

[Report of the Medical Officer of Health for Twickenham].

Contributors

Twickenham (London, England). Borough Council.

Publication/Creation

1950.

Persistent URL

<https://wellcomecollection.org/works/bmur78ac>

License and attribution

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

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

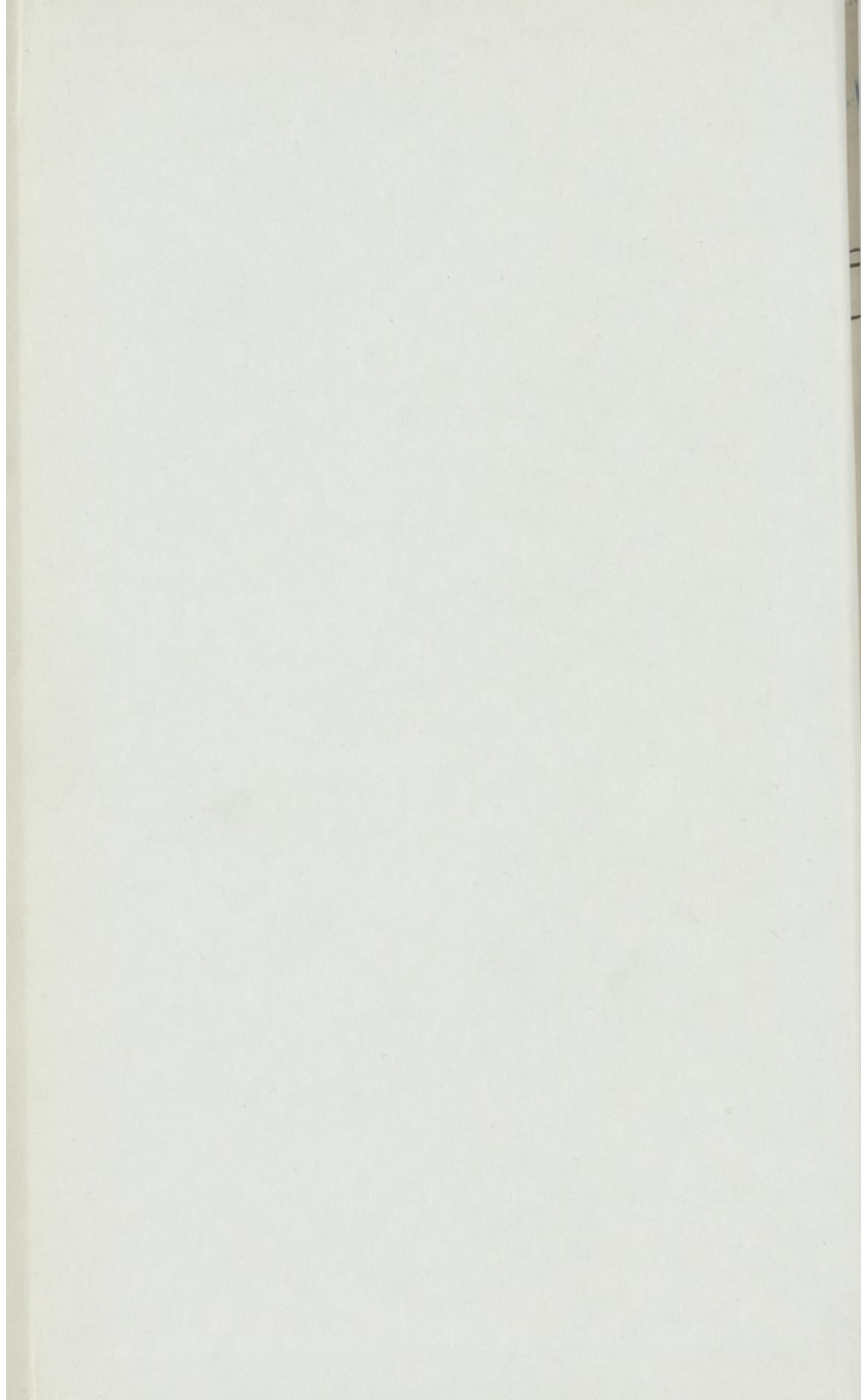
Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



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







TWICKENHAM
439 (1) TWICKENHAM

1949

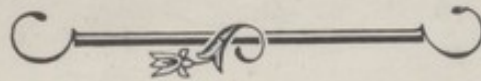
TWI 17

DECEMBER, 1950.

The

Wicks

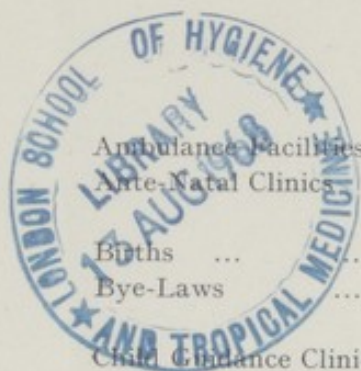
HEALTH *of* TWICKENHAM



The Annual Report of the Medical Officer of Health.

JOHN MADDISON, M.D., B.S., D.P.H.

68669



INDEX

	<i>Page</i>
Ambulance Facilities	21
Ante-Natal Clinics	59
Baths	6, 24, 29, 30
Bye-Laws	15
Child Guidance Clinic	59
Clean Food Guild	15
Common Lodging Houses	33
Complaints received during the Year	32
D.D.T. Treatment	39
Deaths	6, 25, 26, 27, 28, 29, 30
Dental Clinics	59
Diphtheria	13, 45
Diphtheria Immunisation Clinics	59
Disinfestation and Disinfection	38, 39, 40
Drainage and Sewerage	20
Dysentery	47, 48, 49
Enteric Fever	45
Environmental Hygiene	12
Factories Act, 1937	45
Fitness, Substandard	8
Food	8, 9, 42, 43, 44
Food Poisoning	13, 51, 56
Food and Drugs Act, 1938	37, 42, 43, 44
Hairdressers' and Barbers' Premises	33
Hawkers and Premises, Registration of	21
Health Education	20
Housing Statistics	7, 36, 37, 40
Infantile Mortality	27
Infant Welfare Clinics	59
Infection—Dangers of Spread by Insects	16, 17, 18
Infectious Diseases	13, 45-57
Insects—Danger of Infection Spread by	16, 17, 18
Laboratory Work	20
Legal Proceedings	37
Massage or Special Treatment, Establishments for	21
Maternal Mortality	7, 28
Measles	47, 48, 49
Middlesex County Council Act, 1944	21
Milk Supply	40, 41
Mortuary	21

INDEX—continued

	<i>Page</i>
National Assistance Act, 1948, Section 47	11
Old Age	10
Ophthalmia Neonatorum	46
Ophthalmic Clinics	59
Orthopaedic Clinic	59
Petroleum Acts	21
Pneumonia	47, 48, 49
Poliomyelitis	47, 48, 49
Population	6, 25
Public Cleansing	20
Puerperal Pyrexia	47, 48, 49
Rent and Mortgage Interest Restrictions Acts	21
Rodent Control	38
Sanitary Improvements Effected	35
Scabies	40
Scarlet Fever	45, 47, 48, 49
School Clinics	59
Schools	22
Sex Mortality	24
Shops Acts, 1934	21
Slaughtering of Animals	42
Slaughter-houses	42
Smallpox... ..	47
Smoke Abatement	21
Statistics, General and Vital	24, 29
Still Births	24
Summary of Visits, Inspections, etc.	33, 34
Swimming Baths and Pools... ..	22
Tents, Vans and Sheds	21
Tuberculosis	50
Unsound Food	43
Water Supply	19, 31
Whooping Cough	47, 48, 49
Zymotic Diseases Mortality	26

PUBLIC HEALTH DEPARTMENT,
ELMFIELD HOUSE,
HIGH STREET,
TEDDINGTON.

To the Mayor, Aldermen and Councillors of the Borough of Twickenham.

LADIES AND GENTLEMEN,

I have the honour to submit my Annual Report on the health and sanitary conditions of the Borough, together with the statistical tables for the year ending December, 1949.

The year 1949 is the first year following the introduction of the National Health Service Act in which sanitary and environmental hygiene have been dealt with as separate functions of the Borough Council. In this report, therefore, I make no mention of the many allied services, such as midwifery, maternity and child welfare, health visiting, supervision of foster children, adoption of children, home helps, immunisation, and day nurseries, which were formerly administered by the Borough Council and now by the County Council.

The health of every one of us is an indivisible whole; we are all subject to the stresses and strains of life, to the influences for good or evil of those with whom we associate, to the influences of our environment, the food we eat, the education we receive, and the pleasures and sorrows which come our way. A person is usually ill because his innate constitution cannot withstand the attacks made on it by the numerous adverse influences in his environment. These influences may be, for example, infection from another person, a lack of disease-resisting food or ignorance of the principles of hygiene, or some maladjustment to persons at home or at work.

The general practitioner and hospital sections of the national health services are mainly directed to the alleviation or cure of established sickness; they pay little regard to preventing that sickness. Yet the saving in money, time and misery would be enormous if all gave more attention to prevention. The people engaged in each branch of the service see only their own narrow function; they have almost no opportunity of viewing the problem of sickness or good health as a whole. The services run by the hospital boards, executive councils, county and borough councils are completely dissociated by the inherent faults of the administrative framework set up under the Act. I think that is a great pity. I hope some day Parliament may be induced to bring about a better form of liaison.

Nevertheless, the sanitary and environmental services of this Borough are very much alive and doing excellent work. They are preventing untold danger, discomfort and illness amongst the families of the town. The remainder of this report gives some account of what is being done.

I beg to acknowledge my indebtedness to the Chairman and members of the Public Health Committee for their helpfulness and support, which is always of the greatest encouragement. I desire also to acknowledge with thanks the friendly co-operation and help which I have always received from my colleagues in the other departments of the Corporation and the other members of the Council.

I am,

Mr. Mayor, Ladies and Gentlemen,

Your obedient servant,

JOHN MADDISON,

Medical Officer of Health.

MATTERS OF LIFE AND DEATH

Population.

There are 108,220 people living in Twickenham Borough. In 1937 there were 94,230. In 13 years the population has risen by almost 14,000; the largest increase occurred in 1946 when large numbers of service men returned home; many of them had married, especially in the early war years, they now sought homes and started families. In 1947 there were 500 more babies born than usual.

The advance in medical science and in the improvements in social conditions of the people have greatly extended the expectation of life. A hundred years ago the expectation of life was about 40 years; today it is over 60 years, therefore the number of elderly people in the population has risen proportionately greater year by year. Fifty years ago the proportion of the population over 45 years of age was about 20 per cent.; now the proportion has risen to about 35 per cent. At the more advanced ages the problem of the maintenance of old people is already serious. The group over 65 years of age is now about 14 per cent. of the population, whereas 50 years ago it was under 5 per cent. Although, until the next census is taken, we have no exact figures of the actual numbers of old people in Twickenham, there must be somewhere between 10,000 and 15,000 of them. There is thus one elderly person being maintained for every six men and women of working age. In another 20 years or so, the proportion will be one to four or even one to three. The reproduction rate for Twickenham, that is the number of girl babies born who will replace their mothers in the next generation is being maintained at a level which is more than sufficient. Looked at from the point of view of the number of unproductive mouths to feed, there are about 19,000 children and 12,000 old people; it is approximately true to say that married men in the prime of life are each, on the average, supporting three other people.

Being Born.

About 1,600 new babies are born each year. The rate is 15 babies for every 1,000 of the population in the town, which is about the same as pre-war. We have passed the peak period in 1946 when the rate rose to 19. We lose between 20 and 30 babies every year due to still-birth, which is often caused by poor health in the expectant mothers. In addition, about 30 babies die every year before they are one year old. Most of them die before they are a month old; many of them are feeble creatures with a poor hold on life, either premature or deformed; in some cases it is a blessing they do not survive. About 50 years ago it was quite common for a town of this size to have 150 babies die in the first year of life. The mothers of Twickenham are among the best in the country for the way they look after their infants. The child welfare services are doing splendid work teaching them how to do it.

Dying.

Every year in this town 1,200 people die. They certainly do not die any faster than anywhere else in the country. Heart disease takes the highest toll of 400; next comes cancer with 220; stroke takes off 140; and chest diseases, such as bronchitis and pneumonia, account for 110. These four groups carry

off about 870—more than three-quarters of all those who die. Tuberculosis, stomach diseases, and accidents each account for about 40. The danger of dying from poliomyelitis is no greater than dying from suicide or from child-birth. Each of these causes accounts for three deaths or less.

Maternal Mortality.

