurium on the 10th November and the same day she was transferred to Fazakerley Isolation Hospital.

The Health department was informed and in consultation with the hospital physician superintendent, it was decided that a bacteriological examination should be made of the stools of the twenty-four patients in the ward, together with those of the ward medical, nursing and cleansing staff.

The patient's home contacts were also visited and five of her family (husband and four children) were found to be symptomless excretors of salmonella typhimurium. These initial infections were considered due to an infected meal consumed in a city cafe on the 27th October. There is no doubt that this first hospital case entered hospital with her salmonella infection and was the source of the hospital outbreak.

On the 14th November, the senior house physician, who had examined this case, developed diarrhoea. Stool examinations showed salmonella typhimurium. The same day, the night nurse on the ward complained of some abdominal colic, but enteritis did not develop. Salmonella typhimurium was isolated from her stools. Both these two new cases were transferred to the Isolation Hospital.

During the night of the 14th/15th November, seven patients in the adjoining ward complained of gastro-enteritis. It was feared that the salmonella infection had spread to this ward as both the medical and nursing staff were interchangeable. Bacteriological examination of stool specimens from these patients and ward contacts were negative for salmonella organisms on at least three different occasions. Epidemiologically, it was concluded that these seven cases were of staphylococcal toxin food poisoning, unconnected with the salmonella outbreak.

The ward with the salmonella infection was closed for admission and the Health department notified of all ward discharges.

On the 14th/15th November, two patients on the ward were found to be symptomless excretors of salmonella typhimurium. Both were discharged home, visited by officers from the Health department and treatment discussed with their family doctors. In addition, the ward house physician was found to be a symptomless excretor. She was temporarily suspended from duty and successfully treated with chloramphenicol.

Three days later (18th November) three further symptomless excretors were discovered. Two were patients in the ward—they were both unfit (for other medical reasons) to discharge home or to transfer to Isolation hospital, and were treated with chloramphenicol. The third positive isolation occurred in a non-resident student nurse attached to the ward. She was allowed to continue to attend classes and was placed on a course of chloramphenicol. Because of her studies, she would not be nursing patients for a further four weeks.

On the 29th November, two further symptomless excretors were found on the ward and treated. On the 25th November, a second student nurse was found to be a symptom free excretor. She was taken off duty and treated.

Finally, on the 30th November, the last positive isolation of salmonella typhimurium was found in a ward patient who subsequently responded to treatment.

After this date, no further cases occurred or were discovered. The ward was opened for admission and the normal daily routine re-established.

The success achieved in preventing spread of infection within the hospital was due in no small measure to the prompt and cordial co-operation of Dr. L. Findlay, Physician Superintendent of Broadgreen Hospital.

Dysentery

Statistics

During the year, 407 cases of bacillary dysentery were notified in Liverpool as follows:—

Sonne ... 407

In addition, 125 clinical cases and 272 symptomless excretors of shigella sonne and one clinical case of Flexner dysentery (type 2) were discovered following upon investigation of cases of gastro enteritis and their home contacts; thus making a total of 804 known excretors of shigella sonne organisms in Liverpool. This was a decrease of 120 (13 per cent) in the number of known cases as compared with the 1958 figure of 924.

These results are rather surprising, as it was expected that with the long dry summer experienced in 1959, there would have been either an increase in sonne dysentery or that the high 1958 level of infection would have been maintained. It is interesting to note that while the incidence of sonne dysentery declined, that of food poisoning increased.

Dysentery in day nurseries

Dysentery in day nurseries

Four small outbreaks of sonne dysentery occurred in three day nurseries making a total of 56 cases. Two of the outbreaks occurred in the same nursery. This was a decrease of 28 in the number of cases as compared with the 1958 figure of 84. This low incidence of dysentery in day nurseries is in accordance with the improved incidence within the city generally.

Control measures

It is believed that the following measures first instituted in 1955 and continued since, prevent and rapidly control the spread of dysentery in nurseries.

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.

Weil's Disease.

Weil's Disease

A slaughterman at the Stanley Abattoir was admitted to Sefton General Hospital on the 7th November with a history of two days illness. His initial symptoms consisted of fever and pains in the calves, followed after 24 hours, by attacks of dizziness and loss of appetite. There was no jaundice on admission but this developed after two days, on the 9th November. By the 11th November, the jaundice was very deep and there was marked albuminuria. He was successfully treated with penicillin and neomycin.

Serological investigation showed the following positive agglutination test:—

L. icterohaemorrhagica: positive 1/100
negative 1/300

L. canicola : positive 1/30

A diagnosis of Weil's disease was made on this serological result.

Enquiry showed that there was no history of rat bite or scratches and no history of bathing in canals. There were no home pets and no other member of his family was ill.

It may be that he contracted his infection at the abattoir, as he was in the habit of wrapping old meat sacks around himself to protect his overalls when carrying sheep from the storage pens to the slaughter block. These sacks were extremely dirty and soiled with blood and scraps of fat and meat. He was in the habit of collecting old sacks which he stored in an area of the abattoir often frequented by rats. It is interesting to speculate that these sacks may have been infected with leptospira from infected rats. Leptospira on the sacks could then be

transferred to the slaughterman; the site of entry being the many cuts and scratches that slaughtermen often suffer during their every day work.

Further enquiry at the abattoir revealed no further cases of Weil's disease and rats trapped and examined were negative for leptospirosis.

Haemolytic streptococcal infection in a private maternity hospital.

1st case

On the 12th December, a ten-day-old baby girl was admitted to Alder Hey Hospital in a moribund condition, one day after discharge from a private maternity hospital. She died soon after admission Post mortem revealed that death was due to acute haemolytic streptococcal meningitis.

2nd case

On the 23rd December, a seventeen-day-old baby girl, born at the same maternity hospital on the 6th December, and discharged home on the 15th December, was admitted to Alder Hey Hospital as a case of meningitis. Despite treatment, her condition deteriorated and she died on the 25th December. Post mortem showed a haemolytic streptococcal meningitis and a septic thrombophlebitis of the portal vein. The site of infection was thought to be through the umbilicus. While in the maternity hospital, this baby had a bleeding umbilicus.

The maternity hospital was visited on the 26th December, when nose and throat swabs were taken from the five nursing staff and ward maid. The throat swabs from one nurse and the ward maid showed a moderate infection with haemolytic streptococci. Neither gave a history of recent sore throat or upper respiratory infection. The other four were negative.

It was established that the dead babies had been in the same nursery and had been tended by the nurse with the positive streptococcal infection.

The two streptococcal carriers were temporarily relieved of duty and treated with penicillin. Subsequent throat swabs were negative after this treatment. In the meantime, the maternity hospital was temporarily closed for disinfection.

WEEKLY NEW CLAIMS FOR
SICKNESS BENEFIT 1959
Influenza
Serological isolations
Mar.
Apl.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
1959

WEEKLY NEW CLAIMS FOR SICKNESS BENEFIT 1959
No. of new claims for sickness benefit
12000
10000
8000
6000
4000
2000
0
Jan.
Feb.
Mar.
Apl.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
1959

All babies delivered on and since the 2nd December (date of delivery of first dead baby) were traced, visited and examined with negative results.

No further cases of haemolytic streptococcal infection occurred and the maternity hospital was allowed to re-open.

This episode emphasised the vital importance of the routine throat examination of all maternity staff engaged in nursing newborn infants. Unfortunately, this procedure had never been instituted in this private maternity hospital and consequently a haemolytic streptococcal carrier had been allowed to nurse babies with two tragic results.

Influenza.

Influenza

Between February 6th and March 19th, 1959, there was a sharp rise in the number of sickness claims received at the Ministry of Pensions and National Insurance offices in Liverpool. This indicated the beginning of what was proved to a sudden increase in both influenza A and B infection within the adult population. The height of this outbreak was reached during the week ending 27th February with 9,653 first sickness claims being registered for that week period. The infection subsided quickly and by 19th March, sickness claims were down to the normal level for that period of the year. In no instance did this small outbreak develop major proportions as was experienced in the Asian influenza epidemic of September 1957.

Serological isolations

During the year, a total of 23 influenza infections, as compared with 128 in 1958, were diagnosed serologically by Dr. G. B. Bruce-White of the Public Health Laboratory Service. Of these, 14 were due to Influenza A, 14 to Influenza B, and 5 to Influenza C. The majority of isolations occurred in the months of February and March with a total of 17 isolations; 9 due to Influenza A and 8 to Influenza B. The sources of these cases are shown in the following table, all with two exceptions, were isolated from cases in eight Liverpool Hospitals.

In addition, during the year, five isolations of adenovirus were made from children in two Liverpool Children's Hospitals.

INFLUENZA INFECTIONS DIAGNOSED SEROLOGICALLY IN LIVERPOOL 1959.

Week-ending	Influenza Types	Number	Source	Week-ending	Influenza Types	Number	Source
31. 1.59	C	1	W	9. 5.59	A	1	A.H.
7. 2. 59	A	1	G.P.			1	C.H.
14. 2.59	B	1	F	6. 6.59	C	1	C.H.
21. 2.59	A	1	B	20. 6.59	C	1	W
		1	F	27. 6.59	A	1	W
		1	R.I.	4. 7.59	A	1	S.G.
		1	C.H.	18. 7.59	B	1	S.G.
28. 2.59	A	1	F	29. 8.59	A	1	C.H.
		1	C.H.	7.11.59		1	F
		1	W		B	1	S.G.
7. 3.59	A	1	B			1	W
		1	S.G.	21.11.59	C	1	W
14. 3.59		1	S.G.			1	F
	A	1	C.H.	26.11.59	B	1	W
		1	Lab. Technician	5.12.59	B	1	R.S.
21. 3.59		1	B		C	1	R.S.
	B	1	F				
		1	F				

Key to source:— F = Fazakerley Hospital W = Walton Hospital
CH = Chest Hospital SG = Sefton General Hospital
RS = Royal Southern Hospital AH = Alder Hey Hospital
B = Broadgreen Hospital RI = Radium Institute
GP = General Practitioner

Infectious Disease Consultations.

During 1959, 60 visits were made to private houses by the medical staff at the invitation of general practitioners, as follows:—

Smallpox	1
Chickenpox	38
Staphylococcal dermatitis	2
Poliomyelitis	8
Non-Poliomyelitis	4
Rheumatic Fever	5
Herpes Zoster	2

RADIATION MONITORING

During the year, regular monthly tests to measure the radioactivity in Liverpool's water supply have been undertaken by the City Analyst. A small section on the 1958 results was included in my annual report for 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. In addition a detailed study of the Vyrnwy water supply was carried out by the Atomic Energy Research Establishment and reported in January, 1959, in "A preliminary Survey of Radio Strontium and Radiocaesium in drinking water in the United Kingdom." This report clearly showed that the amounts of these long-lived isotopes in the City's water supply were far below the Medical Research Council's permissible level for these radio-isotopes in drinking water.

Radioactivity tests on water supply

A special report on radioactive substances in water supplies was submitted to the Water Committee in November, 1959, and subsequently to the City Council in December, 1959.

These results are recorded in Table I. 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 ($\mu\mu$c/1). It will be seen that the highest results were in May, 1959, when the total beta-activity in the samples of Vyrnwy Aqueduct and River Dee waters was 20 and 19 $\mu\mu$c/1 respectively. It is known that only a small part of that activity was due to Strontium 90.

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 radio-activity 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 maxium permitted level.

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 seventy 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.

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

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.

Training of staff

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.

RADIO-ACTIVITY IN LIVERPOOL'S WATER SUPPLY

January to December, 1959

(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
Vyrnwy Aqueduct ...	11 (14%)	15 (19%)	15½ (19%)	18 (22%)	20 (25%)	16 (20%)	—	8 (10 %)	8 (10%)	8 (10%)	*	4 (5%)
Rivington Aqueduct ...	5 (6%)	6½ (8%)	9 (12%)	5 (6%)	7 (9%)	7 (9%)	—	—	7 (9%)	4 (5%)	*	2 (3%)
Green Lane Well... ...	Less than 1	1	—	Less than 1	—	0	—	—	Less than 1	Less than 1	*	—
Dudlow Lane Well ...	Less than 1	0	—	0	0	0	—	—	Less than 1	—	*	—
Main tap City Lab. ...	5 (6%)	6½ (8%)	9½ (12%)	10 (12%)	7½ (9%)	—	7 (8%)	8 (10%)	6 (8%)	16 (20%)	6 (8%)	—
River Dee ...	11 (14%)	5½ (6%)	7½ (9%)	14 (17%)	19 (24%)	9 11(%)	9 (11%)	—	3 (4%)	2 (2%)	*	2 (3%)

* = The counting set was defective and was not used.

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

IMMUNISATION AND VACCINATION

Poliomyelitis Immunisation.

The immunisation of children and adults up to the age of 26 years has been continued throughout the year. As in previous years the immunisation consisted of two injections of 1 c.c. of the vaccine into the left upper arm at intervals of not less than three weeks.

The immunisation continued to be carried out at the child welfare and school clinics; also by general practitioners.

To ensure the maximum protection a third injection is given at not less than seven months following the initial course.

Health Department Clinic

The daily poliomyelitis sessions which were started in October 1958 in the basement of the Health Department, Hatton Garden, were continued (Monday to Friday, 12 noon to 2 p.m., Saturday 10 a.m. to 12 noon and Wednesday evening 5 p.m. to 7 p.m.).

Despite some "falling off" in the attendances during the early part of the year there was a renewed and greatly increased demand for immediate immunisation following upon the death from poliomyelitis of a prominent footballer.

Dance Halls

During this same period, Mecca Dancing Limited requested that facilities for poliomyelitis immunisation be made available at their Liverpool premises, a procedure which had been adopted in several other of the larger cities.

Teams of doctors, nurses and clerks visited the dance halls each night for one week and immunised 4,343 teenagers. They received their second inoculations four weeks later at the dance halls. For the third inoculations they were invited to attend at the Health Department clinic.

Liverpool Show

For the three days of the annual Liverpool Show (16th—18th July), a special clinic was set up in the Health Department's exhibition tent at the Wavertree Show Ground. Poliomyelitis immunisation without registration or appointment was available, throughout the opening hours of the Show, to all those within the eligible age groups who wished to avail themselves of these facilities. During the show period, a total of 485 persons were inoculated. For subsequent injections they were invited to attend at the Health Department's basement clinic at Hatton Garden.

University Students, etc.

Arrangements were again made for University Students, Hospital Staffs and other priority groups to be immunised.

A number of Industrial firms were also visited by a medical officer from the Department to give injections to the Staff.

Vaccine

Supplies of Vaccine, mainly of British manufacture, are now ample.

Statistics

During the year a total of 28,266 children up to the age of 15 years completed the course of two injections and the number of adults immunised with two injections was 41,235, including 1,250 expectant mothers.

In addition a total of 65,000 third injections were given to all groups.

The total number of persons immunised with two injections since the scheme began in 1956 is approximately 154,000 and nearly 90,000 have had three injections.

The following table gives full details of those inoculated during the year.

POLIOMYELITIS INOCULATIONS GIVEN DURING 1959

(children up to 15 years of age)

TABLE 1

Year of Birth	Immunised at Clinics	Immunised by Private Doctors	Total Number of completed inoculations
1943	478	255	733
1944	544	274	818
1945	573	279	852
1946	694	335	1,029
1947	790	463	1,253
1948	1,024	558	1,582
1949	876	460	1,336
1950	1,059	547	1,606
1951	1,097	650	1,747
1952	1,144	645	1,789
1953	1,234	727	1,961
1954	1,195	739	1,934
1955	1,349	705	2,054
1956	1,551	926	2,477
1957	1,797	1,051	2,848
1958	2,336	1,453	3,789
1959	258	200	458
TOTALS ...	17,999	10,267	28,266

ADULTS: 16—26 years including Ante Natal cases.

CLINICS	34,975
PRIVATE DOCTORS	6,260
	41,235

During 1959 six children who received immunisation injections developed confirmed poliomyelitis.

Sensitivity reactions to poliomyelitis vaccine.

Sensitivity Reactions to Poliomyelitis Vaccine

During the first six months of 1959 a total of 42,644 injections of poliomyelitis vaccine (containing small quantities of penicillin or streptomycin) were given in the basement clinic at Hatton Garden. Those who were vaccinated consisted of teenagers and adults up to 26 years of age, and during this period a total of 70 cases were traced who had experienced reactions, varying from dizziness to symptoms of circulatory collapse, following poliomyelitis vaccination. Twenty-two of the cases were judged to be due to fear and anxiety in an emotional subject there being no previous history of allergy; and the remaining 48 cases were thought to have experienced an allergic response to the poliomyelitis vaccine; in these there was a history of asthma, hay fever or sensitivity to penicillin.

A full description of typical reactions; a method for minimising the resulting sensitivity, and the results obtained on 22 subjects selected for treatment was published in the "Medical Officer" 20th November, 1959.

Briefly, the method adopted of desensitizing a sensitive subject is as follows :—

(1) Obtain a detailed history of any previous attack of asthma, hay fever, urticaria, eczema, sensitivity to sera or drugs, particularly penicillin or streptomycin.

(2) Give a test dose of 0.1 ml. of poliomyelitis vaccine intradermally into the left forearm if there is a history of allergy. Any local erythema ½ inch (1.3 cm) or more in diameter with or without oedema is considered a positive reaction.

(3) Anthisan (mephyramine maleate) to be given orally; a dose of 100 mgm. for adults.

(4) Twenty minutes later (1 m.l.) of the poliomyelitis vaccine to be given.

(5) The patient is kept under observation for 20-30 minutes, and a record made of pulse rate, blood pressure, and any signs of bronchospasm.

Diphtheria Immunisation.

Diphtheria Immunisation

Diphtheria immunisation has continued as in previous years at the child welfare clinics, schools and by general practitioners. A total of 14,145 children were given primary inoculation during the year and 4,291 received a "Booster" inoculation.

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 are given in table 2 below:—

TABLE 2

	Under 1 year	1-4 years	5-9 years	10-14 years	Total under 15 years
Primary Inoculations completed in 1959	8,214	2,950	2,741	240	14,145
Booster Inoculations completed in 1959	—	139	3,784	368	4,291
Percentage of child population immunised during past five years	54·4%	59·1%	36·0%		—
Percentage of child population immunised	58·1%		84·0%		—

It will be seen that it is now estimated that 84% of the child population aged 5—14 years are at present protected against diphtheria by immunisation and that 58% of the children aged 0—4 years are similarly protected.

A complete table of primary immunisation carried out and the places where the immunisations were given, follows:—

TABLE 3

Where or by whom immunised	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Immunisation Clinics	8,219	5,973	6,442	5,316	4,896	3,920	3,974	4,547	4,479	6,861	5,789
Schools	3,471	2,858	2,941	3,307	3,586	3,732	2,943	2,070	3,008	2,316	3,245
Medical Practitioners	1,617	2,066	2,396	2,579	2,694	2,973	3,212	3,702	3,713	5,761	5,102
Miscellaneous ...	228	322	283	109	—	—	—	—	—	—	—
TOTALS ...	13,535	11,219	12,062	11,311	11,176	10,625	10,129	10,319	11,200	14,938	14,145

It is again very gratifying to report that the relatively high percentage of children immunised last year has been maintained both at the child welfare clinics and by general practitioners. Following the introduction of the combined diphtheria and whooping cough vaccine in 1957, a further inducement was given to parents to have their children immunised by the introduction of Triple Antigen, i.e. diphtheria/whooping cough and tetanus, thus giving greater protection with correspondingly fewer injections. There is no doubt that the use of these combined vaccines is a factor in maintaining the high percentage of immunisations, and the necessity for the immunisation of children is constantly being stressed by the health visitors, clinic doctors and general practitioners.

Shick Testing of Nurses

During 1959 a total of 32 probationer Nurses were Shick tested at the Royal Southern Hospital. Of these 16 were Shick positive and susceptible to diphtheria and 16 were Shick negative and immune. The 16 susceptible nurses were offered protection with P.T.A.P.

Whooping Cough Immunisation.

Whooping Cough immunisation

During the year the campaign against this disease was continued. The same arrangements as those for diphtheria immunisation were carried out at the child welfare clinics and by general practitioners, and by the end of the year 12,324 children had been immunised either by the combined vaccine or whooping cough vaccine only, being 10,816 under the age of 5 years and 1,508 between the age of 5 and 14 years.

TABLE 4

1959—WHOOPING COUGH IMMUNISATION

AGE GROUPS	0—4 Years	5—14 Years	TOTALS
	10,816	1,508	12,324

Smallpox Vaccination

Vaccination of infants against smallpox continued at the child welfare clinics and by general practitioners.

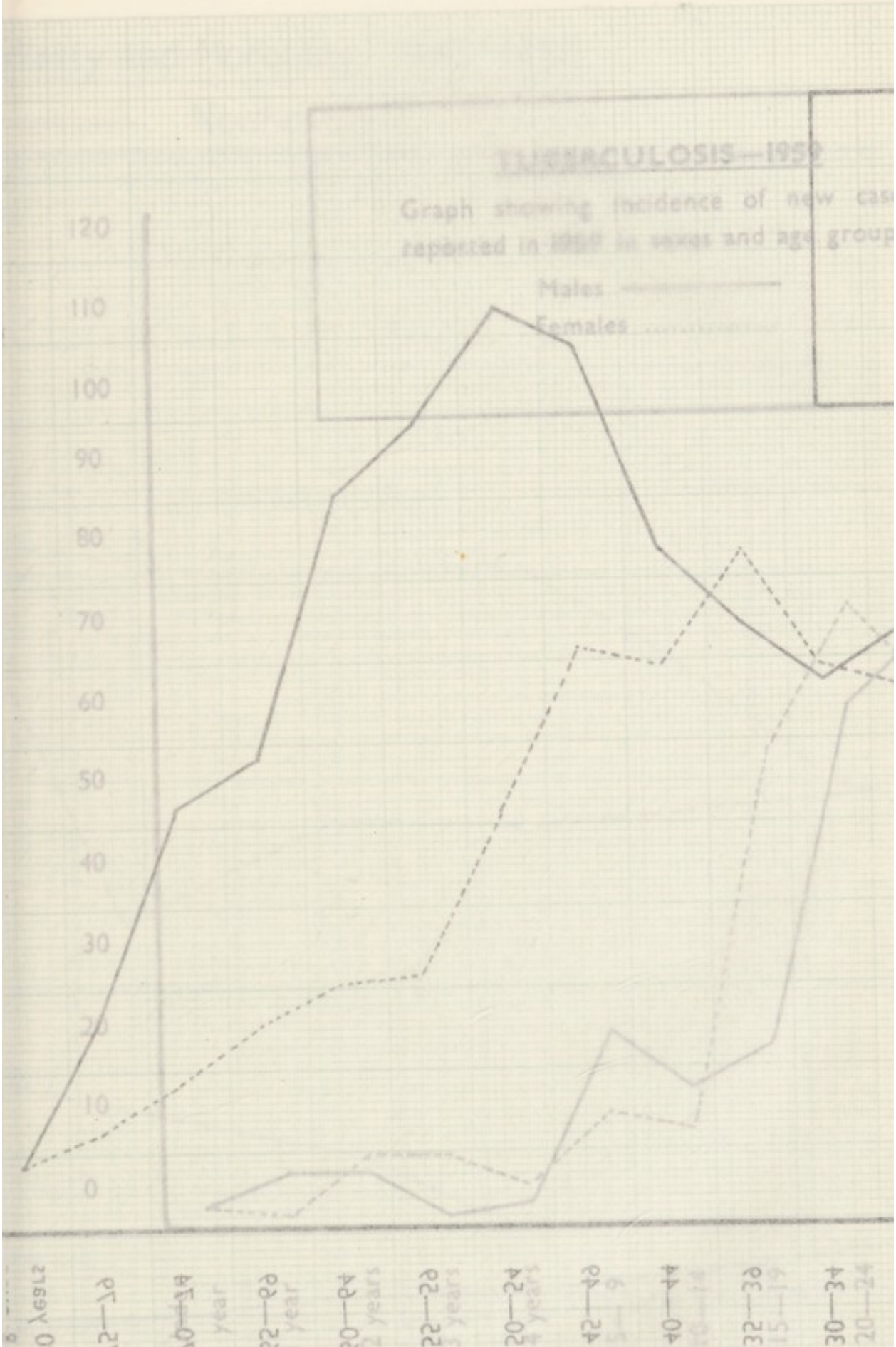
An illustration of the number of primary vaccinations in relation to births is given in the following table.

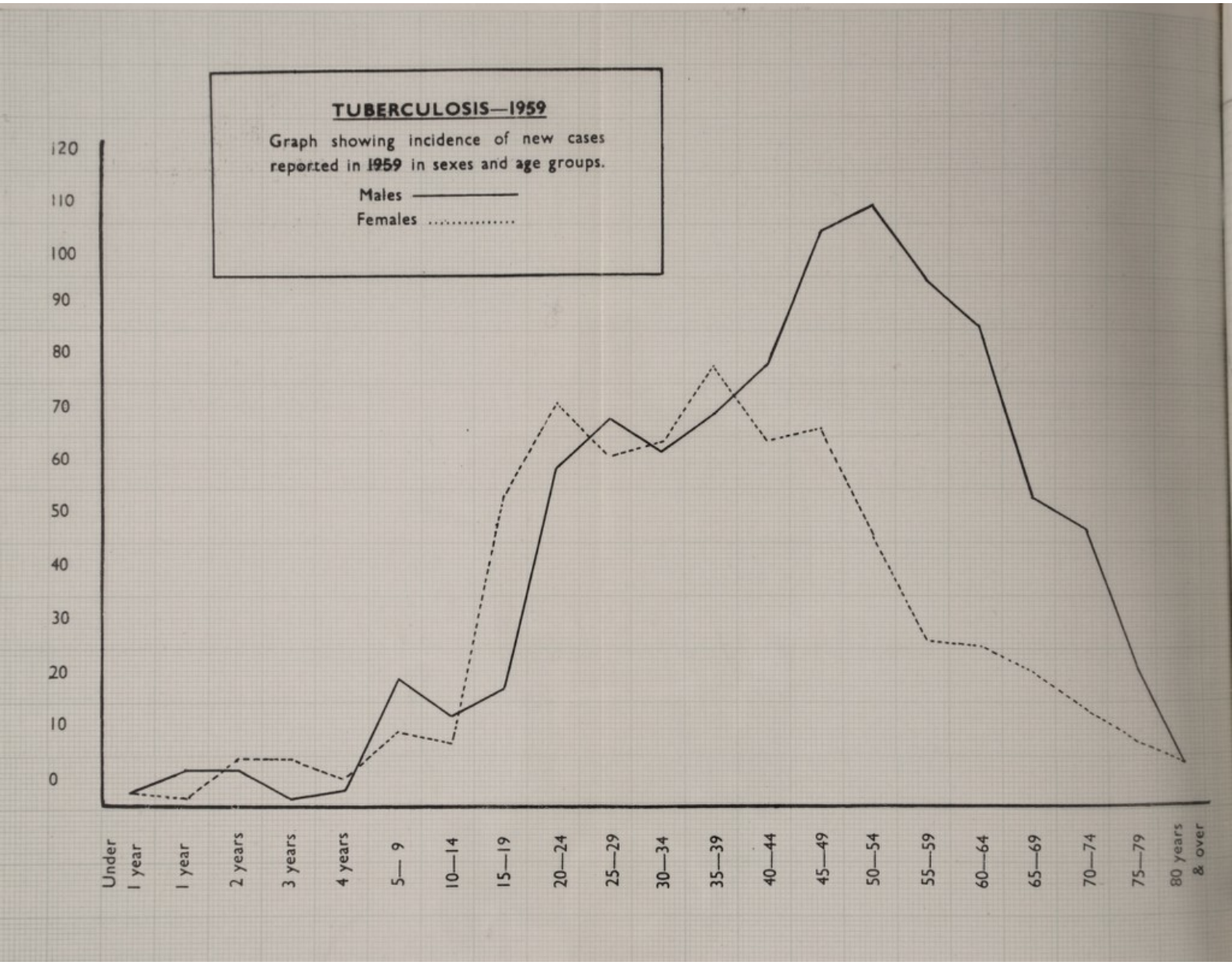
TABLE 5

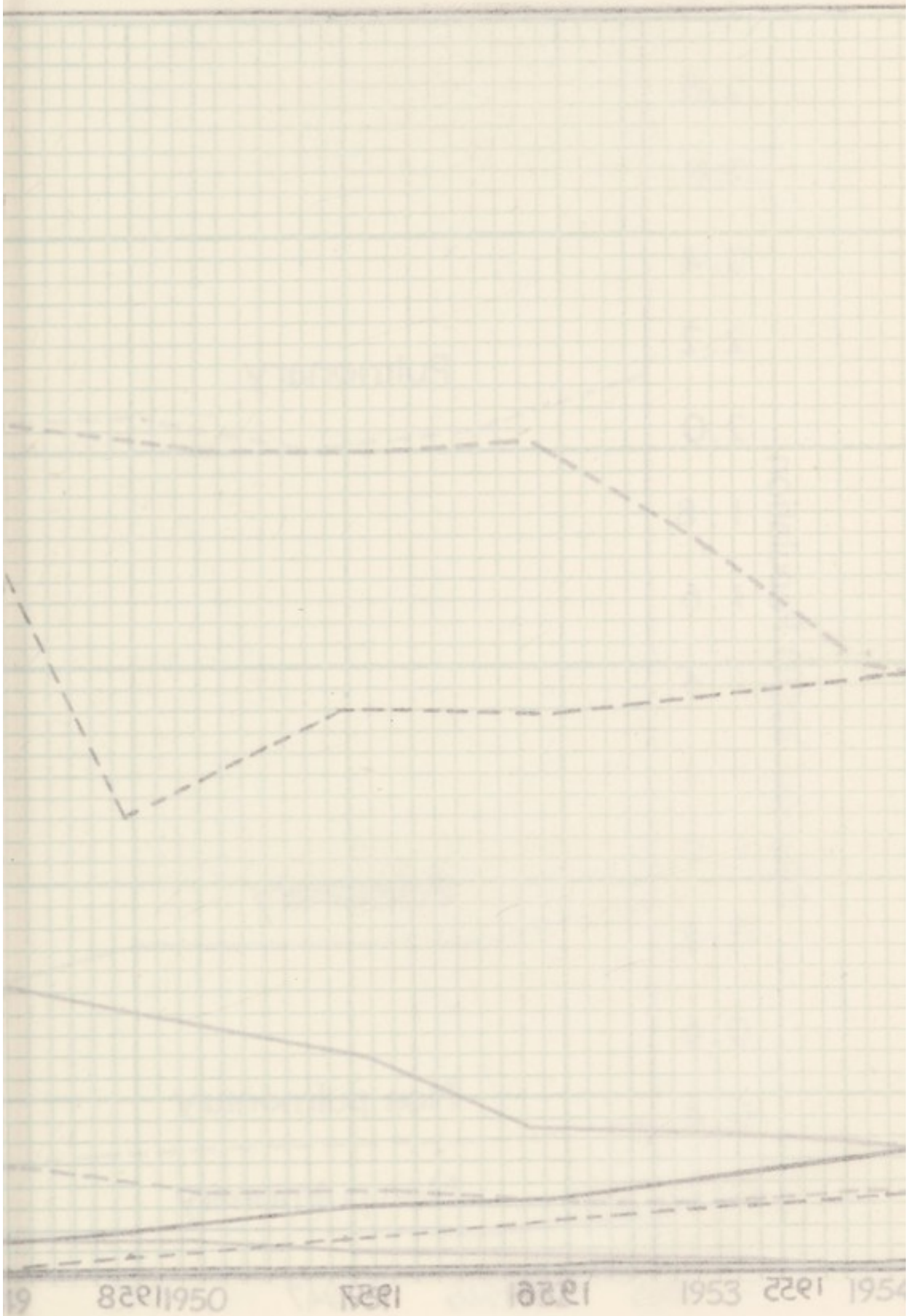
	1957	1958	1959
Births	16,044	15,662	15,615
Number of primary vaccinations	8,250	11,112	9,777
Number of re-vaccinations	107	4,128	1,179
Number insusceptible	—	—	—
	8,357	15,240	10,956
Number vaccinated at clinics	3,614	9,914	5,480
Number vaccinated by private doctors	4,743	5,326	5,476
	8,357	15,240	10,956

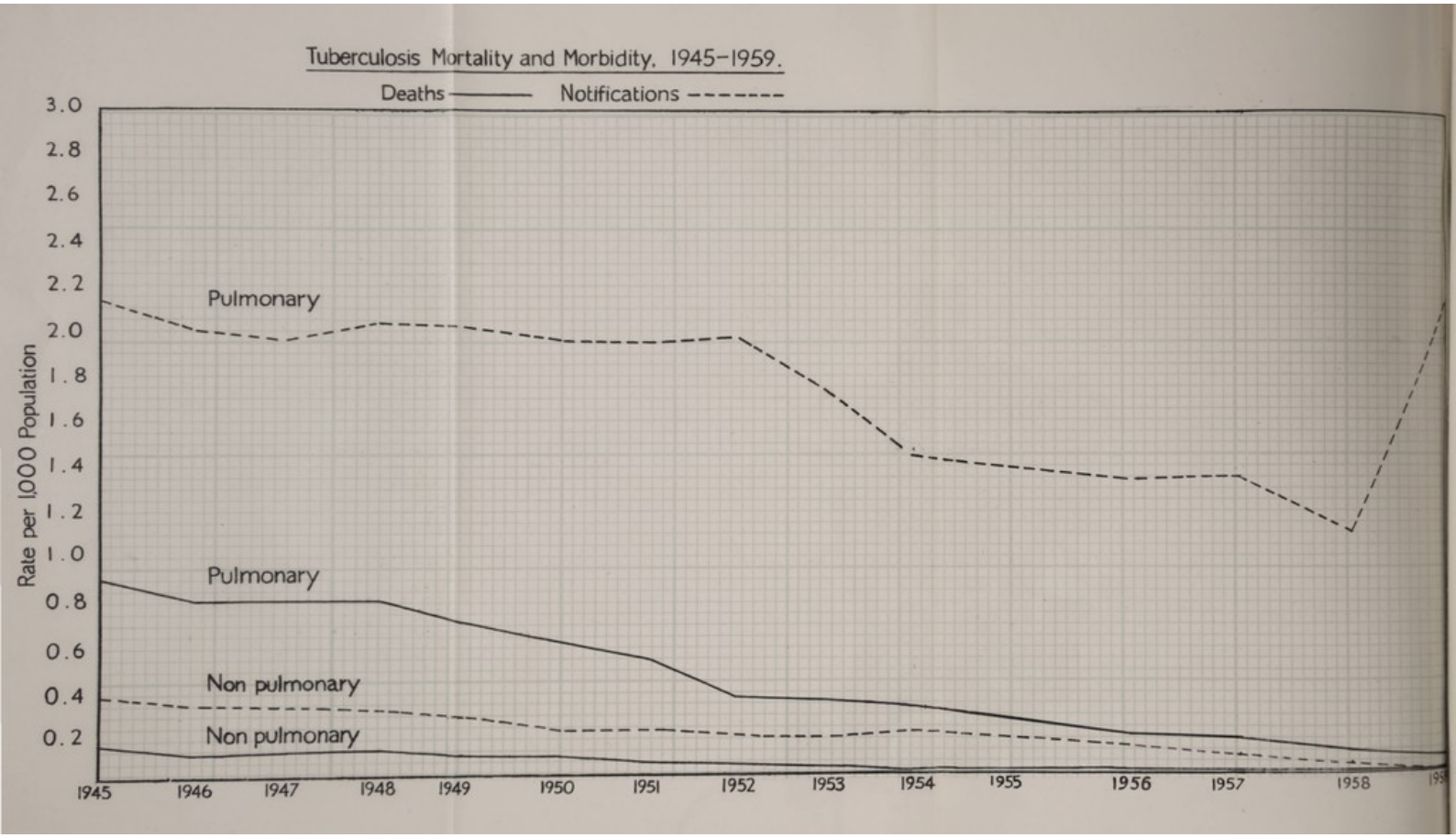
During 1959, a total of 9,777 persons were vaccinated against smallpox; of these 8,541 were children under one year. This latter figure compares favourably with last year's figures but it will be noted that there is a corresponding decrease in the older age groups, the high figure in the group for 1958 being due to the small outbreak of smallpox in Bebington and the resulting vaccination of adult contacts in Liverpool.

The diagnosis of a single case of smallpox in a Liverpool medical student in March, 1959 did not materially affect the numbers vaccinated in 1959 to any great extent; only some 300 contacts were vaccinated or revaccinated during March. As there were no further cases, extensive revaccination of Liverpool residents was not considered justifiable.


TUBERCULOSIS—1959
Graph showing incidence of new cas
repeated in 1959 in sexes and age group
Males
Females
120
110
100
90
80
70
60
50
40
30
20
10
0
80 years
75—79
70—74
65—69
60—64
55—59
50—54
45—49
40—44
35—39
30—34


TUBERCULOSIS—1959
Graph showing incidence of new cases reported in 1959 in sexes and age groups.
Males
Females
120
110
100
90
80
70
60
50
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


tality and Morbidity, 1945–1959.
Notifications
1950
1953
1954

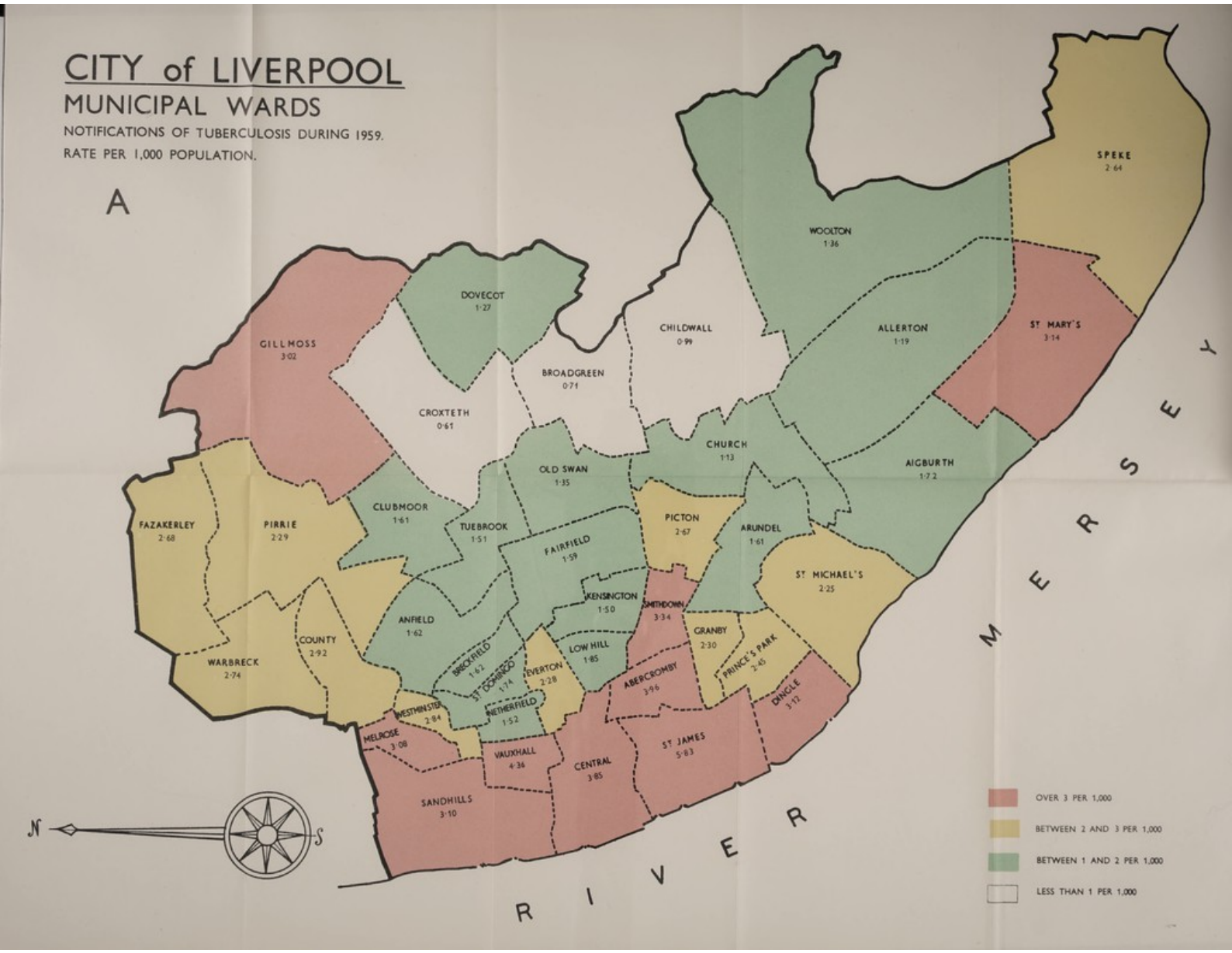

Tuberculosis Mortality and Morbidity. 1945–1959.
Deaths
Notifications
Rate per 1,000 Population
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
Pulmonary
Pulmonary
Non pulmonary
Non pulmonary
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958

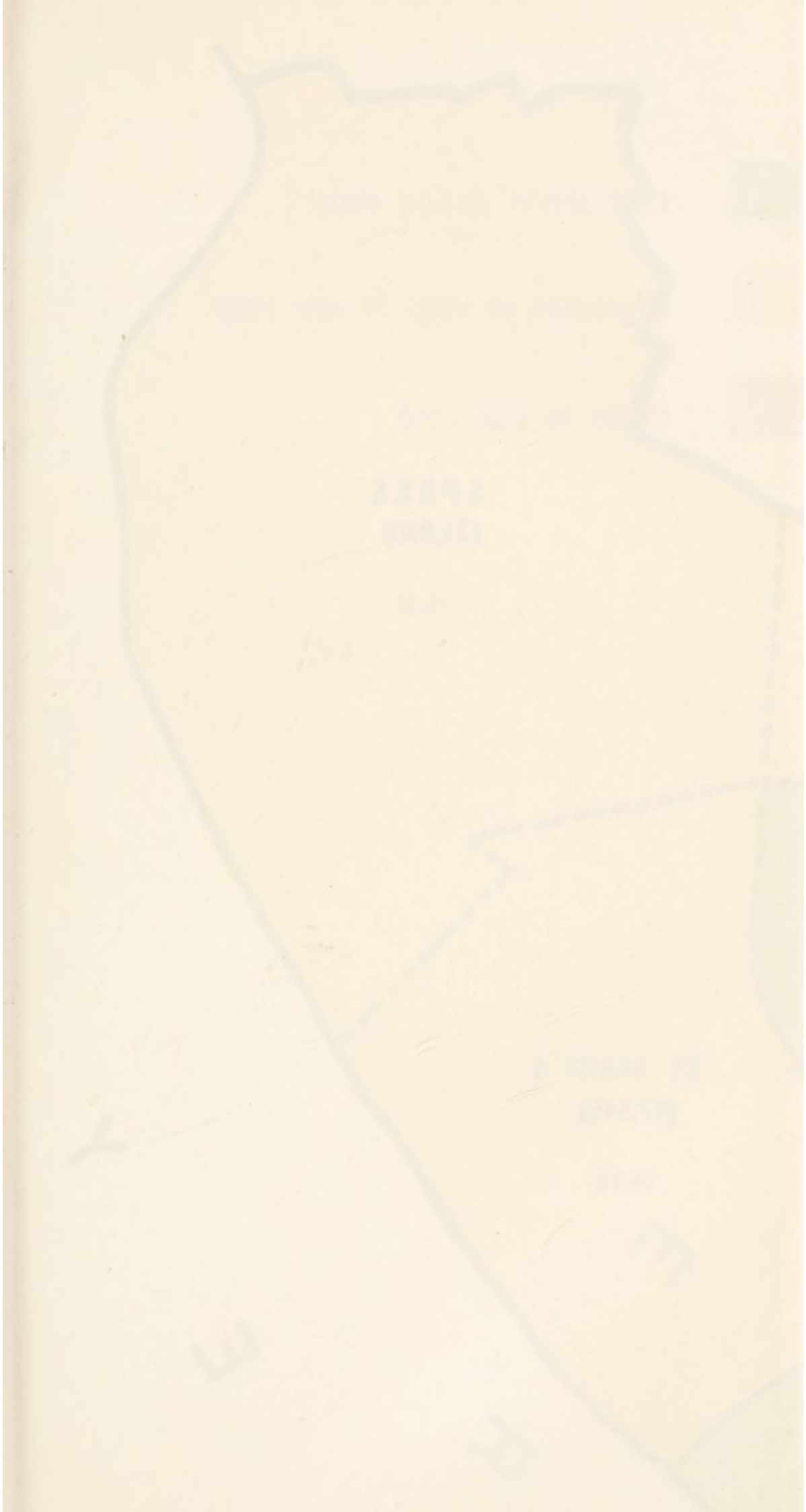
CITY of LIVERPOOL

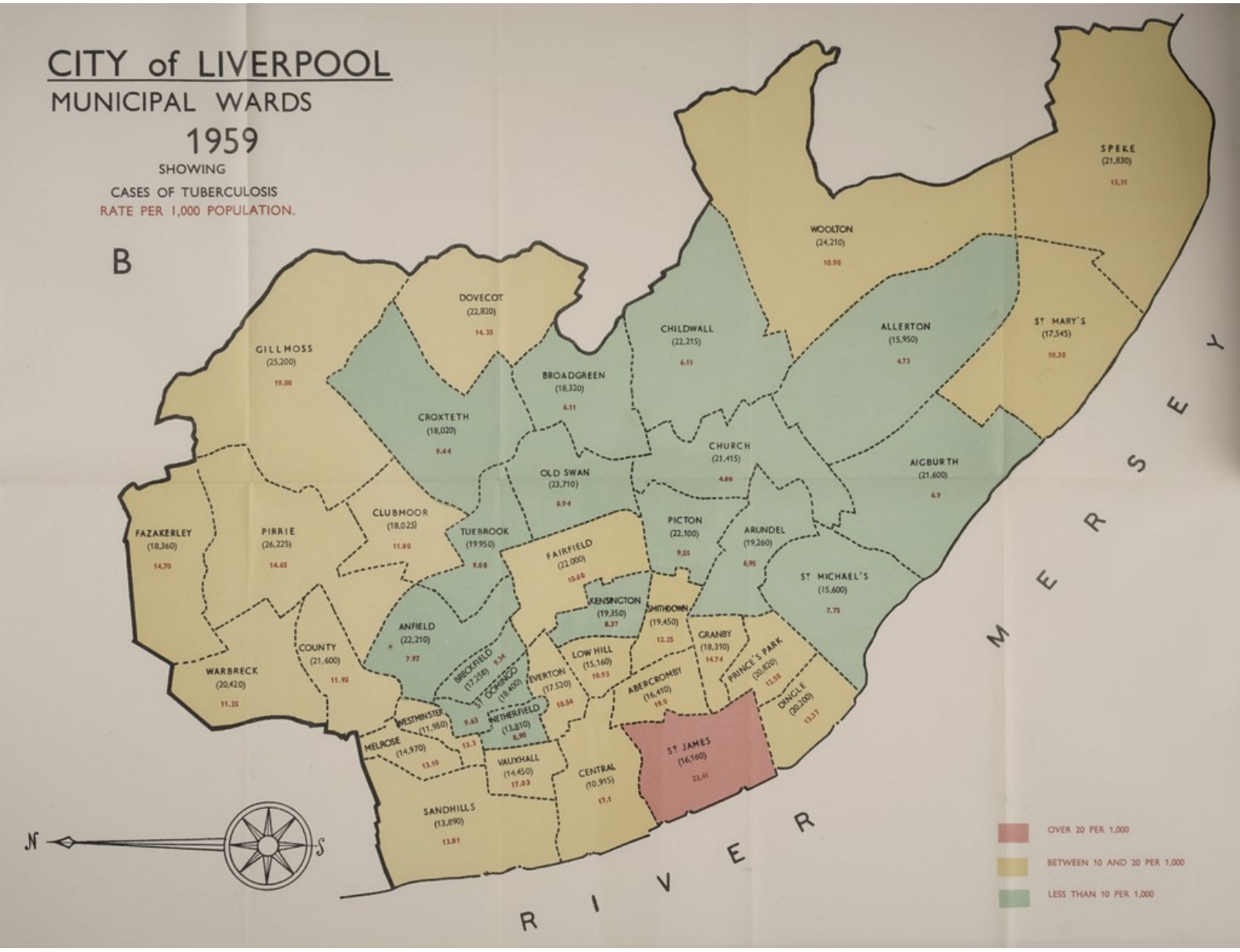
MUNICIPAL WARDS

NOTIFICATIONS OF TUBERCULOSIS DURING 1959.
RATE PER 1,000 POPULATION.

