[Report 1948] / Medical Officer of Health, Essex County Council.

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INDEX.

PREFACE.

To the Chairman and Members of the County Council of Essex.

I have the honour to present my final report as your County Medical Officer on the health services of the Administrative County of Essex. It is the thirtieth report for which I have been responsible, the fifty-ninth in the series and it deals with the year 1948—a year of change and reorientation of ideas in the world of public health and to that extent a year in which history was made.

The statistical tables have been subjected to a good deal of revision, firstly to meet the needs of the new organization and secondly to bring them into line with modern views on statistics. For this revision I am indebted to Mr. W. Leak, B.A., who, as indicated in my report for the year 1946, under the guidance of the late Professor Major Greenwood, was responsible for the work undertaken in this connection. The main features of the statistics are :—

BIRTH-RATE—following the post war rise (20.6 in 1946 and 21.2 in 1947) there was a decrease to 17.4 (as compared with 17.3 in 1945 and a pre-war average of 14.5).

DEATH-RATE—the death rate fell from 10.7 to 9.4 which is the lowest figure for 20 years.

INFANT MORTALITY—there was again a decrease on last year's remarkably low figure—25 as compared with 28.

MATERNAL MORTALITY—there was a slight increase from 0.81 to 0.96.

NOTIFIABLE DISEASES—the figure relating to notifications of notifiable diseases again increased from 21,435 to 26,253 ; measles and whooping cough being again responsible.

Attention is drawn to the report made by the Pathologist of the Oldchurch Hospital, Romford, in regard to an outbreak of epidemic diarrhoea with fever which appears on page 10 and to the report by Dr. J. L. Miller Wood on an outbreak of infection among young babies in a hostel, which is printed on pages 15 to 25.

Details of the work of the County Health Inspector and his staff appear on pages 27 to 49 and follow much the same lines as in previous years.

Two services will pass out of these reports after this year—the hospital service and the tuberculosis service. What is recorded of them in the following pages relates mainly to the first six months of the year. In regard to the former, I would suggest that the County Council need not fear the judgment of posterity on the work they did and endeavoured to do during the time (just short of two decades), in which a large hospital service was their responsibility. Much hard work on the part of both members and officers was just coming to fruition when the second international cataclysm of the century cut it short. Nevertheless, a very solid foundation had been laid for the new hospital authority to build upon.

The same may be said of the tuberculosis service; the sanatoria at Black Notley and Broomfield are sufficient monuments to the ceaseless planning and building (in its wider sense) that went on over a somewhat longer period. They are both hospitals in which Essex may justly take pride.

The section of the report dealing with Maternity and Child Welfare, covering as it does, two distinct periods—pre-National Health Service and post-National Health Service—with varying basic factors, was particularly difficult to prepare in an intelligible form. It will be noted that the statistics are, in consequence, in most instances shown separately for the two periods, and do not therefore give such a complete picture as is desirable. A completely new feature of this section of the report is that relating to the administration of the Nurseries and Child Minders Regulation Act, 1948, which will be found on page 81.

Reference to the two services provided under the National Health Service Act, 1946, which are centrally administered, viz. the Mental Health Service and the Ambulance Service, will be found on pages 50 and 59 respectively. The former promises to perpetuate within the Health Department the distressing repercussions arising from the shortage of institutional accommodation which I noted last year in connection with the treatment of tuberculosis. The writing of tactfully sympathetic and understanding letters to distressed and overburdened relatives anxiously awaiting the allocation of a vacancy for the cause of their distress is therefore still a matter of some importance in the Department.

Bearing in mind all the difficulties associated with the assimilation of a large number of small ambulance units into a comprehensive county service, the new Ambulance Service functioned remarkably smoothly from the very beginning. The organization undoubtedly suffered as a result of the lack of senior administrative staff. No appointment of County Ambulance Officer had been made by the end of 1948; Mr. W. J. Hodgkinson assisted part-time by Mr. H. L. Harris, under the part-time supervision of Dr. Christina Grant, helped me with the organization of the new service, and the only clerical staff available was of General Division level.

The arrangements under which the administration of the remainder of the services provided under the National Health Service Act was decentralised are set out in Part VI of the Report where reference is also made to the more important developments which took place in the new service during its first six months.

Although I do not admit having reached the end of my span of useful activity, I am satisfied that it is appropriate that I should retire at this stage of the inception of a new order, and thus leave its development to a younger man. I feel that the Council were very wise in selecting the County Medical Officer of Health of Gloucestershire, Dr. H. Kenneth Cowan, to succeed me. He possesses the quality I have just mentioned, and moreover has a wide experience which will be of tremendous value to him in his new sphere. It will be noted that by way of a Post Scriptum to this Report, I have followed the example of my predecessor (Dr. J. C. Thresh) and made what may be regarded as a survey of my thirty years tenure as your County Medical Officer.

Finally, I must express my thanks to the Chairmen of the Council; the Public Health and Housing Committee and its successors, the Health Services Development

Committee and the Health Committee; and the Social Welfare Committee and its successor, the Welfare Committee, for their confidence and support. I am also most grateful to the Medical Officers of Health and other officers of County District Councils and members and officers of voluntary organizations for the loyal manner in which they assisted with the launching of the new service.

My thanks are also due to Dr. Cowan for placing at my disposal the staff of the Department for the compilation of this Report; to the staff for the readiness with which they have assisted me in the matter; and particularly to Mr. S. G. Clarke, who has in the main compiled the report.

W. A. BULLOUGH,

PUBLIC HEALTH DEPARTMENT,
COUNTY HALL, CHELMSFORD.
July, 1950.

PART I.

ACREAGE AND POPULATION.

The following table sets out particulars of the Registrar-General's estimated population for the year 1948, compared with the census figures of 1931. The table also gives the rateable value.

	Acres Census, 1931	*Population Census, 1931*	*Registrar-General's Estimated Population, 1948*	*Rateable Value 1st April, 1948*
Municipal Boroughs (13) ..	72,450 ..	739,129 ..	899,810 ..	
Urban Districts (19) ..	184,532 ..	265,196 ..	411,650 ..	£10,556,215
Rural Districts (11) ..	702,482 ..	184,679 ..	219,440 ..	
Total	959,464 ..	1,189,004 ..	1,530,900	

The product of a 1d. rate is estimated at £42,393.

SOCIAL CONDITIONS.

With its estimated population of 1,530,900, Essex is one of the largest administrative Counties in England and Wales. The southern half of the County continues, as a result of its proximity to the metropolis, to develop as a residential and industrial area whilst the northern half remains largely agricultural.

Details of the social conditions of the eleven Health Areas set up as a result of the introduction of an area administration in connection with the health services (particulars of which are given on page 84) are set out below :—

THE NORTH-EAST ESSEX HEALTH AREA (1) covers an area of 381 square miles and supports a population of 173 thousand of which nearly a third live in the Borough of Colchester, a further third along the seacoast in seaside resorts, fishing villages and in the port of Harwich, while the remainder live in rural surroundings. The principal industries are at Colchester and Halstead, light engineering works predominating.

THE MID-ESSEX HEALTH AREA (2) with an area of 718 square miles, nearly half that of the whole county, is essentially rural, Chelmsford being the only town of any size. Smaller towns are Braintree, Maldon, Saffron Walden, Witham and Burnham-on-Crouch. These together house only 40 per cent. of the population of just over 200 thousand. The principal industries are at Chelmsford and Braintree, the engineering works at Chelmsford drawing their workers from districts outside as well as inside the Borough.

THE SOUTH-EAST ESSEX HEALTH AREA (3) covers 128 square miles with a population of 100 thousand. Most of the people live in small towns, some old like Billericay and Rayleigh and others recent growths, largely as overspills of London, such as Laindon, Pitsea and Canvey where in some cases the conditions under which the people live are not very satisfactory. The new town, Basildon is planned for this Area. The present natural centre for most of the Area is Southend-on-Sea.

THE SOUTH ESSEX HEALTH AREA (4) covers 119 square miles with a population of 205 thousand, the largest population of any of the Areas, and includes so many different types of district. There are good residential areas at Upminster and Hornchurch and poorer ones at Rainham. Brentwood is a pleasant country town and there are considerable rural areas. In the south there are the Thames-side towns of Tilbury, Grays and Purfleet with industries and docks. Urban development is planned in two places, Aveley and Stanford-le-Hope.

THE FOREST HEALTH AREA (5) covers 98 square miles and has a population of 175 thousand. The southern portion, covering only a quarter of the total area, supports a population of 143 thousand and is mainly a good class residential area, though the three L.C.C. housing estates in the Area may make the population of more normal social economic structure. The rest of the area is predominantly rural though the new town of Harlow is planned for the north of the Area near the Hertfordshire boundary.

THE ROMFORD HEALTH AREA (6) is coterminous with the Borough of Romford and covers 14½ square miles with a present population of 73 thousand. This will be increased when the Harold Hill estate is finished. There are industries at Romford, notably a brewery, but much of the population earns its living in London.

The remaining five Health Areas are coterminous with the boroughs of Barking, Dagenham, Ilford, Leyton and Walthamstow. All of them are both industrial and residential, many of the inhabitants working in London. ILFORD (9) is the largest (area 13 square miles) and supports the largest population. LEYTON (10) (4 square miles) is the smallest with an average density of 41 persons to the acre about twice that of BARKING (7), ILFORD and DAGENHAM (8); WALTHAMSTOW (11) being intermediate (28 persons to the acre). LEYTON and WALTHAMSTOW are old residential areas, BARKING and ILFORD old towns with considerable recent expansion while DAGENHAM originated with a housing estate built in the 1920's.

VITAL STATISTICS.

The chief vital statistics for the Administrative County are set out below for the years 1946, 1947 and 1948 :—

	1946.	*1947.*	*1948.*	
Civilian Population	1,436,450 ..	1,490,470 ..	1,530,900	
Live Birth Rate	20.6 ..	21.2 ..	17.4	per 1,000 population.
Still Birth Rate	24.7 ..	20.3 ..	20.1	„ „ total births.
Illegitimate Birth Rate ..	51.8 ..	40.0 ..	40.6	„ „ live births.
Death Rate (all causes) ..	10.4 ..	10.7 ..	9.4	„ „ population.
Infant Mortality Rate	33.4 ..	28.3 ..	25.1	„ „ live births.
Infant Mortality Rate (illegitimate infants)	67.8 ..	42.1 ..	35.1	„ „ illegitimate live births.
Maternal Mortality Rates ..	1.45 ..	0.81 ..	0.96	„ „ total births.

Death Rates from Selected Causes—	*1946.*	*1947.*	*1948.*	
Tuberculosis (Respiratory) ..	356	372	352	per million population.
„ (Non-Respiratory)	54	54	50	
Syphilitic Disease	49	53	39	
Influenza	106	91	27	
Diabetes	74	62	61	
Cancer	1,804	1,803	1,733	
Bronchitis	588	642	459	
Pneumonia	455	490	334	
Ulcer of Stomach and Duodenum	120	113	99	
Diarrhoea under two years ..	2.09	1.78	1.50	per 1,000 live births.

The birth rate has now passed the immediate post-war peak and is falling; however, the rate for 1948 is very much higher than the pre-war average (for the years 1934-38) of 14.5. The incidence of illegitimacy and still births has remained steady during the last two years, the still birth rate comparing favourably with the England and Wales rate of 23.2. Infant mortality continues to decrease and the following table compares the Essex infant mortality rate with that for England and Wales :—

	1936–40.	*1941–45.*	*1946.*	*1947.*	*1948.*
Essex	43	39	33	28	25
England and Wales	55	50	43	41	34

The infant mortality rate of illegitimate infants has also decreased.

Twenty-six mothers died from causes connected with childbirth, the same number as in 1947 when there were more births. Consequently, the maternal mortality rate was slightly higher than the 1947 record figure of 0.81 per 1,000 total births.

The death rate from all causes in 1948 was exceptionally low, namely, 9.4 per 1,000 population, the lowest figure for over 20 years. In view of the ageing of the population, this is an exceptionally good record of mortality. Most of the individual causes of death showed some decrease. Particular mention should be made of the very low mortality from influenza, a further fall in mortality from cancer and a record low figure for deaths from infantile diarrhoea.

Table IV shows the principal rates for each of the County Districts. Table VI gives the deaths from various causes in the County Districts and both these tables have been recast so as to show these figures also for each of the eleven Health Areas. It is hoped that periodic analysis of these figures will reveal how the different social and economic conditions of the Areas are affecting the health of the people who live there. At present, we have no adequate numerical indices for such an analysis but the foregoing short descriptions show how the Areas differ.

INFECTIOUS DISEASES.

Notification.

A summary of the notifications of infectious diseases in the various County Districts during 1948 is set out in Table VII. The table shows that 26,253 persons were notified as suffering from infectious diseases compared with 21,435 in 1947. The increase was almost entirely due to the two diseases, measles and whooping cough. All the other notifiable diseases were less prevalent this year with the exception of dysentery of which there were 185 cases compared with 73; 219 and 558 in the three previous years. Particular mention should be made of diphtheria of which only 61 cases were notified, cerebro-spinal fever with 29 cases and typhoid and paratyphoid fever of which together there were 16 cases compared with twice that number in 1947. There were no cases of smallpox and although the incidence of acute poliomyelitis was higher than in most previous years, there was no widespread epidemic as in 1947.

On the other hand, the number of cases of whooping cough notified (6,507) was the highest since 1941. The peak week was in April when 225 cases were notified, but the number of weekly notifications did not drop below 100 between January and September. The cases were mostly of children at pre-school or early school ages, only 209 cases being aged 10 or over. The following table giving the number of cases under 15 and the rate per thousand children under that age in each of the Health Areas, shows that while incidence was higher in the boroughs near London, no part of the County escaped entirely.

		Notified cases under 15 years.	Rate per 1,000 children under 15 years.
1.	North-East Essex	514 ..	14.1
2.	Mid-Essex	792 ..	18.3
3.	South-East Essex ..	356 ..	16.5
4.	South Essex	583 ..	12.1
5.	Forest	760 ..	19.0
6.	Romford	325 ..	18.7
7.	Barking	388 ..	21.1
8.	Dagenham	470 ..	16.2
9.	Ilford	1,045 ..	29.0
10.	Leyton	621 ..	30.1
11.	Walthamstow	559 ..	22.4
	Total	6,413 ..	19.1

At all ages after infancy, the incidence at Ilford and at Leyton was much higher than in other Areas but while at school ages, the incidence at Ilford was significantly greater than at Leyton, in the age group 1–4, the reverse was the case. For infants, there is a clear difference in incidence between the six Areas coterminous with Municipal Boroughs and the rest of the County but the variation between the six boroughs is not greater than would be expected by chance. The following table shows the rates in the three age groups for each of the Health Areas taking the County rates as 100, and in brackets, the actual County rates per 1,000 children in the age groups in question.

	Under 1 year.	1 to 4 years.	5 to 14 years.
1. North-East Essex ..	67	73	78
2. Mid-Essex	66	87	119
3. South-East Essex ..	85	91	82
4. South Essex ..	63	63	65
5. Forest	99	97	102
6. Romford	112	89	106
7. Barking	154	118	92
8. Dagenham ..	126	105	60
9. Ilford	130	139	172
10. Leyton	139	159	142
11. Walthamstow ..	129	123	98
County ..	100 (24.0) ..	100 (32.9) ..	100 (11.2)

There were 25 deaths from whooping cough during the year, of which 21 were of infants and 4 of children between 1 and 5 years of age.

The number of cases of measles notified was 15,454, compared with 12,573 in 1947 and there were 9 deaths compared with 12 in 1947. Of recent years, measles had been showing a two-year periodicity and on this basis, it was to be expected that in 1948 there would be an increased incidence in the late spring and summer followed by a period of lower incidence in the autumn and a rise at the end of the year which would culminate in either March or April, 1949. In fact, the incidence in the spring and summer was much higher than was expected, the peak in May being higher than the peak in 1947 and the expected increased incidence at the end of the year occurred two months earlier than usual. We now know that this presaged an epidemic with an unusually high peak in February, 1949.

Diphtheria Immunization.

The arrangements for co-operation between the County Council and County District Councils and for propaganda in connection with diphtheria immunization were continued on the lines indicated in previous Reports until 4th July, 1948, when the new arrangements made under the National Health Service Act, 1946, came into being.

Figures based on returns received from County Districts, again kindly provided by Dr. A. H. Gale of the Ministry of Health, indicate that the following numbers of children in the Administrative County were immunized against diphtheria during the years 1946, 1947 and 1948 :—

	1946.	*1947.*	*1948.*
Age groups 0–5 ..	21,756 ..	18,374 ..	22,685
Age groups 5–15 ..	4,819 ..	3,409 ..	3,926
Total	26,575 ..	21,783 ..	26,611

The number of notifications of diphtheria and the number of deaths from the disease during the same period were :—

	1946.	*1947.*	*1948.*
Notifications	152 ..	76 ..	61
Deaths	16 ..	6 ..	5

Since 5th July, 1948, all general practitioners in the County have had the opportunity of carrying out immunization under the County Council's scheme, and the majority of them have indicated that they will do so, although no settlement in regard to the fees to be paid therefor had been reached by the end of 1948. It is of interest to record that the number of immunizations carried out between January and June, 1948, was 13,601 and that between July and December, 1948, the figure was 13,010.

Whooping Cough Immunization.

Since 5th July, 1948, immunization against whooping cough has continued to be available in the Boroughs of Barking, Chelmsford, Dagenham and Harwich in which it was available before that date.

Sonne Dysentery.

The following is a report by Dr. E. A. Atkinson, Pathologist of the Oldchurch Hospital, which was made to the Essex Epidemiological Committee in regard to an outbreak of epidemic diarrhoea with fever which occurred at a school in the Hornchurch Urban District during the first two weeks of October, 1948 :—

"The outbreak was marked by an explosive onset followed by a smaller secondary wave. Two thirds of all the cases occurred in the first wave. The clinical course was mild, less than a quarter of the cases showing blood in the stools. All the affected children experienced abdominal discomfort and diarrhoea with more or less fever.

"The first two cases commenced on the evening of September 30th, followed by seventy others during the next two days. The remainder of the cases commenced during the succeeding ten days. Bacteriological investigations were commenced on October 5th, by which time many of the milder cases had returned to school. Shigella sonnei was isolated from the faeces of practically every case by plating on desoxycholate-citrate medium.

"Examination of the first wave showed that all the affected children were in the 5–7 age group. All these children had consumed a mid-day meal at the school on September 30th. No children of the senior school were affected at this time.

"The canteen arrangements are of some interest. Owing to the large number of scholars, it was found necessary to arrange lunch in three shifts. The infant section, which included all the early cases, was fed in the first shift. On September 30th, 183 infants had lunch. The food offered to the infants was the same as the food offered to the older children with one exception. Some stewed apple left over from the previous day was offered only to the infants and was all consumed by them.

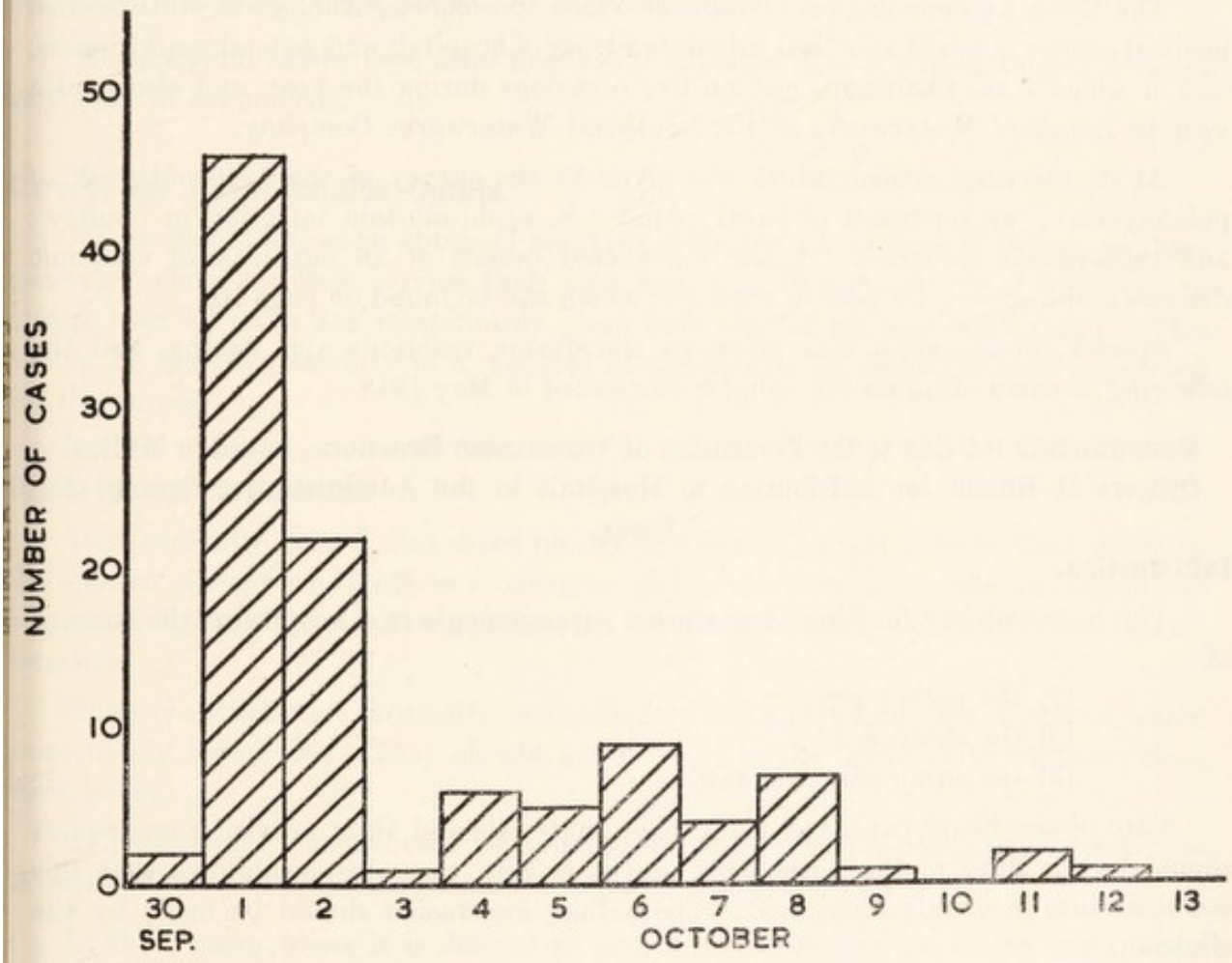
"Examination of the smaller second wave showed that the affected children varied in age from 1 to 11 years, though the majority were in the 5–7 age group. About a quarter of the cases are known to be home contacts of cases in the first wave. As soon as the nature of the outbreak was known, all children who had

had diarrhoea were excluded from school. It was felt, however, that a low standard of bacteriological cure would have to be adopted. It was decided to let children return to school after three successive negative swabs at half week intervals. The average time required to reach this admittedly low standard was 32 days. By the beginning of November, nearly forty children had failed to qualify even by this standard. It was then decided to let most of these return to school with weekly swabbing by the school nurse. In spite of treatment, three cases required eighty to ninety days to reach the standard of three negative swabs.

"None of the food handling staff gave a history suggesting recent infection, and three specimens from each were found negative.

SONNE DYSENTERY

NORTH STREET SCHOOL, HORNCHURCH - 1948.



"The standard of hygiene observed by the food handlers and by the scholars was low. In the case of the children it was the custom, owing to a shortage of soap and towels, to wash after meals and not before.

"Supposed Method of Spread. The stewed apple to which reference has been made, was kept in a badly ventilated cupboard. Unfortunately none remained on October 5th for bacteriological examination. In order to test the possibility of spread by stewed apple, tubes were inoculated with varying amounts of shigella sonnei and incubated at 20 degrees and 37 degrees Centigrade. All the 37 degrees cultures died within 24 hours. All the 20 degrees cultures produced a heavy

growth on subculture every day for a week, when the experiment was terminated. It would appear that shigella sonnei grows quite well in apple stew at 20 degrees in spite of the acidity of the medium. The pH of the medium was 3.2. It is not clear who could have infected the apple stew. Of the later cases, only a quarter were home contacts. The others were mostly children of the same age group. The infection could have been conveyed from child to child during the period when convalescent cases were allowed to return to school. The last new cases of sonne dysentery began on October 13th and none has been reported since.

"SUMMARY. An outbreak of sonne dysentery is described involving 120 children in a school. Stewed apple was the probable vehicle of infection—a theory in keeping with the well known resistance of the organism."

ESSEX EPIDEMIOLOGICAL COMMITTEE.

The Essex Epidemiological Committee which consists of pathologists, statisticians, medical officers of health, medical superintendents of hospitals and general practitioners, and of which I am Chairman, met on five occasions during the year, and also paid a visit to Langford Waterworks of the Southend Waterworks Company.

At its meetings consideration was given to the survey of the 1946 outbreak of poliomyelitis; an outbreak of paratyphoid; S. typhi-murium infection in poultry; and tuberculosis statistics. It also considered details of an outbreak of epidemic diarrhoea in a school, a report in regard to which will be found on page 10.

Special consideration was given to transfusion reactions and deaths, and the following memorandum on the subject was issued in May 1948—

Memorandum relating to the Prevention of Transfusion Reactions, issued to Medical Officers of Health for distribution to Hospitals in the Administrative County of Essex.

Introduction.

The responsibility for blood transfusion arrangements in a hospital is the concern of—

(1) the pathologist;
(2) the clinician;
(3) the administrative staff.

Care of the blood bank and transfusion materials and their provision on request should be the duty of the pathologist and it is with these responsibilities that this memorandum is mainly concerned. The actual transfusion should be made by the clinician.

Care of the Blood Bank.

Blood should be stored in a refrigerator which must be regulated to keep between 4° and 6° Centigrade (39° and 43° Fahrenheit). A maximum and minimum thermometer should be kept continually in the refrigerator for this purpose; the readings being recorded daily.

Blood removed from the refrigerator for more than 30 minutes and not used, should be considered unfit for transfusion. It should be so labelled, and replaced in the

refrigerator, segregated from the other blood, to await collection by the Blood Transfusion Service.

Cells for cross-matching should be removed from the bottle under strictly sterile conditions with the minimum disturbance.

Homologous ABO group Blood should be used whenever possible.

It is most important that females under 45 years of age should be transfused only with Rh compatible blood, since the administration of Rh positive blood to an Rh negative female may sensitize her to the Rh antigen and seriously prejudice her chances of bearing normal children subsequently. The same care must be taken when giving intramuscular injections of blood to such females.

Blood need not be warmed before use. It must under no circumstances be frozen or heated above 38° Centigrade (100° Fahrenheit).

Blood should not be used after four weeks from the date of collection or if it shows any signs of haemolysis.

Care of the Administration Outfits.

These should either be obtained regularly from the Blood Supply Depot, or alternatively, when hospitals service their own sets, the utmost care must be taken to ensure that all parts are scrupulously clean before assembly and sterilization. This should be the responsibility of a member of the theatre or technical staff appointed for the purpose.

Dried Plasma and Serum.

It is generally agreed that dried plasma and serum should only be used when, in the opinion of the medical officer ordering or giving the transfusion, the advantages to be gained by their use outweigh the risk, sometimes fatal, of homologous serum jaundice.

These products are normally reconstituted with pyrogen free distilled water immediately before use. They should not be kept in the liquid state for more than three hours.

As plasma and serum should be reserved for cases of severe shock or burns, transfusions of these materials may usually be given rapidly.

In those cases where it is desired to give intravenous glucose at the same time, the dried plasma or serum should be reconstituted by the addition of five per cent. glucose *in distilled water* to avoid overloading the circulation.

Rate of Transfusion.

Only patients with recent severe haemorrhage require rapid replacement transfusions. In all other cases, blood or plasma should be given at a rate less than 40 drops per minute. Great care should be taken not to overload the cardiovascular system by giving too great a volume of replacement fluid too rapidly.

Records and Reports.

It is of the utmost importance that in every transfusion careful record is made of the batch numbers of all blood, plasma or serum used. (Tear-off segments are provided on the bottle labels for this purpose). Unless this is done, it is not possible to trace the origin of the material, should jaundice or some other complication develop subsequently. This is particularly important in the case of a plasma or serum transfusion, as the appearance of the complication may be delayed by as much as three to six months.

The actual bottle or bottles used for each transfusion, should not be washed out, but should be replaced immediately in the refrigerator for 24–36 hours, in case the remains of the contents are needed for investigation.

All cases of untoward reaction following transfusion should be reported promptly to the medical officer in charge of the blood bank. The Regional Transfusion Officer and his staff are always available for consultation and advice in this connection.

APPENDIX.

Suggested Note for Circulation to Hospitals on the Prevention of Transfusion Reactions.

(Amended at Sir Philip Panton's request).

In an attempt to reduce to a minimum the number of reactions following transfusion, the following notes are circulated :—

Care of the Blood Bank.

The care of the blood bank should be the responsibility of a definitely appointed member of the medical staff, who shall be directly answerable to the Medical Committee at all times for this.

Blood should be stored in a refrigerator which can be regulated to keep between 4° and 6° Centigrade (35° to 40° Fahrenheit). A maximum and minimum thermometer, which should be checked daily, should be kept continually in the refrigerator for this purpose.

Blood removed from the refrigerator for more than 30 minutes and not used, should be labelled to this effect.

Cells for cross-matching should be removed under sterile conditions with the minimum disturbance.

Blood of homologous group should be used whenever possible.

It is particularly important that the Rh type should be investigated in all females under the age of 45, where transfusion is contemplated, particularly as many minor reactions are, in fact, due to Rh incompatibility.

Blood should not be warmed before use. It must under no circumstances be frozen or heated above 40° Centigrade (100° Fahrenheit).

Blood should not be used after one month from the date of collection or if it shows any signs of haemolysis.

Care of the Administration Outfits.

These should either be obtained from the Blood Supply Depot, or alternatively, the utmost care must be taken to ensure that all parts are scrupulously clean before assembly and sterilization.

Choice of Patient.

Only patients with recent severe haemorrhage require rapid replacement transfusions. In all other cases, blood should be given at a rate less than 40 drops per minute. Great care should be taken not to overload the cardiovascular system by giving too great a volume of replacement fluid too rapidly.

No transfusion should ever be given unless there is a definite indication for it.

Dried Plasma and Serum.

Dried plasma and serum should never be used unless, in the opinion of the Medical Officer ordering or giving the transfusion, the advantages to be gained by their use outweigh the risk, not infrequently fatal, of homologous serum jaundice.

These products are normally reconstituted with pyrogen free distilled water immediately before use. They should not be kept in the liquid state for more than three hours.

As plasma and serum should be reserved for cases of severe shock or burns, transfusions of these materials may usually be given rapidly.

In those cases where it is desired to give intravenous glucose at the same time, the dried plasma or serum should be reconstituted by the addition of five per cent. glucose in distilled water, to avoid overloading of the circulation.

Records and Reports.

It is of the utmost importance that in every transfusion careful record is made of the batch numbers of all blood, plasma or serum used. Unless this is done, it is not possible to trace the origin of the material, should jaundice or some other complication develop subsequently. This is particularly important in the case of a plasma or serum transfusion, as the appearance of the complication may be delayed by as much as three to six months.

All cases of untoward reaction following transfusion should be reported promptly to the medical officer responsible for transfusion arrangements in the hospital. The Regional Transfusion Officer and his staff are always available for consultation and advice in this connection.

The following report upon an outbreak of infection among young babies in a hostel for mothers and infants was also given special consideration by the Committee: —

A virulent outbreak of upper respiratory tract infections originating among Young Babies in a County Council Hostel for Mothers and Infants.

This report deals with an outbreak of severe upper respiratory tract infections arising among small infants at a hostel for mothers and babies maintained by the Essex

County Council in a large detached residence known as Ardmore, at Buckhurst Hill, Essex. The object of this hostel is to provide accommodation for 18 mothers (either married or unmarried) and their babies, who, after confinement have difficulty in coping with their immediate future. Whenever the accommodation has not been fully taken up with these types of cases, it has been the practice from time to time also to admit into the hostel ante-natal or post-natal mothers in need of rest and convalescence, and in an extreme case of urgency a small toddler might occasionally be admitted with one of these mothers.

The resident staff at the hostel consists of a matron who is a State Registered Nurse and State Certified Midwife, an assistant nursery helper, and a cook-housekeeper. This comparatively small staff is explained by the fact that each mother is expected to look after her own infant and help with some of the routine domestic work in the hostel.

The medical supervision at Ardmore is carried out by Dr. E. C. Dayus, a general practitioner in Buckhurst Hill, who pays a regular monthly visit and, in addition, is called in as required in the event of illness.

On Saturday, 31st January, 1948, a telephoned message was received at County Hall, Chelmsford, from the matron at Ardmore to the effect that Dr. Dayus had called at the hostel that day and had diagnosed four infants named H., T., V. and Do., to be suffering from colds and bronchitis, and recommended that all further admissions of new infants to the hostel should therefore be temporarily suspended. The four ill infants were being kept isolated in separate rooms away from the other infants. Excluding the four ill infants there were seven other well infants in the hostel on the morning of 31st January, 1948, but four of these, of whom two were twins named C., were discharged in the ordinary way in the care of their mothers to their own homes later in the day in accordance with routine arrangements made a few days earlier. Thus by the afternoon of 31st January, 1948, there were only the four ill infants and three other well infants remaining in the hostel.

Dr. Dayus continued in attendance during the next few days and although they all exhibited some initial transitory pyrexia and increased respirations they appeared to be steadily improving.

On 5th February, 1948, however, infant V. suddenly appeared to become worse and in consequence of this Dr. Dayus recommended that infant V. and also infants H. and T. should be transferred to hospital with the provisional diagnosis of bronchitis in each case. Infant Do. in the meantime had practically recovered and was retained at Ardmore.

The three infants H., T. and V. were therefore transferred to St. Margaret's Hospital, Epping, where they arrived about 6.15 p.m. on 5th February, 1948. They were seen and examined in the Receiving Room by a resident House Physician and were admitted as cases of bronchitis to an open ward in Hut I, which is the Children's Ward in this hospital. The following are brief details of the clinical findings on admission :—

Infant H. (age 12 weeks) .. Dyspnoea.
Respiratory System. Dullness, bronchial breathing left lower lobe with decreased air entry.
Abdomen. Liver edge palpable.
C.N.S. N.A.D.

Infant T. (age 6 weeks) .. Looked slightly yellow, coughing, not dehydrated.
Respiratory System. A few basal rales, and an occasional rhonchus.
Abdomen. Liver edge palpable.
C.N.S. N.A.D.
Fauces. Left rather reddened.
Ears. No discharge.

Infant V. (age 8 weeks) .. Coughing.
Respiratory System. N.A.D.
Abdomen. N.A.D.
C.N.S. N.A.D.
Fauces. Reddened.

About three and a half hours after admission to Hut 1 it was discovered that all three infants had diarrhoea and as there was also some vomiting in evidence it was assumed at that stage that they were probably suffering from gastro-enteritis, in consequence of which barrier nursing was at once instituted.

The three infants, in spite of treatment, remained critically ill and on the evening of 7th February, 1948, infant H. died. Still regarding these infants to be probably suffering from gastro-enteritis, it was decided that the remaining two should now be transferred to Waltham Abbey Isolation Hospital. This transfer was, however, deferred until the following day in order to avoid disturbing the administration of a saline drip infusion. By the following morning, 8th February, 1948, infant T. died and infant V. was subsequently transferred to Waltham Abbey Isolation Hospital the same day.

It is of interest to mention here that at the request of the resident Medical Officer in charge of the infants they were seen at St. Margaret's Hospital on 7th February, 1948, by Dr. K. Tallerman, the County Paediatrician, who was satisfied with the arrangements made for their treatment.

Incidentally, it is important to mention that following the admission of these seriously ill infants to Hut I, all further admissions to that Ward were temporarily suspended, and in fact no new infants were admitted to the Ward for at least 14 days.

Unfortunately, two of the infants already in the Ward when the Ardmore infants were admitted, namely, infants Da., and K., subsequently developed similar acute symptoms of diarrhoea and vomiting and both died later in Waltham Abbey Isolation Hospital. These events were regarded as presumptive evidence that these two infants were infected from the Ardmore infants.

Infant Da. was originally admitted to Hut I on 31st December, 1947 (not from Ardmore) and was then suffering from bronchitis. This infant was slowly recovering throughout January, and on 2nd February, 1948, was much better clinically, but had developed a rash thought to be due to a sulphonamide drug. This drug was therefore stopped and penicillin given instead. On 8th February, 1948, however, diarrhoea and vomiting developed and the infant was discharged the same day to Waltham Abbey Isolation Hospital and died there on 14th February, 1948.

Infant K. was originally admitted to Hut I on 31st January, 1948 (not from Ardmore) suffering from bronchitis. This infant was treated with sulphonamides and seemed to be improving, but on 11th February, 1948, developed diarrhoea and vomiting and so was discharged on 12th February, 1948, to Waltham Abbey Isolation Hospital and subsequently died there on 20th February, 1948.

Infant Do. one of the original four infants taken ill, but later recovered sufficiently to be retained at Ardmore, subsequently became ill again with sudden collapse on 10th February, 1948, and was transferred direct to Waltham Abbey Isolation Hospital the same day. This infant recovered and was discharged on 6th March, 1948, to the care of adopting parents.

Arising out of the transfers of these ill infants to Waltham Abbey Isolation Hospital the Medical Superintendent has stated that he considers there is presumptive evidence that another infant already in his hospital and previously unconnected with the outbreak among the Ardmore infants became infected and died as a result of the same infecting agent which was responsible for the other deaths.

This was infant G. aged 4½ months, admitted to the Isolation Hospital on 22nd January, 1948, in the early stage of whooping cough. He was admitted solely because of the serious illness of his mother. For four weeks the child's illness proceeded on a normal course, and at the time of admission of the Ardmore infants (from 8th February, 1948), he had reached the stage of convalescence. One week later (16th February, 1948), he began refusing feeds and developed diarrhoea and vomiting. This was accompanied by an upper respiratory tract infection. On 19th February, 1948, respirations increased with dyspnoea due to lung involvement, and he died on 20th February, 1948, from broncho-pneumonia.

This infant was in a cubicle ward and had no contact with the Ardmore infants except through the nursing staff. The Medical Superintendent commented that the infecting agent (whether staphylococcal or virus), is evidently extremely lethal to young infants and requires a very strict nursing technique to prevent the spread of infection.

The findings in the bacteriological investigations and post mortem examinations were as follows :—

Rectal swabs taken on 6th February, 1948, from infants H., T. and V. were each reported to have " no pathogenic organisms isolated."

Subsequent swabs, however, from each of the three infants were reported to have grown proteus vulgaris.

Rectal swabs from infants Da., K. and Do. were also found to contain proteus vulgaris.

A throat swab from infant Do. produced a scanty growth of haemolytic streptococci.

A throat swab from infant K. grew pneumococcus only, and a nasal swab from this infant grew staph. pyogenes.

Nose and throat swabs from infant G. yielded staph. pyogenes in both and no other pathogens.

It was not possible to obtain permission for an autopsy on each case, but where is was possible the following results were obtained, all these examinations being rried out by full-time pathologists :—

. INFANT H.

Necropsy performed approximately 18 hours p.m. on the body of a male baby.

External Examination. Possibly some dehydration.

Internal Examination. Tongue, thyroid, thymus all normal.

Trachea and bronchi contain muco-pus. Lungs—left 4oz. empyema, with underlying collapse of lung and a 1in. diameter abscess in left lower lobe. Right lung—oedematous, with regions of bronchiolitis but otherwise normal.

Heart—cavities, valves, myocardium normal.

Abdomen—Liver pale ; moderately fatty. Spleen, suprarenals, gallbladder, bile ducts and pancreas normal. Alimentary system normal.

Genito Urinary system normal.

Brain—pale purple and congested.

Pus in both middle ear cavities.

Cause of death—Left empyema and lung abscess. Bilateral otitis media.

Note. Swabs taken at autopsy subsequently grew staph. pyogenes from the empyema and from both lungs.

. INFANT T.

Necropsy performed approximately 18 hours p.m. on the body of a small baby.

External Examination—Dehydrated.

Internal Examination—Tongue and thyroid normal. Trachea and bronchi and bronchioles contain muco-pus. Lungs pale, especially the left, otherwise normal.

No effusions or adhesions.

Heart—valves and cavities and muscle appear normal.

No congenital defects. Thymus normal. Abdomen—liver pale yellow and fatty appearance. Intestinal tract—stomach normal : contents contain flecks of black material—? iron ? blood. Small intestine injected in places, otherwise normal.

Colon shows many small brown millet seed size marks, otherwise normal.

Spleen, pancreas, gallbladder and bile ducts normal.

Suprarenals normal. Kidneys normal. Brain congested.

Skull—both middle ear cavities full of pus.

Cause of death. Toxaemia resulting from bilateral acute otitis media.

Note. Swabs taken at autopsy subsequently grew staph. pyogenes from both middle ears.

INFANT K.

Body of a thin young male child, body weight about 11 lbs.

Eyes sunken, " radial " fingers. Very pale and rather cyanosed.

Pharynx, larynx, trachea, bronchi and lungs congested, otherwise normal.

Pleurae normal. Pericardium normal. Left ventricle rather hypertrophied but heart otherwise normal. Tricuspid, pulmonary, mitral and aortic valves normal.

Pulmonary artery and aorta normal. Coronary vessels normal. Heart muscle appeared normal. No fluid in pericardium nor in pleural cavities.

Oesophagus normal. Stomach very much distended with water and curdled milk.

Duodenum, jejunum, ileum, caecum, appendix, colon and rectum normal.

Liver rather fatty and yellowish.

Gallbladder distended with dark green bile : very little bile in duodenum or jejunum and bile did not flow on pressing gallbladder, no stone in duct and no atresia of common bile duct. Spleen rather large, otherwise normal.

Pancreas normal. Suprarenals both normal. Kidneys both normal. Ureters normal. Bladder normal. Penis, scrotum, testicles and urethra normal.

Brain very congested, white matter a bluish tinge. Middle ears both normal no pus.

Cause of death. Unknown. Sections of some tissues will be cut and may throw light on the condition.

4. Infant V.

Necropsy performed approximately 12 hours p.m. on the body of a two months old baby.

External Examination—Eyes sunken. Weight 6lbs. Moderately cyanosed.

Internal Examination. Tongue and thyroid normal.

Thorax : Trachea and bronchi contain muco-pus.

Lungs : Right—moderate oedema, early broncho-pneumonic changes in upper lobe. Left lung—small ¼in. diameter abscess containing yellow-green pus situated in upper part of lower lobe, posteriorly : remainder of lower lobe shows early broncho-pneumonic changes; upper lobe appears normal. No pleural effusion.

Heart—valves, cavities and myocardium normal. Aorta normal.

Abdomen—liver, pale and fatty.

Spleen, pancreas normal. Gallbladder distended with bile, bile ducts patent.

Genito Urinary system normal.

Alimentary System—stomach contents undigested food and pale green colour.

Duodenum heavily bile stained. Small intestine—patchy congestion.

Large bowel—distension of transverse colon ; hepatic colon fleure injected and haemorrhagic. Otherwise normal.

Brain—Overall bluish tinge ; marked congestion. Right middle ear cavity full of pus. Left normal.

Cause of death. Left lung abscess. Right otitis media.

Subsequent reports on sections of some of the tissues obtained at autopsy were as follows :—

1. Infant H.

Lung—Multiple abscesses with bronchiolitis and consolidation.

Brain—Intense congestion, collections of white cells in some venules suggestive of pyaemia.

Medulla—Intense congestion. Collections of white cells in some vessels.

Heart muscle—Normal.

2. Infant K.

Medulla oblangata—Marked congestion.

Liver—Congested. Fatty degeneration of liver cells. Diffuse. Moderate.

Heart muscle—Congested.

Lung—Congested.

Cerebral cortex—Intense congestion.

Lung—Normal.

3. Infant V.

Liver congestion. Extreme degree of fatty degeneration of parenchymatous cells.

Cerebral white matter. Intense congestion.

Many lymphocytes and polymorphs in the blood in the larger capillaries.

Three pieces of lung, one normal and two showing an abscess.

Small intestine—Normal.

Immediately it became known that staphylococcus pyogenes had been cultured from wabs taken at the autopsies of infants H. and T. arrangements were made to obtain ose and throat swabs from all the remaining mothers and infants at Ardmore and also rom the staff. Altogether a total of 28 swabs were investigated and of these only ne swab yielded a culture of staph. pyogenes and this, significantly enough, was the asal swab from the mother of infant H.

Incidentally, subsequent enquiries elicited the information that infant H. was the rst of the original four infants to be taken ill. The throat swab from this mother lso yielded a scanty growth of haemolytic streptococci, as did the throat swabs from wo other mothers. All the remainder of the swabs, including those from the staff howed nothing of note. As regards the mother of infant H. she was immediately emoved from Ardmore and appropriate arrangements made to isolate her from possible ontact with young infants, pending treatment for her nasal carrier state.

At this early stage in the investigations the indications tended to point to staph. yogenes being the causative organism, and in order to obtain further evidence in upport of this theory it was arranged that a specimen from each culture of staph. yogenes obtained in connection with this outbreak should be sent to Dr. Allison at he Medical Research Laboratory for Phage typing. Unfortunately, however, this heory had to be abandoned when it became known that the Phage reactions had ailed to confirm the presence of a common strain of staph. pyogenes.

Dr Allison's report on the Phage reactions was as follows :—

"Name.	Swab.	Phage Reaction.
Mother H. ..	Nose ..	N.T.
Infant H. ..	L. empyema ..	N.T.
ditto ..	L. lung abscess ..	N.T.
ditto ..	R. lung ..	N.T.
Infant T. ..	R. ear ..	47 (+)
ditto ..	L. ear ..	47 (+)
Infant V. ..	Nose ..	N.T.
Infant Do. ..	ditto ..	47 (+)
Infant K. ..	ditto ..	52/52A (W)

N.T.=not typable : (+)=side reactions present : (W)=weak reaction.

" There are at least three types represented here. Strains from noses of infants V., Do. and K. are all different so there appears to be little evidence to implicate staphylococci as the cause of an epidemic outbreak. I presume you did not find staphylococci in the stools of these infants."

In pursuing the search for any likely evidence of the originating source of this outbreak follow-up enquiries were made on all other infants discharged from Ardmore between the 1st and 31st January, 1948. These enquiries revealed that a total of 111 infants had been discharged well from the hostel during the month of January and of these 9 were reported to be healthy and making satisfactory progress. From among those 9 infants, however, it was ascertained that one had suffered with acute diarrhoea during a three days' stay in the hostel from the 27th to 29th January, and two others had suffered with what were described as coughs and colds. The information also revealed that these latter two had been mildly pyrexial ; one of them had a cough on admission resulting from whooping cough in November, 1947 : he developed a heavy " cold " on 22nd January with pyrexia up to 100° F. and was kept in bed : on the 24th January he had almost recovered and on 28th January was discharged from the hostel quite well. The other was found to have symptoms of a cold on the 30th January and the mother was advised by Dr. Dayus to stay a day or so longer, but as arrangements for her discharge had already been made she insisted on leaving the hostel together with her baby on 31st January. Nasal swabs were subsequently obtained from both these infants but they failed to yield any pathogenic organisms.

The two other infants making the total of 11 referred to above were twin infants named C. These infants were admitted to Ardmore with Mrs. C. on 21st January 1948, as the latter had been recommended for a convalescent rest, and in due course the infants were discharged apparently quite well in the care of their mother on 31st January.

Within a day or so of returning to their own home both infants became ill with what at first were thought to be " colds ". Later, however, diarrhoea and vomiting supervened and both infants became steadily worse. They were then admitted to Thurrock Isolation Hospital at Grays on 4th February, 1948, where the first infant died the same day within a few hours of admission, and the second infant died there on 10th February 1948.

The cases were regarded as gastro-enteritis and unfortunately no pathological investigations were carried out. The clinical details received from the hospital were as follows :—

PATRICIA C.

Aged 2 months, admitted on 4th February, 1948, with gastro-enteritis. There was a history of the patient having been exposed to infection while at Ardmore, Buckhurst Hill Rest Home. The child became ill with vomiting and diarrhoea on 2nd February, 1948. The stools were yellow, watery and frequent. Pulse was imperceptible and the patient was extremely dehydrated. Temperature was 98.2 on admission. The child died within a few hours of admission. No bacterial investigations were possible. Death certificate signed by Dr. Peters who had seen the child prior to admission.

IAN C.

Admitted on 4th February, 1948, with a similar history. The patient was not so dehydrated. The child was put on a normal saline subcutaneous drip and was given penicillin orally each two hourly feed. On 8th February, 1948, a rectal drip was given. No pathological investigations were done unfortunately. The child died on 10th February, 1948. Certified gastro-enteritis.

DISCUSSION.

Soon after the three original ill infants were admitted to St. Margaret's Hospital some criticisms arose because it was considered they should have been transferred direct to the Isolation Hospital. These criticisms were, of course, made at the stage when the infants were regarded as suffering from infective gastro-enteritis. Dr. Dayus maintained that when he recommended the infants for admission to hospital on 5th February, 1948, there was nothing at that time to cause him to advise that they should be sent to the Isolation Hospital. A further point of criticism arose over a suggestion that, as the infants were found to be suffering with diarrhoea soon after admission, there must have been evidence of this before admission. Both Dr. Dayus and the Matron of Ardmore, however, were emphatic in stating that no true diarrhoea had been present prior to admission to hospital. These statements were to some extent borne out by the fact that no diarrhoea was noticed at St. Margaret's Hospital until the night nursing staff came on duty, and in fact it was some time between 9.0 and 10.0 p.m. when the diarrhoea was first noticed and reported, which was about 3½ hours after admission.

The rapidly ensuing deaths of infants H. and T. followed by the development of similar symptoms of diarrhoea and vomiting in the cases of infants Da. and K. caused a state of some alarm to arise and this inevitably came to be communicated to members of the public in the vicinity of Epping town.

In view of this, the Social Welfare Committee appointed a Special Sub-Committee to hold a full enquiry into the whole incident. This Sub-Committee sat on two separate occasions with a week's interval between them, and a very searching enquiry was made. At the conclusion of the enquiry the Sub-Committee expressed themselves as satisfied that all reasonable precautions had been taken and that everything possible

had been done for these infants, and they requested that the medical and nursing staffs should be so informed.

In considering the causation of this outbreak the possibility of being able to identify the first infant in the series is a question which at once arises. An infant named Cl. admitted to Ardmore on 14th January, 1948, suffered with a heavy "cold" from 22nd to 24th January and some pyrexia up to 100°F. occurred. This was the first infant which can definitely be stated to have suffered with an upper respiratory tract infection during the month of January, and this was just about one week before infants H. T. V. and Do. commenced to be ill. Another infant named Ha. was also found to have symptoms of a "cold" on 30th January and the mother took this infant away from Ardmore on 31st January.

Infants Cl. and Ha. quickly recovered and when subsequently nasal swabs were obtained from them these yielded no pathogenic organisms. Nevertheless it seems highly probable that the transitory "colds" of both these infants might have been part of the same outbreak, and although no conclusive proof is available it seems quite possible that a virus infection might have been introduced by infant Cl.

The initial symptoms in practically all the cases in this outbreak were those of an upper respiratory tract infection with subsequent lung involvement of varying degree. Severe diarrhoea and vomiting simulating infective gastro-enteritis was also a consistent feature in the nine severe cases which developed about 31st January, 1948, or later, and of these nine cases only one, namely, infant Do. survived.

Although the pathogenic staphylococci cultured from several of the infants who died could, by themselves, have been a cause of death, nevertheless in view of the fact established by Dr. Allison that there were three distinct strains of staphylococci present it had to be assumed that some other underlying common factor must have been responsible for the outbreak, and that the presence of the staphylococci was probably secondary to the primary factor which may have been a virus infection.

Another point which would seem to lend some support to the virus theory is the fact that all these ill infants were treated with sulphonamides or penicillin and in some cases both drugs were used, but they appeared to have little or no effect on the course of the illnesses, whereas in some of the cases at least some benefit would have been expected to accrue had the primary cause been a staphylococcal infection.

Just why infants Da. and K. were the only two infants in Hut I to be apparently infected by the Ardmore infants is a little difficult to explain. They were not in very close proximity to the Ardmore infants, one being on the opposite side of the Ward and the other being several cots away on the same side. There were 22 other children in the Ward when the Ardmore infants were admitted, the latter taking up the last three empty cots. Of these 22 infants, Da. and K. were under four months of age, two others were between 7 and 12 months and all the remainder were over 12 months old. It is known that infants Da. and K. were underweight for their ages, and were in poor physical condition. There is also the fact that both infants were only just recuperating from attacks of bronchitis, and so it can be assumed that they were in an already weakened condition and would be an easy prey to any new and virulent infection.