I regret to record that in 1949 three expectant mothers died either in pregnancy or child-birth. Although in these three cases the circumstances were quite exceptional, Twickenham has for years prided itself on its arrangements for safe child-bearing and delivery. The clinics for expectant mothers have always been well attended until recently, when the numbers have declined. Since the National Health Service came in, an expectant mother can make arrangements for her ante-natal care in one or more of three different ways—with a hospital, with a general practitioner, or with a clinic. Many women are making arrangements with hospitals and general practitioners for their ante-natal care as they have a perfect right to do, but I am not convinced that the hospitals and the practitioners have all the time needed to deal with preventive hygiene, which is the main function of the ante-natal clinic. A good mother is made not born; in the clinics they are taught the important rules of personal hygiene, the essentials of good nutrition, facts about clothing and preparation for motherhood; they are given reassurance about the forthcoming confinement, how to establish and maintain breast feeding; their physical health is watched and routine measures such as the taking of blood pressure, urine testing and regular weighing are carried out. In addition they are taught up-to-date methods of relaxation, and suitable physical exercises. All this, together with additional classes in mothercraft, separate for primiparae and multipares, make the preparation for the confinement very complete. From a preventive point of view, it is difficult to see how all this can be provided for each expectant mother in the minimum of three consultations with a practitioner, as required by the new Act. All these things can still be done in co-operation with the hospitals and practitioners. I hope the expectant mothers will continue to take advantage of them. While I repeat that the three deaths I have mentioned were exceptional, I hope this rise in the maternal mortality rate is not the beginning of a rise which we in the Public Health Service fear may occur as a result of decreased attendances at the ante-natal clinics.

Living.

In 1938 there were 28,240 dwelling-houses in the Borough, and the population was 96,550. In 1949 there were 29,776 houses, with a population of 108,000—the increase in the number of houses is 1,536, but the increase in the population is 11,450. In 1938 the average number of persons per dwelling was 2.8; in 1949, 3.6. If the number of persons per dwelling could have been kept constant, we should have needed 4,000 new dwellings to accommodate the increase in the population. There have been 1,100 dwellings provided since the war, many of which replace those destroyed. Allowing for some increase in density per dwelling, there are between 3,000 and 4,000 families for whom separate dwellings are not available. The number of families on the Twickenham housing waiting list is 3,535. Since 1946, the Public Health Department has reported 284 families (1,455 persons) with very severe overcrowding; 163 families have been rehoused (883 persons), leaving 121 families

still not dealt with. Of course the density of persons per dwelling in these families is far higher than the 2.8 of pre-war days. The unhoused families are living with parents or in rooms let off, or sometimes in one single furnished room, and a few in caravans. In 1946, 10,000 people came into the Borough from elsewhere. It is astonishing where they all found dwellings. Twickenham has very few building sites left; within the boundaries of the Borough there is no hope of these people finding separate dwellings. The domestic hardships, the bickering and squabbling over kitchens, the restricted activity of children, the inability to achieve domestic comfort and happiness, are exacting a heavy toll in mental health and efficiency. The pressure on the school accommodation is also very severe.

Sickness or Health.

Substandard Fitness.

Without in any way belittling the tremendous progress which has been made in medical science and the social conditions, mankind today remains appallingly unhealthy. What are the indications of this? To quote just a few; witness the crowded hospitals, the overflowing doctors' surgeries, the volume of sickness absenteeism in industry, and the millions of pounds spent every year by people on patent medicines in addition to the doctors' prescriptions, which also cost millions.

What are the causes? One important cause of ill health is ignorance of the basic facts about health; but by far the most important is faulty nutrition; it is the one over which we have most control as individuals and as a nation.

Substandard Food.

My sanitary inspectors spend a lot of time examining food—particularly meat—alleged to be unfit for human consumption; they find that whilst much of it is obviously of poor quality or even very stale, yet they cannot condemn it as unfit for human consumption. This provides a clue to one of the major causes of faulty nutrition—poor quality and lack of freshness of food.

Wild animals obtain their food in a natural form, fresh and uncooked. It is no coincidence that they are not beset by the diseases of civilisation, for example heart and chest disease, cancer, stroke, rheumatism and tuberculosis.

Every day in the deaths column of the newspapers you can read that a man died suddenly aged about 53 years. His death was probably due to coronary thrombosis, a disease in which the arteries of the heart gradually get narrower and narrower, so interfering with an adequate blood supply to the heart muscle itself. The end comes suddenly with a complete blockage of an important coronary artery. The disease is caused by degeneration or premature old age of the artery walls. I sometimes wonder whether these premature degenerative changes in the blood vessels are not due to deficiencies of certain essential substances in our diet. We already know a great deal about the vitamins and trace elements which are necessary for healthy living, but our knowledge is still incomplete and we can never be sure that we are not overlooking some important factor.

Perfect Food for Health.

The quality of our food, be it vegetable, fruit, animal, or bird, is dependent on the quality of the soil it is raised upon. In the vegetable kingdom plants which are grown in soil rich in humus or compost are sturdier, more fully developed and far healthier than those grown on poor soil. The healthy plants seem to develop within themselves disease-resisting substances which the poor ones appear to lack. Animals and human beings fed on the healthy plants receive in turn the disease-preventing substances, and are far less liable not only to numerous ailments, but also to the degenerative changes or premature old age of certain parts of the body. In addition these well-fed animals and people can withstand greater physical and mental strain; they can work harder and longer; and in them the onset of the feebleness of old age is delayed.

I wish we could be sure that we always ate food from compost-enriched soils. I sometimes wonder if part of the weariness of our nation is not due to eating food, often from abroad, which is grown on land over-exhausted and depleted in its biological potential. Not only is our food of poor quality in the first instance, but it is often subjected to further ill-treatment by processes of refining, whitening, canning, re-constituting, dehydrating and bad cooking. All of these processes in some way reduce the health-giving constituents of our food. It is no wonder that our bodies do not receive all the ingredients necessary to build up full resistance to disease.

We should put back into our fields, our allotments and gardens every scrap of organic waste we come by. If every householder separated the house refuse into three parts—first the ashes and tins into one dustbin; second the paper in another dustbin; and third all organic waste such as food scraps, cabbage leaves and peelings into a receptacle which could be emptied every day into a composting box and covered every few days with soil—not only would there be a saving in the refuse collection service, but the compost so provided would enrich our gardens and produce much more health-giving plants.

The quality of food deteriorates the longer it is kept. Our home-produced eggs are probably not less than four to five weeks old by the time we get them in the larger towns; our milk is four to five days old; our vegetables often look sick with old age; and our fish is tasteless after its sojourn in Scotland and on the railway; our meat is often only just on this side of the borderline of fitness for human consumption. Can we not improve on this?

We should demand whole meal bread and cereals—that is those containing the wheat germ with its essential fertility vitamin E—and we should replace our stodgy, starchy diets by balanced meals containing a much greater proportion of fresh raw fruits and vegetables.

Hard Work.

We are constantly being urged to work harder in the national interest. By harder work, it is alleged, we shall overcome the shortages which necessitate the time-consuming controls which frustrate us at every turn. But a man cannot work hard on an inadequate diet. Although a diet may contain sufficient carbohydrates, proteins, fats and calories, yet if it is lacking in disease-resisting and fatigue-preventing substances, then the sustained effort necessary over

long periods of hard work will be impossible; the onset of fatigue comes earlier than it need do; and in spite of the best will in the world, the body and mind rebel against circumstances over-exacting and exhausting. So we get into a vicious circle; the lessened ability to produce brings with it a lessened ability to obtain a first-class diet for the whole population; food and goods are in constant short supply; controls are imposed with their maddening formalities, so that the efficiency of the people, already lessened, is still further impaired by mental and physical weariness.

In Canada and U.S.A. it is possible—it is indeed quite common—for people to work really hard all day long on two meals a day—breakfast and evening dinner. For lunch they can manage with a cup of coffee and a sandwich. The reason is that the ingredients of their diet have more sustaining qualities and more fatigue-preventing substances than we have in our diet here.

They that Grow Old.

The Burden of Old Age.

I have already referred to the growing number of elderly people in our Borough. Every year my staff and I are called upon to deal with numerous problems these people give rise to. The natural onset of old age is the stage at which the physical independence of adult life becomes so compromised as to limit the activity of the aged person. After age 70, the proportion of women who can manage their own houses becomes less and less. With advancing years there is often mental deterioration; so that in both sexes very few escape the stage of second childhood. About one in ten of all old people require constant domestic care from other people. This care causes quite severe strain and often deprives those who look after the elderly of any chance of a normal life. There must be more than a thousand families in the town where this is happening now.

In cases where family care has failed for any reason, the deterioration in social conditions rapidly becomes serious. I was called to see a man well over 60 years of age who was ill and whose wife was in hospital. They had previously taken in and cared for the man's mother who was aged 93. They lived in an upstairs flat; the aged mother had insisted in having her own room; she attempted to maintain herself as independently as she could, doing her own ineffectual cooking on a gas ring, and attempting to do her own housework. At the time I saw these two, the man was in one bedroom, helpless and ill, and the old woman was in another room. Her circumstances were deplorable. The room was indescribably filthy, scraps of food were mouldy on the table; milk in a bottle stood sour and untouched. Although it was winter, she had no fire. She was lying on the floor, was unable to get into or out of bed, or go to the toilet. She must have fallen and injured herself and was too helpless to get up. She was literally starving, having had no food for days and certainly an inadequate diet for months. There was a smell of gas in the room. The gas-ring tap was on, but mercifully the meter had run out.

A practitioner was called, but he could not deal with these conditions. We sent in a home help who was willing to look after the man, but she was revolted and frightened of the old woman. As best we could we tidied up the woman's room, got her into bed and tried to give her some food. Because of the acute shortage of beds in hospitals for old people, I was unable to get her

admitted at once, and in spite of entreaties I had to be content with a promise of early admission from a waiting list. After three days, with constant urging, a bed became vacant; she was admitted and died soon after admission.

Second Childhood.

The description "second childhood" is very apt. The case I have described is typical of a large number we are called upon to deal with. Should anything happen which restricts the domestic activities of elderly people living alone, the subsequent degeneration is rapid. They truly revert to the baby stage, become doubly incontinent, irresponsible in behaviour, difficult to control and exceedingly tiresome.

We should try to prevent or at least to delay the onset of this degenerative stage for as long as possible. A great deal is being done to keep many old people well by providing home helps for a few hours either every day or three or four days a week. It is difficult to ensure a regular service for them as the home helps often have to be withdrawn for more urgent cases of acute sickness or confinement. It is pitiful to see the deterioration in mental and physical condition when a home help has had to be withdrawn or for some other reason is unable to attend. The old people get worried as to whether they should light a fire laid for them, because the next day may be colder and the home help not visiting. Such domestic necessities as cooking a meal, doing the floor, seeing to the shopping, drawing the pension or ordering the coal are often not done. We sometimes find an old person ill, without a fire, because of inability to get out to order coal. The amount ordered is small because money is short and unless the need is pointed out to the coal company, often no coal is delivered even if ordered. These old people need the active assistance of voluntary organisations who could help them by regular visits, provision of clubs, and a daily meals service. The old people cannot do heavy laundering and need some sort of laundry service to assist them. We have no reliable information about all the old people who live alone. The voluntary organisations could assist by supplying information and by frequent visiting.

With regular care and attention, most elderly sick patients regain vitality. Those quite seriously ill often take on a new lease of life and once again become self-supporting.

In the national interest we should encourage all old people to go on working as long as possible. As a rule, a busy life is best even in old age. Adjustment of the amount of work, the speed, and the wages need to be worked out; the occupations need to be adjusted within the physical powers of the men.

Compulsory Removal.

Occasionally it is necessary for the Council to apply to the Court for an Order to remove an old person compulsorily to a place of care and safety when the degree of degeneration in mental and physical powers has become so severe as to produce great distress to the invalid and often to other occupants of the house. As a rule, the case is one in which the old person occupies a room independently. In 1949 we had to deal in this way with an elderly woman aged 82 years who occupied a small ground floor front room in a small terrace house. The room was filthy with accumulated dirt, and was heavily bug infested. The woman was in a shabby bed covered with worn-out bedclothes

and an old coat, all black with age and dirt. She herself was dirty and was infested with head and body lice. As is usual in these cases of advanced degeneration, she was deaf, had lost the ability to keep herself clean or change her clothing or to see to her domestic necessities, or even to visit the toilet. Not realising her own serious state of deterioration, she persisted in refusing any attention or assistance. The Corporation were obliged to apply for a Court Order authorising the removal of the patient to Redhill House for three months. Under care and supervision she regained vitality and moderate health. The Court Order was renewed four times and then allowed to lapse. The patient lived for 15 months in the hospital.

Environmental Hygiene.

Anything to Complain About ?

Every week over 40 people come to the Health Department to complain about some sanitary defect affecting their health. Monday mornings are especially busy, as everything seems to happen at the week-ends. Housing defects form by far the greatest number—a miscellaneous collection of leaking roofs, rotting floorboards, choked drains, smoky chimneys, defective fire-grates, defective stair-handrails, water-closets out of order and so on. The infestations by rats and mice, bugs and other insects form another large group of about 500 a year. We are always kept busy examining food alleged to be unfit for human consumption; these complaints number over 300 a year. Although this part of the work keeps the sanitary department quite busy, it forms only a fraction of the volume of work needed each year to keep the Borough wholesome. During 1949 the inspectors paid nearly 21,000 visits to ensure that the duty of the Corporation for enforcing the numerous Acts of Parliament which have to do with the maintenance of public health were carried out properly.

Busy Inspectors.