A






CITY of LIVERPOOL
MUNICIPAL WARDS
1959
SHOWING
CASES OF TUBERCULOSIS
RATE PER 1,000 POPULATION.
B
SPEKE (21,830) 15.31
WOOLTON (24,210) 10.90
DOVECOT (22,820) 14.35
GILLMOSS (25,200) 19.00
CHILDWALL (22,215) 6.11
ALLERTON (15,950) 4.73
ST MARY'S (17,545) 10.30
BROADGREEN (18,320) 6.11
CROXTETH (18,020) 9.44
CHURCH (21,415) 4.80
OLD SWAN (23,710) 8.94
AIGBURTH (21,600) 6.9
FAZAKERLEY (18,360) 14.70
PIRRIE (26,225) 14.65
CLUBMOOR (18,025) 11.80
TUEBROOK (19,950) 9.08
FAIRFIELD (22,000) 10.60
PICTON (22,100) 9.55
ARUNDEL (19,260) 6.95
ST MICHAEL'S (15,600) 7.75
KENSINGTON (19,350) 8.37
SMITHDOWN (19,450) 12.35
ANFIELD (22,210) 7.97
GRANBY (18,310) 14.74
COUNTY (21,600) 11.95
LOW HILL (15,160) 10.93
PRINCE'S PARK (20,820) 12.58
WARBRECK (20,420) 11.35
BRECKFIELD (17,350) 9.54
ST DOMINGO (18,400)
EVERTON (17,520) 10.54
ABERCROMBY (16,410) 19.0
DINGLE (20,200) 13.37
WESTMINSTER (11,960) 9.63
NETHERFIELD (13,810) 8.90
MELROSE (14,970) 13.10
ST JAMES (16,160) 23.41
VAUXHALL (14,450) 17.03
CENTRAL (10,915) 17.1
SANDHILLS (13,890) 13.81
N
S
MERSEY
RIVER
OVER 20 PER 1,000
BETWEEN 10 AND 20 PER 1,000
LESS THAN 10 PER 1,000

TUBERCULOSIS

New Notifications

As was expected, the total number of cases of respiratory tuberculosis notified during 1959 was considerably higher than the number notified in 1958—1,633 as against 795. This was due to the X-ray Campaign, which is mentioned elsewhere in this report. The figure for non-respiratory disease was, on the other hand, considerably reduced, maintaining the marked downward trend which was noted last year. There were 48 cases compared with 79 in 1958. Table 71 in the statistical appendix gives a detailed analysis of the cases of tuberculosis notified in 1959 and the accompanying map "A" relates these cases to the populations in each of the 40 wards of the city.

Of the 1,633 cases of respiratory disease, 904 were picked up during the X-ray Campaign. This means that during the remainder of the year 729 cases were discovered in the usual ways. Allowing for the number which would have been found, in excess of this total, during the four weeks of the campaign, had it not taken place, this figure is very similar to the number of new notifications in 1958. It is confidently expected that the 1960 figure will be considerably reduced as the beneficial effects of the campaign are felt.

Distribution of New Cases

The distribution of the new notifications is shown by wards on the map "A". This reveals a higher overall incidence than in 1958. Several wards show striking increases, such as St. Mary's (3·14 per 1,000 compared with 0·84 in 1958), Smithdown (3·34 compared with 1·12), Vauxhall (4·36 compared with 1·71), Melrose (3·08 compared with 0·99), Warbreck (2·74 compared with 1·07). In general, the highest rates are to be seen in the central wards and in those wards where there is a good deal of sub-standard housing and congested living conditions. The lowest rates are once again to be found in the better class residential areas where there is plenty of space and fresh air and where the number of people living in individual houses is lower.

Distribution of all cases on the Tuberculosis Registers

Map "B" gives an indication of the overall picture of tuberculosis within the City. The number of cases in each ward is represented as a proportion per thousand population. The figures show no striking changes from last year. In several wards they are a little higher, due

to the discovery of the high numbers of cases during the campaign. St. James' still has the distinction of being the only ward with over 20 cases per 1,000 (23·41 compared with 21·1 in 1958). This is no doubt due to the high percentage of coloured and nomadic elements in this part of the City and to the congested and overcrowded conditions in which most of them live.

Diagnosis of New Cases

A rather interesting finding, on referring to Table 71, is the number of new cases discovered by Mass X-ray. Naturally this figure is far and away the highest for the different ways in which diagnosis was made, but, after deducting the 904 cases discovered during the campaign, there remain 213 who were picked up during the remainder of the year. This compares very favourably with the 124 cases found as a result of Mass Radiography last year. No doubt it reflects a greater awareness of the benefits deriving from routine chest X-rays engendered by the X-ray campaign.

Far less cases were found through illness than in 1958, 423 as against 593. This is almost certainly a reflection of the early diagnosis of cases during the campaign—many of those who would have fallen ill later in the year were, in fact, diagnosed as a result of chest X-ray.

Contact examinations picked up 78 new cases, a worthwhile return for the painstaking follow-up of contacts made by the tuberculosis visitors.

Only 4 cases were found as a consequence of routine school medical examinations. This is an encouraging indication of the steadily improving health of our school population.

Relationship to Social Class

Social group 3 contributed the highest number of new cases (702), but it was closely followed by group 5 (590 cases). The following table relates the number of new cases in each of the five social classes to the percentage population in each of these classes. It shows that, although class 3 contributed the largest actual number, classes 4 and 5 had progressively higher proportions of new cases relative to their populations. This is, of course, exactly what is to be expected as the incidence of tuberculosis is always closely related to living conditions.

Distribution of population in social classes related to the distribution of new cases of tuberculosis in these classes.

Social Class	I	II	III	IV	V
Number in each class per 1,000 population*	19	102	503	131	245
Number of cases in each class per 1,000 new notifications (1959)	4	36	417	192	351

*NOTE: these figures are based on the distribution of the male population (aged 15 years and over) as shown in the last census.

Age and Sex Incidence

The distribution of cases between the sexes is almost the same as last year, 58 per cent males and 42 per cent females. The X-ray campaign upset the normal distribution pattern within the sexes. There was no sharp peak, either for males or females. This is the sort of finding one would expect when so many more cases were discovered as a result of an all-out drive to X-ray everyone over 15 years of age. It is noticeable, however, that the female cases were nearly all between 15 and 54 years while the male case rate remained high up to 74 years. These figures are illustrated in the accompanying graph as well as in Table 26 of the appendix.

Tuberculosis Death Rate

There were 102 deaths from respiratory and 3 deaths from non-respiratory tuberculosis during 1959. These figures represent 0·135 and 0·004 per 1,000 population respectively and they are compared with those for the preceding eleven years in Tables 24 and 25 of the appendix. Table 21 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 over the past 15 years are shown in the accompanying graph. The morbidity from respiratory disease naturally shows a sharp increase for 1959—a consequence of the X-ray campaign. This is not reflected in the mortality rate for the disease which is lower than last year. It is hoped that the 1960 morbidity figure for respiratory disease will be below the 1958 figure as the benefits of the campaign are felt.

Tuberculosis After-Care and Prevention.

Work of the Tuberculosis Visitors

The staff of tuberculosis visitors remained unchanged at eighteen, of whom three are males.

They continued to work from the four chest clinics, five visitors at South and East and four at Central and North Chest Clinics. This disposition of the force is due to the variation in the numbers of cases on the registers at the four clinics. Naturally these figures vary from week to week but, largely on account of the size of the area served, they remain higher on the South and East Clinic registers than on the North and Central clinic registers. On average, each visitor has about 480 cases to look after, of whom approximately two-thirds are quiescent and one-third active. The quiescent cases are visited at home twice a year and the active cases six times a year. These are routine after-care visits and are supplemented by special visits as necessary: following discharge from hospital, because of non-attendance at the clinic, to investigate housing applications and for a variety of other reasons. Many visits are also paid to contacts.

During the year a total of 40,233 visits were made, no access being obtained in 4,360 of these. This means that each visitor made an average of 47 visits each working week. These figures are, of course, higher than those for 1958 because of the extra visits made necessary by the X-ray campaign.

The visitors continued to attend contact sessions at their respective clinics at the rate of rather less than two per week each. This is a very important aspect of their work, as it maintains the essential working contact between the visitors and the clinic staffs, especially the chest physicians, without which it would be impossible to provide the most efficient service to the public.

Tuberculosis and Housing.

Housing of Tuberculosis Patients

In this sphere also the X-ray campaign made a noticeable impression. The number of applications for assistance in rehousing rose from 712 in 1958 to 821 in 1959. 789 were cases of respiratory disease and 32 of non-respiratory tuberculosis. 601 of the applications were for rehousing under the points scheme and of these 173 were recommended—156 for priority within the Allocation Group, as they had sufficient points to be included in that group, and 17 for submission to the Allocation (Special) Sub-Committee, as they were not in the Allocation Group. The remaining 220 applicants were requesting transfers and 116 of these were recommended for priority.

A total of 653 cases were awarded additional housing points for tuberculosis in 1959. Up to five points are awarded for respiratory disease and up to three points for non-respiratory disease, and 507 cases qualified for the maximum award. Many of these cases would be placed in the Allocation Group because of these extra points and would thereby become eligible for rehousing within a reasonable period of time without further priority.

The overall picture in regard to rehousing has not impoved during 1959, largely because of a reduction in the number of new houses built, the extensive slum clearance scheme and the effects of the de-requisition programme. Many of the cases recommended for priority by the Medical Officer have suffered delays in consequence. It is hoped that this unsatisfactory state of affairs will be improved in 1960.

B.C.G. Vaccination.

B.C.G. Vaccination

There was a substantial increase in the number of children vaccinated with B.C.G. in the schools. The scheme is operated under Section 28 of the National Health Service Act, and B.C.G. is offered to all children between the ages of 13 and 14. For convenience this is now taken to include other children, outside the age group, who are in the same classes as those being done.

In 1959 it was offered to 14,074 children and 11,313 accepted. This represents 80·4 per cent and is also an improvement on the 1958 figure, which was 75·3 per cent acceptors from a total of 11,408 to whom it was offered.

Tuberculin jelly tests were applied to 11,577 children and 1,569 of these were positive. The negative and doubtfully positive reactors to the jelly test were all Mantoux tested, 10,329 in all, and 362 of these tests were positive. Those negative to both tests were given B.C.G. A total of 9,381 were actually vaccinated, 2,645 more than in 1958. The positive reactors were X-rayed to exclude the possibility of active tuberculosis.

In the Autumn term the B.C.G. scheme was extended to include the students at Teacher Training Colleges in the City. These were all offered B.C.G. Many had, of course, already been done at school. A total of 207 accepted and these were Heaf tested. There were 102 positives and the others were all vaccinated with B.C.G. The positive reactors were offered a chest X-ray.

B.C.G. Vaccination of New Born

B.C.G. was offered to the babies born, in the maternity units of several of the City hospitals, into non-tuberculous households. At Sefton General there were 1,475 vaccinations, at Walton Hospital 389 and smaller numbers at Mill Road and Broadgreen.

Compulsory Admissions to Hospital.

Magistrate's Orders under Section 172 of the Public Health Act, 1936

Three cases were dealt with under this section of the Act during 1959. Section 172 deals with admission to hospital of patients with respiratory tuberculosis who are in an infectious state and are a serious danger to others because they are not taking or cannot take adequate precautions. Magistrate's Orders granted under the section permit compulsory admission to and detention in hospital for a period not exceeding three months.

The first case was a man who had already been detained under the Section for nine months. He had been discharged towards the end of 1958, when his condition was rendered non-infectious, and went back to the common lodging house where he had previously lived. Early in 1959 his sputum became positive again and he once more refused to co-operate. He was admitted to Crossley Hospital under an Order granted on 14th May and an extension to this Order was obtained on 7th August. Towards the end of the second period of three months he finally agreed to accept surgical treatment, which had been advocated from the beginning and which offered the only hope of cure. He remained voluntarily in hospital after the expiry date of the Order and was successfully operated upon on 1st December. He has since made uneventful progress and there is a good hope that he will now be permanently restored to health. This is a very satisfactory outcome and was due largely to the persuasive powers of the physician superintendent at Crossley Hospital. He could, however, have achieved nothing if the patient had not been compulsorily admitted to his hospital.

The second case was a single man who lived in a corporation flat with a man, wife and their 7-year-old son. He was persistently uncooperative, refusing to accept treatment and discharging himself from the hospital, into which he had finally been persuaded to go, against medical advice. His sputum was strongly positive and he would not remain in bed, or even in the flat, and did not take the drugs prescribed. He was abusive when interviewed by a medical officer and persistently

refused to attend the clinic. He was admitted to Walton Hospital under an Order granted on 9th December and has been a good patient. It has not been thought necessary to get an extension order as he has agreed to remain in hospital until he is discharged.

The third case was a married woman with nine children. Five of the children lived away from home; two in the care of the Children's Department, following a charge of wilful neglect; two babies in a residential nursery, and one boy with his grandmother. Both parents had been in prison for assault (not against the children) and the family was under the constant supervision of the N.S.P.C.C. and the Children's Department. The patient was told the four remaining children could be taken into care while she had hospital treatment, but the husband would not hear of this, saying he was unemployed and could look after them. The home conditions were bad, two attics and two cellars, all in poor repair. The patient's sputum was strongly positive. She would not attend the clinic but did agree to go into hospital. However she took her own discharge from four hospitals within two months and it was obvious that the only course was a Magistrate's Order. This was obtained on 17th December. This patient did not settle down in hospital and walked out on Boxing Day, returning again of her own free will forty-eight hours later. Since then she has behaved better. An extension order is being considered in her case.

Apart from the three cases described a number of other unco-operative patients were threatened with compulsory admission to hospital under Section 172 and all realised that voluntary admission was the better alternative. On the whole, such patients do quite well in hospital once they have realised that they cannot simply please themselves about going in. This is why the occasional use of the powers granted under Section 172 is so valuable. It provides a salutory reminder that threats can and will be backed by the force of the law.

Extra Nourishment for Tuberculous Patients.

Free Milk

Early in the year it was decided to review the existing scheme for supplying extra nourishment to tuberculous patients. The scheme provides for the free issue of one or two pints of milk per day to those patients whose income is below a fixed level (which varies with the size of his family), and whose medical condition, in the opinion of the chest

physician concerned, makes it desirable. The income scale had been unaltered since the introduction of the scheme in 1949 and was quite unrealistic. For some time it had been necessary to permit the clinic doctors to use their discretion in authorising the supply of milk to deserving cases whose income was above the figures laid down.

A new scale, based on the special National Assistance grant to tuberculous patients, with an allowance for rent and an addition loading to ensure that it was, in all cases, more than the National Assistance grant, was worked out. The minimum figure is 105s. for a single man or woman over 21 years. The scale is subject to review to keep it in line with the National Assistance grants.

Free milk is not authorised to any patient unless a medical certificate is provided by the clinic doctor to say that, in his opinion, it is necessary. The income scales are strictly adhered to, but special consideration can be given in cases when it is considered desirable. Such cases must be referred to the Medical Officer and are not now at the discretion of the clinic doctors. The National Asistance Board is notified of all cases who are receiving extra nourishment so as to avoid duplication of grants.

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 are very willing to do their part and they are constantly reminded of their obligations towards others by the tuberculosis visitors.

There are several ways of tackling the problem in the home: by using flasks containing disinfectant; by spitting into paper handkerchiefs and disposable waxed cartons or by using metal sputum mugs which are subsequently disinfected by boiling. There are disadvantages in all these methods; flasks, if made of glass, can be broken very easily; handkerchiefs and cartons must be burnt after use and fires are not always lit in the summer months, and the contents of mugs may not be adequately sterilized before they are emptied away.

The problem was discussed at a meeting with the chest physicians and it was decided to introduce a standard procedure throughout the City. This is the use of polythene flasks with a solution of hypochlorite. The

method is cheap, clean and effective. Patients spit into their flasks during the day, add one ounce of hypochlorite in the evening and leave for one hour before emptying down the toilet. The solution causes the tubercle bacilli to disintegrate and so completely destroys them. The flasks are then washed in hypochlorite and are ready for use once more.

Supplies of flasks and hypochlorite were obtained in early October and distribution was started immediately. There was a rather surprising reluctance on the part of some patients to change over from their old methods. With persistence, however, most have now done so and the others will, no doubt, eventually agree. It was also found that the number of patients who admit to having any sputum at all was much less than expected—a tribute to modern chemotherapy.

The cost of the sputum flasks and hypochlorite is, of course, being borne by the Local Authority and the patients' supplies are replenished as necessary—about once a month—when they visit the clinics.

Two cases of Tuberculosis in Dogs.

Tuberculosis in Dogs

In November a post mortem examination, made on a dog in the Veterinary Department of the University of Liverpool, disclosed an extensive tuberculous infection. Preliminary culture examinations gave strong presumptive evidence that the bacillus was the human variety. This is an unusual cause of death in dogs, as they have a high natural resistance to the disease. The dog was a fourteen-month-old mongrel which had been unwell for several months prior to his death; at first with a patchy alopecia followed by a cough and abdominal symptoms a month or so before he died finally of profound lethargy, no doubt due to terminal meningitis.

The incident was important for two reasons: first, it seemed likely that the dog had been in contact with a highly infectious case of tuberculosis and secondly, it was quite likely that other human cases might follow close contact with the animal.

The owners' family consists of a man, wife and three daughters aged 10, 9 and 7 years. There was no history of tuberculosis. All were examined at the South Chest Clinic and were found to be tuberculin positive but X-rays showed no evidence of tuberculosis, except in the 9-year-old girl who had a small healed primary complex in the right lung. The family will be kept under observation for a few months.

Visitors to the house were infrequent, but two had stayed overnight during the previous six months, one for one night only in June and the other for a week in September. Both were X-rayed and found to be clear.

An examination of the clinic records showed that two known cases of tuberculosis lived fairly close by. The first was a little boy with a primary complex—a lesion which is not infectious—who had not been in contact with the dog anyway. The second was an active case in a mother of three children, one of whom was often visited by the daughter of the dogs' owner (in whom a healed primary had been found).

It seems fairly certain that this must have been the source of the dog's infection, as he often accompanied the little girl when she went out to play. It is also probable that the girl was infected by the human case and not by the dog. The case herself had been ill for a number of years but it had not been possible to press her treatment for tuberculosis as she had been undergoing psychiatric in-patient treatment at the same time. Since her return home she has always been very co-operative and is at present on chemotherapy at home. Her husband and family are all seen regularly at the clinic. She says she does not allow other children to play in her house but the little girl says she has been in with the dog many times. Neither she nor her mother know about the history of tuberculosis.

It is obviously impossible to prevent children from entering the houses of tuberculous patients and one must rely upon the good sense of the patients themselves not to permit it. The danger of laxity in this respect is evident from this case.

A second dog was found at post mortem to have died from tuberculosis early in 1960. It was a bitch of 8½ years which had been ill for about six weeks with a severe cough, loss of weight and, a few days before death, profound lethargy. The owners live in the Central area, having moved from Fazakerley one year ago. The family consists of husband, wife and one girl aged 7½. The wife's father, aged 80, also lives in the house. There was no history of tuberculosis and all the family have been seen at the clinic with negative findings.

Two relatives, a sister of the wife and a brother-in-law, are known cases of respiratory tuberculosis. Both are quiescent and the brother-in-law does not visit the home, while the sister does so only occasionally.

Neither seems a likely source of infection, nor are any known cases living in the immediate neighbourhood. Another quiescent case lived for three months in the house from July to October 1958. The only other connection with the disease was a habit the dog was known to have of going into the grounds of Aintree Hospital when the family lived at Fazakerley.

In this case, therefore, there is no clear pointer to the source of the dog's infection.

MASS X-RAY CAMPAIGN.

From the 23rd February, 1959, to the 21st March, 1959, a very large Mass Radiography Campaign was held in Liverpool resulting in 454,286 persons being X-rayed. In addition 18,381 X-rays were taken at a unit operating in the Health Department for five weeks immediately prior to the campaign. This represents 76.5% of the available population of Liverpool aged over 15 years, and in addition 80,324 other persons, mainly residents living in the neighbouring districts to Liverpool, including Kirkby, were X-rayed. (At least 48% of these were employed in the City of Liverpool.)

A full report has already been published separately dealing with all aspects of the campaign and was presented to the Liverpool City Council in March, 1960. It is not, therefore, intended in this report to repeat the details.

From the diseases discovered the campaign also accomplished much. Including non-residents 1,045 new cases of active tuberculosis were discovered by the campaign. In addition 1,731 cases were discovered who needed occasional supervision.

904 active new cases were found in Liverpool residents.

In 1958 a total of 795 new cases of tuberculosis were discovered in Liverpool and so, in the four weeks, of the X-ray campaign, the number of new cases brought to light represented fourteen months' normal discovery. Time alone will show the effect of this spectacular removal of so many cases from the community but it is optimistically expected that the effect on new cases will be most significant.

Details of the extent of the disease discovered are very similar to those of the Scottish campaigns, 48.8% minimal, 45.3% moderately advanced and 5.9% far advanced lesions.

The different incidence found in males and females took the usual modern pattern with great emphasis on the problem of the elderly male. In the 45-59 age group the new cases discovered requiring treatment in the male was 4.52 per 1,000 compared with 1.38 per 1,000 in the female and this difference was even more marked in the 60+ age group—5.55 per 1,000 (male) and 0.88 per 1,000 (female).

A total of 161 new cases of carcinoma of the lung were discovered. In comparison with the death rate for 1958 of 434 cases this represents about 40% of the annual discovery. 87 of these patients were successfully operated upon. A follow-up on these and other cases is being undertaken.

For further details of the Campaign, readers are referred to the full text of the Mass X-ray Report.

Work of the Chest Clinics.

A statistical survey of the work done during 1959 at the four chest clinics is given in Table 22 of the appendix.

Reports of the Chest Physicians

The chest physicians have kindly contributed the following reports.

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

South Clinic

The main event of the past year was the Mass X-ray Campaign, a stimulating experience for all the clinic staff involved during a hectic period when nearly 1,700 new patients were seen. Our aim was to give all persons who had an abnormal X-ray an appointment for examination the following day by the same post which notified them that their X-ray was unsatisfactory. This necessitated the examination on our peak day of 124 patients and a programme of clinic sessions which could only be finally organised the previous evening after the delivery of the last of the batches of abnormal X-ray films.

On many days examinations continued from 9 a.m. to 9 p.m., with the clerical staff still hard at work preparing for the next day when all others were on their way home. All the staff deserve the highest praise for the kindness, keenness and enthusiasm with which the work was performed among so many patients attending in varying states of apprehension.

Altogether 370 were found to need treatment for tuberculosis, but only 105 required admission to sanatorium; the others being treated at home with varied restrictions in their activities.

Thirty-two patients were found to have cancer of lung, and 17 were referred for surgical treatment.

Many other disorders of minor or major importance requiring medical or surgical treatment were discovered. In some cases further detailed investigations, over a period, were required to establish a definite diagnosis, but within a month of the end of the Campaign, the clinic work was back to normal.

The new patients discovered, largely as a result of the Campaign, have increased to over 2,400 the number of tuberculosis cases under supervision or domiciliary treatment and halted the downward trend of numbers on the Clinic Register and new cases of tuberculosis still occur among those whose X-ray was normal earlier in the year. In these cases the disease is almost invariably of slight degree, but more extensive disease is still being discovered among those who refused X-ray in the Campaign or who, for various reasons, did not get X-rayed. Altogether in the months before and after the Campaign 116 new cases of tuberculosis were discovered during the routine work of the clinic.

The Campaign has certainly made an important contribution in the fight against tuberculosis, but the battle is still far from won, and the wholehearted efforts of all must still continue for a long time yet.

In the past few months arrangements have been made for school children who have been found to have positive skin tests in the routine test at school at the age of 13 years, to attend the Clinic where arrangements are made for X-ray of their chest.

Dr. Osborne Hughes, from East Chest Clinic writes:—

East Clinic

1959 will go down in the annals as the year of the Campaign and tribute should be paid to all the staff of the Chest Clinic who worked spendidly before, during and after the Campaign, the repercussions of which are still being felt. In addition to duties arising directly from work at the clinic some members of the staff helped in the Campaign as voluntary workers.

During the Campaign an effort was made to keep the routine clinic work going by calling up half the usual number of patients for X-ray examination only: contact sessions were supervised by the Health Visitors who carried out Heaf tuberculin tests and arranged X-rays where necessary: B.C.G. sessions continued as usual.

The number of new cases of respiratory tuberculosis diagnosed during the year shows the expected increase—but this affects mainly the sputum negative cases: new sputum positive cases number 65 compared with 63 in 1958, sputum negative cases were 194 as against 105 in 1958.

In spite of this our total register fell from 2,663 to 2,393 mainly due to a large number of patients being removed from the register as recovered.

As a result of the campaign 46 cases of bronchial carcinoma were found: of these only 12 were operable.

The number of B.C.G. vaccinations at the Clinic fell, but the number done at the Maternity Units at Mill Road and Broadgreen Hospital increased. Owing to the school Medical Service's Scheme for carrying out B.C.G. vaccination of thirteen year olds, more contacts were found who had already received B.C.G. vaccination.

Of the problems facing the tuberculous patient, housing and employment are the most pressing. We appear to be particularly fortunate in this area with regard to the Employment Exchange to which most of our patients go and their success in placing patients in employment at a time when on Merseyside the whole employment situation is difficult, is most creditable.

Unfortunately the same degree of success cannot be claimed in our efforts to secure adequate housing for some of our most deserving cases.

As anticipated, visits done by our Tuberculosis Health Visitors have increased by 1,400 over the 1958 figure: allowing for a month's holiday, this means each visitor does 56 visits per week.

Dr. Gray, from North Chest Clinic writes :—

North Clinic

The outstanding feature of the work during 1959 was the Mass Radiography Campaign, and as a result of this our statistics show a marked increase in comparison with 1958.

So far as Liverpool, itself, was concerned we discovered 508 new cases of pulmonary tuberculosis during 1959 as compared with 180 during 1958. Many of these cases were not active but required observation only, but some were patients who were on the tuberculosis register in the past and had been taken off as recovered and had later broken down, as they got older. To my mind, this was a very important finding as it suggests that in the older age groups, in particular, anybody with fairly large calcified lesions, ought to be kept under supervision annually even though we do take their names off the register.

We saw 756 contacts of new cases during 1959, this being only a small increase over 735 seen during 1958, and it would, therefore, appear that during 1959 we have a very bad contact ratio. I feel, however, that this is due to the fact that most adult contacts of the new cases discovered had been X-rayed during the Mass Radiography Campaign, and we did not, therefore, think that it was necessary for them to attend the Clinic again.

It is noteworthy that in our area 493 children were given B.C.G. as compared with 284 for the previous year. In addition, 181 received B.C.G. in Walton Hospital, compared with 140 in the previous year. In connection with the B.C.G. work 1,256 tuberculin tests were performed as compared with 922 in 1958. In this work we receive very valuable help from our Tuberculosis Health Visitors and a Saturday morning in May or thereabouts stands out in our memory when almost 100 children passed through the Clinic for testing and B.C.G.

The total attendances for the Liverpool patients during 1959 reached the record figure of 9,039 compared with 6,974 in 1958. Of these attendances 1,797 were for other chest conditions than pulmonary tuberculosis, 1,089 were patients being examined for the first time. The corresponding figure for 1958 was 629 for other chest conditions, 345 being for new patients.

In the Autumn of 1959, I was again asked to take part in a Trial for the Treatment and Prevention of Chronic Bronchitis, on this occasion the Trial being organised by a Joint Committee of the British Tuberculosis Association and the Medical Research Council. This Trial is still proceeding and the results will not be known until the end of the winter.

Ninety-one cases of pulmonary tuberculosis had positive sputums a the end of the year and were not in Institutions, of these 15 hac organisms which were resistant to one or more antibiotics. The super vision and treatment of such cases will remain a problem for sometim to come, as many cases received inadequate chemotherapy in the earl stages of their disease. It is hoped that the adequate treatment of nev cases now being discovered will prevent the emergence of drug resistan organisms in the future.

Only 46 people with pulmonary tuberculosis died during 1959 in ou area and 12 of these deaths were due to other causes. This compare favourably with 53 death during 1958.

Dr. Welton, Central Chest Clinic.

Central Clinic

A total of 457 new cases of tuberculosis were added to the clinic register during the year, as compared with 284 in 1958. This 60% increase was due to the Mass Radiography Survey, and is at first sight not so large as might have been expected from such an intensive campaign. More significant perhaps were a series of figures embodied in an interim report of bacteriological findings, for the period ending 30th June, 1959, when it was clear that, on a population basis, a lower total percentage of the community was examined during the Survey in the area covered by this clinic, as compared with other clinics, but, on the other had, of those cases of respiratory tuberculosis discovered, the greatest number of sputum-positive cases were to be found in this area. These two points taken together indicate that, in spite of the overall success of the Survey, there must remain a significant, and as yet unknown, pool of tuberculous infection in the central area of the City. This situation demands a continuation of the effort so clearly demonstrated during the Survey, and which at that time brought its immediate successes. This effort must, therefore, be steadily sustained, and no relaxation or complacency must be allowed to impede progress.

The increase in the number of new cases was naturally followed by an increase in the number of contacts. A total of 1,076 contacts were seen for the first time, 1,045 tuberculin tests carried out, and 557 B.C.G. vaccinations performed. An additional 146 B.C.G. vaccinations were performed by the clinic staff at the Maternity Hospital, Oxford Street.

In spite of the success of modern treatment, over 200 patients on the clinic register were known to be infectious (i.e., sputum-positive for the bacilli of tuberculosis), at some time during the year, and in nearly fifty of these the germs were either wholly or partially resistant to the three main anti-tuberculosis drugs. This is due to the ineffective application of treatment, which, if carried out properly can be relied upon to render almost all cases non-infectious in a reasonable time. Treatment carried out at home is beyond the control of either general practitioner or chest physician, and its success depends almost entirely upon the determination of the patient to persevere for months on end, and sometimes for years, taking drugs, which, though beneficial are sometimes unpalatable. Half-hearted, intermittent or sporadic treatment frequently leads to a condition of stalemate between the patient and his disease, where the germs become resistant, so that anyone receiving an infection from such patient is denied the benefits of these drugs. It will be realised, therefore, that a great deal of work needs to be carried out by the clinic staff, notably the Tuberculosis Health Visitors, in urging patients to be sure to carry out full treatment, as prescribed. Unfortunately disappointment in this respect is our daily experience.

The common lodging houses still present a peculiar and difficult problem, with their moving population and higher incidence of disease. A problem of another type is that of placing in work those men of the older age group, who reach the stage of unemployability, but who so frequently have to be content with the periodic visit to the Labour Exchange, unavailing, except to receive the "dole". The prospect of new industry coming to Merseyside brings very real hope for these patients.

Requests for rehousing priority still abound at each clinic session, and while we are grateful for the many families which are rehoused by the City Housing Department, it must be realised that many of our tuberculous families still live in disgraceful conditions. Frequently they have only themselves to blame for this, but, seen from the view-point of the clinic, certain anomalies in rehousing have sometimes been difficult to understand.

The campaign against tuberculosis is certainly going well in the country as a whole, and experience of the M.R. Survey in 1959 has been exhilarating and encouraging. From what has been said in respect of the Central Clinic, however, it will be seen that there is still much hard work to be tackled in the years ahead.

Mass Radiography.

Mass Radiography

The Liverpool Regional Hospital Board administer the mass radiography services within the City and in the neighbouring districts of South-West Lancashire and the Wirral. There is a static unit operating in Hood Street and three mobile units one of which has its headquarters at Park Hospital, Orphan Drive, and visits business firms and factories throughout the City and in the Kirkby area. The static unit examines individuals from three main sources:—

(*a*) Cases referred by general practitioners, mainly within the City;

(*b*) National Service recruits;

(*c*) Local business firms, establishments and shops, and general public.

During 1959 this Unit made 23,900 such examinations, of which 13,481 were referred by general practitioners, 5,633 were National Service recruits and 4,786 were from business firms and general public.

These numbers constitute only 50% of the normal annual total, the reduction in 1959 being expected following the Mass Radiography Campaign held in February and March.

All prospective employees of the City Nursing Services 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 examinations at premises where active cases of tuberculosis

have been discovered. Routine examinations are also made at schools, but these have largely 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

During 1959, 689 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's review survey of persons in receipt of allowances, requesting confirmation that the individuals are still receiving treatment under the supervision of the Chest Physician concerned, continues.

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 1959 :—

Re-habilitation

A.	Total cases referred by Ministry of Labour to Tuberculosis Officers	404
	(*a*) Examined and found fit for light, part-time or full-time employment ...	381
	(*b*) Not fit for employment	3
	(*c*) Failed to attend for examination	6
	(*d*) Certified as non-tuberculous	7
B.	Letters sent by Tuberculosis Welfare Section to patients, offering advice and assistance to obtain suitable employment...	102
	Number availing themselves of this assistance and referred to Ministry of Labour	40
	Actual number of patients reported by Ministry of Labour as placed in employment	134
	Total number of cases dealt with under Rehabilitation Scheme by Tuberculosis Welfare Section (A+B)	506

At the end of the year, seven patients were undergoing rehabilitation at the Tuberculosis Colony, Great Barrow, one at Papworth Village Settlement and two at the Enham-Alamein Village.

Deaths without notification.

Notification of Deaths

During the year, twelve persons within the City died from tuberculosis, ten respiratory and two non-respiratory, without notification having been effected prior to death. These figures represent 10 per cent of the total respiratory and 66 per cent of the total non-respiratory deaths.

The results of enquiry into the reasons for such failure to notify are summarised in Table 23. The contacts of these cases were called in for examination in the usual way.

VENEREAL DISEASES—AFTER-CARE AND WELFARE

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 a female welfare visitor. In addition, the services of the female welfare visitor attached to the Royal Infirmary V.D. Clinic are available.

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 so 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.

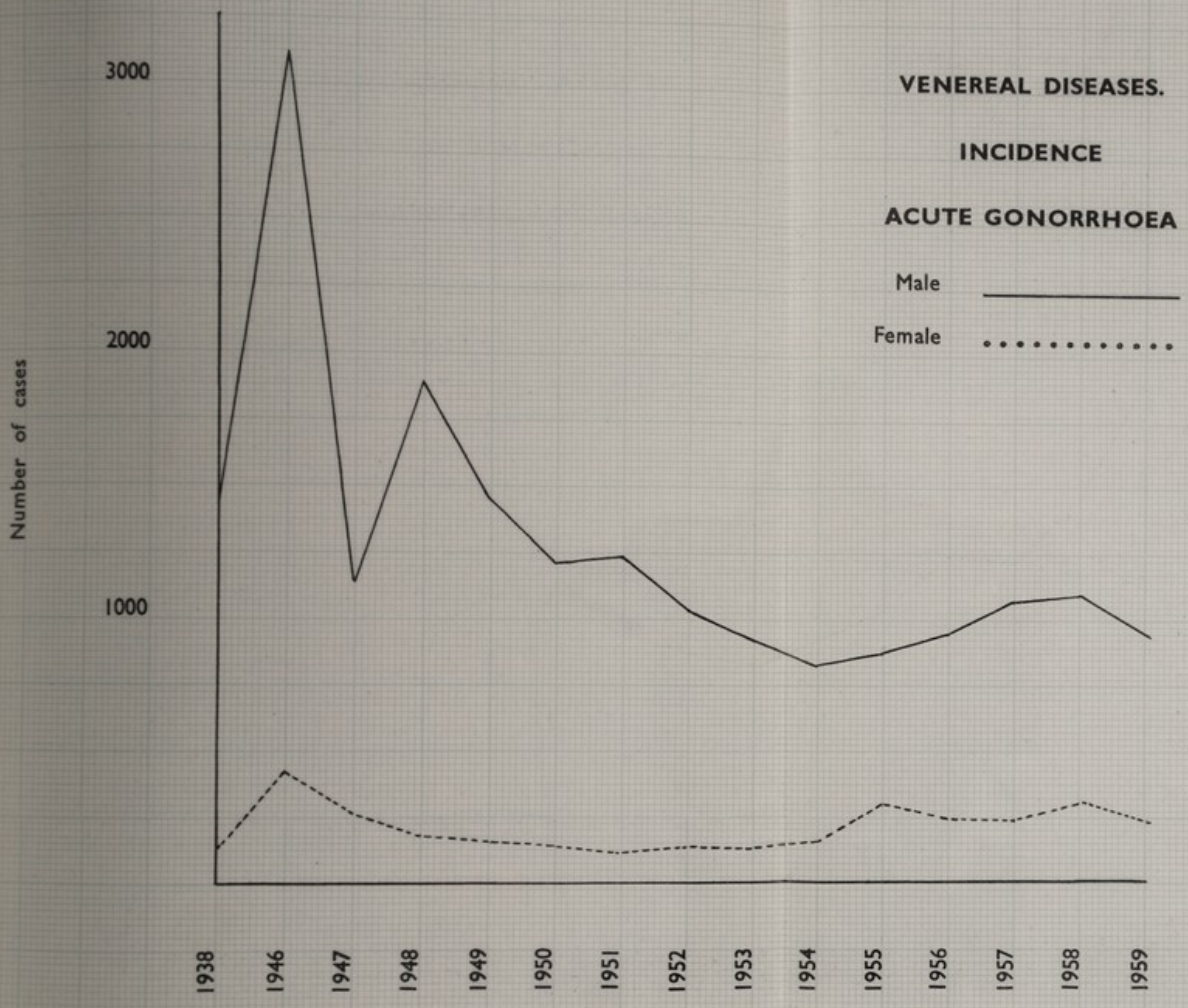
Tables 27 and 28 in the statistical appendix and the following graphs illustrate the pattern of incidence in early syphilis and acute gonorrhoea for the immediate pre-war full year 1938, peak year 1946 and subsequent years to that under review. In early syphilis, the number of male cases fell from 62 in 1958 to 44 in 1959 (a reduction of 29 per cent). In females the pattern of infection was maintained with 8 cases in 1959, as compared with 7 in 1958.

It was observed that in 1959, as in the previous year and also 1955, the incidence of acute gonorrhoea was highest for both male and female in the 21-25 age group. This appears to be accepted within the V.D. clinics as a general rule, the inference being that promiscuity is most common in this particular group.

A comparison of the incidence of acute gonorrhoea in both male and female for the years 1958 and 1959 compared with the peak year of 1955 is shown in the following table.

VENEREAL DISEASES.
INCIDENCE
EARLY SYPHILIS
Male
Female
Number of cases
700
600
500
400
300
200
100
1938
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959

VENEREAL DISEASES.
INCIDENCE
EARLY SYPHILIS
Male
Female
Number of cases
100
200
300
400
500
600
700
1938
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959


VENEREAL DISEASES.
INCIDENCE
ACUTE GONORRHOEA
Male
Female
Number of cases
3000
2000
1000
1938
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959

VENEREAL DISEASES.
INCIDENCE
ACUTE GONORRHOEA
Male
Female
3000
2000
1000
Number of cases
1938
1939
1941
1948
1949
1950
1951
1952
1953

	1955		1958		1959	
	Male	Female	Male	Female	Male	Female
Under 15 years ...	—	6	—	4	—	2
15-17 years ...	20	31	15	43	16	17
18-20 years ...	113	63	138	77	131	71
21-25 years ...	237	78	359	73	281	79
26-30 years ...	194	56	256	52	225	36
31-35 years ...	148	30	155	23	128	16
36-40 years ...	71	10	91	9	75	7
41-45 years ...	35	6	35	6	43	2
46 years and over	44	7	40	5	41	1
TOTAL ...	862	277	1,089	292	940	231

The Teenager and Venereal Disease.

The teenager and venereal disease.

During 1955 the incidence of acute gonorrhoea in the young female up to and including the age of 17 represented 12·9 per cent. of the total number of cases.

In 1958 this figure rose to 16 per cent., while in 1959 there was a substantial reduction, to 8·2 per cent. This particularly welcome decline in incidence of very young female cases could well be due, in some measure, to the recent closure of a large service establishment near Liverpool. Over a number of years this was the principal source of contact notifications concerning locally acquired infection, and time after time, it was found that the commonest meeting grounds for girls to be "picked-up" were local clubs, coffee-bars, milk-bars and public houses in the City centre.

Contact Tracing.

Contact tracing.

During 1959, this method of control produced a degree of success which had not been excelled since the institution of contact tracing on the 1st January, 1948. For example, during 1958 in 47 instances contact tracing was attempted but only 7 were brought under direct investigation, whereas the corresponding figures for 1959 were 19 and 13,

respectively. This success can be attributed to more detailed available information as well as improved methods of tracing and interviewing. The following case-history serves as an example:—

A contact was notified by nick-name and description, but the informant stated that she was better known to the proprietress of a certain "shady" club. The club was visited but was found to have been recently closed by police action. As the informant was said to be suffering from early syphilis, it was deemed imperative that the maximum effort be made in tracing his alleged contact. The name and address of the proprietress of the closed club was supplied to the V.D. welfare visitor by the police. She was visited, and although closely questioned, denied all knowledge of any person answering to the nick-name and description of the alleged contact.

The V.D. welfare visitor was not satisfied as from experience it was clearly seen that this person was lying. After prolonged questioning and pressure, a clue to the identity of the contact was given when it was mentioned "that this description could possibly fit a person whose address I don't know but who may be living in 'X' street". This information, though scanty, proved sufficient for the visitor who recalled the fact that two sisters in this particular street had, several years ago, attended a Liverpool V.D. clinic.

Records were now checked, and following several visits and finally an interview, the contact was traced and persuaded to attend for investigation at the Special Clinic.

Results obtained are shown in Table 29.

Patient Defaulters.

Patient Defaulters

In spite of advice given at initial or subsequent attendance as to the need for surveillance following active treatment, many patients defaulted. A reasonable response was obtained when written for, but where no response was made, home visits were carried out. The end result of each method of contact is shown in Tables 30 and 31, respectively.

Cases referred by Ante-Natal Clinics.

Cases referred by Ante-Natal Clinics

Eight cases were referred by ante-natal clinics for further investigation following upon some degree of positive serology shown on routine

test. In five instances, specific infection was excluded. Of the remainder, two were found to have a history of inadequately treated syphilis, and one was a previously untreated latent case. All three cases were brought under treatment as a result of their being referred.

To date, the babies of two have shown negative serology, the third infant will be called in when due. Family investigation was carried out with negative findings in each case.

Neo-Natal Cases referred.

Neo-Natal—Cases referred

A total of six cases of gonococcal ophthalmia neonatorum were brought to notice and referred for in-patient treatment. Of these, four were referred by maternity units and two by general practitioners. In each instance the mother was admitted for treatment. In none of these cases had the mother attended a Liverpool V.D. clinic during pregnancy for treatment.

General After-Care.

General After Care

During the year, 113 visits in respect of 24 infants were made as a routine follow-up of babies born to patients undergoing specific treatment. Of these, 20 were found to be serologically negative and 4 remain to be investigated.

The following case-histories illustrate the multiplicity of duties, other than follow-up of defaulters, that regularly fall to the V.D. welfare visitors:—

Case 1

While attending one of the V.D. clinics, the welfare visitor was asked to interview a young male patient suffering from gonorrhoea acquired by extra-marital intercourse. He was advised to bring his wife, who may have been infected by marital intercourse following his infection, to the female clinic for investigation.

The patient, anxious that his wife should attend but fearful that she should discover his infidelity, readily agreed to the visitor's suggestion that the welfare section undertake the task of approaching the wife. This was carried out and the wife promised to attend a clinic. On her failure to attend as arranged, she was again visited, during clinic hours, and escorted to the special clinic where she was found to be in need of treatment.

On the occasion of the second visit, the welfare visitor was invited indoors and it was found that the husband, wife and 18 months old baby, occupied a single room in a terraced home owned by an Indian merchant. (It was later found that a case of pulmonary tuberculosis existed in one of the other sub-tenants.)

The baby appeared to be in a poor state of health, although the mother, aged 19 years, paid little or no attention to the child's condition. The visitor insisted that the general practitioner should see the infant. This was arranged, and it was found that the child was suffering from active pulmonary tuberculosis. Subsequent examination of the mother revealed a similar lung condition. Both were admitted to hospital and have responded to active treatment. The husband was found to be clear on X-ray examination.

It is interesting to note that neither parent had attended an X-ray centre during the 1959 Mass X-ray Campaign.

Case 2 The Health department was informed by a general practitioner that a single girl, aged 18 years, had consulted him in regard to her baby who was suffering from a discharging eye condition. The mother had recently been delivered and both had been discharged from a large Liverpool Maternity Hospital. The general practitioner referred the case to an ophthalmologist, who diagnosed gonococcal ophthalmia. Arrangements were made for the baby to receive treatment as an outpatient. After two attendances at the eye clinic the mother failed to bring her baby for further treatment. The mother informed the general practitioner that it was her intention to leave Liverpool at an early date. This information was now passed on to the V.D. welfare visitor.

The same day, the mother was traced and interviewed. She was advised as to the diagnosis and implication of the baby's eye condition and invited to attend a special clinic. This she refused to do stating that "she would prefer to return to London and attend a clinic there".

The visitor insisted that the baby required immediate attention and stressed the need for urgent investigation of the mother. An offer was made to collect and escort both of them to a clinic, which was accepted after a lengthy discussion.

At the clinic, it was felt that the mother could not be relied upon to carry out the child's intermediate treatment, and as she was also found to be suffering from acute gonorrhoea, it was suggested that both be admitted to hospital. At first, she refused this offer and was referred back to the welfare visitor who eventually persuaded her to agree to entering hospital. The general practitioner was accordingly informed of the action taken following his initial report.

Case 3

A young housewife visited the matrimonial section of the Liverpool Probation Service stating that she wished to obtain a separation order through the court. The grounds for this separation order being that her husband, on returning from sea-service, had informed her that he had contacted syphilis whilst abroad and that he was attending a V.D. clinic for treatment. The probation officer referred the case to the V.D. welfare section for initial advice.

The welfare visitor, on interviewing the wife, was able to inform her that enquiry at the clinic showed that she was not at risk as treatment had rendered her husband's disease non-infectious. This alone did not satisfy her and she asked the welfare visitor to have a talk with her husband. This visit was to be arranged so as to appear as by "chance" in order that the husband's suspicions might not be aroused.

Home conditions were found to be reasonably good but the husband appeared irritated by the fact that he, his wife and their young baby, were living in his widowed father-in-law's house while a child of his former marriage was obliged to lodge elsewhere owing to the restricted accommodation. Enquiry at the City housing department showed that their position in the allocation group for rehousing was well placed. This knowledge improved the relationship between husband and wife.

Having "aired" their various grievances, many of which were trivial, both were persuaded to a more rational view-point, the wife agreeing to shelve all idea of separation. At a later date, she informed the welfare visitor that conditions were much improved following his visit.