As already mentioned, as soon as the telephoned message was received on 31st January, 1948, that four infants in Ardmore were suffering from " colds " and bronchitis all new admissions were immediately stopped pending further investigations. In the meantime all the remaining mothers and infants were discharged from the hostel. Arrangements were then made for the hostel to be given a thorough cleaning and airing throughout. In addition it has been decided that redecorating of the walls and ceilings in the room used for bathing and changing infants, and the room used as the day nursery will be carried out before commencing to admit infants again to the hostel.

Summary and Conclusions.

1. An " explosive " outbreak of illnesses originating among young babies in a County Council hostel for mothers and infants has been described.

2. The chief clinical features were those of an initial upper respiratory tract infection with subsequent lung complications coupled with severe diarrhoea and vomiting. There were eight deaths in this outbreak.

3. Three distinct strains of staphylococcus pyogenes were identified by the Phage reaction from cultures obtained from several of the ill infants, and this fact tended to discount the earlier implication of staphylococci as the causative organism in this outbreak.

4. The possibility of a virus infection being the primary infecting agent in this outbreak has been considered as a likely explanation for these illnesses.

5. The extreme virulence of the infection was a marked feature of the outbreak.

6. The steps taken to prevent the spread of infection, and the follow-up enquiries of all other infants likely to have been at risk have been described.

CANCER.

The number of deaths occurring in the County from cancer and malignant disease during the year is shown in the table below. The death rate from this disease will be found under Vital Statistics on page 7.

	Age Period.						
	0–	*1–*	*5–*	*15–*	*45–*	*65–*	*Total.*
Borough and Urban Districts ..	—	9	8	177	848	1,164	2,206
Rural Districts	1	3	1	21	149	272	447
Total for Administrative County	1	12	9	198	997	1,436	2,653

The County Council's arrangements under the Cancer Act of 1939, for the diagnosis and treatment of cancer were referred to in the Report for the year 1946, and were continued on the lines indicated therein until 4th July, 1948, when, with the exception of certain duties under section 4 of the Act, they were transferred to the Regional Hospital Boards.

TREATMENT OF VENEREAL DISEASES.

Incidence.

An increase in incidence has to be recorded during the year 1948, as compared with 1947. This is shown by the following table :—

Year.	Syphilis.	Soft Chancre.	Gonorrhoea.
1947 ..	199 ..	12 ..	323
1948 ..	253 ..	6 ..	446

Attendance at Clinics.

Until the appointed day under the National Health Service Act, 1946, the County Council continued to participate in the London and Home Counties Scheme whereby Essex patients attended for advice and treatment at many of the London clinics. As from 5th July, 1948, the treatment of venereal diseases became the responsibility of the Regional Hospitals Boards. It is understood that there are now four special clinics in the Administrative County of Essex, and that it is hoped that early in 1949, a new clinic at Tilbury will become available for patients.

Table I, on page 27 which is compiled from returns received direct from the hospitals and clinics concerned shows the attendances of Essex patients at the various clinics. It will be noted that there has been an increase in the total number of attendances from 26,641 in 1947 to 35,788 in 1948. It will also be noted that attendances at the London hospitals have increased from 21,745 in 1947 to 24,161 in 1948, but that there is no appreciable difference at any of the Essex clinics. The total number of cases or suspected cases treated for the first time increased from 1,320 to 2,056.

Travelling Facilities.

During the financial year ended 31st March, 1948, fares of necessitous patients to and from the nearest clinics were paid by the County Council and amounted to £32 1s. 2d. From that date until the County Council's responsibility ceased on 4th July, 1948, a further sum of £12 5s. 4d. was expended.

Propaganda.

Propaganda in regard to facilities available for treatment remained the responsibility of the County Council, and as in previous years some hundreds of notices giving the time of sessions and the addresses of the nearest clinics were provided and displayed at railway stations and other public places in the County.

Social Worker.

The work of tracing contacts and persuading defaulting patients to attend for treatment at the special clinic at Oldchurch Hospital was continued by the part-time social worker. The total number of defaulters found was 228.

Health visitors continued to visit defaulting patients in other parts of the County.

TABLE I

TREATMENT OF VENEREAL DISEASES, YEAR 1948

Treatment Centre	Patients from all Areas — Total No. treated for first time	ESSEX PATIENTS — Total Number treated for first time suffering from: Syphilis	Soft Chancre	Gonorrhoea	Not V.D.	Total	Total No. of Attendances of Essex Patients	In-patient Days
London Hospitals	24,161	88	—	178	800	1,066	11,602	5,236
St. Bartholomews', London	792	4	—	1	16	21	145	254
Romford	731	58	4	119	533	714	14,260	944
Chelmsford	189	30	1	20	138	189	2,252	110
Colchester	208	24	—	24	153	201	2,134	131
Harwich	62	3	—	11	21	35	229	NIL
Ipswich	450	2	—	3	—	5	125	1,191
Southend	495	16	—	10	101	127	1,090	44
Gravesend	423	7	1	29	68	105	961	NIL
Tottenham	1,006	7	—	16	97	120	804	228
Bishops Stortford	111	6	—	8	25	39	438	NIL
Queen Mary's, Stratford	448	8	—	27	104	139	1,748	12
Total for 1948	29,076	253	6	446	2,056	2,761	35,788	—
Total for 1947	26,813	199	12	323	1,320	1,854	26,641	—
Total for 1946	45,566	328	17	772	2,814	3,931	42,173	—
Total for 1945	31,943	239	3	496	1,994	2,732	31,481	—
Total for 1944	24,796	217	4	412	1,585	2,218	29,435	—

VACCINATION.

The year 1948 saw the end of the regime of compulsion so far as vaccination against smallpox is concerned. In consequence it is no longer possible to give the detailed statistical information based on the returns of Vaccination Officers. The information available is in two parts, that relating to the first six months of the year and that relating to the second six months, i.e., after the Vaccination Acts had been repealed by the National Health Service Act, 1946.

The figures for the first six months of 1948 show that the number of children under fourteen years of age who were successfully vaccinated was 7,078.

Statistics for the period 5th July to 31st December, 1948, are available in more detail, as follows :—

Age at 31-12-48	*Under 1 Born 1948*		*1 to 4 Born 1944-47*		*5 to 14 Born 1934-43*		*15 or over Born bef. 1934*		*Total*	
	Vacc.	*Re-V*	*Vacc.*	*Re-V*	*Vacc.*	*Re-V*	*Vacc.*	*Re-V*	*Vacc.*	*Re-V*
1. North-East	337	21	21	4	8	8	15	52	381	85
2. Mid-Essex	439	—	29	3	8	8	23	69	499	80
3. South-East	113	—	4	—	6	1	10	22	133	23
4. South	275	—	26	5	8	6	22	49	331	60
5. Forest	323	8	41	1	36	10	15	75	415	94
6. Barking	45	—	2	—	1	1	6	9	54	10
7. Dagenham	56	—	5	—	1	1	7	15	69	16
8. Ilford	341	—	19	3	10	13	28	88	398	104
9. Leyton	88	1	2	—	3	—	14	9	107	10
10. Romford	76	—	12	2	3	4	15	19	106	25
11. Walthamstow ..	107	4	2	—	1	2	4	26	114	32
Total	2,200	34	163	18	85	54	159	433	2,607	539

Thus there are records showing that 10,224 persons resident in the County were vaccinated or re-vaccinated during the year.

No settlement had been reached as to the fees which are to be paid to doctors in connection with this service at the end of the year 1948.

There was one case of mild generalised vaccinia in the County during the year.

HEALTH PROPAGANDA.

Health propaganda remained the responsibility of the County Council throughout the year and was fully maintained both before and after the National Health Service Act came into operation on 5th July, 1948.

As in previous years the travelling health exhibition was in frequent use and formed part of the Health Exhibition at the Essex County Show held at Orsett, when the attendance was very satisfactory.

Central Council for Health Education.

The annual contribution made by the County Council to the Central Council for Health Education in 1948 amounted to £756. During the year the Central Council provided the usual services consisting of advice and assistance in the promotion of health education programmes and the supply of posters, pamphlets and leaflets.

Early in the year, in anticipation of the new arrangements to be made as a result of the National Health Service Act coming into force, the Central Council ceased to provide lecturers for courses of lectures arranged by local authorities in connection with health education programmes. To meet the continued demand for such courses of lectures, the County Council arranged for these to be provided by a former area representative of the Central Council. Some 39 lectures were given to Youth Clubs, Women's Guilds and similar bodies.

In October the Central Council arranged a course of instruction at the Oldchurch Hospital, Romford, on the subject of " Health Education for Public Health Nurses " and upwards of 100 nurses in the County attended. A further two-day course was arranged on the same subject in London in November, when some thirty nurses unable to take advantage of the previous course attended.

Royal Society for the Prevention of Accidents.

The annual contribution of £2 2s. 0d. to the Society was continued by the County Council, and posters, pamphlets and leaflets on " Home Safety " were, as usual, of great assistance to members of the medical and nursing staff engaged in giving lectures in connection with the health education programme.

Lectures.

The lectures given by the medical and nursing staff of the department to school-leavers, Women's Institutes and other bodies increased to 53 compared with 32 in 1947. The subjects covered included " The National Health Service Act," " Child Welfare," " Home Nursing," " Mothercraft " and " Health and Hygiene."

As in previous years, lectures were given by the medical and nursing staff to Women's Land Army hostels throughout the County. A series of twenty lectures were given and the subject " General Health and Hygiene " appeared to attract the greatest interest.

LABORATORY SERVICE.

Bacteriological Laboratory Service. As in the case of other specialist services, the year 1948 saw the transfer of the comprehensive service outlined in Form P.H.28, dated March 1942, to the Ministry of Health.

During the first six months of the year specimens were received and examined at the six laboratories covered by the old agreement. A summary of the work undertaken at each laboratory during that period is given below on the unit basis which has been in operation since October, 1943 :—

Laboratory.	No. of Units.
Billericay, St. Andrew's Hospital	25,062
Black Notley, Essex County Council Hospital	21,380
Colchester, Essex County Hospital	45,281
Epping, St. Margaret's Hospital	29,290
Oldchurch County Hospital, Romford	49,234
Broomfield, Essex County Council Hospital	6,825
St. John's Hospital, Chelmsford	27,311
	204,383

Taken at the average rate of four units per specimen the total number of specimens during the half year was 51,096. The number of specimens calculated on the same basis for the whole of the year 1947 was 74,552.

Supplementary Laboratory Service. This is set out in detail in Form P.H. 28a, copies of which have been provided to local Medical Officers of Health. All the work under this service is carried out under an agreement by the Counties Public Health Laboratories, 66, Victoria Street, London, S.W.1. (telephone : Victoria 5838/9).

Below is given a summary of the work for the year 1948 :—

Kind of Sample.	No. of Examinations.
Water	817
Sewage effluents	467
Milk, ice cream and other foods	1,941

The number of ice cream samples sent for examination was greater than the previous year. A separate section in this annual report deals with ice cream samples in more detail.

Other Laboratory Services. Samples of milk (see page 35), taken from the County Council Hospitals, Institutions and Children's Homes, Schools, Farms, Central Depots and in course of delivery to the consumer are examined by—

Laboratory.	Examination undertaken.
Essex Institute of Agriculture, Writtle.. ..	Bacteriological
Dr. A. L. Sheather, Chorley Wood	Biological

SEWAGE WORKS AND RIVERS POLLUTION.

Table II on pages 31 to 33 gives details of the samples of sewage and trade effluents obtained during the year, necessitating 464 visits and the taking and examining of 374 samples. The results revealed that 165 samples or 44 per cent. were unsatisfactory as compared to 44.9 per cent. in 1947.

Copies of all results are sent to the appropriate officer of the County District Councils or to the private firms. Improvements, mostly of a minor character, have been secured at some of the sewage works. Schemes for major improvements have been prepared or are in course of preparation. Meanwhile, pollution of rivers continues in several districts.

River Roding. In June and July, 1948, the County Health Inspector carried out a detailed survey of the River Roding. This river rises in the Dunmow Rural District to the north of the Dunmow/Bishops Stortford main road. The distance from the source to Ilford is approximately 40 miles. Its course may be divided into three parts, namely :—

(a) *Upper Section*—from the source to High Ongar in the Ongar Rural District —approximately 18 miles. This part of the river passes through agricultural areas and there are only two sewage works at aerodromes which are not in full use at the present. For the purpose of this Report, a population of 1,000 has been estimated to be served by sewage works.

(b) *Middle Section*—from High Ongar to Chigwell—approximately 13 miles. This passes mainly through an agricultural area. Sewage works at Moreton, North Weald, Stanford Rivers, Abridge, Epping (Southern) and Theydon Bois discharge effluents into the river or its tributaries from a population of approximately 10,600.

(c) *Lower Section*—from Chigwell to Ilford—approximately 9 miles. The course of this section of the river passes into increasingly populous areas. Effluents discharge into the river from sewage works at Chigwell Row, Chigwell, Woodford and Wanstead, serving an approximate population of 110,000.

SUMMARY OF SECTIONS.

	Length.	*No. of Public Sewage Works.*	*Estimated Population served.*	*Estimated flow of Effluents. Gallons per day.*
Upper Section	18 miles ..	3 ..	1,000 ..	30,000
Middle Section	13 miles ..	10 ..	10,600 ..	318,000
Lower Section	9 miles ..	5 ..	110,000 ..	3,300,000
Totals	40 miles ..	18 ..	121,600 ..	3,648,000

The above table shows that the greatest discharge from sewage works is in the last 9 miles of the river.

TABLE II

Catchment Area.	*Sewage Works.*	*Sanitary District.*	*No. of Visits.*	*Samples taken.* *No. satisfactory or on border line.*	*No. unsatisfactory.*	*Total.*
Beam ..	Romford and Hornchurch Jt. ..	Romford B. and Hornchurch U. ..	4 ..	5	7	12
Blackwater	Bocking	Braintree and Bocking U. ..	4 ..	—	4	4
Do. ..	Coggeshall ..	Braintree R. ..	5 ..	1	3	4
Do. ..	Kelvedon	Do. ..	6 ..	5	—	5
Do. ..	Silver End	Witham U. ..	4 ..	4	—	4
Do. ..	Tillingham	Maldon R. ..	1 ..	—	1	1
Do. ..	Witham	Witham U. ..	4 ..	2	2	4
Brain ..	Braintree	Braintree and Bocking U. ..	5 ..	—	5	5
Do. ..	White Notley ..	Braintree R. ..	4 ..	3	1	4
Cam ..	Newport	Saffron Walden R. ..	5 ..	1	3	4
Do. ..	Saffron Walden ..	Saffron Walden B. ..	4 ..	—	4	4
Chelmer ..	Chelmsford ..	Chelmsford B. ..	8 ..	2	3	5
Do. ..	Dunmow	Dunmow R. ..	6 ..	—	4	4
Do. ..	Felstead	Do. ..	6 ..	2	3	5
Do. ..	Thaxted	Do. ..	5 ..	—	4	4
Colne ..	Earls Colne	Halstead R. ..	6 ..	5	—	5
Do. ..	Halstead	Halstead U. ..	6 ..	—	8	8
Do. ..	Layer Breton ..	Lexden and Winstree R. ..	2 ..	—	1	1
Do. ..	Sible Hedingham ..	Halstead R. ..	5 ..	—	2	2
Do. ..	Tiptree	Lexden and Winstree R. ..	3 ..	1	1	2
Carried forward			93 ..	31	56	87

Catchment Area.	*Sewage Works.*	*Sanitary District.*	*No. of Visits.*	*Samples taken. No. satisfactory or on border line.*	*No. unsatisfactory.*	*Total*
	Brought forward	.. .. ..	93 ..	31	56	87
Colne ..	Wormingford ..	Lexden and Winstree R. ..	5 ..	4	—	4
Do. ..	Great Bentley ..	Tendring R. ..	6 ..	—	5	5
Crouch ..	Great Burstead ..	Billericay U. ..	5 ..	4	—	4
Do. ..	Laindon	Do. ..	5 ..	—	4	4
Do. ..	Wickford (Louvaine Avenue) ..	Do. ..	4 ..	4	—	4
Holland Brook ..	Thorpe-le-Soken ..	Tendring R. ..	5 ..	2	2	4
Ingrebourne	Brentwood ..	Brentwood U. ..	6 ..	3	3	6
Kirby Creek	Kirby-le-Soken ..	Frinton and Walton U.	4 ..	1	3	4
Mardyke ..	Bury Farm ..	Hornchurch U. ..	4 ..	2	2	4
Do. ..	South Ockendon ..	Thurrock U. ..	4 ..	4	—	4
Do. ..	Orsett	Do. ..	6 ..	1	3	4
Do. ..	Thorndon Park Estate (Southern) ..	Brentwood U. ..	4 ..	3	1	4
Ramsey ..	Ramsey	Tendring R. ..	1 ..	—	1	1
Do. ..	Dovercourt ..	Harwich B. ..	5 ..	—	4	4
Roach ..	Butlers Farm Camp, Shopland ..	Rochford R. ..	4 ..	2	1	3
Do. ..	Rayleigh (East) ..	Rayleigh U. ..	3 ..	—	3	3
Do. ..	Great Stambridge ..	Rochford R. ..	4 ..	1	2	3
Do. ..	Great Wakering ..	Do. ..	4 ..	1	1	2
Roding ..	Abridge	Ongar R.	5 ..	4	—	4
Do. ..	Chigwell	Chigwell U. ..	5 ..	4	1	5
Do. ..	Chigwell Row ..	Do. ..	4 ..	—	3	3
Do. ..	High Roding Council Houses ..	Dunmow R. ..	1 ..	—	—	—
Do. ..	Little Canfield Council Houses ..	Do. ..	1 ..	—	1	1
Do. ..	Epping Southern ..	Epping U. ..	4 ..	1	3	4
Do. ..	Moreton, New Council Houses ..	Ongar R.	3 ..	2	—	2
Do. ..	Moreton	Ongar R.	2 ..	—	2	2
Do. ..	North Weald ..	Epping R. ..	5 ..	4	—	4
Do. ..	Stanford Rivers ..	Ongar R.	5 ..	4	—	4
Do. ..	Theydon Bois ..	Epping R. ..	5 ..	4	—	4
Do. ..	Theydon Mount Council Houses ..	Ongar R.	1 ..	—	—	—
Do. ..	Wanstead	Wanstead and Woodford B. ..	4 ..	3	1	4
Do. ..	Woodford (East) ..	Do. ..	4 ..	4	—	4
Sea ..	Great Holland ..	Frinton and Walton U.	4 ..	—	4	4
Do. ..	St. Osyth (East) ..	Tendring R. ..	5 ..	2	2	4
Do. ..	St. Osyth (West) ..	Do.	4 ..	—	4	4
Do. ..	Little Oakley ..	Do.	5 ..	4	—	4
Stort ..	Hatfield Broad Oak ..	Dunmow R. ..	3 ..	3	—	3
Do. ..	Hatfield Heath ..	Do. ..	5 ..	4	—	4
Stour ..	Dedham	Lexden and Winstree R.	5 ..	2	2	4
	Carried forward	.. .. ..	252 ..	108	114	222

Catchment Area.	*Sewage Works.*	*Sanitary District.*	*No. of Visits.*	*Samples taken. No. satisfactory or on border line.*	*No. unsatisfactory.*	*Total.*
	Brought forward		.. 252 ..	108	114	222
Stour ..	Lawford	Tendring R.	.. 4 ..	—	3	3
Do. ..	Parkeston	Do.	.. 1 ..	—	1	1
Do. ..	Steeple Bumpstead ..	Halstead R.	.. 5 ..	1	2	3
Ter ..	Hatfield Peverel ..	Braintree R.	.. 4 ..	1	2	3
Wid ..	Billericay	Billericay U.	.. 5 ..	2	3	5
Do. ..	Ingatestone ..	Chelmsford R.	.. 4 ..	1	3	4
Do. ..	Mountnessing ..	Do.	.. 2 ..	—	2	2
Do. ..	Shenfield and Hutton, etc. ..	Brentwood U.	.. 4 ..	4	—	4
Do. ..	Thorndon Park Estate (Northern) ..	Do.	.. 4 ..	4	—	4
	Aerodromes and Military Camps		.. 72 ..	48	8	56
	Other samples, including private sewage works, rivers, streams, ditches, etc.		.. 83 ..	37	20	57
	Trade effluents		.. 24 ..	3	7	10
	Total		.. 464 ..	209	165	374

STANDARD IMPURITY FIGURES. The standard impurity figures for river waters used as a guide in the County of Essex, subject to a dilution of not less than ten times, are as follows :—

	Standard Impurity Figure Grains per gallon.
(*a*) River water which may be used after filtration for drinking purposes	2.5
(*b*) River water not to be used	3.5
(*c*) Impurity figures for effluents from sewage works—	
A good effluent	7.0
A passable effluent	10.0

BIOLOGICAL OXYGEN DEMAND. The Royal Commission on Sewage Disposal in its Eighth Annual Report states that " the dissolved oxygen absorption test provides the most trustworthy chemical index of the actual state of a stream, and should be adopted for purposes of a standard."

The Commission's investigations revealed the following figures, which for the purpose of this report are expressed in parts per million :—

Very clean	..	1.0 part	dissolved	oxygen	in 5 days.
Clean	..	2.0 parts	,,	,,	,,
Fairly clean	..	3.0 ,,	,,	,,	,,
Doubtful	..	5.0 ,,	,,	,,	,,
Bad ..	..	10.0 ,,	,,	,,	,,

The Royal Commission states that " for the purpose of arriving at a standard or scale of standards the quality of the diluting water should be assumed to be constant and represented by the figure 2.0 " parts per million.

SAMPLES. On 6th July, 1948, samples representing the three sections of the river were taken at various points together with samples from sewage works *en route*. The results of the examination of the river samples are as follows :—

Source of Sample.	Impurity Figure (Grains per gallon).	Biological Oxygen Demand (Parts per million).	Remarks.
Upper Section .. .. (At High Ongar)	2.2	3.8	Reasonably clean river water
Middle Section .. (At Chigwell Lane)	3.5	3.8	Not a clean river water
Lower Section—			
(*a*) (At Redbridge .. Bridge)	4.6	6.8	Very highly polluted river water
(*b*) (At Ilford) ..	4.8	12.0	Do.

In judging the results of the above table, regard should be had to the fact that this river is not fed by any substantial springs, its natural flow in dry weather being very small. Therefore, there is practically no dilution of sewage effluents during summer months. When the above samples were taken, it was estimated that the flow of effluent from the Chigwell Sewage Works was greater than the flow in the river, whereas the County Council's impurity figure for sewage effluents is intended only for such effluents the volume of which is not more than 1/10th of the bulk of the stream into which they discharge.

Conclusion. The result of this survey indicates that the condition of the River Roding in its lower section is far from satisfactory, despite the fact that, generally speaking, the sewage works in that portion of the river usually discharge effluents within the County Council's standard of 10.0. This unsatisfactory condition is largely due to insufficient dilution of the sewage effluents with clean river water.

RURAL WATER SUPPLIES AND SEWERAGE ACT, 1944.

Up to 31st December, 1948, the Essex County Council had been asked for their observations upon schemes submitted by three Borough, six Urban District and eleven Rural District Councils and estimated to cost £2,640,300 largely based on 1938 prices.

At the time of writing the Ministry of Health has undertaken provisionally to allocate lump sum grants towards the cost of the following schemes :—

	Estimated Cost.	Provisional Grant by Ministry of Health.
	£	£
Tendring Rural Western Area Water Supply Scheme	76,400	35,000
Chelmsford Rural Water Mains Extension Scheme	44,212	20,000
Chelmsford Rural Sewerage Scheme	55,934	23,000
Chelmsford Rural Water Mains Extension Scheme	12,235	4,000
Do. ..	1,726	600
Tendring Rural Sewage Disposal Scheme ..	44,453	19,000
Lexden and Winstree Rural Water Scheme ..	12,750	2,700
Lexden and Winstree Rural Sewerage Scheme ..	34,000	5,000

PUBLIC HEALTH ACT, 1936. SECTION 307.

CONTRIBUTIONS TO RURAL DISTRICT COUNCILS. In accordance with the provisions of the County Council's approved Scheme to give effect to Section 307 of the Public Health Act, 1936, and the Rural Water Supplies and Sewerage Act, 1944, the County Council agreed to make to the undermentioned Rural District Councils payment of the following amounts, being the approved estimated grants payable in respect of the financial year 1948–9 :—

Rural District.	Amount. £
Braintree	4,358
Dunmow	3,514
Epping	1,095
Halstead	1,553
Lexden and Winstree	519
Ongar	1,178
Rochford	1,144
Saffron Walden	2,878
Tendring	648
	£16,887

MILK SUPPLY.

Milk (Special Designations) Regulations, 1936-48.

(*a*) LICENCES. As the powers conferred upon the Ministry of Health under the Milk and Dairies Act, 1944, had not yet been implemented, the County Council remained the Licensing Authority throughout the year 1948. During that year, the number of licences to produce Tuberculin Tested milk again increased and the number to produce Accredited milk continued to decrease. Comparative figures for 1947 and 1948 are as follows :—

Grade.	No. of Licences. 1947.	1948.
Tuberculin Tested	402 ..	485
Accredited	629 ..	581
	1,031 ..	1,066

Action taken by the Milk Sub-Committee, largely upon unsatisfactory samples of milk, is summarised below :—

No. of licences refused	3
No. of written cautions	5
No. of notices of intention to revoke licences	30
No. of licences revoked	7
No. of licences suspended	1

Every licensee upon whom was served a notice of intention to revoke the licence was given an opportunity to appear before the Sub-Committee. Most of the licensees

did so and were then able to give their own views of the circumstances connected with the contravention of the Regulations. These personal contacts between the licensees and the members of the Sub-Committee were helpful to both sides and the results are reflected in the number of licences revoked (7) as compared to the number of notices served (30).

(*b*) Samples of Designated Milk. Every sample of milk obtained from a designated farm is required to comply with the standards laid down for the Methylene Blue Reduction Test, as well as with the Coliform Bacteria Test when this additional test is considered necessary. The total number of Methylene Blue Tests carried out in 1948 was 5,263, the figure for 1947 being 5,518. A quarterly summary is set out below :—

Quarter ended.	*Total.*	*Satisfactory.*		*Unsatisfactory.*		
				1948.		*1947.*
		No.	*%*	*No.*	*%*	*%*
31st March	1,358 ..	1,307	96.2 ..	51	3.8	3.8
30th June	1,405 ..	1,261	89.8 ..	144	10.2	21.7
30th September	1,277 ..	1,002	78.5 ..	275	21.5	43.3
31st December	1,233 ..	1,161	94.9 ..	62	5.1	5.3
Totals	5,263 ..	4,731	89.9 ..	532	10.1	19.6

It must be borne in mind that in the main the samples taken are selective to the extent that there is some concentration on one which is initially unsatisfactory, but this is the lowest percentage of unsatisfactory samples since the Milk (Special Designations) Regulations became operative in 1936. There is no doubt that the coolish rainy summer helped in securing these good results. On the other hand, the number of farms with good premises, good methods and whole-time milk-producing staffs is greater than ever and this factor should increasingly be reflected in the results obtained in the future.

(*c*) Advisory Work. Much time and energy have been devoted to assisting farmers in securing repairs and improvements to buildings to bring them up to modern standards and in providing new cowsheds and dairies where these were necessary. In each case a detailed survey was made and a list of works needed with a sketch plan was provided. Mostly these improvements had in mind making the premises fit for housing tuberculin tested herds and, therefore, particular attention was given to securing good natural lighting and ventilation and readily cleansable internal surfaces of all buildings. This initial work proved invaluable to the County Health Inspector when attending meetings of the Building Panel of the County Agricultural Executive Committee.

(*d*) Water Supplies to Farms. Many schemes for extending public water mains have been carried out by Rural District Councils, most of them so arranged as to make water supplies available for milk-producing and other farms. These schemes have facilitated the work of the Water Supplies Panel of the County Agricultural Executive Committee when dealing with applications for grants. The County Health Inspector has served on this Panel for many years and is thus able to ensure that each

scheme is satisfactory from a public health point of view. Where the source of a supply is not from a public main, the Panel insists on the provision of satisfactory evidence as to quantity and quality.

Biological Examinations.

Reports were received on 690 samples obtained at routine visits to farms and central depots. Examinations gave the following results :—

20 inconclusive.
659 free from tubercle bacilli.
11, or 1.6 per cent., contained tubercle bacilli, the figure for 1947 being 0.9 per cent.

Each positive result was notified without delay to the Divisional Inspector of the Ministry of Agriculture and Fisheries for investigation and report.

Milk-in-Schools Scheme.

The initial samples each school term are obtained by the Weights and Measures Inspectors, acting as agents of the County Medical Officer of Health with the approval of the Parliamentary Committee. All follow-up and other samples are taken by the County Health Inspectors. The work during the year secured the following results :—

(*a*) Bacteriological Examinations : 424 samples passed the appropriate tests and 45, or 9.6 per cent., failed those tests, each being followed up until satisfactory results were obtained.

(*b*) Biological Examinations : 248 were free from tubercle bacilli, 7 gave inconclusive results and 3 (1.2 per cent.) contained tubercle bacilli. Each positive case received prompt attention by the Divisional Inspector of the Ministry of Agriculture and Fisheries.

ICE CREAM.

There was an increase in the number of County Districts in which samples of ice cream were obtained by the Local Sanitary Inspectors, from 28 out of 43 in 1947 to 35 in 1948. This resulted in a marked increase in the number of samples (657 to 1,271) which were submitted to the Counties Public Health Laboratories, 66, Victoria Street, London, S.W.1. (Telephone Victoria 5838/9), under the County Council's supplementary laboratory service and which it must be understood are to some extent selective in that there is some concentration on initially unsatisfactory samples. Each sample was graded by the Methylene Blue Reduction Test and was also submitted to the Plate Count, Coliform Test and Bact. Coli Test.

As explained in last year's report, the Minister of Health in Circular 69/47 drew attention to a report which appeared in the *Monthly Bulletin* for March, 1947, of a Special Sub-Committee which gave particulars of a form of Methylene Blue Test adapted for testing ice cream. He had been advised that this test of bacterial cleanliness appeared to provide the best available for the present purpose. It was simple and cheap to perform and associated with it were the four grades defined as follows :—

Grade 1 ..	Time taken to reduce Methylene Blue ..	4½ hours or more.
Grade 2 ..	Do. ..	2½ to 4 hours.
Grade 3 ..	Do. ..	½ to 2 hours.
Grade 4 ..	Do. ..	0 hours (i.e. reduction at the end of the pre-incubation period).

The Minister suggested that if, out of the four grades recommended, ice cream consistently fails to reach Grades 1 or 2, it would be reasonable to regard this as indicating defects of manufacture or of handling which call for further investigation.

Outside these Grades, however, the laboratory has again endeavoured to classify each sample as satisfactory or unsatisfactory, the results of the Plate Count and Bact. Coli Test being used as a guide to reach those conclusions.

Table IIIa on page 39 gives the detailed results for each County District, a summary of which is given below :—

(*a*) Grading by Methylene Blue Reduction Test.

	1948.		1947.	
Grade 1 ..	389	(30.6%) ..	117	(17.8%)
Grade 2 ..	381	(30.0%) ..	171	(26.0%)
Grade 3 ..	249	(19.6%) ..	154	(23.5%)
Grade 4 ..	225	(17.7%) ..	197	(30.0%)
Ungraded ..	27	(2.1%) ..	18	(2.7%)
Total ..	1,271		657	

(*b*) Judging by Plate Count and Bact. Coli Test.

	1948.		1947.	
Satisfactory	1,096	(86.2%) ..	443	(67.5%)
Unsatisfactory ..	175	(13.8%) ..	214	(32.5%)
Total	1,271		657	

The above results readily reveal the excellent improvement which took place during the year 1948.

Table IIIb on page 40 shows the results of the examination of ice cream samples taken during each month in 1948. It will be seen from the following summary that the above-mentioned improvement is also reflected in the results obtained in the warmer months of the year :—

Month.	*1948.* *No. of Samples.*	*Unsatis-factory.*	*1947.* *No. of Samples.*	*Unsatis-factory.*
June	162	35 (21.6%) ..	119	38 (31.9%)
July	238	35 (14.7%) ..	149	63 (42.3%)
August	172	30 (17.4%) ..	131	54 (41.2%)
September	215	31 (14.4%) ..	95	31 (32.6%)

TABLE IIIa—Showing the results of the tests made on Ice Cream supplies during 1948.

District	Methylene Blue Test						Plate Count Test			Coliform Test			Bact. Coli. Test			No. of samples satisfactory	No. of samples unsatisfactory	Total No. of Samples	Percentage of samples unsatisfactory
	Ministry of Health Gradings																		
	1	2	3	4	Ungraded	Total	Satisfactory	Unsatisfactory	Total	Satisfactory	Unsatisfactory	Total	Satisfactory	Unsatisfactory	Total				
Health Department, E.C.C.	6	—	—	—	—	6	6	—	6	6	—	6	6	—	6	6	—	6	—
Barking B.	18	20	14	11	1	64	60	4	64	38	26	64	62	2	64	60	4	64	6.3
Benfleet U.	6	4	2	4	1	17	16	1	17	10	7	17	15	2	17	15	2	17	11.8
Billericay U.	—	4	—	2	—	6	5	1	6	3	3	6	6	—	6	5	1	6	16.7
Braintree and Bocking U.	3	7	13	6	—	29	24	5	29	14	15	29	24	5	29	22	7	29	24.1
Brentwood U.	10	7	7	7	—	31	28	3	31	15	16	31	29	2	31	27	4	31	12.9
Brightlingsea U.	5	2	1	2	—	10	8	2	10	7	3	10	9	1	10	7	3	10	30.0
Canvey Island U.	5	2	—	3	—	10	8	2	10	5	5	10	10	—	10	8	2	10	20.0
Chelmsford B.	56	47	16	11	2	132	125	7	132	97	35	132	131	1	132	125	7	132	5.3
Chigwell U...	22	12	3	3	3	43	42	1	43	30	13	43	43	—	43	42	1	43	2.3
Chingford B.	2	12	9	10	2	35	33	2	35	13	22	35	34	1	35	33	2	35	5.7
Clacton-on-Sea U. ..	13	15	9	15	—	52	41	11	52	29	23	52	47	5	52	39	13	52	25.0
Colchester B.	13	24	26	18	—	81	65	16	81	40	41	81	62	19	81	57	24	81	29.6
Dagenham B.	23	34	17	12	5	91	85	6	91	53	38	91	84	7	91	81	10	91	11.0
Epping U.	6	2	1	1	—	10	10	—	10	8	2	10	10	—	10	10	—	10	—
Frinton and Walton U. ..	4	5	1	—	—	10	10	—	10	8	2	10	10	—	10	10	—	10	—
Harwich B.	4	7	1	—	—	12	12	—	12	8	4	12	8	4	12	8	4	12	33.3
Hornchurch U.	15	7	7	5	—	34	31	3	34	18	16	34	32	2	34	31	3	34	8.8
Ilford B.	30	23	17	22	—	92	79	13	92	53	39	92	89	3	92	79	13	92	14.1
Leyton B.	15	15	22	21	2	75	58	17	75	31	44	75	62	13	75	54	21	75	28.0
Maldon B.	—	1	2	—	—	3	3	—	3	1	2	3	3	—	3	3	—	3	—
Rayleigh U.	4	1	—	2	—	7	7	—	7	5	2	7	7	—	7	7	—	7	—
Romford B.	23	17	6	8	2	56	51	5	56	33	23	56	52	4	56	49	7	56	12.5
Thurrock U.	27	28	15	14	3	87	79	8	87	59	28	87	82	5	87	77	10	87	11.5
Walthamstow B.	17	24	12	7	—	60	56	4	60	30	30	60	56	4	60	53	7	60	11.7
Wanstead and Woodford B.	21	21	12	10	1	65	62	3	65	32	33	65	64	1	65	61	4	65	6.2
West Mersea U.	1	2	3	1	1	8	7	1	8	1	7	8	5	3	8	5	3	8	37.5
Witham U.	17	9	7	7	2	42	37	5	42	27	15	42	40	2	42	36	6	42	14.3
Braintree R.	9	10	8	10	2	39	32	7	39	23	16	39	32	7	39	28	11	39	28.2
Chelmsford R.	—	4	2	1	—	7	6	1	7	2	5	7	6	1	7	6	1	7	14.3
Dunmow R.	5	2	1	1	—	9	9	—	9	6	3	9	9	—	9	9	—	9	—
Epping R.	4	8	9	8	—	29	27	2	29	11	18	29	29	—	29	27	2	29	6.9
Halstead R.	—	1	1	—	—	2	2	—	2	1	1	2	2	—	2	2	—	2	—
Ongar R.	2	1	—	2	—	5	3	2	5	2	3	5	4	1	5	3	2	5	40.0
Rochford R.	3	—	3	—	—	6	5	1	6	3	3	6	6	—	6	5	1	6	16.7
Saffron Walden R. ..	—	3	2	1	—	6	6	—	6	2	4	6	6	—	6	6	—	6	—
Totals	389	381	249	225	27	1271	1138	133	1271	724	547	1271	1176	95	1271	1096	175	1271	13.8
1947	117	171	154	197	18	657	498	159	657	281	376	657	514	143	657	443	214	657	32.6

TABLE IIIb showing the results of the examination of samples of Ice Cream taken during each month in 1948.

District	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Totals	
	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory	Satis-factory	Unsatis-factory
Health Department, E.C.C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—	6	—
Barking B.	—	—	—	—	—	—	—	—	9	1	9	2	25	—	6	—	6	—	5	1	—	—	—	—	60	4
Benfleet U.	—	—	—	—	—	—	—	—	3	2	—	—	—	—	6	—	6	—	—	—	—	—	—	—	15	2
Billericay U.	—	—	—	—	—	—	—	—	—	—	—	—	5	1	—	—	—	—	—	—	—	—	—	—	5	1
Braintree and Bocking U.	—	—	—	—	2	—	3	—	2	2	5	3	4	—	2	2	4	—	—	—	—	—	—	—	22	7
Brentwood U.	—	—	2	—	—	—	4	3	6	—	4	—	4	1	4	—	3	—	—	—	—	—	—	—	27	4
Brightlingsea U.	3	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	1	1	1	—	—	—	7	3
Canvey Island U.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	2	2	—	—	—	—	—	8	2
Chelmsford B.	5	—	—	—	10	—	14	—	6	—	16	1	17	3	11	1	16	1	12	—	10	1	8	—	125	7
Chigwell U...	2	—	—	—	—	—	3	—	4	—	4	—	4	—	8	—	8	—	4	—	2	1	3	—	42	1
Chingford B.	—	—	—	—	—	—	—	—	8	—	4	—	7	—	4	—	6	2	—	—	4	—	—	—	33	2
Clacton-on-Sea U. ..	—	—	—	—	—	—	5	1	3	3	8	4	8	4	6	—	5	1	—	—	—	—	4	—	39	13
Colchester B.	—	—	—	—	5	1	11	1	3	3	7	4	7	4	6	6	7	5	—	—	6	—	5	—	57	24
Dagenham B.	—	—	—	—	4	—	7	1	6	4	8	1	21	2	7	1	14	1	8	—	6	—	—	—	81	10
Epping U.	—	—	2	—	1	—	2	—	1	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	10	—
Frinton and Walton U.	—	—	—	—	—	—	—	—	—	—	—	—	6	—	4	—	—	—	—	—	—	—	—	—	10	—
Harwich B.	—	—	—	—	—	—	4	—	6	1	6	1	7	1	4	—	4	4	—	—	4	—	—	—	8	4
Hornchurch U.	—	—	—	—	7	—	14	1	14	1	6	2	16	1	7	2	2	—	2	—	—	—	—	—	31	3
Ilford B.	—	—	—	—	—	—	8	—	—	—	8	12	10	6	10	3	5	4	10	2	—	—	—	—	79	13
Leyton B.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	11	—	—	—	—	—	7	—	54	21
Maldon B.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—
Rayleigh U.	—	—	—	—	—	—	7	—	10	1	7	—	6	2	3	1	4	—	—	—	—	—	3	—	7	—
Romford B.	—	—	—	—	—	—	5	—	8	3	9	—	8	2	10	3	9	3	4	—	—	—	3	—	49	7
Thurrock U.	2	—	2	—	—	—	—	—	4	2	6	—	8	3	10	1	17	2	9	—	4	—	3	—	77	10
Walthamstow B.	—	—	—	—	—	—	—	—	14	—	5	1	16	2	4	—	12	—	8	1	5	—	—	—	53	7
Wanstead and Woodford B.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	5	1	17	1	—	—	—	—	61	4
West Mersea U.	—	—	—	—	—	—	4	—	2	—	5	2	11	1	3	1	1	1	2	—	—	—	—	—	5	3
Witham U.	—	—	—	—	2	—	—	—	—	—	—	—	3	1	8	5	8	2	3	—	—	—	—	—	36	6
Braintree R.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	10	2	5	3	—	—	—	—	28	11
Chelmsford R.	—	—	—	—	—	—	—	—	3	—	2	—	2	—	—	—	2	—	2	1	—	—	—	—	6	1
Dunmow R.	—	—	—	—	3	—	—	—	—	—	5	1	3	—	8	—	6	1	—	—	—	—	2	—	9	—
Epping R.	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	27	2
Halstead R.	—	—	—	—	—	—	—	—	—	—	3	1	—	1	—	—	—	—	—	—	—	—	—	—	2	—
Ongar R.	—	—	—	—	—	—	3	1	2	—	—	—	3	—	—	—	3	—	—	—	—	—	—	—	3	2
Rochford R.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	1
Saffron Walden R. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—
Totals	12	—	6	—	34	1	94	8	114	23	127	35	203	35	142	30	184	31	94	10	42	2	44	—	1096	175
1947	4	—	—	—	1	—	25	1	42	13	81	38	86	63	77	54	64	31	36	10	19	4	8	—	443	214

RURAL HOUSING.

The Joint Advisory Committee on Rural Housing, which held its first Meeting in 1944, met on 1st January, 6th May and 23rd December, 1948.

The Joint Clerks in their Annual Report dealt with the following matters :—

Constitution of Committee. The Constitution of the Joint Committee has been further amended by increasing the representation of co-opted members. The bodies or organizations selected to appoint a representative to serve on the Committee as a co-opted member have been increased from three to five and each of these bodies or organizations is now allowed to appoint two representatives in lieu of one member and a deputy.

Further efforts made to persuade the Dunmow Rural District Council to re-consider their decision not to co-operate in the work comprised in the terms of reference of the Committee proved unsuccessful.

Housing Survey in Rural Areas. An interim report on Housing Survey in Rural Areas, prepared voluntarily by the Association of County Sanitary Officers was received. This report is an attempt on the part of the Association of County Sanitary Officers to review the results and implications of the survey of rural housing conditions which the Ministry of Health required Rural District Councils to begin in 1944.

Housing of Agricultural Workers. Arising out of discussions on the subject of the allocation of houses for agricultural workers the Committee requested us to convene a conference of Clerks of the Constituent Rural District Councils to consider and advise the Joint Committee of the progress made and problems encountered by local authorities in the County in regard to the provision and allocation of houses to meet the pressing needs of agriculture for more workers and to assist in achieving the Government's extended food production programme.

Re-Conditioning in Rural Areas. Representations were made by the Committee to the Minister requesting that he should reconsider his decision not to take any immediate steps to implement the recommendations contained in the Fourth Report of the Rural Housing Sub-Committee of the Central Housing Advisory Committee. In reply the attention of the Committee was drawn to a statement made by the Minister in the House of Commons to the effect that it was the Government's intention to introduce legislation as soon as circumstances permit. A new Housing Bill has since been presented to Parliament.

Following a request made by the Tendring Rural District Council for the Joint Committee to support representations made by that authority to the Ministry of Health on certain aspects of the housing problem causing grave concern in that area, the Joint Committee decided to establish a Technical Sub-Committee comprised of the Sanitary Inspector or Surveyor from each Rural District Council and the County Health Inspector to consider and report to them on the problems raised by the Tendring Rural District Council.

The Technical Sub-Committee met on two occasions and upon consideration of their reports the Committee resolved to request Rural District Councils to give

APPENDIX "A"

HOUSING PROGRESS RETURN

PROVISION OF PERMANENT AND TEMPORARY HOUSING ACCOMMODATION

Rural District Council	Permanent Housing Sites						Temporary Housing Sites					
	No. of Sites acquired		Acreage of Sites		No. of Houses capable of being erected on Sites		No. of Sites acquired		Acreage of Sites		No. of houses capable of being erected on Sites	
	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949	Period ended 31st Dec. 1948	Acquired during Qr. ended 31st March 1949
Braintree	15	2	61.23	11.38	346	62	6	—	—	—	38	—
Chelmsford	34	—	130.254	—	1059	—	5	—	8.55	—	90	—
Dunmow	27	—	113	—	594	—	—	—	—	—	—	—
Epping	19	2	109	15	804	144	—	—	—	—	—	—
Halstead	28	—	32.35	—	232	—	4.8	—	9.10	—	50	—
Lexden and Winstree	37	1	73.6	5.5	356	30	—	—	—	—	—	—
Maldon	16	—	80.08	—	506	—	—	—	—	—	—	—
Ongar	15	—	99.970	—	658	—	6	—	7.11	—	76	—
Rochford	11	2	61.327	7.019	548	60	—	—	—	—	—	—
Saffron Walden ..	32	—	80.86	—	513	—	7	—	12	—	61	—
Tendring	33	2	107.85	1.75	696	10	2	—	10.45	—	80	—

LOCAL AUTHORITY—PERMANENT HOUSING

Rural District Council	No. of houses in respect of which House Plans approved		No. of houses in respect of which tenders have been invited		No. of houses in respect of which tenders have been submitted to Ministry of Health		No. of houses in respect of which tenders have been approved by Ministry of Health		No. of houses under construction		No. of houses completed	
	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949
Braintree	210	12	204	12	204	12	204	12	68	46	136	26
Chelmsford	422	490	382	436	382	420	356	398	115	78	239	300
Dunmow	558	—	238	20	232	4	228	—	64	68	150	10
Epping	612	612	472	546	472	546	472	544	113	144	359	41
Halstead	186	84	128	76	118	76	118	72	88	86	60	64
Lexden and Winstree	—	—	194	36	194	36	178	26	44	18	134	40
Maldon	232	—	180	12	180	12	180	2	34	53	107	20
Ongar	202	6	202	6	202	6	202	6	60	8	142	14
Rochford	206	—	206	—	140	54	140	—	24	24	116	—
Saffron Walden ..	326	—	174	—	174	—	122	4	48	50	56	12
Tendring	198	—	198	—	198	—	198	—	56	46	130	18

APPENDIX "A"—*continued.*

LOCAL AUTHORITY—TEMPORARY HOUSING

Rural District Council	No. of houses in respect of which House Plans approved		No. of houses in respect of which tenders have been invited		No. of houses in respect of which tenders have been submitted to Ministry of Health		No. of houses in respect of which tenders have been approved by Ministry of Health		No. of houses under construction		No. of houses completed	
	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949
Braintree	38	—	—	—	—	—	38	—	—	—	38	—
Chelmsford	90	90	90	90	90	90	90	90	—	—	90	90
Dunmow	—	—	—	—	—	—	—	—	—	—	—	—
Epping	—	—	—	—	—	—	—	—	—	—	—	—
Halstead	50	—	50	—	50	—	50	—	—	—	50	—
Lexden and Winstree	—	—	—	—	—	—	—	—	—	—	—	—
Maldon	—	—	—	—	—	—	—	—	—	—	—	—
Ongar	75	—	75	—	75	—	75	—	—	—	75	—
Rochford	—	—	—	—	—	—	—	—	—	—	—	—
Saffron Walden ..	—	—	—	—	—	—	—	—	—	—	61	—
Tendring	77	—	77	—	77	—	—	—	—	—	77	—

PRIVATE ENTERPRISE

Rural District Council	Permanent Housing						Temporary Housing					
	No. of houses in respect of which House Plans have been approved		No. of houses under construction		No. of houses completed		No. of houses in respect of which House Plans have been approved		No. of houses under construction		No. of houses completed	
	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949
Braintree	—	15	10	10	—	—	—	—	1	1	—	—
Chelmsford	209	214	25	41	172	177	12	12	1	1	8	8
Dunmow	145	5	18	16	72	5	22	—	24	24	24	2
Epping	128	137	9	14	115	118	—	—	—	—	—	—
Halstead	20	17	9	6	6	13	—	—	—	—	—	—
Lexden and Winstree	168	18	10	16	59	6	21	—	3	2	13	2
Maldon	149	24	12	28	40	9	1	—	—	—	1	—
Ongar	86	10	10	12	66	2	—	—	—	—	—	—
Rochford	182	3	23	7	161	6	—	—	—	—	—	—
Saffron Walden ..	83	6	14	15	40	5	22	1	—	—	16	1
Tendring	87	7	7	7	73	5	27	—	8	6	11	3

APPENDIX "A"—*continued.*

REQUISITIONED PROPERTIES.

Rural District Council	Permanent						Temporary					
	No. of Agreements between Local Authority and owners of property		No. of requisitions transferred to Local Authority		No. of properties requisitioned by Local Authority		No. of agreements between Local Authority and owners of property		No. of requisitions transferred to Local Authority		No. of properties requisitioned by Local Authority	
	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949	Period ended 31st Dec. 1948	Quarter ended 31st Mar. 1949
Braintree	—	—	—	—	—	—	—	—	—	—	62	4 DR
Chelmsford	10	5	—	—	42	—	—	—	—	—	—	—
Dunmow	—	—	5	—	70	—	—	—	1	—	—	—
Epping	5	—	5	—	50	2 DR	—	—	66	—	—	—
Halstead	7	—	7	—	7	—	—	—	10	58	—	—
Lexden and Winstree	—	—	2	—	4	1 DR	—	—	—	—	—	—
Maldon	1	—	1	—	6	—	—	—	—	—	—	—
Ongar	—	—	—	—	—	—	—	—	—	—	46	1 DR
Rochford	—	—	—	—	13	—	—	—	—	—	—	—
Saffron Walden ..	2	—	1	—	39	—	—	—	—	—	—	—
Tendring	—	—	—	—	—	—	—	—	43	—	24	—

APPENDIX "B"

RURAL HOUSING SURVEY—PROGRESS REPORT

Rural District Council	Satisfactory in all respects		With minor defects only		Requiring repair, structural alteration or improvement		Appropriate for reconditioning		Totally unfit		Total number of properties surveyed to date	Number of properties to be surveyed
	Total surveyed to quarter ended 31st Dec. 1948	Surveyed during quarter ended 31st Mar. 1949	Total surveyed to quarter ended 31st Dec. 1948	Surveyed during quarter ended 31st Mar. 1949	Total surveyed to quarter ended 31st Dec. 1948	Surveyed during quarter ended 31st Mar. 1949	Total surveyed to quarter ended 31st Dec. 1948	Surveyed during quarter ended 31st Mar. 1949	Total surveyed to quarter ended 31st Dec. 1948	Surveyed during quarter ended 31st Mar. 1949		
Braintree	2,682	—	1,341	—	345	—	571	—	436	—	5,375	—
Chelmsford	2,532	—	1,807	—	2,491	—	224	—	311	—	7,365	—
Dunmow	289	43	140	15	278	16	47	12	296	19	1,155	2,850
Epping	780	—	596	—	1,173	—	423	—	208	—	3,180	—
Halstead	95	45	284	279	391	232	106	31	180	322	1,965	2,800
Lexden and Winstree	960	—	2,266	—	1,113	—	246	—	415	—	5,000	—
Maldon	1,281	—	865	—	1,179	—	666	—	530	—	4,521	—
Ongar	1,091	—	765	—	570	—	138	—	449	—	3,013	—
Rochford	1,013	—	2,071	—	1,818	—	14	—	428	—	5,344	—
†Saffron Walden ..	420	9	2,956	105	610	1	87	—	357	—	5,000	—
Tendring	885	146	2,571	878	425	662	144	23	520	26	6,280	959

†Includes 17 "Queries" surveyed.

APPENDIX "C"

PARTICULARS AS TO STAFFS OF RURAL DISTRICT COUNCILS AVAILABLE FOR SURVEY.