An inspector in the course of his duties has to see to a number of complaints which have come in every morning; he has to find the contacts of cases of infectious disease and give advice to them; call at shops, factories, cinemas, dance halls, stables, piggeries, hairdressers, caravans, and fairgrounds to check up on conditions; call at bakehouses, fish shops, grocers, greengrocers, factory canteens, restaurant kitchens, and even the local to see that the conditions are hygienic. He has also to keep an eye on ice-cream premises and premises making preserved meat or fish products. He may have to take samples of milk; take an observation for an alleged smoke nuisance, and see that proper fire precautions are taken at petrol-filling stations. He has to visit schools and swimming baths, slaughter-houses and the places where hawkers keep their barrows. He must watch the operations of building contractors engaged on repairing drains and sewers and supervise the men who deal with rats and mice and bugs.

The inspector may have to attend a court. During 1949 two traders were prosecuted for offences under the Food and Drugs Act; in two other cases the Corporation sent a warning letter.

The Corporation have a very successful scheme for enabling occupiers of premises infested by rats or mice or insects to receive the assistance of the pest destruction staff. Occupiers may enter into a contract with the Corporation to have pest destruction carried out. In 1949 almost 600 contracts were made.

Control of Infectious Diseases.

The control of infectious diseases forms an important part of the work of the health department. This control is concerned with every citizen in the town, and is carried out to lessen not only the number of deaths from infectious disease, but also to lessen the mount of illness and physical, economic, social and psychological damage. Some infectious diseases are preventable, such as diphtheria, smallpox, typhoid, dysentery and food poisoning. Others, especially the airborne infections, are not yet preventable, but can be limited by good personal and social hygiene; examples are the common cold, poliomyelitis, cerebral spinal fever, whooping cough, tuberculosis, and streptococcal infections such as sore throat and scarlet fever. The contribution of the health department is in the assistance it can give on such matters as early diagnosis, tracing of contacts, advice to patients and contacts on how to limit spread, obtaining laboratory confirmation of specific infections, and arranging admission to hospital.

Air-borne Infections.

The germs causing these air-borne infections live in the air passages not only of the victims, but also of healthy carriers. The germs are carried from one person to another, either on comparatively large droplets of spray sent out through coughing, sneezing and talking, or on finer droplets about the size of smoke particles, which can float in the air for a considerable time, or on dust which may settle on the floor and be raised during sweeping and dusting. The public can assist in preventing the spread of these diseases by protecting the mouth and nose when coughing and sneezing, by remaining indoors as soon as the symptoms of a cold appear, and whenever possible by damp dusting and sweeping.

Artificial Immunisation.

In 1937 and 1938 there were 116 and 70 cases respectively of diphtheria. In 1949 there was not a single case. Diphtheria has been almost wiped out by the active campaign of immunisation against it which has been running since 1942. To keep up this record we need to have all children immunised against this disease. Every mother should arrange to have her baby done either by the clinic, or by her own doctor, at any time after the child is eight or nine months old.

Food Infections.

Increase in Food Poisoning.

For the past eight years the number of outbreaks of food poisoning has been rising. We in Twickenham have had our share of them, in some cases affecting only a few people, in other cases hundreds. The reasons for the increase

are, firstly, as we live in towns we have very few opportunities of growing or raising our own food; it may be handled by many people before we get it. Secondly, many people nowadays take a meal at a canteen, cafe or restaurant. Careless handling of food by a housewife in her own home may affect only her own family, but when the same thing is done in a canteen or restaurant it may affect hundreds. Still worse, when it is done in a large food factory it may affect thousands. Thirdly in restaurants and food factories, food is often prepared one or more days before it is eaten, which gives the time needed for dangerous germs to grow in the food. Fourthly we have been driven to accept a great many made-up dishes such as pies, brawn and sausage meat, because of the poor quality of meat supplies fit only for "manufacturing" purposes.

Germs.

There are two main groups of organisms responsible for food poisoning. One group is the staphylococci—tiny germs which live in the noses of about a third of all people, and in septic cuts, spots and boils. The other group is the salmonella organism present in the bowels of animals and human beings. When these organisms are present in food they can, under suitable conditions, cause food poisoning. The conditions required are time to grow—a few hours upwards; a suitable temperature—about blood heat or summer weather; moisture; and a suitable growing medium such as meat, gelatine, milk or cream.

Symptoms.

The symptoms of food poisoning vary a little, depending on the species of organism present; the main symptoms are vomiting, severe dizziness like sea sickness, abdominal pain, diarrhoea, a raised temperature and a feeling of wretchedness. The prevention of these illnesses can be achieved by ensuring that the germs do not reach the food and that the conditions necessary for their multiplication are not allowed to occur. We can withstand a few germs present in food without ill-effect, but we cannot withstand an attack by a large number. Thus food in shops, restaurants and bakehouses should be kept covered as much as possible to prevent staphylococci reaching it from people sneezing, coughing or talking over it. Hands should always be washed after using the toilet because bowel germs can be conveyed to food in that way. In preparing and serving food it should be handled with the fingers as little as possible. Animals, especially rats and mice, must be kept away from food. The time from the preparation of the meal to serving at the table should be as short as possible, and the food should be kept in a cool larder, or better still a refrigerator. Moisture should not be added to dried food such as egg powder until the last possible moment. Special care should be taken over meat and cooked meat products, milk, cream, cream fillings, trifles and layer cakes.

During the last few years, my inspectors and I have put in a great deal of work in trying to raise the standards of hygiene in food shops and food preparation premises. The Food and Drugs Act gives power to local authorities to require owners of food premises to conform to good standards. These powers have been used freely and a great deal has been done to improve the structural condition of premises and the supply of essential fittings like proper wash basins and sinks. Still more has been done by persuasion and education and the solicitation of the active co-operation of the traders themselves. Even so, we felt we ought to try for standards higher still.

Clean Food Guild.

Towards the end of 1949, the Corporation approved and supported the formation of the Clean Food Guild. The Guild was started by inviting traders from main branches of the food industry to a meeting; the project was warmly welcomed. The organisation is independent of the Corporation. It controls its own activities and finances through a Guild executive committee which consists of eleven food traders, six members of the Public Health Committee and one representative of the Food Control Committee. During the year the Guild has been in operation an executive committee meeting has been held once a month, at which the Chief Inspector or I have attended to give technical advice and help.

We have drawn up codes of practice for each of the principal food trades. These codes deal with numerous matters such as cleanliness of rooms, ceilings, walls and floors, maintenance of furniture and equipment; drains, lighting, ventilation, and water supply; toilet and hand-washing facilities for staffs, toilet hygiene and cloakrooms; personal cleanliness, training and education of staff. They deal also with the storage and display of food, methods of handling food, wrapping, dish washing, smoking and illnesses of staff. The Guild has accepted these codes of practice as a standard to which all its members will conform. There are now 49 registered members in the Guild, and a further five applications waiting to be dealt with. Applications come in every month and those whose standards are high enough to warrant admission to the Guild are accepted on the recommendation of the Chief Inspector. There is no doubt about the enthusiasm and interest of the members; indeed they have contributed among themselves subscriptions varying from one to five guineas for the purpose of advancing the scheme.

Bye-laws.

The Corporation has recently made bye-laws which deal with the handling, wrapping and delivery of food. The bye-laws make legal requirements for preventing food infection by infected persons, or by dirty animals or insects. Food must be kept covered; counters, slabs, fittings and apparatus, utensils and crockery must be kept clean. Clean wrapping paper and clean delivery vehicles are required, and many allied matters.

But no amount of legislation will ensure clean safe food unless the food handlers themselves adopt clean safe methods. The best way of achieving this is by education and persuasion. The Corporation have recently approved a training course for food handlers, in which they will be taught the principles of safe food handling. Other courses will follow in the future. The public can assist in this campaign by insisting on clean handling in all food establishments and by refusing to patronise traders whose methods are disreputable. In order to enable the public to understand the nature of the problems, the Guild has invited representatives from women's organisations in the town to attend Guild meetings from time to time; my staff and I have given public lectures, and the Guild, in co-operation with the health department, had a stand in the Twickenham Trades and Industries Fair last September. In all these ways we have tried to make the public aware of the differences between hygienic and unhygienic practices, and to object when they encounter bad methods in shops and restaurants. I would like to see all school children taught the elements of food hygiene and I would still more like to see all schools with the facilities and equipment necessary to practise it.

The Danger of Infection Spread by Insects.

By T. WILLIAMS, *Chief Sanitary Inspector.*

Routes of Infection.

The route by which a person receives an infection is often unknown. Many infections are carried by insects. The Medical Officer of Health and I thought that as we had little knowledge of the extent of this danger in our own locality, it would be useful if we tried to find out what organisms were carried by insects, and if any illnesses which occurred could be attributed to such a mode of spread. We decided to collect insects from various parts of the Borough, to have them identified and examined bacteriologically; and to collect information about as many cases of infectious disease as we could, especially the food poisoning group.

Insect Traps.

We experimented with various forms of insect traps and eventually decided to use a conical pattern which was made out of celluloid and wire mesh. With the assistance of the district sanitary inspectors, traps were set in various parts of the Borough during the period 18th June to 31st December, 1948, and insects were collected as long as any were about. The number of traps laid was 331, and 1,044 insects were caught. We laid traps in places as varied as possible in and around houses, restaurants, canteens, shops, schools, open spaces, refuse works, etc. We tried out 26 different types of baiting material, such as fish, fish paste, meat, hash, sausage meat, corned beef, soup, milk, fruit, beer, compost and animal excreta. We found that more flies per trap were obtained with fish as a bait than with any other material. We were not able to plan the experiment by laying two or more traps with different baits in the same place, nor could we ensure that the placing of the traps in the various parts of the district was "balanced" for similarity of environment, temperature, or time of exposure, as should be done in a "block" experiment.

Identifying the Organisms and Insects.

The traps were taken to the Public Health Laboratory at Epsom, where some of the live insects from certain traps were examined for organisms. It was not possible to examine all the insects for organisms, partly because of the great amount of work entailed in their isolation and identification, and partly because the insects die so quickly; nor was it possible to ensure that the specimens examined formed a random sample, having regard to place and circumstances of collection. In all, 172 insects were examined for organisms, and these, together with the remainder (872) were sent to the British Museum (Natural History) Entomological Department, Diptera Section, where they were identified.

Species and Organisms.

The 1,044 insects identified were spread over no less than 45 different species (Table 35). Admitting the deficiencies of our sampling technique, we found that 488—by far the greatest number—belonged to the species

Lucilia sericata, Meig, and another 103 to the species *Lucilia caesar*, both species being green-bottle flies; and 131 were *Calliphora erythrocephala*, Meig (blue-bottles). The green-bottle and blue-bottle flies accounted for 722, and the remaining 322 insects were spread over the other 42 species as shown in the table. It is curious that we collected only 16 house flies (*Musca domestica*, L.).

Some of the insects examined bacteriologically were found to be carrying two or three organisms each, so that organisms were found 214 times on the 172 insects examined, but 45 of the insects were bacteriologically sterile. On the average, organisms were found on each infected insect 1.7 times. In all there were 25 different organisms isolated, the largest group being *Streptococcus pneumoniae*, which was isolated 32 times (Table 35). Other organisms isolated a fair number of times were *P. morgani*, *Coliform bacilli* and *Streptococcus faecalis*.

Infectious Diseases.

We tried to collect information about as many cases of gastro-enteritis as we could, and of any other infections which might be of interest. We invited the medical practitioners to co-operate by notifying, under section 17 of the Food and Drugs Act, any patient with an illness which might be due to food poisoning infection and who exhibited symptoms of gastro-enteritis, however vague. The Education Officer kept us informed about school children absent from certain schools through illness for two or more days. We had information about children similarly absent from our day nurseries. The health visitors told us of any cases they heard of through the clinics. By these means we learned of 529 cases of illness. The inspectors visited all the houses, but 438 of these cases proved to be non-infective ailments (accidents, etc.) and of no value for our enquiry, leaving us with 91, representing the ascertained incidence of gastro-enteritis in the Borough during the period (Table 37). All except one of these patients exhibited symptoms, either of diarrhoea or vomiting; or diarrhoea and vomiting; or diarrhoea, vomiting and raised temperature. The exception was a child aged one, who had a *Shigella Sonnei* infection without symptoms. Eight of the patients were babies under one; 47 were children aged 1-16; and 35 were persons over 16.

The inspectors used a standard form of enquiry which includes all the accepted routine headings in the investigation of suspected food poisoning, together with a little more detail about such conditions as chronic appendicitis, gall-stones and allergies.

We tried to obtain a specimen of faeces from every patient with gastro-enteritis but were successful in only 62 cases. These 62 specimens were sent to the Public Health Laboratory at Epsom for identification of organisms where possible. Organisms were identified in 20 of these, namely: 8 had *P. morgani*, 2 had Dysentery *Shigella Sonnei*, 3 had Amoebic Dysentery, and 7 had *Salmonella* infections; the other 42 cases gave negative results. We also sent for examination specimens of faeces from 99 contacts in apparently good health, and out of these *P. morgani* was isolated twice.

Potential pathogens from the respiratory tract referred to in Table 35 were isolated from flies in Twickenham, and included *Streptococcus pneumoniae*. This germ was responsible for an outbreak of inflammation of the eyes—conjunctivitis—in a school in Twickenham during 1948, but no connection

between the outbreak and flies could be established, although flies in the district were found to be contaminated with this germ at the same period of time.