Case 4

A male patient aged 37 years referred by a general practitioner to a psychiatric clinic. At initial attendance the psychiatrist elicited a history of syphilis of 13 years duration with defaulting attendance at the treatment clinic. The patient failed to re-attend the psychiatric clinic, and in view of the history of venereal disease, the V.D. welfare

visitor was requested to follow-up this case. After a prolonged and difficult interview, the welfare visitor finally gained his confidence and learned the full story. He was, however, adamant in his refusal to re-attend the psychiatric clinic, but since he maintained that "in his opinion all his mental disturbance stemmed from this old infection", the welfare visitor suggested that the logical thing for him to do was to return to the V.D. clinic, for clinical and serological examination, so that an up-to-date assessment of his present condition could be made. Although he agreed to attend, he defaulted.

He was again visited, and expressed regret at his failure to attend as promised, making the excuse that he felt ashamed to put in an appearance having been so long in default, but undertook to attend if escorted by the visitor. The necessary arrangements were made, but again the patient failed to respond.

A further series of home visits have been attempted but without the visitor gaining access to the house. Further efforts will be continued in this case until a satisfactory outcome is obtained.

MENTAL HEALTH SERVICE

Before the report on the year's work is given, two general comments may be made. In June a review of the Mental Health Service was undertaken at the request of the Ministry of Health. As this was printed and circulated to all members of the City Council, it is not proposed to repeat the information it contained in the present report. Secondly, it will be remembered that a good deal of comment was made in last year's annual report on the possible effects of the Mental Health Act (then in the Bill stage) and it is felt that this also need not be repeated.

Mental Health Act

The passing of the Act was, of course, the great event of 1959 in the mental health world, but important sections have not yet come into operation and procedure on some points will remain a matter for speculation until clarified in ministerial Orders. In particular the precise methods to be adopted for compulsory admissions to hospital are not yet clear.

The year's work under this heading has thus continued to be performed under the Lunacy and Mental Treatment Acts, and the report can still open as in previous years with the action taken in cases referred to the department under those Acts.

Mentally Ill People—Admissions to Hospital, etc.

Section 20

The record of cases referred and action taken is given in Table 35. It shows no diminution in the use of the emergency procedure by mental welfare officers to effect admission of patients to hospital under Section 20 of the Lunacy Act. Out of 1,324 people referred, 851 were admitted under Section 20. Ten years ago there were 561 admitted similarly out of 909 referrals.

The increase in the number of referrals is probably accounted for by the fact that the department's facilities are now much more widely known but, as regards the use of Section 20, it can be seen how important this aspect of the work remains, and how interested the service must be in the new procedure.

Informal Admissions

In October the implementation of the new Act began with an Order authorising hospitals to admit mentally disordered patients informally, i.e., without using the procedures of the Lunacy and Mental Treatment Acts—where the patient is "not unwilling to be admitted and can suitably be treated without powers of detention".

It will be noticed that this authority embodies the Royal Commission's definition of "willingness". Under the old Acts it was assumed that if a patient could not actively express willingness he was unwilling and the compulsory procedure had to be adopted. The new position will be that a patient unable to express an opinion may be assumed to be willing to accept treatment and the compulsory procedure will not be used.

The effect of this on the emergency procedure had not been seen in the short period remaining before the end of the year.

Justices of the Peace

This will be the last annual record of the work of the Justices of the Peace in connection with mental illness, for the procedure under which they make Summary Reception Orders for detention of patients disappears under the new Act. 496 patients were seen by them during the year, and Orders were made in 397 cases. Of these, 369 were in respect of patients who had previously been the subject of Section 20 action, leaving only 28 cases in which the Order was the first authority for detaining. This last figure is much lower than it was ten years ago, though the total number of Orders made has not changed significantly.

The changed pattern for admission procedure in the future, desirable as it is, raises problems for local health authorities who wish to develop a complete community service. The Order authorising informal admissions states that "Only in suitable cases and with the patient's consent" will information be given to the authorities that patients have been discharged from hospital.

Notice of Discharge

Hitherto hospitals have had an obligation to notify discharges, and officers of the service have been able to make tactful visits even when patients have expressed no wish to have them. As a result it has often been found possible to establish good relations and provide needed help. Not every patient discharged from hospital is the best judge of his need for assistance, and though there must be as little interference as

possible with the informal principle, community care is, after all, one of the most important objects of the new Act; unless information is received support and care will be lacking. It will be essential to devise administrative methods to ensure a combination of maximum care and after-care with minimum "official" interference.

The year's work among the mentally ill people in the community can now be considered.

Care and After-care Work.

It is pleasant to record that provision for community care in Liverpool was singled out for special mention in the last annual report of the Ministry of Health. This can be regarded both as supporting evidence that the service is being developed along the right lines, and as an encouragement to go ahead with the further developments planned.

Value of After-care

No apology is needed for emphasising once again the particular value of after-care in relation to mental illness. The fact should be faced frankly that patients who have had hospital treatment are not always completely recovered on discharge from hospital. The terms used for conditions of discharge, as printed on the notices of one large hospital, are:—

"Recovered", "Relieved", "No improvement",

and the reasons for discharge:—

"Recommended", "Claimed by Relatives against advice", "Gave notice against advice".

For patients in categories other than "recovered" support and help in the community are a continuation of treatment and, even for those who have recovered, the return to a life of responsibility after a period of protection can present serious problems.

Patients Visited

At the end of the year, 1,377 patients were on the visiting list (this does not include mentally defective people whom officers also visit). The figure has increased by more than 200 since the end of last year. 5,807 home visits were paid. After-care can continue indefinitely—for example, those who live alone may be in special need of long-term visits —but for the majority, visits continue for about eighteen months if the patient's co-operation is obtained, with usually a follow-up visit twelve months later.

Recurrence of mental illness

It is a striking fact that of 1,045 patients visited after discharge from hospital in 1959, 556 had previously been visited at some time or other. The recurrence factor in mental illness can be illustrated in a different way by analysing cases in which emergency (Section 20) action was taken in 1959 as follows:—

Referred for the first time	368
In hospital once previously	148
,, ,, twice previously	84
,, ,, three times previously	42
,, ,, four times previously	22
,, ,, five or more times	41
Other references where no history available (ships' passengers or crew, transients, etc.)	73

Employment

Thirty-nine posts were found for mentally disordered persons by the employment officer. This may be thought a somewhat meagre result when it is considered that he had 700 interviews with patients and 250 with employers. For many of the patients, however, employment must be considered as a forlorn hope, and it should not occasion surprise if many fail to impress prospective employers, however sympathetically inclined they may be.

Apart from this, the employment officer's task has always been rendered difficult by the high incidence of unemployment in Liverpool. The improvement in the general situation which will come about if the proposed introduction of new industries materialises, is likely to have favourable repercussions for the mentally disabled in time.

Sheltered Workshops

Whatever the improvement in the situation, however, there will remain some who will be unable to compete in open industry, and the City Council's plan to open sheltered workshops is designed to cater for such people.

Altogether, with increasing realisation of the potentials of mentally disabled workers, and the increased provision to be made, the future should be far brighter for them.

The following two cases are cited to illustrate aspects of the employment officer's work, one where success was achieved, the other where every effort ended in failure.

Miss A, born in 1920, had a normal education, but at the age of seventeen suffered a mental breakdown and was admitted to a mental hospital. She remained there for twenty-two years as a certified patient and during the last year was released on licence to take a resident post in a hostel. She became redundant and early in 1959 her mother agreed to take her home. She was then discharged and the hospital asked this service to try to find her employment. It was found that the mother did not really wish to have her daughter at home, and a long history of family discord, arising out of the fact that Miss A was illegitimate was uncovered.

The employment officer felt it would be to Miss A's advantage to have a residential post, and despite the difficulties caused by her long period in hospital he at length found her a domestic post in a hospital. Helped by sympathetic interest on the part of the hospital staff she overcame her initial slowness and has been giving satisfaction in the post for nearly a year.

The second case is that of "William" who is 23. He attended a special school, and whilst there committed a number of offences for which he was fined and placed on probation. Supervision at home was lacking and the probation officer felt that he could make no progress. On his conviction after his seventh offence (stealing) he was sent to an approved school where he was examined and found to be feeble-minded. On an Order made under the Mental Deficiency Acts he was then admitted to a mental deficiency hospital in January 1953. Three years later he was allowed home on licence and was referred to this service with a view to employment, and a post was immediately found for him in a local works. After five months he became redundant, but another job was found a week or so later, and this time a post with the same firm was also found for his mother who, it was thought, might be able to encourage him by her presence. Three months later in January 1957, both mother and son left their work without giving any adequate reason.

A further post was found for the youth which lasted only two months, and then a fourth post was found on the gardening staff at a hospital, which he did not retain for long. He held another similar post found for him for six months, but gave this up saying he was suffering from

fibrositis. In the meantime, the Order under which he was detained had been discharged, but in October 1959 he was charged with burglary and was again admitted to a mental deficiency hospital on an Order made by the Court. The failure in this case must be attributed not only to the patient's sub-normality but also to the fact that he was given no encouragement at all to continue his employment by his parents.

Case Conferences

Visiting officers have been helped in their care and after-care work by being able to discuss difficult cases, and their duties generally, at case conferences which have been held weekly throughout the year.

Care and Training of Mentally Defective People in the Community.

At the end of the year, 1,834 mentally defective people were being visited, and 6,932 home visits were paid. In 61 cases visits ceased, for the following reasons:—

Parents refused to co-operate	14
Parents wishes (patient stabilised)	6
Married (female patients)	11
In regular employment	7
Lost trace or left Liverpool	14
Patient died	9

185 new patients were "ascertained", 63 being children regarded as ineducable (Section 57(3) Education Act), and 110 school leavers needing supervision (Section 57(5) Education Act). Of 24 new cases referred from other sources 12 were "ascertained" and 12 placed under voluntary supervision. Two children improved sufficiently to be referred back for school attendance.

The statutory powers which were thought necessary to safeguard the interests of defectives and the public in 1913 are no longer necessary in the changed social and economic atmosphere of 1959, and only a comparatively few "problem" families remain where the defective is likely to be exploited or cruelly treated. The new Act recognises this by emphasising the voluntary nature of supervision and the importance of assimilating the mentally handicapped into community life.

The chief difficulties today are the shortages of hospital beds and training facilities. Fortunately the picture presented below is more hopeful than at any time in the past ten years.

The generally high standard of care throws into relief the few sad cases where the need for strict measures continues. In the following cases dealt with by the Mental Health Service, it would seem in fact that existing powers have not been sufficient to prevent a social tragedy.

"Mary" is now twenty-five. She could not make progress at school and at the age of thirteen was referred to this service as ineducable. At that time her father was in prison and her mother, who had five other younger children was receiving National Assistance. The home was dirty and neglected. Mary attended a training centre and was happy there and made some progress, but after about eighteen months was taken away by the parents. By that time the father was out of prison, but about to return there for twelve months. The mother was again pregnant. At the insistence of the visiting officer, Mary was allowed to go back to the centre, but soon afterwards was found to be pregnant and gave birth to a male child. Two years later she had another baby. In the first case the identity of the baby's father could not be established, but in the second case her own father came under suspicion and in 1958 he was convicted of incest and was sentenced to six years imprisonment. From 1954 onwards the department has sought institutional care for Mary as it has been obvious that the conditions have at all times been unsatisfactory, but the parents have been able to prevent an Order under the Mental Deficiency Acts being made and Mary is still at home.

Training

For some years these reports have been emphasising the need for more training centre accommodation. The situation has grown worse during the year and there are now 130 on the waiting list. The past year would thus have been one of frustration if it had not been for the progress made with the scheme to open six new centres at Fazakerley Cottage Homes, with a total capacity of over 300. The plans for adapting the six "cottages" have been completed and it is hoped that the work will shortly be started.

In the meantime the work at the three existing centres has gone on with little change. The usual events of the Centres' year took place, including end-of-term and Christmas celebrations, and a holiday at Rhyl for a party of older boys and men from the Princes Road Centre.

Two members of the staff were seconded to the National Association for Mental Health Diploma Course.

The numbers on the rolls at the end of the year were :—

	Age 16 and over		Age under 16		Total
	Male	Female	Male	Female	
Princes Road	53	29	32	30	144
Dovecot	15	22	30	22	89
Garston	7	17	30	15	69
Totals	75	68	92	67	302

A suggestion that some older girls and women attending the centre should be given training designed to effect improvement in thei personal appearance, for example instruction in the use of cosmetics hair washes, etc., was considered and the Committee approved thi innovation on the understanding that prior consent of parents would b obtained.

Institutional Care

The number of patients in mental deficiency hospitals, together wit the waiting list, and admissions and discharges during the year ar shown in Tables 32, 33 and 34.

Waiting List

The waiting list has again been reduced and there has been con tinuous improvement in the position, as compared with five years ago as can be seen from the following figures.

	1955	1956	1957	1958	1959
No. on waiting list :—					
Top urgency	81	68	56	39	32
Others	43	47	51	47	31
Total	124	115	107	86	63
Including :—					
No. on list over 3 years					
Top urgency	34	32	23	15	8
Others	17	21	18	15	8
Total	51	53	41	30	16

The number of top urgency cases who have been on the list for a long period is now very small. Unfortunately it still contains very serious cases whose continued stay at home results in complete disruption of the household. It is to be hoped that the Regional Hospital Boards will be able to provide places for these in the coming year.

Informal Stay

It will be remembered that in 1958, admissions of defectives to hospital without the formality of compulsory procedure under the Mental Deficiency Acts, were authorised for the first time. Many Orders have since been discharged and of 1,400 Liverpool patients now in hospital, 500 are "informal", i.e., are not in need of any form of detention.

Fifty patients were admitted informally in 1959 out of a total of 78 admissions, and informal admission is now the accepted normal procedure.

The change has worked smoothly on the whole and there is no doubt that in the past many patients could well have been retained in hospital without Orders of detention. Sometimes, however, compulsion remains advisable, particularly among unstable high grade patients. The following case dealt with during the year may be given as an example :—

"Albert" is now twenty. His parents both died (of tuberculosis) when he was ten, and he was then cared for by an aunt and uncle. He attended a special school for mentally retarded children, but when he left it was not thought necessary to notify him as in need of supervision, so that the Mental Health Service had no contact with him until he was remanded on a charge of larceny, and a medical report was called for. This report showed him to be feeble-minded and an Order under the Mental Deficiency Act for his admission to a mental deficiency hospital was made on his conviction by the Court in May 1957. It should be said that he had several previous convictions for offences which included pilfering from his home and from cars.

Following the Ministry's circular of January 1958, advising hospitals to review their cases with a view to possible discharge of Orders, Albert's status was changed in May 1958 to that of an informal patient and he

remained in hospital until March 1959 on this basis. He then took his discharge, ostensibly to return to his aunt and uncle; actually he took a room and lived with a woman for a few weeks, after which he got into touch with his aunt and uncle saying he was "in trouble and had to get married". The aunt and uncle took him back, but after a further few weeks he disappeared taking with him a sum of money belonging to his uncle. A few days afterwards he was admitted to a general hospital having swallowed a number of aspirins and half a bottle of whisky. On discharge he was charged with the theft of the money, convicted and again admitted to another mental deficiency hospital under a Mental Deficiency Act Order of Detention.

Although there can be no real disagreement with the general principle that patients should be admitted to, and stay in hospital informally whenever possible this case will perhaps have illustrated that this is not always in the best interests of the patient and the community.

Short-term Care

It was found possible to meet nearly all requests for short-term care during the year, even though there were more than in any previous year. The Regional Hospital Boards and Orchard Dene (children under the age of 12 only) continued to provide most of the accommodation. The following figures show the increase in this useful service through which parents are enabled to have a break from the often arduous task of caring for a mentally defective son or daughter.

	No. of patients accommodated				Total weeks stay			
	R.H.B. Hospitals	Orchard Dene	Other Homes	Total	R.H.B. Hospitals	Orchard Dene	Other Homes	Total
1954	34	17	—	51	117	45	—	162
1955	47	47	5	99	180	107	11	298
1956	56	48	3	107	170	109	5	284
1957	44	40	4	88	184	99	10	293
1958	55	56	9	120	198	131	16	345
1959	87	53	20	160	319	115	50	484

Staffing.

Mental Welfare Officers

To reduce case loads to a manageable size and as a first step towards meeting the needs of the service under the Mental Health Act, eight additional visiting officers were appointed, and at the end of the year the staff of mental welfare officers consisted of 16 men and 7 women. There were three vacant posts. The term "Mental Welfare Officer" was adopted in place of "Duly Authorised Officer", and though one or two older officers have preferred to retain the latter title, it has been discontinued for practical purposes.

Psychiatric Social Worker

A psychiatric social worker was also appointed and took up duty in October. This post has been on the establishment for a number of years but it had never been possible to fill it previously.

Use of Cars

For the first time visiting officers were included on the Corporation's list of "essential" car users and, if they wished, able to buy their cars through the assisted purchase scheme. At the time of writing, 16 visiting officers are using cars in connection with their official duties. It is a condition of service for new officers that they "shall possess or obtain, within a reasonable period following their appointment, a current driving licence unless there are exceptional circumstances".

Courses

Three mental welfare officers were seconded to a National Association for Mental Health refresher course at Leeds and two training centre assistant supervisors to the full-time diploma course run by the same Association.

Mental Health Centre.

One of the chief features of the City Council's proposals under the Mental Health Act is the provision of a mental health centre designed to effect co-ordination between the various agencies connected with mental health work, and to offer a friendly atmosphere for the patient. It is intended that the centre shall provide facilities for case conferences and a social club, as well as accommodate the administrative and visiting staff of the service. At the end of the year the location of this centre had not been fixed. The urgent need to make a start on it is recognised, and the fact that it will ultimately form part of the proposed civic centre is also agreed. Consideration is therefore being given to the erection of a temporary building and it is hoped that such a structure will be available in the coming year.

AMBULANCE SERVICE.

Case load of patients

During 1959, the number of patients carried by the Ambulance Service continued to increase. The total number of patients moved during the year was 226,095 compared with 217,979 in 1958, an increase of 3·7 per cent.

The ambulance vehicles travelled 965,520 miles using 57,876 gallons of petrol and 4,180 gallons of diesel oil. When compared with 1958 this shows an increase of 5,256 miles and a reduction of 5,213 gallons of fuel. This is brought about largely by carrying out the policy of smaller petrol engines in new sitting case ambulances and the consumption of diesel fuel in stretcher case ambulances. The replacement of older type vehicles and the use of multi-grade oil has resulted in considerable economies.

The average miles per patient for the year showed a slight decrease from 4·4 miles per patient in 1958 to 4·2 in 1959. The increased volume of work has no doubt attributed to this decrease.

There can be no doubt the continued increased demand is brought about by the ever increasing number of persons receiving out-patient treatment and it is also realised that in-patients are now discharged earlier than formerly and are thereafter conveyed regularly for out-patient treatment.

In appreciating these facts the transporting of the greater number of patients has produced increased difficulties, the solution of which would appear to be further increases in staff, adding considerably to the cost of the service. Rigid application of the recommendations contained in Ministry Circular 30/51 continues.

Communications

An additional switchboard has been installed at Headquarters to meet the increasing demand and now receives all calls for the removal of general and infectious cases. The introduction of a new system of receiving emergency calls previously taken by the police necessitated the installation of special emergency telephones so that all emergency calls by-passed the switchboard and were re-directed by the G.P.O. to instruments in the radio control room. Additional direct lines have been provided to the Old Swan, Allerton, and Garston Accident stations. The changes have increased the speed in answering an emergency call.

Mobile radio

The introduction by the General Post Office of a new arrangement whereby all authorities must conform to a new 50 kc/s narrow channel spacing by 1962 with a further reduction in 1965 to a 25 kc/s channel spacing has necessitated the replacement of the present mobile radio equipment. This change is planned to take place over the next four years and 1959 brought the implementation of eight of the first new sets. These are mobile dashboard mounted type sets conforming to the 1962 and 1965 regulations at a cost of £120 per set. To provide for an improved reception and transmission a new main transmitter has been installed at the present site at Cresswell Mount.

General service

In 1959 the Westminster Ambulance Station was opened for full use as a station and also the Central Ambulance Station, Upper Stanhope Street re-opened after reconstruction. In addition, the infectious service from Gascoyne Street was transferred to Westminster Station.

The Westminster Station is now operating a general, infectious and emergency service. All requests for transport are received at Headquarters and are passed by direct line to the station.

The staff at the station now consists of:—

1 Station Officer
25 Driver/Attendants,
2 Cleaners

and the following vehicles are operated:—

5 Ambulances
3 Sitting Case Ambulances
1 „ „ Car

The Central Ambulance Station, Stanhope Street, is operating a general and emergency service and again all calls are received at Headquarters and passed by direct line.

The staff at the Central Ambulance Station consists of:—

1 Station Officer
25 Driver/Attendants
1 Mechanic
1 Labourer
1 Cleaner

and the following vehicles are operated:—

4 Ambulances
5 Sitting Case Ambulances
2 „ „ Cars

Infectious patients

Transporting of infectious cases continued to be dealt with by a separate staff and vehicles. The total number of infectious cases carried during 1959 was 3,832 and compared with 1958 shows a slight decrease of 16 patients when 3,848 were carried. During the Mass Radiography Campaign 818 patients were conveyed from their homes to X-ray units.

Out-patients

The demand for sitting case transport for out-patients has resulted in a further increase in special type sitting case ambulances. The present fleet of 13 vehicles has been increased to 17 to enable patients to arrive for treatment at reasonable times.

Handicapped Persons

The service was requested to transport Handicapped Persons to welfare centres in the City and from the 31st August to the 31st December a total number of 340 persons were taken to:—

Knotty Ash Village Hall	168 patients
Domestic Mission, Mill Street	110 ,,
Wilson Hall, Speke Road	62 ,,
	340 patients

A total of 1,516 miles were covered.

During the year three new stretcher case ambulances, two sitting case ambulances and three sitting case cars were delivered. Two sitting case cars were disposed of. The present fleet is as follows:—

45 Stretcher Case Ambulances
13 Sitting Case Ambulances
8 Sitting Case Cars
1 Service Van
1 Breakdown Vehicle

The accident ambulances continue to be housed in certain police premises:—

1 at Heald Street, Garston
1 at Rose Lane, Allerton
1 at Derby Lane, Old Swan

The Administrative staff of the service consists of:—

1 Chief Ambulance Officer
1 Assistant Ambulance Officer
2 Clerks
1 Copy Typist
4 Control Assistants
2 Station Officers
3 Switchboard Operators
4 Telephone Attendants
1 Store keeper

The operational staff consists of:—

115 Male Driver/Attendants
2 Male Attendants
21 Female Driver/Attendants

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

1 Foreman
7 Mechanics
1 Oiler and Greaser
2 Car washers
1 Labourer

STATISTICS FOR THE YEARS 1958/1959

	1958	1959
Non-Infectious cases from:		
Home to Hospital	97,186	98,718
Hospital to Home	79,956	82,972
Maternity Cases	6,513	6,763
Infectious cases from:		
Home to Hospital	3,848	3,832
Mental cases from:		
Home to Hospital	640	480
Accident cases from:		
Home, Streets, etc. to Hospital	10,065	11,088
Inter-Hospital Transfers	11,399	14,379
Removals from places outside the City	2,464	1,709
Removals to places outside the City	5,908	5,336
Removals to and from X-ray Units	—	818
TOTAL:	217,979	226,095

Cases requiring the service of ...		
Midwives—Hospital	118	23
Domiciliary	139	119
TOTAL:	257	142
Removals outside the City		
25 miles radius	8,138	6,846
50 miles radius	202	161
Over 50 miles radius	32	38
Patients to Railway Stations to entrain	628	268

OCCUPATIONAL THERAPY

Staff Appointed

In 1959, domiciliary occupational therapy in Liverpool entered on its second year of service to the sick and disabled of the City. The demands for the service were so great that another two occupational therapists were appointed and started work in the Department in May, 1959.

For convenience, the City was divided into two working areas, one occupational therapist working the northern section and one the southern, while the senior occupational therapist continued to treat the patients she already had in all parts of the City. During 1959, 4,356 visits have been made, covering a total of 190 patients. This total does not include patients visited weekly at the handicraft classes run by the Welfare Service section.

In addition to the conventional type of crafts such as weaving, basketry, stool seating, etc., used in occupational therapy to provide movement for stiff joints and weak muscles, the purchase of treadle and hand sewing machines has enabled the therapists to start training patients in machining, etc., at the same time, providing excellent movement for legs and arms. It is hoped in the near future to purchase a number of typewriters for the purpose of vocational training. Some "outwork" has been provided by a carpet manufacturer in Birkenhead who pays a small amount per pound for the work. Long lengths of coloured bias bindings have to be knotted and rolled into balls, and the balls are sent back to the manufacturer who then has the binding woven into rugs. Some patients have found this extremely tedious and have not wished to continue, while others have found it relaxing. It is hoped that in time, "out work" from some of the Liverpool factories will be made available for the employment of disabled patients in their own homes.

Aids for Handicapped

Once again, there has been a big demand for aids of all types to enable people to live more independently, and apart from the small aids, e.g., stocking aids, bath seats and long handled sponges, combs and shoe horns, etc., a limited number of larger aids has been purchased during the year. Through the home nursing equipment section, an electrically operated bed was bought and loaned to a very heavy and

Electrically Operated Bed

completely helpless male patient. By pressing a button, this patient was able to move from a lying to a sitting position with no effort either to himself or his wife. This bed also provides for the leg section to drop down so that the bed becomes a chair which can be moved about the room quite easily. Two lifting hoists have also been purchased through the home nursing section. One is on loan to a man suffering from muscular dystrophy whose case is outlined further in this report, and the other has been loaned to a man of 68 who has recently had both legs amputated immediately below the trunk, leaving no stumps to assist him to move. To make life even more difficult, his hands and arms are severely deformed with rheumatoid arthritis. The hoist has enabled his wife to lift him for toilet requirements and also to swing him out of bed into a wheelchair.

Alterations to Houses

A number of recommendations for alterations to houses were made, including widening doorways, fitting lifting hooks to ceilings, ramps to replace steps and handles and rails to stairways and passages. In one instance a specially adapted bathroom was built on the ground floor for a paraplegic patient enabling him to perform all his toilet requirements independently. In some cases, the adaptations would have been so costly that, after consultation with the Senior Medical Officer, recommendation was made for re-housing to more suitable accommodation. The occupational therapists have felt that there is a real need for the provision of a certain number of houses specially designed to meet the needs of handicapped persons, comprising wider doorways for easy passage of wheelchair, ramps instead of steps at front and back doors, groundfloor bathroom and lavatory, with power points and working surfaces at comfortable heights for patients in wheelchairs or who are unable to bend down. The Housing department have agreed to make such alterations at an early stage in the construction of houses for disabled people on their housing list but so far, no agreement has been reached to design special houses.

The following paragraphs outline some of the work done with various types of patient:—

Typical Cases Helped by Domiciliary Occupational Therapy

A boy aged 16 suffering from cerebral palsy was visited. It soon became obvious that before any constructive work could be done by him an improvement in his sitting position would be needed as he was always semi-recumbent in bed. It was also found that although regarded with

great affection by the rest of the large family, his double incontinence was becoming more of a problem with increasing age. Investigations showed that this problem was very difficult to control satisfactorily, but eventually, in co-operation with the general practitioner and a technician from the appliance suppliers, a special urinal appliance was provided. This is at present on trial, but an added difficulty is the patient's mental defect. A special chair for spastics has been ordered in co-operation with medical and technical advisers and it is felt that there will be more chance of success with the urinal appliance when this chair is in use. The boy should then be properly dressed and be able to sit up supported by straps, and restraints applied to athetosis, although this is not severe in this case. A tray is to be fitted to the chair and treatment is planned in sense training and the overcoming of feeding difficulties.

A mentally handicapped girl of 17 was referred for occupational therapy. Although she could read and write and was clean and tidy, she was very shy and spent all her days sitting by the fire. It was decided to teach her simple dressmaking, as she was interested in this. A sewing machine was loaned to the patient and the therapist taught her to use and maintain it. The ultimate aim is to find work for this patient as a machinist either at home or in a small factory. Reading and writing practice is also given to maintain and perhaps improve her present standard.

A man aged 26, so severely paralysed with muscular dystrophy that he is unable to move any part of his body except for very feeble movements of his hands, has been provided with aids and an occupation. This patient had been lifted about by his mother all his life, but she recently had a coronory thrombosis and was no longer able to do so. A hoist has been supplied which enables the mother to lift her son from his bed to the toilet and to a wheelchair with the minimum of effort. The occupational therapist has taught the patient to make jewellery and he has made such a success of it, that for the first time in his life he has opened a bank account and is saving up for a transistor radio set which he will be able to operate himself.

Another patient, handicapped for the past 15 years and who has no prospect of returning to work in open industry, has been taught basketry. He has reached such a high standard that his work has been accepted for sale by one of the Liverpool stores.

The handicapped children of the City have not been forgotten, and this year has seen the start of occupational therapy for them in co-operation with the School Health Service. The aim is to help these children to overcome their physical handicap as much as possible, to widen their interests, and where appropriate, to start training them at an early age in some occupation within their capabilities.

Occupational Therapy Centre

During 1959, plans have gone forward for an Occupational Therapy Centre to be built in the grounds of Westminster House. This will have a twofold purpose, firstly some of the residents from Westminster House will attend for occupational therapy and secondly it will be used for the treatment of out-patients requiring group therapy or specific occupational therapy using apparatus impossible to supply in their homes. It is hoped to have a specially adapted kitchen where disabled patients can be taught to use aids enabling them to do their own cooking and housework. In order to staff this centre, another two occupational therapists are being appointed, and a further one has been appointed to work on the domiciliary side.

The ever-growing waiting list shows the need for this type of work among the sick and disabled in Liverpool.

WELFARE SERVICE

Residential Accommodation.

Residential Accommodation

Previous reports have referred to the efforts taken to deal with the question of fulfilling the City Council's duty to provide residential accommodation for persons needing care and attention, and these efforts were not relaxed during 1959. Not only is there a problem of providing residential accommodation for a proportion of the increasing number of elderly persons in the upper age groups, but within these groups there is an increasing proportion of the very infirm whose needs must be met by the provision of ground floor accommodation. Early in the year the Aged Persons Services Sub-Committee reviewed the programme which had been carried out during the previous five years and considered future developments in the light of the rather long waiting list which stood at 228 at the 31st December, 1958, to which figure it had risen from 90 during that year. It was noted that very few of the older type of large house suitable for conversion into hostel accommodation was available, and although new building was contemplated in the West Derby and Fazakerley areas it was decided to erect new premises, during the next few years, in the grounds of existing establishments at Westminster House, Holt House, Croxteth Lodge and to extend the home at Brookfield, Huyton. These four additional projects would provide accommodation for approximately 160 persons in addition to the 100 or more who would be accommodated in the Fazakerley and West Derby areas.

During the year some progress was made in the trial scheme for helping to find accommodation for elderly persons in private households, or "boarding out", as it is sometimes known. Much useful experience was gained from the experiment which was organised jointly by the Health Committee and the Liverpool Personal Service Society. Towards the end of the year it was decided that the Health Committee should operate a scheme for helping to board elderly persons and to discontinue the joint arrangement.

A table which has been included for some years past (No. 37) is again given in the statistical appendix, showing the number of houses and flats which were vacated by elderly persons admitted to residential

accommodation thereby making the premises available for other persons in urgent need of housing accommodation. The total number of houses and flats so vacated amounted to 87, compared with 84 in the previous year. The total number of persons admitted to residential accommodation was 479, the number in 1958 being 404.

Westminster House

The final stages in the adaptation of House 12 were completed in December and the 48 residents happily settled in their new surroundings complete with modern furniture and equipment. Plans were also completed for the adaptation of two further units and the programme is being continued of installing modern furnishings wherever possible pending structural alterations. So successful has been the operation of the new lift which was installed in the Main Building during 1958 that it has been decided to install further lifts to facilitate the work carried on in this large establishment. It was also decided during the year to provide a special unit of accommodation, to be created in a single-storey building at the rear of the main building at Westminster House where individual care can be given to a small number of residents for a temporary period when causing difficulties on account of their anti-social behaviour and to avoid discomfort to other residents.

Hostels

Good progress was made towards the end of 1959 in the construction of an annexe to "Brookside House" and when it is completed about 40 residents will then be accommodated at this enlarged establishment.

In past years the residents of all the establishments had been given the opportunity of having two afternoon 'bus outings to the Wirral or Chester, Southport, and the environs of Liverpool. Last year a departure was made from this practice and arrangements were made for those residents who were willing to have a whole day outing to Fleetwood or North Wales, others having half-day trips to Southport and Chester. These outings were all very much enjoyed and they were particularly appreciated because of the exceptionally fine summer.

From time to time it is possible to accommodate persons, who need care and attention, in establishments administered by voluntary organisations. This function is exercised under the scheme of the City Council made in accordance with Section 26 of the National Assistance Act; and the arrangement provides for the payment to the voluntary body of an amount in respect of individual residents to enable them to

pay the agreed cost of maintenance. The facilities provided by voluntary organisations are of material assistance to local authorities and at the end of the year 160 Liverpool residents were accommodated under the arrangements mentioned. (See Table 38.) One of the conditions is that each admission is subject to prior consultation with the Welfare Service Section of the Department. Homes within a reasonable distance of Liverpool are visited by the Chief Welfare Officer and the Senior Welfare Visitor.

Occasionally it happens that although a resident settles in quite happily at a hostel a desire is later expressed to be transferred to another part of the country, perhaps to be nearer a relative. Invariably the change, when it can be made, proves to be beneficial. During the year one resident became the subject of such an arrangement and a Welfare Visitor helped with the preparations for transfer and accompanied her to a hostel in another part of the country. After about a month had elapsed it transpired that the old lady was less happy than in Liverpool, although the arrangements in the other local authority's home were quite satisfactory. Steps were accordingly taken to return the lady to Liverpool and she settled down quite happily again.

Chest X-Ray of Residents

The arrangements which were made in 1958 for every new resident of the Council's establishments to have a chest X-ray before admission continued in force. Nine cases of tuberculosis were discovered through these routine chest X-rays during the year. Of these, one male and one female were suffering from active pulmonary tuberculosis and in the cases of six males and one female the disease was quiescent.

Temporary Accommodation.

Lower Breck Road

References have been made in previous reports to the steps taken by the Liaison Sub-Committee of the Health Committee to deal with the question of the provision of temporary accommodation, and these measures were continued during the year.

The number of admissions and re-admissions totalled 980 and the number of discharges 1,027. The maximum number of persons accommodated at any one time was 98 (consisting of 24 women and 74 children), and the minimum was 32 (consisting of 8 women and 24 children). As a contrast to the maximum figure it is interesting to recall that the greatest number ever accommodated in the temporary accommodation

was 219 in May, 1952. The daily average accommodated throughc 1959 was 63—a number identical with that of the previous year—wh included 19 women and 44 children. The average length of stay of the families was 15 days, the longest stay being twelve months.

It was necessary during the year, on various occasions, to provi temporary accommodation for five families who had been repatriat to England from Burma. In total they consisted of four men, f women and 21 children. As Anglo-Indians they had found the situati somewhat difficult in Burma due to the changed political situation a obtained assisted passages to England. After a short period of st in the temporary accommodation they all made their own arrangemer to live outside either in Liverpool or elsewhere.

Domiciliary Welfare Service.

It has always been realised that in the absence of what is comparab to a house-to-house visitation service there are many elderly perso and especially those living alone, who might be in need of care a attention, or who might not even know of the welfare services whi are available to them from statutory and voluntary sources. Althou a good deal of propaganda in this matter had already been undertak by the Health Department a further step was taken during the yea with the co-operation of the Ministry of Pensions and National Insu ance, the National Assistance Board and the postal authorities. Th was the insertion in retirement pension order books and non-contributo pension order books of an information card stating some of the welfa services which are available to elderly persons. The system of busine reply cards which has operated for some years inviting interested peop to complete and return a tear-off portion to the department is therefo extended by this new introduction to the welfare services. On recei of these cards visits are arranged, and the services explained in great detail.

The following are a number of selections from the many proble dealt with during the year by the field workers:—

1. An old lady of 97 lived alone and looked after herself as be she could. Neighbours were good to her. She was very independent a would not consider residential accommodation. In view of her gre

age, her wishes were respected. One day she fell, and her cries were heard by neighbours. She would not at first consent to go into hospital, but after a delay of some hours, her nephew persuaded her. She died some three weeks later.

2. A woman, who is now 64 years of age, slipped and injured her hand several years ago whilst employed as a domestic in a hospital and has never worked since. Some years later she came to Liverpool where the hand was amputated. The woman is severely handicapped and is living in poor circumstances in unsuitable accommodation. Since the time of the accident a weekly allowance has been paid but the woman maintains that she should receive a lump sum payment. The offer of National Assistance has been consistently refused by this woman and although the department would be willing to help in the direction of submitting a claim for increased compensatory payments the woman will not sign the necessary declarations. Her non-co-operation in these matters is due to the belief that if she accepts such financial aid her claim for what she considers to be proper compensation in the form of a lump sum would be rejected. The department is following up this matter to see if any further claim can be considered. Even if this part of the problem could be resolved the housing difficulty would still exist.

3. A married woman, aged about 65 years, was referred to the welfare section as needing supervision. She was a drug addict and an alcoholic who had been found by the police in a drunken state and had also obtained drugs illegally. Apart from these moral failings the woman has severe heart trouble and bronchitis. The husband, a man some years older than his wife, was intolerant of his wife's ill-health and there was constant domestic friction. The home circumstances were not of a high standard, and after a period of hospital treatment for the wife, when there was a considerable improvement in her condition, it was felt that if she could live with other people in a higher standard of living the progress already made would be maintained. Eventually the wife was admitted to residential accommodation. She has great confidence in the matron and her health is steadily improving. The husband is managing very well on his own and the state of the house is now showing a change for the better.

4. The circumstances of an elderly couple were brought to the notice of the welfare section by the police, as they had frequently been called to the flat to prevent husband and wife fighting.

The husband is a sick man, but he refuses all medical treatment and advice from his doctor. There is considerable domestic friction and the wife, who despises her husband, constantly nags him. There was a temporary respite from these difficulties when the wife was admitted to hospital and subsequently to a convalescent home. Paradoxically while his wife was away the husband wanted her to return but when she did come back to the house the domestic circumstances became as before with constant fighting. The wife refuses to consider residential accommodation and while the husband also refuses to go away he is quite unable to look after himself. Home help has been provided but the couple need constant attention, and conditions are deteriorating.

5. It came to the notice of the welfare section that a middle-aged widow was due for eviction because of rent arrears. She was cohabiting with a much younger man who was not free to marry her. Although he was unemployed he had helped the widow in many ways. A job was found for him and eventually he cleared off the arrears as well as some other long-standing debts. For a time all seemed to be very satisfactory until he informed the Welfare Visitor that hire purchase debts had been accumulated in his name and without his knowledge. Steps were taken to see that the firms in question entered into no further transactions with the woman and the man once again has undertaken to liquidate the debts.

6. At tea-time on Friday, 24th August, a heavy thunderstorm occurred over the central parts of the City, and the accompanying torrential rain led to severe flooding in Rachel Street. Various field workers in the department co-operated in assessing the damage to personal property and giving advice to the tenants. Because of the break-down in the domestic arrangements in some of the houses mobile meals were supplied until redecorations and repairs had been effected. This proved to be a very useful service in the crisis, and a total of 875 meals were delivered during the period.

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

During the year it was necessary to remove compulsorily, from their homes, nine persons under the provisions of section 47 of the National Assistance Act, 1948. 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 for compulsory removal to hospital accommodation or residential accommodation. Five of the patients subsequently died, two were still in hospital at the end of the year, one was still in the residential accommodation to which she had been admitted, and one returned home after a stay in hospital. In 1958, thirteen persons were the subject of compulsory removals, six in 1957 and eighteen in 1956.

Rest Centres for Elderly Persons.

River View Rest Centre

During the very fine summer the River View Rest Centre was never more popular, and as a meeting place for elderly persons where they can have light refreshments and enjoy a leisurely game of dominoes, etc., it still continues to be exceedingly successful.

Sheil Park Club

A further venture in this direction was undertaken by the Women's Voluntary Services in Sheil Park, in co-operation with the local authority. A suitable site was provided by the Parks and Gardens Committee, and, with the approval of the City Council the City Architect and Director of Housing, provided the necessary architectural services for the erection of a pre-fabricated type of hut, the cost of which was borne by a grant from the King George VI Foundation. The furniture and equipment were purchased from the fund which was created by ex-Alderman W. J. Tristram during his year of office as Lord Mayor. The official opening was by the Lord Mayor (Alderman H. N. Bewley, C.B.E.) on 11th September, 1959, and within a short time afterwards the club was already proving of great benefit to elderly persons living in the neighbourhood.

Towards the end of the year plans were under consideration by the Health Committee for the opening of two further rest centres, in existing buildings, one of which would be in the centre of the City.

Mobile Meals.

A small experimental scheme for supplying mobile meals to a number of persons in a restricted area of the City was inaugurated some years ago. Initially about 30 persons benefited but subsequently it was found possible to extend the service to about 100 persons in an area based on meals supplied from Westminster House. During the year a further extension to the south end of the City took place based on New Grafton House and at the end of the year a total of about 160 persons were receiving a mid-day meal on three days a week.

The possibility of extending the scheme to cover wider areas has always been considered, especially in the knowledge that a service of this nature materially assists in preventing a deterioration in the health and general well-being of elderly persons to a point where it might be necessary to admit them to residential accommodation. In the light of a careful review of the problem, towards the end of the year it was decided that facilities should be provided so that many other areas of the City could be covered, and it was hoped that by February, 1960, about 350 persons would then be benefiting. In addition it has been decided that whenever any new hostel is built that its construction and equipment would be so arranged that it would become the centre of a meals distribution scheme in the neighbourhood.

Registration of Disabled Persons' and Old People's Homes.

At the present time, 27 homes are registered with the local authority, 19 being administered by voluntary bodies and the remainder by private individuals. The homes are inspected from time to time by the Chief Welfare Officer and the Senior Welfare Visitor to see that the standard of accommodation is maintained in accordance with the requirements of the City Council.

Welfare of Handicapped Persons.

Reference was made in the report for 1958 to the further steps which were contemplated in regard to welfare services for handicapped persons. Eventually it was possible to translate these plans into operation, and a class for handicapped persons was organised at each of three centres which were set up in suitable premises in widely-separated areas of the City. The numbers attending vary from 15 to 30 and the

enthusiasm of the handicraft instructors and the welfare visitors is reflected in the regularity and pleasure with which they attend. Those members of the classes who would find it difficult or impossible to make their own way to and from the centres are conveyed by transport. At Christmas time a successful party for those attending the classes was held at 100, Walton Village and 85 persons enjoyed a meal and an entertainment. It was hoped that during 1959 a further centre would be opened in the northern area of the City.

At the end of the year there were 124 handicapped persons accommodated at the cost of the City Council in establishments administered by other local authorities and voluntary organisations. The details are given in Table 46. In December the building adapted by the Liverpool Spastic Fellowship was ready for occupation as residential accommodation and recreational purposes for spastics. A number of adult spastics are now being maintained there under financial arrangements made with the local authority. The City Council is proposing to build a hostel specifically for the accommodation of handicapped persons.

100 Walton Village

The premises at 100, Walton Village, which were placed free of charge at the disposal of organisations concerned with the welfare of handicapped persons, still continue to be used successfully as a social and recreational centre. The following bodies make regular use of the premises:—

Infantile Paralysis Fellowship (Merseyside Branch).

Liverpool Spastic Fellowship.

Merseyside Hard of Hearing Club.

Merseyside and Wirral Group Invalid Tricycle Association.

The Spastic Fellowship's use of the building is by way of holding a day centre for a small number of spastic children on two afternoons a week. They are conveyed by transport to the premises and some occupational therapy is undertaken under supervision.

Discussions are held from time to time on matters of common interest between representatives of these organisations and members of the staff of the welfare service section of the Health Department. Occasionally a member of the staff acts as an operator of the film projector.

Blind Welfare Statistics

During the year, 214 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 143 were found to be blind, 63 partially sighted and 8 not blind. Results of examinations of this nature during the last three years were as follows:—

Year	Number Examined	Registered as Blind	Registered as Partially Sighted	Not Blind
1957	188	127	52	9
1958	162	112	40	10
1959	214	143	63	8

Particulars of the numbers of registered blind and partially sighted persons in the various age groups are contained in Tables 41 and 43. Statistics are also given showing, by age-groups, the numbers of newly-blinded and partially sighted added to the registers during the year (Tables 42 and 44).

Table 45 shows a summary of the reports received during the year indicating, under various headings, whether treatment was recommended and, if so, whether it was medical or surgical.

Blind Employment.

Blind Employment

The following are details in respect of the numbers of blind persons who were engaged at the 31st December, 1959, in various trades operated in the two workshops for the blind in Liverpool:—

Workshops for the Blind, Cornwallis Street:—		
*Basket making	13	
Brush making	20	
Mat making	28	
Upholstery	8	
	—	69
Catholic Blind Institute, Brunswick Road:—		
Basket making	1	
Mat making	4	
Machine knitting	1	
	—	6
TOTAL ...		75

*Includes one employee, partially sighted.

The following numbers of blind persons were engaged in sighted industry:—

Basket making	1
Clerks/Typists	6
Dealers, Tea Agents, etc.	3
Factory operatives	58
Home Teachers	3
Hand Knitter	1
Legal profession	1
Masseurs	2
Musicians and Music Teachers ...	2
Porters, packers, cleaners	5
Schoolteachers	2
Telephone operators	14
Open employment	3
Miscellaneous...	8
	109

The total employed was an increase of nine over the previous year.

It will be noted that the number of blind persons employed in sighted industry (109) exceeds by 34 the number employed in sheltered workshops (75). This reflects the tendency which has been taking place over the last few years for more blind persons to enter sighted industry compared with workshops.

The following persons were employed in the Home Workers' Scheme and their incomes supplemented by the City Council:—

Braille copyist	1
Machine knitters	2
Musicians and Music Teachers ...	4
Hawker and newsvendor	1
	8

Sir Robert Jones Workshops.

About 50 severely handicapped persons are employed at these workshops, mainly in the trade of book-binding but also in printing, boot and shoe repairing and Christmas card renovation. For some years now the organisation has been assisted financially by the City Council to enable a satisfactory salary and wage structure to be maintained, and also to prevent the financial position from deteriorating to a point where the continued existence of the workshop might be in jeopardy.

During 1959 the total payment made by the City Council was about £5,887. The general position of the workshops is constantly under review, particularly in regard to methods of improving the scope of their activities and attracting work for those disabled persons who are in need of sheltered employment. Each quarter a financial statement is prepared by the workshop authorities and submitted to the local authority. Apart from the direct financial assistance which is afforded by the City Council, Corporation departments have been asked to bear in mind the services provided at the workshops when purchases are being considered.

Deaf and Dumb Welfare.

There are nearly 600 adult Liverpool residents who are registered as deaf and dumb and their welfare is catered for by two voluntary organisations, the Liverpool Adult Deaf and Dumb Benevolent Society and the Catholic Deaf and Dumb Society of St. Vincent de Paul, which are grant-aided by the local authorities in the Merseyside area. The basis of the grant during 1959 was a per capita payment at the rate of £5 with an appropriate apportionment between the two organisations in cases where both of them care for the same individual. Towards the end of the year an application was made for the grant to be increased, and arrangements were made for a meeting early in 1960 of representatives of the various local authorities concerned to discuss this matter, and others of common interest.

Epileptics.

There were 71 adult epileptics maintained by the local authority at the end of the year in colonies established for the purpose of providing residential care and attention, and 21 persons were allocated vacancies during the previous twelve months.