Rural District Council	Number of Staff available for Survey								
	Full peace-time			Present time			Additional Staff required to carry out Survey		
	Sanitary Inspectors	Survey Assistants	Clerical Assistants	Sanitary Inspectors	Survey Assistants	Clerical Assistants	Sanitary Inspectors	Survey Assistants	Clerical Assistants
Braintree			SURVEY	COMPLE	TED				
Chelmsford			SURVEY	COMPLE	TED				
Dunmow	2	2	2	2	1	—	—	—	—
Epping			SURVEY	COMPLE	TED				
Halstead									
Lexden and Winstree			SURVEY	COMPLE	TED				
Maldon			SURVEY	COMPLE	TED				
Ongar			SURVEY	COMPLE	TED				
Rochford			SURVEY	COMPLE	TED				
Saffron Walden	1	—	—	2	1	1	—	—	—
Tendring	3	—	2	2 part-time	—	—	—	—	1

serious consideration to the question of the under-occupation of three-bedroomed houses or bungalows in their areas and provision of two-bedroomed dwellings. On the particular matters raised by the Tendring Rural District Council it was decided that in anticipation of the early introduction of pending legislation no further action could usefully be taken at that time.

Quarterly reports were again furnished by the Rural District Councils showing progress made. These are given on pages 42 to 46.

In Appendix " B " on page 47, it will be seen that in three Rural Districts the survey has not yet been completed.

FOOD AND DRUGS ACT, 1938.

As in previous years, the County Analyst has kindly provided the following information in regard to the work undertaken by him during the year 1948 :—

Samples analysed	1,382
Samples unsatisfactory	154

The Chief Inspector of Weights and Measures, whose Department is responsible for the enforcement of the Food and Drugs Act, 1938, writes as follows :—

" The shortage in the supply and variety of foodstuffs has led, unfortunately, to a large number of products which are unsatisfactory from the consumers' point of view, being placed on the market. Orders made by the Ministry of Food have however done much to improve the position.

" During the year ended 31st December, 1948, 2,917 samples of various food and drugs were procured by Officers of the Weights and Measures Department. This number includes 1,535 samples of milk which were tested in the Department's own laboratory.

" Of the 1,382 samples submitted to the Public Analyst 154 were found to be unsatisfactory. These unsatisfactory samples include the following :—

Milk. 88 samples of milk were found to be deficient in milk fat in proportions varying from 1–45 per cent. of the minimum quantity of 3 per cent. proper to normal milk as indicated in the Sale of Milk Regulations.

Twenty-four samples contained added water in proportions varying from ½–26 per cent.

Ground Almond Substitute. A sample of this was found to consist of a wheaten flour preparation having no appreciable taste or smell of almonds.

Bacon. A sample of this was found to have a strong fishy smell rendering it unfit for human consumption.

Baking Powder. Three samples of baking powder were deficient in available carbon dioxide to the extent of 28, 37 and 43 per cent. respectively.

Bread. A sample of bread was contaminated with dirty lubricating oil so as to be unfit for human consumption.

Gelatine. One sample of gelatine contained 70 per cent. per million of copper. (A Ministry of Food Order prescribes a maximum of 30 per cent. per million).

SAUSAGES. A sample of beef sausages was 25 per cent. deficient in meat.

CHOCOLATE FLAVOURED SWISS ROLL. A sample contained rat or mice excreta

STARCH CONCENTRATE. A sample of starch concentrate contained 58 pe cent. of barium carbonate. (This is a recognized rat poison).

VINEGAR. One sample which was labelled Double Strength Vinegar yielde only 4.2 per cent. acetic acid. Two samples were 5 per cent and 15 per cent deficient in acetic acid respectively.

One sample described as Malt Vinegar consisted not of Malt Vinegar but c artificial or non-brewed vinegar.

WHISKY. One sample contained 4 per cent. of added water.

DETTOL. A sample consisted not of dettol but of a similar compound havin different active ingredients.

SACCHARIN TABLETS. One sample consisted not of saccharin tablets but c sweetening tablets.

PROSECUTIONS. Amongst prosecutions undertaken are the following :—

Nature of Offence.	*Act and Section.*	*Results.* *Fine.* £ s. d.	*Costs.* £ s. d.
Selling starch which was injurious to health	Food and Drugs Act, 1938. Section 1	20 0 0	—
Selling starch not of nature demanded	Section 3	20 0 0	105 0 0
Selling milk 18 per cent. deficient in fat	Do.	10 0 0	2 12 6
Selling milk 11 per cent. deficient in fat	Do.	25 0 0	1 11 6
Selling sausages 25 per cent. deficient in meat	Do.	5 0 0	2 2 0
Having in possession milk containing 10 per cent. added water	Section 24 (i) (*c*)	15 0 0	—

MENTAL HEALTH.

During the year under review the combined Mental Health Service, i.e., a servic covering the administration of the Lunacy and Mental Treatment Acts, 1890–1930 an the Mental Deficiency Acts, 1913–1938, came into operation as part of the arrange ments set up under the National Health Service Act, 1946.

Mental Deficiency Acts, 1913-1938.

Up to and including 4th July, 1948, arrangements were continued as in previou years for examining and furnishing reports on persons alleged to be mentally defectiv for consideration by the Statutory Committee for the Care of the Mentally Defectiv On that day the Statutory Committee were responsible for the care, control or supe vision of 2,979 persons, classified under the following headings :—

In Institutions (including cases on licence)	1,090
Under statutory supervision	1,844
Under guardianship	45
	2,979

There were also 159 cases whose names were on the list of cases urgently requiring ıstitutional care.

ıental Treatment Act, 1930.

Psychiatric out-patient clinics established under this Act as outlined in previous eports continued to be held in various hospitals throughout the County, and on 5th uly, 1948, were transferred to the appropriate Regional Hospital Board.

ombined Mental Health Service.

The combined service which came into operation on 5th July, 1948, is administered y the Health Committee through the Mental Health Sub-Committee which consists sixteen members and meets monthly.

The functions of the service are threefold :—

(1) MENTAL TREATMENT. The employment of officers, duly authorized to take initial proceedings for providing care and treatment for persons suffering from mental disorder.

(2) MENTAL DEFICIENCY. The duty of ascertaining what persons in the area are defective, providing suitable supervision or taking steps to secure that they are placed under institutional care or guardianship, and making arrangements, where practicable, for the training or occupation of patients not admitted to institutions.

(3) GENERALLY. Arranging to the extent that the Ministry may direct for the care and after-care of persons suffering from mental illness or defectiveness.

The staff employed during the year 1948 in carrying out these duties was as lows :—

1 Administrative Medical Officer (part-time, approximately 25 per cent.).
1 Medical Officer for ascertainment (part-time, approximately 50 per cent.).
1 Supervising Duly Authorized Officer and Petitioning Officer.
1 Assistant Supervising Duly Authorized Officer and Petitioning Officer.
30 Duly Authorized Officers.
2 Mental Welfare Visitors.
1 Instructor in charge of a Senior Occupation Centre.
1 Assistant Instructor at a Senior Occupation Centre.
4 Occupation Centre Supervisors.
4 First Assistants at Occupation Centres.
10 Assistants Do.

To operate the service the administration has been divided into nine sub-offices each of which is stationed two, three or four Duly Authorized Officers. In addition

there are three Duly Authorized Officers permanently attached to the Central Office staff at County Hall who are available at a moment's notice as relief staff should the necessity arise.

The following is a list of the nine sub-offices, showing their addresses, telephone numbers and also the areas served by each office :—

Area and Addresses.	Area Covered.
1. North East Essex	
7, North Hill, Colchester. (Colchester : 5765)	Colchester Borough Harwich Borough Brightlingsea U.D. Clacton-on-Sea U.D. Frinton and Walton U.D. Halstead U.D. West Mersea U.D. Wivenhoe U.D. Halstead R.D. Lexden and Winstree R.D. Tendring R.D.
2. Mid Essex (North)	
Dorset House, Church Street, Saffron Walden. (Saffron Walden : 2105)	Saffron Walden Borough Braintree R.D. (North of Braintree and Bocking U.D.) Dunmow R.D. Saffron Walden R.D.
3. Mid Essex (South)	
131, New London Road, Chelmsford (Chelmsford : 4052)	Chelmsford Borough Maldon Borough Braintree and Bocking U.D. Burnham-on-Crouch U.D. Witham U.D. Braintree R.D. (South of Braintree and Bocking U.D.) Chelmsford R.D. Maldon R.D. Ongar R.D.
4. South East Essex	
Central Chambers, High Street, Rayleigh (Rayleigh : 240)	Benfleet U.D. Billericay U.D. Canvey Island U.D. Rayleigh U.D. Rochford U.D.
5. South Essex	
35, North Street, Hornchurch (Hornchurch : 3545)	Brentwood U.D. Hornchurch U.D. Thurrock U.D.

6. FOREST

Methodist Church Hall, New Road, Chingford, E.4. (Silverthorn : 2836)	Chingford Borough Wanstead and Woodford Borough Chigwell U.D. Epping U.D. Waltham Holy Cross U.D. Epping R.D.

7. ROMFORD AND DAGENHAM

7, Cotleigh Road, Romford (Romford : 593)	Dagenham Borough Romford Borough

8. LEYTON AND WALTHAMSTOW

West Avenue, Walthamstow (Keystone : 4440)	Leyton Borough Walthamstow Borough

9. ILFORD AND BARKING

249, Aldborough Road, Seven Kings (Seven Kings : 1798)	Barking Borough Ilford Borough

It is the practice at each sub-office for one of the Duly Authorized Officers to remain in the office in the daytime during normal office hours whilst the other Duly Authorized Officers are visiting patients or making the necessary arrangements for the admission of patients to mental hospitals. The Duly Authorized Officers at each sub-office also arrange among themselves for one of their number to be available for duty outside office hours. Should any of them be contacted by a doctor, the police or relatives of a patient suffering from mental illness, the officer so contacted will thereupon arrange for the appropriate officer to handle the case or himself take all the necessary steps with a view to effecting the patient's admission to a mental hospital should this be necessary.

To facilitate the maintenance of this 24-hour service, all officers who can drive a car have been furnished with one. All the sub-offices are on the telephone and as far as possible the residences of all Duly Authorized Officers have also been connected with the telephone service.

The ambulance services provided by the Council under Section 27 of the National Health Service Act, 1946, ensure that suitable ambulances and cars are available with drivers and attendants for the conveyance of patients to and from hospitals or institutions.

Doctors, the police and all other interested persons or bodies from whom calls for assistance are usually received have been furnished with a list of the addresses of the sub-offices and the Duly Authorized Officers and their telephone numbers.

The Duly Authorized Officers visit all mental defectives who are under supervision or guardianship and furnish reports on them quarterly. Close co-operation has been secured with the Regional Hospital Boards and Hospital Management Committees,

and the Duly Authorized Officers and Mental Welfare Visitors have carried out the supervision of mental defectives on licence from institutions and have furnished periodical reports on the progress of such cases for the information of the appropriate Management Committees. Reports have also been supplied on the home circumstances of defectives in institutions in connection with the reconsideration of the orders of detention by the Visitors and also in connection with applications for holidays, leave of absence or for discharge. Preliminary visits were also made to the homes of alleged mental defectives in connection with their ascertainment.

Although no comprehensive scheme for the training of mental health workers has as yet been initiated, the greater proportion of the Duly Authorized Officers have attended refresher courses organized by the National Association for Mental Health, and it is hoped to arrange for the remainder to attend such a course in the near future.

Arrangements were continued, as in the past, whereby examinations were carried out at the request of the police and reports furnished for the information of the Justices.

The use of Voluntary Associations has not been envisaged and the present staff is considered adequate to deal with the present day commitments.

Lunacy and Mental Treatment Acts, 1890-1930.

Under the Lunacy and Mental Treatment Acts patients were dealt with in Essex from 5th July, 1948, as follows :—

With the assistance of the Duly Authorized Officer.	Without such assistance.
245 Certified	12 Temporary
54 Voluntary	354 Voluntary
22 Temporary	
32 Section 20 (Urgency)	
10 Section 11 (Urgency)	

Mental Deficiency Acts, 1913-1938.

During the whole year 73 new cases were examined by the medical staff and were considered by the Sub-Committee, as were 113 cases who were reported by Local Education Authorities under Section 57 of the Education Act, 1944.

On 31st December, 1948, there were 1,835 cases under statutory supervision and 51 cases under guardianship, whilst some 1,608 cases were receiving friendly supervision and advice. Many of these cases had been reconsidered during the year with a view to deciding whether it was necessary for them to be sent to an institution.

The provision of institutional accommodation after 5th July, 1948, devolved upon the appropriate Regional Hospital Boards. Throughout the year there was a grave shortage of such accommodation available. Such vacant beds as became available from time to time through the death or discharge of patients were utilized only for the very urgent cases. At the end of the year there was a waiting list of 170 cases urgently needing institutional care, and particulars of all such cases had been forwarded to the Regional Hospital Board.

Occupation centres are provided at which patients at home under supervision can attend daily for occupational training. There are junior centres at Chelmsford, Dagenham and Walthamstow which cater for boys up to the age of fourteen and girls and women of any age, whilst a senior centre has been established at Dagenham for boys over the age of fourteen. Where necessary patients are conveyed to these centres by coach or car at the Council's expense. Arrangements have been made to open a new junior centre at Barking early in 1949.

The average attendance at the occupation centres is as follows :—

Dagenham Senior Occupation Centre	.. ..	27
Dagenham Junior Occupation Centre	.. ..	65
Walthamstow Junior Occupation Centre	.. ..	48
Chelmsford Junior Occupation Centre	.. ..	12

National Health Service Act, 1946. Section 28.

Arrangements for providing after-care for patients discharged from mental hospitals are being made, and it is proposed with the co-operation of the Medical Superintendent of one of the largest mental hospitals in the County for Duly Authorized Officers to be instructed in their duties in this connection.

It is also hoped in the near future to extend this arrangement to the other mental hospitals in the County, although in fact many cases have already been referred by other hospitals for after-care by the Mental Health Service.

BLIND PERSONS.

The services of Mr. T. Collyer Summers, F.R.C.S., were available up to the 5th July, 1948, as Consultant Ophthalmologist supervising the facilities provided for the certification and medical and general care of the blind in connection with the County Council's arrangements under the Blind Persons Acts, 1920–1938.

Dr. G. F. Ensor, M.R.C.S., L.R.C.P., D.O.M.S., acted in a full-time capacity as Medical Officer for ophthalmic work from February to September, 1948, when he resigned, his services continuing to be available in a part-time capacity. In addition, the services of the following Ophthalmic Specialists were available in a similar capacity :—

Miss L. H. Macfarlane, M.D., D.P.H., D.O.M.S.
A. H. Staples, M.R.C.S., L.R.C.P., D.O.M.S.
G. T. Foster-Smith, M.B., B.S.
J. E. L. Bendor-Samuel, M.B., B.S., M.R.C.S., L.R.C.P., D.O.M.S.
G. H. Kells, M.B., B.Ch.
G. F. Wright, M.R.C.S., L.R.C.P., D.O.M.S.

The Specialists examined 373 persons in connection with the Acts.

On 31st March, 1948, a total of 2,309 persons was on the register. The following table shows their ages :—

Age Period	*0–1*	*1–5*	*5–16*	*16–21*	*21–40*	*40–50*	*50–65*	*65–70*	*70 and over*	*Not known*	*All ages*
Males	0	4	19	23	137	113	270	108	380	1	1,055
Females	0	0	22	13	92	91	244	126	665	1	1,254
Total	0	4	41	36	229	204	514	234	1045	2	2,309

From this, it appears that about 45 per cent. of the registered blind persons in the county are over 70, nearly two-thirds of them being women. On the other hand there are 45 blind persons under the age of 16 (about 2 per cent. of the total). The fact that there are only four blind children under the age of 5 in the County confirms the point made in my last Annual Report that the incidence of blindness among infants is now very small. The number of new cases registered during the year was 244 and includes one infant and 4 of school age.

Since writing my last Annual Report, in which a short statement on the causes of blindness was included, an address entitled " Problems in the prevention of blindness " has been given by Professor Arnold Sorsby, M.D., F.R.C.S., at a meeting of the Southern Regional Association for the Blind. In this address, Professor Sorsby reported on the examination of a large number of certificates of blindness covering mainly the years 1933–43 to determine the principal causes for this condition. On the relative importance of different causes he said :—

> " The numerical frequency of cataract and glaucoma, which is so striking a feature in the statistics for the blind population, gives an exaggerated significance to these two causes. When the causes operative in the different age groups are evaluated in terms of years of expectation of life—i.e., in expected years of blindness—cataract falls from the first place to the second with 11.9 per cent. of the total of expected years of blindness, and glaucoma falls from the second to the fourth place with 8.2 per cent. Defects of congenital, hereditary, and developmental origin, which in order of frequency are fourth, now assume a preponderant first place with 20.2 per cent. and myopia takes the third place with 11.7 per cent. The congenital and congenitally determined anomalies (such as myopia) together are thus responsible for no less than 31.9 per cent. of the total of expected years of blindness, whilst cataract and glaucoma together, though numerically so outstanding, account for considerably less—viz. 20.1 per cent."

He also commented on the change in the causes of blindness in childhood as follows :—

> " In 1922 the Ministry (then the Board) of Education carried out an investigation into the causes of blindness as seen in blind schools ; 927 children were examined at provincial blind schools. A parallel investigation in 524 cases is available for 1944. The following table shows the main similarities and differences observed in the two series. A striking reduction in blindness from ophthalmia neonatorum is seen and a corresponding decline from congenital syphilis is suggested. As a corollary, blindness due to defects of congenital, hereditary, and developmental origin (in which myopia may be included) has assumed a proportionately increased significance.

	Board of Education 1922 (927 cases)	Sorsby 1944 (524 cases)
	%	%
Ophthalmia neonatorum	30.4	9.2
Purulent ophthalmia of later years	2.5	—
Phlyctenular ophthalmia	3.7	0.2
Interstitial keratitis	4.1	0.9
Iridocyclitis	2.5	0.8
Choroiditis	(?)	0.8
Syphilitic lesions	(?)	2.5
Optic atrophy	12.9	5.3
Congenital anomalies—		
including myopia	37.2	67.6
excluding myopia	30.8	55.0 "

On blindness in adults, he said :—

" It is likely that the reduction in the incidence of blindness in children has no parallel in the higher age groups. The causes of blindness are notably different in the different age groups and nearly 80 per cent. of the blind are over 50 years of age. There is no reason for believing that blindness from cataract, glaucoma, myopia, and senile macular lesions—the causes operative in that age group—is declining to any marked extent, while the evidence available for the causes of the decline in the incidence of blindness in the young indicates that the reduction in them is wholly due to the elimination of the sequelae of infectious disease."

PART II.

HOSPITAL SERVICES.

In accordance with the provisions of the National Health Service Act, 1946, the hospitals belonging to the County Council which have formed the subject of previous reports under this heading passed into the control of the North East Metropolitan Regional Hospital Board and the East Anglian Regional Hospital Board on 5th July, 1948. It can be said that during the eighteen years they were controlled by the County Council, substantial improvements were made both in the buildings and in the services provided.

During the first six months of 1948, shortage of staff continued to be a potent factor in restricting the amount of accommodation available for the treatment of patients, but right up to the date of transfer all necessary steps were taken to overcome these difficulties as far as possible and in other ways to ensure that the hospitals were handed over to the Regional Hospital Boards as efficient organizations. The transfer was thus effected smoothly and with no consequent diminution in the service provided. The work which had been put into the integration of the hospital services in the geographical County through the Essex Hospitals Joint Advisory Council was no doubt an important factor in this connection.

The arrangements which had existed for the accommodation of patients at the Roffey Park Rehabilitation Centre and at the Haymeads Hospital, Bishops Stortford, also came to an end on 5th July, 1948, so far as the County Council was concerned.

NURSING SERVICES.

Having completed her enquiry in relation to the nursing staffs of hospitals and sanatoria under the control of the County Council, Miss J. F. Clutterbuck, whose appointment was referred to in last year's Report, left the service of the County Council on 15th June, 1948, the special Sub-Committee set up to deal with the question of the recruitment of nurses having expressed their appreciation of the duties which she had undertaken.

The shortage of nurses of all categories referred to in previous reports continued up to the time that the Council's hospitals were transferred to the Regional Hospital Boards. The special Sub-Committee referred to above considered several matters which might, amongst other things, assist in a long-term solution of the problem, such as the establishment in secondary modern and technical schools, technical colleges and high schools of pre-nursing courses for the education and training of intending nurses; the collation of statistics in an endeavour to secure essential background information with respect to results obtained by the institution of such courses, with particular reference to wastage; the setting up of a nurses training establishment in the County; the production of a brochure for dispatch to potential recruits to the nursing staff; the recruitment of nurses and trainees from Eire and from countries in Europe; but in view of the impending transfer of the Council's hospitals to the Regional Hospital Boards, these proposals were all referred to the Boards for their attention after the appointed day.

Nursing Agencies.

The licences relating to nursing agencies issued in previous years were all renewed on reports of satisfactory inspections carried out during the year by senior nursing officers on the staff of the Department.

AMBULANCE SERVICES.

In accordance with the Proposals approved by the Minister under Section 27 of the National Health Service Act, 1946, for the establishment of a County Ambulance Service, all ambulance services which were under the control of the County Council and County District Councils were operated directly by the County Council as the Local Health Authority with effect from 5th July, 1948. Similarly all agency arrangements between the County Council or County District Councils and voluntary organizations or other bodies were continued as between the County Council as the Local Health Authority and those bodies.

During the first half of 1948 the various ambulance services provided throughout the County continued to function as independent units under the control of their respective District Councils and voluntary organizations. The County Council maintained a small fleet of ambulances attached to the hospitals which were under their control for the purpose of conveying patients to and from those hospitals. In addition the ambulances belonging to the British Red Cross Society and the St. John Ambulance Brigade again carried a considerable number of patients in respect of whom the County Council accepted responsibility.

The Hospital Car Service was used to a much greater extent by the County Council than by any other Local Authority or hospital in the County during the first six months of 1948, some 20,453 miles being travelled with County Council patients. This was almost equal to the total number of miles covered in the whole of the previous year.

The ambulance service which had been operated on behalf of the Emergency Medical Services by the County Council since the disbandment of the Civil Defence Service was itself disbanded on 5th July, 1948. In addition to the diminishing number of E.M.S. cases carried, the vehicles of the service covered 13,817 miles with County Council patients during the first six months of the year. This was an increase of approximately 50 per cent. on the mileage during the corresponding period in 1947.

The actual change over of the services to County administration was achieved very smoothly in the circumstances. One of the main difficulties experienced was that it took a considerable time for the personnel to adjust themselves to a wider County outlook.

For a trial period liaison was instituted with the Fire Service on the operational side and the fullest possible use was made of the Fire Brigade system of communications and of their divisional controls, much to the general advantage of the ambulance service.

The following statistics relate to the work carried out by the ambulance service between 5th July and 31st December, 1948 :—

	Emergency.	Non-Emergency.	Total.
Patients conveyed by E.C.C. vehicles	15,452	33,307	48,759
Patients conveyed by other organizations	1,305	10,412	11,717
Totals	16,757	43,719	60,476

Of these 26,498 were stretcher cases and 33,978 were sitting cases. The total mileage involved was 2,336,205.

The Hospital Car Service carried 8,386 of the sitting cases, involving a mileage of 743,166.

The procedure for obtaining an ambulance is as follows :—

(1) Accident and Emergency Service.

A. Where there is a dialling system .. Dial " 999 " or " 0 " or " 01 " (according to area) and ask for an ambulance.

B. Where there is no dialling system .. Lift receiver and ask for an ambulance.

—or—

C. Go to nearest Ambulance Station.

Accident and emergency calls, from whatever source received, are dealt with by local ambulance stations, and no differentiation is made in regard to calls which require the provision of an ambulance vehicle to an address which is outside the boundary of the Administrative County. If the ambulance station, for any reason, has no ambulance immediately available, the call is passed to the appropriate Divisional Fire Brigade Control either by the telephonist at the ambulance station or, when an ambulance station is unattended, by the operator at the telephone exchange from which the call originated. It is to be noted that in the case of ambulance stations which are for any reason left unattended, arrangements exist with the telephone service to call the ambulance station for 60 seconds. If no reply is received at the end of this period, the telephone exchange transfers the call to Divisional Fire Brigade Control, informing Divisional Fire Brigade Control that they have failed to get a reply from the appropriate ambulance station. Upon receipt of such a message, Divisional Fire Brigade Control orders out the next nearest available ambulance vehicle.

All accident and emergency cases, in the absence of precise instructions to the contrary, are transported to the nearest hospital.

(2) Non-Emergency Service.

To obtain transport for non-emergency cases, call the nearest ambulance station. The following points should be observed :—

Calls will only be accepted from the staff of a hospital, a doctor, a midwife, a home nurse or other competent person (e.g. a health visitor or an authorized officer in the mental health service), for the transport of patients to or from a hospital or treatment centre who are unfit to travel by ordinary means.

An assurance will be required that all arrangements have been completed with the hospital or treatment centre to which the patient is going.

If a trained nurse is required to accompany the patient a special request to that effect should be made.

If a sitting case car is required a special request to that effect should be made.

In cases of infectious disease an indication should be given as to the nature of the disease as pronounced by the medical attendant.

If any difficulty should arise in obtaining an ambulance a call may be made direct to County Hall, Chelmsford, telephone number : Chelmsford 4388.

PART III.

TUBERCULOSIS.

Until the service was transferred to the North-East Metropolitan and East Anglian Regional Hospital Boards on 5th July, 1948, the comprehensive diagnostic and treatment scheme provided by the County Council continued to function, and as in the case of hospitals no effort was spared to ensure that the service was transferred to the Boards as an efficient organization.

Notification.

The following is a summary of the formal notifications of new cases of tuberculosis received in the Department during the year. The number of primary cases was 1,655 compared with 1,746 in 1947.

Primary Notifications of New Cases of Tuberculosis.

Age Period	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	All Ages
Respiratory, Males ..	2	12	14	24	12	92	105	180	136	112	65	36	6	790
Females ..	1	12	15	21	22	115	135	145	88	29	23	14	2	622
Non-Respiratory, Males ..	1	5	14	29	27	11	7	11	2	7	1	—	—	115
Females	—	1	13	24	14	18	15	12	7	8	3	2	—	117

In addition, 423 new cases came to the notice of Medical Officers of Health during the year otherwise than by formal notification, an increase of 53 such cases over the figure for 1947, when an increase of 88 over the 1946 figure was noted. The sources of this information are given below :—

Source of Information.	No. of Cases. Respiratory.	Non-Respiratory
Death Returns from Local Registrars ..	7	1
Death Returns of transferable deaths from Registrar-General	—	1
Posthumous Notifications	13	4
" Transfers " from other areas (other than transferable deaths)	255	34
Other Sources (Forms I and II) ..	80	28
Total	355	68

When compared with the corresponding figures for 1947 and 1946, it is found that the increase is almost entirely in " Transfers from other areas " which numbered 133 in 1946, 261 in 1947 and 289 in the year under review. The age distribution of the 1948 transfers and of all other cases which came to the notice of Medical Officers of Health are given in the two following tables :—

Transfers from other areas.

Age Period	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	All Ages
espiratory, Males ..	—	—	4	11	4	6	23	44	26	18	5	1	—	142
Females ..	—	—	3	4	1	5	19	51	20	8	2	—	—	113
on-Respiratory, Males ..	—	—	1	8	4	1	1	1	1	—	—	—	—	17
Females	—	—	1	4	3	1	3	4	1	—	—	—	—	17

All other Sources.

Age Period	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	All Ages
espiratory, Males ..	—	—	1	2	2	6	13	13	3	11	2	2	—	55
Females ..	—	1	2	3	1	6	8	13	4	3	2	2	—	45
on-Respiratory, Males ..	—	—	—	7	4	1	—	2	1	2	1	—	—	18
Females	—	—	1	3	1	4	—	3	1	2	1	—	—	16

Comparing the age distribution of the " transfers " with that of the primary cases, is found that they are fundamentally different. The proportion of old people and young adults under 20 years of age is less and the proportion of adults between 25 nd 45 more among the transfers. This is consistent with the fact that many house-olds which move into Essex and especially those that are rehoused in Essex are of dults with young families. When the districts receiving these immigrants are con-dered, it is found that just over half these settled in Chigwell U.D., Chingford B, Dagenham B. In all of these areas there was considerable rehousing during 948 in L.C.C. Estates. The extent of this movement and the effect it has had on the cidence of tuberculosis in ten County Districts near London is shown in the following ble :—

NEW CASES AND TRANSFERS INTO ESSEX—1948.

County District.	*Transfers.*	*Primary cases.*	*Rates per 1,000 population.* *Transfers.*	*Primary.*	*Total.*
Barking B.	13	125	0.16	1.58	1.75
Chigwell U.D.	55	32	1.56	0.91	2.47
Chingford B.	48	47	1.03	1.01	2.04
Dagenham B.	42	147	0.38	1.32	1.70
Hornchurch U.D. ..	16	118	0.16	1.17	1.33
Ilford B.	24	241	0.13	1.31	1.44
Leyton B.	14	145	0.13	1.37	1.50
Romford B.	6	78	0.08	1.07	1.16
Walthamstow B. ..	11	130	0.09	1.06	1.15
Wanstead and Woodford B. ..	7	43	0.11	0.70	0.82

In most districts, transfers were of the order of 10 per cent. of the primary cases but in Dagenham the figure was 28 per cent., in Chingford 102 per cent., and in Chigwell 172 per cent. It is found as expected that most of this movement was from the County of London. It is known that the London County Council give high priority for re-housing, to cases of tuberculosis. Movement from the crowded streets of London into the country parts of Essex cannot but be beneficial to a man, woman or child suffering from tuberculosis but at the same time, this movement must cause some concern to those in the areas in question and in the County as a whole, to whom is entrusted the responsibility for the health of the people of Essex. The situation therefore is being closely watched.

On 31st December, 1948, there were 15,180 cases of tuberculosis on the notification registers kept by the Medical Officers of Health in the County. Of these notifications 11,209 were in respect of pulmonary infections (males 6,212 ; females 4,997), and 3,971 of non-pulmonary (males 2,044 ; females 1,927). The number of cases on the notification registers continued to increase ; the total for 1948 being 241 more than that for 1947.

Attack and Death Rates.

The following table shows the number of primary notifications of tuberculosis and the number of deaths attributed to the disease together with the annual attack and death rates in quinquennia since 1919 and for individual years since 1944.

Years	Respiratory Tuberculosis				Non-Respiratory Tuberculosis				Tuberculosis (All forms)			
	Notifications		Deaths		Notifications		Deaths		Notifications		Deaths	
	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
1919–23	4858	1.08	3240	0.72	1321	0.29	835	0.19	6179	1.37	4075	0.91
1924–28	5737	1.14	3347	0.67	1806	0.36	730	0.15	7543	1.51	4077	0.81
1929–33	5811	0.97	3560	0.60	2074	0.35	724	0.12	7885	1.32	4284	0.72
1934–38	5639	0.84	3042	0.45	1897	0.28	592	0.09	7536	1.12	3634	0.54
1939–43	6244	0.96	3109	0.48	1790	0.28	578	0.09	8034	1.24	3687	0.57
1944–48	6933	0.99	2751	0.39	1523	0.22	459	0.06	8456	1.21	3210	0.46
1944	1335	1.06	599	0.47	364	0.29	113	0.09	1699	1.35	712	0.56
1945	1273	0.99	548	0.43	337	0.26	112	0.09	1610	1.25	660	0.51
1946	1454	1.01	511	0.36	297	0.21	78	0.05	1751	1.22	589	0.41
1947	1453	0.97	554	0.37	293	0.20	80	0.05	1746	1.17	634	0.43
1948	1418	0.93	539	0.35	232	0.15	76	0.05	1650	1.08	615	0.40

*Annual rate per 1,000 population.

Both attack and death rates declined to the lowest level since the recent war. In the case of mortality, the figures are lower than ever before, but it will be seen that notifications are still at a higher level than the average of the years 1934 to 1938. As in 1947, the number of new notifications of tuberculosis in men fell while that in women increased. This increase amounting to 37 cases was largely due to more new cases under the age of 25. On the other hand, the 1947 increase was in the age groups over 25.

The following table gives the number of deaths and the death rate from tuberculosis in each of the eleven Health Areas. It replaces the annual rates for individual

County Districts printed in previous reports in the table headed " Births, Deaths, Annual Rates, etc.". The number of deaths is, as heretofore, given in the table giving the " Causes of Death " in County Districts. Rates for individual districts are based on such small numbers that they have very little meaning. Even the fluctuations from 1946 to 1948 in some Health Areas are seen from the table to be fairly large, yet none of these fluctuations can be confidently ascribed to anything but chance.

DEATHS AND DEATH RATES FROM TUBERCULOSIS IN HEALTH AREAS.

Health Area.	*No. of Deaths.*			*Death rate per 1,000 population.*		
	1946.	*1947.*	*1948.*	*1946.*	*1947.*	*1948.*
1. North-East Essex	39	50	57	0.24	0.30	0.33
2. Mid-Essex	59	61	55	0.31	0.31	0.27
3. South-East Essex	40	41	50	0.43	0.42	0.50
4. South Essex	87	87	91	0.46	0.44	0.44
5. Forest	65	66	68	0.41	0.40	0.39
6. Romford	37	32	30	0.56	0.46	0.41
7. Barking	37	56	30	0.50	0.72	0.38
8. Dagenham	54	63	49	0.51	0.57	0.44
9. Ilford	66	75	69	0.38	0.42	0.38
10. Leyton	47	45	52	0.46	0.43	0.49
11. Walthamstow	58	58	64	0.49	0.47	0.52
COUNTY	589	634	615	0.41	0.43	0.40

This table shows appreciable differences between the death-rates in each of the Health Areas, but how much these are due to differences in the sex and age constitution of their populations and how much to actual differences in the mortality of similar populations in different areas cannot be determined until more information is available.

Dispensaries.

Up to 4th July, 1948, the attendances made by patients at the tuberculosis dispensaries totalled 22,355 which is slightly more than 50 per cent. of the total attendances made in the whole of the previous year. The number of X-ray examinations undertaken was 13,556, which figure also shows a comparative increase on last year's total. In addition the Tuberculosis Officers paid 722 visits to patients' homes and Tuberculosis Visitors paid 21,720 home visits. The comparable figures relating to the whole of the previous year were 1,127 and 19,257 respectively.

The adaptations to the dispensary at Colchester to provide an X-ray department with an entirely new X-ray apparatus and with facilities for giving artificial pneumothorax refills were completed in the early part of the year and an informal opening ceremony was performed by Lt.-Cdr. H. Denton, then Chairman of the Committee, on 1st July, 1948, to which all general practitioners in the area to be served by the dispensary were invited.

Institutional Treatment.

Over 900 patients were maintained in institutions throughout the first six months of the year during which the provision of institutional treatment was the responsibility of the County Council. Nevertheless the waiting list which had risen from 350 in 1946 to 390 in 1947 stood at 530 in March, 1948.

No further progress was made with the scheme for adapting the Passmore Edwards Convalescent Home at Clacton-on-Sea, but the arrangements for the reception of patients at the Colchester, Ilford, Thurrock and Waltham Abbey Isolation Hospitals continued up to 4th July, 1948, when with the three sanatoria (the Harold Court Sanatorium, the Black Notley Sanatorium and the Essex County Council Hospital, Broomfield), they were transferred to the services under the control of the North-East Metropolitan Regional Hospital Board.

Mass Miniature Radiography.

During the six months preceding the transfer of the mass miniature radiography unit operating in the County to the North-East Metropolitan Regional Hospital Board, 15,862 miniatures were taken. In 773 of these cases large films were called for and of these 464 were found to require further investigation. Fifteen of these 464 cases were referred to their own doctors, 256 were referred to the chest clinic (9 failed to do so), and 28 were referred to hospital or sanatorium (one failed to attend hospital). No further action was necessary in 163 cases and two did not attend for further investigation. The number of cases of primary tuberculosis discovered was 251 (248 inactive, 3 active), 297 cases of post primary tuberculosis were found (259 inactive, 38 active), and 2 cases of tuberculous pleural effusion.

Financial Allowances.

There was again an increase albeit a slight one, in the number of patients who received allowances under the terms of Ministry of Health Memorandum T.266. The County Council ceased to be responsible for the payment of the allowances upon the coming into operation of the National Assistance Act, 1948 on 5th July, 1948, but during the first half of the year 698 cases were dealt with as compared with 665 in the same period in 1947. The payment of the necessary allowances is now the responsibility of the National Assistance Board.

After-Care.

A new Tuberculosis After-Care Association to cover almost the whole of the north-east portion of the County was formed in February 1948, and brought the total number of Associations operating in the County up to eleven.

During the year ended 31st March, 1948, the Associations expended a sum of approximately £6,500 in giving assistance to tuberculous persons and their families.

Patients coming within certain medical categories continued to be eligible for a grant of extra milk upon the recommenda ion of the tuberculosis officer. During the year 151 persons were provided with such extra milk in addition to grants of milk and other nourishment which were made by the After-Care Associations.

Open Air Shelters.

The 51 open air shelters provided for the use of patients being treated at home were again used to the fullest extent during the year under review.

PART IV.

MATERNITY AND CHILD WELFARE.

Prior to the National Health Service Act, 1946, coming into operation the County of Essex, excluding the County Boroughs, was divided into the following areas for the purposes indicated :—

(*a*) County Council Maternity and Child Welfare Area—

URBAN DISTRICTS.

Benfleet	Chigwell	Rayleigh
Billericay	Chingford B.	Saffron Walden B.
Braintree and Bocking	Epping	Waltham Holy Cross
Brentwood	Frinton and Walton	West Mersea
Brightlingsea	Halstead	Witham
Burnham-on-Crouch	Hornchurch	Wivenhoe
Canvey Island	Maldon	

RURAL DISTRICTS.

Braintree	Halstead	Rochford
Chelmsford	Lexden and Winstree	Saffron Walden
Dunmow	Maldon	Tendring
Epping	Ongar	

(*b*) Autonomous Maternity and Child Welfare Areas—

Barking B.	Dagenham B.	Romford B.
Chelmsford B.	Harwich B.	Thurrock U.D.
Clacton-on-Sea U.D.	Ilford B.	Walthamstow B.
Colchester B.	Leyton B.	Wanstead and Woodford B.

(*c*) County Council Area as Local Supervising Authority under Midwives Acts—

URBAN DISTRICTS.

Benfleet	Chingford B.	Romford B.
Billericay	Clacton-on-Sea	Saffron Walden B.
Braintree and Bocking	Epping	Thurrock
Brentwood	Frinton and Walton	Waltham Holy Cross
Brightlingsea	Halstead	Wanstead and Woodford B.
Burnham-on-Crouch	Harwich B.	West Mersea
Canvey Island	Hornchurch	Witham
Chelmsford B.	Maldon B.	Wivenhoe
Chigwell	Rayleigh	

RURAL DISTRICTS.

Braintree	Halstead	Rochford
Chelmsford	Lexden and Winstree	Saffron Walden
Dunmow	Maldon	Tendring
Epping	Ongar	

(*d*) Autonomous Local Supervising Authority Areas under Midwives Acts—

Barking B.	Dagenham B.	Leyton B.
Colchester B.	Ilford B.	Walthamstow B.

Since 5th July, 1948, the County Council has become the Local Health Authority and is therefore the responsible Authority for Maternity and Child Welfare and the Local Supervising Authority under the Midwives Acts for the whole of the Administrative County. It will be seen that this section of the report is divided into two periods, i.e. 1st January to 4th July, 1948, which deals only with the area for which the County Council was the Child Welfare Authority and the Local Supervising Authority, and 5th July to 31st December, 1948 dealing with the whole of the Administrative County.

Notifications of Births.

The following information gives particulars of the number of births notified as adjusted by any transferred notifications :—

	County Council Welfare Area 1st January—4th July.	Administrative County 5th July—31st December.
Live Births	4,800 ..	13,027
Still Births	70 ..	210

Maternal Deaths.

Investigations into maternal deaths were continued, to establish as far as possible the contributory causes of such deaths. Prior to 5th July, 1948, investigations were made into three maternal deaths occurring in the County Council Welfare Area, and after 5th July, 1948, four maternal deaths occurred in the Administrative County.

Clinics and Centres.

	County Council Welfare Area 1st January—4th July.	Administrative County 5th July—31st December.
(*a*) Ante-Natal and Post-natal Clinics.		
No. of clinics	39 ..	101
No. of sessions held per month ..	116 ..	496
No. of attendances	10,933 ..	49,726
(*b*) Child Welfare Centres.		
No. of centres	134 ..	211
No. of sessions held per month ..	267 ..	708
No. of attendances	62,280 ..	218,337

A number of new centres was established during the year and where there was not sufficient justification for opening a child welfare centre in any particular locality, arrangements were made as a commencement for the establishment of a weighing centre.

The work undertaken by the Voluntary Committees of child welfare centres continues to form a very important part of the general maternity and child welfare work and is of great assistance to the health visitors in attendance at the clinics.

Provision of Milk and Medicaments.

The Ministry of Food National Dried Milk Scheme for expectant and nursing mothers and children under five years of age was in operation at most of the child welfare centres. The distribution of the various vitamins was undertaken by health visitors and voluntary workers in co-operation with local Food Officers.

The following information has been supplied by the Ministry of Food relating to vitamins supplied in the Administrative County for the period 5th July to 31st December, 1948 :—

Orange Juice (Vitamin C)	975,008 bottles
Cod Liver Oil (Vitamins A and D)	230,070 ,,
A and D Tablets (Vitamins A and D)	53,582 packets

Since the inception of the National Health Service Act, certain body building foods are now classed as nutrients and can, on the advice of the medical officer, be provided at the centre. Medicaments are normally obtained by the patient from her own doctor.

Dental Treatment and Dentures.

The National Health Service Act makes particular reference to the provision of dental care for expectant and nursing mothers and young children, and although great difficulties are being experienced in obtaining the necessary qualified staff, every effort is made to ensure that facilities are available for the classes of patients specified in the Act.

The following table gives information as to the number of cases dealt with, together with the various types of treatment carried out :—

	County Council Welfare Area. 1st January—4th July.		*Administrative County. 5th July—31st December.*	
	Expectant and Nursing Mothers.	*Children under 5 years.*	*Expectant and Nursing Mothers.*	*Children under 5 years.*
No of Patients—				
(*a*) Examined	885	299	3,778	1,338
(*b*) Needing Treatment	793	257	3,610	1,278
(*c*) Treated	897	251	3,588	1,212
(*d*) Made dentally fit	708	231	1,898	1,051
No. of Teeth Extracted—				
(*a*) Permanent	1,968	—	4,153	—
(*b*) Temporary	—	358	—	1,094
No. of Teeth Filled—				
(*a*) Permanent	1,160	—	2,098	—
(*b*) Temporary	—	119	4	818
Inlays	1	—	1	—
Crowns	2	—	3	—
No. of Anaesthetics Administered—				
(*a*) Local	438	1	634	27
(*b*) General	587	240	1,059	589

	County Council Welfare Area. 1st January—4th July,		*Administrative County. 5th July—31st December,*	
	Expectant and Nursing Mothers.	*Children under 5 years.*	*Expectant and Nursing Mothers.*	*Children under 5 years.*
Prophylactic Treatment—				
(*a*) Scaling and Polishing	301	—	591	43
(*b*) Gum Treatment	67	—	56	—
(*c*) Silver Nitrate	—	35	—	165
No. of X-ray Examinations	9	2	12	3
No. of Dentures—				
(i) Full	158	—	245	—
(ii) Partial	146	—	225	—
(*a*) Provided	170	—	209	—
(*b*) Repaired	15	—	51	—
(*c*) Remakes	3	—	1	—
Other Treatment—				
(*a*) Impressions	6	—	244	—
(*b*) Bites	5	—	58	—
(*c*) Try Ins	7	—	67	—
(*d*) Fittings and Adjusting	16	—	317	—
(*e*) Dressings	132	18	234	191
(*f*) Linings	—	—	36	16
(*g*) Excision of Fibroma	—	—	1	—
(*h*) Infected Socket	3	—	3	—
(*i*) Sockets Plugged	1	—	—	—
(*j*) Unspecified	200	156	1,628	458

The Senior Dental Officer writes—

"In accordance with the Ministry of Health's instructions contained in Circular 3/49, that a separate report be submitted by the Senior Dental Officer in respect of Section 22 of the National Health Service Act, 1946, I have the honour to present my first annual report in connection with the dental care of expectant and nursing mothers and young children.

"A brief outline of the proposals formulated by the County Council for carrying out their functions under Section 22 of the National Health Service Act, 1946, shows that on the appointed day the services of the equivalent of three full-time Dental Officers would be utilized if still available, together with the appropriate ancillary and clerical staff, which would provide approximately thirty sessions per week to form the basis of the new services. As soon as might prove practicable, additional staff are to be appointed to the equivalent of thirty-two full time Dental Officers. It will be seen therefore that the ultimate time available for this work will be an approximate total of 320 sessions per week.

"In this County as in the case of other Local Authorities, great difficulty has been and continues to be experienced in obtaining the necessary staff to implement the proposals made by the County Council for the treatment of priority classes, and the combined dental staffs of the administrative county on and after 5th July, 1948, produced a total

of only twenty-five sessions per week for this work. During the period 1st January, 1948, to 4th July, 1948, the autonomous Child Welfare Authorities operated various schemes for the dental care of these patients, chiefly through general dental practitioners.

"Perusal of the foregoing schedule appertaining to the number of patients treated and the type of work performed, shows the readiness of patients to avail themselves of the opportunity of treatment thereby demonstrating the wisdom of arranging these facilities.

"Of the total number of mothers inspected, 94.4 per cent. were found on inspection to be in need of treatment, of whom 79.1 per cent. received treatment. Likewise, for children under five years, 93.7 per cent. required treatment, of whom 95.3 per cent. were treated.

"In regard to the latter, however, the figure of 1,282 is given as representing the number of pre-school children who have been made dentally fit. The statement conforms to the type of return required by the Ministry of Education but I regard it as misleading. In my opinion it cannot be accepted as a true record and the reason for this statement will be found in the details of treatment which states that 1,452 temporary teeth were extracted and 937 temporary teeth filled. Consequently I think it will be readily agreed that whilst these children are rendered free from caries and sepsis, the fact that it has been found necessary to extract temporary teeth can hardly be regarded as rendering the child fit, in the true sense of the term. On the contrary, it is suggested that the damage done to the arch by the unfortunate necessity for extraction, may tend to create a state of unfitness in future years of development.

"It must be regarded as tragic that the lack of dental staff imposes a limit to the number of children in this section of the County population who can receive treatment in the scheme. The number for whom treatment is at present possible is only a very small percentage of the children requiring treatment, which, if carried out, would in a very short space of time reflect with favour on the amount and type of work found to be necessary among children coming into the School Health Dental Service.

"Furthermore, this early contact with the dentist by patients of tender years should be encouraged and would tend to abolish the latent fear of treatment which later on is stimulated and exaggerated when pain is the compelling reason for the first visit to the dentist. Early contact with the dentist may mean advice only or at the most, simple treatment without pain and in consequence be the means of providing confidence in the dentist for future occasions.

"It is gratifying to report that considering the small number of dental officers available to carry out this valuable work, a very considerable volume of exacting, conservative and prophylactic dentistry has been carried out. This type of dentistry, although time consuming, is extremely valuable both directly and indirectly to the patient and in general to the service.

"As is at once apparent, restoration of full function to the organs of mastication not only helps in the acquisition of general health but educates the patient in the value of retaining healthy natural teeth. Indirectly this is reflected in the home and particularly on the parental attitude to the care of the children's teeth, thus avoiding the using up of valuable treatment time by dental officers in long individual explanations.

"There can be no doubt of the value of propaganda in bringing dentistry to the notice of the public and that the best propaganda of all is dentistry well and expeditiously performed. It is however necessary at times to bring information of the service before the people by lectures, etc., to make them teeth conscious. This approach has for the time being been discontinued in the knowledge that such tactics might be too successful in attracting patients with consequent overloading of the service beyond the ability of the staff to provide treatment; nevertheless, I am hopeful that when we arrive at happier and more prosperous times this system will be revived throughout the County, when it can be demonstrated that although caries may be unsightly and pain a discomfort, and which stimulates patients to seek treatment, dental officers are more concerned with the dead teeth and gum troubles which are, on account of their insidious onset, by far the greatest menace to general health, in that they are unsuspected by the patient.

"During the year under review 774 dentures have been fitted. The production of dentures is carried out by mechanics to the profession, and in the dental workshops in Barking and Walthamstow which were commenced by these boroughs pre 5th July, 1948 for their Municipal Adult Dental Service. I am convinced that it should be the policy of this Council to set up similar workshops to carry out this work by County staff, and thereby effect considerable economy.

"It should be noted that Dental Officers are grateful for the opportunity of variety which this work affords, and are keen to play their part in a service which can do so much towards improving the health of the nation.

"No report is submitted in regard to the dental work for patients in hospitals which is carried out by certain members of the County Dental staff at the request of the Regional Hospital Board. This service which is only of temporary duration pending the ability of the Regional Hospital Board to appoint their own staff, was popular with Dental Officers but it is gradually running out and is the subject of review every six months."

Domestic Help Service.

The Domestic Help Service is one of the most important functions of the new Health Service. The demands for the service continue to increase and the following gives particulars of domestic helps employed and cases attended :—

No. of whole-time domestic helps employed at 31st December, 1948	39
No. of occasional domestic helps employed during the year 1948 ..	666

	County Council Welfare Area 1st January—4th July.	Administrative County 5th July—31st December.
No. of cases attended	702 ..	1,918

The Domestic Help Organizer appointed on 5th January, 1948, has been responsible for the organization and development of the scheme and for the recruitment of suitable women as domestic helps. She has addressed meetings at the invitation of such bodies as the British Legion, Women's Institute, Women's Voluntary Service, Townswomen's Guilds, and has attended meetings of midwives and home nurses in order to explain the scheme. Personal visits were paid to health visitors and also the homes of persons requiring the services of the domestic help.

On 5th July, the Domestic Help Organizers employed in the Boroughs of Romford, Barking, Dagenham and Ilford were transferred to the County Council as Area Domestic Helps Organizers, and during the year additional Area Organizers were appointed for the South Essex and Forest Areas. It is anticipated that during 1949, Area Domestic Help Organizers will have been appointed in all Areas.

Arrangements are being made for domestic helps to be provided with overalls and a distinctive badge, and a certain number will be given an opportunity of obtaining the Diploma of the National Institute of Houseworkers. Successful candidates will receive a plus rate of 1d. per hour. In addition, arrangements have been made, subject to certain conditions, for domestic helps to be employed in attendance on infectious cases and in households where there is a person suffering from some infectious condition.

Puerperal Pyrexia Regulations.

Copies of notifications made by medical practitioners were received from Medical Officers of Health of County Districts in respect of 185 cases of puerperal pyrexia. For the period 1st January to 4th July, 1948, three cases were admitted to hospital from the County Welfare Area, and from 5th July to 31st December forty cases were admitted from the Administrative County Area. Where considered necessary, the services of a consultant obstetrician were provided.

Public Health (Ophthalmia Neonatorum) Regulations.

In the Administrative County, 32 cases of ophthalmia neonatorum were notified during 1948. Of these, three related to patients residing in the County Welfare Area during the period 1st January to 4th July, and thirteen in the Administrative County from 5th July to 31st December.

Hospital Treatment for Maternity Patients.

From 5th July, 1948, the responsibility for the admission of maternity patients to hospital for confinement was transferred to the Regional Hospital Boards. The pressure on hospital bed accommodation continued to be acute and the system of priorities referred to in previous reports was continued. During the period prior to 5th July, 1,439 patients from the County Child Welfare Area were admitted. The Domestic Help Service did a great deal to relieve the situation, especially where recommendation to hospital was made on account of home conditions.

Arrangements have been made with the Regional Hospital Boards concerned for the Council's health visitors to continue to investigate home conditions, the Boards, through the local Hospital Management Committees, being responsible for making the necessary arrangements for admission.

Treatment of Minor Ailments.

Arrangements were continued whereby children under school age received operative treatment for the removal of adenoids and tonsils, circumcision, etc.

Treatment of Orthopaedic Patients.

Pending a settlement as to the Regional Hospital Boards taking over the orthopædic scheme provided by the County Council, the arrangements for the treatment of children

under five years of age suffering from orthopædic defects have been continued. The number of Ascertainment Clinics held during the year was 97, at which 576 children were examined by the surgeon in attendance. Of this number three children received hospital in-patient treatment. Throughout the year 24 After-treatment Centres were in operation and three other clinics were opened. Children attending these Centres numbered 2,359.