Comparison of Organisms from Insects and Patients.

The only organism common to both flies and patient was *Pr. morgani*, which was found 18 times on four species of fly (15 times on either green or blue-bottles) and was isolated from eight patients (one baby, five children, two adults). Lactose fermenting coliform organisms were often found and certain strains are thought to cause infantile diarrhoea.¹

In a high proportion of cases of gastro-enteritis it seems difficult or impossible to isolate a pathogen.

The most important observation of the whole experiment is, we think, the surprising number of organisms carried by insects. About three quarters of the insects examined bacteriologically were infected with organisms—many highly pathogenic. If this represents the average rate of infection generally amongst the insect population, it is not surprising that infections are liable to be conveyed to persons by insects, especially on food.

Planning the Experiment.

The planning of an investigation such as this on a statistical basis is difficult. Our experience has shown the necessity for attention to the following points. In the part dealing with the insects we should consider and try to balance the many and varied conditions in which traps may be placed ; whether inside or outside premises ; the amount and proximity of breeding facilities, e.g. within so many yards of food, decomposing material, scraps of food lying about, dust-bins, refuse works, pig-bins, open spaces, etc., the standard of domestic catering or industrial cleanliness. The bait used in the traps is of importance—species vary in their likes and dislikes. The times of placing and collecting traps should be as uniform as possible. We noted the maximum and minimum temperature each day. Each trap should have a record including the number of insects caught, alive or dead, and the species. Of the live insects a known proportion should be selected for bacteriological examination. In the part dealing with the patients the points requiring care about illnesses are the source of the information ; allowance for the variation in zeal of practitioners and staff notifying ; the variability of conditions classed as illnesses ; the date and time of onset and the duration ; the age, sex, vocation, school, and address ; the symptoms, diagnosis, and bacteriological proof ; the article and place responsible for infection, and the bacteriological proof.

Acknowledgments.

I wish to thank Dr. Doris M. Stone and the staff of the Public Health Laboratory, Epsom, by whom the bacteriological examinations were made.

The British Museum (Natural History) Entomological Department, Diptera Section, co-operated fully and thanks are due to Mr. Riley (Keeper), and particularly to H. Oldroyd, Esq., M.A., and Dr. F. van Emden (Commonwealth Inst. of Entomology), who identified the many specimens sent to them.

I wish also to thank Mr. Nuttall, Divisional Education Officer, Twicken-

¹ B.M.J. 1949. 16th July. Page 141.

ham, and the Head Teachers of the Schools ; Matrons and Staffs of Day Nurseries ; and of Private Maternity Hospitals for their co-operation.

The Medical Practitioners in the Borough were extremely helpful and thanks are expressed to them for the many voluntary notifications received.

I am indebted to the many traders engaged in the sale or distribution of food who permitted their premises to be used in the investigations ; and to the district inspectors for the able manner in which they carried out the extra work.

WATER SUPPLY.

We are so accustomed to expect a pure water supply from our taps that we sometimes forget the necessity for constant supervision of the supply. I am indebted to Lt.-Col. E. F. W. Mackenzie, Director of Water Examination, Metropolitan Water Board, for the following report:—

“ The water supply to the Twickenham area is abstracted from the River Thames at Laleham and Walton, purified in the storage reservoirs at Littleton and Walton and at the filtration works at Hampton.

All the water is chlorinated before it leaves the works and adequate contact to ensure complete action by the chlorine has been provided at Hampton by the building of a contact tank which first came into operation in July 1948. The dose of chlorine required to achieve satisfactory sterilisation is governed by the maintenance of a predetermined residual of free chlorine after a certain period of contact. This figure is checked at frequent intervals by the Chlorination Attendants, the dose of chlorine being adjusted accordingly, and, in addition, an instrument is in operation at Hampton which records continuously on a chart the residual chlorine in the water after a given period of contact.

The new method of treatment has been in operation for more than a year and it is now possible to assess the results of this method of controlled super-chlorination. Taking as the highest standard of bacterial safety of a water the absence of *Bacterium coli* in 100 millilitres of sample, it is found that the percentage of samples drawn at Hampton works which did not comply with this standard in 1946 (when the ammonia-chlorine process was in use) was 2.5, whereas in 1949 this figure had fallen to 0.3. It has also been found that the amount of colouring matter in the water pumped into supply fell from 19 units in 1946 to 14 units in 1949, a reduction of over 25 per cent.

All new and repaired mains are disinfected with chlorine before being restored to supply and samples of water from them are tested bacteriologically. None of the supplies is plumbo-solvent.

Samples of the water are collected at all stages of purification at least five times each week and are analysed at the laboratories of the Metropolitan Water Board. The results are shown in table No. 9.”

Number of houses supplied by the Board :—

(a) Direct	...	...	...	...	29,767 (106,883 persons)
(b) By means of standpipes	...	...	...	...	9 (17 persons).

KEEPING THE BOROUGH CLEAN.

I am obliged to the Borough Surveyor for the following report about drainage, sewerage and public cleansing:—

“ Drainage and Sewerage.

Apart from a short length of surface water sewer to relieve flooding in Fulwell Park Avenue, no works of major importance have been carried out due to the embargo placed by the various Ministries on the execution of any major improvements to sewers.

Repairs of a routine nature, flooding-inspection and investigation into the entry of foul sewage into surface water sewers have been carried out, in addition to the extensions of sewers at Butts Farm for the growing housing estate.

Public Cleansing.

(a) *Streets.* Shortage of labour has meant that the standard of past years, although maintained, has not yet reached pre-war level.

(b) *Refuse Collection.* Due to the difficulty in supply of materials, etc., it was disappointing that the new “ Paxit ” vehicles were not delivered during 1949, although it is anticipated that a considerable number will be available in the forthcoming year, so that new and modern refuse collecting vehicles will take the place of those already operating in the Borough.

Salvage and refuse has continued to be collected weekly with generally satisfactory results.

(c) *Refuse Disposal.* As in 1948, the three old Destructors have been kept fully in service during 1949, but owing to their limitations, increasing recourse has had to be had to controlled tipping. The Ministry of Health held a Public Enquiry into the proposed new Destructor at Sunbury, for the joint use of Twickenham, Sunbury and Staines, and the revised cost of the scheme is now £207,000. Arrangements for the purchase of the land are in hand and field experiments are being carried out on the possibility of depositing screenings and refuse in water, with a view to incorporating certain economies in the Plant.”

GENERAL.

Health Education.

During the year continued use was made of various health education methods, including propaganda by posters, leaflets and lectures illustrated by films or lantern slides.

Laboratory Work.

The usual arrangements were continued during the year and worked satisfactorily.

Ambulance Facilities.

The Middlesex County Council is the responsible authority for the provision of the ambulance service under the National Health Service Act, 1946.

Mortuary.

During the year 161 bodies were admitted to the mortuary. In all cases post-mortem examinations were held.

Rent and Mortgage (Interest) Restrictions Act, 1920-38.

Two certificates were granted under the above Acts in respect of premises which were in a state of disrepair.

Petroleum (Consolidation) Act, 1928, and Petroleum Spirit Regulations, 1929-47.

During the year 160 visits were paid by the sanitary inspectors to premises upon which petroleum or carbide of calcium was stored. One hundred and seven licences were issued in respect of these premises.

Shops Act, 1934.

Three exemption certificates were granted under section 10(2) of the Act in relation to sanitary conveniences, making a total of 15 premises within the Borough for which such certificates are now extant.

Middlesex County Council Act, 1944.

Establishments for Massage or Special Treatment. Twelve licences in respect of establishments for massage or special treatment were issued during the year. The premises were kept in a satisfactory condition.

Registration of Hawkers and Premises. 43 visits were made by the sanitary inspectors concerning the vehicles and/or storage accommodation of hawkers of meat, fish and vegetables. Five persons and two premises were registered during the year.

Middlesex County Council Act, 1944, Part XI. sections 346 and 347.

Tents, Vans and Sheds. During the year consents were renewed authorising persons to station and use two caravans for human habitation at Longford Close, Hampton Hill, and one caravan situate at Cardinal Vaughan School Playing Fields, Twickenham. A new consent was similarly issued in respect of a caravan situate at 39 Second Cross Road, Twickenham.

Smoke Abatement.

It was not necessary to take any formal action during the year regarding excessive emissions of smoke.

Swimming Baths and Pools.

Excellent facilities for swimming are provided at the Corporation's three open-air baths.

Water is supplied by the Metropolitan Water Board's main, and samples for bacteriological examination are taken throughout the season.

Schools.

Inspection of sanitary arrangements and canteens at the schools coming under the jurisdiction of the Divisional Executive was maintained by the sanitary inspectors during the year.

It was not necessary to close any schools on account of infectious disease among children.

**TABLES FOR
STATISTICAL YEAR
1949.**

STATISTICAL SUMMARY

for the Year 1949

Area in acres	...	...	...	...	...	...	...	7,007
Population (as extended—census 1931)	...	...	...	...	...	...	...	79,376
Civilian population—estimated to mid-year (as supplied by the Registrar-General)	...	...	...	...	...	...	...	106,900
Total population—ditto	...	...	...	...	...	...	...	108,000
Number of inhabited houses	...	...	...	...	...	...	...	29,776
Rateable value	...	...	...	...	...	...	...	£1,061,246
Sum represented by a penny rate	...	...	...	...	...	...	...	£4,346 0s. 8d.

			<i>Total</i>	<i>M.</i>	<i>F.</i>
Live Births:	Legitimate	...	1,535	789	746
	Illegitimate	...	68	30	38
	Total	...	1,603	819	784

Birth rate per 1,000 of estimated civilian population ... 14.99

			<i>Total</i>	<i>M.</i>	<i>F.</i>
Still Births:	Legitimate	...	30	14	16
	Illegitimate	...	2	2	—
	Total	...	32	16	16

Still birth rate per 1,000 total (live and still) births ... 19.57

			<i>M.</i>	<i>F.</i>	
Deaths	...	...	594	610	1,204

Crude death rate per 1,000 of estimated civilian population 11.26

Adjusted death rate ... 11.03

Maternal deaths: Puerperal and post-abortive sepsis, 2 ... } 3
Other maternal causes, 1 ... }

Rate per 1,000 total (live and still) births ... 1.83

Death rate of infants under one year of age:—

All infants per 1,000 live births ... 21.21

Legitimate infants per 1,000 legitimate live births ... 20.20

Illegitimate infants per 1,000 illegitimate live births ... 44.12

Deaths from: Cancer (all ages) ... 221

Measles (all ages) ... —

Whooping cough (all ages) ... 1

Diarrhoea (under 2 years of age) ... 2

TABLE 1.

Population 1937-1949.

Year	Population	Population trend			Migration excess	
		Total increase or decrease	Percentage proportion	Natural increase or decrease	Inward	Outward
1937	94,230	+ 4,090	+ 4.34%	+376	3,714	—
1938	96,550	+ 2,320	+ 2.46%	+363	1,957	—
1939	97,440	+ 890	+ 0.92%	+383	507	—
1940	94,070	— 3,370	— 3.46%	— 15	—	3,355
1941	91,820	— 2,250	— 2.39%	+ 38	—	2,288
1942	92,460	+ 640	+ 0.70%	+450	190	—
1943	92,780	+ 320	+ 0.35%	+502	—	182
1944	88,660	— 4,120	— 4.44%	+507	—	4,627
1945	91,920	+ 3,260	+ 3.68%	+424	2,836	—
1946	102,850	+10,930	+11.89%	+835	10,095	—
1947	105,930	+ 3,080	+ 2.99%	+918	2,162	—
1948	106,700	+ 770	+ 0.73%	+621	149	—
1949	103,900	+ 200	+ 0.19%	+399	—	199

TABLE 2.

Causes of Death. Registrar-General's Official Returns.

Causes of Death							Males	Females	Total
All causes							594	610	1204
1.	Typhoid and paratyphoid fevers						—	—	—
2.	Cerebro-spinal fever						—	—	—
3.	Scarlet fever						—	—	—
4.	Whooping cough						—	1	1
5.	Diphtheria						—	—	—
6.	Tuberculosis of respiratory system						26	14	40
7.	Other forms of tuberculosis						2	—	2
8.	Syphilitic diseases						9	3	12
9.	Influenza						6	7	13
10.	Measles						—	—	—
11.	Acute polio-myelitis and polio-encephalitis						1	1	2
12.	Acute infective encephalitis						1	—	1
13.	Cancer of buccal cavity and oesophagus (M), uterus (F)						7	10	17
14.	Cancer of stomach and duodenum						15	12	27
15.	Cancer of breast						—	18	18
16.	Cancer of all other sites						83	76	159
17.	Diabetes						2	3	5
18.	Intra-cranial vascular lesions						54	82	136
19.	Heart disease						201	195	396
20.	Other diseases of circulatory system						19	27	46
21.	Bronchitis						31	22	53
22.	Pneumonia						26	30	56
23.	Other respiratory diseases						8	10	18
24.	Ulcer of stomach or duodenum						5	3	8
25.	Diarrhoea under 2 years						1	2	3
26.	Appendicitis						—	—	—
27.	Other digestive diseases						9	13	22
28.	Nephritis						13	7	20
29.	Puerperal and post-abortive sepsis						—	2	2
30.	Other maternal causes						—	1	1
31.	Premature birth						4	4	8
32.	Congenital malformations, birth injury, infantile disease						7	12	19
33.	Suicide						—	2	2
34.	Road traffic accidents						6	3	9
35.	Other violent causes						15	12	27
36.	All other causes						43	38	81

TABLE 3.