The Merseyside Epileptics' Association, which was formed about three years ago, continues to function successfully, and discussions have taken place relating to the welfare of this group of handicapped persons. A public meeting was held during the year at the Town Hall which was addressed by Professor Sir Geoffrey Jefferson, C.B.E., on the subject of "Epilepsy as the Doctor and the Layman see it". A central club room has been established as well as a handicrafts class and some progress has been made in an educational programme.

Protection of the property of persons admitted to hospital or residential accommodation.

The Health Department has a duty to provide temporary protection for the property of persons admitted to hospitals or residential accommodation where no other suitable arrangements are made. This includes making the premises secure, notifying the police of the absence of the occupant, taking an inventory of the contents and retaining for safe custody cash, personal documents, securities, jewellery, etc., until the owner is able to resume custody of his own property. Other reasonable precautions are taken to safeguard the premises by shutting off the gas and electricity supplies, draining water tanks, etc., and where possible shutting off the water supply, especially in winter weather. During the year, 179 cases were referred to the welfare service section where it was necessary to take steps of this nature. In 24 cases furniture was removed to store.

Estates of Deceased Persons.

Another duty of the Health Department is to carry out the funeral of a person, who has died or been found dead in the area of the local authority, where no other suitable arrangements are made to dispose of the body. As the local authority has the right of recovery from the estate of the deceased person action has to be taken in such cases in regard to the effects of the individual which involve contact with next of kin (if any), legal personal representatives or, where an estate is solvent and no will or next of kin can be found, the Duchy of Lancaster. It was necessary during the year to take action in 135 instances of this description.

Over £1,800 in cash was recovered during the year from persons' effects and placed in safe-keeping for the time being with the City Treasury.

Of the total cases dealt with of all kinds, 52 were referred by the police, which included 26 persons who had been found dead at home or elsewhere and a similar number who had been taken ill either at home or outside and removed to hospital.

Problem Families.

Fourteen case conferences were held during the year, at the instigation of various Corporation departments or voluntary bodies, when the circumstances of twenty problem families were discussed or reviewed. These meetings have proved of great value when it has been possible to aggregate the information possessed by a number of field workers dealing with a particular family, and to suggest a possible solution to the problems which have arisen. Apart from officers of a number of Corporation departments, representatives attended from interested statutory and voluntary bodies.

HOUSING POINTS SCHEME

Statistics General

During 1959 a total of 4,482 general medical cases, 789 pulmonary tuberculosis and 32 non-pulmonary tuberculosis cases, applied for assistance in rehousing, there being a decrease of 749 (14·3 per cent) in the number of general medical cases, an increase of 122 (15·4 per cent) on the cases of pulmonary tuberculosis and a decrease of 13 (28·8 per cent) on the non-pulmonary tuberculosis case figures for 1958.

Medical

1,122 general medical cases were awarded points; 31 of these were recommended to the City Architect and Director of Housing for submission to the Allocation (Special) Sub-Committee.

Tuberculosis

The tuberculosis cases were awarded up to 5 points each by the chest physicians. Seventeen of these were recommended to the City Architect and Director of Housing for submission to the Allocation (Special) Sub-Committee, and 156 were recommended for special priority within the Allocation group as they had sufficient points for them to be already included in this group.

Transfers

1,190 general medical cases applied for transfer during the year. Of these, 413 (34·7 per cent) were recommended to the City Architect and Director of Housing; 116 tuberculosis cases were also recommended for transfers.

Overcrowding

A further 397 applications were received in respect of non-medical cases and reports concerning 266 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 two 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. A close liaison exists with the Housing Department, and many such cases are given priority within the actual allocation group on the recommendation of the Medical Officer of Health.)

Allocation (Special) Sub-Committee

(2) Cases of special urgency may be brought before the Allocation (Special) Sub-Committee. If approved, they are offered rehousing within approximately one month.

A sample of six cases dealt with in 1959 are as follows:—

Six cases

(1) A married couple with one child were living in one room as sub-tenants in a Corporation house. The husband was suffering from renal tuberculosis and his wife had active pulmonary tuberculosis.

They were accommodated in a two-bedroomed ground level flat.

(2) A married woman, suffering from active pulmonary tuberculosis, was living with her husband and child in her parents' home. The house was grossly overcrowded and the patient and her family had no separate accommodation of their own. In addition, her father, who was the tenant, was also suffering from pulmonary tuberculosis.

This couple were accommodated in a two-bedroomed ground-level flat.

(3) An elderly woman who was suffering from severe chronic bronchitis and asthma with extensive fibrosis at the apices and bases of both lungs. This lady lived with her daughter who had a left hemiplegia following a brain operation. The daughter could hardly walk and her left arm was useless. They lived under most adverse circumstances in a large old house with many stairs, no hot water and the toilet situated outside in the yard.

They were recommended for ground level accommodation.

(4) A school teacher, living in a top floor flat of a large house, was suffering from disseminated sclerosis and he had also undergone a cholecystectomy operation. He travelled to school in a motorised invalid chair but since his operation he was completely unable to negotiate the stairs to his flat.

He was recommended for a ground-level flat with garage space for his invalid car.

(5) An elderly couple lived in a second floor flat situated above a Club premises. They had been acting as caretakers of the premises in return for accommodation.

The husband fell and bady injured his right arm and leg. His wife was severely handicapped due to hemiplegia contracted five years ago. Owing to their disabilities they were no longer able to perform their duties as caretakers.

They were recommended for a small ground-level aged persons flat.

(6) A young married woman with one child lived with her husband as sub-tenants under grossly overcrowded conditions in her mother's home. She was suffering from epilepsy and after one of her attacks she was found face downwards on the fire with her baby. She sustained severe burns of her face, chest and hands, which left her with a severe facial disfigurement and loss of her left eye and deformity of her left hand. Following extensive plastic surgery and convalescence it was most undesirable for her to return to the overcrowded conditions prevailing in the house.

She was granted a two-bedroomed ground-level flat.

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, giving such details as the type and extent of the disease, state of infectivity, family history of tuberculosis, etc. At this stage each case is submitted for assessment to a medical officer. 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 submitting them to the Allocation (Special) Sub-Committee or recommending special priority within the allocation group. 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 certificates 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 doctors of the Health Department during 1959. 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.

Statistics.

Statistics

During 1959, 2,488 medical cases (an increase of 41 per cent over the 1958 figure of 1,766) were dealt with by this section from all Departments of the Corporation (2,101 medically examined; 277 arranged but later cancelled; and 96 reports obtained from hospitals and other sources. In addition, 14 candidates were examined on behalf of other local authorities). 487 were for new appointments, 1,177 for admission to the Superannuation Scheme, and 437 for extended medical sickness. Included in the above figure is a total of 19 Mersey Tunnel Workers who had their usual half-yearly check because of the nature of their work (namely, working in the polluted atmosphere of the Mersey Tunnel). For full details, see Table I.

TABLE I

Medical Examination of Staff and Entrants to the Corporation Service

Department	New appoint-ments	Extended Sickness	Suitable to continue	Super-annuation	Total
Mersey Tunnel	—	1	19	7	27
City Treasury	58	1	1	—	60
Museums	—	—	—	2	2
Health	156	3	21	67	247
Magistrates...	17	—	2	—	19
Parks and Gardens ...	37	9	18	48	112
City Lighting	2	1	4	20	27
Baths	4	1	1	28	34
Libraries	42	1	3	5	51

TABLE 1—*continued*

Department	New appointments	Extended Sickness	Suitable to continue	Superannuation	Total
City Architects	9	2	46	126	183
Children's	39	—	5	6	50
Fire Services	9	5	5	3	22
City Engineer's	46	132	40	197	415
Town Clerk's	22	—	2	—	24
City Analyst's	—	—	—	—	—
Markets	4	—	10	18	32
Weights and Measures ...	—	—	—	—	—
Education	—	2	26	99	127
Building Surveyor's ...	4	—	—	—	4
Water	16	29	6	28	79
Passenger Transport ...	—	—	36	505	541
Art Gallery...	3	—	—	—	3
Police	19	—	5	18	42
TOTAL	487	187	250	1,177	2,101

Unfit for work	126
Unfit for superannuation	40
Unfit for appointment	2
	168

It was decided, after examination, both by consultation with t candidate or patient's own doctor and/or hospital, that 126 (106 in 195 were permanently unfit for work and should be retired; 40 (31 in 195 were unfit for entry into the Superannuation Scheme, and 2 candidat (6 in 1958) were unfit for their new appointments. This totals 1 persons (8 per cent of the total examined) who were declared un

during the year, an increase of 17 per cent over the 1958 figure of 143. A list of their medical conditions is enumerated in Table II below :—

TABLE II

Medical reason for being declared permanently unfit

LUNGS	Chronic bronchitis and emphysema	42	EYES	Glaucoma	1
	Pulmonary tuberculosis	3		Blindness	1
	Asthma	3	STOMACH	Duodenal ulcer	2
	Bronchiectasis	3		Carcinoma	1
	Carcinoma	2		Diverticulitis	1
HEART	Coronary thrombosis	11	THYROID		1
	Angina pectoris	5	BRAIN	Cerebral thrombosis	4
	Mitral stenosis	4		Epilepsy	1
	Cardiac failure	9		Paranoia	2
	Hypertension	33		Psycho Neurosis	4
	Myocardial degeneration	4		Parkinson's Disease	1
	Femoral artery obstruction	1		Syringomyelia	1
				Disseminated Sclerosis	1
BONES AND JOINTS	Osteo-arthritis	13	HERNIAS	Inguinal	2
	Rheumatoid arthritis	6			
	Invertebral disc	2	BLOOD VESSELS	Varicose Veins	1
	Severe injury	2			
			OTHERS	General Debility	1

It will be seen that 42 cases of chronic bronchitis and emphysema (34 cases in 1958) were the main reason for the declaration that a patient was unfit; 33 cases of hypertension (23 cases in 1958) and 13 cases of osteo-arthritis (5 cases in 1958) being second and third respectively. It is of interest to note that there were 2 cases of carcinoma of the lung and 3 cases of pulmonary tuberculosis, whilst the previous year, with a smaller total of persons examined, 4 cases of cancer of the lung and 4 of pulmonary tuberculosis were discovered. There is no doubt that the arrangements for routine chest X-ray revealed, at an early stage, one case of lung cancer and one of pulmonary tuberculosis, thus enabling prompt treatment to be given to these two persons.

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

This year has been outstanding for continual periods of exhilaration enthusiasm and purposeful endeavour.

Environmental health today, in general, is associated with har slogging routine and although it is a relief that the tremendou problems of the past associated with disease have now been removed consolidation and routine are poor substitutes for creative accomplish ments. The gradual culmination of the health pioneers' efforts is see in the marked improvement that can be observed in living condition

For a period during the year, the old ideals and sense of purpos were revived throughout the department with the commencement of th Mass X-ray Campaign. A spirit of unity spreading from the Medica Officer of Health and the Deputy Medical Officer of Health, who wa responsible for the detailed supervision, gradually co-ordinated all th sections which were actively engaged.

Help with Mass X-ray Campaign

The public health inspectors seized this opportunity as a break fro routine and as providing an outlet for their initiative, together wit tremendous experience in the handling of the general public. Th older inspectors, who are rich in experience, were able again to sho how tact and discretion in handling the public can assist in solvin any great problem which may come within environmental health.

A number of teams were created and the first important duty organising industry to co-operate and allow their staffs time off to b X-rayed was soon in full swing. Managements became enthusiastic an the telephone between the Chief Public Health Inspector and all th various industrial firms became actively engaged. "Operation Industry swung into action and soon 18,381 people attended the special unit i the basement of Hatton Garden to provide the necessary experience fo handling the masses that would arrive shortly afterwards.

The duties undertaken by the public health inspectors and roden control inspectors, included the following broad classifications:—

(1) Personal contact with managements of industrial or com mercial concerns to ensure that staff attend for X-ray.

(2) Conveying of staffs to various units, if necessary, when located too far from their normal place of business.

(3) Assistance to the health visitors in stimulating enthusiasm in the wards by use of loud hailers, personal contact, etc.

(4) Formation of small assault teams prior to the opening of the units and arranging for certain factories to start the units operating.

(5) Organising voluntary organisations, Scouts, Boys' Brigades, etc., in delivering 220,000 letters.

(6) Arranging for 60,000 posters to be exhibited and taken down afterwards.

(7) Delivering 20,000 badges to householders, and any other duties, which included assisting in installation and dismantling of X-ray units; manning of units; sorting out problems; staff co-operation, etc.

(8) Prize distribution—a team of six inspectors was responsible for arranging the distribution of the prizes. The method of choosing the winners included "spot" presentations to persons in the streets who were wearing a badge indicating that they had been X-rayed, and distribution at the various X-ray units by drawing a card from the records of persons X-rayed at the units concerned.

(9) Providing the section's motor van and driver with loud hailer, both for day and evening duty.

The inspectors were responsible for many smaller duties and it was necessary, to ensure the success of the Campaign, to severely curtail routine duties. Thousands of posters were distributed for display purposes and large banners were erected on prominent sites. The younger inspectors, full of enthusiasm, rather allowed their energy to over-reach duty on occasions, as when the city awoke one Sunday morning to find posters everywhere, as every inspector had set himself a target of sticking 100 posters in an hour.

This might have been fly-posting in a big way, but the good humoured tolerance of everyone concerned soon removed any irritation.

In certain parts of the slum areas the warm weather contributed to a fiesta feeling around the X-ray units and inspectors were busily engaged supervising the long queues in and out the passages, or standing patiently along main roads, the pavement being crowded with people who were treating the visit as a social occasion, the only thing missing being a certain amount of music.

At the height of the Campaign a case of smallpox occurred and inspectors were diverted to assist in the surveillance of contacts. The additional duties required the inspectors to work long periods outside normal working hours, including Sunday. At the conclusion of the X-ray Campaign a preliminary survey was carried out to provide the statistics for the extensive smoke control area in the south end of the city, and 28,000 premises were surveyed.

Recruitment and training

The training scheme has been successful in providing a steady supply of qualified inspectors to fill vacancies and to replace normal wastage due to retirements.

Twenty-five assistant inspectors completed their training and obtained the certificate of the Public Health Inspectors Education Board, qualifying for appointment as public health inspectors. Ten qualified inspectors obtained the Meat and Other Foods Certificate of the Royal Society of Health and are now carrying out food inspection duties at the Abattoir and Markets.

The training scheme has now been extended to include pupils aged between 16 and 18 years. This new method of recruitment provides a source of entrants with educational qualifications, which comply with the requirements of the Public Health Inspectors Education Board. The inspectorate now comprises 129 qualified inspectors, assistants, trainees and pupils.

General Health Education

Requests have continued to be received for speakers from various organisations. The varied work of the department is of great interest to certain sections of the public. The most popular subjects, however, were food hygiene and smoke abatement. The usual facilities have been provided for the training of inspectors, health visitors and nursing staffs. Lectures were also given to trade organisations, on specialised subjects.

Liverpool Show

The Health department exhibits at the Liverpool Show are always a popular attraction and this year the theme of this section's exhibit was "Radiation and Public Health". The various models and photographs portrayed the beneficial effects and uses of ionising radiations. In addition to pictorial matter, diagrams and a model of the Dounreay fast breeder reactor, a section was devoted to the practical uses of radioactive sources.

Summary of Inspections

A total of 27,450 complaints were received from occupiers, necessitating 91,143 visits. Every effort was made to investigate each complaint within 24 hours of being received. Several complaints were received in respect of shops, cafes and public houses, and the reduction in the number of complaints may be taken as an indication of the improvement in the type of premises concerned. In all, 414,199 visits and inspections were carried out and 20,848 notices were issued under the various Acts and Byelaws.

Legal Proceedings

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, 177 prosecutions were taken under the Public Health Act, 1936, the Shops Act, 1950 and the Food and Drugs Act, 1955. Penalties amounted to £477. (See Table No. 54, Statistical Appendix.)

Work in default

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 255 houses involving expenditure of approximately £2,500, all of which will subsequently be recovered.

Recovery of cost

The cost is recovered through the procedure incorporated in the Public Health Act, 1936. 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.

Choked Drains

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 1,365 choked drains were cleared during the year. 116 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.

Drain Testing

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., 1,374 drainage systems were tested. Notices were issued in respect of 827 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-two defective public sewers requiring urgent attention and 11 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.

Meeting of 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 the 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 13,396 references in respect of various matters requiring the attention of the inspectors, and 7,310 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.

No. of investigations relating to cases of infectious disease	1,997
No. of enquiries regarding contacts of infectious disease...	9,441

These figures are a substantial decrease on 1958 when the visits were 3,217 and enquiries 10,244.

Food Poisoning

Extensive work in connection with ingestion disease enquiries has taken up much time of the inspectorate. The work necessitates specialised knowledge and more men have become proficient in this type of work due to the operation of the training scheme. 6,931 specimens from 3,578 persons were submitted for bacteriological examination; 1,502 specimens from 848 persons proved positive. Detailed enquiries were made into all confirmed cases of Salmonella infections. This is a considerable decrease on the 1958 figures when 12,082 specimens were collected from 5,917 persons. Record maps have been used throughout the year to indicate the location and extent of infections and have proved to be most valuable in linking infections.

Movable Dwellings

There are no licensed camping sites within the City but itinerant traders occasionally park caravans on unfenced land on the outskirts of the City. 441 visits were made to such sites and all the caravans were removed by appropriate statutory procedure.

Common Lodging-houses

There are 12 registered common lodging-houses in the City, 11 providing accommodation for 879 males and one providing accommodation for 94 females. Applications for renewal of registrations were received in respect of 12 of these registered common lodging-houses in the City. Applications were also received from the 12 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 267 visits both by day and by night, resulting in 42 notices being served in respect of bye-law infringements. A total of 9,599 beds were examined, 29 were found verminous and these were cleansed by the local authority, and 29 lodgers found to be verminous were also cleansed by the local authority.

Seamen's Lodging-houses

There are 14 seamen's lodging-houses on the register, seven of which are not licensed under the bye-laws as seamen's lodging-houses. Accommodation is provided for British, Chinese, Arab, Somali and Indian seamen. The total accommodation available is 884. Public health inspectors made 296 day and night inspections. Bye-law infringements were dealt with either verbally or by the service of notice. The inspectors examined 2,773 beds and appropriate action was taken where necessary.

The Hydrogen Cyanide (Fumigation of Buildings) Regulations, 1951

Official notice was received in respect of three fumigations under the regulations and inspectors attended the fumigation of the premises in each case.

Removal of Remains

Under the terms of licences issued from the Home Office, inspectors supervised the exhumation of seven bodies during the year. The remains of four persons were shipped abroad, one to Norway, one to Canada and two to the United States of America.

Canal Boats

The Docks and Inland Waterways Executive, North Western Division, are the proprietors of the Leeds and Liverpool Canal, the only canal having direct communication with Liverpool. The length of the waterway within the City (exclusive of the locks communicating with the Dock Estate) is approximately three miles.

Liverpool is one of several registration authorities for boats used as dwellings plying on the Canal. The details of the boats registered by this authority are indicated in Tables I and II.

TABLE I

Boats on register, 1st January, 1959	395
New boats registered	1
Boats removed from register	42
Boats on register 31st December, 1959	354

Type of Boat

Forty-two boats ceased to be used as dwellings during the year and were removed from the register in consequence of three firms discontinuing business.

TABLE II

Number and type of boats registered :	
Motor-propelled boats	90
Steam-propelled boats	58
Motor-towed boats	41
Steam-towed boats	121
Horse-drawn boats	44
Total	354

325 inspections of canal boats were made during the year and the places of registration of boats visited were as follows:— **Number of Boats Inspected**

TABLE III

Number of boats visited	165
Registered at Liverpool	102
Registered at Runcorn	16
Registered at Manchester	15
Registered at Leeds	Nil
Boats not registered and not used as dwellings	32

All boats were "wide" boats, 59 being motor propelled, 10 steam propelled, 65 motor towed, 31 steam towed.

Contraventions of the Act and Regulations were found on 12 boats, of which number, one was registered by another authority, the contraventions being shown in the following Table:— **Contraventions**

TABLE IV

Nature of Contravention	Reported	Remedied
No certificate of registration on board	5	5
Registration lettering and numbering not legible or incorrect ...	1	1
Leaking decks	3	3
Defective stove or stove pipes	2	2
Miscellaneous	3	3
Totals	14	14

Twelve written notices with respect to the contraventions were sent to the owners concerned and 12 notices 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 347 inspections of canal boats in the docks during the year, 11 contraventions were found, all of which were subsequently dealt with. The figures are included in Table IV. **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 the persons found in occupation of the 165 canal boats used as dwellings are included in the following Table:— **Population of Canal Boats**

TABLE V

Population of Canal Boats :	Men	330
	Women	Nil
	Children	Nil
	Total	330

Distributed as under :—

Males over 14 years of age	330
Males over 5 years of age and under 14 years	Nil
Males under 5 years of age	Nil
Females over 12 years of age	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 on 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 37 filled-up 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

The number of occupied stables has been reduced to 53 and the frequent removal of manure from these premises ensures that they can no longer be considered a source of fly infestation.

Marine Stores
Poultry Stores

Routine visits were made to 39 marine stores and seven poultry stores.

Schools

Schools were visited for observing the general sanitation of the premises, also for the inspection of canteens and kitchens under the provisions of the Food Hygiene Regulations, 1955. Regular inspections were made and the standard of cleanliness was found to be satisfactory.

HOUSING AND SLUM CLEARANCE

A notable landmark was passed during the course of the year in that the 10,000th slum dwelling was represented to the Council since slum clearance commenced after the second world war. Although this marks a tremendous step forward, there is still a great deal remaining to be done, indeed, the rate of deterioration in many of the older houses is still considerable and this, coupled with the ever increasing difficulty of providing sites for housing development, calls for even closer liaison between all concerned in this vital service.

The housing problem

The shortage of land for housing development has, of course, been recognised for some time, and various methods to overcome this have been put into operation, including the construction of multi-storey blocks and the use of all available land within the city boundary, together with the removal of families to areas outside the city.

Although many families prefer a house in the suburbs, there are also many in slum dwellings within the central area who do not want to move to the outskirts, much less to areas earmarked for overspill, and the problem of rehousing these families within the central area is becoming more acute as land for housing development, particularly in the central area, becomes less and less, and indeed the only land which may be available shortly will be that provided by slum clearance.

Progress of Slum Clearance

During the year, 1,719 houses were surveyed as to their suitability for representation in Clearance Areas, and notwithstanding the effect of land shortage, which must cause a reduction in the number of houses represented, a total of 769 dwellings were included in 13 Clearance Areas represented during 1959.

Compulsory Purchase Orders

The year has seen a considerable increase in the number of Clearance Areas made the subject of Orders and the number of Orders confirmed.

Orders made

A total of 26 Clearance Areas involving 1,112 houses were made the subject of Compulsory Purchase Orders and a further 40 Clearance Areas involving 1,735 houses are still pending further action.

Orders Submitted for confirmation

Twenty-one Compulsory Purchase Orders, comprising 26 Clearance Areas involving a total of 1,073 houses, were submitted for confirmation to the Minister of Housing and Local Government.

Public Inquiries

Public Inquiries were held in respect of 12 Compulsory Purchase Orders and a further five Compulsory Purchase Orders were unopposed. The Minister's Inspector visited the sites and inspected properties in respect of applications by owners and occupiers for well-maintained payments.

Orders confirmed

Confirmation of 23 Compulsory Purchase Orders containing 1,751 houses were received from the Minister during the year. This compares with 517 houses confirmed in six Compulsory Purchase Orders during 1958. Although this figure of houses in confirmed Orders shows a marked increase over the previous year, there is, however, a serious delay occurring in the rehousing of families from houses included in these confirmed Orders.

Liaison with other departments

Many problems arise due to the delay in rehousing such families. The maintenance of the dilapidated houses, often abandoned by owners, and the uncertainty of tenants whether or not they should expend money on decorations, etc., calls for the closest co-operation between the various departments concerned.

Individual unfit Houses

There are many individual unfit houses on land zoned for purposes other than housing or which adjoin other houses which do not contravene the standard of fitness, and in these cases the individual unfit provisions of the Housing Act are utilised. 147 such houses were represented to the Demolition and Closing Orders (Special) Sub-Committee as unfit for human habitation.

Demolition and Closing Orders made during the year

The Sub-Committee considered the condition of properties represented during 1959 and in the previous year. Of those properties considered 37 were made the subject of demolition orders and a further 74 were made the subject of closing orders.

Undertakings by owners not to re-let

In accordance with the procedure laid down in the Housing Act owners of properties which have been represented as unfit for human habitation can give undertakings not to re-let the premises. Five such undertakings were given to the local authority in 1959.

Closing Orders revoked

Houses subject to Closing Orders can have works of repair carried out to render the premises fit for human habitation and in the case of one such house the owner carried out works which rendered the premises

fit for human habitation in accordance with the standard of fitness laid down in the Housing Act. The Order was accordingly revoked on the owner's application.

Houses subject to individual Orders

Of the properties made subject to operative demolition and closing orders, 17 were demolished and 96 were closed. At the end of the year the Sub-Committee had still to consider the condition of 41 houses which had been represented.

Rooms unfit for human habitation

Basement rooms and parts of premises used as living accommodation which are unfit for human habitation can be closed in accordance with the provisions of Section 18 of the Housing Act, 1957. The Demolition and Closing Orders (Special) Sub-Committee considered the condition of 45 such lettings during the year, and Closing Orders were made in respect of all these lettings. A further 15 premises remained to be considered by the committee at the close of the year.

Orders made

Families rehoused from rooms subject to Orders

As a result of Orders being made, 62 families were rehoused during the course of the year, and the rooms which they had occupied were closed.

County Court Appeal

An appeal against the local authority in respect of two closing orders made under the provisions of Section 18 of the Housing Act was heard in the County Court, and judgment in favour of the local authority was given by the Judge, who upheld the decision of the Council to make Closing Orders.

Property Enquiries

The housing register, compiled from the Housing Survey of 1954, continues to be of great use in answering the continuous enquiries from persons desirous of purchasing property and is particularly helpful in those cases where the register reveals that the property is sub-standard.

Rent Act 1957

The Rent Act, which came into operation on the 6th July, 1957, continued to be implemented by tenants, and applications for Certificates of Disrepair continued to come to the local authority throughout the year. Since the inception of the Act approximately 25,000 visits have been made and many technical difficulties have arisen, invariably through irregularities in the procedure to be carried out by the tenants. This is, no doubt, due to the ignorance of the tenant of the precise requirements of the Act.

N

The effects of the Rent Act

The effects of this Act are to be seen in the form of new roofs, overall pointing, the cementing of paths and yards and the renewal of gates, fences and boundary walls, which must prevent the progressive dilapidation of the property.

As anticipated, the year 1959 saw a reduction in activity under the provisions of this Act, in comparison with the previous year. Nevertheless, an appreciable number of visits were made to properties in relation to which some specific part of the Rent Act was being enforced.

Applications for Certificate of Disrepair

If the tenant serves upon his landlord a list of defects which he considers the landlord can reasonably be required to repair, and he does not receive an undertaking from the landlord upon the prescribed "H" form, to do these works within six months, the tenant may apply to the local authority for a Certificate of Disrepair. During 1959, a total of 1,264 applications for Certificates were received. This entailed the inspection of all the properties concerned by public health inspectors to assess the reasonableness and precise nature of the repairs specified in the tenant's list of defects.

Notices of the Local Authority's intention to issue Certificates of Disrepair

The matter had then to be reported to the Special Sub-Committee of the Health Committee who determined, where appropriate, to issue a notice of the local authority's intention to issue a Certificate of Disrepair, upon the prescribed form "J". 1,208 such forms were issued during the year under review. The landlord upon receiving this notice could, within 21 days, do the repairs or give an undertaking to do the work specified, during the following six months. Should neither of these courses be adopted by the landlord the local authority must issue the Certificate of Disrepair.

Number of undertakings received from landlords

As a result of the service of "J" forms, the landlords served "K" undertakings upon the tenant and local authority in 1,026 instances, and in 379 cases where no action was taken by the landlord within the requisite period of 21 days Certificates of Disrepair were issued. This part of the procedure entails an appreciable amount of cross checking of the items specified in the landlord's "K" undertaking with the contents of the local authority's notice of their intention to issue a Certificate of Disrepair.

Consequences to Landlord of failure to comply with his undertaking

In accordance with the provisions of this Act, if the owner fails to repair all the defects specified in his undertaking within the specified period of six months, the tenant can reduce the rent upon his own volition. He may, however, apply to the local authority for a Certificate to this effect, which can be used in evidence in any future Court proceedings which may arise. The landlord may also apply for a similar certificate to the effect that all the works specified in his undertaking have been remedied. Difficulties do arise in landlords' applications, for occasionally the inspector, on visiting the property, finds items outstanding which the owner has been led to believe were previously repaired.

Number of applications received and Certificates issued to tenants and landlords in respect of Undertakings

However, during 1959, 586 applications from tenants for such certificates were received and 585 were issued, while 740 applications from the landlords were received and 792 certificates were issued in respect of applications received during the year and others held over from the previous year.

Number of applications received for the cancellation of Certificates of Disrepair

A total of 273 applications were received for the cancellation of Certificates of Disrepair issued in respect of properties under the Housing Repairs and Rents Act, 1954, and the Rent Act, 1957.

Both forms of Certificate are cancelled in accordance with the procedure laid down in the Act of 1957 which requires the service upon the tenant by the local authority of a notice of their intention to cancel the Certificate of Disrepair.

Number of notices of intention to cancel Certificates of Disrepair served upon tenants

If an objection to the cancellation is not received from the tenant within 21 days of the service of the notice upon the tenant, the local authority must cancel the certificate. 273 such notices were issued during the year and 254 Certificates of Disrepair, 51 issued under the Act of 1954 and 203 issued under the Act of 1957, were cancelled.

Number of Certificates cancelled

Improvement Grants

Due to the large numbers of unfit houses which are scheduled for action under the Housing Acts and the slow rate of progress in achieving the clearance of all these properties caused by the shortage of land and other planning difficulties it is likely to be some years before slum clearance is solved.

The problem is growing as houses fall into decay or suffer general dilapidations by ill-use and it is imperative to carry out schemes of conversion, restoration or improvement. There are also many thousands of houses built in the late nineteenth century without bathrooms and internal sanitary accommodation. Many of these properties, 70,000 houses in Liverpool alone, were built in this way but are still in sound structural condition and fit for human habitation, therefore, improvement is necessary to bring the property up to modern living requirements.

Parliament has passed legislation providing for a financial grant of half the cost of works of improvement costing more than £100 and not exceeding a sum of £800 in respect of each dwelling, provided that each dwelling complies with the 12 points specified by the Minister and that upon completion of these works of conversion or improvement the premises will be fit for human habitation for a period of 15 years. Though these provisions were taken up in some limited measure, many applicants, on finding the ultimate costs involved, withdrew their applications.

New legislation was, therefore, passed which made it incumbent upon local authorities to give a maximum grant of £155 in respect of five standard improvements, namely :—

(*a*) a fixed bath or shower in a bathroom;

(*b*) a wash-hand basin;

(*c*) a hot water supply;

(*d*) a water closet in or contiguous to the dwelling, and

(*e*) satisfactory facilities for storing food.

Each of these items is given a fixed value in the Act and where any one of these facilities is provided, the amount of grant must be reduced by the fixed value specified in the Act. Before this standard grant is given the local authority must be satisfied that the house has a life of at least 15 years and will be fit for human habitation when the works are completed.

During the year, 22 applications were received for standard grants and 12 were made. In certain cases the works required entailed further works to be carried out to restore the house to fit condition, such as the

insertion of a damp proof course. Such items are not, of course, covered under the standard grant scheme and applicants have been advised to change to the discretionary grant scheme. During the year, 197 applications were received for discretionary grants and 160 grants were made. The total number of inspections carried out during the year in response to enquiries about standard and discretionary grants was 631.

Loans on Mortgage

The Housing (Financial Provisions) Act, 1958, as amended by the House Purchase and Housing Act, 1959, empowers local authorities to advance loans on mortgage to the house purchasers. In addition to the relevant financial aspects of each application, the local authority must have regard to the standard of fitness of the property and in respect of any house which does not conform to the standard of fitness as laid down in the Housing Act, 1957 by reason of certain defects a schedule of the work required is drawn up. This work must be completed prior to the loan being approved. During the year, 704 houses were inspected in respect of loans on mortgage applications and of those, 505 were approved for loans.

Overcrowding

The overcrowded conditions under which many families are compelled to live, coupled with the extreme housing shortage, necessitates very careful consideration to each individual case, and inspection of houses where overcrowding exists is constantly being carried on.

In extreme 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, under the relevant provisions of the Housing Act, 1957.

As a result of 1,711 visits made to houses, 266 cases of overcrowding were reported to the City Architect and Director of Housing for urgent consideration to rehouse the families.

Cellar dwellings

The number of families occupying cellars as separate dwellings continues to decrease and the small number remaining are being further reduced by the action taken under the provisions of Section 469 of the Liverpool Corporation Act, 1921.

Housing Act, 1957 Sections 8 and 81

Having carried out an inspection of a dwellinghouse, the inspector is required to examine the rent book to ascertain whether or not the landlord has entered in the name and address of the Medical Officer of

Health, a summary of the overcrowding legislation, and also the permitted number in accordance with the provision of Sections 8 and 81 of the Housing Act, 1957. Where any contravention was found, formal action was taken to have the matter rectified.

Houses owned by the local Authority

The total number of houses and flats owned by the local authority at the 31st December, 1959, excluding 3,500 temporary bungalows, was 70,700.

The number of houses built in the last three years under the Housing Act, 1957, Part V, is 6,970, and the number of houses built under the provisions of the Housing Subsidies Act, 1956 is 5,492.

During the year, 13 Clearance Areas were represented under Section 42 of the Housing Act, 1957, which included 769 houses containing 3,311 persons. Orders in respect of 1,067 houses containing 4,677 persons were made and 23 Confirmation Orders in respect of 23 Compulsory Purchase Orders comprising 1,751 dwellings and 7,976 persons were received from the Minister.

COMPULSORY PURCHASE ORDERS CONFIRMED DURING 1959

Date Confirmed	Order	Houses	Population
15.1.59	Windsor View—Compulsory Purchase Order ...	3	11
19.2.59	Anderson Street—Compulsory Purchase Order ...	53	194
8.4.59	Kinglake Street—Compulsory Purchase Order ...	67	291
1.4.59	St. Georges Hill—Compulsory Purchase Order ...	140	774
29.4.59	Eden Street—Compulsory Purchase Order ...	80	293
8.4.59	Deysbrook Lane—Compulsory Purchase Order ...	49	124
29.4.59	Eden Street No. 2—Compulsory Purchase Order	51	228
27.7.59	China Street No. 4—Compulsory Purchase Order	3	12
31.7.59	China Street No. 3—Compulsory Purchase Order	3	11
4.8.59	China Street No. 2—Compulsory Purchase Order	9	83
25.9.59	Upper Stanhope Street—Compulsory Purchase Order	45	359
24.9.59	New Hedley Street—Compulsory Purchase Order	128	625

COMPULSORY PURCHASE ORDERS CONFIRMED DURING 1959—*continued*

Date Confirmed	Order	Houses	Population
2.10.59	Darnley Street No. 2—Compulsory Purchase Order	51	208
15.10.59	Zante Street—Compulsory Purchase Order ...	282	1,341
21.10.59	Barlow Street No. 2—Compulsory Purchase Order	11	28
29.10.59	Eden Street No. 3—Compulsory Purchase Order...	59	259
25.11.59	Potter Street—Compulsory Purchase Order ...	53	194
3.12.59	Denbigh Street Area—Compulsory Purchase Order	38	166
4.12.59	China Street No. 1—Compulsory Purchase Order	181	803
9.12.59	Rose Vale No. 2—Compulsory Purchase Order ...	243	1,042
11.12.59	Upper Beau Street No. 1—Compulsory Purchase Order	72	373
17.12.59	Wellington Grove—Compulsory Purchase Order...	52	201
17.12.59	King Street (Garston) Area—Compulsory Purchase Order	78	356
	TOTALS	1,751	7,976

CLEARANCE AREAS IN ABEYANCE

Area	Houses	Population
Abram Street Clearance Area 1959	15	69
Amity Street No. 1 Clearance Area 1958	45	176
Amity Street No. 2 Clearance Area 1958	14	43
Barlow Street No. 1 Clearance Area 1957	99	361
Birch Street No. 1 Clearance Area 1958	18	63
Birch Street No. 2 Clearance Area 1958	8	42
Boundary Street East Clearance Area 1958	21	77
Dinorben Street Clearance Area 1959	47	178
Devonport Street Clearance Area 1958	30	115
Foley Street No. 2 Clearance Area 1958	25	110
Grosvenor Place Clearance Area 1959	28	127
Jordan Place Clearance Area 1958	68	285

CLEARANCE AREAS IN ABEYANCE—*continued*

Area	Houses	Population
Leighton Terrace Clearance Area 1958	61	287
Lincoln Street Clearance Area 1958	26	138
Melbourne Street Clearance Area 1959	113	461
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
New Henderson Street No. 1 Clearance Area 1958	6	36
New Henderson Street No. 2 Clearance Area 1958	30	131
New Henderson Street No. 3 Clearance Area 1958	14	73
Prince William Street No. 3 Clearance Area 1959	16	79
Prince William Street No. 4 Clearance Area 1959	2	6
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
Rhyl Street No. 1 Clearance Area 1958	25	116
Rhyl Street No. 2 Clearance Area 1958	15	51
Rhyl Street No. 3 Clearance Area 1958	2	8
Robertson Street Clearance Area 1958	44	192
St. George's Hill No. 2 Clearance Area 1959	16	97
Sellar Street Clearance Area 1958	13	59
Smith Street No. 2 Clearance Area 1958...	4	15
Smith Street No. 4 Clearance Area 1959...	18	73
Upper Beau Street No. 2 Clearance Area 1956	40	196
Upper Beau Street No. 3 Clearance Area 1956	273	1,097
Upper Mann Street Clearance Area 1959	22	92
Whittle Street No. 2 Clearance Area 1958	18	61
Windsor Street No. 6 Clearance Area 1958	13	87
Woodruff Street Clearance Area 1959	106	456
TOTAL	1,735	7,300

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

Enforcement

The enforcement in this City of the Shops Act, 1950, and the Young Persons (Employment) Act, 1938, is entirely the responsibility of the Health Department, and a total of 90,922 visits were made in respect of administration of these enactments.

The great increase in the number of visits proves the success in the change in administration which took place in 1956, when specialisation was discontinued and all duties were allocated to the inspectorate. This arrangement obviates the necessity for more than one inspector to visit premises for purposes which are closely associated.

Public relations

Administratively, and from the point of view of good public relations, this procedure is very satisfactory and enables a co-ordinated code of practice to be enforced with the minimum irritation to shopkeepers.

Routine inspections

Shops and allied premises are visited periodically during the routine inspection of each inspector's district, and all infringements are dealt with appropriately either by formal notice, informal action, or, if necessary, by court proceedings. Considerable works of maintenance and improvement have been carried out in many shops as the result of the department's activity, and the need for the regular supervision of these premises is all too apparent.

Co-operation of shopkeepers

Whilst many shopkeepers do not wait for the department to instigate action, there are those who appear to do very little during the period between inspections and seem to be activated only when compulsion is applied.

Anomalies of the Act

Unfortunately, the Shops Act is a piece of legislation which, by reason of its anomalies and requirements, is considered by some shopkeepers to be restrictive, and can easily become a source of annoyance and misunderstanding. Inspectors, therefore, must perform their duties with an abundance of tact, patience and perseverance during routine work and, particularly, whilst investigating complaints.

Hope of new legislation

There lingers each year a hope that new legislation will be considered by Parliament, but since the abortive effort of 1956, there is nothing to justify such hope. Each year various local authorities endeavour to make the way clearer for the future by pursuing contentious questions to the utmost conclusion, with little effect.

Responsibility for continued enforcement

The responsibility of the official is not lessened by the existence of contrary interpretations and adverse criticisms of the law, because there remains an impressive section of public opinion and a vast majority of law-abiding traders who expect the existing shops' law to be enforced.

Complaints

The existence of this opinion is evidenced by a steady, continuous flow of complaints which come into the department, most of them relating to shops being kept open after the closing hours and on Sundays for the sale of non-exempted goods.

Mobile shops

Complaints are also received regarding the extensive trading from mobile shops during the normal closing hours affecting shops. Considerable opposition exists against the freedom enjoyed by street traders, and the unfair trading practices of some of them. The position, from the point of view of both shopkeepers and officials, is unjustifiable because of the serious inequitable effect upon shop traders and the problems of enforcement which arise.

Investigation of complaints

All complaints are fully investigated, sometimes over a considerable period and requiring the utmost patience and care on the part of the inspectors. Discreet observations are necessary in some cases, often carried out under very unfavourable conditions at night and against the opposition of the particular shopkeeper and his own private "observer corps". When adequate evidence of an infringement is obtained it is dealt with either by warning letter or court proceedings.

Cars and television sets

Complaints are also received about the demonstration and display of cars and television sets in shops during the hours when the shops should be closed for business. The conditions under which potential customers are given personal attention excludes the chances of obtaining evidence of actual sales, and therefore prevent effective action being taken by the department. This unsatisfactory situation exists and persists only because the law is seriously inadequate in that it fails to be precise in its requirements.

Inspections

A total of 45,409 inspections of retail shops of all classes, cafes, clubs, hairdressers, warehouses, pet shops, also places of entertainment, have been made during the year. These are in addition to the routine and special visits to shops on the early closing day, at night and on Sundays, which totalled 45,513.

Half-holiday closing

Trading on the early day is, on the whole, confined to permitted hours. Only a comparatively few shops, carrying on a mixed trade, make use of the exemption clauses by either remaining open for the whole of the trading day or re-opening late in the afternoon after closing at lunch time. Unfortunately, many of these shops tend to contravene the closing requirements of the Act, and frequent complaints necessitate the constant supervision of these premises.

Evening closing

The extent of evening trading during the year has not changed in any appreciable way. The pattern of shopping habits and trading practices remains the same throughout the City and in consequence the demand for regular enforcement duties at night continues.

Retail trading is becoming increasingly competitive and this has increased the need for traders to gain whatever advantage they can over their rivals in order to attract additional business to themselves.

One effect of this is their desire to "oblige the customer" at whatever time the customer may require something from the shop. This, of course, does not usually meet with the approval of other traders, especially the law-abiding ones, and the inspector is soon informed of what is going on, or, of course, he may have already discovered it for himself.

Factual evidence

The processes of investigation are often tiresome and unrewarding. Factual evidence is essential if proceedings in the court become necessary, but this can only be obtained in many cases by a patient endeavour which seems almost wasted when the final result of the action is assessed. In spite of this difficulty, the majority of shopkeepers expect to be protected from unfair traders, and, of course, they are entitled to that protection. Hence, because of this entitlement, the department continues to fulfil its enforcement duties and takes appropriate action in every case.

Sunday trading

The circumstances associated with half-day and evening closing also apply to Sunday trading. The difficulties are precisely the same, and every Sunday inspectors are on duty carrying out routine inspections and special observations. Particular attention is always given to the employment of shop assistants, especially young persons.

Street trading

Complaints are received rather frequently regarding trading from mobile shops in the suburbs at night and on Sundays. Apart from any informal action which may be taken in certain instances, no effective measures can be enforced.

Welfare Measures.

Statutory half-holiday

Few complaints are received from assistants about the loss of their weekly half-holiday. In fact such infringements of this character as have been found were observed during routine visits to shops by inspectors. Assistants will not usually complain if they are remunerated with extra pay, but the Act does not provide for this alternative and is insistent upon the half-holiday requirements being observed.

Meal times

Complaints are occasionally received regarding assistants not being allowed the prescribed intervals for meals or not being provided with suitable and sufficient facilities for taking their meals in the shop. These facilities are only enforceable where the staff are required by the employer to remain on the premises for their meals. Somtimes it is physically impossible to provide the necessary accommodation, in which case the assistants must be permitted to take their meals elsewhere. Unfortunately, in some of these cases the employees still prefer to have their lunch in the shop and are quite content to make do with such means as are available rather than have the inconvenience and expense of finding a suitable cafe or snack-bar, or travelling home.

Sunday employment

All persons employed serving customers in a shop on Sundays must be allowed a compensatory holiday which shall be in addition to their statutory half-holiday. Persons who work in a shop which is not open for the serving of customers do not receive any such compensation under the provisions of the Shops Act. This class of work is usually associated with stocktaking or general cleaning and re-stocking of fixtures. Inspectors pay full attention to this section of the Act, which in certain respects may be considered to be even more important than some other requirements.

Records

Shopkeepers are required to keep a record of Sunday employment (Form VII) wherein the names of the workers and the dates of the compensatory holidays granted are recorded.

Another very important aspect of enforcement is that associated with the employment of young persons under 18 years of age. Conditions of employment today are, of course, vastly improved compared with those which existed when the present controls were first enacted in 1934, but careful supervision is still essential. **Employment of young persons**

Periodical complaints are received regarding excessive hours of employment, and these are usually in connection with either the delivery of goods, or the catering trade. Such complaints are always fully investigated and invariably result in the full co-operation of the employer. There is also full co-operation with the Director of Education through the Youth Employment Bureau which notifies cases requiring the attention of this department. **Co-operation with Director of Education**

The employment of young persons in cinemas, theatres, restaurants and clubs is also checked periodically and especially on Christmas Eve and the few days preceding it, in order to ensure that they are not employed later hours than those permitted by the Act. **Night employment**

There is still no indication of legislative changes in connection with the recommendations of the Gowers Committee, therefore there is nothing of any notable consequence to report. **Sanitary arrangements**

The work of inspectors has continued to be directed to the maintenance and improvement, where necessary, of the various facilities prescribed for the benefit of shop workers. This aspect of enforcement is straightforward and receives the ready attention of either the property owners or shopkeepers.

Hairdressers and Barbers.

Work in connection with the provisions of Section 42 of the Liverpool Corporation Act, 1955 and the Byelaws made thereunder, in respect of hairdressers, has been confined to the routine inspection of their establishments, and matters relating to the registration of new businesses, or transfers to new owners. **General**

During the year, 35 new registrations were dealt with and the total number on the register at the end of the year was 622. 838 inspections of hairdressers' shops were made and this action resulted in 230 infringements being recorded, and dealt with by warning letters in each case. **Registration and inspections**

Hairdressing In houses

Two complaints were received in respect of illegal hairdressing in dwellinghouses and one such business was found during the course of routine house inspections. In each case the persons concerned discontinued their businesses mainly because of the difficulty of complying with the hygiene requirements for such establishments.

Places of Entertainment.

Routine supervision

Routine visits to cinemas, theatres, dance halls and other places of entertainment 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.

Closing of cinemas

There are now 57 cinemas and theatres in the City compared with 65 last year, and there is a further possibility of more cinemas being closed.

Inspections

During the year evening visits were made to places of entertainment. 23 defects were found and satisfactorily dealt with by the managers concerned.

Pet Animals Act, 1951.

Licensing

There were 60 licences issued during the year to persons carrying on business as dealers in pets, and 436 visits were made to these premises to ensure that the provisions of this enactment were complied with satisfactorily, and 68 infringements were dealt with by warning letter or informal action.

The requirements of the Act with respect to fire precaution are dealt with by the Liverpool Fire Service who recommend measures for reducing fire risk and action to be taken in case of fire. These recommendations are made special conditions on the licences affected and steps are taken to ensure compliance with these requirements.

Sun blinds

In accordance with the instructions of the Health Committee, action has 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) Factories Act, 1937, the Medical Officer of 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).

Responsibilities of the Health Department

So far as the administration of the Factories Act is concerned, the powers and responsibilities of the local authorities are important, although they are somewhat limited, but the services of the health department are frequently called upon by managements and H.M. Inspectors of Factories in respect of problems affecting the arrangement of buildings and processes, noise, smoke emissions, industrial nuisances and the layout and construction of canteens, etc., which are matters controlled by other legislation administered by the local authority.