Obstetric Specialist.

As in the case of hospital accommodation for maternity patients, the Obstetric Specialist Service was transferred to the Regional Hospital Boards on 5th July, 1948, and the statistical information given below relates to the work undertaken by the part-time obstetric specialist, Mr. Alan Brews, for the period 1st January to 4th July, 1948—

Clinic or Hospital.	No. of Patients Examined.
*St. John's Hospital, Chelmsford	85
St. Margaret's Hospital, Epping	63
*Chingford Ante-Natal Clinic	3
Essex County Hospital, Black Notley	6
Various	17
	174

*Consultative Clinic.

In addition, during the same period he carried out 60 operations, i.e. 29 major operations and 31 minor operations.

In the north-east of the County, the services of Dr. Margaret Puxon were also available during the period in question.

Nursing Homes.

Under the Public Health Act, 1936, Part VI, the County Council is responsible for the registration and supervision of all nursing homes, including maternity homes, in the Administrative County but in the Boroughs of Colchester, Ilford, Leyton and Walthamstow the County Council have delegated their functions to the respective Borough Councils.

The number of registered homes is as follows :—

(*a*) Maternity homes only	17
(*b*) Maternity and nursing homes	16
(*c*) Nursing homes (including convalescent homes) ..	23

Routine inspections were made at regular intervals. In the majority of homes a satisfactory standard was maintained in spite of the difficulties which were still being encountered in obtaining staff. In two cases it was found necessary to issue letters of warning regarding non-compliance with the Council's Byelaws relating to notification of deaths occurring in the homes.

Child Life Protection and Adoption of Children (Regulation) Act, 1939.

On 5th July, 1948, the responsibility relating to the care of foster children and children placed with persons with a view to adoption was transferred to the Children's Committee of the County Council. Until such time as the Children's Committee were able to provide the necessary staff, the visiting continued to be undertaken by health visitors, and in three cases letters of warning were issued in respect of—

(i) an infringement of Section 7 of the Adoption of Children (Regulation) Act, 1939 ;

(ii) non-compliance with the provisions of Section 206 of the Public Health Act 1936 relating to the giving of appropriate notice by persons receiving children for reward ; and

(iii) a contravention of the provisions of Section 215 of the Public Health Act 1936 in regard to an anonymous advertisement offering to undertake care of children.

Hostel for Mothers and Babies, "Ardmore," Buckhurst Hill.

Accommodation is available at this hostel for the mother, married or unmarried, who after confinement has difficulty in coping with her immediate future. When it was found that the accommodation was not being fully utilized the provision was extended to include expectant mothers and mothers who required a short period of convalescence after confinement.

During the year there was an outbreak of illness amongst the infants which necessitated the restriction of admissions and the transfer of infected children to hospital. Full particulars of this outbreak were submitted to the Ministry of Health, and appear on page 15 of this Report.

By the end of the year 19 expectant mothers and 11 mothers with babies had been admitted, together with 11 mothers for a period of convalescence. The average length of stay was 37 days.

Care of Illegitimate Children.

In addition to the provision of foster mothers by the Children's Committee to undertake the care and maintenance of babies apart from their mothers, and to the accommodation available at the various residential nurseries, the fullest co-operation with the Chelmsford Diocesan Moral Welfare Association has been maintained. Grants to the Association have been continued to assist in maintaining and equipping the various shelters and the Diocesan Maternity Home at Coggeshall.

Care of Premature Infants.

Particulars relating to premature infants, i.e. infants weighing 5½lbs. or less at birth, are given below :—

	County Council Welfare Area. 1st January—4th July.			*Administrative County. 5th July—31st December.*		
	Total.	*No. who died during first 24 hours.*	*No. who survived at end of 1 month.*	*Total.*	*No. who died during first 24 hours.*	*No. who survived at end of 1 month.*
Domiciliary ..	102	5	89 ..	197	9	157
Institutional ..	45	5	39 ..	267	19	205

In each case the health visitor is notified so that she can pay an early visit to advise the mother and keep the child under special observation. By arrangement with the Regional Hospital Boards, the services of consulting pædiatricians are available.

Day Nursery Accommodation.

As from 5th July, 1948, the day nurseries previously coming under the control of autonomous Welfare Authorities were transferred to the County Council, and particulars relating to all day nurseries in the Administrative County are given below :—

	Name of Nursery.	Accommodation.
Barking	Eastbury House, Ripple Road	80
	Goresbrook Road, Dagenham	50
	Rugby Road, Dagenham	38
Chelmsford	Waterloo Lane	40
Colchester	Sheepen Road	50
	Brook Street	50
Chingford	Chingford Mount Road	52
	Hatch Lane	50
Dagenham	Dagenham Avenue	70
	Ashton Gardens, Chadwell Heath	54
	Parsloes Avenue	44
Hornchurch	North Street	30
	Elm Park	30
Ilford	Dr. Barnardo's Homes, Barkingside	45
	Green Lane, Seven Kings	50
	Becontree Avenue, Dagenham	45
	Ley Street	50
Leyton	Leyton Green Road	50
	Ellingham Road	50
Romford	Western Road	40
	Collier Row	40
	Rush Green Road	50
Rainham	Rainham Hall	28
Thurrock	Palmers Avenue, Grays	50
	London Road, West Thurrock	50
	Whitehall Lane, Grays	50
Upminster	23 Hall Lane	40
Waltham Abbey	Sewardstone Road	40
Walthamstow	Billet Road	50
	Highams Park	50
Witham	Chipping Hill	20
Wanstead and Woodford	Spratt Hall Road	50
Saffron Walden (part-time)	Drill Hall (temporary)	36

The pressure on the accommodation continues to be acute and negotiations are proceeding for the establishment of additional or alternative nurseries at the following places :—

Additional.

Walthamstow	Hainault Estate
Brentwood	Buckhurst Hill
Canvey Island	Loughton Hall
Harold Wood	Romford
Chingford	Barking
Woodford	Dagenham

Alternative.

Rainham	Elm Park
Hornchurch	Upminster
Saffron Walden	

MIDWIVES ACTS.

From 5th July the County Council became the Local Supervising Authority for the whole of the Administrative County. The valuable work undertaken by the Essex County Nursing Association in training, supplying and maintaining home nurses and home nurse midwives was duly transferred to the County Council. As was indicated in last year's report some difficulty arose over the negotiations with the Essex County Nursing Association in regard to the transfer to the County Council of the services formerly provided by the Association.

At the beginning of the year 1948 the Association had indicated that they were unable to accept certain suggestions which had been made to them as to the manner in which it was considered that they and their affiliated Associations might usefully co-operate with the County Council in connection with the provision of the services. The Association made certain recommendations to the Minister of Health for the modification of the Council's Proposals in connection with midwifery and home nursing and went to the length of submitting alternative " proposals " in which it was provided that the Association should administer the midwifery and home nursing services on behalf of the County Council over the whole of the County. In submitting their observations upon the recommendations made by the Association, the County Council indicated to the Minister that they had regretfully come to the conclusion that further discussions with the Association were unlikely to lead to any agreement.

As a result the Minister of Health called a joint meeting between his officials and representatives of the Association and the County Council at the Ministry in March 1948, for the purpose of discussing the Association's recommendations and alternative arrangements for continuing the midwifery and home nursing services. The whole position was fully examined at this conference and every endeavour was made to reach arrangements satisfactory to the Association which would accord with the County Council's Proposals for decentralization to Area Sub-Committees and the general efficiency of the services in the future. It was even suggested on behalf of the County Council that arrangements might be made for the Essex County Nursing Association to continue in existence for the purpose of managing the training homes,

subject to grants being paid by the County Council in aid of this work. It was also indicated that the Association's affiliated District Nursing Associations might possibly be set up as local voluntary Care Committees.

These suggestions, however, were not acceptable to the Association and as a result the Minister of Health gave his approval, with certain slight modifications in each case, to the Proposals made by the County Council under Sections 23 and 25 of the National Health Service Act. Notice was accordingly given to the Association to terminate the arrangements last made with them in 1945 which was accompanied by an expression of the deep appreciation of the County Council of the valuable and extensive services rendered by the Association in the past.

The transfer of functions entailed the taking over of the administration of the various training homes at Colchester, Dagenham, Leytonstone and Walthamstow. The administrative staff attached to the central office of the Association were also transferred to the staff of the County Council.

Training Homes.

The management of the Colchester and Walthamstow Training Homes has been delegated to the respective Health Areas. The Health Committee have established a Training Homes Management Sub-Committee to deal with the homes at Leytonstone and Dagenham. The Superintendents of these homes have furnished the following reports for the period 5th July to 31st December, 1948 :—

"LEYTONSTONE. Since 5th July the home nursing service undertaken from the Central Training Home, Leytonstone, has been greatly extended. The additional areas now covered are :—

1. The Borough of Barking ;
2. The Borough of Ilford ;
3. The County Borough of West Ham to the boundary formed by the District Railway.

"The East Barking Nurses Home in Porters Avenue, from which four nurses work, has been acquired and premises in Longbridge Road have been set aside for the District Nurses Home.

"The staff employed at the time of the changeover was 42, increased by the end of the year to 55, and there is a steady demand for training both student district nurses and pupil midwives.

"Staff in training on 31st December were as follows :—

Queen's candidates	12
Pupil midwives	12

"In addition to the female staff the Home is undertaking the training of State Registered Male Nurses as Queen's district nurses. This scheme is proving very popular and there is a steady flow of recruits.

"*Examination Results.* In the Part II C.M.B. Examination, eleven candidates entered, ten passed and one failed. In the Queen's Roll Examination nine entered and were successful.

"*Visits Paid.* These were as follows :—

	General Nursing.	Maternity and Midwifery.
Leyton	19,750 ..	3,992
West Ham	9,854 ..	685
Barking	6,144 ..	—
Ilford	10,448 ..	—
	46,196 ..	4,677

Total—50,873.

"This is an increase of 13,721 over the same period of 1947 and is, of course, over a much wider area.

"The usual Christmas activities were held ; a carol service—nurses forming the choir—children's party and the nurses' own party were all much enjoyed.

"With recruits for training coming along steadily and the much wider area usable for training, the future would appear to be good as regards providing the necessary staff to cover the new areas whose people, judging by the increasing demands on the service, are appreciating the provisions made for them."

"DAGENHAM—*Home Nursing.* The home nursing staff at 31st December, 1948, was as follows :—

Full-time	1 S.R.N.	1 S.E.A.N.
Part-time	3 S.R.N.	2 S.E.A.N.

Home nursing in the Borough of Dagenham is very limited owing to the shortage of staff and accommodation. All nursing staff at the moment are non-resident. Although this service is not ideal, the assistance of the part-time home nurses has proved invaluable in the Dagenham area and without their aid much of the care of the sick in their own homes could not have been undertaken.

"*Midwifery.* The midwifery staff at 31st December, 1948, was as follows :—

Midwives	7 (including 1 clinic midwife)
Pupil midwives	7

This branch of the work has gone on steadily in spite of the declining birth rate.

"As a Midwifery Training Home we are pleased to report a one hundred per cent. pass list over the period of the last twelve months."

Midwifery and Home Nursing Service.

At the end of the year the following midwives and home nurse midwives were employed in connection with the County scheme :—

Midwives	105
Home nurse midwives	171

In addition there were 24 independent domiciliary practising midwives and 35 employed in hospitals and nursing homes.

The following information gives particulars of the cases attended :—

	1st January—4th July.		*5th July—31st December.*	
	Midwifery.	*Maternity.*	*Midwifery.*	*Maternity.*
Council midwives and home nurse midwives	2,364	1,001	3,978	1,270
No. of cases in which medical aid was summoned	1,276	—	1,435*	—

*In addition medical aid notices were issued by midwives practising in institutions.

Gas and Air Analgesia.

It is the ultimate aim to train and provide with gas and air analgesia apparatus every midwife employed by the County Council, and at the end of the year there were 131 sets of apparatus in use. In addition to the use of the apparatus in midwifery cases, approval was given for the facilities to be available in cases attended by midwives as maternity nurses.

The arrangements for training were continued and at the end of the year there were 295 midwives proficient in gas and air analgesia. The following particulars give information as to the number of cases in which analgesia was administered by midwives in domiciliary practice :—

1st January—4th July.		5th July—31st December.
693	..	1,505

Housing Accommodation.

On 4th February, 1948, the Ministry of Health issued Circular 15/48 drawing the attention of Housing Authorities to the fact that in some areas midwives are handicapped in the performance of their duties by unsuitable accommodation and requesting the utmost possible assistance be given by Housing Authorities in any case brought to their notice. The policy adopted by the County Council of co-operating with District Councils was continued and appropriate representations were made to the District Councils concerned.

Laundry Allowance.

During the year the laundry allowance payable to midwives was increased from £9 2s. 0d. to £13 per annum.

Provision of Cars and Garages for Midwives.

With the transfer of staff from the Essex County Nursing Association to the County Council, it will be realised that the demand for motor cars was considerably in excess of the supply, in spite of the fact that a large number of transferred staff had already been provided with a motor car, chiefly from the grants made by the County Council to the Association for this purpose. Nevertheless at the end of the year 46 midwives were either supplied with a motor car or received financial assistance in the running of a private motor car in connection with their duties.

In addition the County Council assumed responsibility for 38 garages which were formerly hired or owned by local District Nursing Associations, and arrangements will be made, where necessary, for the provision of portable garages.

Doctors' Fees.

On 8th April, 1948, the Ministry of Health issued Circular 51/48, relating to a revised scale of fees in substitution for fees prescribed in the Medical Practitioners (Fees) Regulations, 1940, together with new regulations embodying the revised scale which came into operation on 18th April, 1948. Arrangements were made for all medical practitioners practising in the area for which the County Council was the Local Supervising Authority to be notified.

Maternity Outfits.

As from 5th July, 1948, maternity outfits were available free of charge on application to a midwife or a home nurse-midwife, and the following gives particulars of the number issued from the beginning of the year :—

1st January—4th July.	5th July—31st December.
109	2,830

American Red Cross Layettes.

A certain number of these layettes has been provided in necessitous cases through the Women's Voluntary Services.

Sheets for Expectant Mothers.

To enable expectant mothers who were being confined at home to obtain a supply of sheets, priority dockets were issued in accordance with instructions from the Ministry of Health, and the following information relates to the number of dockets issued :—

1st January—4th July.	5th July—31st December.
6,080	7,111

HOME NURSING.

At the end of the year there were 61 whole-time and 171 part-time home nurses employed, and the following figures give some indication as to the work done during the period 5th July to 31st December, 1948 :—

No. of visits paid	219,765
No. of cases attended	13,568

Membership of Queen's Institute of District Nursing.

With the transfer of the Essex County Nursing Association to the County Council, it was necessary to consider the relationship between the Queen's Institute of District Nursing and the County Council who, on 5th July, 1948, became employers of a number of Queen's nurses. Arrangements were concluded whereby the County Council became a member of the Queen's Institute upon payment of a fee of £4 4s. 0d. per Queen's nurse. This is referred to in more detail on page 94.

NURSERIES AND CHILD MINDERS REGULATION ACT, 1948.

Under the Nurseries and Child Minders Regulation Act, 1948, the County Council are responsible for the supervision of premises in their area (other than premises wholly

or mainly used as private dwellings) where children are received, and of persons in their area who for reward receive into their homes children under the age of five years, to be looked after for the day or a substantial part thereof or for any longer period not exceeding six days. The Act came into force on 30th July, 1948, and arrangements were made to publicise the provisions of the Act by the issue of advertisements in newspapers, and individual notices were sent to persons who were known to be carrying on day nurseries or acting as child minders.

Particulars in regard to premises and child minders registered, together with the number of children, are given below :—

	Registered at 31st December, 1948.	No. of Children provided for.
Premises	Nil ..	Nil
Child Minders	5 ..	16

In the Dagenham and Forest Areas there are schemes in connection with child minders provided by the County Council, and at the end of the year there were 11 child minders caring for 30 children.

COMBINED MEDICAL SERVICE.

Clacton-on-Sea and Frinton and Walton Urban Districts. No permanent appointment having been made by the end of the year 1948, Dr. J. Ramsbottom continued throughout the whole year as Acting Medical Officer of Health and Assistant County Medical Officer for the Clacton-on-Sea and Frinton and Walton Urban Districts.

Chigwell and Waltham Holy Cross Urban Districts. Following upon his relinquishment of the appointment of Medical Officer of Health and Assistant County Medical Officer for the Waltham Holy Cross Urban District in 1947, Dr. L. S. Fry asked to be released from the similar appointment which he held in connection with the Chigwell Urban District on 31st May, 1948, but in view of the difficulties relating to his successor taking up duty he continued to undertake the duties of Medical Officer of Health of the Chigwell Urban District until the end of the year. It was agreed between the Authorities concerned that Dr. Fry's successor should be appointed as Medical Officer of Health to both Urban Districts and Assistant County Medical Officer.

COMBINED NURSING SERVICE.

With the establishment of the Health Visiting Service under Section 24 of the National Health Service Act, 1946, the combined nursing service under which joint appointments of nursing staff were made (*a*) between the County Council and Autonomous Welfare Authorities and (*b*) between the various employing committees of the County Council virtually went out of existence on 4th July, 1948.

On that date health visiting staff were employed on child welfare work on behalf of the County Council as follows :—

59 whole-time (also undertaking school and tuberculosis work)
1 part-time (also undertaking school and tuberculosis work)

} Equivalent whole-time Health Visitors for Child Welfare—approx. 24.

N.B.—The above figures do not include the superintendent health visitor and her assistant but include the relief health visitors and probationer health visitors.

PART V.

SOCIAL WELFARE.

Hospitals and Institutions.

General oversight continued to be given to the medical arrangements at the hospitals and institutions under the control of the Social Welfare Committee until they were transferred to the control of the North-East Metropolitan Regional Hospital Board and the East Anglian Regional Hospital Board on 5th July, 1948.

Domiciliary Medical Service.

The domiciliary medical service arrangements made by the Social Welfare Committee became unnecessary in the light of the general medical services which were brought into operation on 5th July, 1948, under the National Health Service Act, 1946.

Until that date the arrangements made continued to operate satisfactorily, temporary arrangements being made in the following medical relief districts as a result of the resignation of an existing Medical Officer :—

Castle Hedingham
Maldon (St. Peter's)
Upminster
Hutton and Mountnessing

A number of changes took place in the panels set up under the Free Choice of Doctor Scheme in the various districts where the scheme was in operation. It also was discontinued as from 5th July, 1948.

Canadian Red Cross Clothing.

The County Council were deeply indebted to the Canadian Red Cross Society for a substantial gift of clothing. This was presented to the County Council by the Overseas Commissioner in London and a proportion was distributed to needy women, boys and girls in the Administrative County who had not previously been recipients under Gift Schemes. Some sixty families benefited from the distribution, which was carried out by health visitors at clinics throughout the County.

PART VI.

THE NATIONAL HEALTH SERVICE.

Decentralization of Administration.

The proposals for a scheme of decentralized administration referred to in my Annual Report for 1947 were, after much discussion with representatives of the Local Authorities concerned, incorporated into a comprehensive scheme which is set out on page 85. This scheme was established for an initial experimental period of two years.

Under it the County is divided into eleven Areas, and although it is in every material particular a unified scheme the Areas are divisible into two main categories, as follows :—

(1) Five Areas comprising 37 of the 43 County Districts in the County, as follows :—

No.	Area.	Population.
1	North-East Essex	173,446
2	Mid-Essex	202,420
3	South East Essex	100,067
4	South Essex	204,730
5	Forest	175,037

(2) Six other Areas consisting of six Boroughs on the fringe of the metropolis. Most of these, as was indicated in last year's report, already had well developed health services of their own. They are designated by the names of the Boroughs with whose boundaries they are coterminous :—

No.	Area.	Population.
6	Romford	72,610
7	Barking	78,890
8	Dagenham	111,500
9	Ilford	183,400
10	Leyton	106,100
11	Walthamstow	122,700

It will be noted that the Areas are also in every instance coterminous with the boundaries of the Divisional Executives for Education which it was felt would, amongst other things, facilitate administration, and also be desirable from the standpoint of economy.

In each of the eleven Areas the functions vested in the Health Committee by the County Council were delegated to a Sub-Committee of the Health Committee known as the Health Area Sub-Committee. The total representation of County District Councils on each Area Sub-Committee is in general fifteen members, but in two instances where the Health Area is comprised of more than one County District there are actually sixteen County District members to ensure a fair allocation of representation between the County District Councils concerned. In addition, each Sub-Committee consists of seven members appointed by the Health Committee from amongst members of the County Council, at least one of whom is a member of the appropriate Divisional Exe

tive for Education, and seven other members are appointed by the Health Committee ho are intended to be representative of voluntary associations in the Area, the North- ast Metropolitan Regional Hospital Board, the Executive Council for Essex and the cal Medical Committee for Essex.

In the Areas in the first category above, the Clerk of the County Council acts as erk, whilst in the second category the Town Clerks of the respective Boroughs act as erks to the Health Area Sub-Committees.

During the year 1948 the undermentioned Medical Officers of Health, with the nsent of the County District Councils by whom they were employed, acted as Area edical Officers :—

No. 1 ..	North-East Essex ..	Dr. J. D. Kershaw (Colchester).
No. 2 ..	Mid-Essex	Dr. J. Mervyn Thomas (Chelmsford).
No. 3 ..	South-East Essex ..	Dr. N. S. R. Lorraine (Canvey Island, Benfleet and Rayleigh).
No. 4 ..	South Essex ..	Dr. W. T. G. Boul (Thurrock).
No. 5 ..	Forest	Dr. F. G. Brown (Wanstead and Woodford).
No. 6 ..	Romford	Dr. J. B. Samson.
No. 7 ..	Barking	Dr. C. Leonard Williams.
No. 8 ..	Dagenham	Dr. C. Herington.
No. 9 ..	Ilford	Dr. J. H. Weir.
No. 10 ..	Leyton	Dr. A. W. Forrest.
No. 11 ..	Walthamstow ..	Dr. A. T. W. Powell.

An Area Financial Officer is responsible to the County Treasurer for the financial angements in each Area.

rangements for Decentralization of Administration of Local Health Functions under Part III, as approved by the County Council at their Meeting, on 18th May, 1948.

A. HEALTH COMMITTEE. A Health Committee shall be established and authorized to exercise, on behalf of the County Council, such functions of the County Council, as a Local Health Authority, as the County Council may determine. The membership of the Health Committee shall include a representative nominated by each Area Sub-Committee.

B. AREA ADMINISTRATION.

1. *Areas and Constitution of Area Sub-Committees.*

The area of the Administrative County shall be divided into the areas mentioned and named in column (1) of the Schedule hereto and such areas shall respectively comprise the County District or Districts set out in column (2) of the Schedule opposite the name of the area. There shall be established for each of the areas numbered and named in column (1) of the Schedule an Area Sub-Committee consisting of the total number of persons shown in column (6) of the Schedule of

whom (*a*) each Council of a County District comprised in or c
prising the area shall be entitled to nominate for appointment by
Health Committee, the number of persons shown in column (3) o
Schedule opposite to the name of the County District; each o
persons so nominated to be a member of the District Council by w
he is nominated, (*b*) the number of persons shown in column (4) o
Schedule shall be appointed by the Health Committee from amo
members of the County Council and shall include the Chairman
Vice-Chairman of the Health Committee as ex-officio members.
least one of such members shall be a member of and be nominate
the County Education Committee and in the case of areas b
numbered 1 to 5 inclusive in column (1) of the Schedule, also a me
of the appropriate Divisional Executive for Education if practic
(*c*) the number of persons shown in column (5) of the Schedule
be appointed by the Health Committee from persons nomin
by :—

Appropriate Hospital Management Committee or Committees	1
Executive Council for Essex	1
Local Medical Committee for Essex	1
Voluntary organizations	4

The persons nominated for appointment by the appro
Hospital Management Committee or Committees, the Exec
Council for Essex and the Local Medical Committee for E
respectively shall be members of the nominating bodies and the
persons to be nominated by the voluntary organizations, purs
to sub-paragraph (*c*), shall be representatives of voluntary orga
tions selected by the Health Committee operating in the area,
if practicable, two shall be members of Nursing Associations.
term " voluntary organizations " shall mean voluntary organiza
concerned with the provision of services similar in character to t
to be provided pursuant to the Proposals referred to in Clau
(1) (*a*) below.

A member of an Area Sub-Committee shall cease to be a me
of the Area Sub-Committee on ceasing to be a member of the b
the membership of which qualifies him for appointment on the
Sub-Committee.

2. *Functions of Area Sub-Committees.*

Unless and until otherwise decided by or on behalf of the Co
Council the functions to be exercised from time to time by an
Sub-Committee on behalf of the Health Committee shall, subje
any of such functions not being delegated at the request of the
Sub-Committee to a Sub-Committee comprised of members o
Area Sub-Committee, be as follows, subject also to the excep
limitations and conditions stated—

ises.

(1) Unless otherwise decided in any particular case—

(*a*) To visit and inspect all premises and land situate in the area of the Sub-Committee and used by the County Council for the discharge of their functions under Sections 21, 22, 23, 24, 25, 26 and 28 of the National Health Service Act, 1946 (which Act and the Proposals made by the County Council, pursuant to Section 20 of that Act, for carrying out their functions under the said Sections of that Act, are hereinafter referred to as "the Act" and "the Proposals" respectively).

(*b*) To manage the premises and land referred to in sub-paragraph (*a*) insofar as they are used for the purposes referred to in such sub-paragraph.

(*c*) To arrange for repairs to and the decoration of premises used solely or mainly for the purposes referred to in sub-paragraph (*a*) within the estimates under those headings submitted to and approved by the County Council.

g, etc., of
es and land.

(2) To make recommendations to the Health Committee as to the letting of any premises or land for the time being under the control of the Area Sub-Committee or the provision, adaptation, acquisition or hiring of any premises or land required in connection with the discharge of functions by the Area Sub-Committee.

on and care of
re, etc.

(3) (*a*) To provide, within the estimates under the appropriate headings submitted to and approved by the County Council, furniture, equipment (other than vehicles) and apparel and all other articles whatsoever required for use in connection with the discharge of the Local Health Authority's functions under Part III of the Act, insofar as such functions are exercisable by the Area Sub-Committee.

(*b*) To take such steps as may be requisite to ensure that due care is taken of all furniture, equipment (including vehicles), and apparel and all other articles whatsoever provided or used for the discharge of the functions referred to in sub-paragraph (*a*) above, and to ensure that they are held and used for the purposes for which they have been provided.

ent and
of charges.

(4) To take all requisite action in relation to the assessment and recovery, including the institution of legal proceedings, if necessary, of charges, made by the Local Health Authority under Sections 22, 28 and 29 of the Act in accordance with the methods of assessment and the scales of charges from time to time prescribed by or on behalf of the County Council.

on of legal
ngs.

(5) (*a*) To take all requisite action with respect to (i) any person who fails to give notice, in accordance with Section 203 (as amended by the Act) of the Public Health Act, 1936, of a birth or (ii) the occupier of a factory or workshop who knowingly allows, in con-

travention of Section 205 of the said Act of 1936, a woman t employed therein within four weeks after she has given birth child.

(*b*) To make recommendations in relation to the institutio legal proceedings except proceedings the institution of whic delegated to the Area Sub-Committee, by virtue of paragraph above and sub-paragraph (*a*) of this paragraph.

Making of grants and insurance of risks.

(6) To make recommendations in relation to (*a*) the makin grants, subscriptions or other monetary payments to any volun organizations or any other bodies serving the area and (*b*) any which should be insured originally or more adequately or any rev of the terms of insurance which may be considered necessar desirable.

Records and inventories.

(7) To keep such records and inventories in relation to funct discharged by the Area Sub-Committee as the Health Comm may require.

Furnishing of returns.

(8) To furnish the Health Committee from time to time such returns and other information relating to action taken or rec mended by the Area Sub-Committee as the Health Committee require.

Care of weakly Infants.

(9) To take steps in accordance with arrangements approve the Health Committee for the care of premature and otherwise we infants in the area.

Supply of medicaments, welfare foods, etc.

(10) To hold such medicaments, welfare foods and other n ments as may be approved by the Health Committee and sup by the Ministry of Food or otherwise and to issue the same t persons for whom they are provided.

Use of maternity outfits.

(11) To issue, when required, maternity outfits to expe mothers.

Provision of daily guardians.

(12) To assist, as may be required by the Health Committe relation to any scheme which may be formulated by the Co Council for the provision of registered daily guardians and crech Child Welfare Centres.

Supervision, suspension and provision of Midwives and provision of Health Visitors, Home Nurses and Domestic Helps.

(13) In accordance with arrangements approved by the H Committee—

(*a*) To exercise general supervision over all Midwives (v shall not include the right to suspend any Midwife practice other than as mentioned in sub-paragraph (this paragraph), insofar as they are practising in the of the Sub-Committee, in accordance with the rules down by the Central Midwives Board from time to under the Midwives Act, 1902.

(*b*) To suspend from practice, in accordance with the referred to in sub-paragraph (*a*) above, and if and so lo

it appears necessary so to do in order to prevent the spread of infection, any Midwife for the time being practising in the Area of the Sub-Committee, subject to the submission, to the next available meeting of the Health Committee, of a full report of each case.

(*c*) To take steps to secure that the arrangements in the area for the attendance of certified Midwives (either as Midwives or Maternity Nurses, as circumstances may require), on women in their homes during childbirth and from time to time thereafter during the "lying-in" period, as defined by any rule for the time being in force under Section 3 of the Midwives Act, 1902, are adequate ;

(*d*) to take steps for ensuring the visiting in the area of persons in their homes by Health Visitors, for the purpose of giving advice as to the care of young children, persons suffering from illness, and expectant or nursing mothers, and as to the measures necessary to prevent the spread of infection ;

(*e*) to take steps to secure the attendance of Nurses on persons in the area who require nursing in their own homes ;

(*f*) to provide Domestic Helps for households in the area where such help is required owing to the presence of any person who is ill, lying-in, an expectant mother, mental[ly] defective, aged, or a child not over compulsory school age within the meaning of the Education Act, 1944.

Fees and allowances for medical assistance in cases of emergency.

(14) To take the necessary action to ensure the payment of the prescribed fees and mileage allowances to Medical Practitioners called in to assist Midwives in cases of emergency arising in the Area of the Sub-Committee, as provided for by Section 14 of the Midwives Act, 1918, as amended by the Act.

Cases of Ophthalmia Neonatorum.

(15) To take steps to ensure that all cases of Ophthalmia Neonatorum occurring in the Area of the Sub-Committee are dealt with in accordance with the Regulations made by the Minister of Health and for the time being in force under Section 143 of the Public Health Act, 1936.

Provision of uniforms, etc.

(16) To arrange for the provision and issue of uniforms, and/or protective clothing, in accordance with the arrangements from time to time approved by the County Council or the Health Committee, to persons engaged in the discharge of functions delegated to the Area Sub-Committee.

Provision of transport facilities, etc.

(17) To make recommendations to the Health Committee in regard to the provision of transport facilities or the granting of travelling allowance to employees engaged in the discharge of the functions to be exercised by the Area Sub-Committee.

Vaccination and Immunization.

(18) To take all necessary steps in regard to persons in the Area and in accordance with the Proposals in relation to the functions of the County Council under Section 26 of the Act, for vaccination against smallpox and to achieve immunity against diphtheria and, in accordance with any arrangements approved by the Health Committee, any other disease.

Propaganda.

(19) To take all practicable steps, in accordance with the Proposals, to encourage parents and others to take advantage of the arrangements for (*a*) vaccination against smallpox and (*b*) immunization against diphtheria and, subject to the approval of the Health Committee, any other disease, by all the means referred to in the Proposals and to keep constantly before the public details of the facilities available.

Prevention of illness.

(20) In accordance with arrangements approved by the Health Committee, to take steps (by means of propaganda in the Press and the exhibition of films ; by holding Health Exhibitions ; by arranging for lectures on health topics and by any other reasonable means), with a view to the prevention of illness, particularly tuberculosis.

Outbreaks of infectious disease.

(21) Forthwith, upon receipt from the Local [Sanitary] Authority, of a copy of the notification of any case of infectious disease or food poisoning, to take such steps as may be necessary on the part of the County Council, as Local Health Authority.

Care and after-care.

(22) To make recommendations to the Health Committee in regard to the establishment of facilities for the rehabilitation of patients needing care and after-care and to take steps to implement any direction given by the County Council in regard to such matters.

Care of children of tuberculous parents.

(23) To ensure, in accordance with arrangements approved by the Health Committee, the care, in convalescent homes or otherwise, of children whose parents are infected with tuberculosis.

Provision of articles for tuberculous persons.

(24) To provide on loan, in accordance with arrangements approved by the Health Committee, such articles as beds, bedding, nursing requisites, extra nourishment, clothing and open-air shelters for the use of patients suffering from tuberculosis who are being cared for at home.

Tuberculosis Care Associations.

(25) To encourage the work of voluntary Tuberculosis Care Associations or the formation of further Associations and as authorized by paragraph (6) to make recommendations, in appropriate cases, to the Health Committee for the granting by the Health Committee of financial assistance to such voluntary Associations.

Loan, etc., of sick room articles.

(26) To provide on loan, sick room articles and, as soon as circumstances permit, to provide such articles at the residence of each Home Nurse and, further, to provide on loan from Health Centres or other suitable premises such larger articles as wheel chairs, bed rests, bed blocks, etc.

Encouragement of voluntary organizations providing sick room articles.

(27) To make recommendations to the Health Committee with a view to the encouragement, by the granting of financial assistance by the Health Committee and other means, of any voluntary organizations providing sick room articles on loan.

Provision of meals.

(28) To make provision, in accordance with arrangements approved by the Health Committee, for the supply of meals to mental defectives attending any occupation centre provided or used by the County Council in the area in connection with the mental health services.

"Mobile meals" Service.

(29) To make provision for and manage a "mobile meals" service, if the County Council shall so decide and in accordance with arrangements approved by the County Council.

Financial Provisions.

(30) To arrange for the certification, in such manner as may be required by or on behalf of the County Council, of all accounts and claims in respect of any cost, debt or liability incurred by the Area Sub-Committee.

(31) To take such action in relation to the payment or submission to the County Treasurer for payment of claims and accounts as may be prescribed from time to time by or on behalf of the County Council.

(32) To collect all sums due to the County Council for goods supplied or services rendered in respect of functions administered by the Area Sub-Committee and to credit such sums to the County Fund in the manner and at such times as may be prescribed by or on behalf of the County Council.

(33) To keep such records and furnish such information and returns of a statistical, financial or accounting nature in such form and at such times as may be prescribed or required by or on behalf of the County Council.

(34) To make available, for audit by any officer of the County Council duly authorized by or on behalf of the County Council and at such times as may from time to time be required, all accounts, books, vouchers, deeds, contracts, receipts and other documents whatsoever relating to the work of the Area Sub-Committee and to require the officers under the control of the Area Sub-Committee to furnish the auditor or any authorized officer of the County Council with such information and explanations as may be necessary for the performance of his duties.

Staff.

(35) To appoint, subject to the provisoes set out below, any officers or servants to be employed by the County Council (the intention being that all officers and servants shall, so far as circumstances in the opinion of the Health Committee permit, be in the employment of the County Council) for duty solely within the area and who are to

be engaged in discharging functions delegated or referred to the Area Sub-Committee or discharging such functions as aforesaid and functions in connection with the School Health Services provided (*a*) that the appointment of the Clerk of the Area Sub-Committee, the Area Medical Officer, the Area Financial Officer and, unless otherwise agreed in any specific case, the Architectural and Building staff, the staffs of the Area Clerk and the Area Financial Officer respectively shall not be a function of the Area Sub-Committee and such officers and servants shall be appointed by the County Council; (*b*) that the functions delegated to the Area Sub-Committee of appointing officers or servants shall be limited to appointments to posts included in an establishment approved by the County Council and the salaries or wages to be paid and the other terms and conditions of service of such employees shall be in accordance with scales of remuneration and other terms and conditions of service approved by or on behalf of the County Council; and (*c*) that, subject to prior consultation with the Area Sub-Committee except in any case of urgency, the County Council shall have the right to transfer any of their whole-time employees, whether appointed by them or by the Area Sub-Committee, for duty in any part of the Administrative County.

(36) To control all officers and servants allocated to the Area insofar as they are carrying out duties relating to the services delegated or referred to the Area Sub-Committee.

(37) To terminate the engagement of any officer or servant other than those referred to in proviso (*a*) to paragraph (35) above, subject to the right of such officer or servant to appeal to the County Council against such dismissal.

Efficient operation of services.

(38) To take all steps, either by the discharge of the functions delegated to them or by the making of appropriate recommendations to the Health Committee, as the case may require, to ensure the efficient operation of the services to be provided in the area by the County Council, as Local Health Authority.

Other functions.

(39) To discharge such other functions as the Health Committee of the County Council may from time to time decide.

The Area Sub-Committee shall discharge all the functions to be exercised by them on behalf of the Health Committee, subject to such directions as shall be given from time to time by or on behalf of the County Council and, in particular, without prejudice to the generality of the immediately foregoing qualification, shall (*a*) prepare and submit to the Health Committee for approval in such form and by such dates as shall from time to time be prescribed by or on behalf of the County Council (i) annual estimates of income and expenditure on capital and revenue account in respect of the following financial year; (ii) supplementary estimates for each proposed item of expendi-

ture in respect of which provision or sufficient provision has not been made in the annual estimates of the Area Sub-Committee as approved by the County Council ; (iii) a separate estimate of any proposed new cost, debt or liability, whether on capital or revenue account, in excess of £100 ; (*b*) only incur expenditure approved by the County Council ; (*c*) observe any procedure prescribed by or on behalf of the County Council in relation to the ordering of goods, materials and/or services required by the Area Sub-Committee ; (*d*) in all respects observe the Standing Orders of the County Council ; (*e*) ensure that no action is taken which is contrary to the Proposals.

THE SCHEDULE REFERRED TO.

MEMBERSHIP OF AREA SUB-COMMITTEES.

No. and Name of Area.	*Name of County District(s) comprising the Area.*	*No. of members to be nominated by the Councils of the County Districts named in column (2).*	*No. of members of the County Council to be appointed by the Health Committee.*	*No. of other persons to be appointed by the Health Committee.*	*Total No. of members.*
(1)	(2)	(3)	(4)	(5)	(6)
1. North-East Essex ..	Colchester B.	3			
	Harwich B.	1			
	Brightlingsea U. ..	1			
	Clacton U.	2			
	Frinton and Walton U.	1			
	Halstead U.	1	.. 7 ..	7 ..	29
	West Mersea U. ..	1			
	Wivenhoe U.	1			
	Halstead R.	1			
	Lexden and Winstree R.	1			
	Tendring R.	2			
2. Mid-Essex ..	Chelmsford B. ..	2			
	Saffron Walden B. ..	1			
	Maldon B.	1			
	Braintree and Bocking U. ..	1			
	Burnham-on-Crouch U.	1			
	Witham U.	1	.. 7 ..	7 ..	30
	Braintree R.	2			
	Chelmsford R. ..	2			
	Dunmow R.	2			
	Maldon R.	1			
	Ongar R.	1			
	Saffron Walden R. ..	1			
3. South-East Essex ..	Benfleet U.	3			
	Billericay U.	5			
	Canvey Island U. ..	2	.. 7 ..	7 ..	29
	Rayleigh U.	2			
	Rochford R.	3			
4. South Essex ..	Thurrock U.	5			
	Brentwood U. ..	3	.. 7 ..	7 ..	29
	Hornchurch U. ..	7			
5. Forest	Chingford B. ..	3			
	Wanstead and Woodford B. ..	4			
	Chigwell U.	3	.. 7 ..	7 ..	30
	Epping U.	2			
	Waltham Holy Cross U.	2			
	Epping R.	2			
6. Romford B. ..	— ..	15	.. 7 ..	7 ..	29
7. Barking B. ..	— ..	15	.. 7 ..	7 ..	29
8. Dagenham B. ..	— ..	15	.. 7 ..	7 ..	29
9. Ilford B. ..	— ..	15	.. 7 ..	7 ..	29
10. Leyton B. ..	— ..	15	.. 7 ..	7 ..	29
11. Walthamstow B.	— ..	15	.. 7 ..	7 ..	29

Transfer of Staff and Property.

The coming into operation of the Act meant a widespread transfer of staff and also of property from County District Councils to the County Council on the one hand, and from the County Council to the Regional Hospital Boards on the other hand.

In regard to those services which were formerly carried on by certain District Councils in addition to the County Council, such as maternity and child welfare, midwifery, health visiting, immunization against diphtheria, and ambulances, staff, vehicles, equipment and land and buildings were transferred to the County Council who had become solely responsible for the provision of the services concerned. In those instances where staff were not mainly employed, and property was not entirely used in connection with transferable functions it was necessary for the authorities concerned to make special arrangements by mutual agreement.

The new responsibility of the County Council for a home nursing service involved the transfer of all members of the staff of district nursing associations and of the supervisory and administrative staff of the Essex County Nursing Association, including the two Training Homes, on 5th July, 1948. So far as property of all kinds was concerned, it was agreed that this should be purchased or leased, as appropriate, by the County Council.

Health Centres.

In June, 1948, a report was submitted showing that a large number of sites throughout the County had been earmarked for the possible future erection of health centres and that a number of other sites was still under investigation.

It was decided that the earmarking of suitable sites should be continued, but in view of the request of the Ministry of Health in Circular 3/48 that proposals for the erection of health centres under Section 21 of the Act should not, for the present, be formulated except in cases of urgency, it was agreed that no useful purpose would be served in considering the establishment of health centres at that juncture.

In order to preserve the *status quo* in connection with certain general dental services provided formerly by the Boroughs of Barking and Walthamstow, however, the Ministry stated that it would be necessary for the County Council to submit formal proposals under Section 21 of the Act. (These proposals, together with those relating to Sections 22–29 and 51 were set out in full in the Annual Report for 1947). Negotiations were at the same time entered into with the Executive Council for Essex (who had now become responsible for the general dental service) with a view to their use of the services of certain of the County Council's dental officers in Barking and Walthamstow.

Home Nursing.

It was indicated in the Report for 1947 that the difficulties which arose in the negotiations with the Essex County Nursing Association in connection with the transfer of their functions to the County Council were settled on a reasonably satisfactory basis before the Appointed Day.

In order to preserve the position of those members of the staff of voluntary nursing associations who are Queen's nurses, the County Council adopted proposals agreed at

national level in regard to the future relationship of the Queen's Institute of District Nursing to Local Health Authorities who took over services formerly provided by those associations. Under these proposals the County Council became a member of the Queen's Institute and agreed to appoint Queen's nurses as superintendents of their nursing staffs, to consult the Institute before making appointments, and to agree to periodical visiting by the Institute, subject to the following general conditions :—

(*a*) that as the Minister of Health is the final judge of the efficiency of the nursing service in any area, the Institute shall be entitled to terminate the membership of any local authority only with his consent ;

(*b*) that the appointment of a Queen's nurse as superintendent, though desirable, shall not be obligatory, and, in cases where a Queen's nurse is not so appointed, the local authority shall give adequate facilities for the superintendent to undergo a Queen's Institute qualifying course of training ;

(*c*) that the superintendent shall be responsible, through the Medical Officer of Health, only to the local authority by whom she is employed ;

(*d*) that visiting of local nursing staffs by the Queen's Institute shall be undertaken only by arrangement with the local authority concerned and, when so undertaken, shall be solely advisory in character ;

(*e*) that a copy of the Queen's Institute visitor's report, together with such recommendations as the Institute may consider necessary, shall be supplied to the local authority.

Health Education.

The responsibility laid upon the County Council under Section 28 of the National Health Service Act for health education and publicity and propaganda generally led to the creation of a new post of Health Education Organizer on the staff of the County Medical Officer, the first appointment to which was made in November, 1948. This officer is to have responsibilities in respect of health education throughout the County, including the provision of propaganda services and materials, the arrangement of film shows, exhibitions, lectures, conferences and week-end courses, and the maintenance of a panel of lecturers.

Among the suggestions made in Ministry of Health Circular 36/48 was the preparation and periodical revision of an authoritative guide to the health services available in the area of each local health authority. Plans were accordingly made for the preparation of a comprehensive handbook which would give details not only of the County Council's own services but also of the general medical, dental and pharmaceutical services, the hospital and specialist services and other such allied services.

The Thurrock Mobile Meals Service.

The Thurrock Mobile Meals Service, an experimental service for delivering cooked meals to patients in their own homes, began operations at the end of June, 1948, under the auspices of the Nuffield Provincial Hospitals Trust, the County Council and the Thurrock Urban District Council.

The proposal for an experimental service to deliver well-cooked diets, on medical recommendation, to the sick, the convalescent and the infirm in their own homes was

originally put to the Nuffield Provincial Hospitals Trust by its Women's Advisory Council in 1947 after detailed enquiries had been made into the various mobile meals schemes which were already being run in many parts of the country by voluntary bodies. The investigations revealed that outside the London area the schemes then existing catered for old people only and did not deliver meals more than two or three times a week.

Among the main objectives of the sponsors of the scheme under review were to attempt to discover whether a well-organized mobile meals service, preferably based on a hospital, could help to relieve the existing pressure on hospital beds, to try to develop co-ordination between hospital, general practitioner and local health authority care and after-care services within a particular area and, if the value of the scheme could be demonstrated, to encourage local health authorities in other parts of the country to organize similar services.

In order that the meals scheme might reach a representative cross-section of patients, it was felt that the area to be served ought to include industrial, residential and rural districts, and as the Thurrock Urban District appeared to satisfy these requirements talks were held between the Trust, the County Council and the Urban District Council in the summer of 1947 on the possibility of organizing a hospital meals scheme in the locality. A Management Committee and an Advisory Committee, consisting of representatives of the three bodies concerned and also of other interested bodies, were established and much preliminary discussion took place before the scheme came into operation.

It was arranged that meals should be prepared in the kitchen of the Thurrock Hospital and distributed by means of a van carrying special equipment for the purpose, the necessary staff being partly full-time paid personnel and partly voluntary workers.

By the end of 1948, after six months' working, about forty meals a day were being provided in two shifts, the van running fifty miles a day. Three types of diet were made available, normal, light and very light, each person receiving one meal a day from Monday to Friday, for as long as considered necessary.

With a service of this kind, it was inevitable that running expenses would be relatively high and at the end of 1948 the total cost per meal was 4/9d. from which should be deducted the sum of 11½d. as the average income per meal. The net loss, together with the initial capital expenditure on the vehicle and equipment, was borne by the Nuffield Provincial Hospitals Trust.

Sufficient evidence was not available by the end of 1948 to show whether or not the scheme was fulfilling its main purpose—to help to keep patients out of hospital, and it was clear that some time would have to elapse before it was practicable to analyse the statistical material that was being carefully collected.

Recovery of Charges.

There was provision in the Act for the recovery from persons availing themselves of certain services provided by Local Health Authorities of such charges as the Local Health Authority might consider reasonable, having regard to the means of those persons. The Ministry of Health defined the services in respect to which charges might be made in Circular 100/48 dated 18th June, 1948. Briefly the services are :—

(1) all articles provided under Section 22 (Care of Mothers and Young Children), including meals supplied and equipment lent for use in day nurseries, mother and baby homes, etc., except welfare foods, maternity outfits, special cots for premature babies, medicaments and dentures, eye-glasses and other appliances not being replacements necessitated by lack of care ;

(2) all articles of extra nourishment or clothing, garden shelters, beds, bedding, nursing requisites and sick-room equipment supplied or lent under the Care and After-care Service ;

(3) all services provided as part of the Domestic Help Service.

It was further indicated that the basis of the charges for articles should not exceed the actual cost, taking into account in the case of articles supplied on loan their normal useful life plus an addition of not more than 10 per cent. for handling expenses, and in the case of domestic helps the actual cost, including wages, etc., and organizational and clerical expenses.

The County Council accordingly adopted a complete scheme for the recovery of appropriate charges which was based on recommendations made with the approval of the Minister by the County Councils Association, the Association of Municipal Corporations and the London County Council, although it differed slightly in a number of particulars and on the whole was slightly more generous to the beneficiary. In accordance with the undertaking given in Parliament during the discussion of this particular aspect of the service, provision is made for persons using the services to be informed in advance what charges they are likely to be called upon to pay. Provision is also made for the extent of recovery to be determined according to the ability to pay and to obviate variations as between one beneficiary and another. Intending beneficiaries are advised of the amount of the standard charge, and it is only if they indicate that this is more than they can afford to pay that information is sought as to their means with a view to assessing what smaller sum they are able to pay.

Two scales are in existence for the purpose of determining the amount which it is reasonable should be paid for articles or services provided. Scale "A" enables the beneficiary and the responsible officer to determine on the spot with the least possible trouble whether or not payment should be made, whilst in the case of those services where advance application is made by beneficiaries, a comprehensive scale known as scale " B " is used, which goes into much greater detail in ascertaining particulars of income to be included, income to be disregarded and expenses to be allowed in determining the amount of the contribution to be paid.

The Services in the Areas.

What has so far been written in this section of the Report, dealing as it has done with decisions and activities at the centre, may be regarded as introductory. It must not be overlooked, however, that in a service like the National Health Service the most important point is at the periphery where the service makes contact with the individual ; nor must it ever be overlooked either by the spectator or (least of all) by those whose duty it is to assist in the administration of the service that (and this applies to no other service now provided by the County Council in the same degree) this contact is made

at a time when the individual who needs the service is at maximum stress either because of his or her own illness or the illness of a loved one.

The Report could not therefore be regarded as complete without some reference to the work in the Health Areas. Area Medical Officers have each kindly supplied a survey of the first six months' working of the service and the following notes are based on these surveys.

Administration. There were, of course, many difficulties associated with the inception of a vast scheme such as the service in Essex. Dr. J. D. Kershaw (North East) refers to them as "teething troubles" and this is probably a reasonable description because many of them will disappear as the service grows up.

One of the greatest difficulties was the lack of established clerical staff and off adequate office accommodation. This is referred to particularly by Dr. N. S. R. Lorraine (South East). In his Area temporary assistance was provided "by an already fully engaged Clerical Division clerk in the employ of three local District Councils, and also such assistance as could be given by a fully engaged member of the School Health Service clerical staff of the Essex Education Authority."

Other difficulties arose in some of the rural areas because of the fact that the Divisional School Medical Officer's staff set up under the Education Act, 1944, was accommodated in separate premises. Dr. Lorraine notes "it is of paramount necessity that the School Health Service and the Area Health Departments in South-East Essex should be centralized under one roof. It is obvious that if they are sited at different premises situate some distance apart, many difficulties are bound to arise, especially as the two Departments are so closely linked together. The existence of two addresses and two different telephone numbers has given rise to much confusion, overlapping and duplication, especially from the point of view of members of the public who have from time to time endeavoured to get in touch with the right Department."

Under this heading reference should be made to an understandable point of view which was and is prevalent in those Areas which were autonomous authorities before 5th July, 1948. It is perhaps summed up by Dr. A. T. W. Powell (Walthamstow) who in submitting his survey says "I have been requested, or indeed, instructed to submit in my Annual Report as Medical Officer of Health for the Borough, information as to the working of the whole of the Health Services of the Borough." Dr. C. Herington (Dagenham) refers to the same matter as follows: "It is difficult to differentiate accurately between the County and Corporation activities, therefore no attempt has been made to draw a hard and fast line to divide the functions of the Authorities concerned. Indeed, I would go further and suggest that our endeavour should be to knit all the agencies into one homogeneous whole, the target being to raise the level of health." This, of course, is the solution of the whole problem.

Health Centres. The only provision made in Essex under Section 21 of the Act (as noted on page 94) is designed to preserve in the Barking and Walthamstow Health Areas the Municipal Dental Services previously provided by the respective Borough Councils. In both Areas the recruitment and retention of staff was an outstanding problem during the first six months of the operation of the scheme. Dr. C. Leonard Williams (Barking) notes "In common with many other areas some dental officers

were attracted by the higher remuneration offered by private practice, and the loss of these officers necessitated a severe curtailment of the treatment of adults under the Public Dental Scheme, in order that the needs of the Priority Services could be met. At the end of the year four dental officers remained in the service." Dr. A. T. W. Powell writes " The continuation of this service is seriously threatened by the delay in reaching agreement with the Executive Council in regard to the payment of the salaries of the dental surgeons."