Zymotic Diseases Mortality.

The mortality rates for this group of diseases, which includes enteric fever, smallpox, scarlet fever, diphtheria, measles, whooping cough and diarrhoea under two years of age, were:—

<i>Disease</i>	<i>No. of Deaths</i>			<i>Death rate per 1,000 of the population</i>
	<i>Male</i>	<i>Female</i>	<i>Total</i>	
Enteric Fever	—	—	—	—
Smallpox	—	—	—	—
Scarlet Fever	—	—	—	—
Diphtheria	—	—	—	—
Measles	—	—	—	—
Whooping Cough	—	1	1	·009
Diarrhoea	1	2	3	·028

TABLE 4.

Main Causes of Death.

An analysis of the death returns reveals the following main causes of death:—

<i>Disease</i>	<i>Percentage of total deaths</i>	<i>Death rate per 1,000 of the population</i>
Diseases of heart and circulatory system	36·7	4·13
Intra-cranial vascular lesions	11·29	1·27
Bronchitis, Pneumonia, and other respiratory diseases	10·59	1·19
Cancer	18·36	2·07
Violence	3·16	0·36
Tuberculosis	3·49	0·39

TABLE 5.

Infantile Mortality.

(a) The following table, compiled from official registrations, gives details of the causes of death at various ages under one year of age:—

	<i>Under 1 week</i>	<i>1-2 weeks</i>	<i>2-3 weeks</i>	<i>3-4 weeks</i>	<i>Total under 4 weeks</i>	<i>4 weeks and under 3 months</i>	<i>3 months and under 6 months</i>	<i>6 months and under 9 months</i>	<i>9 months and under 12 months</i>	<i>Total deaths under 1 year</i>
ALL CAUSES :—Certified ...	17	1	2	3	23	6	2	1	—	32
Uncertified ...	2	—	—	—	2	—	—	—	—	2
Smallpox ...	—	—	—	—	—	—	—	—	—	—
Chicken-pox ...	—	—	—	—	—	—	—	—	—	—
Measles ...	—	—	—	—	—	—	—	—	—	—
Scarlet Fever ...	—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup ...	—	—	—	—	—	—	—	—	—	—
Whooping Cough ...	—	—	—	—	—	1	—	—	—	1
Influenza ...	—	—	—	—	—	—	—	—	—	—
Enteritis ...	—	—	—	—	—	1	2	—	—	3
Tuberculous Meningitis ...	—	—	—	—	—	—	—	—	—	—
Abdominal Tuberculosis ...	—	—	—	—	—	—	—	—	—	—
Other Tuberculous Diseases ...	—	—	—	—	—	—	—	—	—	—
Congenital Malformations ...	3	—	—	—	3	—	—	—	—	3
Premature Birth ...	5	1	1	—	7	1	—	—	—	8
Atrophy, Debility and Marasmus	—	—	—	—	—	—	—	—	—	—
Atelectasis ...	1	—	—	—	1	—	—	—	—	1
Injury at Birth ...	4	—	—	—	4	—	—	—	—	4
Erysipelas ...	—	—	—	—	—	—	—	—	—	—
Syphilis ...	—	—	—	—	—	—	—	—	—	—
Rickets ...	—	—	—	—	—	—	—	—	—	—
Meningitis (not Tuberculous)	—	—	—	—	—	—	—	—	—	—
Convulsions ...	—	—	—	—	—	—	—	—	—	—
Gastritis ...	—	—	—	—	—	—	—	—	—	—
Laryngitis ...	—	—	—	—	—	—	—	—	—	—
Bronchitis ...	—	—	—	—	—	—	—	—	—	—
Pneumonia (all forms) ...	1	—	—	1	2	3	—	1	—	6
Suffocation (overlying) ...	—	—	—	—	—	—	—	—	—	—
Other causes ...	5	—	1	2	8	—	—	—	—	8
Totals ...	19	1	2	3	25	6	2	1	—	34

(b) An analysis of the mortality reveals that neo-natal deaths were responsible for 73.53 per cent. of the total deaths, viz.:—

<i>Under 24 hours</i>	<i>1 to 7 days</i>	<i>1 to 4 weeks</i>	<i>Total under 4 weeks</i>	<i>Percentage total infant deaths</i>
13	6	6	25	73.53

TABLE 6.
Maternal Mortality.

<i>Case No.</i>	<i>Cause of Death</i>	<i>Post Mortem held</i>
1	Septicaemia due to incomplete abortion	Yes
2	Haemorrhage from placental site due to extra-uterine gestation	Yes
3	1a. Pulmonary Embolism (Puerperal)	Yes
	b. Rtd. femoral thrombosis	
11.	Ante-natal thrombophlebitis	

**Birth Rate, Death Rate and Analysis of Mortality.
Provisional Figures.**

	<i>Rate per 1,000 total population</i>		<i>Annual Death Rate per 1,000 population</i>									<i>Rate per 1,000 live births</i>	
	<i>Live Births</i>	<i>Still Births</i>	<i>All Causes</i>	<i>Typhoid and Para- typhoid fevers</i>	<i>Whoop- ing Cough</i>	<i>Diph- theria</i>	<i>Tuber- culosis</i>	<i>In- fluenza</i>	<i>Small- pox</i>	<i>Acute Polio- myelitis and Polio- encephalitis</i>	<i>Pneu- monia</i>	<i>Diarrhoea and Enteritis (under two years)</i>	<i>Total Deaths under 1 year</i>
England and Wales ...	16·7	0·39	11·7	0·00	0·01	0·00	0·45	0·15	0·00	0·01	0·51	3·0	32
126 County Boroughs and great towns, including London ...	18·7	0·47	12·5	0·00	0·02	0·00	0·52	0·15	0·00	0·02	0·56	3·8	37
148 smaller towns, resi- dent populations 25,000 to 50,000 at 1931 census ...	18·0	0·40	11·6	0·00	0·01	0·00	0·42	0·14	—	0·02	0·49	2·4	30
London Admin. County	18·5	0·37	12·2	0·00	0·01	0·00	0·52	0·11	—	0·01	0·59	1·7	29
Twickenham ...	14·99	0·30	(a) 11·26 (b) 11·03	—	0·01	—	0·39	0·12	—	0·02	0·52	1·9	21·21

A dash (—) signifies that there were no deaths
(a) crude (b) adjusted

TABLE 8.

Review of the Comparative Vital and Mortality Statistics for the Borough of Twickenham, together with those for England and Wales for years 1937-1949 inclusive.						
Year	Birth Rate		Death Rate		Infantile Mortality Rate	
	Twickenham	England and Wales	Twickenham	England and Wales	Twickenham	England and Wales
1937	14.9	14.9	(a) 11.08 (b) 10.96	12.4	35.4	58
1938	14.4	15.1	(a) 9.91 (b) 9.81	11.6	45.8	53
1939	14.2	15.0	(a) 10.46 (b) 10.35	12.1	26.4	50
1940	14.67	14.6	(a) 14.8 (b) 14.9	14.3	45.8	55
1941	13.4	14.2	13.0	12.9	70.95	59
1942	16.49	15.8	11.6	11.6	53.1	49
1943	17.7	16.5	12.3	12.1	47.99	49
1944	18.5	17.6	12.8	11.6	37.1	46
1945	16.76	16.1	12.15	11.4	48.02	46
1946	19.01	19.1	10.89	11.5	26.09	43
1947	19.72	20.5	11.05	12.0	40.21	41
1948	15.86	17.9	10.04	10.8	20.69	34
1949	14.99	17.09	(a) 11.26 (b) 11.03	11.7	21.21	32

(a) Crude
(b) Adjusted

RESULTS OF THE CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF THE WATER SUPPLY TO THE BOROUGH OF TWICKENHAM.
Parts per million (unless otherwise stated).

(a) Chemical.

<i>Description of the Sample</i>	<i>Number of Samples</i>	<i>Ammoniacal Nitrogen</i>	<i>Albuminoid Nitrogen</i>	<i>Oxidised Nitrogen</i>	<i>Chlorides as Cl</i>	<i>Oxygen abs. from Permanganate 3 hrs. at 80° F.</i>	<i>Turbidity in terms of Silica</i>	<i>Colour, m.m. brown, 2 ft. tube, Burgess's Tintometer</i>	<i>Hardness (total)</i>	<i>Hardness (permanent)</i>	<i>pH. Value</i>	<i>Phosphate as P.O.</i>	<i>Silica as SiO</i>	<i>Conductivity</i>
River Thames water filtered at Hampton Works	250	0.015	0.087	4.3	27.4	1.13	0.4	14	244	71	7.7	39	11.3	450

(b) Bacteriological.

<i>Description of the Sample</i>	<i>Number of Samples</i>	<i>Number of Microbes per ml. Colonies counted on agar after 20-24 hours at 37° C.</i>	<i>Bact. coli test</i>	
			<i>Number of samples negative to Bact. coli in 100 ml.</i>	<i>Bact. coli per 100 ml.</i>
River Thames water filtered at Hampton Works	980	7.5	99.7	0.006

TABLE 10.

Analysis of Complaints Received.

<i>Nature of Complaint</i>									<i>Number Received</i>
Housing defects	...	...	...	...	...	...	...	...	927
Choked and defective drains	...	...	...	...	...	...	...	...	140
Accumulations of offensive matter	...	...	...	...	...	...	...	...	33
Unsound food	...	...	...	...	...	...	...	...	299
Verminous premises :—									
(a) Bugs	...	...	...	...	...	...	...	...	68
(b) Rats and mice	...	...	...	...	...	...	...	...	328
(c) Other	...	...	...	...	...	...	...	...	105
Keeping of animals	...	...	...	...	...	...	...	...	20
Unsatisfactory milk supplies	...	...	...	...	...	...	...	...	4
Miscellaneous	...	...	...	...	...	...	...	...	273
Total									2,197

TABLE 11.

Summary of Visits, Inspections, etc.

	<i>Number</i>
Dwelling-houses for housing defects under Public Health Act:—	
(a) After complaint... ..	2,213
(b) Subsequent visits	5,415
Dwelling-houses under Housing Act:—	
(a) After complaint... ..	126
(b) Subsequent visits	99
Dwelling-houses:—	
Housing applications, specially investigated	268
Infected dwelling-houses:—	
(a) After notified infectious disease (other than tuberculosis)	710
(b) Contacts	173
(c) Fumigations after infectious disease	25
(d) Phthisis enquiries and fumigations	13
School and church halls	38
Swimming baths	3
Water sampling:—	
(a) Swimming baths	5
(b) Dwelling-houses... ..	25
Business premises	9
Cinemas, dance halls, billiard halls	21
Offensive trade premises	2
Stables, piggeries, keeping of animals	160
Houses let in lodgings	Nil
Factories Act, 1937:—	
Factories with mechanical power	267
Factories without mechanical power	57
Outworkers' premises	20
Common lodging houses	1
Underground rooms	7
Hairdressing premises	20
Tents, vans and sheds	24
Smoke nuisances	97
Fairgrounds	17
Drainage: Testing by:—	
(a) Smoke	59
(b) Coloured water	50
(c) Water	37
(d) Breaking down	219
Re public sewers	738
Watercourses and ditches	6
Land and tips	240
Septic tanks and cesspools	7
Sanitary conveniences—public-houses	35
Miscellaneous visits	1,005
Visits not inspections	2,204
Verminous premises:—	
(a) Rats and mice: (i) After complaint or from survey	626
(ii) Subsequent visits	1,939
(b) Bug infestations: Number of premises visited	356
Number of premises where definite infestation existed	71
(c) Cockroaches	16
(d) Other vermin	406

TABLE 11—*continued.*

Inspections for supervision of food:—								
Unfit foodstuffs other than meat	...	...	...	...	...	...	...	403
Slaughterhouses	...	...	...	...	...	...	...	19
Butchers' shops (Public Health (Meat) Regulations, 1924)	...	...	...	...	...	...	...	422
Food and Drugs Act, 1938, Section 13:—								
Bakehouses	...	...	...	...	...	...	...	178
Fish shops, grocers and greengrocers	...	...	...	...	...	...	...	694
Factory canteens	...	...	...	...	...	...	...	40
Restaurant kitchens, etc.	...	...	...	...	...	...	...	319
Hotel and beerhouse bars and cellars:								
(a) Day inspections	...	...	...	...	...	...	...	76
(b) Night inspections	...	...	...	...	...	...	...	10
Food and Drugs Act, 1938, Section 14:—								
Ice-cream premises (Heat Treatment Regulations, 1947 and 1948)	...	...	...	...	...	...	...	465
Sausage manufacturers	...	...	...	...	...	...	...	8
Preserved meat preparation premises	...	...	...	...	...	...	...	16
Preserved fish preparation premises	...	...	...	...	...	...	...	56
Milk and Dairies Regulations, 1926-1943:—								
Milk sampling for bacteriological examination	...	...	...	...	...	...	...	2
Contraventions of Milk and Dairies Regulations	...	...	...	...	...	...	...	5
Cowsheds	...	...	...	...	...	...	...	7
Dairies at farms	...	...	...	...	...	...	...	4
Pasteurisation plants	...	...	...	...	...	...	...	1
Milkshops and dairies	...	...	...	...	...	...	...	46
Shops Act, 1934, Section 10	...	...	...	...	...	...	...	30
Middlesex County Council Act, 1944:—								
Hawkers' vehicles	...	...	...	...	...	...	...	18
Hawkers' premises	...	...	...	...	...	...	...	25
Noise nuisances	...	...	...	...	...	...	...	44
Massage and/or special treatment establishments	...	...	...	...	...	...	...	2
Petroleum (Consolidation) Act, 1928, and Regulations, 1929-1948	...	...	...	...	...	...	...	160
Total number of visits and inspections								20,808

TABLE 12.