In food factories owing to the application of the Food Hygiene Regulations, the department is faced with the task of ensuring that all consumable commodities are free from contamination and that any risk of contamination is eliminated.

Food Factories.

Bakehouses

The baking trade in this City has shown that it is conscious of its responsibility so far as the production of clean and safe food is concerned and members of the industry are in the enviable position of being able to call upon the assistance of an active and progressive research association which does not confine its investigations to problems relating to production but takes a scientific interest in matters relating to hygiene and personnel welfare.

Value of Industrial Research Associations

The benefit of this service is reflected in the precautionary measures taken by several local bakeries to avoid contamination of food, and in the installation of hygienic equipment and the use of wall and floor finishes which have been tested and found to be suitable for a type of food trade where cleanliness is a factor of paramount importance.

Technical Information given by Inspectors

One of the advantages of periodical visits by health inspectors to food factories is that much practical knowledge is gained with regard to the hygienic advantage and value of different types of structural materials, detergents and equipment under normal working conditions

over a period. This fact has been particularly appreciated by the baking trade whose members frequently request the assistance and advice of the department in respect of problems affecting matters of this nature.

Regular visits are made by the inspectors to bakeries to ensure that a good standard of hygiene is maintained. In one case the conditions were so unsatisfactory, owing to unsuitable premises and lack of efficient control following the death of the occupier, that the executors decided to close the business. Other less serious infringements were dealt with as they were observed.

Preserved Meat Premises

Sausages and cooked meats present a potential food poisoning problem unless manufacturers of these commodities take every precaution to eliminate risk, and the food handlers engaged in making up meat products apply scrupulous care and observe the recognised rules of hygiene relating to the preparation of such food.

Supervision in large concerns

Most of the preserved and cooked meats sold in this City are prepared in factories where supervision is highly organised and codes of hygienic practice are strictly enforced. In this class of factory the inspectors have found that managements are aware that contamination of meat products is an important health factor and, in general, employees have been trained by their employers to appreciate this fact.

Control of small businesses

There are, however, many small concerns such as pork butchers, butchers and caterers who make up this type of food on the premises where it is sold. In some cases a portion of the premises may be used as a dwelling and in others the proprietor or a member of the family may be called to attend to the shop or carry out some domestic chore during the period when preparation is in progress, and this practice could increase the risk of contamination.

For this reason inspectors visit these premises fairly frequently to ensure that a good standard of environmental and personal hygiene is practised and maintained and it is significant that during the year under review no food infection incidents were traced to products from businesses of this character.

Other Food Factories.

Periodical visits are made to the wide variety of factories in which food is manufactured, processed or packed. These have included sweet and chocolate confectionery, edible fat, baking powders, tea packing, jam, fish cakes, ice cream, flour and sugar packing, etc. These businesses must conform with the Food Hygiene Regulations, 1955 and although many hygienic improvements occur as the result of advice given to the respective managements, cautionary letters have been sent on several occasions directing attention to infringements and to conditions which provide a risk of contamination of food.

Application of Food Hygiene Regulations

Industrial Nuisances.

Complaints continue to be received from persons residing in the vicinity of firms engaged in business and industrial activities of nuisances such as obnoxious odours, noise, dust, waste matter and condensing steam. The majority of these complaints are genuine and based on conditions which cause annoyance and discomfort to local residents. On occasions, however, incidents are grossly exaggerated for one reason or another and it is essential that complaints of this nature should be thoroughly investigated so as to be equitable to all parties, and it is not uncommon for the inspectors to keep observation over a period of several weeks so as to be certain of the facts.

Investigations

The need for this approach is illustrated in the case of a person who was well aware that he had been able to purchase a house at a very reasonable price owing to the presence of a nearby factory and then complained repeatedly about noise and offensive smells. Many visits by inspectors only served to prove that the factory noise was negligible and the odour was not pronounced or objectionable and in any event was unavoidable and associated with the type of article being produced.

Unjustified complaints

In other cases an elderly woman complained about employees in a nearby factory singing during their work. A man also objected to the smell of nicotine from a tobacco works, and during the enquiry admitted that he was a non-smoker.

Following a number of complaints of obnoxious smells from Stanley Abattoir during the summer, an intensive examination was made of all activities and undertakings situated in or near the premises and these included those under the control of the Corporation and private

Stanley Abattoir

concerns. A report submitted to the Committee drew attention to the fact that there were several sources of offensive smells in the vicinity of the abattoir all of which were ephemeral in character or occurring at irregular intervals. Conditions such as defective operating of animal waste plants, accumulations of waste and refuse, incinerators on railway property, the method of discharging certain waste liquors, or unsealed street gullies due to the lack of rain were found to give rise to effluvia.

All these matters were dealt with as and when they were detected and as regular observation was maintained for the remainder of the year it can be reported that the risk of obnoxious odours from these premises has been reduced appreciably and should not recur unless mechanical failures develop or unforeseen circumstances arise.

Other sources of effluvia

Objectionable odours were a cause of trouble in the case of offensive trades located in other parts of the City; fumes from cellulose and paint spraying and the dyeing of pig hair were also responsible for complaints. Statutory notices were served in these cases and on several occasions abatement of these nuisances was effected after the offending firms had consulted the public health inspectors.

Dust

Occasionally complaints were made by persons affected by dust arising from industrial activities. During the year investigations were made in respect of dust from the dumping of lime and sand in contractors' yards, the careless handling of flour bags and an ineffective method of collecting leather dust from machines in a footwear repair factory. Appropriate action was taken in these cases.

Noise

Complaints of excessive and unreasonable noise have been received during the year. These range from the slamming of the doors of tradesmen's vehicles in the early morning to the vibration of compressors and the drone of forced draught fans. Action can be taken in the event of unreasonable or unnecessary noise under the Liverpool Corporation Act, 1955, but a proprietor of a business is permitted to offer in his defence proof that he had used the best practicable means for preventing or mitigating the noise.

The hot summer gave rise to two unusual complaints. The rattling and clatter of baking tins and the chatter and singing of night workers in two small bakeries which caused considerable irritation and kept

residents from sleeping in the early hours of the morning. The bakers said that it was essential to keep the doors and windows open owing to the hot weather and that the noise was unavoidable. Both premises were visited during the night and in one case the nuisance ceased after the inspector had urged the bakers to subdue their voices and to handle the utensils with more care, and in a similar case a statutory notice was necessary to achieve a satisfactory result.

An interesting point arose in connection with the noise from the loudspeakers installed in taxicabs located in the depot belonging to a firm of public service vehicle owners. Instructions were transmitted by radio from the central office to the taxis parked inside and outside the depot and this frequently interfered with the sleep of nearby residents. On being pressed to remedy this situation the firm ceased to use the depot during the night and also reduced the volume of the loudspeakers in all vehicles under their control.

Co-operation with H.M. Inspector of Factories on special problems has been a feature of administration in this City for many years, and this has continued during the year.

Outworkers

In accordance with Sections 110 and 111 of the Factories Act, 1937, returns are received twice yearly by local authorities from employers of this class of labour.

The premises of outworkers are visited to ensure that the places where the work is carried out are not dangerous or injurious to health.

Details of the returns are as follows:—

Number of outworkers returns referred to the Medical Officer of Health of districts outside the City	76
Number of outworkers received from other authorities	2
Number of outworkers returns for the year	396

Offices

The welfare of clerical workers and environmental conditions in offices was a matter which attracted considerable attention during the year under review.

An Office Regulation Bill presented by a Member of Parliament was successful in receiving a second reading in the House and leading articles in the Press endorsed the view that the time is long overdue

when clerical workers should have the benefit of protective welfare legislation similar to that enjoyed by other sections of the working community.

Senior officials of the department were invited to address a number of associations on office welfare and the Chief Public Health Inspector presented a paper on this subject to an important conference in London.

During the debate on the Bill reference was made to the fact that Liverpool had carried out a pilot survey of conditions in commercial buildings and the findings of this survey were quoted and used by the promoter of the Bill. It is some satisfaction to note that Liverpool is in the forefront of the drive to provide a welfare charter for a group of workers numbering about four millions who have been neglected by our legislators for many years.

Notwithstanding the fact that there are no powers to require adequate lighting, heating, washing facilities and other essential requirements in offices, the inspectors have continued their efforts to improve conditions by encouraging and persuading business managements and owners of commercial buildings to take appropriate steps to raise environmental standards in cases where this has been considered necessary.

Although the result of this work is not spectacular it is pleasing to record that many clerical workers are now reaping the benefits of this endeavour as a number of firms have accepted and acted upon the inspectors' advice, particularly with regard to lighting, heating and the provision of meal facilities. On the other hand there are employers who argue that there are difficulties in carrying out improvements owing to lack of floor space, pressure of business or the orientation of their suites of offices in city buildings.

It would be true to say that if the comfort and welfare of the staff is to be considered as a factor of greater importance than business exigencies, then structural works of varying degrees will be essential in many commercial buildings, and in some cases where business is carried on in offices located in aged buildings removal to new premises would be inevitable.

This frequently raises a point which has been advanced as a reason by some firms for not seeking more suitable accommodation. Certain types of businesses which are similar in character tend to be located in particular parts of the city and it is claimed that transfers to more modern premises would cause so much inconvenience to their clients and associate firms that a change of address to another part of the city would give rise to serious business and administrative problems.

The fact that as many as 3,569 visits were made to offices and workplaces in the year under review reflects the attitude of the department to this type of employment. The number of statutory nuisances and unsatisfactory sanitary conveniences, which are the only matters that can be remedied by notice, totalled 296, and these were abated in all cases.

Licensed Premises.

Hygiene Standard

The efforts made by brewery companies and employees in this type of catering establishment to maintain a good standard of hygiene can be easily misunderstood by visitors entering licensed premises at different times of the day.

During opening hours prior to nine o'clock in the evenings, the staff in busy houses appear to make every effort to observe hygienic rules and regulations. After this time, however, when many bars are crowded the standard gradually deteriorates, glass washing is less thorough, counter tops are not wiped so frequently and ventilation is inadequate, etc.

The customer's responsibility

Observation by inspectors during the evenings has shown that in many cases the customer at that time is largely to blame for this state of affairs. Owing to the demand, by certain impatient customers, little encouragement is given to the bartenders to spend much time washing glasses and to attend to service tables and counters. Cigarette ends, tobacco ash and spent matches are disposed of in a careless fashion on the floors and furniture and certain customers frequently interfere with the windows and ventilating fans with the object of preventing draughty conditions. The type of customer who indulges in these activities is not rare and is a constant source of trouble to conscientious

licensees and their assistants, particularly in view of the fact that they feel inspectors may take them to task for not maintaining the requisite hygienic standard.

Ventilation

Ventilation is becoming a more and more vexed question in licensed premises. Overcrowded rooms thick with tobacco smoke demand very frequent air changes and this can only be accomplished by fairly good extraction fans. Apart from the fact that the number of air changes required may be so great as to create an uncomfortably rapid air movement, the tendency is for smoke-laden atmosphere from adjoining bars and passages to be drawn into the room which makes the environmental condition worse. This is one of many types of problems which inspectors have been called upon to investigate during the year, when 1,084 visits were made to public houses.

Notices were served with respect to the 390 defects or infringements which were observed during inspection and with the exception of 12, which necessitate the preparation of plans, all were remedied by the owners.

Sanitary Conveniences

The brewery companies are pressing on with the modernisation of sanitary conveniences, a programme which has been retarded for several years owing to circumstances beyond the control of the local firms. It has now become the practice to carry out other much needed improvements when the conveniences are being altered and opportunity has been taken at the same time to install smokeless fuel grates, redesign bars, construct separate entrances to the licensee's private quarters and undertake general decorations. This practice has the effect of slowing progress in replacing out-of-date conveniences, but has the advantage of making the entire premises clean and comfortable.

Agriculture (Safety, Health and Welfare Provisions) Act, 1956.

Powers to require the provision of suitable sanitary accommodation for employees engaged in agricultural activities are contained in the above enactment and it is the duty of the local authority to enforce these provisions.

Owing to the fact that there are no extensive farm lands within the city boundary there is no difficulty in providing the necessary facilities without resorting to the provision of portable and temporary arrangements which can be required by this Act. During the year, 62 holdings including 18 piggeries were visited and notices served in four cases with respect to the cleansing and maintenance of the sanitary conveniences.

Employment Agencies.

These agencies are licensed and controlled by byelaws made under the Liverpool Corporation Act, 1927, and visits are made to ensure compliance with legislative requirements. At the end of the year, 35 licences were in force permitting agencies of this character to operate within the city.

Shellfish.

The selling of shellfish cannot be undertaken in this city unless the persons and the premises are registered by the Corporation under the Liverpool Corporation Act, 1955. During the year under review there has been a considerable increase in the number of registrations owing to one large brewery concern desiring to retail cockles in their public houses which were visited in all cases before registration was granted. The cockles, which are sterilized in sealed glass containers, are opened by the customers and eaten direct from the containers. All the shellfish is distributed by one food processing firm which is also located in the city. 459 premises have been registered by the Corporation for the sale of shellfish.

Rag Flock and Other Filling Materials Act, 1951.

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

Number licensed to manufacture Rag Flock ...	1
Number licensed to sell Rag Flock	8
Number registered in which filling materials are used	83

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

Rag Flock (loose)	10
Layered Rag Flock	5
Coir Fibre	6
Layered Cotton Felt	3
Woollen Mixture Felt	2
Algerian Fibre	1
Feathers	1
Curled Hair (Dyed)	1

One sample of rag flock contained 6·4 per cent. of soluble extracted matter in excess of the amount stated in the Regulations made under the Act, and a warning letter was sent to the user in respect of this sample.

ATMOSPHERIC POLLUTION

This winter, for the first time, it has been possible to look forward to the time when Liverpool achieves the tremendous objective of being completely smoke controlled.

Largest Smoke Control Area in the Country

The success in the central area has now made it possible to move from the industrial and commercial problem to the first large area of domestic premises comprising 7,292 acres, and including 27,212 houses and other premises, making a total of 28,821 in all, which has been submitted to the Health Committee and confirmed by the City Council.

Improved Efficiency

Already the central areas of the city are smoke-free. This splendid achievement has taken place in only three years, and 5,000 chimneys in confirmed smoke control areas have ceased to disgorge filth and smoke. The record is one of efficiency, endeavour and enthusiasm. The co-operation between the public health inspectors and managements has brought smokelessness without having to resort to threat of prosecution, or even formal action throughout the operation. In many cases it has been obvious that the management has been ahead of the official requirements and are only awaiting the signal to commence large-scale alterations.

Modern Smokeless Appliances Installed

Many new mechanical stokers have been installed where bituminous coal is burned as apparently, solid fuel is the most satisfactory for the industrial process concerned. New oil burning boilers have replaced obsolete boilers, gas and electricity have been adopted for certain establishments and even "bottled" gas has been used where it has been difficult to obtain the approved form of ignition. This revolution has been accomplished without any fuss and bother and is indicative of the general desire to achieve smokeless air.

Statistics

Already in Liverpool there are ten smoke control areas surveyed, of which nine have been confirmed and seven are now in operation. These areas include industrial and commercial premises situated in the central smoke control area. The majority of the premises included in the proposed (No. 10) smoke control area are domestic and situated in the south end of the City. The industrial problem, with the exception of one notable large establishment, has been solved and the official records show some 2,000 large industrial premises converted. This does not

include the many others where the managements have carried out their own alterations and merely informed the Health department upon completion.

Corporation Owned Boiler Plants

The City Council has already modernised all the premises under its control, which were the subject of complaint, including, during the past years, the boiler plants at public baths and washhouses, at Burroughs Gardens, Steble Street, Picton Road, Netherfield Road North, Kensington, Lodge Lane and Westminster Road. Future proposals include the conversion from hand firing to oil firing at William Roberts Baths, Norris Green, Queens Drive Baths, Walton, and Donaldson Street Washhouse. In addition, the old boilers at the Central Library and College of Technology are being replaced with modern oil-fired boilers.

Central Library New Boiler Installation

Shipping

There has been consistent and relentless control on the river. Daily observations are carried out on shipping, and where there has been a lack of co-operation, prosecutions have been taken against offenders.

The old tugs are now being modernised or replaced and, within the last two years, a fleet of 47 modern diesel motor vessels, or oil fired vessels, which ply to and fro throughout the length of the river, have been provided. The remaining old fashioned tugs are also being considered for replacement by modern vessels.

Domestic Problem

The domestic problem, although considerable, has now been tackled in an energetic manner. Obvious remedies are by solid smokeless fuels, gas, electricity or oil. However, future generations will, no doubt, enjoy heating by electricity generated by nuclear reactive processes, in completely smokeless power stations.

Education in the use of these smokeless fuels is essential. People do not readily accept the new class of fuel, preferring coal, with its warm, comfortable fires which, incidentally, waste heat in enormous quantities.

The future plans for the city incorporate a scheme of one large area annually comprising some 24,000 premises, which will complete approximately 240,000 conversions within the next ten years. These conversions will proceed from the south end of the City, where the property is fairly modern, and later reach the older areas as slum clearance begins to remove old houses and, incidentally, old-fashioned grates.

Clarence Dock Power Station

This power station has nullified our efforts too long, has dampened enthusiasm and caused managements, rightly so, to ask why should they co-operate when "They are allowed to get away with it"—pointing to the chimneys at the Clarence Dock Power Station.

Approaches have been made to the appropriate Ministers, and Chief Technical Officers have visited the City from the Ministries. The Central Electricity Generating Board has had a working party at the station to try to solve the problem technically, but the obsolete equipment and large output which has to be maintained makes it almost impossible to solve this problem, unless there is a complete overhaul, modernisation and reduction in load. There is an arrangement whereby it is hoped that the load would gradually decrease but, of course, this is a long-term plan and in the meantime, the effect of smoke control could not be fully appreciated during the glorious summer months when there was this hovering smoke cloud.

The problems of atmospheric pollution have been dealt with by a keen and enthusiastic staff of young inspectors who have endeavoured to impart into the industrialist, as well as in the home, the advantages and necessity for clean air.

Clean Air Act

This Act has continued to prove its worth, although it is not in some ways the ideal instrument to bring about clean air within a short space of time, it will be more effective as Smoke Control Orders are confirmed and the City begins to remove its mantle of smoke haze which is seen to develop during periods of temperature inversion, which causes fog.

Smoke Control.

Smoke Control Programme

The Minister of Housing and Local Government requested local authorities in black areas, as defined by the Beaver Report, on atmospheric pollution, to consider their domestic smoke problem and to decide on the smoke control orders needed, the order of priority and the date of completion of the city to complete smokelessness.

Preliminary Survey

In accordance with this request, a special preliminary survey revealed that it would involve the surveying of some 27,819 acres including 200,295 dwellings and 28,656 industrial and commercial premises. The future programme could be divided into 10 stages involving some 22,806 premises annually. Of this total, 20,000 would be dwellinghouses.

Selection of Areas

During the programme planning it was found that certain difficulties affected the selection of the order of priority, for example, the north end of the city comprises mainly sub-standard premises and already slum clearance is beginning to make substantial alterations in these localities. It was considered unwise, therefore, to include old houses with a limited life in the first smoke control areas having regard to the cost of conversion, also the fact that many houses would be replaced by new modern dwellings within the next ten years.

Many areas include smokeless appliances

As the centre and southern areas of the city include many premises which only require a change of fuel to be completely smokeless, it was considered practicable to include in the first major smoke control areas many of these premises and thus secure smokelessness for a greater acreage as quickly as possible.

Phased Programme

The phased programme for the first five years requires that a smoke control Order should be made annually to cover the following wards—

(1) Aigburth, St. Mary's and Speke with part of St. Michaels, Allerton and Woolton.

(2) Church, Childwall with the remainder of St. Michaels, Allerton and Woolton.

(3) Arundel, Picton, Broadgreen and Dovecot.

(4) Croxteth, Gillmoss, Clubmoor and Pirrie.

(5) Fazakerley, Warbreck, County and Anfield.

(6) Old Swan, Tuebrook, Fairfield and Breckfield.

The remaining wards are to be considered in a phased programme at a future date.

Smoke Control Survey

Progress has been maintained and as a result of the survey carried out at the southern point of the city from the boundary, comprising 7,292 acres, including part of St. Michael's, Allerton, Woolton and the whole of Aigburth, St. Mary's and Speke, a total of 28,821 premises, involving 27,212 dwellinghouses, have been visited.

Corporation Estates

On Corporation housing estates in the area including Speke, Springwood and part of Belle Vale, a total of 11,049 houses were inspected and of these, some 5,277 will require converting to approved appliances. The remainder are already smokeless or must be considered for exemption, being either slum property or prefabricated bungalows with an estimated life of ten years.

Privately owned dwellings

Out of a total of 16,163 privately owned dwellings in this area, 14,454 will require adaptations to the living-room firegrates in order to comply with the requirements of the Smoke Control Order. The estimated total cost of this work for the conversion of 19,731 dwellings is £396,929, being approximately £20 per dwelling.

Furthermore, there are already 6,756 dwellings equipped with approved coke burning grates; of these, 5,911 houses will only require a change of fuel to comply with a Smoke Control Order. A total of 4,054 fireplaces will only require an approved form of ignition, therefore, a third of the premises in the area would become smoke controlled merely by a change of fuel.

Preliminary Survey

The adjacent wards, including parts of Woolton, Allerton, St. Michaels and parts of Church and Childwall are in the area in which the survey was commenced during the autumn. Premises adjacent to the existing Central smoke control area have been visited during the year with a view to being included in future proposals. The survey has revealed that in many instances works of adaptation have been carried out prior to official requirements.

Special Problems.

Clarence Dock Power Station

The smoke nuisance from the three chimneys at Clarence Dock Power Station has, for some time, been the subject of correspondence and discussion between Officers of the Central Electricity Generating Board and public health officials. At the beginning of 1958 the Central Electricity Generating Board decided to spend £50,000 on modification of boiler plant.

Controlled by Alkali Inspector

This power station is not under the control of the Local Authority's Inspectors by reason of Section 17, Clean Air Act, 1956, which transferred certain processes to the Alkali Inspectorate. An application was submitted to the Minister of Housing and Local Government during January applying for an Order under Section 17(2) of the Clean Air Act to transfer the control over the emission of smoke, grit and dust from the power station and other industrial processes registered under the Alkali Etc., Works Regulations Act, to the City Council.

Minister in agreement with transfer of responsibility to Local Authority Inspectors

The Minister intimated that a large and competent local authority employing public health inspectors qualified and experienced in smoke prevention can reasonably claim to control processes which give rise to what are essentially questions of fuel combustion, and that he was of the opinion that a *prima facie* case exists for including Clarence Dock Power Station in an Order transferring the control to the Local Authority. The Minister further intimated that he would consult the industry concerned regarding the application and make a decision in due course.

Action Taken

Subsequently the City Council agreed that a request should be submitted to the Minister for an Order to be made which would include the two power stations in the City at Clarence Dock and Lister Drive and reserving the right for the Council to make further representations about other premises now subject to the control of the Alkali Inspectorate such as the Gas works, should they fail to comply in the future with the provisions of the Clean Air Act, 1956.

Decision awaited

The decision of the Minister is still awaited and meanwhile every measure that can be taken within the existing powers has been invoked to ensure that the emissions of grit and dust from the power station chimneys are kept to a minimum concentration.

Crown Property Hospitals

Observations taken of the chimneys used to convey products of combustion from the boiler houses at certain Liverpool hospitals reveal a serious nuisance and menace to health. Following a particularly excessive period of dark smoke emission from one hospital chimney, the Secretary of the United Liverpool Hospitals was requested to take immediate action to reduce the pollution of the atmosphere.

Operational Difficulties

Inspection of the boilers exposed a certain amount of difficulty in the application of recognised principles of smokeless combustion. It is quite clear that there will be no permanent improvement at these hospitals until the proposed new central boiler house is completed and it is disturbing to note that although this project was first mooted some years ago, it is still being held back by lack of finance. This new boiler house will take approximately 2½ years to complete and the Minister of Health has been contacted with a request that this project should be given the utmost priority.

In order to reduce the black smoke and grit emissions to an absolute minimum it was suggested that a more suitable fuel should be obtained, and that a much closer supervision should be exercised by the responsible officers of the Board. On a number of occasions, public health inspectors have instructed the firemen on the correct technique to avoid smoke but within a short time from their departure dense black smoke has been observed. There is no question of special occasions, such as lighting up from cold or overloading at peak periods, as these emissions have been constant throughout the day and night.

Improved grade of fuel recommended

Firemen instructed to avoid smoke

Following the request to obtain an improved grade of fuel the Children's Hospital boilers have been fired with Welsh Dry Steam Peas, since mid-June. This fuel has proved most satisfactory, in fact approximately 30 per cent. less fuel is now being burnt. The saving offsets the higher cost of this superior grade fuel. The boilers are now hand-fired and the sprinkler stokers are not being used. As a direct result of this change no complaints of grit emission have been received during the latter half of the year and frequent observations confirm that this hospital rarely contravenes the regulations.

Children's Hospital Improved grade of fuel

Following a resolution of the Health Committee the Minister of Health was informed of the Council's grave concern at the apparent lack of action with the proposed new boiler house to replace the existing worn out, overloaded plant. The Minister agreed that the real answer to the problem was the provision of a new central boiler house to serve four hospitals in the United Liverpool Hospital Group and the Board of Governors have now been authorised to accept a tender for the purchase of new boilers and to prepare final drawings and bills of quantities for the remaining works.

New Central Boiler House

Railways.

The problem of smoke emissions from the steam locomotives which use the three main line terminal stations daily still continues to give concern due to the difficulty of observing the engines and the practice of blowing steam which appears to reduce the density of the smoke. Following the receipt of a complaint of excessive smoke emission from railway engines, British Railways expressed concern and promised to take the appropriate action to deal with excessive smoke from steam engines and steps are being taken to educate the footplate staff to become smoke conscious.

Railway Engines

Action taken

Railway Modernisation Programme

Considerable use is now being made of diesel multiple units and certain main line trains are being hauled by diesel locomotives. The practise of substitution of diesel for steam propulsion is intensifying month by month. In addition, British Railways have prepared a modernisation plan for the electrification of main line services.

Smoke Abatement.

Statutory Action Industrial

A total of 2,424 visits were made to industrial, commercial premises and dwellings to investigate complaints of smoke nuisances, advise on technical problems which arise from time to time, and supervise the installations of new boilers to ensure the work carried out complies in detail with the specification submitted for approval. In two instances the chimney heights, as shown on the approved drawings had not been adhered to, but, after an interview with the engineer or responsible person, this oversight was remedied to the satisfaction of the department.

Industrial Smoke Emissions Warning letters

It has been necessary to issue 41 warning letters to owners or occupiers in consequence of the inspector having observed smoke in excess of the permitted minimum.

Shipping Special Complaints

Following the receipt of complaints of excessive smoke from shipping, 50 ships were observed and a total of 22 minutes excess smoke recorded.

Routine Observations

Daily routine observations of ships using the river and docks resulted in a total of 392 minutes being recorded out of a total of 967 ships observed. In six of these cases it was necessary to take legal action after 80 owners had previously been warned that a further offence being observed, legal action would be taken. The usual cause of black smoke emissions from shipping is insufficient care in firing in the older type vessels.

Improvements

The gradual change from hand fired coal vessels to oil firing and diesel electric propulsion is now beginning to indicate an improvement on the river. On many occasions now it is possible to observe 20 or more vessels moving on the river with clear funnels, indicative of smokeless combustion.

Observations of Shipping

This continues to be a problem due to the difficulty of choosing a vantage point where the vessel can be kept under constant observation for the period of time required by the regulations. The normal procedure is to record the emissions of black smoke in excess of three

minutes, this being an offence. It is only on rare occasions that dark smoke is emitted from ships' funnels for prolonged periods and in certain cases it would be necessary to keep the vessel in sight for an hour. As can be readily appreciated, in a Port such as Liverpool, this would be extremely difficult if not impossible.

Domestic Smoke Emissions

The burning of bituminous coal on the open firegrate of dwellings continues to be responsible for approximately 40 per cent of the pollution. The Netherfield area viewed from the upper floors of the ten storey tenement blocks, clearly indicates the seriousness of the offenders, especially during the ignition period in the early morning and again during the early evening banking of fires. On still days long columns of smoke can be seen slowly spiralling upwards to merge with the industrial haze which forms over the northern industrial zone.

Atmospheric Pollution Measurement.

Department of Scientific and Industrial Research

The measurement of atmospheric pollution is carried out in close co-operation with the Department of Scientific and Industrial Research. During the year the work on atmospheric pollution was continued as part of the programme of Warren Spring Laboratory's Atmospheric Pollution Division.

Scientific Investigation

Smoke Filter

The amount of suspended and gaseous impurities in the atmosphere are measured by the aid of special scientific instruments. The instruments consist of an electric pump which draws a measured quantity of air in a 24 hour period through a filter paper. The smoke remains on the paper and forms a grey stain. The darkness of the stain depends on the amount of smoke in the air. To measure the density of the stain the exposed filter paper is placed on a reflectometer which records the density of the smoke as compared with a standard scale of shades.

Measurement of sulphur dioxide

In conjunction with the measurement of suspended matter the determination of sulphur dioxide in the air is found by bubbling the air through dilute hydrogen peroxide after it has passed through the filter; the sulphur dioxide is oxidized to sulphuric acid then titrated with alkali and the equivalent sulphur dioxide concentration in the atmosphere is calculated.

The results obtained show that the concentration of sulphur dioxide varies very considerably from day to day according to weather and wind

changes. The sampling point at Hatton Garden was chosen to ensure reasonable freedom from adverse weather conditions in order that the figures obtained would be fairly representative of the Central City Area.

Standard deposit gauge

Three standard deposit gauges are maintained by the department at Aigburth Vale, Oxford Street and Hatton Garden to record the rates of deposit of grit and dust, and substances associated with rain. The month to month fluctuations in deposited matter are due to the variations in weather conditions.

Co-operation with the Central Electricity Generating Board

A further seven instruments are maintained by the Central Electricity Generating Board at various sites throughout the City.

Owen Automatic Filter

The Owen Automatic Air Filter sited in Dale Street records the intensity of smoke in the atmosphere by an automatic arrangement in which a two-litre vessel is repeatedly filled with water and emptied by syphonic action. During each emptying, two litres of air are drawn through a filter paper, the position being changed during each filling by a clock and counter weight. The exposed filter paper is inserted behind the standard scale of shades and the degree of smoke recorded in milligrammes per cubic metre.

Determination of Sulphur Dioxide by the Lead Peroxide Method

This method consists of exposing a suitably prepared surface of lead peroxide to the air, and analysing it for sulphate at the end of a given period, usually one month. The results obtained are published in milligrammes of sulphur trioxide per 100 sq. centimetres.

During the year a special survey, undertaken at Speke adjacent to the Industrial Estate, terminated. Observations continued at five stations situated in the City and Edge Lane area.

Special Tests.

Industrial processes

The area of land situated to the north east of Fleming Road has been approved for a limited housing development programme following the special series of observations and sulphur dioxide tests which terminated during the year.

In conjunction with the special boiler tests, twelve stations for the measurement of sulphur trioxide were set up for a period of eleven months in close proximity to the factory concerned. From the evidence

obtained, it was proved that the sulphur emissions are within the percentages normally associated with this type of industrial establishment. During the special period, frequent observations were carried out in the vicinity of the premises and from nearby vantage points and irrespective of the wind direction. No nuisance was detected which could be considered to have originated from the premises concerned.

Inspectors' Visits.

Survey

A total of 29,300 visits have been made in connection with the smoke control survey and 120,410 appliances were examined by the inspectors who advised owners and occupiers of the adaptations which would be required in order to burn authorised smokeless fuels.

Special Complaints

Following the complaint of excessive smoke emissions 106 special visits were made by inspectors to investigate the cause of the smoke and take the appropriate action, and a further 5,521 visits were made in connection with various matters relating to atmospheric pollution.

In order to ensure that installations and adaptations were carried out in compliance with the methods recommended, it was necessary to make 1,350 re-visits as a follow-up procedure.

Advisory Visits

A number of owners and engineers requested advice from the specialist inspectors relating to new boiler installations or other improvements. Some 134 such visits were made during the year.

District Inspectors

Routine observations and visits have been made by the district inspectors to ensure that the necessary remedial action is taken to ensure prompt abatement of excessive smoke emissions. Some 1,156 such observations were made on industrial chimneys and 872 on shipping.

Informal Action

Informal action in respect of exempted buildings, Crown property, including Hospitals and Nationalised Industry, is necessary to ensure that all sources of pollution are kept to an absolute minimum. This work absorbs a considerable amount of the specialist inspectors' time.

Prior Approval

When plans, deposited with the Local Authority for the erection or extension of a building, show that it is proposed to erect a chimney for carrying smoke and flue gases from the building, the Local Authority shall reject the plans unless they are satisfied that the height of the chimney or flue is sufficient to prevent the emission from becoming

prejudicial to health or a nuisance. The plans are examined by a specialist senior inspector who must be satisfied that the height of the chimney is such that the products of combustion will quickly disperse without descending to such a level as to affect the property in close proximity to the point of discharge. Special regard must be had to the position of the chimney in relation to adjoining premises, the level of the ground and the purpose for which the chimney is to be used.

Heights of chimneys

It was necessary to examine 90 plans deposited with the City Building Surveyor to ascertain if the height, as shown, was sufficient to comply with the requirements of Section 10, Clean Air Act. In 67 cases the plans were approved as submitted and 23 were rejected owing to the proposed chimney height not being approved. After the plans had been altered to comply with the minimum heights recommended in each individual case, 19 plans were approved and four rejected.

New Boilers and Furnaces Approved

Subject to the provision of Section 3 of the Act no furnace can be installed unless it is capable of being operated continuously without emitting smoke. Persons installing new furnaces must give notice to the Health department and may, if they wish, submit details for approval. A total of 82 new boilers or furnaces were installed during the year and 68 were submitted for the Committee's consideration. Of these, 67 were approved and one rejected.

Rodent Control.

The great overall reduction in the rat population of the City, especially noticeable in the dockside districts and in the central area, continues. This very satisfactory situation has undoubtedly been brought about by the vigorous rodent campaign carried out by the department over a period of many years.

Rodent infestation generally and rat infestation in particular has declined in severity and it is significant to note that only one major infestation was reported during the year, on the outskirts of the City at a piggery and poultry farm. In this case the infestation was found to be linked with rat infested sites in two other adjoining local authorities' districts. Co-ordinated action was taken by everyone concerned and uniform treatment applied to the several infested sites for the destruction of the rats to a prearranged timetable, which is the first essential of proper rodent control procedure.

Whilst the means is not yet provided for a spectacular wiping out of the rat and mouse population, the momentum can be further increased in the reduction of their numbers. This may be accomplished with the continued advancement of scientific and technical knowledge in the wide field of rodent control, together with the maximum of effort by the general public, not only for the destruction of rats and mice but also in taking precautionary measures to discourage and prevent infestation.

A great deal of importance is attached to the work of systematic survey of lands and buildings in the dockside wards, central area, and in other places where rodents are likely to be found. In this way infestation is detected and remedied before it has time to develop to serious proportions.

The surveys continue to reveal 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 subsequent measures taken to prevent infestation.

A specialist staff is engaged whole time in rodent control covering all lands, buildings and sewers in the City and this is one of the principal reasons for Liverpool being for many years in the forefront of rodent control.

Infestation in Sewers

Although there is a considerable reduction in the number of rats in sewers, especially since the work was centralised in 1953, the disinfestation of sewers in some districts is retarded by difficulties of a practical nature, consequently the problem continues to receive the serious attention of the experts. 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 undertaken during the year to provide a solution to this problem. Several types of bait container, fitted to an adjustable climbing rope for rats, and placed in the most sheltered position in very wet manholes, were tried out until suitable ones were found, which were both effective and easy of application. Approximately 350 such manholes were treated in this way and many comparatively large poison takes were recorded where previous treatments had been unsuccessful.

Duties of local authorities and occupiers

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 notify the local authority when rats or mice in substantial numbers are living on or resorting to buildings and lands in their occupation or under their control.

Many thousands of requests to the department for assistance have been received from the occupiers both of business premises and dwelling-houses 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, which is 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.

Complaints relating to rats and mice to the total of 4,993, a decrease of 95 from the previous year, were received and promptly investigated. The complaints now relate more and more to dwelling-houses and many of these are entirely in connection with mice.

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 preventative 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, have done much to remove the health dangers from rodents and the risk of food contamination by them.

Farms

The rat destruction service provided to farmers by the Ministry of Agriculture, Fisheries and Food was discontinued from the 31st March, 1959. Routine inspection was made of the farms in the City during the year as a precautionary measure against the development of rodent infestation and to meet the requirements of the Act in this respect. The

staff gave advice to the farmers on rodent control methods when required, and practical assistance in the destruction of rodents on request.

Precautions against the spread of Disease.

General Rodent Control Precautions.

Action against Plague

Precautions are taken against the spread of plague, a disease which may be brought into the port by rodents, and specimens of rats and mice collected are sent to the Public Health Laboratory for examination. It is satisfactory to report that all rodents submitted during the year were found to be free from plague.

Precautions against Weil's Disease

Rats are carriers of the organism leptospira icterohaemorrhagiae causing Weil's disease, and in order to safeguard not only the public but the sewer worker, who is required to enter sewers where he may become infected with the disease, specimens of rats caught in sewers and on the surface are submitted for examination. Therefore although poisoning is the chief agent used for rat destruction in sewers in the City, spot trapping was again applied in advance of poisoning treatment to obtain specimens for examination, as a precautionary measure against the spread of infection.

During the year 31 rats (11 from sewers and 20 from lands and buildings) were submitted for examination and only one of the rats was found to be a positive carrier of leptospira icterohaemorrhagiae. The affected rat was found dead in the cellar of a dwelling-house into which it was believed to have entered from a defective private drain connected to a sewer undergoing poisoning treatment.

Immediate action was taken in the district concerned and the buildings and lands near-by were specially examined for rats and mice, but no further infestation was found. The minor infestation in the dwelling-house was soon remedied by the district rodent operative and the drainage fault subsequently repaired to avoid any further outbreak of rats.

Systematic Survey.

The rodent control staff examined 30,824 sites during the year in connection with systematic survey and investigation of complaints. A

further 71,503 visits were made entailing operational work and re-examination of buildings and lands during or following treatment. Public health inspectors also made in conjunction with other matters 114,002 inspections under the Act.

Rodent Infestation.

Infestations—Buildings and Lands

During the year 4,762 sites were found to be infested (2,276 by rats, 113 by rats and mice, and 2,373 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 the result of the action taken year by year.

Transportation in goods

The City, as an important port, is a centre of road and rail transport and rodents, due to their migratory habits, may be brought in by road, rail or sea. There was a further indication during the year of the transportation of rats and mice conveyed when goods were delivered to premises

Infestations brought about in this way, although believed to be few in number, would account for ship rats being found in buildings on the outskirts of the City and on sites some distance away from the dockside districts. In some cases premises that had been successfully treated were subject by this means to reinfestation, particularly by mice. Where evidence indicated that rats or mice had been conveyed in goods delivered to premises, 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 the 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 the public passages.

As part of the investigation to trace the source of these rat infestations, references to the total of 1,277 were sent to the public health

inspectors relating to the drains of such sites, 968 relating to dwelling-houses and 309 to business premises. Drainage tests were subsequently applied and defects were found in 469 and 131 cases respectively, and the necessary action 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 necessary for drains undergoing construction or repair to be temporarily capped when the work is left incomplete, especially overnight, as a precautionary measure against the escape of rats either from or into the sewers.

Infestation of Lands and Ditches

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 nearby 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 habitat and result in their visitation to sites of premises under construction and to occupied dwelling-houses near-by to seek food and fresh quarters. Sporadic outbreaks of minor infestation occurred from time to time on these new estates.

Complaints of rats

Complaints received of this nature 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 in such places

available for rats 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 the 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 disinfestations are shown in the statistical appendix.

Rodent Disinfestation.

Disinfestation of Buildings and Lands

During the year 4,582 buildings and lands were disinfested from rats and mice.

Dwelling-houses

The practice of providing free assistance to the occupiers of dwelling-houses was continued with a slight increase in the number requiring attention for the destruction of rats and a decrease for mice.

Business Premises

Owners or occupiers of buildings or lands other than private dwellings who desire 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 still quite appreciable and 1,780 requests were received during the year. 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 to detect the slightest indication of rodent activity and give skilful attention when disinfestation is required.

A wide variety of premises in all districts in the City were serviced in this way and the full costs 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 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 a reinfestation and receive the closest investigation to trace its source.

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.

Methods 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. The use of acute poisons for rats 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 partaking 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 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 has some value in minor common rat infestations, particularly on sites where putting down 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 in the bait required to be effective 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 both species of rats and mice and its comparative safety for application in dwelling-houses, schools and on other sites where it would be dangerous to use an acute poison. Nevertheless it is necesary 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, and special arrangements are made where there would be the least likelihood of any contact with the poison by children.

All baits used by the operatives are granular in form for two special reasons, 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, and 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 4,917 infestations and reinfestations remedied during the year 4,491 were treated by the department's operatives. Of these 4,480 were cleared by the use of poisons and the remaining 11 were remedied by trapping only. The effectiveness of rodenticides properly applied is apparent from the large number of infestations which were remedied by one poisoning treatment, namely 3,736 out of a total of 4,480. Of the others 598 required two treatments, 110 three treatments, and 36 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 426 infestations were remedied either by the occupiers under the guidance and supervision of the rodent control inspectors or proofing, which mainly entailed the repair of effective drains under the supervision of the public health inspectors.

Calculating the kill.

Estimated number of Rats killed

It is estimated, using the appropriate formula for calculating the kill, that at least 14,412 rats in buildings and on lands were destroyed during the year as a result of poisoning treatments. 1,914 dead rats were actually collected after poisoning and a further 103 were caught in traps. The species of rats collected were 1,609 rattus norvegicus ("brown" or "common" rat) and 408 rattus rattus ("black" or "ship" rat).

A percentage of rodents collected (326 rats and 5 mice) were sent as usual to the Public Health Laboratory for examination and the remainder burnt.

Destruction of mice

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, 9,762 ounces. 1,313 dead mice were collected as the result of poisoning and 104 were caught in traps.

Rat Destruction in Sewers.

Sewer treatment

Contrary to the popular belief, rats found in sewers are in no way fundamentally different from the common or brown rat found 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 tables 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 having a plentiful supply of food and abundant harbourages in sewers and drains where manholes are a long distance apart. 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.

A comparison of the total bait takes recorded during the maintenance treatments shows an increase of 915 during the second treatment. This may have been due to the abnormally fine weather throughout the second

treatment, allowing the rats freer movement and undisturbed feeding by the absence of storm water and conditions favourable to breeding increase.

There are 25,792 sewer manholes in the City and the total baits taken during the two maintenance treatments of 2,681 and 3,596 compared with 9,329 on the initial treatment in the year 1953, show a reduction of 71 per cent and 61 per cent respectively.

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 made after as well as during treatment 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 or 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. Of the 77 divisions wholly or partly test baited, no takes were recorded in 56 divisions containing a total of 8,916 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 702 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.

Any condition likely to hinder the work of disinfestation, and works of proofing which were reasonable and practicable to be carried out to prevent reinfestation of a site, were brought to the notice of the person responsible, either the owner or the occupier of the premises concerned.

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.; thereby preventing means of ingress for rodents and the abolition of unnecessary harbourage, both temporary and permanent.

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, but where they failed to co-operate statutory action was taken by the public health inspectors and eleven notices were served under the Act, one for business premises and ten for dwelling-houses. It is pleasing to note that during the year it was not necessary to institute legal proceedings.

SUPERVISION OF FOOD SUPPLY

City Markets

The supervision and inspection of the City's food supplies has been maintained throughout the year by public health inspectors with additional qualifications as meat and food inspectors. Daily visits have been made to wholesale premises in Queen Square, the Wholesale Fish Market, St. John's Market, and the Wholesale Fruit and Vegetable Market in Cazneau Street in addition to wholesale warehouses situated throughout the City.

The section has handled the investigation into food complaints, together with the routine inspections of fish, fruit, vegetables and canned goods. A continued surveillance of all premises located in the City centre has also been maintained.

The various food markets are supervised each morning between the hours of 8 a.m., and 11 a.m., and periodically throughout the rest of the day. It is during this supervisory period that complaints originating from wholesalers and retailers are investigated and decisions are given concerning the fitness or otherwise of various food consignments. Special complaints arising from the more widely spread wholesale warehouses are also investigated and dealt with promptly, thereby enabling the swift disposal of unfit foodstuffs lying in storage.

St. John's Retail Market

The substitution of windows in lieu of unsuitable roof louvres has continued during the past year and a resulting improvement in natural lighting and draught exclusion has been noted. The upper surfaces of the walls have been scraped clean and redecorated with a high gloss paint which will facilitate easier cleansing. Various items of electrical equipment attached to the walls have been cased in, resulting in a neater and cleaner appearance. Although no decorations have been carried out to the roof or supporting cross-members, cleansing of these items is being undertaken during the hours in which the market is closed. Vacuum cleansing of the tops of stalls is also carried out regularly.

Additional washing facilities have been provided on the West side of the Market by the construction of partitioned cubicles, each containing an equipment washing sink, a wash hand basin, and slop sink. Hot

and cold water is provided for the use of market tenants. The walls of each compartment are half-tiled for easy maintenance and present an improvement over the previous accommodation available.

Improvements to individual stalls have once more been carried out by a number of the occupiers with improved conditions as regards to food hygiene and actual presentation of the commodities.

Poultry inspection

All poultry and game entering the market is examined prior to sale. Special attention has been paid to the entry of sub-standard poultry imported from Northern Ireland. These birds are mainly forwarded by the breeders as make-weight in consignments of First Grade poultry, and are very often found to be retarded in growth and are unfit for human consumption by reason of some disease or injury.

The detailed inspection of such birds resulted in 192 head of poultry being rejected for reasons set out as follows:—

Ascites	17
Decomposition	103
Emaciation	49
Injury	17
Oedematous Oviducts	6
TOTAL	192

Although there has been an increase in the numbers rejected during the past year, this is mainly due to the fact that over half the birds had been held in cold storage for some considerable time before being released for general sale. In actual fact the incoming supply of this type of bird has again decreased and this is taken as a welcome sign of the effectiveness of the special attention paid to the examination of inferior birds.

In addition, 2,698 head of high grade poultry and game were rejected in the course of inspection. The reasons for rejection were mainly that of decomposition.

Fish inspection

The Wholesale Fish Market supplies an extensive retail trade throughout Merseyside and surrounding areas. During the past year a total weight of 10,663 tons of fish was handled, in addition to some 61,054 packages of rabbits, poultry and game.

The inspection of fish, poultry, game and rabbits resulted in the rejection of some 5,607 packages at a weight of 58 tons as unfit for human consumption. (See Table 67, Statistical Appendix.)

During the year there was a heavy incidence of infestation in stock fish, i.e., dried, salted fish normally imported from Norway. On arrival in the City prior to export a number of these consignments were found to be heavily infested with spider beetles of the Ptinus Tectus group. These infestations were speedily eradicated by the use of insecticidal treatment, and the stock fish consisting of cod, torsk, tusk and ling passed for export to various tropical countries where it forms the main fish diet.

Fruit and vegetable inspection

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 year. The daily inspections of fruit and vegetables resulted in 39,422 packages at a total weight of 370 tons being rejected as unfit for human consumption. (See Table 67, Statistical Appendix.) Although there were no large scale indications of blight damage during the last year, there was a marked general increase in the rejection of fruit and vegetables. This amounted in all to some 120 tons (20,000 packages) over and above the previous year's figures. There are several features to account for this increase, which range chronologically through the months of January, June, July, September and October.