In connection with the ultimate development of the Health Centre idea a remark made by Dr. C. Herington is of some importance : " there should be no confusion between existing combined treatment centres and proposed health centres." Dr. J. D. Kershaw—who is incidentally responsible for two published papers on the subject as it affects rural Essex : " The Implementation of the National Health Service Act in a County District " Jnl. R.S.I. 1948, and " The Country Health Centre " (with Dr. W. Radcliffe of Wivenhoe), The Medical Press, 1949—suggests that " the partial implementation of the scheme [in the Area] would not only be of considerable local value but would form an interesting and profitable experiment of wider importance."

Care of Mothers and Young Children. The arrangements for the care of mothers and young children which were in existence before the Appointed Day were continued thereafter without a great deal of modification. As was to be anticipated only very slight extensions of services took place during the first six months of the new service. It was, however, essential to make some provision on the new housing estates which were being erected at various points in the County ; additional sessions were held in some cases, and in others arrangements were made for the transport of mothers and children to nearby clinics, pending the provision of new clinic premises. Dr. J. D. Kershaw notes a slight decrease in the attendances at ante-natal clinics owing to the development of the general practitioner obstetric service.

The capacity of day nurseries was taxed to the utmost and the waiting lists which existed in all Areas pointed to the necessity for the extensions to the service which were planned in addition to those which had been put in hand by some of the autonomous authorities at the time it was transferred. In the Dagenham Health Area, Dr. C. Herington points out : " The problem is tackled to some extent by the Daily Guardian Scheme whereby the local health authority contributes the sum of 4/- per week and the balance is payable by the mother concerned."

Owing to shortage of staff there was no opportunity to develop the priority dental service and Dr. Kershaw suggests : " In view of the obvious difficulties which are arising in the Part IV General Dental Service, I feel that of all the many staffing problems in the Area that of the priority dental service for mothers and young children is the most pressing."

Midwifery Service. Unlike other services the midwifery service was generally adequately staffed ; in fact, owing to the gradually falling birth rate and the tendency on the part of expectant mothers to go into hospital for confinement, Area Medical Officers suggest that it may be necessary to make changes in the distribution of the staff employed. It is of interest to note that Dr. Kershaw records : " The Hospital Management Committee took advantage of my dual capacity of Area Medical Officer

and [Administrative] Medical Superintendent of the Colchester Maternity Hospital by making me responsible for the general control of admissions to the Colchester Maternity Institutions. The value of having a single person to co-ordinate domiciliary with institutional midwifery has been amply demonstrated during the period under review."

Health Visiting. The staff of health visitors continued to be below establishment in nearly every Area, and only a restricted service could therefore be provided. Visits to mothers and children were maintained, and accounted in the main for the work of the staff employed, although their duties were by no means strictly confined to such visits.

Home Nursing. The service provided by voluntary associations before the Appointed Day was maintained. The need for increasing the number of nurses and for increasing the mobility of existing staff by the provision of motor cars was emphasised by a steady upward trend in the demand for the service after the Act came into operation. The appointment of a certain number of male nurses was mooted. Dr. Kershaw notes : " Though the system of employing nurses who combine general nursing and midwifery is undoubtedly the right one, the combined nurse must inevitably give her midwifery first place and her midwifery commitments limit the load of general district nursing which she can carry." Dr. J. B. Samson (Romford) refers to an increase in the number of evening visits required because more patients are receiving penicillin injections. The provision of adequate housing accommodation for home nurses received close attention in all Areas.

Vaccination and Immunization. The delay in determining the amount of the fee to be paid for the records in connection with vaccination and immunization had its effect upon the information available regarding the amount of work done by general practitioners. Dr. Kershaw notes : " Some practitioners send in regular batches of cards, while others are not prepared to submit cards unless payment is forthcoming. There is reason to believe that many practitioners who send in no cards whatever are doing a substantial amount of both immunization and vaccination." Dr. J. M. Thomas (Mid-Essex) suggests that " the majority of the private doctors appear quite keen to make the scheme operate successfully."

There appears to be no gainsaying the fact to which Dr. C. Leonard Williams draws attention, however " that now vaccination has been placed on a voluntary basis there has been a considerable fall in the number of vaccinations taking place."

In regard to immunization, the clinic sessions which were in being before the Appointed Day were continued. Dr. Kershaw indicates that there was something of a falling off in the attendances at these clinics, although on the whole he does not believe that there was sufficient reduction in the total amount of work done to give cause for disquiet at the present time, whilst Dr. Thomas comments on the value of clinic sessions in remote rural areas.

Immunization against whooping cough was continued in those Areas where it had been established prior to the Appointed Day. Dr. Williams notes that 487 children were immunized in the Barking Health Area during the period under review, despite the fact that mothers were advised that no guarantee could be given of the efficacy

of the treatment. Dr. Herington points out that similar limited arrangements existed in the Dagenham Health Area although " immunization against whooping cough must still be regarded as in the experimental stage."

Prevention of Illness, Care and After-Care. This is to all intents and purposes a new service, only a very small proportion of which was in existence prior to the Appointed Day, i.e. Tuberculosis Care Committees (see page 66), and the loan of sickroom equipment formerly carried out in some of the Boroughs adjacent to London and by district nurses employed by the voluntary nursing associations. These activities were continued, and so far as the loan of sickroom equipment was concerned to some extent extended. In addition arrangements were made for certain convalescent patients to go to suitable homes for a recuperative stay which did not involve any medical or nursing attention.

Dr. Kershaw notes that " certain local nursing associations having lost their former functions, turned their attention to possible activities in the voluntary provision of after-care to supplement the very useful work which the British Red Cross Society and St. John Ambulance Association were doing."

In the Barking Area Dr. Williams referred to the very extensive scheme for the provision of sickroom equipment which was in operation prior to the Appointed Day. The demands for loans increased and were all met, with the exception of providing wheel chairs on loan. He says " With regard to wheel-chairs there is a very real shortage. In quite a number of instances the patient has been eligible for the supply of a permanent wheel-chair through the Ministry of Pensions but there is a considerable waiting list for the supply of such chairs." He refers to active co-operation with hospital almoners and to work which is going on in connection with the care of the aged. He says " In a significant number of cases these people have been living completely on their own but in most cases they have been living in households with their married sons or daughters, and in the latter case a heavy burden has been placed on members of the household in endeavouring to minister to their needs. Close cooperation has been maintained with private doctors in supporting, where appropriate, their recommendations for the admission of the chronic sick to hospital on social grounds. . . . Close liaison has been maintained with the local office of the National Assistance Board and cash payments have been arranged to provide extra bedding in some cases. . . . . The problem of the aged, however, remains far from satisfactory and indeed little has been done as yet to tackle it comprehensively."

Chiropody clinics which had been established in the South Essex, South-East Essex, Forest, Barking, Dagenham, Leyton and Walthamstow Health Areas were continued. Dr. Powell indicates that in Walthamstow the service was very popular, the total attendances during the whole year being nearly 14,000.

Domestic Help Service. There was a good foundation of a home help service in most areas of the County on which to build the new domestic help service, and in some areas, including the County Council's former child welfare area, organizers of the service had been appointed. By the end of the year arrangements had been completed for the appointment of such organizers in all Areas to meet the steadily

increasing demand which became immediately apparent after the Appointed Day. Until such appointments were made the work in connection with the placing of domestic helps fell on the already over-worked health visiting staff.

A comment is made by Dr. Kershaw in regard to the difficulties connected with the establishment of the services in sparsely populated rural areas; he suggests that "the whole-time domestic help will rarely, if ever, be a practical proposition in the rural districts."

One of the difficulties encountered almost at once was in connection with the provision of domestic help in households where there were cases of infectious disease or a case of tuberculosis. In Areas where it was necessary to do so, this was overcome during the period under review by asking for volunteers from the enrolled staff of domestic helpers. The chronic sick made the greatest demand upon the service and to this extent no doubt much relief was afforded to the hospital service. Dr. Williams comments "It is pertinent to record that the Barking Health Area Sub-Committee did recommend that in their opinion in cases where a person would normally be admitted to hospital but had to remain at home because of the lack of hospital beds, no charge should be made for the service of a domestic help, i.e. if the person had been admitted to hospital no charge for treatment or maintenance would have been made." In this connection Dr. Powell also comments that "the service, together with the help of home nursing, appears to be the only means of overcoming the very serious shortage of hospital beds."

The provision of the service is very much appreciated by its beneficiaries. The survey from the South-East Essex Area states that "the demand for domestic helps has steadily increased due no doubt to the fact that the service has become more widely known, and possibly due also to the circulation of good reports of help received by various members of the public. Letters of appreciation are frequently received."

TABLE IV.

BIRTHS, DEATHS, ANNUAL RATES, &c., 1948.

Health Area and County District	Census, 1931		Estimated Population	Live Births		Still Births		Deaths at all Ages		Infant Deaths	
	Acreage	Population		No.	Rate*	No.	Rate†	No.	Rate*	No.	Rate‡
ADMINISTRATIVE COUNTY	959,464	1,189,004	1,530,900	26,649	17.4	546	20.1	14,393	9.4	668	25.1
BOROUGHS AND URBAN DISTRICTS	256,982	1,004,325	1,311,460	22,765	17.4	460	19.8	11,978	9.1	572	25.1
RURAL DISTRICTS	702,482	184,679	219,440	3,884	17.7	86	21.7	2,415	11.0	98	25.2
1. NORTH-EAST ESSEX	243,652	156,843	173,446	2,930	16.9	67	22.4	1,995	11.5	71	24.2
Colchester B.	12,011	49,131	52,270	938	17.9	27	28	508	9.7	20	21
Harwich B.	1,512	12,046	12,570	234	18.6	6	25	139	11.1	12	51
Brightlingsea U.	2,852	4,147	4,473	62	13.9	2	31	71	15.9	—	—
Clacton-on-Sea U.	6,470	16,737	23,010	339	14.7	9	26	301	13.1	7	21
Frinton and Walton U.	6,293	7,324	7,943	109	13.7	4	35	92	11.6	1	9
Halstead U.	1,176	6,012	6,020	93	15.4	2	21	77	12.8	2	22
West Mersea U.	3,171	2,067	2,783	40	14.4	—	—	43	15.5	2	50
Wivenhoe U.	1,493	2,193	2,317	45	19.4	—	—	31	13.4	—	—
Halstead R.	76,693	15,997	16,520	276	16.7	2	7	201	12.2	3	11
Lexden and Winstree R.	66,097	19,418	21,910	377	17.2	3	8	267	12.2	9	24
Tendring R.	65,884	21,771	23,630	417	17.6	12	28	265	11.2	15	36
2. MID-ESSEX	459,453	165,617	202,420	3,570	17.6	76	20.8	2,126	10.5	90	25.2
Chelmsford B.	4,772	27,457	35,850	615	17.2	14	22	311	8.7	18	29
Maldon B.	4,809	8,542	9,570	161	16.8	2	12	121	12.6	3	19
Saffron Walden B.	7,502	5,930	6,590	124	18.8	2	16	100	15.2	5	40
Braintree and Bocking U.	6,812	13,497	17,180	278	16.2	4	14	204	11.9	9	32
Burnham-on-Crouch U.	5,352	3,492	3,838	76	19.8	1	13	51	13.3	2	26
Witham U.	7,329	6,751	8,252	143	17.3	—	—	68	8.2	1	7
Braintree R.	59,556	16,378	18,190	292	16.1	9	30	206	11.3	11	38
Chelmsford R.	86,506	27,836	38,490	726	18.9	15	20	371	9.6	18	25
Dunmow R.	72,487	15,320	18,490	309	16.7	8	25	198	10.7	8	26
Maldon R.	78,507	13,348	14,350	252	17.6	2	8	135	9.4	5	20
Ongar R.	47,236	11,523	14,370	283	19.7	9	31	162	11.3	5	18
Saffron Walden R.	78,585	15,543	17,250	311	18.0	10	31	199	11.5	5	16
3. SOUTH-EAST ESSEX	81,886	63,707	100,067	1,744	17.4	30	16.9	1,213	12.1	48	27.5
Benfleet U.	6,361	12,091	19,600	315	16.1	4	13	281	14.3	13	41
Billericay U.	29,367	27,708	42,180	749	17.8	13	17	472	11.2	20	27
Canvey Island U.	4,351	3,532	10,500	190	18.1	4	21	154	14.7	8	42
Rayleigh U.	5,727	6,407	9,237	160	17.3	5	30	88	9.5	2	13
Rochford R.	36,080	13,969	18,550	330	17.8	4	12	218	11.8	5	15
4. SOUTH ESSEX	76,361	124,727	204,730	3,825	18.7	77	19.7	1,716	8.4	109	28.5
Brentwood U.	18,269	23,694	28,050	444	15.8	7	16	275	9.8	10	23
Hornchurch U.	19,768	39,389	101,000	1,745	17.3	35	20	819	8.1	60	34
Thurrock U.	38,324	61,644	75,680	1,636	21.6	35	21	622	8.2	39	24
5. FOREST	62,978	107,292	175,037	2,921	16.9	71	23.7	1,588	9.1	85	29.1
Chingford B.	2,868	22,076	46,610	743	15.9	17	22	342	7.3	16	22
Wanstead and Woodford B.	3,842	43,129	61,150	977	16.0	20	20	618	10.1	32	33
Chigwell U.	8,971	16,338	35,190	615	17.5	16	25	299	8.5	16	26
Epping U.	1,488	5,081	6,410	125	19.5	2	16	63	9.8	5	40
Waltham Holy Cross U.	10,958	7,092	7,987	150	18.8	4	26	73	9.1	4	27
Epping R.	34,851	13,576	17,690	311	17.6	12	37	193	10.9	12	39
6. ROMFORD	9,342	37,840	72,610	1,337	18.4	26	19.1	597	8.2	30	22 4
7. BARKING	3,877	51,270	78,890	1,461	18.5	29	19.5	593	7.5	30	20.5
8. DAGENHAM	6,554	89,362	111,500	2,135	19.1	32	14.8	686	6.2	62	29
9. ILFORD	8,425	131,061	183,400	2,848	15.5	65	22.3	1,518	8.3	62	21.8
10. LEYTON	2,594	128,313	106,100	1,810	17.1	27	14.7	1,118	10.5	38	21
11. WALTHAMSTOW	4,342	132,972	122,700	2,068	16.9	46	21.8	1,243	10.1	43	20.8

*per 1,000 estimated population; †per 1,000 total births; ‡per 1,000 live births.

TABLE V.

CAUSES OF DEATH BY AGE 1948

Cause of Death	Males							Females						
	0 –	1 –	5 –	15 –	45 –	65 –	Total	0 –	1 –	5 –	15 –	45 –	65 –	Total
1. Typhoid and paratyphoid fever	—	—	—	—	—	—	0	—	—	—	—	1	—	1
2. Cerebro-spinal fever	2	3	—	1	1	—	7	2	2	—	1	—	—	5
3. Scarlet fever	—	—	1	—	—	—	1	—	—	—	—	—	—	0
4. Whooping cough	10	2	—	—	—	—	12	11	2	—	—	—	—	13
5. Diphtheria	—	—	1	—	—	—	1	—	1	3	—	—	—	4
6. Tuberculosis—respiratory	—	3	—	142	143	40	328	1	2	2	146	43	17	211
7. Tuberculosis—other forms	2	5	4	16	11	3	41	—	4	6	19	5	1	35
8. Syphilitic disease	—	—	—	3	23	16	42	—	—	—	—	8	10	18
9. Influenza	3	3	—	1	3	12	22	1	2	—	2	7	8	20
10. Measles	2	5	—	—	—	—	7	—	1	1	—	—	—	2
11. Acute poliomyelitis and polioencephalitis	—	—	—	1	—	—	1	—	—	1	3	—	—	4
12. Acute infectious encephalitis	—	—	1	1	1	—	3	—	—	—	3	2	2	7
13M Cancer of mouth and oesophagus	—	1	—	3	15	79	98	*	*	*	*	*	*	*
13F Cancer of uterus	—	—	—	—	—	—	0	—	1	—	13	51	57	122
14. Cancer of stomach and duodenum	—	—	—	11	115	155	281	—	—	—	10	73	116	199
15. Cancer of breast	—	—	—	—	—	1	1	—	—	—	34	113	111	258
16. Cancer of all other sites	1	6	7	70	389	540	1,013	—	4	2	57	241	377	681
17. Diabetes	—	—	—	3	6	22	31	—	—	—	1	13	48	62
18. Intra-cranial vascular lesions	1	—	1	8	144	504	658	1	1	—	9	117	837	1,025
19. Heart disease	—	—	2	54	513	1,499	2,068	—	—	2	64	267	1,728	2,061
20. Other circulatory diseases	—	—	—	7	57	230	294	—	—	—	10	55	251	316
21. Bronchitis	7	4	—	12	132	310	465	2	—	—	5	39	191	237
22. Pneumonia	51	15	5	19	72	115	277	42	10	2	12	27	142	235
23. Other respiratory diseases	2	5	—	11	28	53	99	2	1	1	10	26	50	90
24. Ulcer of stomach or duodenum	—	—	—	13	43	49	105	—	—	—	3	19	24	46
25. Diarrhoea under two years	26	1	—	—	—	—	27	13	—	—	—	—	—	13
26. Appendicitis	—	4	—	9	6	3	22	—	1	1	2	2	6	12
27. Other digestive diseases	12	4	1	20	37	55	129	3	2	2	8	37	97	149
28. Nephritis	—	—	—	19	53	82	154	2	—	2	24	41	85	154
29. Puerperal and post-abortive sepsis	—	—	—	—	—	—	0	—	—	—	6	—	—	6
30. Other maternal causes	—	—	—	—	—	—	0	—	—	—	20	—	—	20
31. Premature birth	80	—	—	—	—	—	80	62	—	—	—	—	—	62
32. Congenital malformation, birth injury and other infantile diseases	156	7	1	7	3	3	177	124	6	—	6	9	2	147
33. Suicide	—	—	—	31	38	28	97	—	—	—	22	25	10	57
34. Road traffic accidents	—	5	12	45	25	16	103	—	3	3	7	4	14	31
35. Other violent causes	12	9	9	42	24	26	122	8	12	6	14	9	73	122
36. All other causes	18	12	13	57	110	398	608	9	13	14	70	91	397	594
All Causes	385	94	58	606	1,992	4,239	7,374	283	68	48	581	1,385	4,654	7,019

*For females, cancer of the mouth and oesophagus is included under " cancer of all other sites ".

TABLE VI.
CAUSES OF DEATH, 1948.

Health Area and County District		Typhoid and Para-typhoid Fever	Cerebro-Spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Syphilitic Disease	Influenza	Measles	Acute Poliomyelitis and Polioencephalitis	Acute Infectious Encephalitis	Cancer of Buccal Cavity and Oesophagus (Males)	Cancer of Uterus	Cancer of Stomach and Duodenum	Cancer of Breast	Cancer of all other Sites	Diabetes	Intra-Cranial Vascular Lesions	Heart Disease	Other Diseases of Circulatory System	Bronchitis	Pneumonia	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhoea (under 2 years)	Appendicitis	Other Digestive Diseases	Nephritis	Puerperal and Post Abortive Sepsis	Other Maternal Causes	Premature Birth	Congenital Malformations, Birth Injury and Infantile Diseases	Suicide	Road Traffic Accidents	Other Violent Causes	All other Causes	All Causes
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13M)	(13F)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	
ADMINISTRATIVE COUNTY	..	1	12	1	25	5	539	76	60	42	9	5	10	98	122	480	259	1,694	93	1,683	4,129	610	702	512	189	151	40	34	278	308	6	29	142	324	154	134	244	1,292	14,393
BOROUGHS AND URBAN DISTRICTS		1	10	1	22	5	486	62	46	37	8	5	10	79	99	392	225	1,411	79	1,387	3,411	511	614	429	162	132	35	26	229	239	6	13	116	281	137	107	207	958	11,978
RURAL DISTRICTS	.. ..	0	2	0	3	0	53	14	14	5	1	0	0	19	23	88	34	283	14	296	718	99	88	83	27	19	5	8	49	69	0	7	26	43	17	27	37	244	2,415
1. NORTH-EAST ESSEX	..	1	0	0	3	0	47	10	5	6	1	0	2	10	16	55	33	215	11	275	670	78	69	47	22	22	3	3	32	56	0	2	19	32	17	16	28	189	1,595
Colchester B.	.. ..	1	—	—	2	—	21	2	1	3	—	—	1	4	2	14	7	47	1	67	194	14	10	10	8	13	—	—	6	14	—	1	9	8	9	3	7	29	598
Harwich B.	.. ..	—	—	—	—	—	1	—	1	1	—	—	—	—	—	3	6	14	1	18	42	3	11	5	2	3	1	—	2	6	—	—	2	6	—	1	1	9	139
Brightlingsea U.	.. ..	—	—	—	—	—	½	—	—	—	—	—	—	—	—	1	1	10	1	10	24	8	—	1	1	—	—	—	1	4	—	—	—	—	—	—	1	2	71
Clacton-on-Sea U.	.. ..	—	—	—	—	—	6	3	—	2	—	—	1	1	3	10	3	30	1	51	191	14	5	6	4	1	—	—	3	4	—	—	—	5	3	½	1	3	37	391
Frinton and Walton U.	..	—	—	—	—	—	½	—	—	—	—	—	—	½	½	1	3	14	1	9	31	½	5	—	—	1	—	—	1	4	—	—	—	—	—	½	½	1	6	92
Halstead U.	.. ..	—	—	—	—	—	—	—	—	—	—	—	—	½	2	2	—	6	—	17	23	½	1	4	—	—	—	—	1	½	—	—	—	1	1	—	—	1	12	77
West Mersea U.	.. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5	—	8	12	½	½	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43
Wivenhoe U.	.. ..	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	4	10	1	½	—	1	—	—	—	—	—	—	—	—	½	—	—	1	4	43
Halstead R.	.. ..	—	—	—	—	—	½	½	—	1	—	—	—	½	1	6	1	28	1	24	53	4	10	7	1	1	—	1	1	12	—	—	—	—	—	1	2	35	201
Lexden and Winstree R.		—	—	—	—	—	3	½	—	—	—	—	—	1	1	10	3	32	4	32	99	10	13	6	2	—	—	—	1	7	—	—	5	½	1	2	5	15	267
Tendring R.	.. ..	—	—	—	1	—	6	½	2	—	—	—	—	½	4	6	2	24	1	35	79	10	10	7	4	—	1	—	12	3	—	1	3	7	2	3	6	37	265
2. MID-ESSEX	.. .. ..	0	2	0	2	0	47	8	13	7	1	0	2	22	22	73	34	242	14	273	607	86	72	87	25	18	2	10	36	52	0	7	18	51	17	25	39	212	2,126
Chelmsford B.	.. ..	—	—	—	—	—	3	1	4	—	—	—	—	6	3	11	6	38	3	36	84	18	14	15	3	—	—	—	5	2	—	1	13	3	4	7	31	311
Maldon B.	.. ..	—	—	—	—	—	½	—	1	—	—	—	—	1	2	4	—	8	—	20	53	4	1	5	1	1	—	—	2	½	—	—	—	2	—	1	3	8	121
Saffron Walden B.	.. ..	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1	2	18	2	7	24	3	3	2	4	—	1	—	3	½	—	—	—	2	—	1	1	10	100
Braintree and Bocking U.	..	—	—	—	—	—	10	—	—	1	—	—	—	—	1	3	2	22	3	27	61	½	5	14	3	2	—	2	—	½	—	—	—	4	2	—	1	10	190
Burnham-on-Crouch U.	..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	6	—	13	11	½	—	—	1	—	—	—	3	½	—	—	2	1	½	—	1	6	25	204
Witham U.	.. ..	—	—	—	—	—	½	1	1	—	—	—	—	1	—	—	—	1	—	10	28	½	—	—	—	—	—	—	1	½	—	—	1	—	—	—	3	6	51
Braintree R.	.. ..	—	—	—	—	—	3	1	½	1	—	—	—	—	—	3	3	—	—	10	28	½	—	3	—	½	—	—	1	1	—	—	—	—	—	—	1	5	68
Chelmsford R.	.. ..	—	1	—	—	—	6	1	½	1	—	—	—	4	2	8	3	25	½	17	60	4	9	5	3	5	1	—	3	½	—	1	7	3	3	1	24	206
Dunmow R.	.. ..	—	—	—	—	—	4	—	1	—	—	—	—	5	3	19	3	51	1	53	76	21	15	19	3	2	—	—	7	5	—	½	7	10	4	4	8	40	371
Maldon R.	.. ..	—	1	—	1	—	5	—	—	—	1	—	—	1	1	6	1	14	—	17	50	1	—	6	2	1	—	2	5	8	—	—	3	4	1	4	1	18	198
Ongar R.	.. ..	—	—	—	—	—	5	2	—	1	—	—	—	1	3	5	6	17	1	21	53	9	5	5	1	3	—	1	5	3	—	1	4	1	2	2	13	135
Saffron Walden R.	..	—	—	—	—	—	5	1	—	2	—	—	—	1	3	8	5	20	1	21	53	11	9	6	4	2	—	1	1	7	—	1	2	3	—	3	5	24	199
3. SOUTH-EAST ESSEX	..	0	1	0	2	1	45	5	5	2	0	0	1	6	10	53	16	133	8	159	361	57	64	42	13	9	1	3	22	26	0	1	13	25	13	8	17	100	1,213
Benfleet U.	.. ..	—	—	—	—	—	15	1	—	—	—	—	—	2	3	7	4	32	—	36	98	13	14	13	4	3	—	1	6	3	—	—	7	5	5	—	2	7	281
Billericay U.	.. ..	—	—	—	2	—	12	1	—	2	—	—	1	1	4	21	5	60	2	57	124	27	30	11	5	3	—	1	12	10	—	1	4	12	3	4	9	47	472
Canvey Island U.	..	—	1	—	—	—	6	2	—	—	—	—	—	1	1	5	1	13	2	17	39	3	11	8	1	1	1	—	2	6	—	—	—	6	4	2	3	18	154
Rayleigh U.	.. ..	—	—	—	—	1	2	—	2	—	—	—	—	1	—	8	2	5	2	16	22	5	3	1	—	—	—	1	1	6	—	—	—	1	—	—	2	15	218
Rochford R.	.. ..	—	—	—	—	—	10	1	3	—	—	—	—	—	2	12	4	23	2	24	78	9	6	9	3	2	—	1	1	6	—	—	1	2	—	2	2	15	218
4. SOUTH ESSEX	.. ..	0	1	0	3	3	78	13	4	4	3	1	0	15	12	52	41	192	15	185	504	71	66	56	18	15	14	4	34	31	2	3	22	44	19	16	38	137	1,716
Brentwood U.	.. ..	—	—	—	1	—	12	1	—	—	—	—	—	1	2	14	2	31	2	42	82	14	6	8	2	3	—	—	6	3	—	—	—	3	2	3	7	28	275
Hornchurch U.	.. ..	—	—	—	2	1	37	7	1	1	1	—	—	1	3	20	18	91	6	94	259	27	36	30	9	7	7	4	14	13	1	1	12	25	8	7	14	64	819
Thurrock U.	.. ..	—	1	—	—	2	29	5	3	3	2	—	—	7	7	18	21	70	7	49	172	30	24	18	7	5	7	—	14	15	1	2	10	16	9	6	17	45	622
5. FOREST	.. .. ..	0	1	0	2	0	53	15	6	1	1	1	2	8	11	50	33	205	7	191	415	73	66	55	27	19	6	3	48	48	1	1	17	41	15	10	27	129	1,588
Chingford B.	.. ..	—	—	—	—	—	16	5	1	—	—	—	—	2	4	8	11	45	1	36	89	14	15	16	6	4	—	—	10	10	—	—	2	12	4	4	4	23	342
Wanstead and Woodford B.		—	—	—	2	—	17	4	3	—	1	—	2	1	5	20	10	75	3	80	170	32	29	17	6	9	3	—	19	18	1	—	8	17	4	4	11	47	618
Chigwell U.	.. ..	—	1	—	—	—	13	2	—	1	—	1	—	4	—	13	6	45	3	40	66	8	15	9	8	3	1	2	8	9	—	—	2	4	4	1	5	24	299
Epping U.	.. ..	—	—	—	—	—	1	—	1	—	—	—	—	1	1	4	1	4	—	7	16	4	—	3	2	1	—	—	½	—	—	—	—	3	—	—	2	9	63
Waltham Holy Cross U.		—	—	—	—	—	3	—	—	—	—	—	—	—	—	3	2	10	—	7	13	4	4	4	—	1	—	1	3	2	—	—	1	1	—	—	1	11	73
Epping R.	.. ..	—	—	—	—	—	3	3	1	—	—	—	—	—	1	3	2	20	—	21	61	11	3	6	5	1	2	—	6	9	—	1	2	4	3	1	4	15	193
6. ROMFORD	.. .. ..	0	1	0	0	0	25	5	1	1	0	0	0	5	6	24	8	71	2	63	175	29	25	14	10	4	1	2	11	18	0	1	10	13	7	4	14	47	397
7. BARKING	.. .. ..	0	0	0	1	1	28	2	4	2	1	1	0	8	6	27	11	83	5	56	129	33	37	25	7	12	2	2	10	8	0	1	3	15	8	5	16	44	503
8. DAGENHAM	.. .. ..	0	1	0	3	0	47	2	2	2	1	1	0	3	12	32	10	79	3	49	164	22	46	32	12	7	5	0	9	16	2	2	13	21	5	16	9	58	686
9. ILFORD	.. .. ..	0	3	0	0	0	62	7	6	8	0	1	0	9	14	49	34	191	9	179	422	74	83	50	22	15	1	3	29	21	0	0	16	32	25	13	25	115	1,518
10. LEYTON	.. .. ..	0	2	1	3	0	47	5	5	3	0	0	0	7	12	25	17	128	10	122	323	43	106	44	11	11	3	1	23	15	1	2	7	25	15	11	12	78	1,118
11. WALTHAMSTOW	.. ..	0	0	0	6	0	60	4	9	6	1	0	3	5	1	40	22	155	9	140	359	44	68	60	22	19	2	3	24	17	0	0	4	25	13	10	19	93	1,243

TABLE VII.

NOTIFICATIONS OF INFECTIOUS DISEASE.

	Health Area and County District	Scarlet Fever	Whooping Cough	Diphtheria	Measles	Acute Pneumonia	Cerebro-Spinal Fever	Acute Poliomyelitis	Acute Polio-encephalitis	Encephalitis Lethargica	Dysentery	Ophthalmia Neonatorum	Puerperal Pyrexia	Smallpox	Paratyphoid Fever	Enteric Fever	Erysipelas	Malaria	Others*	Total
	ADMINISTRATIVE COUNTY ..	1,817	6,507	61	15,454	1,108	29	57	1	0	193	32	185	0	11	5	321	3	469	26,253
	BOROUGHS AND URBAN DISTRICTS	1,674	5,449	56	13,740	1,051	28	50	1	0	176	32	168	0	9	5	291	1	409	23,140
	RURAL DISTRICTS	143	1,058	5	1,714	57	1	7	0	0	17	0	17	0	2	0	30	2	62	3,113
1.	NORTH-EAST ESSEX ..	105	524	8	1,975	61	3	6	0	0	17	0	7	0	3	0	21	0	243	2,973
	Colchester B.	44	158	6	619	30	1	3	—	—	13	—	3	—	2	—	3	—	122	1,004
	Harwich B.	4	42	—	275	10	1	1	—	—	—	—	2	—	—	—	—	—	1	336
	Brightlingsea U.	—	21	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	28	60
	Clacton-on-Sea U. ..	4	14	—	189	—	1	—	—	—	—	—	—	—	—	—	2	—	35	245
	Frinton and Walton U. ..	3	13	—	52	2	—	1	—	—	—	—	—	—	—	—	2	—	1	74
	Halstead U.	—	5	—	253	—	—	—	—	—	—	—	—	—	—	—	1	—	7	266
	West Mersea U.	2	6	—	36	—	—	—	—	—	1	—	1	—	—	—	1	—	13	60
	Wivenhoe U.	2	18	—	7	1	—	—	—	—	—	—	—	—	1	—	1	—	—	30
	Halstead R.	5	52	—	132	2	—	1	—	—	—	—	—	—	—	—	2	—	5	199
	Lexden and Winstree R.	25	117	2	261	13	—	—	—	—	1	—	—	—	—	—	4	—	12	435
	Tendring R.	16	78	—	141	3	—	—	—	—	2	—	—	—	—	—	5	—	19	264
2.	MID-ESSEX	97	810	2	2,165	53	1	11	0	0	7	2	31	0	1	0	20	0	92	3,292
	Chelmsford B.	20	79	—	605	2	—	2	—	—	—	1	22	—	—	—	2	—	1	734
	Maldon B.	2	33	—	210	24	—	—	—	—	—	1	1	—	—	—	3	—	75	349
	Saffron Walden B. ..	—	10	—	40	2	—	5	—	—	—	—	—	—	—	—	2	—	—	59
	Braintree and Bocking U.	6	50	—	254	1	—	—	—	—	—	—	1	—	—	—	—	—	—	312
	Burnham-on-Crouch U. ..	6	4	—	90	1	—	—	—	—	—	—	—	—	—	—	2	—	—	103
	Witham U.	—	36	—	13	3	—	—	—	—	—	—	—	—	—	—	2	—	—	54
	Braintree R.	9	38	—	172	4	1	—	—	—	1	—	3	—	—	—	6	—	—	234
	Chelmsford R.	16	244	—	352	5	—	—	—	—	1	—	—	—	—	—	2	—	2	622
	Dunmow R.	8	100	1	129	1	—	1	—	—	1	—	3	—	—	—	—	—	—	244
	Maldon R.	13	87	—	205	9	—	—	—	—	1	—	—	—	—	—	—	—	6	321
	Ongar R.	13	60	1	51	—	—	—	—	—	2	—	1	—	—	—	1	—	8	136
	Saffron Walden R. ..	4	69	—	44	1	—	3	—	—	1	—	1	—	1	—	—	—	—	124
3.	SOUTH-EAST ESSEX ..	100	361	5	464	38	1	1	0	0	6	3	16	0	1	0	23	0	13	1,032
	Benfleet U.	19	69	—	38	7	—	—	—	—	—	—	—	—	—	—	6	—	2	141
	Billericay U.	51	192	2	194	13	—	—	—	—	—	3	6	—	—	—	5	—	—	466
	Canvey Island U. ..	—	1	1	137	3	1	—	—	—	—	—	—	—	—	—	—	—	2	145
	Rayleigh U.	10	25	1	68	3	—	1	—	—	—	—	—	—	—	—	6	—	1	115
	Rochford R.	20	74	1	27	12	—	—	—	—	6	—	10	—	1	—	6	—	8	165
4.	SOUTH ESSEX	264	593	13	1,081	165	1	10	0	0	136	1	8	0	1	0	43	0	27	2,343
	Brentwood U.	32	123	2	72	3	—	—	—	—	3	—	1	—	—	—	3	—	4	243
	Hornchurch U.	114	307	2	585	36	—	9	—	—	121	1	1	—	—	—	28	—	—	1,204
	Thurrock U.	118	163	9	424	126	1	1	—	—	12	—	6	—	1	—	12	—	24	897
5.	FOREST	177	782	2	1,740	152	4	10	0	0	7	3	19	0	1	1	49	2	29	2,978
	Chingford B.	78	190	—	355	78	3	4	—	—	1	1	1	—	—	—	13	—	—	724
	Wanstead and Woodford B.	47	239	2	470	33	—	1	—	—	5	1	8	—	1	—	13	—	20	840
	Chigwell U.	30	153	—	531	19	—	3	—	—	—	—	—	—	—	1	12	—	—	749
	Epping U.	4	40	—	164	2	1	—	—	—	—	—	10	—	—	—	1	—	5	227
	Waltham Holy Cross U.	4	21	—	20	13	—	—	—	—	—	1	—	—	—	—	6	—	4	69
	Epping R.	14	139	—	200	7	—	2	—	—	1	—	—	—	—	—	4	2	—	369
6.	ROMFORD	99	327	2	488	69	4	2	0	0	2	4	9	0	0	1	12	1	0	1,020

POST SCRIPTUM.

At my request my predecessor, Dr. J. C. Thresh, the Essex County Council's first Medical Officer of Health, in the last Annual Report (for the year 1918) which he prepared included what he described as " a resumé of the Sanitary work done by the County Council since its inauguration shewing how it has developed and giving my opinion as to its results ". He agreed to my request because he thought the resumé might be of value in the future. I think he was justified in this, and that is my reason for the following notes and comments on the growth and development of the Public Health Service of the Essex County Council during the thirty years (1919–1949) that I have been its second Medical Officer of Health.

It was not incumbent upon County Councils in their early days to appoint a Medical Officer of Health, but it was to be anticipated that the County which had produced Gilbert and Lister, and in which the bones of Harvey rested, would be to some extent pioneers in this respect. Dr. John Clough Thresh. D.Sc., who was Medical Officer of Health of the Chelmsford and Maldon Rural Districts and thus known to Members of the County Council, had first undertaken duties of a medical advisory nature for the County Council by making summaries of the reports of Medical Officers of Health of Sanitary Districts in the County from 1889 onwards. In 1898 he was appointed part-time County Medical Officer of Health whilst continuing to act as Medical Officer of Health of the two Rural Districts, and this arrangement obtained until 1914, when his agreement with the Chelmsford and Maldon Councils was terminated. However, by the time the 1914–18 war was coming to an end Dr. Thresh was anxious to give up these part-time County Council duties which, as will be shown later, had considerably increased since the beginning of the century. He found that his work as a consultant on water supplies and sewage disposal and as Medical Director of the Counties' Public Health Laboratories was more than enough to tax the energies of a younger man, quite apart from his lecturership in Public Health at the London Hospital Medical School. He accordingly retired as County Medical Officer of Essex on 31st March, 1919, amidst the plaudits and with the gratitude of all who knew anything about his work. After being appointed to the post on the first Tuesday in January of that year, I took up duty as County Medical Officer of Health, Chief Tuberculosis Officer and School Medical Officer on 1st April, 1919.

.. ..

I may perhaps be permitted to digress at this point to develop the reference I made above to famous names in medicine associated with Essex because the details are not without interest in a document of this kind. A permanent record in regard to them appears on the murals in the Council Chamber in the County Hall at Chelmsford, the motif of which is the story of the Essex people. The murals owe their existence, as indeed do the Council Chamber itself and the adjoining rooms, to the munificence of the late Councillor William Julien Courtauld.

William Gilbert (1540–1603), a Colchester man, was physician to Queen Elizabeth. He wrote a famous treatise, " De Magnete ", in which were laid the foundations of the science of electricity. He is buried at Holy Trinity, Colchester.

In a sarcophagus in Hempstead Church, near Saffron Walden, lie the mortal remains of William Harvey (1578–1657), to which they were transferred from the family vault beneath the church in 1883 at the cost of the Royal College of Physicians. He was physician extraordinary to King James I and later physician in ordinary to King Charles I, whom he attended at the battle of Edgehill. He was the founder of scientific medicine and wrote an essay on the circulation of the blood, setting forth for the first time the true nature of this phenomenon.

The Right Honourable Lord Lister was born at Upton House on 5th April, 1827. His contribution to safe surgery is too well known to need any further comment. Suffice it to say that Upton in those days, difficult as it may be to imagine, was a country village with a winding lane which led from the Romford road towards Plaistow. In the year that Lister was born his biographer (Sir Rickman Godlee) notes that a red deer was run down in the garden of Upton House, which, by the way, is now St. Peter's Vicarage. It was here and in the neighbouring forests of Hainault and Epping and in the Barking marshes that as a boy Lister was able to develop his taste for natural history and to come to his decision, when quite a child, to become a surgeon. It was my privilege in 1927 to accompany the Chairman of the Public Health Committee, then Alderman (afterwards Sir) Sydney Robinson, to a commemoration service for the centenary of his birth at St. Peter's, Upton Cross.

Another not unimportant matter which is worthy of note in this connection is the story of the finding of what are known as the Chamberlen forceps. Peter Chamberlen (1664–1728), an accoucheur belonging to a family which came from France in the seventeenth century, used short forceps of his own design for the first time in obstetrics. In 1818 several pairs of these forceps in four varieties (indicating that he had endeavoured to improve his instruments) and other midwifery instruments were discovered in an old chest concealed beneath a floor in Woodham Walter Hall, near Chelmsford. The original instruments are described in Volume XXVII of the Medico-Chirurgical Society's Transactions and modifications of the forceps are still in use.

.. ..

I started my new duties by taking what I consider to be two important steps. Firstly, I advised the County Council to appoint Dr. Thresh to act as my consultant for twelve months; this had far-reaching effects, for it placed at the disposal of an inexperienced and untried Medical Officer of Health a vast store of knowledge, particularly in regard to water supplies and sewage disposal, which Dr. Thresh was only too willing to impart and which I could not otherwise have obtained. Secondly, I recommended the County Council to appoint Mr. Alfred Marsh, A.R.San.I. (with whom I had worked in the service of the West Riding of Yorkshire County Council as Chief Clerk and County Sanitary Inspector in the Public Health Department; this

step was almost as important as the first one—for five years Mr. Marsh held the dual office, but after that confined himself to the duties of County Health Inspector and proved himself a never-failing stalwart throughout the whole of my thirty years of office.

Dr. Thresh had provided accommodation for the small clerical staff of the Department, consisting of Messrs. P. T. Burdon, C. W. Samain, H. J. Allsupp, C. Smee and Miss W. Shoobridge, at his home at " Spergula ", London Road, Chelmsford, and for a few weeks this arrangement was continued. Mr. Marsh set himself to build up a clerical staff to meet the general desire for a rapid development of the public health work of the County Council, and as a first stage arrangements were made for the clerical staff which had been responsible for the school medical service in the Education Department to be transferred to the staff of the Public Health Department. Offices for the Department as thus reorganized were found in the same building as the *Essex Weekly News* newspaper at 26, High Street, Chelmsford. Our landlord was the late Mr. George W. Taylor, a man greatly respected in Chelmsford, but who, though a member of the County Council and of the Public Health and Housing Committee, proved to be a very severe critic of expenditure on public health.

I quote as typical of that period an incident which occurred when the Department had occupied the upstairs rooms of the *Essex Weekly News* office for some months. One day a message came from Mr. Taylor asking me to visit his sanctum. I went down and for half an hour listened to a semi-quizzical, semi-humorous, semi-sarcastic account from him as to the way it appeared to him the County Health Department was developing. He referred to a long report which about that time had been considered by the Public Health Committee on the future development of the Public Health Services. Mr. Taylor's advice to me was that when I had thought out and written any more splendid reports like that and they had been finally checked and corrected, the best thing was to put them in the waste paper basket.

The Department stayed in these rooms until March, 1924, when it was transferred to the Prudential Buildings in Duke Street, Chelmsford. These served our purpose very well for six years when the Department was moved to its present admirable headquarters on the third floor of the new County Hall, Chelmsford.

.. ..

It has never been a principle of the County Council to make a particular splash in any one direction in its public health work, but rather to maintain a steady high level all over the field of progress. Consequently Essex has not figured greatly in the headlines ; nevertheless competent judges, on visiting the County to see what has been and is being done, would agree that it is no exaggeration to state that public health standards in Essex are as good as any and better than most.

The Public Health Committee of the County Council has never shown itself backward in following a lead from the officers concerned in improving the social services provided for the community. It was invariably at a later stage of the consideration of recommendations that troubles began, and again and again during my first ten years it was not an unusual experience for a scheme for the improvement of

the health services to go through the Public Health Committee with little or no opposition, only to be mangled, obstructed or referred back when it got to the stage of consideration by the General Purposes Committee or the Finance Committee or, occasionally even, by the Council itself. It is hardly an exaggeration to say that at least half my time in these first ten years was spent in preparing schemes which were doomed never to be adopted or carried out. Of course, in a County like Essex there are always competing claims for any available moneys for purposes such as education, highways, smallholdings and so forth. Nevertheless progress was made, and slowly and imperceptibly first one step would be taken and then another, so that after about ten years the affairs of the Department did seem to be gradually stirring.

It was during these ten years that my first two Chairmen of the Public Health Committee, Alderman E. W. Tanner (1919–23) and Alderman (now Sir) Sydney Robinson (1923–30) carried out the spadework for all that was to follow. Alderman F. D. Smith (1940–46) worthily succeeded Alderman A. M. Mathews (1930–40) until the 1946 County Council elections resulted in a Council with a Labour majority for the first time in history. There were many conjectures as to the results of this changeover, but events, as usual, proved to be quite different. The majority party took charge of all the Committees and with a certain amount of ruthlessness proceeded to carry out their electoral programme. In one or two particulars it entailed considerable dislocation and disturbance, but for the most part it was nothing much more than a speeding up of what had been gradually gaining momentum over the last decennium.

.. ..

The reader who is not acquainted with the intricacies of local government should bear in mind that what is said in the following pages in the main deals only with the Administrative County, and that even within that framework the County Council was only responsible for some services throughout the whole area, and for other services was responsible in a part of the area only. To give full details of these arrangements would take up too much space, but outstanding examples are the School Health Service, in the administration of which there were seven autonomous authorities within the County prior to 1944; Child Welfare, in the administration of which there were twelve autonomous authorities prior to 5th July, 1948; and the supervision of midwives where six autonomous authorities were involved.

In addition to this, consideration must be given to the peculiar position of four of the Municipal Boroughs in the County which received their charters of incorporation in the years indicated and which have always asked for and been granted by the County Council special consideration in regard to delegation of powers where this was provided for in legislation :—Barking, 1931; Ilford, 1926; Leyton, 1926; Walthamstow, 1929.

Population.

Dr. Thresh noted that in 1918 the Administrative County comprised thirty urban and seventeen rural districts with populations of 615,153 and 255,849 respectively giving a total of 871,002. The population of the County had, at the time of my retirement, increased to 1,530,900. Details are given below :—

Year.	No. of Urban Districts.	Population.		No. of Rural Districts.	Population.	Total Population.
1918	30	615,153	..	17	255,849	871,002
1928	34	795,580	..	17	288,120	1,083.700
1938	32	1,201,400	..	11	193,700	1,395,100
1948	32	1,311,460	..	11	219,400	1,530,900

The outstanding circumstance during the thirty years under review has, of course, been the colossal growth of population in the County on the periphery of London which has called for tremendous financial and other provision to cope with an ever-growing number of inhabitants. To take one instance alone—Dagenham, a parish of some 2,000 people in the year 1919, became three years later a township with a population, largely handpicked from the slums of London, numbering over 100,000. The school building programme for this body of people, quite apart from anything else, was enough to keep the Finance Committee on the *qui vive*!

The Health of Essex, Thirty Years Ago and To-day.

In spite of increasingly numerous attempts to measure sickness incidence, the principal measures of the health of a community are still not the number of people who fall ill, but the number of people who die. Consequently, apart from some slight reference to notifications of some infectious diseases, it will be mortality rates which will be employed to measure the improvement in the health of this vast population during the last thirty years.

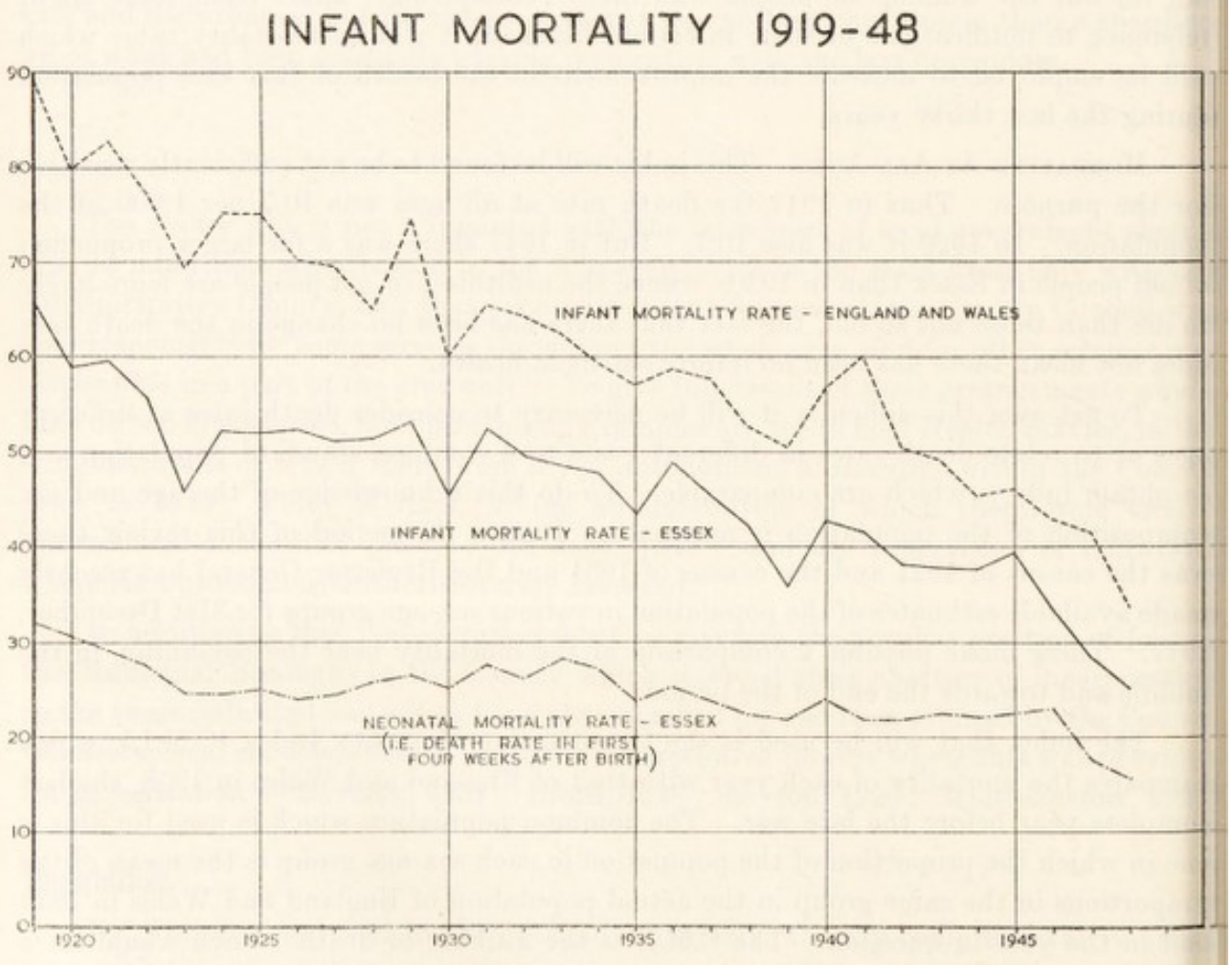
Mortality At All Ages. This index will be found to be not sufficiently sensitive for the purpose. Thus in 1947 the death rate at all ages was 10.7 per 1,000 of the population. In 1920 it was also 10.7. But in 1947 there was a far larger proportion of old people in Essex than in 1920. Since the healthiest of old people are more likely to die than those not so old, the fact that there has been no change in the death rate does not mean there has been no improvement in health.

To get over this difficulty it will be necessary to consider death rates at different ages or to relate death rates in different years to a common standard population and so obtain indices which are comparable. To do this a knowledge of the age and sex composition of the population is necessary. During the period of this review there was the census of 1921 and the census of 1931 and the Registrar-General has recently made available estimates of the population in various sex-age groups for 31st December, 1947. These make possible a comparison of the mortality near the beginning, in the middle and towards the end of the period.

The index that will be used is the Comparative Mortality Index (C.M.I.), which compares the mortality of each year with that of England and Wales in 1938, the last complete year before the late war. The common population which is used for this is one in which the proportion of the population in each sex-age group is the mean of the proportions in the same group in the actual population of England and Wales in 1938 and in the year in question. The C.M.I. is the number of deaths which would have occurred in the common population if the death rates of the year in question had obtained, divided by those which would have occurred if the death rates of England and Wales in 1938 had obtained.

For England and Wales the C.M.I. in 1919 was 1.42, in 1920 it fell to 1.27 and thereafter fell fairly steadily till the beginning of the late war, being of course 1.00 in 1938. It rose to 1.17 in 1940 and has since fallen. In 1947 it was 0.91 and in 1948, 0.81. For Essex the C.M.I. for the period 1920–22 was 1.03. By 1930–32 it had fallen to 0.96 and the average for the years 1947–48 was 0.75. These figures suggest that while death rates have been falling both in Essex and in England and Wales as a whole, the average level to which they had fallen in England and Wales by 1938 had been reached in Essex ten or more years previously and that this relative advantage is being maintained.