Sanitary Improvements Effected.

	<i>Number</i>
Offensive accumulations removed	14
Nuisance from keeping of animals remedied	16
Chimney flues repaired... ..	9
Chimney stacks repaired	9
Roofs repaired	509
Eavesgutters repaired	174
Downspouts repaired	35
Pointing renewed	125
Drains repaired	31
Drains unstopped	13
Dustbins provided	498
Fireplaces repaired	70
Filthy condition of premises remedied	9
Floors repaired	181
Gullies repaired	8
Plaster to walls and ceilings repaired	743
Sashframes and sashcords repaired	168
Public sewers repaired	12
Sinks provided	7
Sink waste pipes repaired	55
Soil pipes repaired	6
Stairs repaired	9
External walls repaired	33
W.C.s repaired	57
W.C. cisterns and fittings provided	128
W.C. accommodation provided	8
Yard paving repaired	42
Other works carried out	597

TABLE 13.

Housing Statistics.

<i>I. Inspection of dwelling-houses during the year</i>		<i>Number</i>
1. (a) Dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	2,339	
(b) Inspections made for the purpose	7,843	
2. (a) Dwelling-houses (included under sub-head (1) above) which were inspected under the Housing Consolidated Regulations, 1925... ..	Nil	
(b) Inspections made for the purpose	Nil	
3. Dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	Nil	
4. Dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	1,394	
<i>II. Remedy of defects during the year without service of formal notices</i>		
Defective dwelling-houses rendered fit in consequence of informal action by the local authority or their officers	1,352	
<i>III. Action under statutory powers during the year</i>		
A.—Proceedings under sections 9, 10 and 16 of the Housing Acts, 1936:—		
(1) Dwelling-houses in respect of which notices were served requiring repairs... ..	Nil	
(2) Dwelling-houses which were rendered fit after service of formal notices:		
(a) By owners	Nil	
(b) By local authority in default of owners	Nil	
B.—Proceedings under Public Health Acts:—		
(1) Dwelling-houses in respect of which notices were served requiring defects to be remedied	141	
(2) Dwelling-houses in which defects were remedied after service of formal notices:		
(a) By owners	120	
(b) By local authority in default of owners	1	
C.—Proceedings under sections 11 and 13 of the Housing Act, 1936:—		
(1) Dwelling-houses in respect of which Demolition Orders were made	Nil	
(2) Dwelling-houses in respect of which an undertaking was accepted under sub-section (3) of section 11 of Housing Act, 1936	Nil	
(3) Dwelling-houses demolished in pursuance of Demolition Orders...	2	
D.—Proceedings under section 12 of Housing Act, 1936:—		
(1) Separate tenements or underground rooms in respect of which Closing Orders were made	Nil	
(2) Separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	2	

TABLE 14.

Notices Served.

Administrative action was taken during the year to secure abatement of nuisances and to enforce the appropriate statutory enactments, as follows:—

<i>Subject of Notice</i>	<i>Public Health Act</i>	<i>Food & Drugs Act, Sections 13 & 14</i>
Number of Informal Notices served	1,394	210
Number of Informal Notices complied with ...	1,352	182
Number of Statutory Notices served	141	—
Number of Statutory Notices complied with	120	—
Number of cautionary letters sent by Town Clerk	—	2

TABLE 15.

Offences under Food and Drugs Act, 1938.

<i>Case No.</i>	<i>Section contravened</i>	<i>Offence</i>	<i>Action taken</i>
1	Section 10	Broken glass contained in a one-pint bottle of milk.	Legal proceedings instituted. Fine of £5 and costs of £1 1s. imposed.
2	Section 10	Ditto.	Legal proceedings instituted. Fine of £3 and costs of £2 2s. imposed.
3	Sections 9 and 10	Cigarette-end embedded in the pastry of a treacle tart.	Cautionary letter sent by the Corporation.
4	Section 13	Storage of unsound meat in a refrigerator containing other foodstuffs.	Cautionary letter sent by the Corporation.

TABLE 16.
Rats and Mice (Destruction) Act, 1919.
The Infestation Order, 1943.

VISITS

<i>Initial Visits following upon Complaints or Resulting from Surveys</i>	<i>Re-inspections for Laying Baits, Poisoning and Trapping</i>	<i>Total Visits</i>
6,594	9,293	15,887

NUMBER OF INFESTATIONS

<i>Food Premises</i>	<i>Non-food Premises</i>	<i>Private Dwellings</i>	<i>Factories</i>	<i>Rats only</i>	<i>Mice only</i>	<i>Rats and mice</i>
77	59	573	16	696	23	6

DEGREE OF INFESTATION

RATS			MICE		
<i>Reservoir</i>	<i>Major Primary 50-100</i>	<i>Minor Secondary 1-50</i>	<i>Reservoir</i>	<i>Major Primary 50-100</i>	<i>Minor Secondary 1-50</i>
Nil	4	698	Nil	1	22

RATS AND MICE (DESTRUCTION) ACT, 1919

NOTICES SERVED			NOTICES OUTSTANDING		
<i>Preliminary Notices</i>	<i>Statutory Notices</i>	<i>Final (Default) Notices</i>	<i>Preliminary Notices</i>	<i>Statutory Notices</i>	<i>Final (Default) Notices</i>
197	77	12	3	1	1

RAT DESTRUCTION WORK UNDERTAKEN BY:—

CORPORATION		OCCUPIERS	
<i>Rats</i>	<i>Mice</i>	<i>Rats</i>	<i>Mice</i>
570	23	105	Nil

NUMBER OF PREMISES UNDER CONTRACT WITH CORPORATION
TOTAL 604

<i>12 months</i>	<i>6 months</i>	<i>3 months</i>	<i>1 month</i>	<i>Others</i>	<i>Total Receipts</i>
21	230	341	1	11	£700 14s. 0d.

Eradication of Insect Pests.

D.D.T. and Other Special Treatments.

Number of Infestations Treated

Type of Premises			<i>Ants</i>	<i>Beetles</i>	<i>Bugs</i>	<i>Cock- roaches</i>	<i>Fleas</i>	<i>Flies</i>	<i>Lice</i>	<i>Moths</i>	<i>Silver Fish</i>	<i>Wasps</i>	<i>Weevils</i>	<i>Wood Beetles</i>	<i>Totals</i>
Dwelling-Houses	...	...	4	—	70	—	4	39	—	4	—	43	1	3	168
Workplaces	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—
Food Shops	...	...	1	—	—	2	—	15	—	—	1	3	—	—	22
Offices	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—
Day Nurseries	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—
Clinics	...	...	—	—	—	—	—	2	—	—	—	—	—	—	2
Miscellaneous	...	...	—	—	1	2	—	5	—	—	—	2	—	—	10
Totals	...	...	5	—	71	4	4	61	—	4	1	48	1	3	202

Total income for D.D.T. and other special treatments, £128 6s. 6d.

Corporation premises treated (re-housed families only), 3.9 per cent.

TABLE 18.

Disinfections, etc.

	<i>Number</i>
<i>Premises</i> disinfected after infectious diseases	53
<i>Premises</i> disinfected after other diseases	6
<i>Articles</i> disinfected after infectious disease	274
<i>Persons</i> (children and adults) treated for scabies at cleansing station ...	78

TABLE 19.

Housing Act, 1936. Overcrowding.

The known cases of overcrowding on the register of the department at the end of the year were as follows:—

	<i>Number</i>
(a) (1) Dwellings overcrowded at the end of the year	133
(2) Families dwelling therein	167
(3) Persons dwelling therein	505
(b) New cases of overcrowding reported during the year	76
(c) (1) Cases of overcrowding relieved during the year	34
(2) Persons concerned in such cases	169

TABLE 20.

Milk Supply.

At the beginning of the year there were registered under the Milk and Dairies Regulations, 1926-1946:—

	<i>Number</i>
Persons:—	
Cowkeepers registered as wholesale and retail purveyors of milk ...	Nil
Cowkeepers registered as wholesale purveyors of milk	2
Cowkeepers registered as retail purveyors of milk	Nil
Total number of persons registered for carrying on trade of cowkeeper	2
Retail purveyors of milk in sealed bottles only	14
Total number of persons registered as retail purveyors of milk ...	14
Total number of cowkeepers, wholesale and retail purveyors of milk ...	16
Premises:—	
Number of cowsheds	2
Farms used as dairies	2
Other premises used as dairies	22
Visits:—	
Visits paid to dairies, milkshops and cowsheds	65

The bulk of the milk supply of the Borough continues to come from outside the area and has been pasteurised or heat-treated before delivery. All milk used in the schools under the "Milk in Schools" scheme is pasteurised.

TABLE 21.

Milk (Special Designations) Regulations, 1936-1946.

(a) During the year the following licences were granted for the sale of designated milk:—

<i>Designation</i>	<i>Dealers' Licences</i>	<i>Supplementary Licences</i>
" Tuberculin tested " milk	20	7
" Accredited " milk	Nil	Nil
" Pasteurised " milk	24	10
" Sterilised " milk	19	9

(b) As from the 1st October, 1949, the existing legislation relating to milk supplies was repealed and the new regulations became operative. The necessary registration of persons and premises, and the issue of appropriate licences, have been effected in accordance with the following table:—

<i>Milk and Dairies Regulations, 1949.</i>							
Persons registered as distributors	...	...	...	...	...	...	14
Premises registered as dairies (not being dairy farms)	...	...	...	...	...	...	15
<i>Special Designation</i>				<i>Dealers' Licences</i>		<i>Supplementary Licences</i>	
Milk (Special Designation) (Raw Milk) Regulations, 1949.							
Tuberculin tested	...	...		20		9	
Accredited	...	...	...	Nil		Nil	
Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949.							
Pasteurised	...	...	...	22		11	
Sterilised	...	...	...	18		10	

TABLE 22.
Food and Drugs Act, 1938. Statistics.

<i>Conditions</i>	<i>Food Premises</i>	
	<i>Found</i>	<i>Remedied</i>
Number of premises	210	182
Accumulation of refuse	16	20
Ceilings—defective	33	26
Ceilings—dirty	72	48
Cleanliness (personal) unsatisfactory	8	9
Dampness	1	3
Floors—defective	31	22
Floors—dirty	21	14
Lighting inadequate	—	2
Sink—absence of	17	9
Sink-waste pipe inadequate	3	—
Storage facilities unsatisfactory	4	4
Ventilation insufficient	19	18
Walls—dirty	91	65
Wall-plaster—defective	56	36
Insufficient or absence of hot and cold water for cleansing utensils ...	39	26
Absence of hot water for ablution purposes	63	56
W.C. accommodation—insufficient or unsuitable	14	14
Other defects	189	149
Totals	677	521

Public Abattoirs.

There is no public abattoir within the Borough.

Slaughterhouses.

Three licences were renewed during the year. The licensing of two slaughterhouses was again deferred pending the execution of essential repairs. There is no horse-slaughtering establishment within the Borough.

Slaughter of Animals Act, 1933.

Nine slaughter-men were on the register of the department at the end of the year.

TABLE 23.
Meat—Carcases Inspected and Condemned at Private Slaughterhouses in the Borough.

	<i>Cattle, excl. Cows</i>	<i>Cows</i>	<i>Calves</i>	<i>Sheep and Lambs</i>	<i>Pigs</i>
Number killed (if known)	—	—	—	—	9
Number inspected	—	—	—	—	9
All diseases except tuberculosis :					
Whole carcases condemned	—	—	—	—	—
Carcases of which some part of organ was condemned	—	—	—	—	—
Percentage of the number inspected affected with disease other than tuberculosis	—	—	—	—	—
Tuberculosis only :					
Whole carcases condemned	—	—	—	—	—
Carcases of which some part or organ was condemned	—	—	—	—	—
Percentage of the number inspected affected with tuberculosis	—	—	—	—	—

TABLE 24.

(a) Meat.

Diseased and unsound conditions found in meat caused the detention and surrender for destruction of:—

	<i>lbs.</i>
Beef... ..	1,684
Mutton and lamb	657
Pork	250
Other meats	727
Total ...	3,318

(b) Foodstuffs.