The commencement of the year saw a large quantity of citrus fruits left on the market following the Christmas trading period. Although a degree of sorting and repacking was possible, by far the larger proportion of the stocks were not reclaimable and had to be tipped.

The months of June and July were marked for the rejection of imported potatoes from Cyprus. Due to poor packaging and storage facilities large quantities of these consignments had to be rejected as unfit for human food. The potatoes had been packed in large wooden cases, lying in stratas throughout a bed of peat. On arrival in this country, examination revealed that the peat packing used to protect the potatoes during transport was moist. This factor combined with the difficulties of providing adequate ventilation during shipment

caused the potatoes to arrive in a semi-cooked condition. A thorough inspection revealed that it was impossible to reclaim or salvage any of the consignments so affected.

The same period also revealed an increase in the deterioration of imported apples and pears. This was as a direct result of two factors; first, the arrival of the fruit in a ripe condition, and secondly, the warm summer weather. This combination of events meant that the fruit possessed little or no holding properties and rapid deterioration soon set in which made it unmarketable.

September and October were marked by the rejection of imported Spanish grapes which had been packed in 22 lb. barrels between layers of granulated cork, intended to protect them from damage during transportation. It was during this period that Spain was subjected to unseasonable heavy rain, and the grapes were packed in a wet condition so that by the time they reached the wholesale market in this country they were mouldy and had started to fall from their clusters, features which rendered them unfit for sale, or even salvage.

Canned goods

The daily inspection of canned goods 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 totally unfit for human consumption, have been disposed of directly at the Corporation controlled tip at Otterspool. Smaller consignments, brought to the office for inspection were removed by the City Engineer and Surveyor's (Cleansing) Department and subsequently tipped, under their supervision.

There have been several cases where the food inspected has been found unfit for human consumption, but fit for animal feeding, following further processing. In these circumstances, the food stuffs concerned have been released to pig feeders under a "Guarantee of Unsound Food" for conversion into swill only.

The examination of canned goods resulted in the rejection of 70,752 cans at a total weight of 72 tons. (See Table 67, Statistical Appendix.) Altogether 12,998 certificates of condemnation were authorised and issued to wholesalers and retailers in respect of the rejected canned goods.

It should be mentioned that the public health inspectors are not called in merely to examine unsound goods, and the rejection of 72 tons of canned foods represents only a small portion of the actual goods inspected over which doubt of fitness was expressed by the owners.

When such an instance arises, a full and thorough inspection of the consignments is carried out, which can involve four distinct and separate stages of external tests, any one of which is indicative of content deterioration. However, despite these tests there are still instances where circumstances have dictated that the contents of the can are faulty even though external inspection has failed to reveal this. One such case is reported below:—

Canned shoulders

It was reported by a wholesale firm that the members of the retail trade to whom they supplied canned imported pork shoulders were experiencing trouble with this product. The firm had in their possession some 800 cans, each approaching 10 lbs. in weight, and all bearing the same code marks, which they were loath to circulate on the retail market. An external examination was then carried out incorporating tests by palpation, auscultation, percussion and for faulty seams or seals. As a result of this inspection it was then agreed that in all outward appearances the cans were sound, and that the contents should also be in that same state. However, bearing in mind the complaints which had been experienced, arrangements were made for an internal examination of the contents and adjoining can surfaces.

A representative selection of the cans were opened and inspection of the contents immediately revealed that the food was unfit for human consumption, or even conversion into pig swill. The gelatine, fat and meat content were completely discoloured, varying in shades from dark brown to black. The cause of this was soon revealed as metallic contamination. Although the complete inner surfaces of the cans were lacquered and in good condition, there had been an oversight during manufacture and a four inch by one inch metal strip incorporated in the finished product had escaped attention. This metal strip formed the exhaust channel within the head space between the meat contents and the vacuum seal. As it was entirely free from fixed contact with the actual can there remained the faint hope that only a portion of the

total consignment might have been supplied with the unlacquered strips. Opening and examination operations were continued to no avail, and regrettably the whole consignment had to be assigned to the tip.

Luckily, such large-scale occurrences as this are infrequent, but it must be borne in mind at every inspection that such a possibility does exist and exacting care and precautions must be taken as a matter of course.

Goods for export

Regular examinations have been carried out during the year in respect of foodstuffs which are intended for export from this country and are required to be accompanied by a certificate of soundness. The main items which required inspection were animal carcases or portions thereof, dried and salted fish, canned soups and meats. In all instances the goods concerned were found to be fit for export and for human consumption.

Food complaints

Three hundred and eight complaints were received from members of the public during the year in respect of foodstuffs which had been purchased within the City boundary. The complaints concerned such matters as mould formations, vermin contamination, decomposition, extraneous matter, damage, and false labelling.

The average number of food complaints investigated by this section during the past three years gives a figure of 302 cases annually. Full investigation of each complaint is carried out and careful consideration of all features is undertaken. Almost all of the complaints involve visits to two or more establishments before a final report is possible. In all instances the complaint is traced back via the retailer to the manufacturer or importer, and wherever it is possible an inspection of the premises, process, and equipment is carried out. Revisits are made at later dates to note the adoption of any suggestions and safeguards brought to the notice of the individual firm.

A different procedure has to be adopted where it is found that the firms concerned operate their manufacturing processes outside the City boundary. Where this occurs a letter is sent informing the firm of the complaint and requesting an interview in Liverpool to discuss the matter with one of their representatives. A further letter is also sent to the local authority within whose area the firm operates, requesting information as to the condition of the premises and the safeguards employed therein.

During the year there were several complaints of alleged glass in processed cheese. An examination revealed that the extraneous matter bore a strong resemblance to glass from a bottle, being curved and jagged in appearance. Further investigations revealed that the "glass" was in fact Struvites caused by a breakdown of the proteins into a chemical compound. Although this condition has been previously noted in canned fish and meats these complaints were the first notification of its presence in any other substance.

A disturbing factor, both for this section and for the bakeries concerned, was the receipt of complaints concerning a pink mould growth in bread which gave the distinct impression that the bread had been coated with a salmon spread. This mould, Monilia Sitophila, is rare, but when it does make its appearance drastic steps are required to secure its eradication from bakehouses, delivery vans, shops, and domestic premises. It is understood that its last widespread appearance was in 1955, when, as in the past year, climatic conditions favoured its growth. It is particularly difficult to eliminate as its spores are unusually light, spread easily, and are resistant to heat. It also grows with extreme rapidity, often in association with the more usual bakery moulds and has a tendancy to "creep" i.e., the growth from one patch of mould will spread by almost invisible threads to appear as a patch in another place.

Notification of these complaints called for urgent action on behalf of the bakeries concerned to take the necessary action to rid their premises and vans of the spores. Whole-hearted co-operation was achieved in this respect, and it was possible for the normal baking to continue without disruption of their services.

School meals complaints

During the year, 24 special visits were made to establishments following requests from the School Meals Service concerning complaints affecting food supplies. These visits involved the examination of meat, fish, and milk. It was found that on nearly all occasions the deterioration of the meat or fish had been caused by a breakdown of the establishment's refrigerator.

The number of complaints arising from broken bottles of milk supplied to pupils continued throughout the past year. It was found that

the main reason for the entry of particles of glass into the milk content was due to rough handling of the crates and bottles during transport and delivery.

All the premises visited as a result of food complaints were found to comply with the requirements of the Food Hygiene Regulations, 1955.

Central Purchasing Scheme

In June of the past year arrangements were made with the Central Purchasing Department for regular inspections to be made of 141 establishments where food is prepared for human consumption. These premises are supervised by various departments of the Corporation, i.e., School Meals, Special Schools, Health Department, and Children's Department, which are situated throughout the City and suburbs.

Under the provisions of this scheme, inspectors with additional qualifications as meat and food inspectors make regular visits to all these premises as follows:—

Type of Premises	Visits
Main and Central School Kitchens	2 per month
School Kitchens ...	1 per month
Nurseries and other premises	1 per quarter

In addition to the inspection of food delivered to these establishments, regular inspections are undertaken under the provision of the Food Hygiene Regulations, 1955, to ensure that the provisions of this Act are adhered to and a satisfactory condition of hygiene and cleanliness is maintained.

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 Hospitals Board

Twice monthly 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 Regulations, 1955.

It is estimated that during the year £67,000 value of unsound foodstuffs excluding fresh or frozen meat were rejected. A table of the total weights of foodstuffs excluding fresh or frozen meat and offal rejected over a period of the past three years is listed below :— General observations

1957	...	...	433 tons
1958	...	...	368 tons
1959	...	...	506 tons

As can be seen, there is a wide fluctuation in the quantity of foodstuffs found unfit for human consumption. An analysis of commodity weights shows that in the main they remain fairly constant over the three year period. The fluctuation occurs in the range covered by fresh fruit and vegetables, and as will have been seen by previous comments a number of factors such as climatic conditions, storage and packing influence the holding qualities of these perishable foods to a large extent.

Meat Inspection.

The year was noteworthy for a striking increase in the number of sheep and lambs slaughtered. The total was 361,848, an increase of 145,938 on the previous year. This increase was occasioned by the long dry summer weather when pastures became withered and dried up, and the shortage of water was acute. Large numbers of these sheep and lamb carcases were of poor quality and in particular, hill sheep carcases were emaciated and dehydrated. Another feature of the year's work was the number of cows slaughtered under the Tuberculosis (Slaughter of Reactors) Order, namely 194, last year's figure was 60. The total number of animals slaughtered in the City was 514,155, an increase of 131,602 on last year, and all carcases and offals were inspected at the time of slaughter.

This year was the third year of the operation of the training scheme approved by the City Council in 1956, and of twenty-two trainees, twelve were successful in obtaining the certificate of competency in meat and food inspection issued by the Royal Society of Health. Training Scheme

The difficulty of attracting men to full-time work in an abattoir persists partly because of the nature of the work. Other reasons given are Sunday and bank holiday duty, early morning starting, and the

unremitting application required where intensive slaughter takes place from eight o'clock in the morning till half-past four in the afternoon with only one hour break for lunch.

Staff

At the end of the year the staff consisted of the chief inspector and his deputy, four senior inspectors, two public health inspectors qualified in meat inspection and six assistant inspector trainees. The office clerk resigned in November to take up appointment with another authority.

Private Slaughterhouse

Private slaughtering

There is only one private slaughterhouse in the City. During the year 27,272 pigs were slaughtered in a humane hygienic manner, and all the carcases and offals were inspected at the time of slaughter.

Knackers' Yard

Knackers Yard

There is one Knackers' yard in the City where 318 animals or carcases comprising 89 cattle and calves; 38 horses, 15 ponies, 6 donkeys, 161 pigs, and 9 sheep were dealt with during the year. The premises are maintained in a satisfactory condition.

Stanley Abattoir

City Abattoir slaughtering

The number of animals slaughtered at Stanley Abattoir during the year was 486,883 detailed as follows:—

Bulls	Bullocks	Cows	Heifers	Calves	Pigs	Sheep
195	21,734	27,114	341	11,150	64,501	361,848

Sunday slaughtering

Slaughtering at the City Abattoir, and at the Woolton slaughterhouse, took place on Easter, Whit, and August Bank holidays as well as Sundays. The number of animals slaughtered on these days was 92,805 or 18 per cent of the total kill.

Diseased Conditions

Diseased Meat

The carcases of 134,649 animals, approximately 26 per cent of the total 514,155 slaughtered and inspected at the private slaughterhouse and Stanley Abattoir showed diseased conditions and a detailed examination was made in each case. The number of whole carcases rejected as being unfit for human consumption was 1,891, together with part carcases from 7,531 animals.

As noted above the sheep condemnations were mainly due to the increase in the number of oedematous, emaciated carcases following the summer drought. There was a striking drop in the number of bulls slaughtered—195 compared with 333 in 1958. This is probably due to the increase in the use of the artificial insemination of cows under the Ministry scheme by breeders who formerly kept their own stock bulls. This view is strengthened by the fact that the bulls slaughtered were mainly all over six years old and had passed their period of usefulness.

The number of carcases totally rejected viz. :—1,891, is a decrease of 189 on last year, whilst partial condemnations rose from 4,996 to 7,531. Total condemnation of cow carcases for tuberculosis increased slightly by about one half per cent (0.4 per cent); this increase was due probably to the culling of stock in anticipation of the final assault on bovine tuberculosis due in March, 1960. (Table 68, Statistical Appendix.)

Condemned Meat and Offal

The total quantity of diseased meat and offal found unfit for human consumption at the time of slaughter was 649 tons comprising 182 tons of meat and 467 tons of offal.

All this meat 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 and farmers 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

Detained Meat

Diseased carcases from which portions have to be cut, for example hindquarters, forequarters, legs or chest walls, are detained overnight for cooling and setting. The carcases are railed into a special detention cage and locked up. The following morning the diseased portions are cut off, checked and weighed; the carcases reinspected and the meat suitable for human consumption is released and taken into the meat market for sale.

Disposal of diseased meat

All diseased or unsound meat and 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.

Pharmaceutical Products

Medicinal Products

In addition to the various organs and glands which are normally used for medicinal extracts for example, thyroids, ovaries, pancreas, adrenals, pituitaries, a considerable quantity of liver affected by distomatosis was sent for chemical manufacture for liver extract. The amount of liver utilised in this way during the year was 141 tons.

Boneless Fresh Meat

Boned-out Meat

The demand for boneless meat by manufacturers has continued steadily. Boned-out cow and bull carcases have a ready sale, the sides of meat are sawn into fores and hinds and the bones completely removed, the lean meat being packed in white stockinette bags and sold. It is estimated that a quarter of the 27,309 cows and bulls slaughtered were dealt with in this way.

In addition, much of the meat brought into the market from outside areas was similarly utilised.

Stanley Meat Market

The frozen or chilled meat and offal "pitched" daily on the meat market is subjected to inspection for mould, brine damage, decomposition, or contamination, and all carcases brought in from outside areas are reinspected.

Stanley Meat Market

As a result of this inspection the amount found to be diseased or otherwise unfit for human consumption was:— beef 15,790 lbs; mutton 4,514 lbs; pork 4,850 lbs; poultry 1,055 lbs; offal 300 lbs; a total of approximately 12 tons.

Carcases and meat dealt with at the Stanley Meat Market (excluding the 486,883 slaughtered in the Abattoir was as follows:—

	Beef (quarters)	Mutton (pieces)	Veal	Mutton	Lamb	Pork	Beef (pieces)–
Imported frozen/ chilled	177,981	80,656	33	151,809	779,526	5,551	13,031
Slaughtered outside Stanley Abattoir	93,458	17,293	3,170	7,596	138,207	67,852	15,681

In addition to the above meat, some 190,000 packages or boxes of meat, poultry, and offal were dealt with.

Tuberculosis (Slaughter of Reactors) Order 1950

Bovine Reactors Tuberculosis

The number of bovine animals sent into Stanley by the Ministry of Agriculture, Fisheries and Food was 194, more than three times the last year's figure of 60.

A detailed post mortem inspection was made in each case and the extent and nature of the infection reported to the Ministry's officers. Eight carcases were totally rejected for acute or widespread infection, and portions from 49 other carcases not seriously diseased. In other cases the organs only were infected.

Trichina Spiralis

Trichina examination

During the year, 1,000 samples of pork snippets taken from the diaphragm, legs, necks and shoulders of pig carcases were submitted to the Public Health Laboratory service who have developed a special examination technique in this work. No trichinellae were found.

Slaughter of Animals Acts 1933-1954

Slaughter Licences

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 119 licences were issued to slaughtermen. In addition 281 licences were issued to Mohammedans, mainly seamen, for the slaughter of sheep at Stanley Abattoir, subsequently destined for the meat of ships' crews.

Supply of Specimens

Specimens

Specimens of intestines, blood, pancreas, uteri, spleens, hearts, cysts, bovine eyes, and meat have been provided during the year for research work and use in various departments of the Liverpool University and hospital laboratories.

Morbid specimens are also prepared for the examination conducted by the Royal Society of Health and the Veterinary School of Liverpool University.

Meat and Food Inspection

Food inspections Classes

The course of instruction for persons preparing for the examinations in meat and food inspection or food hygiene were well attended. Seventy-five students received a sound grounding in the theory and

practice of meat inspection, control of food and milk supplies and the law relating thereto. The course commences in September and carries on till May on two evenings a week, one of which is devoted to practical instruction at the Abattoir. During the course the students visit food factories, pasteurising plants, ships and docks where food is handled, as well as attending the Abattoir during routine slaughtering operations.

In addition to local students, some come from the county areas of Cheshire, North Wales and Lancashire.

The Slaughterhouse (Hygiene) Regulations, 1958.

Slaughter-house Regulations

The regulations come into force by stages, commencing January, 1959 and are designed to secure hygienic conditions in the slaughter of animals and handling of meat intended for human consumption, sanitary requirements in the construction, drainage, cleanliness of operatives, lighting, ventilation and equipment provided or appliances used in slaughterhouses.

Certain major requirements of the regulations do not become operative till the Ministry appoints a date.

The particular sections are mainly concerned with construction, layout, lighting and ventilation requirements which are to be the subject of report by Local Authorities to the Ministry at the end of 1960.

To this end, comprehensive reports have been prepared in respect of the Stanley Abattoir and the private slaughterhouse in the City, which after consultations with organisations and authorities concerned, consideration and approval by the Council, will form the subject of the final report to the Ministry on the slaughterhouse facilities for the area.

In general the co-operation and goodwill which so far has been shown by all concerned in the implementation of the Regulations is gratifying and gives solid promise of satisfactory future development in this important matter of handling meat under hygienic conditions.

The Adulteration of Food and Drugs.

The Medical Officer is responsible for ensuring the safety of food supplies, and the public health inspectors specially qualified in food

sampling are responsible for carrying out the routine duties to implement the legal requirements. This entails 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 4,070 premises were visited by the sampling officers and 3,869 samples of food and drugs were taken or purchased and of this number 118 or 3.05% were found not to be genuine or were otherwise irregular. This represents a decrease on last year's figure which was 4.7%.

Routine samples of milk were taken daily from producers sending milk to Liverpool from Cheshire, Lancashire, Flintshire, Denbighshire and Shropshire. The 3,869 samples obtained included 877 formal and 2,992 informal. An informal sample is one purchased without intimation to the vendor that it is to be analysed. Valuable information as to irregularities is obtained this way, and a variety of food and drug preparations are checked.

Legal Proceedings

Prosecutions were instituted in respect of 3 samples of milk which contained added water, and fines totalling £12 0s. 0d. with £3 3s. 0d. costs were imposed. Three summonses were issued against retailers for selling fish cakes which did not contained the required quantity of fish. Fines totalling £15 0s. 0d. with £5 5s. 0d. costs were imposed.

One summons was issued against a sausage manufacturer for giving a false warranty in writing relating to beef sausages found to be deficient in meat content. A fine of £5 0s. 0d. with £1 15s. 0d. costs was imposed.

Ice Cream and Water Ices

During the year 380 samples of ice cream, ice lollies and frozen confections were submitted for chemical analysis or bacteriological examination. Of these 243 ice creams were examined bacteriologically and 126 were grade 1; 58 grade 2; 31 grade 3 and 28 grade 4. Samples in grades 1 and 2 can be classed as satisfactory. In those cases where

the bacteriological result was found to be unsatisfactory, visits were made to the manufacturing premises and advice given. Ice lollies and frozen confections submitted for bacteriological examination proved as a whole satisfactory.

Analysis of 84 ice creams proved only 3 to be slightly below standard all other samples complied with the requirements of the Food Standards (Ice Cream) Regulations, 1959. The regulations prescribe amended standards of composition for ice cream and "Parev" (Kosher) ice, and introduces separate standards of composition for dairy ice cream and milk ice. The introduction of any artificial sweetener is forbidden. Analysis of 39 ice lollies and frozen confections proved in every case free from metallic contamination.

Bacteriological examination of Foodstuffs

In addition to the bacteriological examination of milk and ice cream during the year 248 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 and meat and fish pastes. The results, as a whole, were satisfactory, in no case was salmonella contamination reported, but in a number of cases other bacterial contamination was reported and appropriate action taken. The above total includes samples which were examination bacteriologically as a result of complaints made by the general public and enquiries incidental to food poisoning.

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 and pasteurisation is highly satisfactory. The total number of milk samples submitted to the Public Health Laboratory for examination was 2,171, comprising 1,903 heat treated milks, 224 tuberculin tested milks and 44 undesignated raw milks.

Seven of the 1,903 heat treated milks which were examined failed to satisfy the phosphatase test for efficiency of pasteurisation and 32 failed the methylene blue test (for bacterial quality). 46, 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 that three samples were positive.

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 152 samples were tested chemically and bacteriologically. All the samples proved satisfactory and efficiently pasteurised.

Milk Supply to Schools, Day Nurseries and School Canteens

There were 202 samples taken at these establishments and all proved satisfactory both chemically and bacteriologically.

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. 224 samples of tuberculin tested milk were taken and 166 were specially tested for brucella abortus infection. These samples were taken from milk produced in the city and from milk sent from outside areas where it had been bottled on the farm.

The milk from one city herd and one herd in an outside area was found to be infected with brucella abortus. In the case of the city herd immediate measures were taken to isolate the infected cow by further individual sampling. By this means the suspected animal was isolated at once and with the co-operation of the producer one cow was slaughtered. In the case of the herd outside the city area, with the co-operation of the Medical Officer of Health for the area, the infected milk was stopped at the farm and sent for pasteurisation. In neither case was it necessary to send a notice requiring heat treatment of the milk.

Bovine Tuberculosis

The milk from 3 city herds was found to be infected with mycobacterium tuberculosis. This milk was already being pasteurised before sale therefore no notice requiring heat treatmment of milk was necessary. After veterinary examination one cow was slaughtered and found to be tuberculous.

Fertilisers and Feeding Stuffs Act, 1926.

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.

Pharmacy and Poisons Act, 1933.

The Act, 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 707. It was not necessary to take any legal proceedings.

Milk Supplies.

The city's milk supply

The duties relating to the supervision and inspection of food and food premises are the responsibility of the public health inspectorial staff and these duties include the administration of legislation governing the registration of milk distributors and their premises, the issue of licences in support of the sales of designated milk handled by them and the treatment, storage, distribution and sales of milk effected by them, which entailed the issue of 126 new registration certificates and 395 new licences required in support of the sale of designated milk.

Milk distribution

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 very important food and most careful supervision is essential at every stage from its receipt at the factory where it is to be treated, bottled and stored, down to the delivery to the consumer, who may be in the home, school or factory canteen.

Under the present departmental arrangements it is possible for inspectors to keep a close watch on all the links in the chain of milk handling, treatment, storage and distribution as it is now 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 observed and complied with.

Registration of Dairies

Although all milk is produced under the supervision of the Ministry of Agriculture, Fisheries and Food, who register all such producers as dairy farmers, the handling, treatment, storage and distribution of milk, other than that 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, accordingly, be both registered and licensed by that authority.

This entails a frequent check on all registered premises and routine visitation revealed that 32 businesses had ceased to operate, 42 dairies required to be transferred from one person to another and 126 new registrations were required to be effected, comprising 42 transfers and 84 new registrations. 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 is distributed under a specially designated description, according to its treatment and all milk distributors must hold a licence in respect of each particular designation which they handle. These licences are renewable annually and are accordingly collected for endorsement and re-issue by the inspectors, who, at each visit, examine the premises to ensure that the conditions are satisfactory for the storage and sale of milk. During the year 2,706 visits were made to premises at which milk is handled, treated, stored or sold.

Registered dairies and distributors

Number of registered dairies	593
Number of registered distributors	616
Number of dairies which ceased to operate	31
Number of dairies newly registered	84
Number of distributors who ceased to operate	31
Number of dairies transferred from one person to another ...	42
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	22

Under the terms of the Milk and Dairies (General) Regulations, 1959, Part 3, Regulation 8(1) the 16 distributors who are daily bringing milk into Liverpool and who were registered by this authority as well as by the authority in which their premises are situated, need not now be so registered by this authority and their names have accordingly been removed from the register.

[NOTE.—It is still necessary for such distributors to be in possession of licences, covering each designation of milk with which they deal, to be issued by this authority, therefore, their existing licences are still operative, as shown above.]

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 153 visits were made to pasteurising plants when the installations were in operation and also at times when the plant was in process of dismantling for cleaning and sterilising, special attention being paid to temperatures and functioning of the indicating and recording instruments during the water runs on reassembly of the plant. Holding times were also checked. Checks on thermographs and indicating thermometers revealed that in six instances inaccuracies had arisen. These were rectified by the operator at the time of visit excepting for three instances when the thermographs required to be overhauled or repaired by the maker.

Milk Sterilisation.

During the year 152 visits were made to sterilising plants and in each instance all component parts of each plant were inspected. All indicating and recording thermometers were checked and in three instances inaccuracies were found. These were of such a nature that they could be rectified at the time of visit.

Inspection of dairies

A thorough examination of all plant and utensils in or about 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 approved sterilising agents and detergents, also the temperatures at which these machines are operated. The balance tanks, both for raw milk on receipt and for processed milk on completion of pasteurisation, are examined for deposits and cleanliness. Bottle filling machines and capping plants are carefully inspected for inaccuracies such as ineffective capping, etc. Homogenisers and heat exchangers on the sterilising milk plant are checked, together with pressures and temperatures, both on the homogenisers and in the autoclaves.

Pasteurisation and sterilisation of milk

There are 5 high temperature short time pasteurising plants operating in the city. These consist of 16 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 plant of an equal capacity, automatic filling and capping machines, together with the necessary conveyor belt systems to adjacent cold rooms.

In addition to the foregoing high temperature short time units, 4 establishments are fitted with holder or batch type pasteurisers, there being a total of 8 separate units of from 100 gallons 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.

Churn washing and sterilising equipment

There are four mechanical tunnel type washers in operation for the washing and sterilising of milk churns in addition to 2 rotary washers and 6 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. In the 9 foregoing establishments, approximately 365,000 to 370,000 gallons of milk are heat treated daily, the balance over the city's requirements being processed here for distribution outside the city area.

Distribution of milk by dispensing machines in cartons

From the establishment which is fitted with a machine for the making, filling and sealing of cartons (made from sheet polythene lined board) an increasing amount of milk is being sold by the bulk delivery of cartons of milk to factories and workplaces and by means of three milk vending machines. Two of these machines are operating in factories, first as a trial and later, if successful in their utility, as a permanent basis for selling milk to persons engaged in factories. These machines are sited with the approval of the local authority and are open for inspection and examination as and when required. One vending machine is sited outside a shop and as it is the first of its kind to be operated here, special observation is being maintained on the operation of the machine. This machine is used for the sale of milk in pre-moulded cartons containing Tuberculin Tested Pasteurised milk ($\frac{1}{2}$-pints) and is so far operating satisfactorily. The cartons are filled and sealed at the processing establishment.

Frozen milk in cartons

The demand for the $\frac{1}{2}$-pint and 1-pint cartons of frozen milk is still on the increase. These cartons are stored in a deep freeze plant in the city and are used entirely for export and by shipping companies for use on voyages. No milk under this heading is sold within the city area. The output of this plant is approximately 300 gallons daily. (All the milk in this category is heat treated and frozen outside the area.)

Mechanical de-crating and crating plant

This plant fitted in one of the larger dairies and consisting of two separate units is operating quite successfully.

Milk for Export

The sterilised milk which is processed in bottles, packed and shipped to the Near East weekly shows a slight increase over the year.

Milk (Special Designation) (Raw Milk) Regulations, 1949. Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949.

Milk Licences

A person who is 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	609
Vendors of pasteurised milk	602
Vendors of sterilised milk	593

All the foregoing licences were issued to registered milk distributors and in addition to these, 1,103 licences were issued to vendors of sterilised milk only, these persons being in the main, small shopkeepers.

During the year 251 businesses were transferred from one person to another involving the cancellation of 346 licences and the issue of new ones to the new proprietors.

Ice cream registrations on registered dairy premises

There were 737 visits made to dairy premises for the purpose of transferring existing registrations for the sale of ice cream or for issuing new registrations for this purpose and routine visitations.

An extensive building programme is in operation at one of the main dairies and the sterilisation plant, previously housed in temporary structures, is now being housed in a modern brick built building.

DAILY CONSUMPTION OF MILK IN LIVERPOOL

Total milk consumption in the city

	Gallons
Tuberculin tested milk (farm bottled)	866
Tuberculin tested milk (bulk)	455
Tuberculin tested milk (pasteurised) ...	32,972
Pasteurised milk	52,298
Sterilised milk	18,923
Total number of gallons	105,514

There are some 1,380 gallons of milk produced daily in the city of which approximately 530 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 and then sold as Tuberculin tested milk (Pasteurised). The ungraded milk produced in the city, of which there are some 300 gallons, is all collected by the wholesalers for pasteurisation. Approximately 540 gallons of cream are produced daily in the city.

Liverpool Corporation Act, 1921. Sections 475-483.

Premises used for housing of cattle

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 1959 the following table of licences was operative for the keeping of cattle and/or pigs in the city area:—

Licences to keep cattle	29
Licences to keep pigs	49
Number of dairy cows permitted on licences	724
Average number of dairy cows kept	429
Number of store cattle permitted on licences	377
Average number of store cattle kept	150
Number of pigs permitted on licences	3,338
Average number of pigs kept	2,043
Number of licences forfeited on ceasing to keep cattle	5
Number of cattle involved in these licences	127
Number of licences forfeited on ceasing to keep pigs	6
Number of pigs involved in these licences	284
Number of cattle licences transferred from one person to another ...	1
Number of pig licences transferred from one person to another ...	1

Routine visits were made to all these premises during the year and all infringements were dealt with by notice or verbally, all the requirements being carried out to the satisfaction of the department.

Number of visits made to cow sheds	57
Number of visits made to piggeries	102

FOOD HYGIENE

The effect of special departmental activities

The spotlight of special attention swings each year to different facets of the department's work. By reason of special departmental need, or because of public attention being directed to a particular matter, certain of the department's duties are diverted from time to time in order to deal with the subject in question.

Whilst two major events have entailed a concentration of effort involving a considerable number of man-hours to deal with them, other sections of departmental work, and food hygiene in particular, have been given the necessary degree of attention to ensure all reasonable safeguards.

Food traders co-operation

The food trade as a whole is sufficiently aware of its responsibilities with regard to hygiene as to be able to conduct its affairs reasonably well without pressure from, or supervision by enforcement officers. In fact there is a high degree of co-operation and understanding by a large section of the trade which enables the department to direct its attention to the less satisfactory premises.

Without wishing to detract from the foregoing acknowledgment to food traders generally, it must be emphasized that the degree of indifference among certain food workers and the lack of practical effort by a number of owners of food businesses is a matter of great concern to the department.

However one may assess the vast amount of good work already done in the field of food hygiene, one is constantly reminded that the job is far from completion. In fact, having regard to the number of food poisoning cases which are still being notified, and the unsatisfactory methods of food handling revealed upon investigation of these cases and during the routine inspection of food premises, doubts are borne upon the mind as to whether the task will ever be brought to a completely satisfactory conclusion.

Need for supervision

One fact is certain that careful and regular supervision of food production, preparation and serving must continue, and the endeavour to educate the nation, for it is a national problem and responsibility, must not be retarded.

Methods of training

Efforts are already afoot to provide the means for training personnel in the various aspects of food hygiene. Unfortunately the facilities at present available are entirely inadequate to meet the demand, and it would appear that there is an opportunity now to plan certificated courses of training throughout the country. This might well be done by co-operation between local health and education departments together with traders and trades organisations.

Public reaction

Public demand for a better food service falls far short of the need to make food suppliers more careful in their methods of display and distribution. There are indications that public reactions are less vociferous in recent months, which is not necessarily evidence that they have nothing to complain about. The spur to action appears to have lost much of its thrust, and it might be necessary to stimulate public interest once again by further publicity of the dangers that still invade their food supplies.

Inspections of food businesses

During the year 18,019 visits were made to retail food shops, cafés, bakehouses, licensed premises, food factories, street traders, etc., and 2,589 infringements were dealt with in respect of these premises.

Attention has also been given to cafés, restaurants, etc., in order to ensure compliance with the Food Hygiene Regulations and Liverpool Food Byelaws, and 809 routine visits have been made to these premises, apart from general observations during the course of visits under the Clean Air Act and other duties.

Court proceedings

Included among the many proceedings taken in Court were 37 informations, involving a total of 130 infringements of the Food Hygiene Regulations 1955, and fines totalling £185 0s. 0d. were imposed by the Stipendiary Magistrate.

Proceedings were taken against certain bakery firms, café proprietors and a fish cake manufacturer, and the evidence covered a considerable number of items of lack of cleanliness of articles and equipment, walls, floors, woodwork, structural disrepair, the presence of cat excreta in two of the premises, the absence of adequate washing facilities, soap, clean towels and nail brushes, also food not protected from the risk of contamination. The defendants pleaded guilty in all cases and the premises were dealt with satisfactorily by the occupiers.

Clubs

There are approximately 320 clubs in the City, including licensed establishments and 203 visits were made to them during the year. These premises are usually only open at night and thus require late visits or arrangements for access to be made by appointment. This latter arrangement is not particularly satisfactory owing to the difficulty experienced in contacting the responsible person, and sometimes involves the use of a great deal of time.

Standard of hygiene

The general standard of hygiene in these premises is, on the whole, much improved, although it is realised that there is a degree of indifference or inattention on the part of certain club organisers or managers. In these clubs supervision on the part of the inspectors is essential.

It is appreciated that there are problems associated with clubs which do not apply in food shops and factories where paid labour is employed. In clubs run solely by volunteer helpers there is the lack of authoritative direction whereby personnel can be allocated to particular tasks. Also there is invariably an absence of a sufficient financial reserve to enable structural improvements to be carried out satisfactorily. It is because of these difficulties that works of improvement and cleaning which are carried out from time to time rapidly deteriorate, and inspectors are faced with the task of endeavouring to fulfil their duty without creating the impression of exercising undue pressure.

Restaurants, cafes, snack bars, etc.

In spite of the considerable amount of time given to the special matters referred to earlier in this section of the report, the department has been aware of the necessity of giving as much attention as possible to restaurants, cafés, snack bars, etc., especially those in the central area of the City. Whilst there is a considerable and excellent endeavour on the part of the proprietors of many of these establishments to maintain a satisfactory standard of hygiene, the need for regular visits by inspectors remains as great as before.

Staff changes

Changing staff, which occurs frequently, presents a special problem of maintaining standards of training and efficiency, and inspectors, whenever possible, advise personnel of the need for and the methods of hygienic food handling.

Food Hygiene Course

Some firms have taken advantage of the food hygiene course held at the University School of Hygiene for persons engaged in the many branches of the food trade, and members of their staffs have responded well and with notable success.

This is an encouraging development, and one which, if developed further, will ultimately produce a sufficiently qualified group of food workers who will understand what food hygiene really means, and through a knowledge of the pathological dangers involved, be enabled to make an effective contribution to the eradication of food poisoning.

Food shops

Whilst there has not been any extra special attention devoted to food shops, nevertheless, routine attention has been given to some 7,000 retail food establishments in the City. The requirements as to the standard of hygiene and the problems associated with the compliance with those requirements are similar in most respects to those affecting the catering trade.

There is the same degree of co-operation from the traders as a whole, but there are still shopkeepers whose trading practices have not advanced very far beyond the traditional methods of past years, being slow to acknowledge the need for some of the more detailed care required in the storage, display and serving of food. There remains, among a few, a certain scepticism of the demands made upon them to improve their methods, and it is an extremely difficult, and often a long, tedious process to bring them to some measure of understanding of the medical aspects of hygiene requirements.

In a number of cases economic factors are allowed to outweigh to an unjustifiable degree the needs of public health, thereby causing shops to be understaffed so that sufficient attention is not given to adequate cleaning, especially of stock rooms and fixtures, and through pressure of work, preventing employees from leaving the counter during the busiest periods of the day to ensure personal cleanliness.

Indifference among food handlers

Concern is also felt regarding the indifference of certain food handlers to the need for greater care in the observance of hygienic practices. Some show a complete disregard for their responsibilities. There are many indications of frequent smoking in food rooms and shops, but, unfortunately, these people are careful to avoid being caught by the inspectors.

Employers' problem

Employers find themselves, in many cases, unable to effectually deal with these problems, due mainly to the difficulty of obtaining satisfactory labour, and where shops are short of staff even the most conscientious employer is reluctant to take the only effective step in dealing with unco-operative workers.

Infectious disease notification

Employers in the food trades have not responded as well as is required of them by Regulation 11, of the Food Hygiene Regulations, 1955. It is felt that many cases of notifiable diseases under this regulation are not brought to the attention of the local authority. There were 142 notifications received and appropriately dealt with by the department during the year.

Fried Fish Shops.

Inspections

The inspection of fried fish shops has been of a routine nature during the year, and these premises have been dealt with along with all other food shops. All aspects of the Food Hygiene Regulations, as they affect this class of food business, have been fully applied. A total of 339 special visits were made to these premises, apart from the casual or incidental visits which have been made for other purposes.

Standard of hygiene

The experience of inspectors indicates that the general standard of hygiene is being satisfactorily maintained, but, again, there is evidence of a partial falling back in certain cases. On the other hand, steady progress is being maintained in the general structural improvement of premises by the increasing use of tiling, modern equipment, and brighter and attractive lighting. The co-operation of these traders is greatly appreciated.

Ice Cream Retail Trade.

Inspections

The registration in the City of ice cream manufacturers and vendors is regulated by the Liverpool Corporation Act, 1936, and there are now 1,546 premises so registered.

New registrations

Ice cream is sold in a vast variety of retail shops, but only in those premises which satisfy the requirements of the Food Hygiene Regulations. An unusual characteristic of this class of business is the frequency with which they change ownership. There were 240 new registrations during the year, all of which, with the exception of 25, were transfers to new occupiers.

Hygienic standards

Modern methods of storage, packaging and wrapping have almost completely removed the dangers formerly present in the retail distribution of ice cream. There is, however, a considerable need for careful supervision of these premises, especially in those where unwrapped ice cream is sold.

Street Trading.

Supervision of street trading

The work of the department in connection with street trading has been directed to an endeavour in solving some of the problems associated with this class of retail trading. The major problem is the maintenance of adequate supervision over many of these extremely mobile units which constantly move from district to district and appear to have no set routine or timetable.

Satisfactory vehicles

Many mobile shops are well equipped and maintained, especially those which have been brought to the department's office for approval before being used.

Problem vehicles

Unfortunately other traders take advantage of the absence of compulsory official approval of these vehicles and go out on to the roads with poorly equipped vans which soon become unsatisfactory and which cannot meet the requirements of the Food Hygiene Regulations.

Departmental action

Periodical surveys bring most, if not all, of these mobiles under the attention of the department and immediate action is taken in every case to make the traders concerned comply with the regulations. In two of three instances the old vehicles have been scrapped by the owners because of the impracticability of improving the vans.

Inspections

There are some 107 barrows and carts and 100 mobile shops operating in the City and 330 special visits have been made during the year, also 12,845 visits and observations for other purposes. Altogether 66 infringements were dealt with satisfactorily.

Special action was also taken in respect of a number of instances where traders using barrows were stacking open boxes of fruit and net bags of vegetables on street and yard pavements and upon vacant sites. This type of street trading presents greater problems than those associated with mobile shops because of the difficulty produced by the handcart not being sufficiently large to accommodate all the stock required for the day's trading. The traders therefore place foodstuffs on

the roadway under the carts or on nearby ground which entails the serious risk of contamination from animals and dirt. The solution of this particular problem is difficult to find. Action taken by the department so far, has considerably reduced the practice and means are being considered for a satisfactory alternative which will meet the needs of the traders.

Transport of Food.

Feeder lines of the food trade

The retail distribution of foodstuffs is entirely dependent upon the feeder lines of transport. This is an integrant part of the food trade and one in which a very considerable risk of food contamination exists. Therefore it is somewhat remarkable that traders as a whole have not given more careful attention to their vehicles and the methods of handling certain foodstuffs during transport.

Negligence of distributors

Inspectors have observed incidents of negligence on the part of transport workers whilst carrying food supplies into shops. There is a marked lack of care of personal cleanliness, and far too often these workers fail to wash their hands and to don clean protective clothing before they carry the food into the place of delivery. The fault does not lie entirely with the worker, but very often with his employer who fails to instruct his staff properly or to furnish them with the necessary facilities or means for complying with the Food Hygiene Regulations.

Employers' responsibility

Inspections

Whilst the above factors are receiving the serious attention of the inspectors during the course of their inspections of all food vehicles, it must be recorded that a steady improvement is being maintained both with regard to the greatly improved types of vehicles and to the facilities for personal hygiene provided for drivers and their assistants. In a number of cases insulated washing units have been installed in the vans to assist the workers to keep their hands clean.

Hand washing facilities

Food protection

The risks of contamination to which food is exposed during transport have also been reduced by reason of the increased practice of the pre-wrapping or packaging of many foodstuffs which were formerly transported in bulk. Whatever the economic aspects of this desirable development may be, it is certain that pre-wrapping must be developed beyond its present limits, but with this safeguard in mind, that all other protective measures are maintained to the fullest degree. The

packaging of food before distribution could well produce a false sense of security among food handlers in the factories, in packing rooms, in the preparation rooms, and in the shops. Pre-wrapping must be an additional safeguard—not the only safety measure.

Bread vans

The contemporary van with its metal lined interior is now in general use by the wholesale and retail trade. The replacement of the old type of van which was badly designed from a hygienic point of view has been gradual, and the makers of this class of vehicle have co-operated with the baking industry to produce a van which can be kept clean with a minimum of effort.

The effect of this was seen when the use of hose pipes were forbidden during the water shortage following the lack of rain in the summer months. Manual methods of cleansing had to be adopted and these were found to be satisfactory and little difficulty was encountered in maintaining a good standard of cleanliness in those cases where vehicles were of a modern design.

DISINFECTION AND DISINFESTATION

Although the title of this section may imply that disinfection and disinfestation are the paramount functions, such is not the case. The duties associated with disinfestation continue in more or less the same degree, but the marked reduction in the incidence of infectious disease during the past years has naturally led to fewer demands on the disinfection side of the section. This reduction, however, has been more than counterbalanced by a large increase in other functions in which the staff is engaged, and this increase is realised more clearly when it is remembered that with any increase in existing services or the introduction of new services it invariably happens that this section becomes involved to some degree. It may be of interest to list the principal duties for which the section is responsible.

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. Burial Service.
8. Storage, distribution and collection of Home Nursing Equipment.
9. Mobile Meals Service.
10. Food and General Store.
11. Welfare Food Service.
12. Poliomyelitis Immunisation—Transport.
13. Milk Bank.
14. Miscellaneous Services.
15. The Liverpool Show.

1. *Inspections for Verminous Condition.*

Inspections for Verminous Conditions

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 they are 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.

Hospitals

(*c*) Hospital Management Committees continue with requests for inspections and treatment of those hospital premises where cockroach or steam-fly infestation is suspected.

Canteens

(*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.

Fly Problems at Otterspool

During the latter part of a summer which will be remembered for its continued fine weather and record-breaking hours of sunshine, the department was faced with a serious problem of fly infestation at the Otterspool refuse tip. Numerous and continued complaints of fly infestation were received from residents in the Otterspool area and it was only after a prolonged series of disinfestation treatments in co-operation with staff of the Cleansing Department that the nuisance was abated.

Certain specific and urgent recommendations have been made to the City Engineer and Surveyor for certain work to be put in hand during the winter, so as to prevent a repetition of this fly infestation during the coming year.

2. *Disinfestation Treatment of Verminous Premises.*

As a result of the inspections detailed in the previous paragraphs disinfestation treatment was carried out in the following cases:—

Premises Treated

(*a*) 693 dwelling houses treated at the request of the Housing Department.

(*b*) 609 dwelling houses treated at the request of owners or occupiers.

(*c*) 295 treatments of hospitals, staff canteens, factory premises, etc.

a total of 1,597 treatments.

3. *Disinfestation treatment of Verminous Furniture, etc.*

Verminous Furniture

The disinfestation of dwelling houses usually necessitates 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 disinfestation 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 1,013 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 dwelling houses 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.

Work of Disinfestation and Disinfection Stations

In this connection the stations dealt with the following items during the year.

6,968 verminous articles disinfested.
17,000 infectious articles disinfected.
113 infectious library books.
8,486 articles disinfected as a precautionary chargeable measure.
1,191 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, 1,845 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, 509 bodies were received and 455 post-mortems were held. Close liaison is maintained with the City Coroner's Officer 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 153 adults and children and 4 stillborn babies.

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 68 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 1959, 2,587 visits were made for the purpose of issuing or collecting the various items.

Home Nursing Equipment Deliveries

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.

Meals on Wheels

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, 19,729 visits were made and a corresponding number of meals supplied, three vans being used for this purpose.

It will be noted that the increase foreshadowed in last year's annual report is now becoming evident and arrangements are now in hand for a further considerable increase during the coming year.

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, but including a number controlled by the School Medical 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 Store-Keeper and three assistants.

11. *Welfare Foods.*

Welfare foods provided by the Ministry of Health and proprietary foods provided by the Local Authority are issued to the general public from a large number of distribution centres throughout the City. The supervision of these centres and the staff employed is under the control of this section, together with the transport necessary for the efficient maintenance of this service.

Statistics for this service will be found on page 29.

12. *Poliomyelitis Immunisation.*

Delivery of Poliomyelitis Vaccine

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.

13. *Milk Bank.*

Collection of Human Breast Milk for 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.

14. *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.

(*j*) Maintenance of gardens at day nurseries and clinics.

15. *Liverpool Show*—1959.

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 86, consisting of:—

Administrative	*Operational*
1 Chief Inspector	2 Mortuary Attendants
4 Inspectors	1 Mechanic
1 Copy Typist	1 Joiner
3 Foremen	2 Boiler Attendants
1 Storekeeper	14 Drivers
2 Welfare Foods Supervisors	17 Disinfestors, Disinfectors, etc.
1 „ „ General Assistant	36 Welfare Foods Distributors

Vehicles.

Sixteen 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 151,032 miles and consumed 9,959 gallons of petrol.

CIVIL DEFENCE

Ambulance and Casualty Collecting Section

Extensive training of members has taken place for the Ambulance and Casualty Collecting Section throughout 1959. During this period five training courses were arranged and 120 persons attended for training of which twenty-four members of the section qualified for the award of a certificate and silver star.

The inauguration of a divisional training night at Civil Defence Headquarters, and Civil Defence Divisional Headquarters, 90 Rose Lane, Liverpool 18, now held at weekly intervals, has proved a big success in keeping together volunteers who have completed standard training.

In addition to ordinary training, special training was given to two ambulance driver/attendants and four Casualty Collecting Party members for entry into the North Western Region Competition held at Belle Vue, Manchester, on 9th July, 1959. The team were successful in gaining fourth place in the Section and Runners-up in the overall award.

The driving school continued training drivers throughout the year and those who have passed the official test have assisted in giving driving practice to trainees. Eight volunteers were successful in passing the official driving test.

Shelter Welfare

Due to the marked lack of volunteers coming forward for this particular section of the Civil Defence Welfare Services, no courses were arranged during the past year. A number of talks were, however, given on this subject to meetings of various organisations in the City.

Welfare Section (Care of the Homeless, Evacuation and Billeting)

During the first quarter of the year a full home nursing course was held of eleven sessions and at the subsequent examination eleven members were granted a Home Nursing Certificate.

In the autumn a first aid and home nursing course of five sessions was held; and later a full first-aid course was held which was attended by thirty members of the section, the examination to be held early in 1960.