Infant Mortality. The Infant Mortality Rate for the Administrative County in 1919 was 66, in the next two years it was 59 and 69. The rate has declined steadily with some fluctuation from year to year to new low records in 1946, 1947 and 1948, the latest figure being 25. Since the middle of the thirties the decline has been rather steeper, in spite of the 1939–45 war which produced rates consistently higher than the 1939 rate of 36, but less than all rates previous to 1938. The increase in the early part of the war was less in Essex than for the country as a whole and, throughout the whole period, Essex had a better record of infant mortality than had England and Wales. The diagram below shows these results.



Still Births. Allied in many ways to infant mortality are still births, since the causes of death in the first few weeks of life are much the same as before birth.

Registration of still births became compulsory on 1st July, 1927. In 1928 still births registered in the whole country were 4 per cent. of the total births, a still-birth rate of 40 per 1,000 total births. No decline was registered till 1936, since when the still-birth rate has fallen steadily. In Essex the general trend has been the same but at a lower level. The highest rate was 35 in 1930. The latest figures are :—

	1946.	1947.	1948.
Essex	24.7	20.3	20.1
England and Wales ..	27.2	24.1	23.2

The simultaneous fall in the Infant Mortality Rate and the Still-birth Rate is encouraging, since it implies that the lives of young infants are being saved and not that their deaths are taking place after, rather than before, birth. In the following table still births have been combined with deaths of infants in the first four weeks of life (neonatal deaths) while deaths in the rest of the first year have been considered separately. In each case the mortality rate (per 1,000 total and live births respectively) in the year 1938 and in the last two years for which the figures are available is given as a percentage of the rates in the years 1928–33, showing the different rates of decline since then in the two age periods :—

	Still Birth with Neonatal Mortality Rate (per cent. of rate in 1928–33).	Infant Mortality Rate 1–12 months (per cent. of rate in 1928–33).
1928–33 ..	100	100
1938 ..	95	71
1946 ..	72	53
1947 ..	67	54

Mortality of Children. The Registrar-General has provided for the last few years estimates of the population in local areas under the age of 5 and between 5 and 15. With the aid of these it has been possible to obtain recent estimates of the mortality at these ages to compare with earlier periods. In the following tables, mortality at 1–4 and at 5–14 in periods of three years round the Censuses of 1921 and 1931 are compared with the period 1945–47.

Mortality of children over 1 and under 5.

Period.	Average No. of children aged 1–4.	Number of deaths.	Annual deaths per 1,000 children aged 1–4.	Rate as percentage of 1920–22 rate.
1920–22 ..	58,570 ..	1,312 ..	7.47 ..	100
1930–32 ..	78,063 ..	1,205 ..	5.14 ..	69
1946–48 ..	99,050 ..	464 ..	1.56 ..	21

Mortality of children over 5 and under 15.

Period.	Average No. of children aged 5–14.	Number of deaths.	Annual deaths per 1,000 children aged 5–14.	Rate as percentage of 1920–22 rate.
1920–22 ..	177,342 ..	1,062 ..	2.00 ..	100
1930–32 ..	207,054 ..	1,021 ..	1.64 ..	82
1946–48 ..	199,100 ..	384 ..	0.64 ..	32

In spite of the greater decline in the mortality of pre-school age children, their mortality is still more than twice that at school age.

Deaths Due to Infectious Diseases of Children. The following table shows for different ages the number of deaths from measles, scarlet fever, whooping cough and diphtheria in the two quinquennia 1919–23 and 1944–48.

			Males.					*Females.*			
		Total deaths.	*0–*	*1–*	*5–*	*15–*		*0–*	*1–*	*5–*	*15–*
Measles	1919–23	247	23	73	29	1		15	75	28	3
	1944–48	45	8	11	4	0		1	17	4	0
Scarlet fever	1919–23	94	3	18	28	4		2	13	20	6
	1944–48	6	0	1	1	1		0	1	2	0
Whooping cough	1919–23	387	77	83	12	0		91	117	6	1
	1944–48	121	35	13	0	0		52	19	2	0
Diphtheria	1919–23	557	12	111	140	15		5	100	165	9
	1944–48	53	1	6	15	2		2	5	15	7

The number of children under the age of 15 at the Census of 1921 was 253,623. The estimated number on 31st December, 1947, was 328,550. The number of children in Essex in 1944 and 1945 was considerably less than this figure since an appreciable number was still evacuated in these years, but clearly the average child population in 1944–48 was not less than in 1919–23. Therefore, a direct comparison of the number of deaths of children under 15 will somewhat understate the improvement over the years. The following table shows that the decline has been greatest for scarlet fever and least for whooping cough, which has always taken a heavier toll from infants and pre-school children.

	Deaths 0–14.		1943–47 as percentage of 1919–23.
	1919–23.	1943–47.	
Measles	243	45	18.5
Scarlet fever	84	5	6.0
Whooping cough	386	121	31.3
Diphtheria	533	44	8.3

Notifications of Infectious Diseases. Notifications have serious disadvantages as health indices. There is always an unknown number of cases which are not notified and in recent years there has been an increasing tendency to notify suspected cases in order to facilitate admission to hospital. Until the last few years notifications have not been corrected for wrong diagnosis, nor has the age distribution of cases been known. However, some general conclusions about the following diseases can be reached.

(a) *Typhoid and Paratyphoid Fever.* In 1921–23 there were 180 cases notified, giving an average annual notification rate of 65 per million population. In 1946–48 there were 85 corrected notifications, giving a rate of 19 per million. In the former period there were 28 deaths and in the latter 4 (a case fatality of 15.6 per cent. and 4.7 per cent. respectively). Thus there has been a considerable decrease both in prevalence and in case fatality. On page 119 will be found details of an outbreak of paratyphoid fever in Epping in 1931.

(b) *Scarlet Fever.* There has been some decrease in prevalence; the three worst years were 1921 with 4,491 cases, 1934 with 5,670, and 1943 with 5,181, giving rates

per 1,000 of the population of 4.9, 4.4 and 4.1, but the most striking thing is the decrease in case mortality, 7.0 per 1,000 in 1921–23 compared with 0.2 per 1,000 in 1946–48. On page 120 will be found details of an outbreak of scarlet fever in the Chelmsford area in 1935.

(c) *Diphtheria.* Notifications decreased from 2,004 in 1921 to 875 in 1923, rose again to 3,163 in 1930 and, after a further fall, rose again to 2,736 in 1934. Since then there has been a steady fall, so that in 1946, 1947 and 1948 the corrected notifications amounted to only 152, 76 and 61. The case mortality has not changed much since the fall began. In 1933–35 it was 5.4 per cent. and, based on uncorrected figures (to preserve approximate comparability), it was the same in 1945–47.

(d) *Smallpox* has only been present during the period in 1920, from 1928 to 1934, and in 1946. In the centre period cases rose to a peak in 1930, when 602 cases were notified, and then fell away again. The disease was mild in character, only one death being attributed to smallpox in 1930.

One of the lessons we learned from the 1920 outbreak of smallpox (as usual, imported into this country and disseminated from several ports) was the necessity to have readily available the services of a smallpox specialist to confirm diagnosis in suspected cases. An arrangement was therefore made with the London County Council whereby the services of Dr. W. McConnel Wanklyn (probably the greatest authority on the subject at that time) were placed at the disposal of every Medical Officer of Health in the County upon application being made to me. To have such an experienced man readily available was very helpful and for nine years he rendered assistance of great value to Medical Officers of Health. By his untimely death in 1929 Essex suffered, with London, a severe loss. He published numerous pamphlets and treatises on the diagnosis and control of smallpox and his comments on the use of the word " alastrim ", current in the early '20's, to describe a disease said to simulate smallpox which I quoted in my Annual Report for 1921 are, I feel, worth reproducing.

> " The word ' alastrim ' has no justification for existence or perpetuation in the English language. It means nothing. There is one well recognised disease, chicken-pox, and another well recognised disease, small-pox ; there occur a number of cases which are difficult for untrained observers to place with certainty in either the one group or the other ; therefore recourse has been had to such terms as ' varioloid ', ' varioloid varicella ', ' alastrim ', and others. But there is no such intermediate or third disease, and therefore no occasion for a word to describe it. Mild forms of small-pox have often been termed a-typical ; but such cases have been reported in large numbers from all parts of the world, and on close examination are found to conform regularly to the type of the disease."

Later Dr. Arthur Burrows was our consultant in this connection, and after his departure we relied entirely on the panel provided by the Ministry of Health.

(e) *Acute Anterior Poliomyelitis* has only been present in epidemic form infrequently. The three worst years were 1926, 1938 and 1947. In 1926 there were 89 cases, mostly in the Thurrock area ; in 1938 there were 181 cases, principally in the north of the County ; and in 1947 most parts of the County were affected and the number of corrected notifications amounted to 221.

Arising out of the 1938 outbreak, Dr. J. S. Ranson, the Medical Officer of Health of the Halstead Urban and Rural Districts and Medical Officer of the Halstead

Infectious Diseases Hospital, wrote an illuminating report on 92 cases treated in that hospital which was printed and published in 1939 (Halstead : W. H. Root, Caxton Works). In it he made what, so far as I am aware, is the earliest reference to the effects of exercise in the early stages of the disease, as follows :—

> " On going through the case sheets of the 92 cases of acute anterior polio-myelitis admitted to the Halstead Isolation Hospital during the outbreak which has occurred during the summer and autumn months of 1938, it appears that all of the worst cases were those of patients who undertook more or less severe exercise during the early stage of the disease. These patients all state that for several days previous to their actual illness they have felt unwell, usually with headache and stiff neck. A careful survey of their resultant paralysis seems to show that the paralysis that followed selected groups of muscles that had been put to strain, and that recovery was more rapid where this strain had been slight only.
>
> " In every case from whom a clear history could be obtained a definite history of malaise was obtained for from three to five days prior to the onset of paralysis of (*sic*) muscular weakness.
>
> " Comparatively few cases were admitted to hospital on the actual first day of the disease, but all of these either developed some slight muscular weakness only, or the paralysis occurring recovered in from two to three months.
>
> " During times of the disease taking on epidemic form it seems probable that the public should be warned that anyone suffering from such symptoms as stiff neck, headache, vomiting and pains in the back should be put to bed immediately and remain there for one week on the onset of symptoms."

(f) *Ophthalmia Neonatorum.* In 1921–23 four out of every 1,000 babies born were notified as suffering from ophthalmia neonatorum ; in 1933–35 the proportion had fallen to 3.7, and in 1946–48 to 1.6, per 1,000 live births.

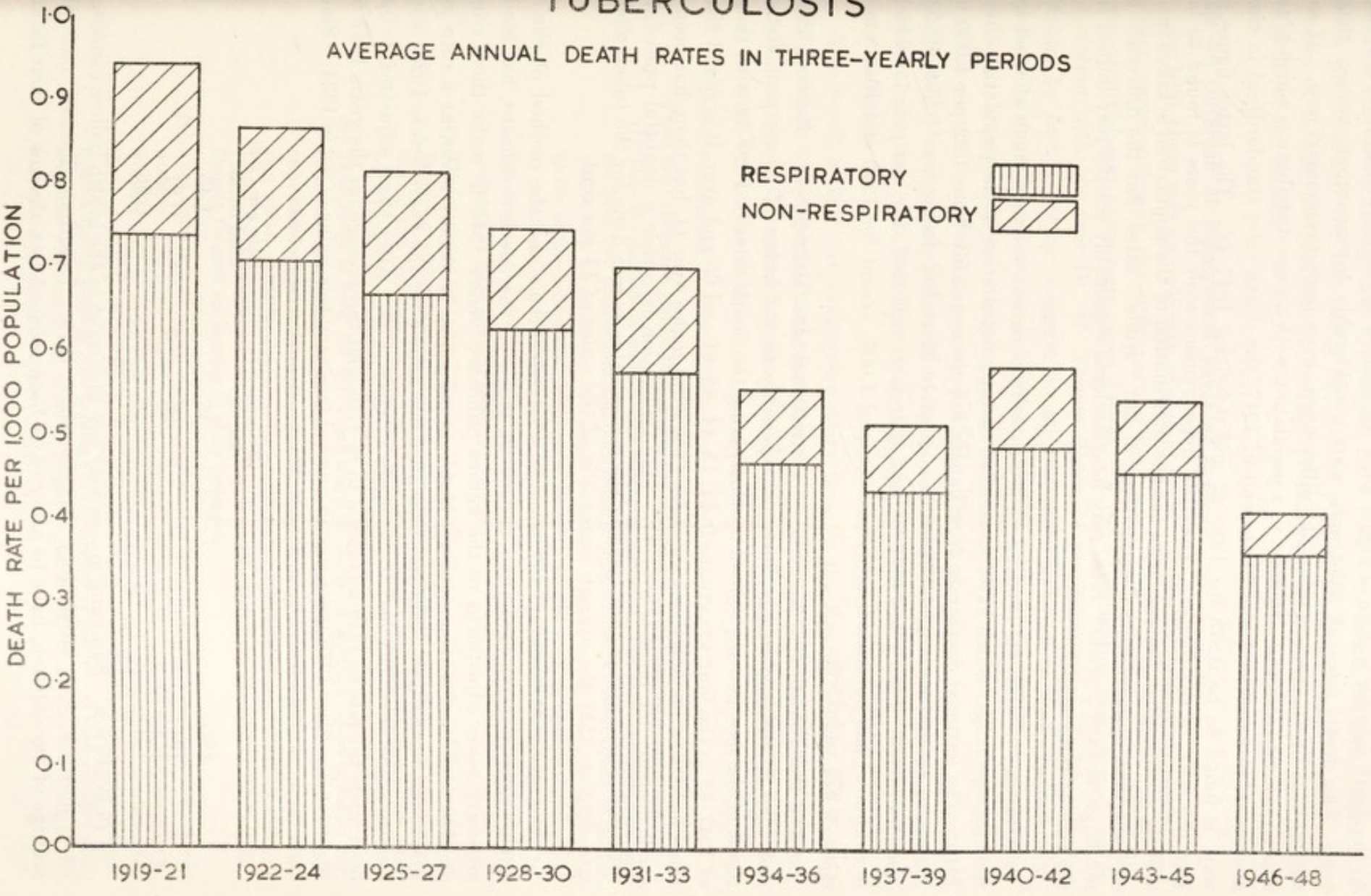
Tuberculosis. In 1919 there were 920 deaths from tuberculosis, giving a rate of 1.05 per 1,000 of the total population. The rate fell steadily to 0.50 in 1938. During the 1939–45 war it rose somewhat, the peak year being 1941 with 0.61. In 1947 and 1948 the rate was 0.43 and 0.40. The diagram on page 117 shows the movement in the death-rate in three-yearly periods. These rates are uncorrected for the changing age distribution of the population. There is evidence, however, that this is not a serious matter in this case. The average death-rate in Essex for the three years 1920–22 was 0.863 and for the two years 1947–48 it was 0.416, the latter being 48.1 per cent. of the former. The decrease has not been uniform at all ages, as the following table, giving the death-rate in five age groups for each sex, shows.

Age Group.	Males. 1920–22.	Males. 1947–48.	Females. 1920–22.	Females. 1947–48.
0– 4 ..	0.885	0.150 (17%) ..	0.800	0.158 (20%)
5–14 ..	0.235	0.054 (21%) ..	0.300	0.087 (29%)
15–44 ..	1.249	0.488 (39%) ..	1.030	0.530 (51%)
45–64 ..	1.197	0.845 (71%) ..	0.660	0.263 (40%)
65 and over	0.670	0.663 (99%) ..	0.473	0.206 (44%)

The figures in brackets show the death rate in 1947–48 as a percentage of the death rate in 1920–22. We see that the improvement has been greatest among children, due largely to the great decrease of non-pulmonary tuberculosis. The improvement has been greater among young men than among young women, and the death rate among men between 15 to 45 is now less than among women of the same age. If it were possible to divide this large age group further, it would probably be

TUBERCULOSIS

AVERAGE ANNUAL DEATH RATES IN THREE-YEARLY PERIODS



found (as in the case of England and Wales as a whole) that whereas under the age of 30 the death rate for women is higher than for men, at ages over 30 the reverse is the case. The death rates at older ages were considerably lower among women than among men thirty years ago, but the difference is even more pronounced now. If we apply these two sets of death rates to a population with an age distribution which is an average of those of 1921 and at the end of 1947, the death rate, standardized in this way, is found to be 0.873 for 1920–22 and 0.406 for 1947–48. The latter figure is 46.5 per cent. of the former. Thus the improvement over the years is found to be slightly greater when the change in the age distribution of the population is taken into account than appears from a comparison of the " crude " rates, but the difference is not large and the " crude " rates may be considered reasonably satisfactory indices in the case of tuberculosis.

Cancer. Unlike tuberculosis, death rates from cancer are very much affected by the kind of changes which have occurred in the age distribution of the population since 1919. The national death rate from cancer has risen steadily from 1.22 per 1,000 in 1922 to 1.86 in 1948. The Cancer Comparative Mortality Index was 0.954, 0.953, 0.966 and 0.982 in the years 1921–24, and thereafter (till 1947, the last year for which it is known) has fluctuated between 0.985 and 1.006, except for 1943 and 1944 when it was 0.975 and 0.982.

The Essex death rate has followed the national rate fairly closely. Between 1928 and 1940 it was consistently lower, due possibly to the influx of young people as a result of the new housing schemes. Comparing the death rates of 1920–22 with those of 1947–48 in the four age groups 0–14, 15–44, 45–64 and 65 and over, it is found that there have been increases at ages under 44 and for males over 44, but there has been a small decrease for females over 44. Standardization is rather a doubtful procedure with such broad groups, but treating the cancer rates as was done for the tuberculosis rate suggests that the over-all increase is of the order of 11 per cent.

Maternal Mortality. Differences of classifications and the method of choice of the cause of death, when two causes are given on the death certificate, has made necessary some adjustment of the figures published before 1940 to make them comparable with more recent figures. Maternal mortality is usually given as a rate per 1,000 total births, and, since still-births are not known for the years before 1928, some further adjustment has had to be made to cover this. After these adjustments had been made the rate in 1919 was found to be 4.45, and the average for the years 1921–26 just over 3. After 1926 there was an upward tendency to a value of 5.2 in 1934. Since then there has been a steady decline. The most recent figures are :—

	Maternal deaths.	Rate per 1,000 total births.
1946	45 ..	1.45
1947	26 ..	0.81
1948	26 ..	0.96

Conclusion. Summing up, we may say that most of the health indices examined have shown a very satisfactory decrease since 1919. Infectious diseases, once the scourge of our children, have in many cases been reduced to a shadow of their former

elves. The death rate from tuberculosis is continuing to fall steadily. Infant and naternal mortality, though not conquered, have been very much reduced. Cancer is till a problem and the increasing age of the population has brought it and other liseases of middle and old age more into prominence. They constitute one of the problems of the future.

Note on Outbreak of Paratyphoid Fever at Epping.

In 1931 there was an outbreak of a mild type of paratyphoid fever in the Epping district, commencing in the early part of the year. In a period of seven weeks 312 cases occurred and there were eight deaths. A full investigation was carried out in association with the late Dr. W. Vernon Shaw, of the Ministry of Health. It was difficult to find a factor common to all the cases until it was ascertained that "accommodation" milk at weekends was purchased by all the retailers in the area from one particular farm. Samples were taken from four workers at this farm and these gave a positive Widal to paratyphoid B. The workers were removed to hospital and the milk they had handled was destroyed. All the vessels and apparatus employed in milk production were sterilized and after twenty-four hours the milk was allowed to go out again.

As a result of this outbreak every dairy farm in the Epping Urban and Epping Rural Districts was inspected and recommendations were made with a view to securing improvement in buildings and methods. The following general conclusions appeared in my Annual Report for 1931 :—

"*General Conclusions.*

From the experience gained throughout the outbreak it would appear :—

(1) That the legislation dealing with infectious diseases is scattered throughout at least six Acts, two Regulations and one Order, to which a local Medical Officer of Health has to turn for guidance. It would be helpful if the principal points from all these so far as they affect the measures to be taken to deal with an outbreak of typhoid or paratyphoid fever, could be merged into a booklet similar to the one issued by the Ministry of Health upon smallpox (No. 62, dated February, 1931) for the guidance of local Medical Officers of Health.

(2) That it would be helpful if a list of notifiable diseases was included in the book of forms on which medical practitioners notify infectious diseases. In one district during this outbreak, a medical practitioner stated that he was not aware that paratyphoid fever was a notifiable disease.

(3) That there is need for the availability in Essex of hospital accommodation for extensive outbreaks of this kind. This could be provided by the County Council either having power to appropriate an isolation hospital or by providing an institution which would be available for an extensive outbreak of any infectious disease. In the Epping outbreak of paratyphoid fever, the County is grateful to the London County Council for coming to their assistance.

(4) That there is need for closer supervision over the health of cowmen and other dairy workers. Farmers should make a special point of noticing illness amongst dairy workers, and of consulting a medical man when there is the slightest doubt as to the true nature of the illness in question. Further, medical practitioners should make a special point of ascertaining the occupation of patients or their families who are either suffering from, or are in contact with, infectious diseases which might be conveyed by the milk supply.

(5) That the laboratory service which examined hundreds of specimens during the outbreak proved to be an indispensable part of the Public Health Service.

(6) That further consideration ought to be given to the desirability of, or even the necessity for, pasteurising all ungraded milks wherever practicable.

General.

Although this outbreak caused considerable alarm amongst the general public they should not regard it as anything other than an unfortunate accident which might happen from time to time, but with the increasing co-operation of the trade, medical men and others, the likelihood of its recurrence ought to be remote. It should be remembered that at the first alarm, further risk of infection can be avoided if the housewife will boil or pasteurise all milk before consumption."

Another interesting feature was that the effluent from the sewage works for the northern portion of the Epping Urban District discharged into a tributary of the River Lee. Samples taken gave such surprising results bacteriologically (the effluent containing 33,000 million paratyphoid bacilli per day's flow) that immediate steps were taken by the Metropolitan Water Board to safeguard to the fullest extent the interests of the consumers in the East End of London. These safeguards included the chlorination of the effluent before being discharged into Cobbins Brook, and this chlorination was continued for some thirteen or fourteen years, although b. paratyphosus had not been detected in samples taken since 1934.

Note on Outbreak of Scarlet Fever in the Borough and Rural District of Chelmsford

In August and September, 1935, there was an epidemic of scarlet fever in the Borough and Rural District of Chelmsford, and during these months no less than 666 cases were notified. This epidemic exemplified a high proportion of atypical cases showing no rash, but where the diagnosis rested on the clinical findings and the bacteriological recovery and typing of haemolytic streptococci.

From the " explosive " nature of the outbreak of this epidemic it was clear that the most likely source was from infected milk, and investigation showed this to be the case—the milk emanating from a farm in the Chelmsford Rural District.

At this farm it was found that the usual four milkers were away ill, suffering from sore throats, and some of them, without the knowledge of their employer, had actually been at work while suffering from this condition. It was ascertained that the child of one of these milkers, and also the child of the employer, were at this time suffering from scarlet fever. Although the temporary milkers were apparently free from illness the supply of milk from the farm was stopped until arrangements had been completed for its efficient pasteurization.

Bacteriological investigation and the serological typing of the haemolytic streptococcus responsible (type 2) made it possible to trace with exactitude the infection from the affected milkers to the milk and thence to one of the dairies supplying the Borough of Chelmsford, and the outside distributors to whom " accommodation " milk was supplied in the Rural District.

Dr. J. L. Miller Wood, who was Acting Medical Officer of Health for the Borough of Chelmsford during Dr. Sleigh's absence on holiday, was temporarily seconded from his County duties in order to devote his full time to deal with the epidemic. Dr. Vernon Shaw, of the Ministry of Health, visited Chelmsford several times during the epidemic period, when his advice and experience were of invaluable assistance.

The services of Dr. F. E. Camps, of the Chelmsford and Essex Hospital, were freely used in connection with the extensive bacteriological work necessitated by the outbreak. A large number of haemolysis and typing examinations was made and proved of primary importance in tracing the source of the epidemic and in establishing the diagnosis in many atypical cases. Dr. Miller Wood, in collaboration with Dr. Camps, wrote an article on this outbreak which was published in *The Lancet*.

Once again the fact was demonstrated that persons working in connection with the supply of milk must be educated as regards the necessity of obtaining medical advice when they, or their families, show any sign of illness.

Statistics.

During my early years in Essex, Dr. R. J. Ewart, who was then Medical Officer of Health for Barking, presented me with a most interesting series of graphs which he had prepared for a lecture at the Royal Society of Medicine in 1923, showing how improved standards of living had improved the state of the public health. I found these graphs of considerable assistance in my lecturing and health propaganda activities, which were pretty considerable in those days, but it was a disturbing reflection on the value placed on public health activities to find that these graphs demonstrated a very close relationship between the accepted criteria of health and the real value of wages. In other words, enable the community to get a sufficiency of proper food and a decent home to live in and it follows that their standard of health will tend to look after itself. Generally speaking this is still true, provided that educational progress (general and particular) keeps abreast of these improvements of nutrition and hygiene.

In 1924, Mr. (now Professor) A. Bradford Hill, of the Medical Research Council, conducted in Essex an investigation into the effects upon rural death rates of migration from country to town. It was known that although at most ages death rates in rural districts were lower than in towns, amongst young adults death rates were as high or sometimes higher in the country. The method of enquiry was first to examine the mortality statistics of the County in relation to known migration and then to obtain individual histories of families for a comparison of those who remained in the country with those who migrated to London or other towns. The conclusion was that migration was an important reason (tuberculosis was another) for the high rural death rates among young adults.

The ordinary reader may not appreciate sufficiently that the amount of work going through the Public Health Department of a County Council like Essex is so great that there is literally no time to take on any duties which, however desirable, are not absolutely essential and necessary. The absence of a statistician was always deeply felt, and as each year came round I became more and more conscious that the part of my Annual Report dealing with vital statistics was really unworthy of the importance of the subject matter.

As soon as the 1939–45 war was over, therefore, opportunity was taken to present a report to the Public Health Committee advocating the appointment of a statistician. Suitably qualified men were in very short supply and it was accordingly agreed that a lay statistician should be appointed in the hope of securing also the part-time services of a medical statistician of international renown who had recently retired. This,

fortunately, proved to be possible, and Essex welcomed into its service in 1946 Professor Major Greenwood, a Fellow of the Royal Society and Professor of Epidemiology and Vital Statistics at the University of London. Professor Greenwood put us in touch with a suitable man for the post of lay statistician and, accordingly, Mr. W. H. Leak, B.A., took up duty during 1947. Thus began, very belatedly, a much-needed and essential element in a Public Health Department. Already in the short time that has elapsed since the appointment became effective, reports have been made which indicate the extreme fruitfulness of this new venture. It is with deep regret that I record that Professor Greenwood died on 5th October, 1949.

There is a great need for a statistician on the staff of a Public Health Department, because there is a very grave danger of vital statistics being wrongly interpreted. Experience shows that erroneous ideas based on statistics once started off are difficult to catch up with and correct, but with expert opinion constantly available these can be avoided in the first place. In more positive respects the statistician can indicate lines of administrative and executive action which will be likely to produce beneficial results.

.. ..

Essex Epidemiological Committee.

One very important development in the organization of our forces against ill-health took place as a direct result of the 1939–45 war. Some time before it started, the Medical Research Council had prepared a scheme to come into operation in the event of war which involved the setting up of emergency public health laboratories. As it turned out, there was no immediate need for the kind of service which had been envisaged, but as things began to settle down the arrangements which had been made formed the basis of a new kind of laboratory service which has proved to be of great value.

Essex had always been well served by a laboratory service from the days before the 1914–18 war, when Dr. Thresh, through the Counties' Public Health Laboratory, which was a development of the smaller laboratory adjoining his home at Chelmsford, had arrangements not only with the County Council of Essex but with many other public health authorities throughout the country, and these arrangements had been continued by the Essex County Council with his successors—Thresh and Beale; Beale and Suckling; Suckling alone; and then with Dr. R. C. Hoather. From the very earliest days, all the laboratory services provided in this way were made freely available to every local sanitary authority in the County. There is no doubt that in this matter the County Council treated local sanitary authorities very generously and the whole story of their laboratory service is proof of the fact that the best way of securing co-operation is to render a tangible service of some sort. It is of interest to note that the number of specimens submitted for examination from the County grew from 2,256 in 1919 to 20,919 just before the emergency laboratories came into operation. So far as the examination of water supplies and sewage and trade effluents was concerned, the figures rose from 14 in the early twenties to 1,284 in 1948. Nevertheless the new emergency public health laboratories service was an acquisition inasmuch as the pathologists were on the ground and were thus able to do more field work.

Professor S. P. Bedson, a member of the Medical Research Council, took up duty at St. Margaret's Hospital, Epping, at the beginning of the war as supervisor of the

laboratory scheme in Essex, as well as part of London, Middlesex and Hertfordshire. He soon got all the public health laboratory work in first-class order. On 1st November, 1939, I met him, together with Dr. A. B. Rosher, Dr. P. H. Martin and Dr. E. V. Suckling, at Chelmsford, and a general discussion took place on the extent and nature of the laboratory service and on the need for establishing a committee to be known as the Essex Epidemiological Committee. Such a committee was formed and had its first meeting on 15th November, 1940, having as its terms of reference "To survey periodically the infectious diseases occurring in the Administrative County of Essex, and to consider what steps (if any) should be taken to combat those diseases".

In time the membership of the Committee was extended to include pathologists, bacteriologists, statisticians, general practitioners and medical officers of health and others interested in the health of Essex. It met monthly all through and after the war and issued circulars and memoranda for the guidance of general medical practitioners, medical superintendents of hospitals and medical officers of health; and it considered and reported upon outbreaks of disease and food poisoning. Although established primarily for the duration of the war, it became part of the post-war health service.

A brief account of the transactions of this important Committee will be found in my Annual Reports for 1940 and the following years.

The meetings were very well attended and proved to be enjoyable and stimulating. The academists from the medical schools introduced an element novel and beneficial to the average medical officer of health and it may have been equally novel and, it is hoped, pleasant to the academists to find that the medical officer of health knew one or two things. Our minds were kept on the main chance and the discussion always tended to reality and subsequent action. My opinion is that the field work which is an essential part of the functions of an epidemiological committee, can be, and must be, carried out by or on behalf of a medical officer of health if he is to fulfil the duties laid down in the Sanitary Officers' Order.

Isolation Hospitals.

My predecessor referred to the decreasing necessity for the provision of isolation hospitals which was apparent in his time; to the annual grants which were made, after inspection, to efficient isolation hospital units; and to the necessity for power to be obtained to combine districts for the provision of the necessary accommodation.

In 1925 the conditions under which these annual grants were paid were carefully reviewed, and on 17th February, 1925, the County Council adopted the following amended scheme :—

(1) That the grants made by the County Council in accordance with the Isolation Hospitals Act, 1893, to the Boards of Isolation Hospitals within the Administrative County, in future be on the following basis :—

(*a*) Five pounds (£5) per annum per bed per 2,000 cubic feet accommodation in buildings erected out of loan.

(*b*) Ten pounds (£10) per annum for providing a motor ambulance.

(*c*) Special grant towards exceptional expenses out of loan on improvements carried out during the year to the satisfaction of the County Architect.

(2) That the grants (£2 10s. 0d. per bed) be extended to Isolation Hospitals provided out of revenue of the local authority in accordance with the resolution of the Council in February 1922, when approved by the Ministry of Health.

(3) That the foregoing grants to the Boards of Isolation Hospitals be made, subject to the following conditions being complied with to the satisfaction of the County Medical Officer of Health :—

(i) To make adequate provision for the reception, isolation and care of persons suffering or suspected to be suffering from infectious disease within the area served by the Hospital Board.

(ii) To provide adequate and efficient medical, nursing and domestic staff and adequate accommodation for such staff.

(iii) To provide adequate arrangements for conveyance of patients to and from the hospital and for all necessary disinfection.

(iv) To make adequate provision for the general administration, repairs, upkeep, water supply, lighting, heating, furnishing, fire appliances, ventilation, drainage and cleanliness of all buildings.

(v) To be prepared, if accommodation is available, to admit and treat patients from other isolation hospital areas upon agreed terms.

(vi) To ensure that charges and conditions are not so restrictive as to prevent the hospital from carrying out its primary duty, namely, the protection of the public.

(vii) To meet at least quarterly, or oftener as required, and receive written reports from the Medical Superintendent and Matron.

(viii) To grant every facility to the County Medical Officer of Health in the annual inspection of the hospital.

(ix) To arrange for the following to be furnished to the County Medical Officer of Health :—

(*a*) Annual Return, including Statement of Accounts, not later than 31st May each year.

(*b*) Annual Report from Medical Superintendent dealing with types of disease treated, adequacy of arrangements, medical and nursing, care of patients, etc.

(*c*) Monthly Return, including number of patients suffering from the various diseases admitted and discharged.

There is no doubt that these grants to isolation hospital authorities proved invaluable in maintaining the hospitals in a good state of efficiency. They were also instrumental in securing a working arrangement between isolation hospital authorities under which help was given to each other when there was a shortage of accommodation in any particular hospital.

Year by year, it increasingly became obvious that the small isolation hospital unit, whilst fulfilling its original function of isolation, was no longer capable of providing all the medical and nursing care needed, particularly for complicated and difficult cases. Hence, we were not surprised when Section 63 of the Local Government Act, 1929 required county councils to prepare schemes for securing the proper isolation and treatment of persons suffering from infectious disease. The preparation of the scheme for Essex involved much detailed investigatory work and visits by members of a special sub-committee to all the isolation hospitals. At that time there were twenty isolation hospitals and seven smallpox hospitals. The number of beds at the former ranged from twelve to one hundred and thirty-seven and at the latter from four to twenty-six. The scheme prepared recommended a reduction in the number of isolation hospitals from twenty to ten with the number of beds ranging from fifty-nine to two

undred and sixty-one, and a reduction in the number of smallpox hospitals from even to one, with twenty-four permanent beds. Before adopting this scheme the Essex ounty Council endeavoured to secure an arrangement with the London County Council hereby patients could be admitted to their smallpox hospital. Unfortunately this ould not be arranged as the Essex County Council was not prepared to shoulder nancial responsibility for a large annual retaining fee amounting to £5,000. This ecessitated the Essex County Council turning their attention to providing a smallpox ospital within the County and being readily available for the whole of the County ould circumstances demand it. Arrangements were made accordingly with the olchester Borough Council whereby a new smallpox hospital with twenty-four ermanent beds was designed and erected within the grounds of the Colchester solation Hospital.

The scheme under Section 63 of the 1929 Act was approved by the Ministry of ealth, with certain modifications, and the major portions were implemented fairly uickly ; but, after an appeal to the High Court, the Maldon Joint Hospital Board ere able to preserve their separate identity.

All these hospitals have now been transferred to the Minister of Health. Present ractice is leading to the elimination of separate hospitals for infectious diseases as it realized that such diseases (smallpox excepted) can be dealt with more efficiently nd economically in cubicles attached to general hospitals. It is noteworthy that ne of the first things done by the North-East Metropolitan Regional Hospital Board as to close down the Maldon Isolation Hospital.

.. ..

enereal Diseases.

It was not until 1916 that regulations and instructions were issued by the Local overnment Board requiring the preparation of a statement of the extent of the robable needs of the County for treatment of these diseases. Dr. Thresh mentions at the number of cases treated under the arrangements made with various hospitals, cluding some in London and East and West Ham, had not reached his original timates. He commented that " everything in connection with these filthy diseases, most invariably contracted by actions considered immoral, is so shrouded in mystery at until their loathesomeness and their dangers are publicly revealed our efforts are t likely to be attended with much success ".

Old prejudices die hard, but a distinct advance has been made, particularly in gard to this matter, over the last thirty years. It is probable that in no branch of ublic health has the outlook so changed for the better as in this particular one.

This is attributable to the campaign to enlighten the general public on the perils the diseases concerned and to encourage them by every means to resort to the free, nfidential and expert treatment provided in the public clinics. The campaign of ucating the public has been carried on unceasingly by means of public lectures and exhibition of cinema films as well as by talks given to selected groups in schools.

The following table gives, for successive periods of three years, the number of new ses of syphilis, gonorrhoea and other conditions reported from V.D. clinics and, in e case of the first two, the rate per 1,000 population :—

	Syphilis. Number.	Rate.	Gonorrhoea Number.	Rate.	Number of other conditions.
1919–21 ..	1,378	517	1,482	556	857
1922–24 ..	931	333	1,298	464	903
1925–27 ..	785	264	1,436	483	1,319
1928–30 ..	896	267	1,474	440	1,448
1931–33 ..	858	231	2,047	551	1,899
1934–36 ..	583	147	1,883	476	2,290
1937–39 ..	538	129	1,863	447	1,885
1940–42 ..	554	144	1,143	298	2,243
1943–45 ..	661	173	1,282	335	5,080
1946–48 ..	780	175	1,541	346	6,225

The County of Essex has participated in the London and Home Counties scheme since its inception in 1916. Under this scheme patients were enabled to attend certain London hospitals as well as the special centres originally established in Chelmsford and Colchester which, in 1938, were supplemented by a new clinic specially built in the grounds of the Oldchurch Hospital, Romford. The success of this clinic is shown by the fact that over 8,000 patients have been registered on its books. A further clinic was established at Harwich in 1944 to cater for the seafaring population, but building difficulties delayed the establishment of further clinics at Tilbury and Walthamstow.

From 1937 I was assisted in this particular aspect of the work by a venereal diseases specialist (Dr. J. M. Elliott). A very valuable contact with Mr. Reynold H. Boyd, F.R.C.S., was established during the 1939–45 war, when he undertook Dr. Elliott's work during the latter's absence on war service. When Dr. Elliott returned to his County duties we were able to retain the outstanding services of Mr. Boyd.

Following upon advice given by the Ministry of Health in a circular issued in July, 1943, the County Council appointed a trained almoner as a V.D. Social Worker in February, 1944. The first appointment only lasted two months but later in the year another appointment was made. This lady remained until 1946. In each of the years 1944 and 1945, some 600 home visits were made, divided nearly equally between visits to patients who had failed to complete their treatment and visits for the purpose of tracing contacts under the wartime Defence Regulation 33B.

Since 1947 a part-time Social Worker has been attached to the Romford Clinic making 183 visits in 1947 and 228 in 1948, while follow-up work for the Chelmsford and Colchester Clinics has been done by health visitors, an arrangement that has worked well.

Undoubtedly the most spectacular advances in medicine during the period I am reviewing were first the discovery, shortly before the 1939–45 war, of the sulpha drugs and secondly the discovery of penicillin during the war years. The former proved most efficacious in treating gonorrhoea, whilst the latter has revolutionized the treatment of both syphilis and gonorrhoea.

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Sanitary Circumstances of the County.

During all the time that Dr. Thresh carried out duties for the County Council he had two main passions. One was for anything to do with water supplies and sewage

disposal; the other will be referred to later. He became an international authority on both these subjects. With the late Mr. W. Whitaker, B.A., F.R.S., he carried out a thorough survey of all the underground supplies of water in Essex, and the result of their researches was published in 1916. Far beyond the year during which he acted as my consultant, it was the custom of Mr. Marsh and myself to go out with him one or sometimes two days a week visiting sources of water supply, sewage disposal works, following the courses of rivers, etc., studying housing and other sanitary problems in all the various parts of the County.

Another major problem with which Dr. Thresh had been faced was the unsightly, smelly and burning dumps on the north bank of the River Thames, due to the depositing in a crude manner of thousands of tons of house and trade refuse from London boroughs each year. He had made a complete survey and a detailed report as far back as 1911. The nuisance, in an aggravated form, was still in evidence when I took up duty in 1919. Endeavours were made, by inspections and interviews, to secure an improvement; representations were made to the London County Council and the Ministry of Health, with a request for a full enquiry into the present and future methods of disposal of the ever-increasing volume of refuse from the London boroughs. As a result, the Minister of Health directed Mr. J. C. Dawes, C.B.E., the Ministry's Inspector of Public Cleansing, "to investigate and report on the general question of public cleansing in London".

Mr. Dawes' comprehensive and excellent report was published in 1929. He did "not hesitate to say that the reeking masses at South Hornchurch taken together comprise the worst refuse dump in Britain and by far the biggest". It is to the credit of some of the contractors that, voluntarily, they endeavoured to improve this serious state of affairs.

As time went on it became evident that the Essex County Council must obtain compulsory powers to regulate and control the depositing in this County of refuse collected outside the County. Therefore the Essex County Council included appropriate clauses in their General Powers Bill promoted in 1933. Objections were at once lodged by some of the London boroughs, by the refuse disposal contractors and other interested parties. Eventually, however, after protracted negotiations, a compromise was reached, resulting in Sections 146–187 of the Essex County Council Act, 1933, under which successful results have been secured.

Meanwhile, in 1922, a new duty was placed on county councils, who became licensing authorities for the production of Grade A milk. Before that year the Health Department co-operated with the Essex Institute of Agriculture in its educational campaign in clean milk production. This included demonstrations at farms, talks to farmers and cowmen, and judging in clean milk competitions. In fact, Mr. Marsh's services as a judge in such competitions were soon sought by other counties, and he became a part-time lecturer at the Institute. The seed for this intensive work was largely sown by the zeal and energy of Mr. Alec Steel, Mr. H. G. Howard and Captain Skelton, who were then well known as progressive clean milk producers. Mention should also be made of Mr. J. B. Gill, who was then the Secretary of the Essex Farmers' Union, and the Principal of the Institute (Mr. Johnston Wallace), ably assisted by Mr. R. Robson, Mr. Alexander Hay, Miss Fletcher and Miss Jameson. This was the

team who, in 1928, helped the farmers to bring to Essex the Stapleton Cup in the Inter-County Clean Milk Competition for that year.

In 1936 the County Council became the licensing authority for tuberculin tested milk and accredited milk, the latter in place of Grade A milk. A bonus was offered by the Milk Marketing Board to producers of these designated milks. This soon attracted many applicants for licences. Our previous experience proved invaluable in coping with this work, which increased rapidly, with the result that by 1949 there were approximately 500 farms licensed to produce tuberculin tested milk and 500 accredited milk. It was not possible to please every farmer. There were occasions when Mr. Marsh had to meet committees of the Essex Farmers' Union and usually there was little difficulty in finding some solution of the problems which are bound to arise in a rapidly developing service. The staff did its best to help farmers and there are many letters on the files expressing thanks for the advice and assistance rendered.

Water supplies in Essex gave cause for anxiety in 1923, when schemes for additional sources of supply had been considered or were under consideration by waterworks authorities and waterworks companies. Therefore, in 1924, I prepared a special report on " The Present Water Supplies, Future Needs and Future Supplies " and this led to the County Council engaging Mr. J. Mackworth Wood, Consulting Engineer, to report upon the present sources of supplies. His report, issued in 1926, which gave an excellent summary of the position, became the standard reference book for water companies and everyone interested in the water supplies of Essex. In 1933 the County Council adopted a scheme for giving financial assistance to rural district councils in the provision of public water supplies and sewerage and sewage disposal schemes. Many rural district councils quickly responded and were further helped under the Rural Water Supplies Act, 1934, which placed one million pounds at the disposal of the Minister of Health for grants to rural district councils. In 1934, Mr. J. Mackworth Wood, at our request, investigated and reported upon " The Water Supplies in Rural Districts ". By 1936 the estimated cost of schemes was £580,906, towards which the Minister of Health had agreed to pay grants amounting to £53,825. In this connection the following table from my Annual Report for 1937 is of interest :—

Total number of parishes in 11 rural districts	290
Number of parishes with public water supplies in 1934	123
Number of parishes which will have piped supplies when schemes are completed	241
Number of parishes left without piped supplies (mostly in one rural district)	49

Further progress has followed and has been encouraged by the further grants which are available from the Ministry of Health under the Rural Water Supplies and Sewerage Act, 1944.

Sewage disposal problems are ever with us in a county and the County Council have from time to time had to take a much wider view than a single county district. This was particularly the case in the valleys of the Rivers Lee and Roding. In 1933 the County Council engaged the late Mr. E. H. Tabor, M.Inst.C.E., to enquire into and report upon the present arrangements of sewage disposal in the Epping, south-western, south-eastern and southern parts of the County, the anticipated adequacy

of such arrangements for the next ten years, and to intimate in what way co-operation could be secured between local sanitary authorities in regard to the establishment of larger and more economical sewage disposal works. His report was published on 20th January, 1934. This report proved invaluable later in association with Middlesex in securing reports from their consultants, Messrs. J. D. & D. M. Watson, on the practicability of extending their East Middlesex scheme to include the Essex side of the River Lee and the lower portion of the River Roding. Unfortunately, apart from two county districts (Chingford Borough and Waltham Holy Cross Urban), this comprehensive and desirable combined scheme was not proceeded with, largely on financial grounds. So was missed a golden opportunity to secure a permanent solution of the sewage disposal problem for a large, populous area.

Attention was then turned to the Rivers Brain and Ingrebourne and in 1938 proposals were put forward for doubling the joint sewage works (Romford and Hornchurch) at Britons Farm, Hornchurch. By every possible means, including conferences and interviews at the Ministry of Health, an endeavour was made to secure joint action by Brentwood, Dagenham, Romford and Hornchurch, with the long-term view of establishing one sewage disposal works with a discharge to the River Thames for the whole area. These negotiations revealed how difficult it is to get county districts to sink local interests and join voluntarily in a scheme which, ultimately, would be of benefit to a much larger area. At the time of writing, agreement has not been reached, but the County Districts have agreed to the matter being further pursued at officer level.

Throughout my period of office I endeavoured to maintain and improve the excellent foundation laid by my predecessor in this aspect of the work—he realized the importance of maintaining the rivers as near to their pristine purity as possible. He foresaw the day when the further water supplies which would be needed in Essex would be obtained only from the rivers—he was in 1918 already utilizing and supervising an experimental works for treating river water at Langford. To-day five of the Essex rivers are sources of water supply—hence rivers pollution prevention work has been and must continue to be maintained at a high level.

In 1949 the County Health Inspector and I gave evidence before the Prevention of Pollution Sub-Committee of the Central Advisory Water Committee on the need for strengthening the rivers pollution powers.

Rural housing was another feature in which my predecessor took a great interest, more particularly as Medical Officer of Health for the Chelmsford and Maldon Rural Districts. My energies were mainly directed in giving assistance when required, supplemented by loaning the services of the County Health Inspector in connection with slum clearance schemes and at public enquiries. I well remember one complaint from a parish council that they could get no satisfaction from the rural council, which consistently refused to provide any houses in the parish. A detailed survey was made by the County Health Inspector, whose report revealed overcrowding and many houses unfit for human habitation. There were bedrooms without windows, marked dampness, major and minor structural defects and lack of satisfactory water supplies. The Committee then visited the parish and eventually made representations which resulted in the rural council providing a sufficient number of houses in that particular parish.

Reference has already been made to the Essex County Council Act, 1933, under which powers are available for preventing the pollution of rivers, licensing establishments for massage and special treatment, making byelaws for securing the cleanliness of premises and equipment used by hairdressers and barbers, controlling moveable dwellings and camping grounds, controlling the depositing of refuse and registering and regulating ice-cream vendors. In promoting the Bill, evidence had to be prepared and given on each subject, conferences were attended and much time was spent in the Committee Rooms of the House of Lords. It was a tremendous task, revealing how advisable it is to contact all interested parties in the early stages and endeavour to secure agreement on contentious points as far as that is possible. Much time, energy and worry are saved in this way. But where agreement cannot be secured there is no alternative but to press for the powers needed. Between 1919 and 1939 much parliamentary bill work came my way, and I had frequently to prepare and give evidence in the Committee Rooms of both Houses on matters affecting Essex. It was interesting work, though at times exacting, and one got a good insight into the art of law-making in this country.

In most of this work the late Alderman C. W. Daines took a very keen interest. Mr. Marsh and I owe a good deal to him for his unswerving assistance, particularly when matters reached the Committee stage. He gave up a good deal of his time to what he called " real public health " ; he was very good on health education, giving many talks in Essex and as far afield as South Wales. He liked nothing better than accompanying us on " field work ", so that he could familiarize himself with the difficult problems which we had to help in solving. We lost a good friend and helper when in 1946 he retired from public work after more than twenty-five years on the Essex County Council.

It will be seen that the work in connection with the sanitary circumstances of the County developed from small beginnings into an important section of the Department. Obviously this could not be done without the necessary staff, which increased from one County Health Inspector (part-time) in 1919 to one County Health Inspector (whole-time) and six Assistant County Health Inspectors from 1936 onwards.

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Mental Health.

A very active voluntary body—the Essex Voluntary Association for Mental Welfare—had undertaken duties in connection with the mental deficiency service on an agency basis for the County Council from the year 1916 under the guidance of Miss C. A. Neville and later Miss S. C. Turner, as Secretary. The purpose of the Association was to inspire interest and sympathy with the lot of mental defectives and to increase the accommodation for them in the shape of special schools and institutions.

In the year 1938 the work of this voluntary Association was taken over and administered directly by the County, its officers being transferred to the County service and continuing their good work as part of the staff of the Clerk of the County Council.

It is of interest to record that the total number of cases on the books was 1,355 in 1918, had risen to 8,238 in 1938 and was 7,395 in 1948.

Essex was very favourably placed in the matter of the provision of institutional accommodation for mental defectives, being the major participant in the Royal Eastern Counties Institution at Colchester, so ably directed for over thirty years by Mr. F. Douglas Turner, C.B.E., who resigned owing to ill-health in 1945. He was a national figure in the mental deficiency world and acted as representative of the voluntary institutions for defectives when the Mental Deficiency Act, 1913, was under consideration. He served on the joint committee appointed by the Board of Education and Board of Control to enquire into mental deficiency and on the departmental committee to advise on mental deficiency colonies. He introduced a system of licensing patients out on trial which was later adopted by practically every institution for defectives in the country with great success.

Reform has come very slowly on the lunacy side of the Mental Health Service. Until 5th July, 1948, the domiciliary aspect was largely undertaken by officers of the Public Assistance Department. As a first stage, the Poor Law Act of 1930 changed the description of " pauper lunatic " to that of " rate-aided person of unsound mind ". A second stage was the Mental Treatment Act of the same year, which made it possible for patients to be admitted to mental hospitals on their own application and for the temporary treatment of cases without certification. It also made possible the establishment of out-patient clinics, and in this connection much valuable assistance was given to the County Council by Dr. W. G. Masefield, who was at that time Medical Superintendent of the Brentwood Mental Hospital.

As a result of the National Health Service Act, 1946, both the mental deficiency and lunacy and mental treatment activities of the County Council were combined into the Mental Health Service under the control of the County Medical Officer, thus removing, so far as lunacy and mental treatment is concerned, the difficulties associated with the appointment of visiting committees under Section 169 of the Lunacy Act, 1890, which debarred me from advising in regard to this important aspect of public health.

On the mental deficiency side these difficulties did not exist, and Dr. T. P. Luddicombe and other officers of the Department regularly advised in regard to the work of the Committee for the Care of the Mentally Defective. That Committee has been particularly fortunate in its Chairmen. When I came to Essex Councillor James Tabor occupied that office. In 1927 he resigned owing to ill-health, and Alderman Colonel (afterwards Sir) Gilbertson Smith succeeded him until he became Vice-Chairman of the County Council in 1937. Then came Alderman Percy Astins, who also resigned soon his election as Vice-Chairman of the County Council in 1944. Thereafter the chairmanship was in the capable hands of Alderman C. E. S. Blackmore. All these gentlemen have been remarkable for a devotion to the cause of the unfortunate people which it was the business of their Committee to deal with. None of them ever lost the personal touch which is so important in work of this character.

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Hospital Services.

The provision made in the Local Government Act of 1929 for the transfer of functions from Boards of Guardians, including those Poor Law hospitals which were

undertaking acute medical and surgical work, established the County Council as a Hospital Authority and, incidentally, confronted it with a very pretty problem. To achieve the transfer of the hospitals to the Public Health Service there was a legal process of "appropriation" with the alternative of a "declaration", but it was not these that caused any difficulty in Essex but rather a clash of personalities. Alderman Alfred Brooks, O.B.E., became the first Chairman of the new Public Assistance Committee, which later became known as the Social Welfare Committee, and proved such a doughty Chairman, so progressive in improving the hospitals and institutions transferred to the Council, that no one could have equalled him, let alone could have been superior to him. Nevertheless, there remained the fatal stigma of the Poor Law attached to these institutions. Men like Mr. Brooks tried in vain to pooh-pooh the suggestion that there was such a stigma; it is well known that the public still insisted on believing that there was a stigma.