The following foodstuffs, other than meat, being unfit for human consumption, were voluntarily surrendered for destruction:—

Eggs	527
Fowls	—
	<i>lbs.</i>
Bacon	144
Butter	51
Cheese	144
Cooked meat	—
Fish... ..	2,598
Flour and cereals	758
Jam... ..	168
Chocolate	—
Cake mixture	—
Biscuits	—
Sugar	—
Swedes	—
Potatoes	—
Tea	—
Fruit	—
	<i>Bottles</i>
Pickles	405
Canned foodstuffs:—	<i>Tins</i>
Fish	703
Fruit	205
Meat	371
Milk	1,293
Vegetables	1,030
Other	396

TABLE 25.

Sampling.

The Middlesex County Council is the food and drugs authority for the Borough. The Chief Officer, Public Control Department, has kindly supplied the following information relating to samples taken in the Borough:—

<i>Article</i>	<i>Taken</i>	<i>Adulterated</i>
Milk	161	—
Milk, Channel Island	4	—
Milk, South Devon	1	—
Aspirin	1	—
Boracic ointment	1	—
Brandy	1	1
Coffee and chicory essence	2	—
Cherries	1	—
Cream fancies	13	—
Cream, goats'	2	—
Easter egg	1	1
Effervescing drink powder	1	—
Egg yellow colouring	1	—
Fish paste	1	—
Gelatine	1	—
Gin	11	—
Grape jelly	1	—
Gravy browning	1	—
Ground nuts	1	1
Haddock, smoked	2	—
Honey	1	—
Jam	1	1
Ice-cream	1	—
Lemonade powder	1	—
Liver sausage	1	—
Meat products	4	—
Meats, cooked	5	—
Pastry	1	—
Pork, Danish	1	—
Port	1	—
Rum	4	—
Salad cream	3	—
Sausages and sausage meat	29	2
Sherbert... ..	1	—
Sweets	2	1
Syrup of figs	1	—
Whisky	39	—
	304	7

TABLE 26.

Factories Act, 1937.

INSPECTION FOR THE PURPOSES OF PROVISIONS AS TO HEALTH.							
						<i>Inspections</i>	<i>Written notices</i>
Factories with mechanical power	...	...	...	...	...	267	14
Factories without mechanical power	...	...	...	...	...	57	4
Outworkers' premises	...	...	...	...	...	20	—
SUMMARY OF DEFECTS FOUND							
						<i>Found</i>	<i>Remedied</i>
Want of cleanliness	...	...	...	...	...	—	7
Overcrowding	...	...	...	...	...	—	—
Unreasonable temperature	...	...	...	...	...	—	—
Inadequate ventilation	...	...	...	...	...	5	3
Ineffective drainage of floors	...	...	...	...	...	1	—
Sanitary conveniences:—							
(a) Insufficient	...	...	...	...	...	4	5
(b) Unsuitable or defective	...	...	...	...	...	10	4
(c) Not separate for sexes	...	...	...	...	...	—	—
Other offences against the Act	...	...	...	...	...	8	12

TABLE 27.

Infectious Diseases. Incidence and Mortality.

DIPHTHERIA, SCARLET FEVER AND ENTERIC FEVER.
1937-1949.

<i>Year</i>	<i>Diphtheria</i>				<i>Scarlet Fever</i>				<i>Enteric Fever</i>			
	<i>No. of Cases</i>	<i>Case Rate per 1,000 pop.</i>	<i>No. of Deaths</i>	<i>Death Rate per 1,000 pop.</i>	<i>No. of Cases</i>	<i>Case Rate per 1,000 pop.</i>	<i>No. of Deaths</i>	<i>Death Rate per 1,000 pop.</i>	<i>No. of Cases</i>	<i>Case Rate per 1,000 pop.</i>	<i>No. of Deaths</i>	<i>Death Rate per 1,000 pop.</i>
1937	116	1.23	2	0.02	148	1.57	—	—	2	0.02	1	0.01
1938	70	0.72	5	0.05	274	2.83	1	0.01	—	—	—	—
1939	25	0.25	3	0.03	93	0.95	—	—	2	0.02	—	—
1940	18	0.19	3	0.03	38	0.41	—	—	2	0.02	—	—
1941	25	0.27	3	0.03	78	0.85	—	—	7	0.07	—	—
1942	7	0.08	1	0.01	125	1.35	—	—	—	—	1	0.01
1943	4	0.04	1	0.01	238	2.56	—	—	—	—	—	—
1944	5	0.06	3	0.03	121	1.37	—	—	—	—	—	—
1945	4	0.04	1	0.01	97	1.06	—	—	—	—	—	—
1946	4	0.04	—	—	60	0.58	—	—	—	—	—	—
1947	4	0.04	1	0.01	60	0.58	—	—	—	—	—	—
1948	1	0.01	—	—	99	0.93	—	—	—	—	—	—
1949	—	—	—	—	128	1.20	—	—	—	—	—	—

TABLE 28.

Ophthalmia Neonatorum, 1937-1949.

The following table shows the number of cases notified and result of treatment:—

<i>Year</i>	<i>Cases notified</i>	<i>Cases Treated</i>		<i>Vision un-impaired</i>	<i>Vision impaired</i>	<i>Total blindness</i>	<i>Deaths</i>
		<i>At home</i>	<i>In hosp.</i>				
1937	6	6	—	6	—	—	—
1938	12	11	1	12	—	—	—
1939	7	7	—	7	—	—	—
1940	4	3	1	4	—	—	—
1941	5	2	3	5	—	—	—
1942	4	4	—	4	—	—	—
1943	6	6	—	6	—	—	—
1944	8	8	—	8	—	—	—
1945	2	2	—	2	—	—	—
1946	3	2	1	3	—	—	—
1947	5	5	—	5	—	—	—
1948	4	4	—	4	—	—	—
1949	—	—	—	—	—	—	—

Cases of Infectious Diseases Notified during the Year 1949.

DISEASE	Under 1 year	CASES NOTIFIED AT VARIOUS AGES (YEARS)												Age not known	Total cases notified	Cases admitted Hospital	Deaths
		1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-35	35-45	45-65	Over 65				
Dysentery ...	1	1	1	—	—	—	—	—	—	2	1	1	1	—	8	5	—
Erysipelas ...	—	—	—	—	—	1	1	—	—	1	2	8	3	—	16	4	—
Food Poisoning ...	3	4	6	3	3	—	—	2	10	9	16	1	3	3	63	2	—
Measles ...	18	34	76	88	180	331	10	3	—	3	3	—	—	3	749	25	—
Para-typhoid ...	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	—
Acute Poliomyelitis ...	1	1	—	3	—	1	1	3	2	1	2	—	—	—	15	15	2
Pneumonia ...	—	1	1	1	—	4	1	2	—	3	3	6	11	—	33	8	56
Puerperal Pyrexia ...	—	—	—	—	—	—	—	1	11	7	2	—	—	—	21	21	—
Scarlet Fever ...	—	7	10	2	10	83	9	6	—	1	—	—	—	—	128	52	—
Typhoid Fever ...	—	—	—	—	—	—	—	—	1	—	—	—	1	—	2	2	—
Whooping Cough ...	13	19	22	23	26	88	4	—	—	2	—	—	—	1	199	14	1
Totals ...	36	67	116	120	219	508	26	17	24	29	29	17	19	7	1235	149	59

Five smallpox contacts were kept under observation by the department.

Monthly Incidence of Infectious Diseases during the Year 1949.

DISEASE	NUMBER OF CASES												TOTAL
	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	
Dysentery	—	1	2	—	—	1	—	1	—	2	1	—	8
Erysipelas	4	—	2	2	2	—	1	2	1	—	1	1	16
Food Poisoning	—	—	—	—	1	3	20	27	7	3	2	—	63
Measles	9	48	206	186	134	87	42	27	7	1	2	—	749
Para-typhoid	—	—	—	—	—	—	1	—	—	—	—	—	1
Acute Poliomyelitis	—	—	—	—	1	—	—	1	7	3	2	1	15
Pneumonia	3	6	6	3	3	1	2	—	4	—	1	4	33
Puerperal Pyrexia	2	1	1	2	2	—	2	3	3	3	2	—	21
Scarlet Fever	8	2	9	7	9	12	5	8	7	17	14	30	128
Typhoid Fever	—	—	—	—	—	—	—	—	1	—	—	1	2
Whooping Cough	30	35	37	34	20	16	9	3	—	9	2	4	199
Totals	56	93	263	234	172	120	82	72	37	38	27	41	1235

TABLE 30.

Ward Distribution of Infectious Diseases Notified during the Year 1949.

<i>Disease</i>	<i>Twickenham</i>				<i>Whitton</i>	<i>Hampton</i>	<i>Hampton Hill</i>	<i>Teddington</i>		<i>Hampton Wick</i>	<i>Heathfield</i>	<i>Total</i>
	<i>East</i>	<i>Central</i>	<i>South</i>	<i>West</i>				<i>Upper</i>	<i>Lower</i>			
Dysentery	1	—	—	1	—	2	2	1	1	—	—	8
Erysipelas	—	1	—	1	1	4	1	5	1	2	—	16
Food Poisoning	—	4	3	1	6	17	31	—	—	1	—	63
Measles	42	44	24	32	91	99	79	139	109	89	1	749
Para-typhoid	—	—	—	—	1	—	—	—	—	—	—	1
Acute Poliomyelitis	2	1	—	1	3	2	2	—	3	1	—	15
Pneumonia	7	1	1	—	5	6	2	4	4	2	1	33
Puerperal Pyrexia	—	—	—	—	—	21	—	—	—	—	—	21
Scarlet Fever	9	4	4	5	22	13	5	21	15	17	13	128
Typhoid Fever	1	—	—	—	—	—	—	1	—	—	—	2
Whooping Cough	15	8	10	32	63	7	10	10	20	19	5	199
Totals	77	63	42	73	192	171	132	181	153	131	20	1,235

TABLE 31.

TABLE 32.

Tuberculosis.

The following tables have been compiled from the notifications received:—
NEW CASES AND MORTALITY.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-pulmonary		Pulmonary		Non-pulmonary	
	Male	Female	Male	Female	Male	Female	Male	Female
Under 1	—	—	—	—	—	—	—	—
1-4	2	1	—	—	—	—	—	—
5-9	—	3	—	1	—	—	—	—
10-14	1	—	—	—	—	—	—	—
15-19	8	7	—	—	—	1	—	—
20-24	8	12	—	—	1	5	—	—
25-34	12	10	1	—	5	3	1	—
35-44	10	2	—	2	5	1	—	—
45-54	8	8	—	—	1	3	—	—
55-64	15	3	—	—	10	—	—	—
65 and over	5	—	—	1	4	1	—	—
Totals	69	46	1	4	26	14	1	—

Non-notified tuberculosis deaths—cases not notified as tuberculosis and not recorded in the registers of the department during life—were responsible for 7.14 per cent. of the total tuberculosis deaths.

Public Health (Prevention of Tuberculosis) Regulations, 1925.

It was not necessary to take any action under the above regulations concerning persons suffering from tuberculosis and employed in the milk trade.

Public Health Act, 1936 (Section 172).

No action was taken under this section for the compulsory removal to hospital of persons suffering from tuberculosis.

TABLE 33.

PRIMARY NOTIFICATIONS OF TUBERCULOSIS, 1937-1949 INCLUSIVE.

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Pulmonary... ..	85	100	106	114	127	112	119	133	118	120	132	117	115
Non-Pulmonary ...	25	30	19	12	14	18	18	18	18	19	11	17	5
Totals	110	130	125	126	141	130	137	151	136	139	143	134	120

TABLE 34.

Analysis of Food Poisoning Notifications, 1949.

1st Quarter —	2nd Quarter 4	3rd Quarter 54	4th Quarter 5	TOTAL 63
OUTBREAKS DUE TO IDENTIFIED AGENTS:				
Total outbreaks ...	...	Nil	Total cases ...	... Nil
Outbreaks due to:				
(a) Chemical poisons ...	...	...	...	Nil
(b) Salmonella organisms ...	...	...	...	Nil
(c) Staphylococci (including toxin) ...	...	...	...	Nil
(d) Cl botulini ...	...	...	...	Nil
(e) Other bacteria ...	...	...	...	Nil
OUTBREAKS DUE TO UNDISCOVERED CAUSES:				
Total outbreaks ...	...	11	Total cases ...	... 32
SINGLE CASES:				
	Agent identified	Unknown cause	Total	
Staphylococci	2	25	31	
Salmonella ...	2			
Other bacteria	2			
OUTBREAKS ASCERTAINED, NOT NOTIFIED BY DOCTOR:				
Total outbreaks ...	...	5	Total cases ...	... 210

TABLE 35.