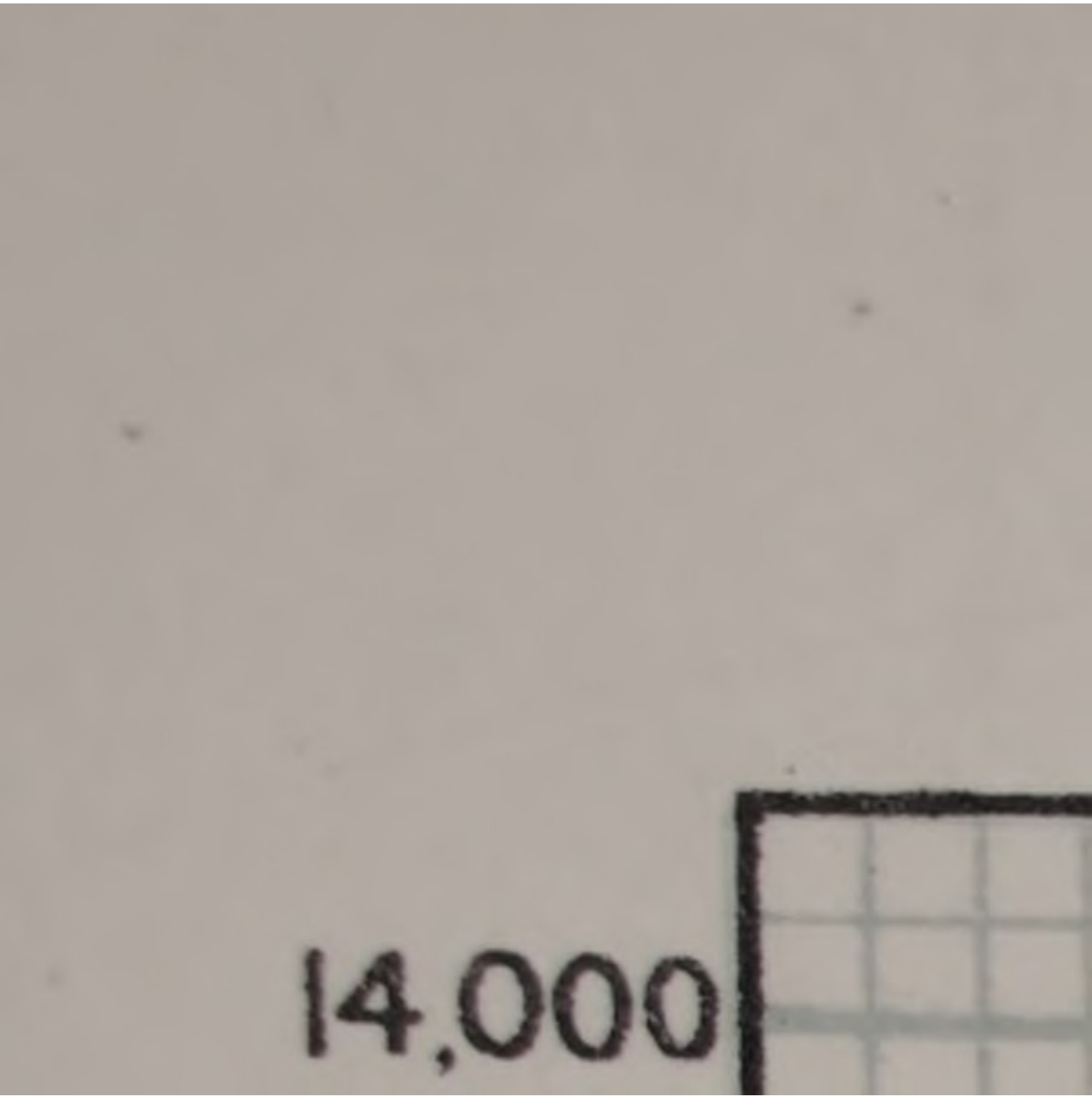
A course in evacuation and care of the homeless was attended by class of twenty members, and a similar course for newly enrolled per sonnel was being held at the end of the year.

Members of the Evacuation and Care of the Homeless section tool part training for the Regional Tourney (N.W. Civil Defence Region and were sixth at the competition held in Manchester in July.

Up to date, 154 proficiency badges have been issued to volunteers in respect of services dealing with care of the homeless and/or emergency feeding.

During the year follow-up action was taken under circular 26/55 in regard to non-active members and as a result the names of eighty volunteers were removed from the records.

DEATHS OCCURRING IN THE NUMBER OF
PLACE AT LIVERPOOL DURING EACH YEAR
1934 – 1959


14,000

CREMATION

Cremations

The Medical Officer of Health continued to act as Medical Referee to the Liverpool Crematorium. The Deputy Medical Officer of Health and the Senior Medical Officer act as deputy medical referees. The statutory documents connected with cremations are scrutinised at the central offices of the Health Department before the Medical Referee gives authority to cremate.

The number of cremations carried out at the Liverpool Crematorium has decreased during the year. 3,239 cremations were undertaken in 1959 compared with 3,348 during the previous year. This decrease can be accounted for by the fact that crematoria were opened at Southport and Widnes during 1958.

Many interesting cases were discovered from the documentation point of view, two being related to cases of persons who had died suddenly whilst travelling abroad. One was the case of a person who was on holiday in Spain and passed away there. It was found necessary to have the documents translated before the cause of death could be ascertained. Similar circumstances were discovered in the case of a man who died on board a vessel whilst at Antwerp, and in this case also, the aid of the Consul was sought before sanction could be given for the cremation to take place. The co-operation of the persons who carried out the translation in both these cases proved most helpful.

A great many cases continue to be received from Coroners throughout the country although in most cases the cause of death was found to be natural.

WATER SUPPLY

The water supply in the area during 1959 was satisfactory both in quality and quantity, but it was maintained with some difficulty during the autumn after some months in which the rainfall was deficient and the stocks of water in the impounding reservoirs were exceptionally depleted.

Bacteriological examinations and chemical analyses of the waters were made regularly by the Public Health Laboratory Service and the City Analyst, samples for these examinations being taken both in the City and at Prescot Storage Reservoirs.

During the year, the Medical Officer of Health and the Water Engineer submitted to the Water Committee a joint report on Radio-active Substances in Water Supplies.

The supplies from both Rivington and Lake Vyrnwy are filtered through slow sand filters, and chlorinated; they are also limed in order to raise the pH value. Further chlorination is carried out at the Prescot Reservoirs.

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

PUBLIC SWIMMING BATHS

The Public Swimming Baths, with the exception of one establishment which uses water pumped from the River Mersey, are filled with water from the Liverpool mains water supply.

Pressure Type Sand Filters are used, providing turnovers not exceeding four hours, and break-point chlorination is standard practice in all establishments.

The plunges are completely emptied and re-filled at intervals of not less than twelve months. There is, of course, progressive dilution in varying degrees caused by leakage, etc.

Frequent bacteriological tests are undertaken in the summer months, but with the introduction of B.P. chlorination these are of doubtful necessity. The reason for this is that the B.coli per 100 ml. and the total Coliform per 100 ml. are always zero readings.

In the school baths, Diatamaceous Earth Filters are used, and the turnovers vary from one to four hours. Marginal chlorination is used in these baths.

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STATISTICAL APPENDIX.

TABLE 1

BIRTH STATISTICS

	LIVE BIRTHS			STILLBIRTHS		
	Males	Females	Total	Males	Females	Total
Legitimate ...	7,580	7,220	14,800	193	158	351
Illegitimate ...	417	398	815	13	11	24
	7,997	7,618	15,615	206	169	375

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

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

TABLE 2.

Analysis of causes of Infant Mortality in successive quinquennia 1896-1955, and the years 1956, 1957, 1958, and 1959.

(A.)—Recorded Deaths.

Years.	1 Total Births.	2 Total Deaths Under 1 Year of Age.	3 General Diseases (excluding Tuberculosis).	4 Tubercular Diseases.	5 Nervous Diseases	6 Respiratory Diseases	7 Digestive Diseases (including Diarrhœa.)	8 Malformations Premature Birth, Marasmus &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

TABLE 2—*continued.*

Analysis of causes of Infant Mortality in successive quinquennia 1896-1955, and the years 1956, 1957, 1958, and 1959

(B.)—Death Rates per 1,000 Births.

Years	1 Total Births	2 Total Deaths Under 1 Year of Age	3 General Diseases (excluding Tuberculosis)	4 Tubercular Diseases	5 Nervous Diseases	6 Respiratory Diseases	7 Digestive Diseases (including Diarrhoea)	8 Malformations Premature Birth, Marasmus &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

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

TABLE 2—*continued.*

Analysis of causes of Infant Mortality in successive quinquennia 1896-1955, and the years 1956, 1957, 1958, and 1959

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

Years	1 Total Births	2 Total Deaths Under 1 Year of Age	3 General Diseases (excluding Tuberculosis)	4 Tubercular Diseases	5 Nervous Diseases	6 Respiratory Diseases	7 Digestive Diseases (including Diarrhoea)	8 Malformations Premature Birth, Marasmus &c.	9 External Causes
1896/1900	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1901/1905	100·0	91·0	102·3	89·3	95·9	91·5	76·5	94·0	65·7
1906/1910	93·0	78·6	107·1	62·9	78·6	83·1	57·8	91·0	63·0
1911/1915	87·0	72·5	91·9	50·0	57·9	81·5	56·9	84·0	52·1
1916/1920	76·0	61·4	87·4	32·2	49·3	88·7	32·7	82·0	25·5
1921/1925	75·1	54·9	80·3	30·6	24·9	84·7	29·9	70·8	16·4
1926/1930	66·2	49·7	80·3	17·7	18·9	83·5	30·4	60·9	11·0
1931/1935	61·4	47·2	79·5	14·8	18·9	72·2	23·4	69·2	10·4
1936/1940	58·1	40·7	55·1	14·5	29·0	55·9	15·4	64·5	13·7
1941/1945	63·8	41·3	37·8	16·1	25·3	75·3	13·5	62·0	24·6
1946/1950	68·7	29·4	26·9	8·0	10·6	38·5	18·3	48·8	15·9
1951/1955	60·1	17·6	8·2	1·9	1·5	19·0	2·9	44·7	10·7
1956	61·7	13·8	3·9	—	1·8	14·7	1·1	36·9	6·8
1957	62·6	13·8	3·1	—	2·3	15·6	1·6	36·9	5.5
1958	61·4	14·8	1·6	—	1·4	15·3	2·3	40·2	5.5
1959	61·7	14·3	2·4	—	0·9	11·9	2·1	42·7	2·7

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, and 1959.

Years.	(a) Infective diseases (less Diarrhœa and Influenza).	(b) Tubercular diseases.	(c) Respiratory diseases (including Influenza).	(d) Digestive diseases (including Diarrhœa).	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
Deaths expressed as a percentage of total deaths from all causes (Proportionate Mortality).							
1871-1880	19·2	13·5	20·2	10·0	62·9	1·4	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	100·0
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				

TABLE 4

DEATHS FROM CANCER

Organs Affected	Number of deaths
Buc. cavity and pharynx	32
Oesophagus, stomach, intestines and rectum	557
Larynx, trachea, bronchus and lungs ...	444
Cervix and uterus	58
Breast	101
All other sites	379
Leukaemia and aleukaemia	41
Lymphosarcoma	35
Total	1,647

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

TABLE 6

PREMATURE BIRTHS

Year	Domiciliary Deliveries				Hospital Deliveries			
	Born at Home and Nursed at Home by Premature Baby Nurses	Survived 28 days	Born at Home and Transferred to Hospital	Transferred to Hospital and Survived 28 days	Born in Hospital and Discharged to care of Health Visitor	Survived 28 days	Born in Hospital and Transferred to care of Premature Baby Nurses	Born in Hospital and Transferred to Premature Nurses and Survived 28 days
1955	187	182	51	34	1,021	853	48	48
1956	203	201	58	36	1,058	909	115	115
1957	208	202	39	28	1,063	898	248	248
1958	220	214	42	20	1,027	877	368	368
1959	199	195	46	34	988	807	439	439

TABLE 7

PREMATURE BABY SURVIVAL—1955-1959

	Weight	Born at Home and Nursed at Home		Born at Home and Transferred to Hospital		Born in Nursing Home and Nursed there		Born in Nursing Home and Transferred to Hospital		Born in Hospital		On Discharge Transferred to care of Premature Baby Nurse
			Survived 28 days		Survived 28 days		Survived 28 days		Survived 28 days		Survived 28 days	
1955	Less than 3 lb. 4 oz.	4	1	14	3	—	—	—	—	152	50	1
	3 lb. 5 oz. to 4 lb. 6 oz. ...	13	12	15	13	—	—	—	—	186	148	14
	4 lb. 7 oz. to 5 lb. 7 oz. ...	110	110	19	16	10	9	—	—	600	572	28
	5 lb. 8 oz.	59	59	3	2	3	3	—	—	83	83	5
1956	Less than 3 lb. 4 oz.	1	—	21	9	—	—	—	—	142	60	9
	3 lb. 5 oz. to 4 lb. 6 oz. ...	27	26	23	18	1	1	—	—	193	159	27
	4 lb. 7 oz. to 5 lb. 7 oz. ...	129	129	12	7	7	7	—	—	647	617	58
	5 lb. 8 oz.	46	46	2	2	4	4	—	—	76	73	21
1957	Less than 3 lb. 4 oz.	3	2	13	6	—	—	—	—	147	48	29
	3 lb. 5 oz. to 4 lb. 6 oz. ...	19	18	9	9	4	3	1	1	233	195	123
	4 lb. 7 oz. to 5 lb. 7 oz. ...	134	131	17	13	14	14	—	—	614	588	74
	5 lb. 8 oz.	52	51	—	—	4	4	—	—	69	67	22
1958	Less than 3 lb. 4 oz.	1	1	16	4	—	—	—	—	128	35	29
	3 lb. 5 oz. to 4 lb. 6 oz. ...	28	24	15	8	3	3	—	—	218	182	139
	4 lb. 7 oz. to 5 lb. 7 oz. ...	143	141	10	7	10	10	—	—	598	580	167
	5 lb. 8 oz.	48	48	1	1	2	2	—	—	83	80	33
1959	January to June.											
	Less than 3 lb. 4 oz.	5	3	10	6	—	—	—	—	74	22	20
	3 lb. 5 oz. to 4 lb. 6 oz. ...	6	6	3	2	1	1	—	—	103	76	61
	4 lb. 7 oz. to 5 lb. 7 oz. ...	73	73	6	5	9	9	—	—	306	289	117
	5 lb. 8 oz.	29	28	2	—	—	—	—	—	34	33	23
1959	July to December.											
	Less than 3 lb. 4 oz.	3	2	8	5	—	—	—	—	71	20	20
	3 lb. 5 oz. to 4 lb. 6 oz. ...	7	7	6	5	—	—	1	1	80	72	58
	4 lb. 7 oz. to 5 lb. 7 oz. ...	54	54	9	9	3	3	—	—	270	256	116
	5 lb. 8 oz.	22	22	2	2	1	1	—	—	40	39	24

TABLE 8

ANALGESIA

	Year	Doctor present at delivery	Doctor not present at delivery	Total
Liverpool Maternity District Homes				
Gas/Air	1957	28	869	897
	1958	34	990	1,024
	1959	43	919	962
Pethidine	1957	17	605	622
	1958	19	708	727
	1959	26	671	697
Municipal Midwives				
Gas/Air	1957	276	3,118	3,394
	1958	314	3,140	3,454
	1959	290	3,032	3,322
Pethidine	1957	239	2,577	2,816
	1958	277	2,584	2,861
	1959	350	2,473	2,823

TABLE 9

MIDWIVES ENGAGED IN BOTH DOMICILIARY AND INSTITUTIONAL PRACTICE AT THE END OF THE YEAR

	Domiciliary Midwives	Midwives in Institutions	Total
Midwives employed by the Authority	51	—	51
Midwives employed by Hospital Management Committees or Boards of Governors under the National Health Service Act:— Under arrangements with the Local Health Authority in pursuance of Section 23 of the National Health Service Act, 1946 ...	10	186	196
Midwives in private practice (including midwives employed in nursing homes)	—	8	8
Totals	61	194	255

TABLE 10

ANALYSIS OF CONFINEMENTS

	Domiciliary Cases.				Totals.	Cases in Institutions.
	Doctor not booked.		Doctor booked.			
	Doctor present at time of delivery.	Doctor not present at time of delivery.	Doctor present at time of delivery (either the doctor booked or another).	Doctor not present at time of delivery.		
Midwives employed by Hospital Management Committees or Boards of Governors under the National Health Service Act...	—	212	43	876	1,131	13,309
Midwives in private practice (including midwives employed in nursing homes) ...	—	—	—	—	—	461
Midwives employed by the Local Authority						—
Year 1957 ...	18	590	307	3,173	4,088	
Year 1958 ...	14	459	353	3,343	4,169	
Year 1959 ...	9	371	320	3,185	3,885	

TABLE 11

REASONS FOR REQUESTS FROM DOMICILIARY MIDWIVES FOR MEDICAL AID

Mothers		Babies	
Pre eclamptic toxaemia	31	Congenital abnormalities	25
Urinary infections	9	Asphyxia pallida	20
Rh negative with antibodies	1	Cyanosis	15
Poor general condition	4	? Cerebral irritation	2
Request for inhalation analgesia certificate	3	Vomiting	23
Intra uterine death	10	Prematurity and immaturity	11
Post maturity	1	Stillborn	5
Multiple pregnancies	6	Respiratory infections	28
Malpresentations	50	Hypothermia	3
Extra sedation	22	Poor general condition	13
Anaesthesia	1	Accident (fall from pram)	1
Haemorrhages	158	Discharging eyes	139
Complications during labour	277	Malaena neonatorum	2
Retained placenta and products	55	Green stools	1
Vaginal cyst	1	Mastitis	12
Born before arrival of midwife	4	Septic infections	73
Ruptured perineum	575	Pyrexia	2
Pyrexia	96	Jaundice	5
Abortions	42	Anuria	5
Suppression of lactation	17	Not passed meconium	1
Epilepsy	2	Umbilical infection	7
Thrombosis	35	Intestinal obstruction	1
Various aches and pains	15	Total	394
Rapid pulse rate	4		
Offensive lochia	2		
Breast infection	50		
Respiratory complications	16		
Septic infections	11		
Haematoma	1		
			1,499
Total	1,499	Total	1,893

TABLE 12

HOME NURSING—ANALYSIS OF DISEASES

BABIES 0-1 MONTH

	Cases	Visits
Spina Bifida	4	111
Bronchitis	2	6
Constipation	—	—
Pemphigus	4	43
Septic Fingers	1	7
Septic Toe	—	—
Septic Spots	22	251
Discharging Eye	16	121
Mastitis	2	12
Breast Abscess	1	7
Pneumonia	—	—
Septic Umbilicus	2	36
Protruding Umbilicus	1	9
Ophthalmia Neonatorum	10	120
Haemorrhagic Disease	—	—
Abscess of Head	1	15
Abscess of Shoulder	—	—
Sore Buttocks	—	—
Stomatitis	5	22
Otitis Media	—	—
Anaemia	—	—
Circumcision	—	—
Meningocele	—	—
Healthy Babies	9	93
Pyrexia (undiagnosed)	17	138
Otorrhoea	—	—
Jaundice	1	3
Head Injury	2	30
Prematurity	1	1
Supervision Feeding	1	13
Boils	2	15
Totals	104	1,053

TABLE 13

HOME NURSING—ANALYSIS OF DISEASES

BABIES 1 MONTH—1 YEAR

	Cases	Visits
Pneumonia	12	82
Bronchitis	82	483
Undiagnosed Respiratory Infection	4	25
Pyrexia (undiagnosed)	—	—
Scalds	—	—
Burns	1	10
Constipation	8	20
Circumcision	5	47
Whooping Cough	1	4
Measles	3	14
Septic Spots	5	52
Septic Throat	—	—
Abscesses	9	98
Lachrymal Abscess	—	—
Gastro Enteritis	1	2
Removal of Naevus	—	—
Conjunctivitis	2	7
Stomatitis	12	65
Sore Buttocks	—	—
Boils	—	—
Tuberculosis	—	—
Cervical Adenitis	1	8
Otorrhoea	1	2
Otitis Media	31	210
Spina Bifida	7	224
Tonsillitis	2	10
Eczema	1	18
Septic Umbilicus	—	—
Septic Infection	1	6
Impetigo	—	—
Mastitis	—	—
Osteomyelitis	—	—
Ectopic Viscera	1	5
Bath	—	—
Anaemia	—	—
Hernia	1	13
Meningocele	1	19
Cellulitis	1	10
Ophthalmia	1	10
Totals	194	1,444

TABLE 14

ANTE-NATAL CLINICS

	1958	1959
Total number of centres at which ante-natal clinics were held ...	21	20
Number of clinic sessions held per week (Medical)	24	23
Number of new cases attending ante-natal clinics (Doctors' Sessions)	2,250	1,846
Total attendances at ante-natal clinics	11,629	9,739
Total attendances at post-natal clinics	335	303
Number of new cases attending midwives' ante-natal clinics ...	586	706
Number of attendances at midwives' clinics	2,486	2,816

TABLE 15

CHILD WELFARE CLINICS

		1958	1959
Total number of centres at which child welfare clinics were held...		24	25
Number of clinic sessions per week		53	62
Number of new cases:	Under 1 year of age	8,200	8,616
	Aged 1-5 years	437	473
Total attendances:	Under 1 year of age	80,379	76,772
	Aged 1-2 years	7,657	8,582
	Aged 2-5 years	8,725	9,888
	Total under 5 years	96,761	95,242

TABLE 16

PRIVATE NURSING HOMES

The following Nursing Homes were on the register at the end of the year.

	No. of Beds	Medical	Maternity
Greystoke Nursing Home, 25, Aigburth Drive, Liverpool, 17.	25	23	2
Rosslyn Nursing Home, 202, South Mossley Hill Road, Liverpool, 19.	5	5	—
Lynwood Nursing Home, 32, Parkfield Road, Liverpool, 17.	18	8 Medical and Surgical	10
Elmswood Nursing Home, North Mossley Hill Road, Liverpool, 18.	12	—	12
Holmleigh Nursing Home, 61, Russian Drive, Liverpool, 13.	18	18	—
Lourdes Private Hospital, 57, Greenbank Road, Liverpool, 15.	34	24 Medical and Surgical	10
Virgo Potens Hospital, Rose Brow, Gateacre, Liverpool.	32	32 Medical and Surgical	—
The Half Way Hostel, 25/27, Sefton Drive, Liverpool, 17.	18	18 Geriatric	—
Sunnybank Nursing Home, Speke Road, Woolton, Liverpool.	50	50	—

TABLE 17

NUMBERS PROVIDED WITH DENTAL CARE

	Examined	Needing Treatment	Treated	Made Dentally Fit
Expectant and Nursing Mothers	790	715	598	134
Children under Five Years	138	121	119	54

TABLE 18

FORMS OF DENTAL TREATMENT PROVIDED

	Expectant and Nursing Mothers	Children under Five Years
Scalings and Gum Treatment	97	2
Fillings	187	25
Silver Nitrate Treatment	3	1
Crowns or Inlays	—	—
Extractions	3,242	283
General Anaesthetics	458 + 197 locals	114 + 1 local
Dentures provided—Full Upper or Lower	435	—
Partial Upper or Lower	166 + 12 repairs	—
Radiographs...	9	—

TABLE 19

NUMBER OF CASES OF CERTAIN INFECTIOUS DISEASES REPORTED DURING 1959

	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Scarlet Fever ...	82	78	70	73	81	90	86	44	54	94	129	92	973
Measles and German Measles	1059	937	612	667	593	630	579	238	115	234	324	320	6,308
Diphtheria	—	—	—	—	—	—	—	1	—	—	—	—	1
Cerebro-spinal Fever	2	1	4	2	2	2	1	1	2	2	1	1	21
Poliomyelitis													
Paralytic	—	1	1	1	1	1	1	7	6	1	3	—	23
Non-paralytic ...	—	1	—	—	—	1	—	1	1	—	—	—	4
Pneumonia and Influenzal Pneumonia	36	138	86	31	22	11	22	17	18	16	12	42	451
Dysentery	50	14	16	18	18	26	23	17	12	50	80	83	407
Whooping Cough ...	51	79	76	80	102	107	113	218	242	156	151	113	1,488
Food Poisoning ...	7	1	3	4	5	6	6	24	49	28	22	5	160

TABLE 20

ANNUAL RETURN OF FOOD POISONING NOTIFICATIONS COUNTY BOROUGH OF LIVERPOOL, 1959

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Food Poisoning Notifications (Corrected) As returned to Registrar General ...	11	15	79	55	160
Cases Otherwise Ascertained	5	7	62	13	87
Fatal Cases	—	—	—	—	—

Symptomless Excreters 76

PARTICULARS OF OUTBREAKS

	No. of Outbreaks		No. of Cases		Total No. of Cases
	Family Outbreaks	Other Outbreaks	Notified	Otherwise Ascertained	
Agent identified (*Cl. welchii*)	—	1	—	42	42
Agent not identified ...	—	—	—	—	—

SINGLE CASES

	No. of Cases		Total No. of Cases
	Notified	Otherwise Ascertained	
Agent identified ...	160	43	203
Agent not identified ...	—	2	2

AGENTS

Staph. pyogenes	68	*Salmonella* organisms ...	135

TYPE

Sal. anatum	1	*Sal. montevideo*	3
Sal. enteritides	1	*Sal. newport*	3
Sal. give...	1	*Sal. poona*	1
Sal. heidelberg	2	*Sal. thompson*	3
Sal. infantis	1	*Sal. typhimurium* ...	118
Sal. kottbus	1		

TABLE 21

AGE PERIODS OF DEATHS FROM TUBERCULOSIS DURING 1959

Age Periods.	Respiratory		Meninges and C.N.S.		Other Forms	
	Males.	Females.	Males.	Females.	Males.	Females.
0— 1	—	—	—	—	—	—
1— 4	—	—	2	—	—	—
5— 9	—	—	—	—	—	—
10—14	—	—	—	—	—	—
15—19	—	—	—	1	—	—
20—24	—	—	—	—	—	—
25—34	1	5	—	—	—	—
35—44	6	6	—	—	—	—
45—54	15	8	—	—	—	—
55—64	19	3	—	—	—	—
65—over	30	9	—	—	—	—
Totals ...	71	31	2	1	—	—

TABLE 22

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) ...	990	641	63	10	25	19	1,000	666	82	1,748
B.—Contacts examined during the year:										
(*a*) Definitely tuberculous ...	7	15	29	—	—	—	7	15	29	51
(*b*) Diagnosis not completed...	—	13	20	—	—	—	—	13	20	23
(*c*) Non-tuberculous	277	598	2,830	—	—	—	277	598	2,830	3,705
C.—Cases written off the Dispensary Register as Recovered	249	313	71	38	39	19	287	352	90	729
D.—Number of Cases on Dispensary Register on Dec. 31st, 1959:—										
(*a*) Definitely Tuberculous ...	4,279	3,545	642	194	235	140	4,473	3,780	782	9,035
(*b*) Diagnosis not completed...	7	6	11	—	—	—	7	6	11	24

Number of attendances of patients at the Dispensaries during the year 1959 ...	38,716	Number of patients under medical treatment at home on 31st December, 1959 ...	1,859
Number of visits paid by the Tuberculosis Medical Officer to the homes of patients during 1959	690		
Total number of cases vaccinated with B.C.G. during 1959:—		Total number of visits paid to the homes of patients by Tuberculosis Visitors during 1959	39,986
Children 4,344*	4,442		
Others 98			

* Includes 1,864 newly born babies in Maternity Wards in Sefton General Hospital and Walton General Hospital.

TABLE 23

ANALYSIS OF NON-NOTIFIED TUBERCULOSIS CASES 1959

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	—	10	1	—	—	—	9
Non-Respiratory ...	—	2	1	—	—	—	1

TABLE 24

DEATHS FROM RESPIRATORY TUBERCULOSIS 1948-1959

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

TABLE 25

DEATHS FROM NON-RESPIRATORY TUBERCULOSIS 1948-1959

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

TABLE 26

NUMBER OF NEW CASES OF TUBERCULOSIS FOR 1959

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	12	33	80	290	404	144	963	1,633
Females ...	17	21	132	280	162	58	670	
Meninges and C.N.S.								Total Non-respiratory
Males	2	—	—	—	—	—	2	
Females ...	3	2	—	—	—	—	5	48
Other Forms								
Males	5	2	2	6	2	—	17	
Females ...	2	2	4	11	5	—	24	

TABLE 27

CASES OF EARLY SYPHILIS, 1938-1959

	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

TABLE 28

CASES OF ACUTE GONORRHOEA, 1938-1959

	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

TABLE 29

VENEREAL DISEASE—CONTACT TRACING

	Females	Males
No. of reports of alleged source of infection	18	1
No. of cases traced and interviewed	13	1
No. of cases traced, not interviewed to date	1	—
No. of cases reporting for investigation following interview	12	1
No. of cases untraced, insufficient or inaccurate information	5	—
No. of visits carried out	73	5

TABLE 30

VENEREAL DISEASE—PATIENT DEFAULTERS

	Male	Female	Congenital	Total
No. of cases written to	635	621	86	1,342
No. of letters despatched	714	1,209	158	2,081
No. of cases reporting after receipt of letter ...	342	421	60	823
No. of letters returned to Dead Letter Office ...	46	20	—	66
No. of cases traced and transferred	7	5	—	12

TABLE 31

VENEREAL DISEASE—RESULTS OF HOME VISITS

	Male	Female	Con-genital	Total
No. of cases visited	198	351	31	580
No. of visits made	334	1,471	133	1,938
No. of cases attending following visits	66	190	22	278
No. of cases promising to attend but failing to do so	29	35	4	68
No. of cases removed or not known at address given	42	87	—	129
No. of cases not contacted, no access, away from home, etc.	55	17	2	74
No. of cases who refused to re-attend	4	16	—	20
No. of cases removed and transferred for follow-up	—	5	3	8
No. of cases deceased	2	1	—	3

TABLE 32

MENTAL DEFICIENCY

HOSPITAL ADMISSIONS AND DISCHARGES IN 1959

	Admissions					Total Admissions	Discharges (all types) to Community
	Section 3	Section 6	Section 8 (1) (*b*)	Informal	Other Special R.H.B. Mental Deficiency Accommodation		
Liverpool R.H.B. Hospitals—							
Greaves Hall	1	3	1	14	—	19	2
Thingwall Hall	—	—	—	16	—	16	2
Newchurch	—	—	—	4	—	4	—
Ashton House	—	—	—	—	—	—	1
St. Catherine's	—	1	—	—	—	1	—
The Manor	—	—	—	1	—	1	1
Rathbone	—	—	—	—	2	2	—
Ormskirk	—	—	—	—	1	1	—
Olive Mount	—	—	—	—	2	2	—
Manchester R.H.B. Hospitals—							
Calderstones	—	—	6	—	—	6	8
Brockhall	—	2	2	6	—	10	12
Gillibrand Hall	—	—	—	2	—	2	—
Cranage Hall	—	—	—	1	—	1	4
Royal Albert	1	2	1	1	—	5	2
Mary Dendy	—	2	—	—	—	2	6
Offerton House	—	—	—	5	—	5	1
State Institution—							
Rampton	—	—	1	—	—	1	—
Total	2	10	11	*50	5	78	†39

* In addition 6 transfers from other Special R.H.B. Mental Deficiency accommodation.
† In addition 1 patient transferred to mental hospital.

TABLE 33

MENTAL DEFICIENCY

LIVERPOOL PATIENTS IN HOSPITALS AT 31ST DECEMBER, 1959

	Males		Females		Total
	Under 16	16 and over	Under 16	16 and over	
1. Patients in Mental Deficiency Hospitals—					
(*a*) Hospitals of Liverpool Regional Hospital Board :					
Newchurch	—	—	6	103	109
Ashton House	—	—	—	20	20
Greaves Hall	13	63	11	18	105
The Manor	—	—	2	14	16
St. Catherine's	—	6	—	2	8
Thingwall Hall	4	27	—	—	31
Rathbone	1	—	1	—	2
Olive Mount	15	—	—	—	15
Crow Wood	3	—	3	—	6
St. Joseph's	—	—	8	—	8
Ormskirk	3	—	—	—	3
Whitecross	6	2	12	1	21
(*b*) Hospitals of Manchester Regional Hospital Board :					
Calderstones	1	272	—	178	451
Brockhall	10	192	6	184	392
Cranage Hall	2	13	—	3	18
Mary Dendy	—	17	—	10	27
Royal Albert	3	27	2	3	35
Swinton	3	—	6	—	9
Lisieux Hall	—	42	—	—	42
Gillibrand Hall	—	—	—	18	18
Ulverston	—	—	—	9	9
Chorley	—	1	—	22	23
Offerton House	—	11	—	—	11
Atherleigh	—	—	1	—	1
(*c*) Hospitals of other Regional Hospital Boards	1	6	1	14	22
(*d*) State Institutions	—	10	—	12	22
2. Patients in Mental Hospitals	—	6	—	*11	17
3. Patients in Non-Mental Deficiency Hospitals (indefinite stay)	1	35	—	9	45
	66	730	59	631	1,486

* Includes 2 Place of Safety cases.

Note.—Figures include 24 patients on licence and 3 escaped.

TABLE 34

MENTAL DEFICIENCY

WAITING LIST FOR INSTITUTIONAL CARE

Waiting list at 31.12.59	...	...	...	63	comprising
Urgency 3 (highest)	...	...	...	...	32
Urgency 2	...	...	...	...	16
Urgency 1	...	...	...	...	7
Urgency 0	...	...	...	...	8

These figures can be classified as follows:—

(*a*) *In age and sex groups.*

Urgency	Under 6		6—16		16 and over		Total
	male	female	male	female	male	female	
3	4	2	13	1	7	5	32
2	—	2	6	2	1	5	16
1	1	—	1	—	—	5	7
0	—	1	1	1	2	3	8
Totals	5	5	21	4	10	18	63

(*b*) *Time on waiting list.*

Urgency	Over 3 yrs.	2—3 yrs.	1—2 yrs.	6 mths—1 yr.	Under 6 mths.	Total
3	8	5	7	2	10	32
2	4	3	3	1	5	16
1	1	—	2	2	2	7
0	3	2	—	—	3	8
Totals	16	10	12	5	20	63

(*c*) *Classification of defectives.*

Urgency	High grade	Medium Grade	Ambulant low Grade	Cot & Chair Grade	Total
3	3	9	16	4	32
2	1	6	7	2	16
1	—	3	4	—	7
0	—	6	1	1	8
Totals	4	24	28	7	63

NOTE :—Waiting list figures do not include the following :—

In places of safety	...	...	2
In Regional Hospital Board accommodation other than certified M.D. hospitals	...	...	84

TABLE 35

MENTAL ILLNESS

PATIENTS REFERRED IN 1959 AND ACTION TAKEN

Total cases referred 1,324

Referred by :—

General Practitioners	606	Other Corporation sections and departments	
Hospitals	239	H.M. Prisons	
Police	154	From pre- or after-care	
Psychiatrists	109	Other sources	
Relatives...	82		
Shipping firms	14		

How dealt with :—

Admitted to hospital (Section 20 Lunacy Act)	*85
Admitted to hospital (Section 21 Lunacy Act)	
Admitted to hospital (Mental Treatment Act—Voluntary)	
Admitted to hospital (Mental Treatment Act—Temporary)	–
Admitted to hospital (Magistrates Court Act)	1
Admitted to other hospitals	1
Referred to J.P. (Section 14 Lunacy Act)	†4
Referred to Psychiatric Clinic...	2
Referred to Welfare Services Section	5
Referred for pre- or after-care	11
Referred back to patient's doctor	8
No further action	12
	1,32

* Of whom 369 were subsequently subject to Summary Reception Order (Sectio 16 Lunacy Act).

† Of whom 28 were subsequently subject to Summary Reception Order (Sectio 16 Lunacy Act).

TABLE 36

RESIDENTIAL ACCOMMODATION—AGED PERSONS

The total accommodation available for use on 31st December, 1959, was as follows :—

Establishment.	No. of Beds.	Date of Opening.
Westminster House	738	5. 7.1948*
Aigburth House	52	16. 7.1953
Alteross House	57	11. 4.1957
Beechley	41	9.11.1950
Brookfield	19	21. 1.1952
Brookside House	18	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	109	5. 7.1948*
New Parkfield House	27	18.12.1950
Park House	20	30.12.1949
Ullet Grange	29	13.11.1957
Total	1,267	

* In occupation by the Local Authority prior to 5th July, 1948.

TABLE 37

PARTICULARS OF PERSONS ADMITTED TO RESIDENTIAL ACCOMMODATION AND DESCRIPTION OF THE PREMISES FROM WHICH THEY WERE ADMITTED

1959	1 Vacated Private House	2 Vacated Corporation House	3 Flat	4 Living with Relatives	5 One Room	6 Misc. Lodgings Res. Accom. etc.	Total
January ...	4	1	1	7	10	9	32
February ...	6	—	—	8	4	8	26
March	4	1	—	8	10	13	36
April	10	—	1	17	16	14	58
May	13	—	1	17	10	7	48
June	9	—	3	14	4	12	42
July	4	—	2	14	1	15	36
August ...	4	—	—	15	5	13	37
September	4	—	2	4	6	10	26
October ...	3	1	—	8	1	35	48
November ...	3	1	1	14	—	33	52
December ...	6	—	2	9	1	20	38
TOTAL ...	70	4	13	135	68	189	479

TABLE 38

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

STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS

Authority or Organisation	Remaining 31.12.58	Admitted	Discharged	Died	Remaining 31.12.59
British Legion Home, Ripon	2	1	1	1	1
British Legion Home, Bwlch	1	—	—	—	1
Charles Best House, Parkgate ...	2	1	1	—	2
Christadelphian Homes, Southport ...	1	—	1	—	—
Church Army Home, Bootle	5	—	1	—	4
Convent of the Good Shepherd, Liverpool	4	1	—	—	5
Embankment Fellowship, London ...	1	—	1	—	—
Maryland, Formby	3	—	2	—	1
Methodist Home, Liverpool	8	1	1	—	8
Methodist Home, Colwyn Bay ...	1	—	—	—	1
Red Cross Home, Buxton	1	—	—	—	1
Red Cross Home, Portmadoc	1	—	—	—	1
Red Cross Home, Oxford	—	1	1	—	—
52/54 Croxteth Road, Liverpool (Old People's Hostels Association) ...	8	5	1	—	12
25/27 Sefton Drive, Liverpool (Old People's Hostels Association) ...	10	3	3	—	10
Salvation Army Home, Bootle ...	6	2	1	—	7
Salvation Army Home, Liverpool ...	15	4	2	3	14
Salvation Army Home, Penketh ...	1	4	2	—	3
Salvation Army Home, Ripon Lodge	—	1	—	—	1
Salvation Army Home, Wicksted Hall	—	2	—	—	2
"Stapely" Home for Aged Jews, Liverpool	26	17	13	2	28
"Sundale", Liverpool	1	—	—	—	1
Turner Memorial Home, Liverpool ...	20	18	15	1	22
W.V.S., "St. Michael's Mount", Liverpool	5	4	1	—	8
W.V.S. "Warriston", Liverpool ...	8	5	8	—	5
Sundene Lodge, Waterloo	1	—	—	—	1
Home for Jewish Incurables ...	1	—	—	1	—
Redhill Bethesda Home	1	—	—	—	1
"Woodlands", Edinburgh	1	—	—	—	1
Mutual Aid Homes Ltd., Minehead ...	—	2	—	—	2
Bootle Corporation	2	2	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	1	—	1
Flintshire County Council	1	—	—	1	—
Glamorgan County Council	1	—	—	—	1
Lancashire County Council	—	2	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
Yorkshire West Riding County Council	—	1	1	—	—
TOTALS	145	84	60	9	160

TABLE 39

TEMPORARY ACCOMMODATION PROVIDED AT LOWER BRECK ROAD UNDER SECTION 21(1)(b) OF THE NATIONAL ASSISTANCE ACT

Remaining 31.12.58	Admitted	Discharged	Remaining 31.12.59
81	980	1,027	34

TABLE 40

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... ...	1,649
Number of visits paid (including 351 visits to handicapped persons)	3,190
Number of revisits (including 615 revisits to handicapped persons)	11,198
Number of persons admitted to:—	
(*a*) residential accommodation	479
(*b*) hospital	20
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 ...	1,339
Requests for assistance, either by letter or telephone, during the year numbered	3,555

TABLE 41

REGISTERED BLIND PERSONS

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

Age	Males	Females	Total
0	—	—	—
1	—	—	—
2	—	1	1
3	1	1	2
4	1	—	1
5—10...	13	18	31
11—15...	12	4	16
16—20...	4	8	12
21—29...	26	20	46
30—39...	49	34	83
40—49...	64	65	129
50—59...	106	98	204
60—64...	72	73	145
65—69...	76	93	169
70—79...	137	297	434
80—84...	49	124	173
85—89...	23	73	96
90+	7	17	24
TOTALS ...	640	926	1,566

TABLE 42

REGISTERED BLIND PERSONS—NEW CASES 1959

The following table shows by age-groups the number of newly-blinded added to the register during 1959:—

Age Groups	Males	Females	Total
0	—	—	—
1	—	—	—
2	—	1	1
3	—	—	—
4	—	—	—
5—10	—	1	1
11—15	—	1	1
16—20	—	—	—
21—29	1	—	1
30—39	3	5	8
40—49	1	3	4
50—59	3	11	14
60—64	6	6	12
65—69	5	11	16
70—79	16	37	53
80—84	8	12	20
85—89	—	9	9
90+	1	2	3
TOTALS ...	44	99	143

TABLE 43

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	—	—	—
5—15	47	26	73
16—20	15	12	27
21—49	24	18	42
50—64	21	19	40
65 and over ...	32	108	140
TOTALS ...	139	183	322

TABLE 44

PARTIALLY-SIGHTED PERSONS—NEW CASES 1959

The following table shows by age groups the number of new cases of partially-sighted persons added to the register during 1959:—

Age Groups	Males	Females	Total
0— 1	—	—	—
2— 4	1	1	2
5—15	6	—	6
16—20	—	—	—
21—49	4	3	7
50—64	6	5	11
65+	16	21	37
TOTALS ...	33	30	63

TABLE 45

FOLLOW-UP OF REGISTERED BLIND AND PARTIALLY-SIGHTED PERSONS

	Cause of Disability			
(i) Number of cases registered during the year in respect of which Section F of Form B.D.8 recommends :—	Cataract	Glaucoma	Retrolental Fibroplasia	Other
(*a*) No treatment	35	—	—	54
(*b*) Treatment (medical, surgical or optical) ...	31	19	1	56
(ii) Number of cases at (i) (*b*) above which on follow-up action have received treatment	14	19	1	46

TABLE 46

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

STATEMENT OF ADMISSIONS, DISCHARGES AND DEATHS

Authority or Organisation	Remaining 31.12.58	Admitted	Discharged	Died	Remaining 31.12.59
Catholic Blind Institute, Liverpool ...	21	5	3	—	23
Herefordshire County Association for the Blind	1	—	—	—	1
Jewish Blind Home, Surrey	3	—	—	—	3
Royal National Institute for the Blind, Hoylake	1	—	—	—	1
Royal School for the Blind, Leatherhead	2	—	—	—	2
" Angers House " for Spastics, Liverpool	—	3	—	—	3
" Ponds " Home for Spastics	1	—	—	—	1
David Lewis Epileptic Colony ...	9	6	7	—	8
Langho Epileptic Colony	15	5	1	—	19
Maghull Homes for Epileptics ...	53	14	15	2	50
St. Elizabeth's Home for Epileptics, Much Hadham	2	—	—	—	2
Ashley House, Bognor Regis	1	—	—	—	1
Ampthill Cheshire Home	1	—	—	—	1
" Honresfeld " Cheshire Home ...	—	2	1	—	1
Cotebrook Home for Cripples ...	1	—	—	—	1
Hostels for Crippled and Invalid Women Workers, London ...	1	1	1	—	1
Ernest Ayliffe Home for the Deaf ...	2	—	—	1	1
Alexian Bros. Home, Manchester ...	—	2	—	—	2
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	1	—	1
Girls' Friendly Society Hostel ...	—	1	1	—	—
TOTALS	117	40	30	3	124

TABLE 47

HOUSING POINTS SCHEME—SUMMARY OF STATISTICS FOR THE YEAR 1959

	Nos. Dealt With	Nos. Awarded Points	Nos. Awarded No Points
RESPIRATORY SYSTEM—			
Upper Respiratory Tract Infections	133	—	133
Bronchitis/Emphysema	322	219	103
Asthma	144	100	14
Bronchiectasis	39	39	—
Bronchial Carcinoma	2	2	—
Pneumonia	17	11	6
CARDIOVASCULAR SYSTEM AND BLOOD DISORDERS—			
Acute Rheumatic Fever	3	3	—
Angina	3	3	—
Coronary Thrombosis	21	21	—
Hypertension	47	47	—
Valv. Disease of Heart	183	178	5
Varicose Veins/Ulcers	17	15	2
Pernicious Anaemia	3	3	—
Anaemia	48	18	30
DIGESTIVE SYSTEM—			
Gastric Ulcer	26	16	10
Diabetes	22	21	1
Gastro Enteritis and Colitis	28	10	18
Gastric Carcinoma	21	21	—
GENITAL URINARY SYSTEM—			
Nephritis	11	11	—
Kidney Removal	1	1	—
FEMALE GENITO URINARY SYSTEM—			
Urino Genital Carcinoma	2	2	—
ENDOCRINE SYSTEM—			
Thyrotoxicosis	12	7	5
C.N.S.—			
Disseminated Sclerosis	12	12	—
Poliomyelitis	15	15	—
Spastic Paraplegia	28	28	—
MUSCULO SKELETAL SYSTEM—			
Arthritis	68	67	1
Rheumatism	39	27	12
Amputation	16	15	1
Muscular Dystrophy/Spondylitis	2	2	—
MENTAL DISEASES—			
Anxiety State and Nervous Debility	59	33	26
Neurasthenia	17	6	11
Mental Defectives	26	23	3
OTHERS	1,025	246	779
TOTAL	2,282	1,122	1,160
Transfers—Recommended 413 / Not Recommended 777 } TOTAL	1,190		
Cases recommended to Allocation (Special) Sub-Committee	31		
Cases pending completion	979		
GRAND TOTAL	4,482		

TABLE 48

PARTICULARS OF SHOPS INSPECTIONS

TOTAL NUMBER OF SHOPS—17,000 (APPROX.)