As a first step the County Council received in March, 1930, a report from a special sub-committee which had been set up to inspect the Poor Law institutions in the County under the Chairmanship of Alderman Alfred Brooks. The report was largely concerned with the actual structural condition of the buildings, and it was obvious from the data collected that there was much to be done even from this point of view if the basis of a satisfactory hospital service was to be established.

Even then there was a shortage of hospital accommodation, and it is interesting to note that the two main reasons for the shortage were seen to be: (1) the increase in population; and (2) the increasing habit of hospitalization. The report mentioned above was the starting point of a new era in the County, and the development of the hospital service to the reasonable standards which prevailed at the time of its transfer to the Minister of Health on 5th July, 1948, can be said to have derived directly from the findings of this report. It is noteworthy that in the section dealing with special hospital accommodation I made special comment about the "Poor Law taint", a theme which I have constantly reiterated since those days. I made a special plea for as complete a division as possible between the sick and the other categories (non-sick), and I also suggested the setting up of special centres, e.g. for cancer. These recommendations were stressed—and implemented to a considerable extent—in the years following.

In 1931 a survey of the health services in Essex was carried out by officers of the Ministry of Health. Arising from their report a committee of the County Council was set up to prepare a scheme for the allocation of the accommodation in existing institutions in the County and the provision of additional accommodation.

In order that all the facts and data necessary would be available, a further survey was carried out in 1934 by officers of the Department embracing institutions directly controlled by the Public Assistance Committee and all other institutions and hospitals with which the Council had contractual arrangements for the treatment of patients. It was found that for a population then estimated to be 1,271,176 there were 4,148 hospital beds available, i.e. 3.3 beds per thousand population. Curiously enough the greatest shortage of beds was for the chronic sick, a position that even to this day has not been remedied. The main recommendations which resulted from this survey were that :—

(1) More accommodation should be provided at Colchester or Chelmsford or both ;

(2) An acute hospital of 500 beds and a chronic hospital of 800 beds should be provided in the south-western area ;

(3) A new hospital of 500 beds should be built in the southern area ;

(4) Two convalescent homes of 100 beds each should be provided ;

(5) Various other extensions to existing institutions should be carried out.

Reference was also made to preliminary plans for a pathological service, in order that the hospital service might have all the necessary requirements in this connection.

It was only after a great effort by the Chairman of the Public Health Committee, Alderman A. M. Mathews, that Mr. Brooks and his Committee were persuaded by the Chairman of the County Council (Alderman Hugh de Havilland) to agree to the Oldchurch Hospital at Romford being appropriated for Public Health purposes, but this did not take place until 1935. It is true that the appropriation did not remove the old workhouse and other relics in the grounds of the hospital which constantly reminded a visitor of its Poor Law origins. As a result, however, considerable up-grading of this hospital took place, many additional services and facilities were made available, the medical staffing was improved, and a full consultative out-patient department was commenced. Dr. E. Miles, who as a member of the Central Office staff had been responsible for the departmental survey of institutions referred to above, became its first Medical Superintendent under the new dispensation and Oldchurch at once leapt up in public estimation and, in the opinion of those best able to judge, soon rivalled some of the best hospitals of the London, Middlesex and Surrey County Councils.

The ultimate plan was that a new hospital should be constructed on the Crowlands site some two miles away, and that Oldchurch would eventually cater only for chronic sick patients. Complete plans were prepared for the new hospital and the tender, amounting to over half a million pounds, was accepted in July, 1939, but owing to the advent of war two months later it was never implemented.

Unfortunately Oldchurch remained the only Poor Law hospital in Essex to be appropriated, whereas there were many others, notably St. Andrew's, Billericay, St. John's, Chelmsford, St. Margaret's, Epping, and the Lodge Hospital, Orsett, each of which was quite worthy of being appropriated, and, in fact, from time to time their appropriation was considered but all attempts were strenuously resisted by the Public Assistance Committee. The matter got to such a pitch that on one occasion Alderman Brooks and Alderman Mathews, accompanied by officials, saw Sir Arthur Robinson, who was Secretary of the Ministry of Health at the time, on the subject of how effect was to be given to the intention of the 1929 Local Government Act. After listening patiently, Sir Arthur expressed the view that no matter of law or of principle was involved, but purely a clash of personalities. This resistance on the part of the Public Assistance Committee had its repercussions in later years, notably in connection with the provision of maternity accommodation and the establishment of the Emergency Medical Service.

A definite move in the matter was made in 1947, but it was decided, on referring the matter to the Ministry of Health, that no useful purpose would be served by such action in view of the imminence of the transfer of the hospitals to the Government in 1948.

Two important acquisitions to the hospital accommodation of the County prior to the outbreak of the 1939–45 war should be noted.

Firstly, the Convent of the Good Shepherd at Hermon Hill, Wanstead, originally built as a merchant seamen's orphanage, was purchased in 1937 with a view to demolition and the erection on the site of an acute general hospital of 500 beds. The need for some sort of accommodation for patients of the chronic type became more and more urgent in this area, and, upon representations made by the Public Assistance side, adaptations were carried out in 1937 and 1938 to enable the existing convent buildings to accommodate 200 chronic sick patients until such time as a new hospital could be erected on the site. My comment at the time was that if these temporary adaptations were proceeded with there was no doubt that the existing unsatisfactory buildings, though possessing all the drawbacks of institutional buildings of their period, would continue to be used for hospital purposes for a generation. Time has proved that this was a prophetic utterance ; during the war the hospital was upgraded to the standards of an acute general hospital and is still serving a great need in this capacity.

Secondly, Sutton's Institution, Hornchurch, was opened by Alderman A. Brooks in 1938 as an up-to-date modern institution for approximately 200 chronic sick patients and 700 aged and infirm. Unfortunately, on the outbreak of war it had to be evacuated owing to its proximity to an aerodrome.

Apart from the availability of these additional hospitals, the County Council, during 1935 and 1936, agreed to the acquisition of sites for the building of modern hospitals when time and opportunity were favourable. This policy was the outcome of the recommendations contained in my Report and Review of Hospital Accommodation, dated August, 1934, to which reference has already been made. The sites were as follows :—

1. *In the Southern Area of the County.*
   (*a*) A site for a new hospital of 560 beds, capable of expansion, at Crowlands, Romford.
   (*b*) A site for a new hospital of 500 beds at Loxford Lane, Ilford.
2. *In the South-Western Area of the County.*
   (*a*) A site for a new hospital of 500 beds, capable of expansion, for acute cases at the Convent of the Good Shepherd, Wanstead.
   (*b*) A site for a new hospital of ultimately 800 beds for chronic sick and infirm cases at Brookfield Orthopædic Hospital and adjoining site, Walthamstow.
   (*c*) A site for a new convalescent home of 100 beds at Pyrgo Park, Havering-atte-Bower.
3. *In the South-Eastern Area of the County.*
   (*a*) A suitable site for a new hospital of 500 beds at Thurrock.
   (*b*) A suitable site for a new hospital of 250 beds at Bowers Gifford.
4. *In the Chelmsford Area.*
   A suitable site in or near Chelmsford to provide for the additional hospital beds required, adjoining St. John's Hospital.
5. *In the Saffron Walden Area.*
   Failing a satisfactory arrangement with the Saffron Walden Voluntary Hospital, a suitable site for a new hospital to accommodate up to 100 beds.

6. *In the Colchester Area.*

A suitable site for a new County Hospital at Altnacealgach, Park Road, Colchester, which was shared with the Education Committee.

7. *In the Area of the County outside the Metropolitan Police District.*

A site for a new convalescent home of 100 beds at Michaelstow Hall, Ramsey, near Dovercourt.

During the next three or four years the programme thus envisaged was slowly and methodically developed, culminating in the acceptance of a tender for a hospital on the Crowlands site to which reference has already been made. At the same time a scheme was prepared for the making of capital and maintenance grants to voluntary hospitals in the County with a view to assisting them to provide additional much-needed accommodation. A loan of £125,000 free of interest and not recoverable whilst the hospital carried out its functions to the satisfaction of the County Council was in fact offered to the Essex County Hospital, Colchester, but the negotiations fell through because the Board of Governors could not see their way to meet the County Council's requirements in regard to representation on their effective Executive Committee.

Whilst on the subject of voluntary hospitals, I ought to mention the outstanding voluntary effort made in Ilford in connection with the establishment of the fine modern King George Hospital on the foundations of the old Ilford Emergency Hospital. The first stage of the King George Hospital Scheme was completed in 1931 and on 18th July of that year the opening ceremony was performed by the late King George V who was accompanied by Her Majesty Queen Mary. I had the honour of meeting them on that occasion.

Early in 1938 the deterioration in the international situation was such that the Ministry of Health decided to review the hospital facilities throughout the country. This did not achieve a great deal from the practical viewpoint, but in the period following the Munich crisis the Ministry arranged for Dr. A. Leslie Banks, who afterwards became their Principal Regional Medical Officer, to undertake a comprehensive survey of the existing hospital services in the County.

The result of this survey revealed that approximately 5,457 beds could be made available in emergency, although the review mentioned previously in this report revealed that the number of beds actually available was some 2,500. From this it will be seen that practically all peace-time standards of bed spacing had been discarded. The problem of upgrading was, however, energetically tackled and many of the hospitals and institutions were consequently fitted to deal with casualties. In 1939 the Ministry of Health set up the Sector organization by which the area around London was divided into Sectors, each associated with a Teaching Hospital—this being the London Hospital in the case of Essex. A Group Officer was appointed to take charge of Sector I (including the County of Essex) and Mr. Russell Howard, C.B.E., Consulting Surgeon to the London Hospital, was appointed to this post. The Group headquarters were situated in the basement of the Essex County Hospital, Wanstead. Dr. G. G. Stewart, of the Central Office staff, and Miss M. Ruck, the Matron of the Black Notley Hospital, were seconded to assist staff, both medical and lay, which were transferred to the Sector office from the London Hospital, and this close association with Teaching Hospital staff and services proved invaluable to the County Council hospitals.

A casualty bureau was established at Sector headquarters to enable the necessary records of patients to be kept and to ensure smooth working of the arrangements for the transfer of patients. The closest possible co-operation was maintained with the Civil Defence Organization, including the Ambulance Services.

In 1940 the Ministry of Health provided hutted annexes at the following hospitals :—

Black Notley Sanatorium, Braintree ;
St. John's, Chelmsford ;
St. Margaret's, Epping ;
St. Andrew's, Billericay ;
Sutton's Institution (subsequently bombed and never in use).

These annexes provided an additional 2,000 beds, plus all the ancillary services necessary for the working of acute general hospital units.

Unfortunately the mansion attached to the Altnacealgach estate which had been acquired at Colchester was in the portion given over to Education ; otherwise it would have provided a sufficient administrative block to justify hutted annexes being erected there. For this reason there were no hutted annexes in the Colchester area. The only other hospital in the County at which hutted provision was made was the Harold Wood Hospital, a public assistance institution belonging to the West Ham County Borough. Some 16 or 18 huts were built here to provide what is now an important general hospital in the vicinity of Gallows Corner.

From its geographical position, Essex bore a large portion of the war in the air during the years 1939 to 1945, and the swaying of the fortunes of war caused evacuation in the first place away from London, but later on, as the possibility of invasion became imminent, a current in the opposite direction set in. Finally, the flying bombs and rockets completed the discomfiture of the population of the County.

Although the majority of beds were reserved for the treatment of casualties, the needs of the civilian sick were not forgotten, and while difficulties were experienced in finding accommodation for chronic sick patients the acute sick were dealt with adequately.

The periods in 1940 and later, during which there was intensive aerial bombardment, found the hospital services fully prepared, and while the number of casualties fortunately did not reach the numbers originally expected the demands were at times severe.

Many lessons were learned which subsequently proved of great value as regards the treatment of the sick, such as the concentration of special services in separate centres. Higher standards of treatment resulted in orthopaedics and the applied experience of the war period enabled patients to recover much earlier than hitherto often with fully restored function.

In July, 1941, the Sector organization was disbanded with the closure of Sector headquarters at Wanstead, and the County of Essex (except for a small portion transferred to Sector II) was transferred for operational purposes to the charge of the Ministry of Health's Hospital Officer at Cambridge. Dr. D. L. Mackenna assumed control, and much credit is due to his efforts for the continued efficiency of the service

Concurrently with this I was appointed as agent of the Hospital Officer, and the Senior Medical Officer of the County Council's Hospital Services, Dr. James Graham, was appointed Assistant Hospital Officer for the Region. From this time forward much of the control of the service in Essex was centred in County Hall, Chelmsford. An important result was a still closer co-operation between the municipal and voluntary hospital services.

It was at about this stage and arising out of these changes that it became crystal clear that the County as a whole should look London-wards so far as future developments were concerned, rather than to the Provinces (i.e. Cambridge). An extremely valuable contribution to this outlook was the regular conferences of Medical Officers of Health of London and the Home Counties convened by the Medical Officer of Health of London (Sir Allen Daley) from the early days of the war onwards. At these we discussed our common problems and pooled our knowledge to the mutual benefit of all concerned.

During the 1942–43 period the emergency service was not unduly strained, but the demands for beds for civilian sick showed an upward trend owing to the increased hospital-mindedness of patients and the absence of members of families on war work. Service sick patients also increased the demand for beds.

Early in 1944 considerable reorganization of the hospital services took place in anticipation of the invasion of Europe and the expected use of new weapons by the enemy. Many hospitals were partially evacuated, particularly in the London area, and the demands for beds were consequently intensified in the other parts of the County. Although damage and casualties were sustained in a number of hospitals, the demands for treatment continued to be met fully and efficiently.

It should be noted that selected buildings were earmarked as potential hospitals if need proved the necessity for further accommodation, but while these additional buildings could have been made available at short notice it was never found necessary to implement these measures.

Over 300 beds were available in the County for convalescent cases as a result of the setting up of convalescent homes by the British Red Cross Society and St. John organization. These homes were situated at Stansted Hall, Moynes Park, Greenstead Hall, and Hillingdon House.

The main results of the emergency services outlined above were the upgrading of accommodation that was carried out in many hospitals, including the installation of modern equipment, and consequent improvement of facilities for the treatment of patients. Again, much improved consultant and specialist services also resulted. Lastly, the link between the municipal and voluntary hospitals became closer than ever.

Mention must be made of the important part played by voluntary hospitals in the development of the County hospital services. In 1944 informal discussions were initiated between local representatives of the British Hospitals Association and the Medical Officers of Health of the major local authorities in Essex with the object of bringing together all those who might be concerned in any kind of area organization for both local authority and voluntary hospitals in the County.

Arising from these meetings, the County Council was invited to send representatives to a conference organized by the Nuffield Provincial Hospitals Trust at which it was unanimously agreed to establish a joint hospitals organization of a temporary character consisting of representatives of voluntary and municipal hospitals in the geographical County of Essex. The purpose of this body was to discuss the factual parts of the Report of the Surveyors of the Hospital Services in London and the Surrounding Area which had been published by the Ministry of Health in 1945.

From these beginnings grew the Essex Hospitals Joint Advisory Council, which eventually appointed a sub-committee to survey the existing hospital facilities and services throughout the geographical County of Essex, and the report of this committee was published in 1946. The report made many valuable suggestions as to the integration of hospital services in the County and made tentative suggestions for the grouping of hospitals in the light of the impending transfer of hospitals to the Minister of Health. It is noteworthy that many of these suggestions were adopted by the North-East Metropolitan Regional Hospital Board.

In addition to the review of general hospital services, the Essex Hospitals Joint Advisory Council also set up a sub-committee to consider the arrangements in the geographical County for the diagnosis and treatment of cancer and kindred matters within the provisions of the Cancer Act, 1939.

The total net result was a solid foundation on which to commence the service established under the National Health Service Act, and it can be said without fear of contradiction that when the time came to hand over to the Minister of Health Essex could feel justly proud that they were transferring an efficient and progressive organization with a tradition of faithful service to the public.

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I cannot leave the subject of hospitals without making reference to the experiment in geriatric rehabilitation conducted at the Orsett Lodge Hospital by the Medical Superintendent, Mr. L. Cosin, F.R.C.S., from November, 1944, to January, 1947. This attempt to diagnose, classify, treat and rehabilitate the elderly chronic sick received commendation from officers of the Minister of Health following a visit or inspection by one of their Principal Medical Officers, Dr. E. L. Sturdee, O.B.E., who was accompanied by the Right Honourable Lord Amulree. Mr. Cosin obtained remarkable results with the use of physiotherapeutic methods to get aged patients out of bed after illnesses which would usually have confined them to bed for the rest of their lives. " A Statistical Analysis of Geriatric Care ", based on this experiment by Mr. Cosin, appeared in the Proceedings of the Royal Society of Medicine for May 1948 (Volume XLI, No. 5).

Closely allied to the hospital service is the scheme which became known as the Thurrock Mobile Meals Service, full details of which will be found on page 95 of this report.

One other activity under this heading deserves special mention and this is the Homes of St. Giles for British Lepers at East Hanningfield, near Chelmsford. So far as I am aware this is the only provision made in the country for persons suffering from leprosy. The Homes were established in 1914 and are supported by voluntary funds

I accompanied members of the Public Health Committee on a visit to the Homes in 1930. Sisters of the Society of the Divine Compassion, an Anglican religious community, devote their lives to the care of the patients and every praise is due to them and to the Council of the Homes of St. Giles for the excellent work they are carrying out. If ever the need should arise, and so far as I know no such need is apparent at the moment, there ought to be no hesitation about providing whatever assistance is necessary from public funds without in any way interfering with the voluntary and religious nature of the work.

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Nursing Services.

There is no doubt that for a long time to come it will not be possible to meet the nursing requirements of the nation out of that group of girls who have the brain and inclination to study and to pass theoretical examinations. If we restricted the recruitment of nurses to that class we should deprive ourselves of a great body of naturally gifted women who have a love for practical nursing but who will not or cannot take up theoretical ideas sufficient to pass the examinations of the General Nursing Council.

About the year 1934 the Lady Supervisor of the Public Assistance Institutions, Miss L. Snowden, S.R.N., mentioned to me that she thought it would be a good plan if the untrained nurses in the Public Assistance Institutions and elsewhere received some modicum of training, both theoretical and practical. For the most part this would have to be after they had commenced duty, but a time could be looked forward to when they might have the training before actually taking up duty. Accordingly a curriculum was drawn up and put before the Public Assistance Committee who eagerly adopted the scheme, details of which will be found in the 1934 Annual Report, pages 101 and 102. This " Essex Scheme " marked a new epoch in Public Assistance nursing work and was soon to prove of national importance. It aroused great interest amongst various bodies dealing with nursing services. I spoke on it at an annual meeting of the College of Nursing at Manchester on 3rd May, 1935, and I also had the privilege of giving evidence thereon on behalf of the County Councils Association before the Interdepartmental Committee on Nursing Services (the Athlone Committee) and the proposals were adopted by that Committee as was shown in the recommendations contained in paragraphs 158–164 of their Interim Report, dated 20th December, 1938. Paragraph 160 of that Report is of interest :

> 160. It will of course be necessary to determine what qualifications should be required for admission to this Roll and what training in future the assistant nurse should receive.
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> We have received evidence of a scheme for the training of assistant nurses inaugurated by the Public Assistance Committee of the Essex County Council. The object of the scheme is to provide a training in the care of chronic and senile patients in Public Assistance Institutions and the training course lasts for two years. A simple test examination is given at the end of the first two months' preliminary training and there is a final examination at the end of the course. Trainees are recruited normally from persons of 18 years of age or over and the syllabus covers lectures and practical demonstrations on the theory of nursing, practical nursing, elementary anatomy and physiology, first aid, dietetics and hygiene. Many of our witnesses have spoken highly of this scheme and of the product, and it is clear that there is no insuperable difficulty in constructing a scheme of training suitable for girls with a practical bent for nursing but without the intellectual equipment necessary to pass all the examinations for State Registration.

Thus began a course of events which led ultimately to the legal recognition of the "assistant nurse" in the Nurses Act of 1943. The title is unfortunate and not descriptive but merely allusive; people who use the term without thought do not find it necessarily depreciatory, but people coming new to the subject regard it in such a light, and hence it is detrimental to recruitment.

Mention must be made of the Civil Nursing Reserve which played a valiant part in the nursing services during the war years. All matters relating to the Reserve were dealt with by the Essex Local Emergency Organization, which acted as an advisory body to its Chairman, the County Medical Officer. This organization was formed by representatives of the British Red Cross Society, the St. John Ambulance Brigade, the Women's Voluntary Services, Voluntary Hospitals, British Medical Association and the Municipal Hospitals, together with the Regional Nursing Officer and the Sector Matron.

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Civil Defence Casualty Services.

Civil Defence during the 1939–45 war made a big demand upon the Department but the fact that there was such an excellent team of workers in the Casualty Services led by Dr. Agnes V. Kelynack (now a member of the secretariat of the British Medical Association), meant that the ordinary health services could be kept going with very little serious disturbance during the whole length of the war. In fact, as will be noted, some fresh developments were put in hand.

To begin with, in 1938 the powers and duties of the County Council under the Air Raid Precautions Act of 1937 were delegated to a special committee, called the Air Raid Precautions Committee, which made detailed plans for the protection of persons and property from injury or damage against hostile air attack. An important part of these plans was the setting up of an efficient Casualty Service which would deal with casualties at the site of an incident and would be responsible for such casualties until they were admitted to hospital or returned home after treatment.

It will be appreciated that the arrangements on the medical side were an essential part of the whole organization and during this period there was close collaboration between all departments concerned, the medical side being particularly assisted by Dr. A. Leslie Banks who was then a Regional Medical Officer of the Ministry of Health, Cambridge.

As a result of co-ordinated effort both centrally and locally, the situation at the outbreak of war in 1939 was that a reasonably efficient and trained service existed and was ready to act should the need arise. It should be stressed that at this time the service depended solely on part-time volunteers, for it was not until September, 1939, that the recruitment of whole-time personnel was allowed.

As has been noted earlier in this survey, the expected heavy attack from the air did not materialize in 1939 or during the early months of 1940 and this respite was indeed fortunate for it allowed time for improvement of first-aid posts, hospitals and depots and practical training in dealing with casualties both from a local point of view and in connection with mutual assistance arrangements from area to area and county to county.

This respite was not to last and was broken on 30th April, 1940, by a serious incident at Clacton involving a large number of casualties (157). As has been stated in the Report of the A.R.P. Committee, this first phase of aerial warfare was mainly one of attacks on military objectives, but it gave a foretaste of raiding to come.

At this time the administration of the medical side of the casualty services was undertaken in my department, but no one medical officer had been made responsible for the work. It was evident that such an appointment was necessary and in May, 1940, Dr. Kelynack was appointed a whole-time medical officer for civil defence duties. Although she was a member of my staff she was on the operational side under the direction of the County Controller, the late Councillor Major A. P. W. Wedd, C.B.E., acting as his medical staff officer and being always available for duty in County or Group Controls. Group Control covered the whole of that portion of the County adjacent to the Metropolis which is in the Metropolitan Police District ; its Controller was Alderman (then Councillor) Frank S. Foster, who was awarded the C.B.E. for his services in this connection, and who, as I was on the point of retiring, was unanimously elected as Chairman of the County Council. The integration of administrative and operational duties in one person who had wide and personal knowledge of the County as a whole proved to be a satisfactory and efficient arrangement.

The second period of severe attack from August, 1940, to May, 1941, and which included the Battle of Britain and the bombardment of London, stands out in my mind, though Essex had in later years to face further ordeals. The incidents were numerous, scattered over all parts of the County and involving large numbers of casualties. At first that part of Essex which is outside the Metropolitan Police District bore the brunt of the attack, but in the bombardment of London, Group 7 (which consisted of the Boroughs of Barking, Chingford, Dagenham, Ilford, Leyton, Wanstead and Woodford and Walthamstow and the Urban Districts of Chigwell and Waltham Holy Cross) took the full weight.

What problems arose ! Mutual assistance to hard-hit West Ham ; medical care of the evacuees in Epping Forest ; medical supervision of air raid shelters and rest centres, not to mention pure public health problems which arose as the direct result of bomb damage. My outstanding memories of this period are firstly, the magnificent behaviour of the population as a whole, their courage and high morale under the most difficult circumstances ; and secondly, the efficiency and kindliness of the personnel of the Civil Defence Services. Their period of waiting was over, their hours of training were now being tried—the petty grumbles and feeling of *ennui* had gone, they were " on the job " and doing it well.

And then came a phase of intense activity in preparing for the eventuality of invasion. Detailed plans were made with regard to evacuation, first-aid points were increased in number and many were upgraded into miniature first-aid posts. Close liaison was maintained with the military authorities, a liaison which was never tested by invasion but which brought many friendships between service and civil personnel, friendships which have gone on into the years of peace and some which are now only a happy memory—of a soldier who said *au revoir* so gaily but whom we shall not see again.

Period three of the air attack was from May, 1943, to June, 1944—the Baedeke period some call it. Essex towns did not escape, but the Civil Defence Service was able to deal with the various problems. Intensive training, which was put in during any quiet periods, paid big dividends in increased efficiency and a happy relationship with the Home Guard, Fire Watchers and other services.

During the early months of 1944 a great deal of work was involved in collaboration with the Service authorities in the preparations for the invasion of Europe. This necessitated a regrouping of medical resources and casualty services and reinforcement of all services by personnel brought into the County from other authorities in view of possible intensive bombing, which, fortunately, did not materialise.

The last period—Period 4—was that of attack by flying bombs and rockets and lasted from June, 1944, to May, 1945. New problems arose in many branches of the service, but from the medical point of view the succour of the casualties remained the same and of primary importance. The whole of the County was involved in this latest form of attack and casualties, especially from rockets, were very heavy.

I have in no way attempted to deal with detailed medical problems. So many of these arose during the war years that it would be impossible to enumerate them all. From the point of view of the casualty services they ranged from the small number of casualties in a country village to the large incident in the Metropolitan Police area ; from a single casualty at a small farm to the direct bombing of a maternity home or the evacuation in the middle of a night raid of a maternity hospital where an unexploded para-mine had landed at the front door ; from the medical care of homeless persons in a rest centre to the evacuation of a large hospital severely damaged by a flying bomb. And during the whole time the ordinary public health services of the County were continued.

Certain things must stand out in the mind of each of us who worked in Essex in those days, incidents grave and trivial, actions of great courage and a gaiety which never faltered even in the most difficult circumstances.

There are many names I would wish to mention, but I know the individuals concerned would simply say : " I was doing my job ". It is that memory of the loyalty, courage and unselfishness of the Civil Defence personnel which will remain.

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Tuberculosis.

My predecessor made reference to the origins of the scheme for the treatment of tuberculosis, but it may not be out of place to recapitulate the story very briefly. The National Health Insurance Act of 1912 provided as one of its benefits the treatment of insured persons suffering from tuberculosis in sanatoria, but it was perceived that it would be inconvenient and partial to give such benefits to one section of the community only. Accordingly, in 1913, the Government introduced what was called the Hobhouse Grant, paid to county councils and county boroughs (who were the administrative authorities under the National Health Insurance Act for sanatorium benefit) to enable them to devise and work out schemes to treat the whole community, including those who were not insured persons.

Tuberculosis had become a notifiable disease only in 1912, and for various reasons the disease was not very completely notified. The outstanding reason was that such

a disease has certain social consequences and reactions, and it was recognized that it would be a long time before the community and the medical profession would agree that it was to the best interests of the home to notify all cases. A scheme was prepared on the lines of the Report of the Departmental Committee on Tuberculosis (known as the Astor Report) which included the appointment of tuberculosis officers, the establishment of dispensaries, the provision of beds for both early cases and advanced cases of tuberculosis, the setting up of care committees, the appointment of tuberculosis nurses and the provision of various kinds of propaganda.

The country was scoured for suitable doctors with knowledge and experience to become whole-time tuberculosis officers, and this was achieved with more or less success. It is of interest to know that one of the tuberculosis officers appointed, Dr. (afterwards Sir) Arthur MacNalty, left after only a few months' service in Essex to take up a post as an inspecting officer of the Ministry of Health, and afterwards became the Ministry's Chief Medical Officer. Another outstanding appointment was that of Dr. John Sorley in 1917. A bachelor and something of a character, he was a great force for some seventeen or eighteen years in the Walthamstow and surrounding area. He was a devoted worker with a flair for statistics and a Tuberculosis Officer who even in those early days without mechanical aids to diagnosis gave an opinion which could always be trusted. He died in 1935. A great point of the Astor Report was that the tuberculosis officers would be paid at a much higher rate than what had been paid for whoel-time school medical inspectors appointed as a result of the Education (Administrative Provisions) Act, 1907. Accordingly, tuberculosis officers were appointed at the then very considerable figure of about £500 a year, whereas contemporary school medical officers were being paid from £250 to £300 a year. If the difference had been the measure of the degree of knowledge and skill of the tuberculosis officer it would have been well worth while, but there were many wise people who very much doubted whether that was the case.

In any event the means of diagnosis in those days were nothing like what they are to-day : X-ray was almost impossible to obtain in many parts of the country ; laboratories had not perfected their technique ; and other means of diagnosis which are accepted as commonplace to-day were not then available. Accordingly a great deal of importance was attached to the stethoscope and various tappings of the chest, which gave an appearance of mystery and other-worldliness. A well-known statistician of the time estimated that the error of diagnosis both ways was about 30 per cent., i.e. of the cases notified 30 per cent. had not got the disease, and, furthermore, of those who were definitely told on examination that they were not tuberculous 30 per cent. had got the disease.

About the same time one or two doctors, notably Camac Wilkinson, had made a great " to-do " about treatment by tuberculin, and in the early stages it was expected of tuberculosis dispensaries that they would be largely occupied in administering tuberculin according to the current ideas. Unfortunately the great hopes which had been aroused were not fulfilled and at very few dispensaries was it used, apart from assisting in diagnosis.

In the built-up areas there was a lot to be said for having a dispensary where doctors and others could send suspected patients for diagnosis by a chest expert. The trouble was that often when the suspected patient got to the dispensary and the fear

or suspicion was confirmed, nothing much could be done because even at that time there was a great shortage of sanatorium beds. In 1916 the Government had sent a special letter to all county councils and county boroughs asking them to make extra-ordinary efforts to provide beds for soldiers returning from the Continent suffering from tuberculosis.

Consequently I found in 1919 that beds were provided at a number of isolation hospitals by arrangement with the respective owning authorities, all of which were definitely on the open-air system as at that time it was thought by many that by rigorous open-air treatment tuberculosis could be cured and abolished. It was insufficiently appreciated that patients in the later stage of tuberculosis needed the warmth of a ward as much as any other kind of treatment.

In addition, use was being made of an old smallpox hospital near Braintree belonging to the Braintree Joint Hospital Board, which had never been used for its original purpose. It consisted of a brick house in the middle of a field, with a shallow well and a very primitive means of sewage disposal. The brick building was used for administrative purposes and wooden hutments for about 36 female patients were put up in a sort of quadrangle joined by a verandah. One little trouble was that the shallow well invariably dried up in the second week in October, and from then until the second week in January, when it suddenly filled up as a result of the autumn rainfall, water had to be carted for all purposes, including cooking and the flushing of the water closets. So began Black Notley, which is now one of the leading sanatoria in the country.

Another unused smallpox hospital half-way between Sible Hedingham and Wethersfield had been discovered, very similar to the type of place that was utilized at Black Notley. A brick building intended to be the administrative block stood in a field ; round this tents or hutments could be provided in the adjoining field in the event of an epidemic. Here huts were provided to meet the clamour for treating children. The dispensaries had been found exceedingly popular in doling out large quantities of cod liver oil and malt to all the children who had been accustomed to having this sort of thing in the variety of ways in which our country dispensed to its indigenous poor. Let any child be looking a bit thin or under-nourished and the provisional diagnosis of pre-tuberculosis was established and the child was sent off to the children's sanatorium. About 24 children at a time had a perfect holiday, and undoubtedly it did them an immense amount of good. The only trouble was, as we were informed many years later by our expert, Dr. W. Burton Wood, that most of the children had not been suffering from tuberculosis at all !

Harold Court, an old country mansion in an outlying part of the Brentwood Mental Hospital grounds which had been used for the custody of imbeciles and epileptics, had been obtained and earmarked for the accommodation of male patients. It is sufficient comment on the allocation of the rooms to note that on the top floor about eight male patients were accommodated as well as the maids ! However, that was soon found to be unworkable. More and more of the main building was used for administrative, cooking and dining purposes, the patients being accommodated in the grounds in suitable wooden huts of an ever-improving design and make-up.

All the above was in respect to pulmonary or respiratory tuberculosis. Attention was then drawn towards non-pulmonary or surgical tuberculosis, which at that time

was assumed to be almost entirely a problem of children, as apparently it was not appreciated that a great many adults suffered from active surgical or non-pulmonary tuberculosis. By a piece of good fortune a philanthropist, Mrs. M. Brenton, of High Beech, in Epping Forest, had built a convalescent hospital for East End children before the 1914–18 war, which, being disused for reasons arising out of the war, she was very glad to allow the County Council to make use of in return for a very small rental. Thus began High Beech Sanatorium which was visited by Sir Henry Gauvain monthly for the next twenty years, during which time it was extended and improved and did an immense amount of good work. It was only when Black Notley Sanatorium was sufficiently extended to take in all the non-pulmonary children that High Beech was converted into a pulmonary institution for children, so that Sible Hedingham could be closed down.

Even so, the waiting list steadily mounted up and as beds could not be obtained from outside sources something had to be done. Accordingly, in 1920, the County Architect was instructed to get out a plan for an institution of 150 beds for women and children.

In respect to the site, this matter was settled in a curious way. Prior to the 1914–18 war a site had been reserved at Sandon, near Chelmsford, but the outbreak of the war temporarily held up the project. I arranged to visit the Sandon site on a day in April, 1919, following a most extraordinarily heavy fall of soft, fleecy snow to the extent of six inches or more. The sun shone powerfully and rapidly melted all the snow, causing temporary floodings in various parts of the County. The floods in the vicinity of Sandon were of such a nature that it was found quite impossible to get through to the site. Even though this was an exceptional occurrence, it was felt that a site liable to be cut off from transport was hardly a suitable one for a sanatorium, and accordingly the County Council gave up the idea!

Dr. Thresh drew my attention to a very favourable site, Rectory Farm, on the south slope of Danbury hill, and I advised the purchase of this site from the Rector of Danbury. As soon as this became known there was a general uprising of disapproval, and the usual steps were taken to prevent the desecration of a beauty spot for such a purpose as treating consumptives. The Ministry of Health ordered a local enquiry, and it is worth putting on record that a local doctor solemnly stated at the enquiry that he had no doubt that if a sanatorium were built on that site within six months of patients being admitted all the local residents within a radius of a few miles of the sanatorium would be infected! Expert opinion was given on both sides, and ultimately the Ministry of Health advised the County Council to seek a site which, whilst sufficiently answering the purposes required, would not deprive the lover of the countryside of one of the beauty spots of Essex.

The Committee's choice of site fell on Black Notley and, although it was not such an inspiring one as the Danbury site, the County Architect reported on it most favourably from the building point of view. The first thing to do was to discover if there was a chance of getting sufficient water, because, as previously pointed out, the shallow wells invariably failed in the early winter months. Dr. Thresh decided where a deep bore should be made and, after some slight perturbations owing to a possible failure, eventually water was struck and proved to be of perfectly satisfactory quality.

It may be put on record that the Chairman of the Sub-Committee of Black Notley at that time, when he discovered that the Committee was really serious in pushing forward with the project of a new sanatorium at Black Notley, promptly resigned as he said he would not be associated with this wanton expenditure of money!

A tribute should here be accorded to the County Architect. People versed in county administration will be aware how far an officer can influence the committee and the council in their deliberations and also in their executive capacity. Once the council has instructed its architect to prepare plans for a certain number of patients and to consult with its medical officer and other chief officers as might be required, the matter is very largely left in the hands of the architect as to whether he contents himself with a cheap and nasty building or something worthy of the project in hand which will stand up to the test of time. It might be said, without offence, that at that juncture in its history the Essex County Council was hardly ultra-progressive and had been accustomed in a lot of these matters to content itself with adapted buildings and makeshifts. Here, for the first time, was a building on a large scale being planned and built brand new for the health services, and fortunately the County Architect not only planned the building but executed it in good style and good material. In one respect he was forced to curtail his ideas by the Ministry of Health and under duress from them he had to make certain so-called savings in respect to the verandahs of the pavilions. History subsequently proved beyond doubt that this initial saving was a cause of a great deal of unnecessary expenditure later on.

One of the outstanding features of the new layout was the King Edward VII Memorial Hall, towards the cost of which the King Edward VII Memorial Fund made a grant of £2,635. It provides a place of recreation for the patients with seating accommodation for nearly 200. The foundation stone of this building was laid on 3rd August 1928, by General R. B. Colvin, C.B., D.L., acting for the Lord Lieutenant, the late Lord Lambourne, G.C.V.O.

The new buildings altered the whole aspect of Black Notley as it had previously existed, and the whole administration had to be looked at afresh. Miss A. B. Clay who had been Matron from the beginning in the old improvised buildings, had done a magnificent job of work and was able to retire in the fullness of the knowledge that she had done a splendid piece of work. Partly on the advice of Sir Henry Gauvain the Committee, early in 1929, appointed Miss M. Ruck, of Bramshot, as the successor to Miss Clay, and in September of that year she began a term of office which has been epoch-making, so much so that the name of Ruck and Black Notley are intimately associated. The first whole-time Medical Superintendent was obtained from Queen Mary's, Carshalton, in the person of Dr. Michael Wilkinson. In making this appointment it was thought desirable to choose a doctor with experience of the diagnosis and treatment of surgical tuberculosis as such doctors were in short supply and, moreover, the new Black Notley had been designed to accommodate children as well as women. Dr. Wilkinson took up duty not long after Miss Ruck, and between them they have built up a sanatorium which is known and deservedly holds a very high place throughout the world of tuberculosis.

An aspect of the development of this sanatorium which should be mentioned is the maternity unit which was established in July, 1937, for the care of pregnant women.

with active disease during and after their confinement. It consisted of a separate annexe to the ward for adult women and was complete with lying-in room, labour ward, sterilizing room, bathroom and sanitary annexe. It was thus nothing spectacular but it gave many other local authorities ideas of what could be done in this direction. Dr. R. C. Cohen was in charge of the work in the maternity unit. By 1941 the number of confinements in the unit had increased considerably—33 mothers were confined in that year as compared with 13 in 1938.

During the war years it was found increasingly difficult to arrange for the care of babies by relatives and in a number of cases it became necessary to retain the babies in the hospital until the mothers were discharged. Consequently, in 1942 the possibility of establishing a creche in connection with the unit was mooted, but the Ministry of Health ruled that it was not a function of the County Council as a tuberculosis authority to care for young children, this being their prerogative only as a child welfare authority. Various expedients were suggested to overcome this difficulty, one of which was that a small portion of land at Black Notley might be appropriated for child welfare purposes, but these problems connected with the establishment of a creche, together with the question of finance, proved to be insuperable and the proposal was therefore dropped.

When the time came to plan the new sanatorium for male patients at Broomfield it was very fortunate that the chosen site (Broomfield Court) was immediately adjacent to the County Town. When the Black Notley site was decided upon a generation previously, the question of labour, particularly female domestic labour, was not even considered. Nowadays, however, in deciding on a site for an institution or hospital, the first thing that has to be considered is the availability of sufficient female, as well as male, domestic labour of all kinds. Of course, the same remarks apply to nursing and other professional grades but the domestic problem is the all-important one.

Dr. W. L. Yell, who had been acting as Clinical Tuberculosis Officer in the Department, gave great assistance in working out the plans of the new sanatorium, having almost daily conferences with members of the County Architect's staff. The sanatorium proved to be a great improvement on previous attempts at the modern type of construction. It is the direct antithesis of the Black Notley pavilion type, Broomfield consisting of a wide, extended front of three-tier building. One of the contentious points with the Ministry of Health was in respect to the financial justification for putting a service corridor behind each floor of the lateral wings as well as behind the centre block. Ultimately cheeseparing economy had its way, but already, after only a few years, the economists have been shown to be utterly unjustified, and either at great expense the back corridor will have to be installed or, alternatively, the whole of the front of the building will have to be adjusted, as when there is a high wind it is quite impossible to get in and out of the cubicles from the front balcony. The building was not completed at the outbreak of the 1939–45 war but, fortunately, sufficient material and labour were allowed by the Government to get it finished by 1940. Alderman H. de Havilland, as Chairman of the Council, made a characteristic address at the inaugural ceremony.

It might very modestly be said that Black Notley Sanatorium, as an example of the pavilion type of sanatorium, and Broomfield Sanatorium, as a type of the

modern three-tier steel and concrete construction, represent two of the best sanatoria in the whole country.

In addition to all the beds thus provided within the County it was always necessary to make use of beds outside the County boundary and in voluntary sanatoria whenever any were available. For many years it was a routine to make provision in the annual estimates for fifty additional beds each year, and although by this process the number of beds provided for patients in Essex approached an annual figure of 1,000 the demand was never fully met; it was apparently insatiable. In my early days in Essex the picture was vastly different. At that time, as has been indicated, the Public Health Committee of the County Council did not deal with what was known as "sanatorium benefit" for insured persons. As Chief Tuberculosis Officer, I attended meetings of the Sanatorium Benefit Sub-Committee of the Insurance Committee and solemnly presented a list of the cases which had been recommended by the tuberculosis officers and which I considered suitable for admission to the very limited number of beds available. Actually there were never more than about 100 beds for adults at that particular juncture. In association with one of the London Hospital Medical Schools one bed for adult surgical tuberculosis had been secured as a great favour, but it is interesting to put on record that only with great difficulty during the first few years was that one adult surgical bed kept occupied! Twenty years later more than 100 adult beds for such cases were continually in occupation. Of course, the patients were there, but they were simply not notified or were treated in the voluntary hospitals under one guise or another.

A passing mention has been made of Dr. W. Burton Wood, but no record of the tuberculosis services in Essex would be complete without a more detailed reference to him. He was first appointed to a post in the County in the Thurrock district where later, he acted as Medical Officer of Health for Grays Urban, Tilbury Urban and Orsett Rural Districts, and as School Medical Inspector and Tuberculosis Officer for the Essex County Council. In his spare time he attended assiduously at the Victoria Park Hospital, London, and shortly after getting his M.R.C.P. he was elected an Assistant Honorary Physician to that hospital. This caused him to apply for sufficient time off to carry out the sessions entailed, which led to his being appointed as Consultant Chest Physician to the Essex County Council on a part-time basis.

Thus began a career of extraordinary benefit to the County of Essex. By his researches, his writings and his capacity for raising enthusiasm in his disciples, Burton Wood built up a school in Essex which raised it far above the level of anything that had preceded that period. He devoted more and more of his time to Black Notley and ultimately bought a house in the vicinity so that he spent almost half his time working and inspiring others to work there. It was a tragedy when, at a comparatively early age, he died whilst in full harness and robbed the County of one of the most brilliant exponents of the art of diagnosing and treating tuberculosis. For those interested, some of his papers were reprinted in my Annual Reports for the years 1925–28, 1930 and 1933.

An important feature of the early administration of the tuberculosis scheme was the establishment of what were called Dispensary Sub-Committees. These sub-committees were set up by the Sanatorium or Tuberculosis Sub-Committee of the

Public Health Committee and meetings were held at the dispensaries which were suitably grouped so as to cover the County by about seven sub-committees. The sub-committee met usually at the largest dispensary of the group but every dispensary was visited at least once a year. This holding of sub-committee meetings at dispensaries was greatly appreciated by the tuberculosis officers and tuberculosis nurses. It also kept members of the Committee interested in the actual premises and particularly in the Care Committees, which were set up in connection with the largest dispensaries as successors to the Essex Tuberculosis Association, a local branch of the National Association for the Prevention of Tuberculosis. For many years, in my capacity of Chief Tuberculosis Officer, accompanied by the Chief Clerk, I attended each of these Dispensary Sub-Committees and I feel that the time was very well spent.

.. ..

Midwifery.

In 1919 there were 219 midwives (28 of whom were *bona fide*) practising in that part of the area for which the County Council was the Local Supervising Authority. This figure rose steadily to well over 300 just before the appointed day under the National Health Service Act; thereafter the County Council became responsible for the supervision of 495 midwives throughout the administrative County.

With the coming into operation of the Midwives Act, 1936, the County Council formulated a scheme for the establishment of a salaried midwives' service. Conferences were held with the autonomous Child Welfare Councils concerned and with voluntary organizations, as a result of which a comprehensive scheme was formulated providing for the services of midwives to be available for the whole of the area for which the County Council was the local supervising authority, either by the provision of County Council whole-time midwives or by arrangements with the Essex County Nursing Association and Welfare Councils. This scheme came into operation on the 1st July, 1937.

It is interesting to note that during the period 1920 to 1948 it was found necessary to report 12 midwives to the Central Midwives Board and in two cases only the findings of the Board resulted in the names of the two midwives concerned being removed from the roll of the Central Midwives Board.

In 1919 practising midwives issued 674 medical aid notices (requesting assistance from a doctor at the expense of the County Council) in the area for which the County Council was the local supervising authority, and for the period 5th July to 31st December, 1948 (just short of six months), after the National Health Service Act came into operation, 2,531 notices were issued for the whole of the administrative County.

The administration of gas and air analgesia by midwives has, from time to time, been given a great deal of publicity. In 1940 arrangements were made for County Council and Welfare Council midwives to undergo a course of training in its administration at Oldchurch Hospital, Romford. Similar courses have been established at other hospitals in the County with the object of training all midwives in the County in analgesics.

The first whole-time Non-Medical Supervisor of Midwives for Essex was appointed on 4th December, 1944. Previously the work had been undertaken by the Chief Health

Nurse (Superintendent Health Visitor) and the senior nursing staff of the Essex County Nursing Association, who continued to be responsible for the supervision of midwives employed by District Nursing Associations.

The Essex Midwives Association, established by Miss Thresh (who was also responsible at that time for the inspection of midwives) in 1919, has undertaken excellent work ever since, particularly in arranging lectures for the benefit not only of midwives but of district nurses and health visitors. Originally lectures were given by members of the County Council's staff, but subsequently the Council made grants to the Association to enable them to arrange for lectures by doctors who were consultants or specialists in their particular sphere of work.

.. ..

Arising out of a report on maternal mortality issued by the Ministry of Health in 1937, arrangements were made for the establishment of an emergency obstetric units or " flying squad " as it was called, so that, where necessary, a complete working unit of a hospital could be taken to the bedside of a patient, thus obviating a journey to hospital which might be prejudicial to her safety.

.. ..

Maternity and Child Welfare.

One may detect a tinge of regret in my predecessor's remarks under this heading. He refers to a report which he prepared on the subject in 1914 and to a conference of representatives of Sanitary Authorities in 1915 presided over by the Chairman of the County Council, at which he advocated that the County Council should adopt the Notification of Births Act (Extension) Act, 1915. " Unfortunately," he says, " my eloquence was wasted, practically every Authority, large and small, preferred to adopt the Act locally and do their own Maternity and Child Welfare work. It was finally resolved ' That the County Council be recommended not to adopt the Act for the County or any portion thereof '. This was accepted by the County Council later and as I anticipated, very many of the rural and smaller urban Authorities have done little or nothing ".

It was only when the 1915 Act came into force that births became notifiable in every part of the administrative County. Even so, there were many parts of the County which had no Maternity and Child Welfare scheme at all at the end of hostilities. In 1920, however, the County Council adopted a scheme made under the Maternity and Child Welfare Act of 1918 applicable to all those parts of the County in which schemes had not been put into operation by the local Sanitary Authorities. In 1922 this consisted of 25 out of a total of 47 sanitary districts, and in 1947 of 31 out of 43. The existence of so many autonomous Child Welfare Authorities—most of them authorities of some importance—created many problems, notably in connection with the provision of maternity hospital accommodation.

Big developments quickly took place and a special Section was established in the Department to deal with this important service and also the duties under the Midwives Acts. Arising out of the new duties placed on the County Council by the Midwives Act of 1902, Dr. Thresh had used the qualifications and experience of his daughter Miss M. Thresh, and she became the Council's first Inspector of Midwives, a post which she held until 1923.

Closely connected with these services was Dr. Thresh's other main passion—the District Nursing Associations. In 1894 he had assisted Evelyn Lady Rayleigh and one or two other people who were interested in the provision of a nursing service for the sick poor in their own homes in the formation of the Essex County Cottage Nursing Association. (The word " Cottage " was dropped in 1917.) Only a small portion of the County was covered by the service at first, but long before the passing of the Midwives Act, 1902, the Association had realized the importance of training women for maternity nursing and as soon as the Act was passed the training home they had established at Leytonstone became a recognized training school.

In the light of subsequent events it is, perhaps, not inappropriate to outline the development of this service in an abbreviated diary form :—

1894—Formation of Essex County Nursing Association.

1898—Salary paid to District Nurse-Midwife 12/6d. a week.

1902—Leytonstone Training Home becomes a recognized training school.

1906—Further Training Home opened at Walthamstow.
Forty-seven District Nursing Associations employed fifty nurses; one-eighth of County covered.

1909—Sixty-two District Nursing Associations.

1910—Building and Development Fund Appeal launched; £1,450 received by end of year.

1911—Extensions to Leytonstone Training Home.

1914—Salaries of District Nurses increased : first year 13/6d. a week, second year 14/– a week and third year 15/– a week, thereafter as arranged.

1918—Maternity and Child Welfare Act. Agreement made between County Council and Essex County Nursing Association " to provide Nurse-Midwives for all the County save the large urban areas " containing provision for the payment of grants in respect to such provision. Sixty-seven District Nursing Associations affiliated. Total of 151,415 visits.

1919—Eighty-three District Nursing Associations affiliated.

1921—Agreement with County Council revised.

1922—One hundred and twenty-three District Nursing Associations affiliated. I noted in my Annual Report " there is no doubt that the efforts of the County Nursing Association during the past few years have culminated in the provision of a district nursing service of which the County is justly proud, and it is hoped that the Association's excellent work will not be hampered in future by the economy campaign ".

1923—One hundred and twenty-seven District Nursing Associations affiliated. Total of 282,592 visits.

1924—Miss D. Landon appointed Chief Health Nurse. By arrangement she visited District Nursing Association staff and supervised their work.

1926—Miss Landon appointed to dual office of Chief Health Nurse and County Superintendent of the Essex County Nursing Association in succession to Miss Alice Tilbury. (It may not be out of place here to say a few words in regard to Miss Tilbury, or Sister Alice as she was known. She had been appointed to the staff of the training home at Leytonstone in its earliest days as superintendent, and immediately upon her appointment set to work to organize the home and the training scheme on approved lines. Throughout her career she gave herself unfailingly to the development and improvement of district nursing in Essex and inspired a real affection and a great loyalty in those who worked with her and in the scores of nurses she trained.)

1927—Further extensions to Leytonstone Training Home opened by H.R.H. Princess Arthur of Connaught. One hundred and forty-two District Nursing Associations affiliated. Garden Scheme commenced.

1928—One hundred and forty-seven District Nursing Associations affiliated. Assistant County Superintendent appointed. Site at Dagenham purchased for erection of Branch Training Home.

1932—Branch Home at Dagenham opened by Her Majesty the Queen (then Duchess of York) and named York House. Walthamstow Training Home transferred to York House.

1933—One hundred and fifty-four District Nursing Associations affiliated, employing 164 District Nurse-Midwives. Death of Dr. Thresh.

1934—Death of Evelyn Dowager Lady Rayleigh, the Association's first President. She was succeeded by Kathleen Lady Rayleigh, who continued in office until 1948.

1936—Midwives Act. New agreement with Association to provide a comprehensive scheme of midwifery and district nursing in the County.

1937—Association affiliated to Queen's Institute of District Nursing. Second Assistant County Superintendent appointed.

1939—Office removed from Leytonstone to Dagenham. Miss Landon resigned. Miss E. A. Davieson appointed County Superintendent. Separate appointment of Superintendent Health Visitor made by County Council. By agreement with County Council nurses became eligible to participate in Local Government Superannuation Scheme.

1941—Office removed to Chelmsford.

1944—Training Home at Leytonstone recognized as Key Training Home by Queen's Institute of District Nursing.

1946—National Health Service Act. Miss Davieson retired. Miss E. M. Macalister appointed County Superintendent.

1947—Negotiations with County Council for transfer of service.

It is regrettable, though perhaps understandable, that the negotiations for the transfer of the district nursing and midwifery services to the County Council were tinged with some acrimony. The Essex County Nursing Association had, as will be seen above, every reason to be proud of their record over a period of nearly 60 years and their relations with the County Council had always been excellent.