Report on the Danger of Infection Spread by Insects

Species of Flies	Number of Times Bacteria Found on Species of Insects										Total	Miscellaneous species
	Caliphora erythrocephala. M. (bluebottle)	Caliphora vomitoria. M. (bluebottle)	Drosophila funebris. Fbr. (fruit-fly)	Fannia canicularis (lesser house-fly)	Lucilia sericata. M. (greenbottle)	Lucilia caesar. M. (greenbottle)	Musca domestica. L. (house-fly)	Sarcophaga haemorrhoidalis. Flh.	Wasps (Vespa vulgaris.) L.			
Type of Bacteria found on flies :—												
Potential pathogens from the Gastro-intestinal tract:												
P. morgani	7	—	—	—	8	—	—	—	—	3	18	—
Ps. pyocanea	1	—	—	—	—	—	—	—	—	—	1	—
P. vulgaris	1	—	—	—	2	—	—	1	—	—	4	—
Paracolon bacilli	3	—	—	—	1	—	—	1	—	1	6	—
Potential pathogens from the respiratory tract:												
Strep. pneumoniae	20	—	—	—	9	—	1	—	—	2	32	—
Staph. aureus	1	—	—	—	—	—	—	—	—	1	2	—
Non-pathogenic organisms, probably of faecal origin:												
B. coli type II	4	—	—	—	1	—	—	—	—	1	6	—
B. coli type I (faecal)	10	—	—	—	1	—	—	1	—	2	14	—
Coliform bacilli of irregular type... ..	8	1	—	1	6	—	2	—	—	2	20	—

B. alkaligenes

<i>B. alkaligenes</i>	1	—	—	—	—	—	—	—	—	—	—	—
Bact. aerogenes types I and II	5	—	—	—	7	—	1	—	—	6	19	
Lactose fermenting coliforms	5	—	—	1	5	—	—	1	—	3	15	
Non-lactose fermenters of non-pathogenic type	2	1	—	—	2	—	—	1	—	—	6	
Strep. faecalis	8	—	—	1	6	—	—	—	—	3	18	
Non-pathogenic airborne contaminants : Diphtheroid bacilli... ..	4	—	—	1	2	—	—	1	—	5	13	
<i>B. mycoides</i>	2	—	—	—	2	—	—	—	—	—	4	
<i>M. flavus</i>	1	—	—	—	—	—	—	—	—	—	1	
<i>Micrococcus</i>	1	—	—	—	—	—	—	1	—	2	4	
<i>B. mesentericum</i>	—	—	—	—	1	—	—	—	—	—	1	
<i>B. megatherium</i>	—	—	—	—	—	—	1	—	—	—	1	
Strep. viridans	3	—	—	—	—	—	—	—	—	5	8	
Strep. non-haemolytic	1	—	—	—	1	—	1	—	—	1	4	
Sporing aerobes	3	—	—	—	—	—	1	—	—	1	5	
Staph. albus	1	—	—	—	1	—	2	1	—	4	9	
<i>B. vulgatus</i>	—	—	—	—	—	—	2	—	—	—	2	
Sterile	9	—	6	—	—	—	3	3	2	22	45	
Infections found on insects	92	2	—	4	56	—	11	8	—	41	214	
Live insects examined	53	1	6	3	31	—	10	9	2	57	172	
Insects infected	44	1	—	3	31	—	7	6	—	35	127	
Live insects caught	131	2	6	6	488	103	16	14	21	257	1,044	
Organisms per insect examined	2.1	2.0	—	1.3	1.8	—	1.6	1.3	—	1.2	1.7	

TABLE 36.

Species of Flies		Number of Insects caught with Certain Baits										Total
		Calliphora erythrocephala, M. (bluebottle)	Calliphora vomitoria, M. (bluebottle)	Drosophila funnebris, Fbr. (fruit-fly)	Fannia canicularis (lesser house-fly)	Lucilia sericata, M. (greenbottle)	Lucilia caesar, M. (greenbottle)	Musca domestica, L. (house-fly)	Sarcophaga haemorrhoidalis, Flin.	Wasps (Vespa vulgaris) L.	Miscellaneous species	
Ref. No.	Nature of Bait Used											
1	Fish	80	2	—	2	443	102	2	—	9	112	752
2	Cod roe... ..	—	—	—	1	—	—	3	4	—	14	22
3	Fish paste	—	—	—	—	—	—	—	—	—	11	11
4	Sardine	5	—	—	—	30	—	—	—	5	12	52
5	Meat	13	—	—	—	—	—	3	—	—	1	17
6	Meat hash	—	—	—	—	1	—	3	2	—	45	51
7	Sausage meat	—	—	—	—	—	—	—	—	—	—	—
8	Corned beef	—	—	—	—	—	—	—	—	—	1	1
9	Meat and bacon	—	—	—	—	—	—	1	—	—	—	1
10	Soup	—	—	—	—	—	—	—	—	—	—	—
11	Milk	1	—	—	—	1	—	—	3	—	5	10
12	Peas (cooked) and milk	1	—	—	—	2	1	—	1	—	2	12

13	Peas (cooked) ...	...	...	...	2	—	3	—	5	—	—	1	1	2	14
14	Peach ...	...	...	...	1	—	—	—	—	—	—	—	—	2	3
15	Banana ...	...	...	...	2	—	3	2	—	—	—	—	1	4	12
16	Plum ...	...	...	...	15	—	—	—	1	—	—	—	—	12	28
17	Marmalade ...	...	...	...	2	—	—	—	1	—	—	1	1	—	5
18	Beer ...	...	...	...	—	—	—	—	—	—	—	—	—	—	—
19	Bread and beer ...	...	...	...	5	—	—	1	—	—	4	—	4	5	19
20	Vegetable compost ...	...	...	...	—	—	—	—	—	—	—	—	—	—	—
21	Horse dung ...	...	...	...	2	—	—	—	2	—	—	—	—	1	5
22	Pig excreta ...	...	...	...	—	—	—	—	—	—	—	—	—	12	12
23	Cow dung ...	...	...	...	—	—	—	—	—	—	—	—	—	—	—
24	Dog excreta ...	...	...	...	—	—	—	—	1	—	—	2	—	11	14
25	Cat excreta ...	...	...	...	2	—	—	—	1	—	—	—	—	—	3
Totals ...					131	2	6	6	488	103	16	14	21	257	1,044

TABLE 36 (continued)

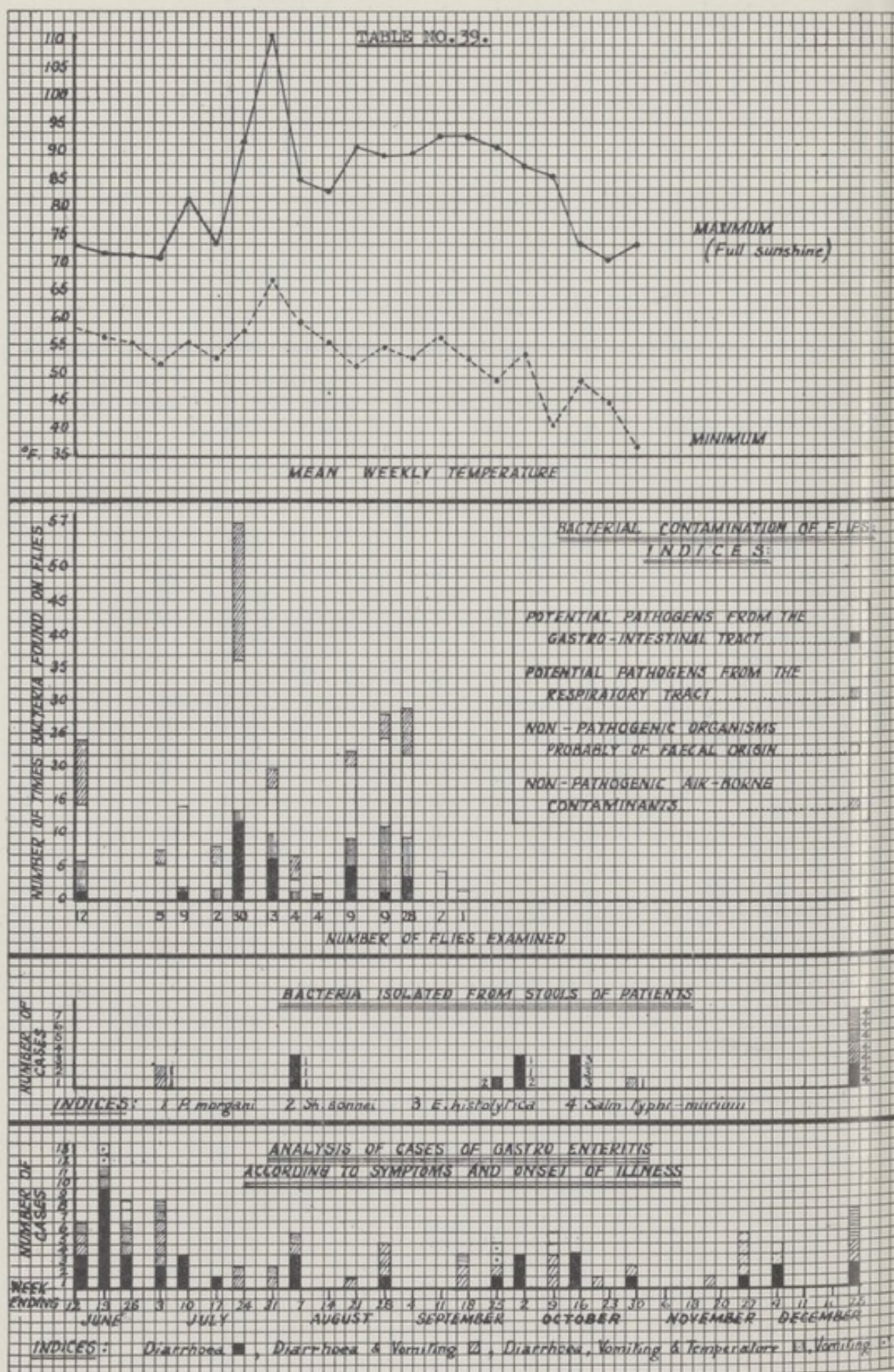
Analysis of Cases.

Age	Pr. Morgani		Bac Dysentery (Shigella Sonnei)		Amoebic Dysentery		Salmonella Infections (Food Poisoning)		Enteritis-origin unknown or not established		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
0-1 years 	1	—	1	—	—	—	—	—	2	4	8
1-16 years 	4	1	1	1	1	1	1	2	17	19	48
16-60 years or over	1	1	—	—	—	1	2	2	13	15	35
Total 	6	2	2	1	1	2	3	4	32	38	91

TABLE 37.

TABLE 38.

Ref. No.	Nature of Bait	Number of Traps Laid		Number of Traps Laid Negative Result		Number of Flies Caught	
		External	Internal	External	Internal	External	Internal
1	Fish	41	37	12	32	745	7
2	Cod roe	12	8	8	7	17	5
3	Fish paste	4	10	—	9	10	1
4	Sardine	9	5	5	5	52	—
5	Meat	12	28	8	25	13	4
6	Meat hash	6	3	1	2	48	3
7	Sausage meat	2	1	2	1	—	—
8	Corned beef	5	—	4	—	1	—
9	Meat and bacon... ..	—	5	—	4	—	1
10	Soup	1	—	1	—	—	—
11	Milk	9	15	6	15	10	—
12	Peas (cooked) and milk	1	1	—	1	12	—
13	Peas (cooked)	7	3	2	3	14	—
14	Peach	1	1	1	—	—	3
15	Banana	1	11	—	7	1	11
16	Plum	2	2	—	2	28	—
17	Marmalade	7	8	5	7	2	3
18	Beer	2	8	2	8	—	—
19	Bread and beer	3	3	2	3	19	—
20	Vegetable compost	3	—	3	—	—	—
21	Horse dung	16	5	15	4	4	1
22	Pig excreta	15	1	13	1	12	—
23	Cow dung	2	—	2	—	—	—
24	Dog excreta	10	—	6	—	14	—
25	Cat excreta	4	1	3	1	3	—
		175	156	101	137	1,005	39



Clinics and Welfare Centres.

The following clinics were being held within the Borough at the end of the year:—

<i>Clinic</i>	<i>Address</i>	<i>By whom provided</i>
Infant Welfare Centres ...	York House, Twickenham; Hospital Bridge Road, Twickenham; Art School, Teddington; Station Road, Hampton; 20, Seymour Road, Hampton Wick.	Middlesex County Council.
Ante-Natal Clinics ...	York House, Twickenham; Hospital Bridge Road, Twickenham; Art School, Teddington; Station Road, Hampton; 20, Seymour Road, Hampton Wick.	Middlesex County Council.
School Clinics ...	York House, Twickenham; Hospital Bridge Road, Twickenham; Stanley Road, Teddington; Station Road, Hampton; 20, Seymour Road, Hampton Wick.	Middlesex County Council.
Dental Clinics ...	York House, Twickenham; Stanley Road, Teddington; Hospital Bridge Road, Twickenham; Station Road, Hampton; 20, Seymour Road, Hampton Wick. Art School, Teddington (Orthodontic).	Middlesex County Council.
Ophthalmic Clinics ...	York House, Twickenham; Stanley Road, Teddington.	Middlesex County Council.
Diphtheria Immunisation ...	York House, Twickenham; Hospital Bridge Road, Twickenham; Stanley Road, Teddington; Station Road, Hampton; 20, Seymour Road, Hampton Wick.	Middlesex County Council.
Child Guidance Clinic ...	58, Hampton Road, Twickenham.	Middlesex County Council.
Orthopaedic Clinic ...	Art School, Teddington.	Middlesex County Council.

WALKER & CO. (PRINTERS) LTD.,
162 COLNE ROAD,
TWICKENHAM