INSPECTIONS	
Retail food shops ...	16,721
Retail non-food shops ...	6,634
Cafes, restaurants, etc. ...	805
Fried fish shops	339
Clubs	193
Hairdressers	838
Pet Stores	436
Wholesale shops ...	18,435
Wholesale warehouses ...	410
Street traders	330
Places of entertainment ...	88
Merchandise Marks Act ...	12,845
Special visits	180
Half-holiday Closing.	
Visits to shops after 1 p.m.	4,806
Evening Closing.	
Visits to shops	38,267
Sunday Closing.	
Visits to shops on Sunday ...	2,440

NOTICES	Issued	Remedied
Shops Act, 1950.	360	269
Food Hygiene Regulations, 1955	1,467	785
Food Byelaws	40	28
Public Health Act, 1936	62	33
Pet Animals Act ...	22	22
Prevention of Damage by Pests Act, 1949 ...	2	2
Liverpool Corporation Act, 1956 (Hairdressers) ...	42	24
Merchandise Marks Act	13	13

TABLE 49

VISITATION OF FOOD PREMISES

The number of food premises subject to visits by public health inspectors for the purpose of securing compliance with the requirements of the Food Hygiene Regulations, 1955, and Local Byelaws are as follows :—

Food preparation premises—

Bakehouses	195
Industrial canteens	196
School kitchens and Dining Centres, etc.	286
Brewing, beer and mineral water bottling	36
Spice manufacturers	4
Bacon curing	10
Preserved meat and sausage manufacturers	217
Biscuit manufacturers	5
Jam manufacturers	6
Fruit cleaning	10
Custard and meal powders	4
Millers, flour and rice	17
Pickles	1
Sweet confectionery	12
Coffee and tea packing	18
Sugar refiners	8
Tripe dressers	8
Edible fat manufacturers...	5
Miscellaneous food products	30
Ice cream and ice lolly makers	43

TABLE 50

RETAIL FOOD BUSINESSES

Licensed premises	1,155
Off-licence premises	94
Ice cream vendors	1,546
Bread and confectionery	467
Butchers	629
Cafes, snack bars, etc.	283
Cooked meats	53
Dairies	205
Fishmongers and poulterers	236
General	1,341
Greengrocers	804
Grocery and provisions	885
Sweets, minerals, etc.	1,278
Fish frying establishments	417

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		
		Inspections (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 ...	1,304	430	5	—
(ii) Factories not included in (i) in which Section 7 is enforced by local authority	3,694	2,645	92	—
(iii) Other premises in which Section 7 is enforced by the local authority (excluding outworkers premises)	53	98	4	—
TOTAL	5,051	3,173	101	—

TABLE 52

FACTORIES ACTS

CASES IN WHICH DEFECTS WERE FOUND

Particulars (1)	Found (2)	Number of Cases in which Defects were found			Number of Cases in which Prosecutions were instituted (6)
		Remedied (3)	Referred To H.M. Inspector (4)	Referred By H.M. Inspector (5)	
Want of cleanliness (S.1) ...	5	5	5	3	—
Overcrowding (S.2)	—	—	—	—	—
Unreasonable temperature (S.3)	—	—	—	—	—
Inadequate ventilation (S.4) ...	2	2	—	—	—
Ineffective drainage of floors (S.6)	—	—	—	—	—
Sanitary Conveniences (S.7)—					
(*a*) Insufficient	8	8	—	8	—
(*b*) Unsuitable or defective ...	89	—	—	12	—
(*c*) Not separate for sexes ...	1	1	—	1	—
Other offences against the Act (not including offences relating to outwork)	—	—	7	1	—
TOTAL	105	16	12	25	—

TABLE 53

FACTORIES ACTS
Part VIII of the Act
OUTWORK
(SECTIONS 110 AND 111)

Nature of Work (1)	SECTION 110		No. of prosecutions for failure to supply lists (4)	SECTION 111		Prosecutions (7)
	No. of outworkers 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 unwholesome premises (5)	Notices served (6)	
Wearing apparel—making, etc. ...	198	—	—	—	—	—
TOTAL ...	198	—	—	—	—	—

TABLE 54

SUMMARY OF PROSECUTIONS (Cases Heard)—1959

Act	Section	No. of Informations or Complaints	Penalties	Costs	Orders
			£ s. d.	£ s. d.	
Public Health Act, 1936 ...	75	4	2 10 0	—	—
Public Health Act, 1936 ...	94	64	136 10 0	—	41
Public Health Act, 1936 ...	95	1	1 0 0	—	—
Public Health Act, 1936 ...	154	3	3 0 0	—	—
Public Health Act, 1936 ...	290(6)	47	102 10 0	—	—
Shops Act, 1950	Evening Closing	3	3 0 0	—	—
Shops Act, 1950	Half-holiday Closing	2	2 0 0	—	—
Shops Act, 1950	Sunday Closing	2	2 0 0	—	—
Food and Drugs Act, 1955	Fish cakes deficient in Fish...5 Beef sausage deficient in Beef...1 Issuing a false warranty ...1	7	12 0 0	7 0 0	—
Food and Drugs Act, 1955, and Food Hygiene Regulations, 1955 ...	—	37	185 0 0	—	—
Clean Air Act, 1956, and Regulations	—	7	28 0 0	—	—
TOTALS		177	£477 10 0	£7 0 0	41

TABLE 55

SMOKE ABATEMENT—STATISTICS

Industrial

New oil fired boilers installed	120
Boilers converted to oil firing	48
New boilers fitted with Chain Grate Stokers	8
Existing boilers converted to Chain Grate Stokers	8
New boilers fitted with Underfeed Stokers	6
Existing boilers converted to Underfeed Stokers	2
New boilers fitted with Low Ram Stokers	4
Existing boilers converted to Low Ram Stokers	1
Gas fired boilers installed	17
Coke fired boilers installed	8
Gas fired Incinerators installed...	2
Boilers provided with gas ignition	25
	249

Shipping

New Diesel Ferry Boat	1
New oil fired tugs in service	4
New Diesel motor tugs in service	6
Tugs converted to oil firing	6
New Diesel Dredgers in service...	2
No. of coal fired vessels with special fire doors	9
	28

Vessels to be adapted

Dredgers converting to oil	6
Tugs converting to oil	12
New Electric Floating Crane on order (Diesel propulsion)	1
	19

TABLE 56

CLEAN AIR ACT, 1956—INSPECTIONS, OBSERVATIONS, ETC.

Particulars of Inspections

Total number of inspections to secure smoke control	29,300
Total number of appliances examined	120,410
Open fires	29,177
Closed stoves	1,169
Central heating boilers	407
Industrial steam boilers	43
No. hand fired	308
No. of mechanical stokers	92
Other types of fire or radiators	89,614
Solid fuel appliances provided with approved means of ignition	5,024
Special visits	106
Revisits	1,350
Incidental visists	5,521
Advisory visits	134

OBSERVATIONS

Industrial Chimneys

Routine observations	2,384
Total minutes of excess smoke recorded	330
Special observations	40
Total minutes of excess smoke recorded	41
Warning letters issued	41

Shipping

Routine observations	967
Total minutes of excess smoke recorded	392
Special observations	50
Total minutes of excess smoke recorded	22
Warning letters issued	80
Informations laid	6
Summons proved	6

Clean Air Act, 1956, Section 3—Approval of New Furnaces

Notices of intention to install received	82
Applications for approval received	68
Installations approved	67
Installations rejected	1

Clean Air Act, 1956, Section 10—Heights of New Chimneys

Plans examined to check chimney height	90
Plans approved	67
Plans rejected	23
Plans approved after chimney height increased	19
Plans withdrawn	4

TABLE 57

SMOKE CONTROL AREAS CONFIRMED AND OPERATIVE DURING 1959

Area	Date Confirmed	Date Operative	Industrial Premises	Commercial Premises	Dwellings	Other (L.A. and Crown
No. 2 Smoke Control Area bounded by James St., Lord St., Whitechapel, Manchester St., Dale St., Lime St., Ranelagh St., Hanover St., Canning Place and Strand St.	12-5-58	1-5-59	113	684	39	7
No. 3 Smoke Control Area bounded by London Road, Stafford St., Islington, Wm. Brown St.	20-10-58	1-5-59	27	180	61	3
No. 4 Smoke Control Area bounded by Mount Pleasant, Hope St., Hardman St., Leece St., Renshaw St., Ranelagh Place.	26-3-59	1-10-59	34	169	98	18
No. 5 Smoke Control Area bounded by Renshaw St., St. Lukes Place, Berry St., Seel St., Hanover St., Ranelagh St., Ranelagh Place.	26-1-59	1-8-59	60	294	21	2
No. 6 Smoke Control Area bounded by Lime St., London Road, Monument Place, Moor Place and Copperas Hill.	27-2-59	1-9-59	17	172	132	1
No. 7 Smoke Control Area bounded by Hatton Garden, Gt. Crosshall St., Byrom St., Cartwright Place, Dawson Place Hunter Street, Christian St., Islington, Wm. Brown St. and Dale St.	25-5-59	1-12-59	23	100	31	13
TOTALS			274	1,599	383	44

TABLE 58

SMOKE CONTROL AREAS

ORDERS MADE AND SUBMITTED TO MINISTER DURING 1959

Area	Date Order Made and Submitted	Industrial Premises	Commercial Premises	Dwellings	Other Premises (Local Authority and Crown)
No. 8 Smoke Control Area bounded by Stafford Street, Islington, Moss Street and London Road.	1.4.59	21	108	166	1
No. 9 Smoke Control Area bounded by New Quay, Bath Street, Gibraltar Row, Old Hall Street and Chapel Street.	1.7.59	16	437	7	2
TOTALS		37	545	173	3

TABLE 59

SMOKE CONTROL AREAS

PRELIMINARY DETAILS SUBMITTED TO MINISTER OF HOUSING AND LOCAL GOVERNMENT DURING 1959

Proposed (No. 10) Smoke Control Area

Area	Date Submitted	Industrial Premises	Commercial Premises	Dwellings	Other Premises (Local Authority and Crown)
Proposed (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.	29.12.59	166	1,158	27,212	138

Type of Premises	Totals	Exempt	Smokeless	Change of Fuel	Adaptations
Industrial	166	20	84	—	62
Commercial	1,158	—	734	—	424
Privately owned dwellings ...	16,163	314	585	810	14,454
Corporation owned dwellings ...	11,049	411	260	5,101	5,277
Other premises (Local Authority and Crown)	138	5	69	—	64
Vacant	147	—	—	—	—
TOTALS	28,821	750	1,732	5,911	20,281

TABLE 60

SMOKE CONTROL AREAS

ADAPTATION OF DWELLINGS, 1959

(No. 2) Smoke Control Order, 1958

Made ... ... 5th February, 1958
Confirmed ... ... 12th May, 1958
Operative ... ... 1st January, 1959

Dwellings requiring conversion	33
Dwellings converted without applying for grant aid	19
Estimates received	14
Claims received for grant aid	14
Total cost of adaptations	£198 6s. 6d.
Total amount awarded as grant	£143 15s. 5d.
Total amount recoverable as Exchequer Grant	£79 11s. 6d.

(No. 3) Smoke Control Order, 1958

Made ... ... 2nd July, 1958
Confirmed ... ... 20th October, 1958
Operative ... ... 1st May, 1959

Dwellings requiring conversion	54
Dwellings converted without applying for grant aid	2
Estimates received	52
Claims received for grant aid	52
Total cost of works of adaptation	£831 8s. 5d.
Total amount awarded as grant	£581 17s. 2d.
Total amount recoverable as Exchequer Grant	£332 10s. 6d.

(No. 4) Smoke Control Order, 1958

Made ... ... 2nd October, 1958
Confirmed ... ... 26th March, 1959
Operative ... ... 1st October. 1959

Dwellings requiring conversion	41
Dwellings converted without applying for grant aid	13
Estimates received	28
Claims received for grant aid	16
Total cost of works of adaptation to 31st December, 1959	£268 8s. 0d.
Total amount awarded as grant	£187 17s. 2d.
Total amount recoverable as Exchequer Grant	£107 7s. 2d.

TABLE 60—*continued*——

(No. 5) Smoke Control Order, 1958

Made	2nd October, 1958
Confirmed	26th January, 1959
Operative	1st August, 1959

Dwellings requiring conversion	21
Dwellings converted without applying for grant aid	9
Estimates received	12
Claims received for grant aid	11
Total cost of work of adaptation	...£191 19s. 0d.
Total amount awarded as grant	...£134 7s. 0d.
Total amount recoverable as Exchequer Grant	... £76 15s. 6d.

(No. 6) Smoke Control Order, 1958

Made	5th November, 1958
Confirmed	27th February, 1959
Operative	1st September, 1959

Dwellings requiring conversion	17
Dwellings converted without applying for grant aid	2
Estimates received	15
Claims received for grant aid	13
Total cost of works of adaptation	...£278 15s. 1d.
Total amount awarded as grant	...£195 2s. 0d.
Total amount recoverable as Exchequer Grant	...£111 9s. 10d.

(No. 7) Smoke Control Order, 1958

Made	5th November, 1958
Confirmed	25th May, 1959
Operative	1st December, 1959

Dwellings requiring conversion	12
Dwellings converted without applying for grant aid	6
Estimates received	6
Claims received for grant aid	1
Total cost of works of adaptation	... £10 2s. 3d.
Total amount awarded as grant	... £7 1s. 6d.
Total amount recoverable as Exchequer Grant	... £4 0s. 11d.

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	18·00
Aigburth Vale	9·72
Clarence Dock	41·43
Love Lane	50·67
St. Domingo Road	29·61
Fairclough Lane	22·86
Dunbabin Road	16·14
Rocky Lane, Childwall	14·75
Mill Lane, West Derby	18·88
Hatton Garden...	21·38

TABLE 62

ESTIMATION OF SULPHUR TRIOXIDE POLLUTION

LEAD PEROXIDE METHOD

The daily average for the year is quoted in milligrams per 100 square centimetres.

Location of Instrument	M.G. of SO_3/day
Hatton Garden	2·89
Clarence Dock	4·18
St. Domingo Road	4·23
Fairclough Lane	4·12
Dunbabin Road	3·17
Mill Lane, West Derby	2·75
Edge Lane (Outside)	2·61
Edge Lane (Inside)	0·82
Mersey Tunnel Air Inlet	4·56
Mersey Tunnel Mid River	3·10
Mersey Tunnel Docks Junction	3·13

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.	J1.	A.	S.	O.	N.	D.
Average Value ...	No record	No record	No record	14	11	6·3	7	6·3	13·2	13·8	19·3	19·5
Highest Value ...				30	21	16	13	14	25	31	41	39
Lowest Value ...				9	4	3	3	3	6	6	12	8

SULPHUR DIOXIDE : CONCENTRATION parts per 100 million parts of air

	J.	F.	M.	A.	M.	J.	J1.	A.	S.	O.	N.	D.
Average Value ...	No record	No record	No record	8·9	8·0	4·2	4·5	4·4	12·3	15·5	20·3	20·5
Highest Value ...				13·3	15·8	10·5	8·3	8·6	21·6	29·7	34·4	35·9
Lowest Value ...				4·0	2·5	1·2	1·8	2·3	5·7	6·9	9·3	10·8

TABLE 64

SUMMARY OF RODENT INFESTATIONS AND DISINFESTATIONS OF BUILDINGS AND LANDS DURING THE YEAR 1959

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	535	185	14	336	31	4	2	26	—	567	567	549
Factories	270	127	24	119	51	35	2	37	—	344	344	345
Warehouses	233	133	11	89	26	23	2	15	—	273	273	277
Dwelling-houses	2,871	1,465	36	1,370	75	47	1	33	—	2,952	2,952	2,864
Other buildings and lands	853	366	28	459	87	23	5	80	1	960	961	882
Food premises (included in above)...	(706)	(235)	(25)	(446)	(52)	(31)	(6)	(52)	(—)	(795)	(795)	(690)
TOTAL	4,762	2,276	113	2,373	270	132	12	191	1	5,096	5,097	4,917

NOTE :—Infestations remedied include 473 outstanding from 1958.

TABLE 65

RAT DESTRUCTION IN SEWERS

MAINTENANCE TREATMENTS

Sewer manholes treated	Initial Treatment 1953	Maintenance Treatments			
		1958 (1)	1958 (2)	1959 (1)	1959 (2)
Pre-baited	16,378	13,246	12,483	12,271	12,301
Pre-bait taken	9,329	2,976	3,741	2,681	3,596
Poison baited	11,141	5,143	6,074	4,929	6,281

TABLE 66

RAT DESTRUCTION IN SEWERS

ANNUAL TEST BAITING

Test Baiting Divisions	Year 1953	Year 1957	Year 1958	Year 1959
Total number of manholes	6,337	13,571	12,810	11,852
Number of manholes tested	797	1,440	1,451	1,313
Number of manholes showing takes ...	68	101	98	23

TABLE 67

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

	Tons	Cwts.	Qrs.	Lbs.
Beef, Veal, Mutton, Pork	182	—	1	20
Offal	467	11	—	26
Fish (Wet)	50	15	2	1
Fish (Dry)	4	9	3	14
Shellfish	3	12	—	15
Poultry	3	17	3	14
Game	—	—	1	2
Rabbits and Hares	—	2	—	3
Fruit	178	13	—	24
Vegetables	168	2	1	27
Nuts	23	11	2	4
Dried Fruits	—	18	—	2
Canned Goods	57	7	3	14
Sundries	14	12	1	2
Total quantity	1,155	14	3	—

TABLE 68

CARCASES AND OFFAL INSPECTED AND CONDEMNED IN WHOLE OR IN PART

	Cattle excluding Cows	Cows	Calves	Sheep and Lambs	Pigs	Horses
Number killed ... 514,155 ...	22,270	27,114	11,150	361,848	91,773	—
Number inspected 514,155 ...	22,270	27,114	11,150	361,848	91,773	—
All Diseases except Tuberculosis and Cysticerci.						
Whole carcases condemned ...	10	144	159	1,242	193	—
Carcases of which some part or organ was condemned ...	4,666	10,430	733	103,693	5,772	—
Percentage of the number inspected affected with disease other than tuberculosis and cysticerci	21·0%	39·0%	8·0%	29·0%	6·5%	—
Tuberculosis only.						
Whole carcases condemned ..	36	81	6	—	20	—
Carcases of which some part or organ was condemned ...	1,300	4,528	—	—	1,629	—
Percentage of the number inspected affected with tuberculosis	6·0%	17·0%	0·05%	—	1·8%	—
Cysticercosis.						
Carcases of which some part or organ was condemned ...	4	3	—	—	—	—
Carcases submitted to treatment by refrigeration ...	4	3	—	—	—	—
Generalised and totally condemned	—	—	—	—	—	—

TABLE 69

METEOROLOGICAL SUMMARY, 1959,

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.					
	1959	Normal	1959	Normal	1959	1959	1959	Normal	1959	1959	Normal
January ...	29.85	29·92	37·3	39·7	40 5	33·0	3·14	2·30	18	73·5	51·8
February ...	30.43	29·93	41·1	40·2	45·3	36·8	0·19	1·77	5	49·1	66·6
March ...	29·86	29·91	45·3	42·4	50·0	40·6	1·15	1·75	16	85·5	111·5
April	29·76	29·92	47·8	46·7	53·4	43·5	2·41	1·68	19	140·4	161·6
May	30·10	29·97	55·3	52·1	62·4	48·9	1·97	2·04	7	241·5	202·3
June	30·09	29·99	58·0	57·3	64·5	52·5	2·93	2·03	12	260·5	206·5
July	30 03	29·95	61·3	60·2	67·4	56·4	3·16	2·71	17	221·4	183·4
August ...	30·09	29·92	62·0	59·9	67·7	56·8	2·22	3·15	8	203·3	168·0
September ...	30·19	29.97	59·4	56·3	66·1	53·3	0·28	2·72	2	175·8	131·5
October ...	29·90	29·90	55.2	50·1	61·0	49.7	2·80	3·16	15	119·5	96.4
November ...	29·70	29·89	45·7	44·3	49·3	41·5	3·96	2·69	21	60·7	59·1
December ...	29·41	29·86	43·8	41·1	47·2	39·0	4·25	2·68	28	29·8	40·9
Year ...	29·95	29·93	51·0	49·2	56·2	46·0	28·46	28·68	168	1661·0	1479·6

The normal is the long period average for that time of year.

TABLE 70

MISCELLANEOUS STATISTICS—AREA OF CITY—NUMBER OF INHABITED HOUSES—RATEABLE VALUE—PENNY RATE

Area of City	27,819 acres
Number of inhabited houses at 31st March, 1959	205,227
Number of structurally separate dwellings occupied (1951 census)	195,981
Rateable Value :	
1st April, 1959	£10,222,215
31st December, 1959	£10,292,926
Sum represented by 1d. Rate :	
Actual 1958-59	£36,314
Estimated 1959-60	£40,453

TUBERCULOSIS—1959. **TABLE No. 71.**

ANALYSIS OF NEW CASES.

	Diagnosis							Type of Tuberculosis						Racial					Social Class					Housing					Family History			Contact History (of Cases Diagnosed as Contacts)			B.C.G.			Sex		Age Groups																				
	Illness	Contact	Mass Radiography	Routine Exam. (Adult)	Child Welfare Exam.	School Health Exam.	Other	Pulmonary T.B.	T.B. Meningitis	Bone and Joint T.B.	Cervical T.B. Adenitis	Abdominal T.B.	Other	English	Scottish	Irish	Welsh	Others	Group 1	Group 2	Group 3	Group 4	Group 5	Static Sep. House	Unsat. Sep. House	Rooms only	Institution	Other	Sep. Bedroom	Exc. Std.	Parents T.B.	Siblings T.B.	Spouse T.B.	Other T.B. Contact in Household	Contact in Family Other than Husband	Contact at Work	Contact at School	Other Contact	B.C.G. Previously	B.C.G. Refused	Notified after Death	Male	Female	Up to 1	1	2	3	4	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+	TOTAL
Abercromby	19	3	37	6	...	...	...	62	1	1	1	...	...	57	...	2	...	6	...	...	23	15	27	29	8	28	...	...	24	1	4	3	2	6	2	1	...	...	...	...	...	38	27	...	1	1	1	...	2	...	3	9	1	5	6	4	9	8	3	4	3	4	...	1	65
Aigburth	5	3	28	...	...	...	1	37	...	...	...	...	...	34	1	...	1	1	...	6	24	1	6	37	...	...	...	...	27	1	1	3	1	2	3	...	...	...	...	...	1	25	12	...	...	...	...	2	...	3	...	2	3	3	2	2	5	3	6	5	...	1	...	37
Allerton	1	1	16	1	...	...	...	19	...	...	...	...	...	19	...	...	...	...	1	1	10	1	6	18	...	...	1	...	7	1	1	1	1	1	...	...	...	...	...	1	...	16	3	...	...	...	...	1	...	...	1	...	2	2	1	2	4	2	1	2	...	...	1	19
Anfield	6	2	27	1	...	...	...	34	1	...	...	...	1	34	...	1	1	...	...	...	23	7	6	28	2	5	1	...	7	1	3	2	...	4	2	...	...	...	...	...	...	18	18	...	1	1	...	...	1	...	3	4	...	2	5	6	2	5	1	1	2	2	...	...	36
Arundel	6	2	21	2	...	...	...	30	...	...	1	...	...	27	...	1	1	2	1	2	15	5	8	21	2	6	2	...	13	3	3	...	...	2	...	...	...	...	...	...	17	14	...	...	...	1	1	...	2	3	4	3	3	3	...	1	1	1	1	4	3	...	31
Breckfield	6	...	22	...	...	...	...	26	1	...	...	...	1	27	...	...	...	1	...	...	17	5	6	19	5	2	...	2	6	1	2	4	...	...	...	...	...	...	...	...	17	11	...	...	...	...	1	...	2	5	2	3	1	1	5	2	2	1	2	...	1	...	28
Broadgreen	7	...	6	...	...	...	...	13	...	...	...	...	...	12	...	...	...	1	...	1	7	4	1	11	...	1	1	...	5	2	...	...	...	...	...	...	...	...	...	...	9	4	...	...	1	...	...	...	1	1	1	4	1	...	1	...	1	2	...	...	...	...	13
Central	19	3	18	...	...	1	1	41	...	1	...	...	...	35	1	...	...	6	...	1	14	10	18	22	6	4	8	2	5	12	3	2	...	6	3	...	...	...	...	...	28	14	...	...	1	...	...	4	1	1	5	4	4	3	7	7	3	2	...	...	...	...	42
Childwall	6	15	...	...	1	...	...	20	...	1	...	...	1	20	...	...	1	1	...	1	14	2	5	19	...	1	2	...	12	2	1	...	...	15	...	...	...	...	...	...	14	8	...	...	...	...	...	2	...	2	2	...	1	2	2	4	2	1	1	2	1	...	22
Church	5	1	22	...	...	...	...	28	...	...	...	...	...	23	2	2	...	1	1	2	9	5	10	20	1	3	...	4	14	9	...	...	1	1	1	...	...	...	...	...	19	9	...	...	...	...	1	...	...	4	3	1	2	3	3	2	5	2	...	1	...	1	28
Clubmoor	7	1	21	...	...	...	...	28	...	...	1	...	...	29	...	...	...	...	1	11	8	9	26	...	2	...	1	4	3	2	3	1	4	1	...	...	...	...	...	19	10	...	1	...	...	...	...	...	2	2	2	6	1	4	2	2	3	2	1	...	1	29
County	13	...	48	...	...	...	2	62	...	1	...	...	...	63	...	...	...	...	...	3	33	12	15	52	6	5	...	...	19	5	5	12	...	9	...	...	...	...	...	...	36	27	...	...	...	...	3	...	3	7	5	4	3	9	6	8	4	5	5	1	...	...	63
Croxteth	3	...	8	...	...	...	...	11	...	...	...	...	...	11	...	...	...	...	...	2	5	2	2	11	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	8	3	...	...	...	...	...	1	...	1	...	2	...	1	...	2	1	1	1	1	...	...	...	11
Dingle	15	1	47	...	...	...	...	63	...	...	...	...	...	62	...	1	...	...	...	...	12	12	39	43	12	6	1	1	6	6	...	4	3	1	1	...	...	...	...	...	35	28	1	...	...	...	...	...	3	6	12	3	2	5	6	6	5	4	3	3	3	1	63
Dovecot	11	...	18	...	...	...	...	28	...	...	...	...	1	26	...	1	...	2	...	3	10	5	11	27	1	1	...	...	9	2	3	5	3	2	...	...	...	...	...	...	18	11	...	...	...	...	...	2	1	5	1	3	...	2	7	3	1	2	1	1	...	...	29
Everton	16	3	18	2	...	...	1	38	...	...	1	1	...	40	...	...	...	...	...	2	13	6	19	17	9	6	2	6	12	12	...	6	...	3	3	...	...	...	...	...	20	14	...	...	...	...	3	...	4	3	3	4	3	3	2	7	4	1	2	...	1	...	40
Fairfield	11	1	18	3	1	...	1	32	...	1	1	...	1	33	...	1	...	1	...	1	16	10	8	17	5	12	...	1	17	1	1	3	...	1	1	...	...	...	...	...	15	20	...	...	...	1	...	...	2	6	2	5	7	5	...	2	1	1	1	1	1	...	35
Fazakerley	7	...	40	2	...	...	...	48	...	...	...	1	...	47	...	...	...	2	2	1	27	7	12	39	...	7	1	2	17	3	3	3	4	8	...	...	...	...	...	1	28	21	...	...	...	...	...	2	1	3	2	3	4	3	8	7	1	7	3	3	2	...	49
Gillmoss	10	5	60	1	...	...	...	74	1	...	1	...	...	76	...	...	...	...	...	2	31	17	26	63	3	8	...	2	16	10	8	2	1	11	5	...	...	...	...	...	37	39	...	...	1	1	1	...	2	5	8	5	3	7	4	7	10	7	7	5	2	...	1	76
Granby	11	3	27	...	...	1	...	41	...	1	...	...	...	37	...	...	...	5	...	2	15	13	12	21	4	15	...	2	...	...	2	...	...	3	3	...	...	...	...	...	22	20	...	...	1	...	...	1	...	2	3	6	6	4	5	2	3	5	2	1	...	1	...	42
Kensington	7	2	19	...	...	...	1	26	1	1	...	...	1	28	...	...	...	1	...	...	12	5	12	21	2	4	...	2	15	1	1	2	1	2	2	...	...	...	...	1	19	10	...	...	1	...	...	1	2	2	6	2	3	3	...	2	2	1	1	1	2	...	...	29
Low Hill	12	...	16	...	...	...	...	26	...	...	1	1	...	25	...	1	...	2	...	1	13	8	6	25	1	2	...	...	7	2	...	1	1	3	...	...	...	...	...	...	18	10	...	...	1	...	...	...	2	6	4	1	3	4	1	1	1	1	3	...	...	28
Melrose	9	2	35	...	...	...	...	46	...	...	...	...	...	45	...	1	...	...	...	1	11	16	18	31	5	4	4	2	13	5	4	8	1	11	1	1	...	...	...	...	28	18	...	...	1	1	...	...	1	2	5	1	4	5	4	6	4	6	2	2	...	2	46
Netherfield	7	...	13	1	...	...	...	20	...	...	1	...	...	21	...	...	...	...	...	...	5	4	12	14	5	2	...	...	3	...	...	...	...	1	3	...	...	...	...	...	16	5	...	1	...	...	...	1	...	...	2	3	1	4	...	3	1	2	...	1	2	...	...	21
Old Swan	12	...	20	...	...	...	...	30	...	...	...	1	1	31	...	...	...	1	...	...	17	7	8	27	3	2	...	...	13	3	...	2	1	2	...	...	...	...	...	...	16	16	...	...	...	...	1	...	1	3	3	4	3	4	3	...	2	4	2	2	...	...	32
Picton	16	6	36	...	...	...	1	59	...	...	...	...	...	58	...	...	1	...	...	2	35	6	16	39	15	4	...	1	23	3	5	2	8	4	5	1	...	...	...	...	29	30	1	...	...	2	...	1	1	2	2	5	5	2	4	7	6	7	5	4	3	2	...	59
Pirrie	16	1	42	1	...	...	...	58	...	...	1	...	1	59	...	1	...	...	...	2	39	7	12	56	1	2	...	1	4	20	6	2	4	5	1	...	...	...	...	...	35	25	1	...	...	...	...	...	...	8	4	5	8	6	7	6	6	4	1	3	...	1	60
St. Domingo	12	1	18	1	...	...	...	49	...	...	1	...	1	44	...	2	...	5	...	2	17	9	23	31	7	12	...	1	4	6	...	2	1	4	...	...	...	...	...	...	36	15	...	...	...	...	1	...	4	3	5	3	4	6	5	4	5	1	4	2	4	...	51
St. James	20	2	49	8	...	2	3	91	1	...	1	...	1	65	...	4	1	24	...	2	28	20	44	48	10	21	1	14	16	31	2	3	6	6	2	...	...	...	...	...	60	34	...	...	...	1	1	2	5	5	6	7	8	10	8	5	11	6	7	3	4	4	1	94
St. Mary's	8	4	43	...	...	...	...	53	...	...	...	1	...	51	...	3	1	...	...	2	18	11	24	41	7	5	...	2	23	6	2	...	...	2	4	...	...	...	...	...	1	30	25	1	...	1	...	...	1	...	4	4	2	2	6	6	2	8	3	5	3	4	2	1	55
St. Michael's	6	...	28	1	...	...	...	35	...	...	...	...	...	35	...	...	...	...	1	2	18	1	13	24	...	7	1	3	3	3	1	...	...	1	...	...	...	...	...	...	22	12	...	...	...	...	...	...	...	...	...	3	1	6	4	2	6	3	3	4	1	1	1	35
Smithdown	14	1	46	3	...	...	1	65	...	...	...	...	...	62	...	2	...	1	...	2	22	17	24	39	18	7	...	1	25	6	1	4	3	4	1	...	...	...	...	...	28	37	...	...	...	1	...	...	1	4	4	5	5	4	9	14	4	7	4	1	2	...	...	65
Speke	10	5	41	1	...	...	...	55	2	...	...	...	...	55	1	1	...	...	...	2	24	12	19	55	...	1	...	1	10	5	3	1	1	3	1	4	...	...	...	1	27	30	...	...	2	...	1	7	2	4	2	2	7	7	7	5	3	3	3	1	...	1	...	57
Sandhills	9	2	30	2	...	...	...	42	...	...	...	...	1	42	1	...	...	...	...	1	12	8	22	32	8	3	...	...	11	12	2	3	...	6	2	...	...	...	...	...	29	14	...	...	...	1	...	...	4	3	3	1	4	4	9	3	2	3	3	2	...	1	43
Tuebrook	7	...	21	1	...	...	1	30	...	...	...	...	...	29	...	1	...	...	...	...	14	4	12	24	3	2	...	1	17	1	...	6	...	1	...	...	...	...	...	...	19	11	...	...	...	...	...	...	3	1	5	1	1	4	5	1	3	2	...	2	2	...	30
Vauxhall	21	5	35	2	...	...	...	62	...	...	...	...	1	63	...	...	...	...	...	...	21	10	32	48	9	3	3	...	16	3	1	9	2	8	...	5	...	...	...	1	...	1	35	28	...	1	1	...	2	4	...	1	3	6	8	5	3	9	3	6	4	4	1	1	1	63
Wavbreck	14	...	39	3	...	...	...	55	...	...	...	...	1	52	...	4	...	...	...	4	23	13	16	41	6	5	4	...	12	19	3	6	...	10	...	...	...	...	...	...	2	...	33	23	...	...	...	...	...	...	4	5	2	5	7	5	6	5	5	5	2	3	2	...	56
Westminster	6	...	28	...	...	...	...	33	...	...	...	...	1	34	...	...	...	...	...	1	13	4	17	23	7	4	...	...	12	12	...	2	...	6	...	...	...	...	...	...	21	13	...	...	...	...	...	1	...	5	...	2	3	5	2	1	3	...	3	5	2	...	34
Woolton	4	3	25	...	1	...	...	33	...	...	...	...	...	29	1	2	...	1	1	4	17	5	6	26	5	1	1	...	5	15	3	3	...	...	2	1	...	...	...	...	16	17	...	1	...	...	...	...	3	...	1	5	4	7	1	4	2	2	3	...	...	...	...	33
TOTALS	423	78	1117	43	3	4	15	1633	10	7	12	5	14	1570	7	33	7	64	7	60	702	322	590	1203	181	212	33	52	459	250	78	113	48	146	65	13	...	...	...	4	1	5	979	702	4	7	14	9	7	36	27	79	138	137	134	155	150	177	162	128	118	81	68	36	14	1681
																																											M	2	6	6	1	2	23	16	21	63	72	66	73	82	107	112	98	89	57	51	25	7	979
																																										F	2	1	8	8	5	13	11	58	75	65	68	82	68	70	50	30	29	24	17	11	7	702

TABLE 72.

TABLE SHOWING POPULATION, BIRTH-RATES, DEATH-RATES, INFANT AND MATERNAL MORTALITY RATES, ETC., OF A NUMBER OF THE LARGER AUTHORITIES FOR 1959.

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 1959	1,091,500	289,100	436,600	254,200	301,800	513,300	275,400	757,500	672,300	271,100	313,300	499,400
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	1.14	0.98	0.97	1.12	1.22	1.14	1.02	1.22	1.17	1.12	1.13	1.10
Crude birth rate per 1,000 population	17.729	17.61	15.26	17.86	18.70	16.3	16.5	20.6	18.34	19.18	17.95	15.44
Birth rate as adjusted by factor...	16.84	17.61	15.26	16.79	17.95	16.0	16.67	19.17	17.61	18.60	17.23	15.59
Crude death rate per 1,000 population	11.624	14.42	11.85	10.73	11.05	11.9	12.29	11.3	12.49	12.08	11.48	11.74
Death rate as adjusted by factor	13.25	14.13	11.49	12.01	13.48	13.6	12.54	13.8	14.61	13.53	12.97	12.91
Infant mortality rate per 1,000 live births	25.37	29.85	19.5	24.45	29.59	25.4	20.88	27.4	26.35	26.73	24.18	16.99
Neonatal mortality rate per 1,000 live births	17.98	19.24	14.0	17.62	21.61	17.8	13.41	19.6	18.08	19.23	17.25	11.286
Stillbirth rate per 1,000 total births	21.14	23.96	19.7	23.65	23.53	19.9	19.60	23.45	24.21	22.55	19 87	20.582
Perinatal mortality rate per 1,000 total births	36.56	41.02	31.8	38.28	40.14	35.2	31.03	39.46	39.40	38.34	32.93	31.254
Maternal mortality rate per 1,000 total births	0.354	0.38	0.29	0.215	0.52	0.47	—	0.31	0.95	0.564	0.35	0.254
Tuberculosis rates per 1,000 population												
(a) Primary notifications—												
Respiratory	0.64	0.79	0.50	0.83	0.63	0.66	0.494	2.15	0.71	0.815	0.83	0.663
Non-respiratory...	0.08	0.08	0.11	0.10	0.06	0.07	0.073	0.06	0.06	0.089	0.06	0.068
(b) Deaths—Respiratory	0.087	0.08	0.06	0.098	0.12	0.09	0.051	0.135	0.12	0.103	0.083	0.126
Non-respiratory...	0.007	0.003	0.01	0.024	0.01	0.01	0.0036	0.004	0.01	0.007	0.009	0.006
Death Rates per 1,000 population from—												
Cancer (all forms including Leukaemia and Aleukaemia)	2.17	2.47	2.24	1.999	2.24	2.29	2.20	2.17	2.28	2.353	2.14	2.223
Cancer of Lungs and Bronchus	0.49	0.52	0.49	0.460	0.58	0.56	0.450	0.59	0.68	0.594	0.53	0.573
Meningococcal infections	0.01	0.003	0.00	—	0.007	0.004	—	0.004	0.00	0.0037	—	—
Whooping Cough	0.00	0.003	—	—	—	0.002	—	—	—	0.0037	—	0.002
Influenza	0.26	0.380	0.19	0.071	0.17	0.12	0.290	0.119	0.16	0.066	0.18	0.134
Measles	0.00	0.003	—	0.004	0.004	0.002	—	0.001	0.00	0.0037	0.003	—
Acute Poliomyelitis and Encephalitis	0.00	0.000	—	0.008	—	—	—	0.001	0.00	—	0.003	—
Diarrhoea (under 2 years)	0.01	0.013	0.00	—	0.007	0.02	0.011	0.014	0.00	0.022	0.006	0.008
Diarrhoea (under 2 years) (per 1,000 live births)	0.62	0.780	0.2	—	0.35	0.48	0.659	0.704	0.24	1.154	0.355	0.519

TABLE 73.

NOTIFIABLE DISEASES (OTHER THAN TUBERCULOSIS) DURING THE YEAR 1959.

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	973	2	29	72	104	120	541	88	9	8	—	—	—	—
Diphtheria	1	—	—	—	—	—	—	—	1	—	—	—	—	—
Enteric Fever (including Para-typhoid)	12	—	2	1	—	1	—	3	1	1	2	—	1	—
Puerperal Pyrexia	629	—	—	—	—	—	—	1	92	465	71	—	—	—
Pneumonia	451	23	22	20	17	10	32	26	14	41	36	127	83	152
Cerebro-spinal Fever	21	4	4	4	1	1	4	2	—	1	—	—	—	3
Poliomyelitis (Paralytic)	23	—	9	3	2	2	6	1	—	—	—	—	—	1
Poliomyelitis (Non-paralytic)	4	—	2	—	—	1	—	1	—	—	—	—	—	—
Dysentery	407	43	82	52	35	20	84	27	24	23	11	5	1	—
Ophthalmia Neonatorum	104	104	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	46	—	—	—	—	1	—	—	—	—	9	30	6	—
Malaria	6	—	—	—	—	—	—	—	—	2	1	2	1	—
Measles	6299	419	854	977	944	896	2138	57	10	4	—	—	—	1
Whooping Cough	1488	196	215	223	213	182	431	22	4	2	—	—	—	—
Food Poisoning	160	16	15	16	8	5	26	14	14	16	9	13	8	—
Totals	10624	807	1234	1368	1324	1239	3262	242	169	563	139	177	100	157

CITY OF LIVERPOOL.

TABLE 74.

Infant Mortality during the year 1959.

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningococcal Infections	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Psychosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis (non-tubercular)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Influenza	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	10	12	9	5	2	1	1	2	1	—	1	44
Bronchitis	—	—	—	—	—	—	—	—	—	—	—	—	2	4	3	1	2	—	1	—	—	—	13
Enteritis	—	—	—	—	—	—	—	—	—	—	—	2	2	1	1	—	1	—	1	2	—	—	10
Malformations	22	5	2	8	1	2	—	11	5	7	63	13	6	8	3	1	4	2	3	—	—	—	103
Injury at Birth	20	4	9	9	2	1	—	2	—	—	47	—	—	—	—	—	—	—	—	—	—	—	47
Infections of Newborn	1	—	—	—	2	1	1	4	10	4	23	—	—	—	—	—	—	—	—	—	—	—	23
Other Diseases of Early Infancy	98	25	18	3	10	4	2	3	2	1	166	1	—	—	—	—	—	—	—	—	—	—	167
Other Causes	3	1	1	—	—	—	1	1	—	—	7	3	3	1	1	3	—	—	—	—	1	—	19
Totals	144	35	30	20	15	8	4	21	17	12	306	29	26	23	14	7	8	3	7	3	1	1	428

Net Births in the year { Legitimate ... 14,800 / Illegitimate ... 815

Net Deaths in the year of { Legitimate Infants 401 / Illegitimate Infants 27

TABLE 75.

CITY OF LIVERPOOL.

DEATHS REGISTERED DURING THE YEAR 1959

CAUSE OF DEATH	SEX		AGE—BELOW																						Totals.
	Males.	Females.	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	Over 90	
ALL CAUSES	4505	4082	428	20	14	5	9	22	15	33	33	34	70	107	171	291	446	641	781	1056	1323	1309	1054	549	176	8587
Class I.—Infectious and Parasitic Diseases	99	48	4	1	3	2	...	1	...	1	...	1	5	7	7	14	15	10	22	24	17	9	2	2	...	147
.. II.—Neoplasms	924	730	1	...	...	...	2	6	3	7	4	4	21	31	59	92	134	218	216	255	255	184	113	42	8	1654
.. III.—Allergic, Metabolic Diseases, etc.	18	47	...	...	...	...	...	...	...	...	2	2	1	...	3	1	6	2	7	7	13	11	9	3	...	65
.. IV.—Diseases of the Blood	12	13	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	1	1	2	3	4	10	1	...	25
.. V.—Mental, and Psychoneurotic Diseases	7	11	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	3	4	3	2	1	1	18
.. VI.—Diseases of Nervous System	569	690	3	2	...	...	...	...	2	3	2	3	7	4	20	30	53	64	104	132	217	256	213	99	25	1259
.. VII.—Diseases of Circulatory System	1379	1316	...	...	...	...	...	...	...	5	4	8	13	36	41	86	145	185	253	370	417	469	370	220	73	2695
.. VIII.—Diseases of Respiratory System	866	688	39	7	...	1	1	1	1	4	1	5	3	6	21	27	54	104	129	171	291	270	231	121	46	1554
.. IX.—Diseases of Digestive System	129	113	18	3	1	1	3	...	...	...	1	...	...	3	9	8	12	26	19	25	44	29	25	10	5	242
.. X.—Diseases of Genito-urinary System	80	47	...	...	...	1	...	...	2	...	3	3	1	3	4	10	5	5	6	17	21	21	15	14	2	133
.. XI.—Diseases of Pregnancy	...	5	...	...	...	...	...	...	...	...	...	2	1	1	...	1	...	...	...	...	...	...	...	...	...	5
.. XII.—Diseases of Skin	3	7	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	2	2	3	...	10
.. XIII.—Diseases of Bones	3	27	...	...	...	...	...	...	...	1	...	...	...	...	1	1	3	1	2	3	2	8	6	1	1	30
.. XIV.—Congenital Malformations	55	70	103	2	2	...	3	...	1	2	1	...	1	...	2	5	2	...	1	...	...	1	4	8	19	12	5	135
.. XV.—Diseases of Early Infancy	143	94	237	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	237
.. XVI.—Senility and Ill-defined Diseases	19	32	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	4	8	19	12	5	51
.. XVII.—Deaths from Violence	193	144	3	4	8	1	2	11	6	10	15	6	17	15	11	15	16	22	29	26	36	35	29	19	10	337
Class 1.—Tuberculosis of Respiratory System	71	31	...	...	...	...	...	...	...	...	...	1	5	7	5	10	13	5	17	20	11	6	1	1	...	102
Tuberculosis of Meninges, etc.	2	1	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Tuberculosis of Intestines, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Other Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	16	5	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	3	4	2	4	3	1	1	...	21
Typhoid Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningococcal Infections	1	2	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Acute Poliomyelitis	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Measles	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Infectious Diseases	7	9	4	...	...	...	...	...	...	...	...	...	...	...	1	2	2	2	1	2	2	...	...	...	...	16
Class 2.—Malignant Neoplasm of Buc. Cavity	25	7	...	...	...	...	...	...	...	1	...	...	...	...	...	3	2	1	5	7	1	6	4	2	...	32
Malignant Neoplasm of Digestive Syst.	267	290	...	...	...	...	...	...	...	...	...	1	5	7	13	18	43	54	69	92	106	75	53	16	5	557
Malignant Neoplasm of Respiratory Syst.	367	77	...	...	...	...	...	...	...	1	1	...	6	10	14	27	39	87	68	70	76	29	13	3	...	444
Malignant Neoplasm of Breast	...	101	...	...	...	...	...	...	...	...	...	...	3	7	4	14	14	11	11	9	14	7	7	4	1	101
Malignant Neoplasm of Female G. Organs	...	58	...	...	...	...	...	...	...	...	...	...	1	1	7	9	6	9	4	8	1	7	2	3	...	58
Malignant Neoplasm of Other Organs	237	177	1	...	...	...	...	1	1	5	1	2	5	9	10	20	28	31	56	61	50	56	42	13	2	414
Leukaemia	23	18	...	...	...	...	2	4	2	...	2	...	1	...	2	1	2	3	3	8	6	4	...	1	...	43
Benign Neoplasms	5	2	...	...	...	...	...	1	...	...	...	1	...	2	...	...	...	2	...	...	1	...	...	...	...	7
Class 3.—Thyrotoxicosis	...	8	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	1	2	2	...	...	...	...	8
Diabetes mellitus	10	24	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2	3	2	6	9	7	3	...	34
Other Allergic diseases, etc.	8	15	...	...	...	...	...	...	...	...	2	1	...	...	3	1	3	...	3	3	3	2	2	...	...	23
Class 4.—Anaemias	10	11	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	1	3	4	8	1	...	21
Other Diseases of Blood	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2	...	...	4
Class 5.—Psychoses and Psychoneurotic Disorders	7	11	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	3	4	3	2	2	1	18
Class 6.—Vascular Lesions of Central Nervous Syst.	536	651	1	1	...	...	...	...	...	...	...	1	2	2	16	24	48	53	98	148	210	253	206	99	23	1187
Meningitis	2	6	1	...	...	...	...	...	...	1	...	...	1	...	1	...	...	2	...	...	1	...	1	...	...	6
Epilepsy	4	3	...	...	...	...	...	...	...	1	...	...	4	...	...	...	1	...	...	...	1	...	...	...	...	7
Otitis Media and Mastoiditis	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Diseases of Nervous System	26	30	1	1	...	...	...	2	1	1	2	...	2	3	6	4	9	6	4	5	3	6	...	...	...	56
Class 7.—Rheumatic Fever	10	5	...	...	...	...	...	...	...	2	1	...	1	1	...	2	1	3	3	1	...	...	...	...	...	15
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Arteriosclerotic, etc. Heart Disease	1096	805	...	...	...	...	...	...	...	...	...	2	5	17	29	49	106	136	182	269	312	324	263	155	52	1901
Other Diseases of Heart	75	116	...	...	...	...	...	...	...	...	...	...	...	4	1	2	3	9	15	24	28	45	35	21	4	191
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Class 8.—Influenza	52	38	1	1	...	...	...	...	...	...	1	2	1	...	2	4	5	5	11	8	17	11	16	4	1	90
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Pneumonia	28	34	...	1	...	...	...	...	1	1	...	1	1	1	1	3	4	6	9	12	13	3	2	2	...	62
Bronchitis	429	230	13	2	...	1	...	...	...	1	...	...	...	...	8	15	29	67	78	97	127	103	75	32	11	659
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Other Respiratory Diseases	41	23	1	...	...	...	...	...	...	1	...	2	...	3	3	3	4	4	6	10	15	7	2	2	1	64
Class 9.—Ulcer of Stomach	56	20	...	...	...	...	...	...	...	...	...	...	...	...	5	1	4	11	7	12	13	10	8	3	2	76
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Appendicitis	8	4	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	2	...	1	2	1	3	1	...	12
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Other Diseases of Digestive System	18	31	1	2	1	...	...	1	...	...	...	...	...	2	1	1	4	4	4	7	9	6	3	2	1	49
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Other Diseases of Pregnancy	...	5	...	...	...	...	...	...	...	...	...	2	1	1	...	1	...	...	...	...	...	...	...	...	...	5
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