The position of the County Council towards the Association was admirably summed up by the Vice-Chairman of the Council, Alderman W. J. Bennett, when the matter was discussed in the Council Chamber on 7th October, 1947. He pointed out that many of the voluntary bodies undertaking duties such as those performed by the Association came into existence during the XIXth century because neither the central Government nor Local Authorities was prepared fully to face up to their social responsibilities. Hence it became necessary, and still is necessary in some instances for voluntary bodies to fill the gap. They had performed a magnificent work and the community at large had reason to be very grateful to them.

Indeed, many thousands of poor people—and not so poor people—in Essex have very good reason for being grateful to two ladies of the house of Rayleigh and to John Clough Thresh for their devotion to the cause of providing nurses to care for them in their own homes during sickness. "*Factum abiit; monumenta manent*"—The deed has gone: the memorial thereof remains.

So far as the other services provided by the County Council for the welfare of mothers and children were concerned, a network of clinics was established where doctor

and health visitors attended to give advice and encouragement to mothers on the care of their infants.

The outstanding feature of the period under review was the development of institutional accommodation for confinements. The *ad hoc* maternity homes which had been established by Boroughs and County Boroughs throughout the country became very popular, mainly because of the bad housing conditions which existed after the 1914–18 war, and thereafter it became the accepted thing to expect a confinement to take place in either a maternity home or a hospital, and steps had to be taken to ensure that only cases in which it was really necessary were admitted to the limited accommodation available. The Borough of Ilford were pioneers in this respect—they established a maternity home in the Borough in 1914 and in January, 1926, H.R.H. the Princess Beatrice formally opened the present building which was specially designed and built for the purpose. Power to provide maternity homes was not given to County Councils until the Midwives and Maternity Homes Act, 1926, was placed on the Statute Book, although several County Councils up and down the country had irregularly established such maternity homes in response to the growing demand. The Essex County Council made no direct provision of this kind, all their cases being admitted to accommodation provided by voluntary effort and the other autonomous welfare authorities in the County, or to Public Assistance Institutions, including a large unit at the Oldchurch County Hospital and a smaller one at St. John's Hospital, Chelmsford, and most of these arrangements were continued even after the County Council became a hospital authority.

The increase in the demand for hospital bed accommodation for maternity patients is shown by the fact that whereas under the arrangements made by the County Council only three patients were dealt with in 1925, by 1947 the number had risen to 2,519. To cope with the increasing demand in later years, maternity units were established at the Essex County Hospital, Wanstead, and at the Orsett Lodge Hospital in 1946 and in 1947 at St. Andrew's Hospital, Billericay, and the facilities were restricted to those patients in whose cases it was anticipated that the confinement would be complicated or difficult, and to patients whose home conditions were not considered suitable for confinement.

The idea of providing a maternity home by the Borough of Colchester was first mooted in 1927. Several large houses were inspected, but each had, for one reason or another, to be abandoned. Eventually premises at 32, Lexden Road, Colchester, were selected and it was finally decided that they should be utilized for the purpose of providing a maternity home for the Borough. The Home was officially opened on 5th May, 1932, and, in anticipation, patients were booked as from the 1st May. Being born is, however, one of the uncertainties of life, and the first baby chose to arrive about a month before he was expected. Actually, therefore, the Home commenced its work on 4th April, on which day the first baby was born—a fine boy. Applications were received for admission to this Home from outside the Borough of Colchester and satisfactory arrangements were made between the Borough and the County Council for the reception of such patients.

In 1931 special units were established at St. John's Hospital, Chelmsford, and Oldchurch Hospital, Romford, for the reception of patients suffering from puerperal fever or puerperal pyrexia. These units also served some of the autonomous Child Welfare Authorities.

In this connection I would make mention of " . . . the matter of the Charity of the Home for Nurses and for nursing the sick and needy in the parish of Witham . . " otherwise the Witham Nurses Bungalow, the foundation stone of which was laid by Evelyn Dowager Lady Rayleigh on 27th October, 1920, and which was opened by Dame Margaret Lloyd George on 20th July, 1921. Arrangements were made in 1926 for maternity patients in the area recommended for residential accommodation under the County Council's Scheme to be admitted to the Bungalow at the County Council's expense.

The evacuation of expectant mothers in the early days of the 1939–45 war resulted in the establishment in conjunction with the Ministry of Health of *ad hoc* maternity homes temporarily at Moulsham Grange, Chelmsford; Lawford Place, Manningtree; Michaelstow Hall, Dovercourt; Campion's, Harlow; Mama's House, Tolleshunt D'Arcy (provided by Mrs. Youngman Carter, who, as Margery Allingham recorded in her novel " The Oaken Heart " some of her experiences amongst evacuees from London), and at Hollywood, Frinton, and for longer periods at Lord Edward Hay's house, Hill Hall, Theydon Mount (until it was damaged by enemy action), and at Writtle Park on Lord Petre's estate.

The latter was closed down at the end of the war, Supplementary to this provision was that made by General and Mrs. Wigan who made a part of their delightful home at Danbury Park available for the accommodation of evacuated expectant mothers during the whole of the war period. I noted in my Annual Report for 1945 that " Danbury Park never became an institution in the accepted sense and those mothers who had the good fortune to have their babies there regarded it as a home from home."

On 20th October, 1945, the 2,000th baby was born at Danbury Park and on 27th November following, her Majesty the Queen was graciously pleased to pay an informal visit to General and Mrs. Wigan in order to present a layette to the mother of that baby whose father, incidentally was a member of the County Architect's staff. It was a memorable occasion and provided an excellent opportunity for all concerned including the mothers of babies born at Danbury to express their gratitude for all that had been done. When in the following year the family left Danbury, General and Mrs. Wigan were invited to County Hall by Alderman Percy Astins, then Chairman of the County Council, and were presented by him with a reading lamp designed and made of rare and exotic woods at the South West Essex Technical College, as a memento of the County's indebtedness to them.

It was in 1931 that with all due safeguards the giving of birth control (family planning) advice at the County Council's clinics was first authorized. The main safeguard was that it was only to be given to women on medical grounds. The first special Clinic (known as a Women's Welfare Clinic) for the purpose was established at Ho:nchurch in 1935.

Various services were provided or developed during the 1939–45 war with the object of assisting the war effort. Notable amongst these were the residential and day

nurseries. The former were closed at the end of the war; their value had, however, been proved and consequently provision was made for the continuation of one residential nursery as part of the Maternity and Child Welfare Service, and this was accommodated at a mansion on the outskirts of Chelmsford—Writtle Wick on the Chignal Road. This had hardly been established before it was transferred to the control of the Children's Committee as the result of the passing of the Children Act of 1948. Day nurseries were established at strategic points throughout the County from the end of 1941 onwards, and most of these are still in being.

The Home Helps Scheme which had been in operation for some years before the war but which had only been used to a very small extent was, at the request of the Ministry, reorganized and increased in popularity by leaps and bounds. In November, 1947, it became necessary to appoint an Organizer of Home and Domestic Helps, who took up duty in January, 1948.

One other development of the service should be mentioned and that is the steps which were taken to provide special care for unmarried mothers and illegitimate babies. A scheme of guaranteed payments to foster mothers was instituted during the war years, but the most important step in the provision of this service was the acquisition in 1943 of "Ardmore" Buckhurst Hill, which provided accommodation for young mothers, married or unmarried, who after confinement had difficulty in coping with their immediate future, with the object of avoiding their being separated from their babies, and also, in the case of single women, of promoting their rehabilitation. To the establishment and conduct of this Hostel, Councillor Mrs. C. Custerson of Saffron Walden who was at that time Chairman of the Maternity and Child Welfare Sub-Committee gave unsparingly of her energy and enthusiasm, assisted in no small measure so far as its establishment was concerned, by Alderman Reuben Hunt.

School Health Service.

The subject of the health of the school child flows naturally from the subject of maternity and child welfare, and in fact modern trends are towards the elimination of an artificial division at five years of age by the establishment of a comprehensive child health service, responsible for the health of children from birth to sixteen years of age. I make no apology, therefore, for dealing with the School Health Service in the wider context of the report of the County Medical Officer.

When the scheme for the medical inspection of school children commenced in 1908, Dr. Thresh was appointed as School Medical Officer. Pressure of other duties however compelled him to relinquish the post in 1910 and a whole-time School Medical Officer, Dr. H. W. Sinclair, was appointed by the Education Committee. Dr. Sinclair left to undertake military service in 1915 and did not return, having taken up private practice. During the remaining period of the war from 1915–1918 Dr. Marjorie Dalby, a member of the staff of School Medical Inspectors, supervised the work and was succeeded by Dr. Edith Leitch, another School Medical Inspector, until I took up duty in April, 1919.

. . . . . .

Miss U. B. Chisenhale-Marsh, sister of Alderman W. S. Chisenhale-Marsh, then Chairman of the County Council, had been Chairman of the Medical Inspection Sub-Committee, later called the School Medical Committee, since 1908, and Alderman J. H.

Burrows was Chairman of the Education Committee. Miss Chisenhale-Marsh continued in the capacity of Chairman of the Sub-Committee until 1931, when she was succeeded by Dr. J. P. Atkinson. He was succeeded in 1935 by Mrs. K. M. E. Bell, daughter of Alderman Chisenhale-Marsh. When the Labour Party gained control of the County Council in 1946, Councillor Mrs. A. E. Hardy was appointed Chairman of the School Medical Committee and continued until she resigned in 1949.

.. ..

Dr. Thresh made no specific resumé of the work undertaken from 1908 until 1918 and the following is a very brief outline of the main trends.

The service started with two whole-time School Medical Inspectors who were assisted during 1909 by eight local medical practitioners employed in a part-time capacity. The latter were replaced in the following year by a further whole-time appointment, and a woman doctor was employed for a month to examine girl scholars. By 1914, the numbers had risen to five whole-time doctors, one part-time and the part-time services of a woman doctor. Thereafter under war-time conditions the staff was reduced to something like half that number. Originally no nursing staff was provided apart from somewhat vague arrangements with individual District Nursing Associations for assistance by some district nurses. The first whole-time school nurse took up duty in the Orsett area in 1910, and in each of three succeeding years one additional whole-time nurse was appointed, and after a lapse during the war years four more were appointed in 1918 making eight altogether.

The number of children inspected rose steadily from 18,814 in 1909 to 28,580 in 1914, but during the 1914–18 war as was to be anticipated from the reduction in the number of inspectors the number fell considerably.

As a result of these inspections the Grays and Tilbury areas which " suffered from unemployment " were selected for special attention. Children in these areas were found to be remarkably badly clothed and shod in relation to the rest of the County and were markedly below normal nutrition. A care committee and several boot clubs were formed in these areas in 1910 and supplies of cod liver oil and free meals were provided. In the following year special clinics for ringworm were started and the care committee made arrangements for the treatment of adenoids and tonsils. School baths were opened in Grays in 1912 and two cleansing stations were built in 1913.

Throughout the County defects of vision due to eyestrain were prevalent. Dr. Thresh immediately recommended the remedying of defects in the lighting of school rooms, the provision of books with larger and more distinct type and the adaptation of work and seating to the amount of light provided, and one of the school medical inspectors was detailed to carry out refractions. Arrangements were made for spectacles to be provided at cheap rates in 1911, and 54 eye clinics were commenced in schools and other buildings, examinations being carried out with portable equipment.

It was found that very few children had perfectly sound teeth and attention was called to the importance of cleaning the teeth and the provision of tooth brushes was recommended. A small beginning was made with a dental service in 1910, arrangements being concluded with a local dental practitioner in the Woodford area for the dental treatment of children. Voluntary dental clinics were held in various centres

in the following year, 646 children being treated. The first whole-time school dentist was appointed in 1917.

The question of mental defect received considerable attention in the early years. Day classes were commenced in Romford in 1911 and special schools were provided at Grays and Woodford in the following year. The Mental Deficiency Act of 1913 made provision for ineducable children and ensured the after-care of others.

Apart from the refraction and dental clinics referred to above, clinics for the treatment of minor ailments were established—three in 1912 and one in 1913 at Chingford, Grays, Romford and Woodford—in addition to special clinics for the treatment of ringworm at Grays and Tilbury, and at Romford, and Hornchurch (where there was an epidemic in 1912), and for the treatment of pre-tubercular children at Grays and Tilbury (established in 1915).

Institutional treatment for delicate, blind, deaf, epileptic and mentally defective children was provided at residential special schools from 1909 onwards.

Regular reports were received from school medical inspectors on all school buildings visited. At first comparatively few schools met modern requirements and many, especially the non-provided schools, were considered to be quite unsuitable for teaching purposes. Many sites had been badly chosen. Playgrounds were either too small, or in bad condition. Windows were too small, insufficient in number or obscured. Heating and ventilation were insufficient. Desks were unsuitable. Many of the offices were unsatisfactory, and there seemed to be little realization of the need for keeping these and cloakrooms and lavatories clean as an object lesson to the children. However, by 1912, Dr. Sinclair was able to report that a survey by His Majesty's Inspector had revealed the fact that the majority of managers had made improvements in the lighting, ventilation, heating and general sanitation of school buildings.

In anticipation of my taking up duty in April, 1919, the Education Committee in 1918, approved of the re-organization of the School Medical Service including (1) the appointment of the County Medical Officer as School Medical Officer; (2) increase of school medical, dental and nursing staff; (3) the use of the part-time services of three Medical Officers working directly under the County Council with special experience in ophthalmology, mental deficiency and nose, throat and ear diseases respectively; (4) the establishment of eleven fully equipped and eleven partly equipped minor ailment clinics; (5) arrangements with Hospitals for X-ray treatment of ringworm, and (6) provision of additional school accommodation for mentally and physically defective children.

The following figures show the increase which has occurred in school population over the years :—

Approximate School Population.

1919.	1924.	1929.	1934.	1938.	1948.
62,142 ..	62,751 ..	85,750 ..	104,250 ..	104,380 ..	194,768*

*Includes secondary schools and schools taken over from autonomous authorities for first time.

Under the Education Act, 1944, the Essex County Council on 1st April, 1945, took over the elementary schools in the seven autonomous Boroughs, Barking, Chelmsford, Colchester, Harwich, Ilford, Leyton and Walthamstow, and thereby became responsible for education in the whole of the Administrative County.

On my arrival in April, 1919, there were three whole-time and one part-time School Medical Inspectors including a very keen young Medical Officer, Dr. H. Emlyn Jones, who had carried out invaluable work in the difficult area of Grays and Tilbury. The service suffered a great loss by his death in 1921. There were two whole-time and one part-time School Dentists and six whole-time School Nurses.

In July, 1919, the clerical staff and administrative work of the School Medical Service were transferred to the offices of the Public Health Department under my direct control.

Dr. T. P. Puddicombe, D.S.O., was appointed Chief Assistant County Medical Officer and Mental Expert in 1920, subsequently being appointed as Deputy County Medical Officer. During the whole of his stay in this County he was responsible to me for the school health work and rendered faithful and loyal service until he retired in 1942, to return to his native Devon. Unfortunately he did not enjoy a long retirement as he died suddenly in 1945.

In 1924, the staff had increased to the equivalent of five whole-time Medical Officers; this was however below that of 1914, which was approximately six. By 1929, this had increased to eight, by 1934 to 13¼ and by 1939 to 17. In 1945 the services of the staff in the seven autonomous Boroughs became available and the equivalent whole-time strength in 1948 was approximately 30.

Most of the County, especially in the rural areas, has been served by Health Visitors carrying out combined duties of School Nursing, Child Welfare and Tuberculosis Nursing. A number of whole-time School Nurses was, and still is, employed in the populous areas such as Dagenham, Romford, Woodford and Leyton. Much more use was made of the services of the District Nurses for assisting the School Nurses in visiting homes, etc. The appointment of lay assistants to cleanse verminous children, and also of clinic clerks has done much to relieve nurses of a good deal of routine clinic work.

Despite these expedients the national shortage of nurses makes it necessary to limit school nursing duties. Whilst it is obviously desirable for a nurse to attend routine school inspections, and carry out periodical cleanliness surveys and re-examinations each term, her essential duty is to visit homes in order to advise and educate mothers in regard to their children's health, and persuade them to obtain treatment; to visit schools to consult teachers on this subject; and to give talks to senior pupils on health subjects.

The six whole-time School Nurses of 1919 had increased to the equivalent of 14 in 1924, to 16½ in 1929, to 27 in 1934, and to 32½ in 1938. In 1945, some of the staff in the seven autonomous boroughs was taken over, and in 1948, there was the equivalent of 88 whole-time officers carrying out school nursing duties.

The following selection of figures gives some idea of the number of examinations of children in schools, and home visits carried out by School Nurses since 1919 :—

Examinations.

1924.	1929.	1934.	1938.	1948.
188,499 ..	278,675 ..	316,035 ..	293,070 ..	497,843

Home Visits.

1924.		*1929.*		*1934.*		*1938.*		*1948.*	
School Nurses.	*District Nurses.*	*School Nurses.*	*District Nurses.*	*School Nurses.*	*District Nurses.*	*School Nurses.*	*District Nurses.*	*School Nurses.*	*District Nurses.*
15,861	5,970	26,629	9,605	36,407	7,556	34,885	6,344	29,536	6,500*
21,831		36,234		43,963		41,229		36,036	

*Estimated.

Financial restrictions in 1920 and the following years militated against increases of staff and clinic facilities but steady progress was made throughout that period.

Regular annual medical inspections of school children in the code groups, roughly one-third of the children in attendance, with " specials " and " re-inspections " have been maintained except during the war period and other times when it has been difficult to carry these out owing to shortage of staff. The following figures show gradual increases in the number of children examined :—

Number of Inspections.

Year.	Routine.	Specials.	Re-inspections.	Total.
1919	12,684	3,803	3,733	20,220
1924	23,685	9,370	9,507	42,562
1929	34,968	7,284	15,087	67,339
1934	54,147	9,245	24,505	87,897
1938	52,123	16,061	51,860	120,044
1946	60,759	30,183	36,025	126,967
1948	60,399	30,825	37,122	128,346

I have always emphasised the need for at least one room to be set aside specially at each school for medical inspections and it is gratifying to note that such accommodation is required by the new School Building Regulations of the Ministry of Education.

Parents and teachers have appreciated these inspections from the point of view of early diagnosis of defects and the resultant home visits by the school nurses have served the dual purpose of securing treatment and of educating parents in the need for closer supervision of their children—a factor of extreme importance in all schemes of preventive medicine.

With medical inspections as the groundwork of the scheme, treatment of minor ailments and other defects have followed and clinics have been established in various parts of the County. In 1919 there were seven minor ailment clinics, in 1924 the number had increased to 16, in 1929 to 23, in 1934 to 29, and in 1938 to 41. In 1945, the clinics in the seven autonomous Boroughs were taken over, bringing the total number to 68. These figures include the Combined Treatment Centres. Attendances at the Clinics increased from 14,000 in 1919, to 22,451 in 1924, 26,343 in 1930, 41,931 in 1934, 63,915 in 1938 and in 1948 they numbered 120,722.

Special clinic sessions continued to be held for the treatment of defective vision. Originally refraction was done by some of the School Medical Inspectors. In 1932, an arrangement was made for the services of the County Council's Consulting Ophthalmologist, Mr. T. Collyer Summers, F.R.C.S., to be available for difficult cases. A

whole-time Ophthalmic Specialist, Mr. G. J. Ahern, was appointed in 1934, for the purpose of certification of blind persons, and examination of children with defective vision. I believe this was the first full time appointment of this nature in the Country. He resigned in 1936, and was succeeded in 1937 by Mr. G. A. Jamieson. A second whole-time, and a part-time Ophthalmic Specialist took up duty in 1938, and all refraction work was then undertaken by Ophthalmic Specialists. These officers resigned during the war 1939–1945, but it was possible to continue the work with whole-time specialist officers who had the assistance of various part-time officers, until the introduction in 1948 of the National Health Service. The number of spectacles prescribed increased from 545 in 1919, to 667 in 1924, 1,370 in 1929, 3,327 in 1934, 4,164 in 1938 and 7,216 in 1948. The arrangements for supplying spectacles at cheap rates were continued and developed and when the Education Act, 1944, came into force on the 1st April, 1945, they were supplied free of charge, the Committee agreeing to the supply of a better type of frame. Since 5th July, 1948, the spectacles have been supplied under the National Health Service Act, 1946.

In 1937, the Committee approved an Orthoptic scheme (exercises for squint). The war delayed initiation of this but eventually in 1947, an Orthoptist was appointed, and there are now four Orthoptists working in the County.

In 1919, arrangements existed with three Hospitals for the operative treatment of school children for the removal of adenoids and enlarged tonsils. This scheme gradually developed so that prior to the war arrangements were in force with practically all hospitals serving the County. During the last 30 years opinion has veered round to the view that operative treatment is unnecessary in many of the cases recommended for such treatment. Accordingly in latter years Specialist Clinics have been arranged at which ear, nose and throat cases were examined by a Specialist before operative treatment was arranged. This resulted in some diminution of the number of children put forward for operation. Unfortunately shortage of beds, and the call on hospital services for other purposes, caused serious delay in carrying out treatment.

Some of the autonomous education authorities had developed a scheme for the group testing of hearing by means of the audiometer for some six or seven years before their education services became the responsibility of the County Council under the 1944 Act. Since then the extension of these schemes has been under active consideration, and the appointment of three additional whole-time audiometricians was imminent at the time of my retirement.

A scheme was started in 1924 for the treatment of crippling and other orthopædic conditions. Mr. B. Whitchurch Howell, F.R.C.S., was appointed as Orthopædic Specialist, and examined children at various centres throughout the County. After-treatment centres were established and the first whole-time Masseuse (Physiotherapist) was appointed in 1928. Special classes for cripples were opened in Dagenham in the same year. The scheme has developed considerably and in 1948, the staff consisted of three whole-time and four part-time Physiotherapists and over 22,000 attendances were made at the various After-treatment Clinics. Fifty-five children received hospital in-patient treatment, and 9,464 children received other treatment in that year.

The question of child guidance has received considerable attention for several years, and the commencement of a scheme in this County was delayed only because

of the outbreak of the 1939–1945 war, cases in the meantime being sent to London clinics. In 1945, two Child Guidance Clinics at Colchester and Walthamstow were taken over under the Education Act, 1944, and in 1947 and 1948, Clinics were opened at Chelmsford and Ilford respectively. Further developments are under discussion. At each of these clinics psychiatrists, psychologists, play therapists and psychiatric social workers are in attendance, and 531 children received child guidance in 1948.

The treatment of speech defects received consideration in 1936, and the first speech therapist was appointed in 1937. By 1948, there was a staff of 13 and 1,263 children received treatment.

With regard to dental treatment, this is carried out at most of the clinics and other centres throughout the County. From one whole-time dental officer in 1919, the staff grew to two whole-time and a number of part-time dental officers in 1920, but the whole-time officers resigned, and the work was carried out by part-time dentists until 1932. In that year two whole-time officers commenced duty and by 1947 there were in the County 34 whole-time dental officers. Mr. S. K. Donaldson was appointed as Senior Dental Officer in 1935. Unfortunately since the 1939–1945 war the dental staff has been seriously depleted owing to the attraction of higher remuneration in other services.

Other health facilities which were continued and developed include X-Ray treatment of ringworm, treatment of rheumatism, and convalescent treatment.

In my report for 1919 I recommended the extension of the provision of school dinners on the lines of factory canteens for children who have to stay at mid-day for meals. Feeding Centres were opened in Dagenham for necessitous children in 1929. A number of Milk Clubs was formed in 1930 at various schools for the provision of milk to children, and in 1933, it was agreed to provide milk and cod liver oil for necessitous children. In 1934, the milk scheme was extended under the Milk Act, 1934, one-third of a pint of milk being provided to school children at a cost of a half-penny. Various reports etc., have been issued on the provision of milk and meals, supervision of mid-day meals, etc., and in 1946, the provision of milk was made free of charge to all school children. The following figures show the number of children provided with milk and meals over the years :—

School Meals Statistics.

Summary of the Growth of the School Meals Service in Elementary Schools 1939 to 1945.

Month in which a day was selected for return.	Total No. on School Roll.	No. receiving Meals.	Percentage.
March, 1939 ..	104,938 ..	3,680 ..	3.5
March, 1940 ..	83,433 ..	5,890 ..	7.0
March, 1941 ..	88,839 ..	7,363 ..	8.3
March, 1942 ..	98,451 ..	13,894 ..	14.1
March, 1943 ..	100,403 ..	24,678 ..	24.6
March, 1944 ..	98,791 ..	37,978 ..	38.4
March, 1945 ..	92,592 ..	41,350 ..	44.7

Number of Children having Meals and Milk in Primary and Secondary Schools.

Month in which a day was selected for return.	*No. of pupils on roll.*	*No. of pupils present.*	*No. having dinner.*	*Percentage of pupils present having dinner.*	*No. having milk.*	*Percentage of pupils present having milk.*
February, 1946	173,318	151,379	78,741	52.0	112,637	74.4
June, 1946	174,986	157,985	84,266	53.3	113,825	72.1
October, 1946	174,724	162,487	92,731	57.1	148,231	91.2
February, 1947	173,363	147,380	86,267	58.5	130,459	88.5
June, 1947	176,538	162,721	96,275	59.2	145,299	89.3
October, 1947	182,446	169,566	106,372	62.1	153,751	90.7
February, 1948	187,007	167,876	108,373	64.6	150,467	89.6
June, 1948	193,228	174,162	109,750	63.0	158,178	90.8
October, 1948	193,811	179,631	115,621	64.3	160,750	89.5
February, 1949	194,825	169,284	109,028	64.3	150,964	89.1

There is no doubt that the provision of milk and meals in schools has resulted in great improvement in the nutrition of children and it is gratifying to note that during the 1939–1945 war the general nutrition of the children did not appear to suffer in any way.

The following figures give particulars of the classification of nutrition of children at the routine medical inspections :—

Year.	Classification. Good.	Fair.	Poor.
1935	4.52	91.27	4.21
1936	4.55	92.06	3.39
1937	2.58	95.57	1.85
1938	9.33	88.14	2.53
1939	4.52	91.34	4.14
1940	5.82	88.47	5.71
1941	5.92	89.55	4.53
1942	3.32	93.36	3.32
1943	4.55	90.45	5.00
1944	4.32	90.46	5.22
1945	13.53	80.99	5.48
1946	12.95	82.06	4.99
1947	29.1	68.4	2.5
1948	34.8	62.7	2.5

The duties of School Medical Inspectors have been considerably enlarged during my term of office and now include the ascertainment of handicapped pupils, viz., educationally subnormal children, deaf, blind, epileptic and physically defective, and the supervision of those in attendance at special schools as well as at the ordinary schools. In addition to the inspection of school buildings, nursery schools, school camps, remand homes and approved schools, swimming baths, playing fields, canteens

and open air schools are inspected. Talks to parents and children on hygiene, the prevalence of infectious illness, the examinations for the employment of school children and of boarded-out children also receive the attention of the school health staff. Various researches have also been carried out at the request of the Ministry of Education such as the effect of summer-time on sleep, "mottled" teeth, survey of nutrition, incidence of syphilis, goitre and encephalitis lethargica, and an anthropometric survey.

.. ..

In 1922, Mr. N. J. Ainsworth, L.D.S., in the course of carrying out a dental survey of the school children of England on behalf of the Dental Committee of the Medical Research Council, recorded the prevalence of " mottled " teeth at Maldon. He made an investigation and ascertained the presence of fluorine in Maldon water to the extent of 4.5 and 5.5 parts per million. In September, 1933, his observations were recorded in the British Dental Journal.

On 27th July, 1939, a conference was held at Essex House with Medical Officers of Health whose Authorities provided water which it was suspected had a high fluorine content. They were addressed by Dr. E. V. Suckling, who gave an historical view of the whole matter and during his address he said he could not regard a public water supply which contained more than one part per million of fluorine as being pure and wholesome. Decisions arrived at were as follows :—

" (1) That Dr. Bullough should make a guarded statement at the meeting of the Public Health and Housing Committee this afternoon.

(2) That each Medical Officer of Health in the areas concerned should, in private, place the facts before his Chairman or Committee.

(3) That Dr. Suckling will be prepared, under the County laboratory service, to carry out the fluorine test of all samples submitted.

(4) That whatever steps are taken, they should be so taken as to avoid creating a scare."

.. ..

In connection with these miscellaneous duties I would note here that during the 1939–1945 war the evacuation of school children caused considerable dislocation of the work, and much time was spent in the examination of children prior to evacuation and on reception in the rural areas. Many special clinics were opened to deal with the treatment of verminous and other cases. During the latter period of the war " flying bombs " and " rockets " caused considerable interruption but it is pleasing to note that the School Medical Inspectors reported that the children stood up very well to the continual strain.

.. ..

It is difficult to obtain comparative figures to support evidence regarding the improvement of the condition of the children as so many medical officers have carried out the work that the personal factor has come into undue prominence in assessing the results of the examinations. It is obvious from personal observation, however, that the children of to-day are very much better in general health, physique and cleanliness

than those of thirty years ago. Unfortunately there are still some neglected families; these are usually the children of persistent offenders who are specially followed up to ensure that the position is suitably remedied.

Under the School Health Service between one-ninth and one-eighth of the total population of the country is under continuous medical supervision for about 10 years at the most impressionable period of their lives. As a result of the Education Act of 1944, this period will be extended up to 18 years of age when staff is available for the purpose. This is one of the most important aspects of the Health Services.

Combined Medical Service.

Early in 1919, I had occasion to go down to Clacton to meet the elderly Medical Officer of Health of most of the Sanitary Districts in the Tendring Peninsula; I found him in bed. He was a man of over 80 years of age, and it appeared that of recent months he had been living alone. One night he had gone to bed and, waking up in the middle of the night, found himself between the mattress and the bedroom floor, unable to move. He could not attract attention and had to wait until the daily woman came in and liberated him.

This rather dramatic episode was only an aggravation of a condition of physical incapacity, and I gathered that he would be only too glad to retire, except that he was not in a financial position to do so. Discussions took place with the Local Authorities concerned and although it was agreed that it was desirable that he should retire they pleaded their legal inability to put together anything in the nature of a pension. I made a special visit to the Ministry of Health to see how this difficulty could be got over, and a proposal that he should be given a salary as consulting Medical Officer of Health was favoured, on condition that half the cost was met by the County Council as in the case of the actual salary of a Medical Officer of Health.

This difficulty having been overcome, the next point was how to fill the gap in the ranks of Medical Officers of Health of County Districts. About the same time I met one of the school doctors employed by the Essex County Council serving the Tendring Peninsula, and to my astonishment I learned that she had never met the Tuberculosis Officer who covered practically the same area for tuberculosis purposes. Pondering this, it struck me that it would be a very helpful thing if one and the same person could hold the office of Medical Officer of Health of the Local Sanitary Authority, School Medical Inspector for the County Council and Tuberculosis Officer for the County Council and the Insurance Committee. After a good deal of persuasion, the Ministry agreed, on the understanding that in respect to purely clinical matters in connection with tuberculosis the Combined Medical Officers should have access to a person of undoubted clinical standing and experience. This was arranged, and accordingly Combined Medical Officers were appointed firstly for Clacton, secondly for Tendring and thirdly for Lexden and Winstree. Shortly afterwards the same idea was followed up in North West Essex upon the resignation of the Tuberculosis Officer for that area; Braintree, Halstead and Saffron Walden respectively were added to the quota.

The first principle of the Combined Medical Service was that the duties of Medical Officer of Health came before the clinical duties carried out by the same officer on behalf of the County Council; in fact, if the whole of his time was required to deal with

an epidemic or for other sufficient reason, it was agreed that regardless of the financial sharing of his salary the necessary time should be devoted exclusively to the duties of the Local Sanitary Authority. In actual practice this rarely happens but there are occasions when the Combined Medical Officer gives, for a brief period, far more time to his duties of Medical Officer of Health than is provided for in the arrangements and the aim has always been that there should be sufficient elasticity in so far as County Council duties are concerned for alternative arrangements to be made at short notice. Theoretically it was thought by many that loyalty to the Local Sanitary Authority might conflict with loyalty to the County Council, but in practice this has not proved to be so, and for a very good reason—the responsibility of the Combined Medical Officer to the Local Sanitary Authority is of an entirely different order to his relationship to the County Council.

In 1927, Dr. James Pearse, C.B.E., of the Ministry of Health, made a report (Ministry of Health : Reports on Public Health and Medical Subjects, No. 45), on the working of the scheme in Essex and on similar schemes on a smaller scale also in operation at that time in three other Counties. His conclusions as set out at the end of the Report were :—

> 1. The Local Authorities within the districts investigated have almost unanimously expressed their satisfaction with the scheme, and approval has been especially marked from authorities zealous in public health activity.
>
> 2. In no district have difficulties been experienced from the dual relationship of the Medical Officer to the District Councils and the County Council. Some authorities have expressed the view that there is advantage in the liaison effected.
>
> 3. The making of a combined appointment reduces the number of officials working in a given area, increases the opportunities for efficient work in each of the appointments combined, and reduces the difficulty sometimes met by members of the general public who may need official assistance but may not know where to find it.
>
> 4. An officer holding a combined appointment has the advantage of a wider outlook and larger range of official interests, and in particular the independence proper to a Medical Officer of Health relieves in this respect the monotony and the less responsible work of the assistant to a County Medical Officer.
>
> 5. The public health services must benefit by improvement of the opportunities thus offered to new recruits.
>
> 6. The definite advantages of the system are such as to merit its continued encouragement, and the taking of such steps as may be necessary to prepare for its further and more uniform development.

It was greatly opposed by many people at the time, but it has gradually worn down all opposition and is now almost universal throughout the country. Despite the criticism and opposition, however, the scheme was appreciated by many doctors in the public health service as was shown by the large number of excellently qualified men who applied whenever a vacancy was advertised. They felt that it saved them from blind alley posts and service in Essex fitted many of them for more important posts in larger centres of population.

One variation of the original scheme is that the diagnosis and treatment of tuberculosis has been reserved for the specialist, as a result of the tremendous advances of X-ray diagnosis and the introduction of artificial pneumothorax treatment and chest surgery generally which have taken place during the last 20 or 25 years ; otherwise I

have no doubt that had knowledge remained at its primitive level of 25 years ago, the Combined Medical Officers would have been quite as capable of doing the work of Tuberculosis Officers as any of the eminent experts who gave their whole time to such work.

One difficulty was not foreseen, namely, that arising out of superannuation. The County Council adopted a superannuation scheme at an earlier date than most of the Local Sanitary Authorities with whom they have arrangements for a Combined Medical Service. It was many years before some of the Authorities adopted such a scheme and consequently so far as the pension arising from the part of his salary paid by the Local Sanitary Authority was concerned, the Combined Medical Officer was proportionately worse off.

Another curious and somewhat unexpected outcome of the Combined Medical Service was in relation to the salary of the Medical Officer, particularly when the scale of salaries recommended by the Askwith Committee began to be operative. This scale of salaries was such that in the case of many Local Sanitary Authorities the Combined Medical Officer received a total salary greater than the salary of the Clerk of the local council. This caused heartburning and repercussions.

As the Combined Medical Officer carried out duties on behalf of the County Council in respect of both the Public Health Committee and the Education Committee (and at a later stage for other Committees, such as the Public Assistance Committee, Committee for the Care of the Mentally Defective, etc.), it was early found to be desirable that a strong and authoritative Sub-Committee should be set up to reconcile the interests of these various Committees and to act as an immediate executive body to avoid the long delays in making appointments which would otherwise occur. Accordingly, the Medical and Nursing Services Joint Sub-Committee was established, and for many reasons the then Chairman of the Education Committee was made its Chairman and he so served for a number of years.

Combined Nursing Service.

Gradually other functions were added to the Medical and Nursing Services Joint Sub-Committee so that it dealt with all Health Visitors who were performing combined duties either wholly on behalf of the County Council (i.e. school nursing and health visiting), or partly for the County Council and partly for an autonomous Child Welfare Authority. This latter arrangement ensured that the same nurse acted as Health Visitor for the autonomous Child Welfare Authority and School Nurse for the County Council. There was a tendency, however, for the autonomous authorities to appoint and retain their own officers. Accordingly the idea of a Combined Nursing Service was frustrated in many of the areas of the County.

As far as the County Council were concerned they were whole-heartedly in favour of a Combined Nursing Service, combining in the person of one nurse school nursing, health visiting and tuberculosis nursing duties, except that in the built-up areas around the Metropolis it was found desirable and even necessary to appoint whole-time Tuberculosis Nurses. In such cases every endeavour was made to keep the whole-time Tuberculosis Nurses in close touch with the Health Visitors and School Nurses serving the same locality. At one time a move was made to include mental deficiency visiting in the

above combination of duties, but for various reasons this never succeeded, owing to some extent to the strong position of the Voluntary Committee for mental defectives and their desire that there should be no interference with the system of local people being appointed as home visitors.

Combined Treatment Centres.

Another important function of the Medical and Nursing Services Joint Sub-Committee was the provision of Combined Treatment Centres. Prior to 1928, Minor Ailment Clinics were arranged in suitable buildings, e.g. Sunday School rooms, Parish Halls, and disused buildings of various kinds, and the same kind of accommodation was often used for Infant Welfare Clinics, and later Ante-Natal Clinics. Most of these places were rather grubby, not very hygienic and certainly in themselves did not carry any message of what is understood by sanitation and hygiene. Accordingly, on the basis of the aphorism coined by King Edward VII—" An authority meanly housed is meanly considered "—the Committee decided that it was quite time that premises used for clinic purposes should in themselves be an object lesson to the people frequenting them. The County Architect was instructed to design a Combined Treatment Centre which would serve all the various Public Health purposes of the locality, and the first building of its kind to be designed, planned and built for this particular purpose was opened by Kathleen Lady Rayleigh on 25th May, 1928, in Wantz Road, Maldon. The idea so captivated the County Council that very soon it became a prescribed thing that provision should be made for two new Combined Treatment Centres in the estimates for each year. Later on this was increased to three and finally to four. Unfortunately the outbreak of war in 1939 put a temporary stop to the construction of these most desirable buildings. Actually one was completed and opened in 1932, three in 1933, two in 1934, two in 1935, four in 1937, five in 1938 and two in 1939—a total of 20. It is a matter of history that during the war many of these Combined Treatment Centres proved themselves of tremendous value in forming suitable headquarters for Civil Defence purposes, the ordinary clinics being carried on side by side with the war-time services, in spite of black-out, anti-blast walls and steel girders.

The National Health Service.

I have already made incidental reference to the new National Health Service. No record of the last thirty years would be complete without some further reference to the administrative changes which took place in the last years of my office.

The Education Act of 1944 had a great influence on County administration inasmuch as it provided for the transfer of Education functions from seven autonomous areas. In order to meet the obvious need for some local control the County was parcelled out into eleven Divisions. This more or less forced the hand of the Health Committee when, arising out of the National Health Service Act, 1946, it in turn had to carve out administrative Areas for the decentralization of most of the functions imposed upon it by Part III of the Act. The formula used for the creation of Divisions for Education was based upon very different factors from those which ought to have been the governing principles in determining Areas for health administration. Nevertheless it was deemed wise not to alter the Divisions thus created but to adopt them for the purposes of health administration. Naturally it was a great blow to many of

the autonomous Child Welfare Authorities, particularly the four Boroughs of Barking, Ilford, Leyton and Walthamstow. Over a long period these four Boroughs had in the most progressive manner developed Maternity and Child Welfare Services second to none. In many respects they had been pioneers in various branches of that section of public health and it was a severe blow to their self-respect for their powers to be taken over by the County Council, even though the County Council endeavoured to be as liberal as possible in decentralizing the administration. As a result of much goodwill on all sides it was agreed to try the scheme of decentralization for a period of two years and to reconsider the whole matter at the end of that time.

One innovation of the new services was the conferences which were held with the eleven Medical Officers of Health who were acting as Area Medical Officers and Borough or Divisional School Medical Officers, which undoubtedly were instrumental in removing a great many sources of difficulty and misunderstanding. I would like to pay a great tribute to all these Medical Officers of Health for the public spirit in which they have endeavoured to carry out the scheme in spite of their private feelings of disappointment that the integrity of their authorities as primary authorities should have been so ruthlessly taken from them.

.. ..

Conclusion and Acknowledgments.

For a number of years I have ended the introductory letter to my Annual Report with a reference to the assistance which I have received throughout my career in Essex from members of the Council and members of my staff, and I feel I cannot do better than end this review in the same way.

Straight away I must say that I have always considered that the Essex County Council was extremely liberal in the way in which it allowed its officers to serve on national committees. Particularly was this so in respect to the County Councils Association, on which body in days gone by Alderman F. Dent and Alderman H. Brooks played so conspicuous a part.

One method of recording the historical growth of the public health services during the last thirty years would have been to have discussed the developments which had occurred under the guidance of the various Chairmen of the Public Health and Housing Committee. When I arrived in the County, Alderman O. D. Belsham was Chairman of the Committee and he merely carried on the office for one or two meetings after I came in order to introduce me. When he retired the Committee chose as his successor Alderman E. W. Tanner, of Saffron Walden, mainly because, I suspect, of the interest which he had taken in mental defectives with a view to pushing forward this largely untouched field of social enterprise. He threw himself into the work heart and soul and, although it must be admitted that his outlook was considerably influenced by his associations with a delightful old town like Saffron Walden, he never showed lack of courage in pushing forward schemes of improvement when he was convinced of their necessity. The isolation hospitals of the County particularly interested him and he took a great deal of trouble over the annual inspection of these hospitals; it was on this annual inspection that the monetary grant from the County Council depended.

He usually attended a meeting of the Committee responsible for the management of each hospital in order to bring to their notice improvements which he deemed to be necessary.

Alderman Tanner retired in 1924 and Alderman S. W. Robinson (now Sir Sydney Robinson), who had been a member of the Public Health and Housing Committee for a long time, succeeded him. His main interest had been with mental hospitals, particularly the Brentwood Mental Hospital, but when he became Chairman of the Committee he gave up most of his other interests and devoted himself entirely to public health. During his term of office he created something of a political sensation by defeating Mr. E. G. Pretyman, an ex-Minister of Agriculture, in a bye-election at Chelmsford which enabled him to carry his progressive ideas into the House of Commons. His great ambition was to make the Black Notley Sanatorium worthy of the County of Essex and he worked in season and out of season to this end, with the result that he had the great satisfaction in April, 1930, of welcoming the then Minister of Health, Mr. Arthur Greenwood, to open the first extension. He retired in 1930. It was often necessary for me to consult him in regard to his County duties at the House of Commons, and it is of interest to record that during this period whilst in London we frequently met the late John Burns, who, it will be remembered, was " the first of the ancient lowly to reach the position of Cabinet Minister " and served as President of the Local Government Board from 1906–14. He asked for and read every Annual Report which I sent to him and often talked to us about Essex and Defoe. Many of the comments which he made are still fresh in my memory; one was that Essex was the Cinderella of the Home Counties; another was that a prime factor in the promotion of health is the value of real wages to enable the housewife to give the family sufficient and proper food—thus confirming what Dr. R. J. Ewart, as previously noted, had demonstrated.

Alderman A. M. Mathews succeeded Alderman Robinson as Chairman and for the next ten years gave himself unsparingly in the service of public health in Essex. It was during his term of office that the spadework was done in connection with the sanatorium at Broomfield. Although he spent much time on his public health duties, he was keenly interested in the subject of health generally and was a member of the Essex Insurance Committee and the Essex County Nursing Association, and, being a man of some substance, was responsible for many public benefactions. An outstanding example is the additional ward and a bed-carrying lift designed to take patients on to the flat roof in the summer at the Comely Bank branch of the Connaught Hospital at Walthamstow in memory of his wife, after whom it was named. He died suddenly in 1940 and was succeeded by Alderman F. D. Smith, who had been a member of the Committee for nearly thirty years; being the best kind of Liberal, namely, a progressive Conservative, he had no difficulty, ably assisted for some years by the late Alderman J. C. Mead as Vice-Chairman, in maintaining the good work of the three previous Liberal Chairmen until the change in political fortunes which, as I have previously mentioned, took place at the post-war County Council election in 1946. Alderman Smith's special interests were Harold Court Sanatorium, the Wanstead Hospital and the new sanatorium at Broomfield.

Lt.-Cdr. H. Denton, of Harwich, was the choice under the Labour dispensation, and he proved a most energetic Chairman. He was able to devote a good deal of time to the work and, in consequence, commonly spent two or three days a week in County

Hall, conferring with me and other principal officers and their staff. It was no doubt inevitable that he would be chosen as one of the representatives of the County Council on the North-East Metropolitan Regional Hospital Board created under the National Health Service Act and he served thereon to great advantage; amongst other things he became Chairman of the Colchester Group Hospital Management Committee. A student of our political system would, perhaps, be not altogether surprised to learn that at the end of the triennial period Commander Denton was beaten at the poll by a handful of votes. Thus the County services have been deprived of one who, by universal acclaim, was regarded as a great supporter of the health and education services.

Particularly to each of these gentlemen, but also to the Chairmen of the County Council under whom I have had the honour to serve (Alderman W. S. Chisenhale-Marsh, 1919–29; Alderman Sir C. G. Musgrave, 1929; Alderman H. E. Brooks, 1929–31; Alderman J. H. Burrows, 1931–33; Alderman A. Porter, 1933–37; Alderman H. de Havilland, 1937–41; Alderman Sir Gilbertson Smith, 1941–46; Alderman Percy Astins, C.B.E., 1946–47 and 1949; and Alderman J. Hewett, 1948) and of the Education Committee (Aldermen Burrows, de Havilland and Hewett and, in addition, Alderman E. A. Hibbs, Alderman Miss M. E. Tabor, Alderman A. L. Clarke and Alderman H. L. Green) and Social Welfare Committee (Alderman A. Brooks and Alderman G. H. Spackman), I am conscious that I owe a debt of gratitude for the confidence and support which they gave me through thirty difficult years which were made none too easy for the elected representatives of the people by the aftermath of one world war involving constant calls for economy, financial crises of ever-increasing magnitude, and finally a second world war more devastating than its predecessor and which only served to accentuate all the difficulties which had preceded it. I feel it a duty to refer particularly to the late Alderman J. H. Burrows. Devoted as he was to the development of education in Essex he looked with a sense of suspicious rivalry on the projects of other Committees and was often a relentless critic of their proposed expenditure. Nevertheless public health made an appeal to him and with his great influence many advances were made, even in the hard times of 1931 and subsequently. Especially was this so after he left the Chair of the Education Committee and became Chairman of the County Council; his enthusiasm for the health services seemed to come back on the rebound and he was undoubtedly instrumental in forwarding many of the health schemes which had been temporarily held in abeyance.

I have mentioned already the assistance which I received, particularly during the war period, from Dr. A. Leslie Banks and Dr. D. L. McKenna, of the Ministry of Health at Whitehall and in the Eastern Region respectively. Throughout the whole of my career in Essex I have been most fortunate in my relations with officers of both the Ministry of Health and what is now the Ministry of Education, and I am indebted to a very large number of them for much assistance and advice in the many difficult problems which from time to time I had to face.

To my colleagues, the other Chief Officers of the Council and the staffs of their departments I am grateful for their ready co-operation in furthering the health of the community and for all the advice and assistance which I have received from them during thirty years. Over that period I have worked with at least two occupants of every post, in most three, and in two instances four.

Ranking high amongst those to whom my thanks, and that of all concerned with the health of the people of Essex, are due are the legions of voluntary workers who have laboured unceasingly, sometimes in the face of discouragement, to supplement the services provided officially. Those who worked at our clinics and the Women's Voluntary Services are in the forefront, as are also the British Red Cross Society and the St. John Ambulance Brigade, ready at little notice to do such things as provide an ambulance service, to give first aid training, run a maternity home or undertake any difficult job, the urgency of which could not await the slow grinding of official machinery.

At the same time I must pay a tribute to the Medical Officers of Health of Local Sanitary Authorities and to all past and present members of the staff of the Public Health Department for the co-operation and assistance which they have always unfailingly given me. Some of them call for special mention. A name which comes instantly to mind is that of Lt.-Col. T. P. Puddicombe, D.S.O., who came to Essex in 1920 and was appointed as my first Deputy in 1930. He was in charge of the school health service and also of the mental deficiency service. His geniality, kindness, sympathy and consideration will long be remembered by those who came into contact with him, particularly a very wide circle of parents in Essex who have much reason to be grateful to him in his capacity as mental expert for his tact and kindness. Personally, I was most indebted to him for his great loyalty ; no matter how much we disagreed one could always depend upon him to be loyal to the extreme.

Dr. G. G. Stewart succeeded Dr. Puddicombe as Deputy in 1942, and throughout the difficult war years and the years of reconstruction thereafter gave me invaluable assistance. I am particularly grateful to him for the way in which he relieved me of much of the detailed work in connection with the preparation of the County Council's Proposals under the National Health Service Act, 1946.

Many other doctors who now hold important posts up and down the country served their apprenticeship in the Department whilst I was County Medical Officer. Dr. Rachael Elliott, Dr. Helen Campbell and Dr. R. M. Shaw are on the staff of the Ministry of Health. Dr. J. S. Bradshaw and Dr. Alfred Elliott are respectively County Medical Officers of Health of West Sussex and Kent. Dr. James Graham is Deputy Senior Medical Officer of the North-East Metropolitan Regional Hospital Board and Dr. W. A. M. Stewart is Deputy County Medical Officer of Health, Hertfordshire. For some years Dr. F. E. Camps acted as the County Council's Consultant Pathologist. His genius and flair for field work investigation of outbreaks of infectious disease and food poisoning, of which we regularly had the benefit at meetings of the Epidemiological Committee, no doubt stand him in good stead in the equally exacting work which he now undertakes in connection with the administration of justice.

To mention all the individuals comprising the teams of doctors, nurses and administrators who carried the burden of responsibility at the sanatoria and hospitals would be wearisome to the reader. Dr. M. C. Wilkinson, Miss Clay and Miss M. Ruck at Black Notley, Dr. W. L. Yell at Broomfield and Dr. E. Miles at Oldchurch have already been referred to. Other names that spring to the mind are Miss E. E. Burge (Broomfield), Miss S. B. Looseley (Harold Court), Miss A. Roberts (High Beech), Miss E. McArthur and Mr. F. J. Macey (Oldchurch) and Dr. D. H. Irwin and Miss C. M. Wilson (Wanstead), but there are hosts of others.

In the section of the review relating to Maternity and Child Welfare there is reference to Miss D. M. Landon, the first Chief Health Nurse and County Superintendent of the Essex County Nursing Association ; a native of the County, her father was a well-known and respected solicitor, and the County Council were exceedingly fortunate in having her in their service. She served the District Nursing Associations faithfully, whilst at the same time keeping before them the County Council's viewpoint in regard to their work. She retired in 1943 and was succeeded by Miss E. M. Davieson, upon whose retirement the Essex County Nursing Association decided to appoint their own County Superintendent. The post of Chief Health Nurse—afterwards Superintendent Health Visitor—was filled by the appointment of Miss E. K. Trillwood, the present holder of the post.

I have already referred to the coming of Mr. Alfred Marsh, my first Chief Clerk and afterwards the first County Health Inspector. Throughout thirty years he proved himself a faithful steward as well as a confidant and friend.

Every Chief Officer of a large authority will acknowledge how much he has to depend upon the senior member of his clerical staff and I have been exceedingly fortunate in this respect. So far as all the occupants of the post of Chief Clerk whilst I have been County Medical Officer are concerned, I have had no hesitation in putting into operation my maxim that in a Public Health Department of a large County the senior member of the clerical staff is and must be the alter ego of the County Medical Officer. When Mr. Marsh ceased to act as Chief Clerk in 1925, his place was taken by Mr. J. Colman who came to us from Durham. He was a man of considerable organising ability, and finally left early in 1937 to take up the post of Chief Clerk in the Public Health Department of the West Riding of Yorkshire County Council. To succeed him, Mr. Lawrence Hey, who had been with me since the very early days in charge of the maternity and child welfare section, was promoted to the post of Chief Clerk and during seven difficult years immediately prior to and during the war he was a tower of strength to me. In March, 1944, he left to take up a similar appointment with the Kent County Council, and in due course was succeeded by the present occupant of the post, Mr. S. G. Clarke. Apart from all his other services, I am mainly indebted to Mr. Clarke for compiling this report.

To these and succeeding generations of professional, technical and clerical officers of the Department my thanks and appreciation are due for much loyal support and assistance. Despite differences of opinions which are inevitable in all the circumstances, no man could have been better served than I during the long years I had the honour of being your County Medical Officer of Health.