[Report 1946] / Medical Officer of Health, Essex County Council.

Contributors

Essex (England). County Council.

Publication/Creation

1946

Persistent URL

https://wellcomecollection.org/works/c257bsw6

License and attribution

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

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

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

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

INDEX.

	Page
Acreage and Population	4
Adoption of Children (Regulation) Act, 1939	84
After-care (Tuberculosis)	78
Ambulance facilities	59
Bacteriological Examinations	29, 58
Birth-rate	4, 95
Blind Persons Acts, 1920–38	55
Cancer	22, 23
Care of Illegitimate Children	88
Care of Premature Infants	87
Causes of Death	5–9, 96, 97
Casualty Services	56
Child Life Protection	84
Civil Nursing Reserve	61
County Laboratory Service	29
County Tuberculosis Scheme	65–78
Combined Medical Service	90, 91
Combined Nursing Service	91
Death-rate	4, 96, 97
Dental Treatment (M. & C. W.)	82
Diphtheria Immunization	10, 15, 16, 91
Dispensaries (Tuberculosis)	69
Doctors' Fees (Midwives Acts)	86
Domiciliary Medical Service	91
Emergency Hospital Scheme	56
Essex County Nursing Association	87
Essex Epidemiological Committee	16
Financial Allowances for Tuberculous Patients	75
Food and Drugs Act, 1938	53
Geriatric Rehabilitation	92
Health Propaganda	26, 28, 30
Home Helps	81
Hospital Services	56–64
Hospital Treatment for Maternity Patients	82
Hostel for Mothers and Babies	87
Illegitimate Children : care of	88
Immunization, Diphtheria	10, 15, 89
Infant Mortality, Rate	4, 11–15
Infectious Diseases (Notification)	4, 94
Institutional Treatment (Tuberculosis)	68–76
Laboratory Service	29, 58
Mass Miniature Radiography	76
Maternal Mortality	7, 79
Malaria	11, 94
Maternity and Child Welfare	79–91
Maternity Homes	84
Maternity Accommodation	56
Maternity Patients : Hospital Treatment	82
Medical Rest Homes and Hostels	64
Mental Deficiency Acts, 1913–1927	53
Mental Treatment Act, 1930	54
Midwifery Service	85
Milk Supply	33–35
Milk (Special Designations) Regulations, 1936 and 1943	33
Milk-in-Schools Scheme	35
National Milk Testing and Advisory Service	34
Nurseries	89–90
Nursing Homes	84
Nursing Provision for Children under five years	89
Nursing Services	59–61
Obstetric Specialists	83
Open-air Shelters	78
Ophthalmia Neonatorum Regulations	84
Orthopædic Patients : Treatment of	83
Parenthood Clinic	26
Population	4
Preface	2, 3
Premature Infants : care of	87
Provision of Hospital Services	56
Provision of Milk and Medicaments (M. & C. W.)	80
Public Health Act, 1936. Section 307	33
Puerperal Pyrexia Regulations, 1939	82
Public Assistance	92
Rehabilitation	62–64
Residential Nurseries	89
Rest Homes for Homeless Persons	64
Rivers Pollution	30
Rural Housing	35–53
Rural Water Supplies and Sewerage Act, 1944	32
Salmonella Typhi-murium	21, 22
Scabies	16
Sewage Works	30–32
Smallpox	16–21
Social Conditions	4
Statistician	11
Still-births	5, 85, 95
Tuberculosis Scheme	65–78
Vaccination	26
Venereal Disease	23–26
Vital Statistics	4–9
War-time Day Nurseries	89

PREFACE.

To the Chairman and Members of the Essex County Council.

I have the honour to present my twenty-eighth Annual Report for the year 194 (the fifty-seventh to be issued), on the health services of the Administrative County Essex. Pressure of post-war work has prevented earlier publication of this report.

The report includes all the usual statistical tables, the main features of whic are :—

Birth-rate increased from 17.3 to 20.6 which is the highest rate recorded sine 1920.

Death-rate decreased from 11.5 to 10.4.

Infant Mortality decreased from 39 to 33 which is the lowest rate ever recorde

Maternal Mortality in the County Council's Welfare Area decreased from 1.0 to 1.26.

Notifiable Diseases Notifications decreased from 22,431 to 15,737. Whoopin Cough showed a marked increase from 2,060 to 3,287, whereas measl decreased from 15,591 to 7,296 and Scarlet Fever from 2,045 to 1,886. Th most remarkable figure relates to Diphtheria, the figure decreasing fro 219 to 152. Twelve years ago it was 2,717.

Smallpox appeared in the Administrative County after being absent since 193 A special report on this outbreak is included in the body of this report— see pages 17 to 21.

Special attention is drawn to the Comments on Vital Statistics on pages 5 11 and Infant Mortality in Essex on pages 11 to 15. These have been prepared Professor Major Greenwood, D.Sc., F.R.C.P., F.R.S., who has kindly undertake to assist as Medical Statistician (part-time) and who in turn has subsequently bee assisted by a whole-time Statistician.

Rural Housing has been made a special feature in this year's report and t references to this subject are based on the work carried out by the Joint Advison Committee on Rural Housing. Their approved memorandum regarding standards fitness, which is included in this report, has been an excellent guide to the Sanita Inspectors when carrying out their housing surveys in Rural Districts. Tables are al included showing the number of permanent and temporary houses erected or und construction and the position of the housing surveys. It will be seen that there is on one Rural District (Chelmsford) where the survey has been completed.

Work on the prevention of rivers pollution has continued. More and more hous and factories mean greater loads being placed on already overloaded sewage works some areas. Shortage of labour and materials prevent the carrying out of improv ments. It is to the credit of some Authorities that they have made every effort produce the best possible effluents in the circumstances.

Details of the remaining general health services, e.g., designated milks, water and wage schemes, laboratory service, are furnished in the report and call for no special mment.

Reservation of hospital beds for E.M.S. purposes continued, 621 being so reserved the end of the year at ten hospitals. Finding accommodation for chronic sick and tuberculous patients proved to be a great difficulty again, due largely to the ntinuing shortage of nurses. I am indebted to the Medical Superintendents of the unty Council Hospitals for their excellent annual summaries which reveal the ormous amount of work carried out therein, despite the shortage of labour and aterials and the difficulties in the supply and preparation of food.

Full particulars of the Maternity and Child Welfare Service appear in their appro-ate section of the report. They include references to domiciliary work, ante-natal d post-natal clinics, institutional treatment, provision of milk and medicaments, me helps, child life protection and the work done at residential and day nurseries.

nclusion.

Throughout the year the confidence and support of the Chairman and members the Public Health and Public Assistance Committees have been a source of strength the staff in dealing with the many and difficult problems which have arisen. I am ecially indebted to the Medical Officers of Health and other Officers of the County strict Councils, and to all the members of the staff of the County Public Health partment for their co-operation.

W. A. BULLOUGH,
County Medical Officer.

BLIC HEALTH DEPARTMENT,
COUNTY HALL, CHELMSFORD.

h May, 1948.

PART I.

ACREAGE AND POPULATION.

The following table sets out particulars of the Registrar-General's estimated popul tion for the year 1946, compared with the census figures of 1931. The table giv as in previous years, the rateable value.

	Acres. Census, 1931.	Population. Census, 1931.	Registrar-General's Estimated Population, 1946.	Rateable Value 1st April, 1946.
Administrative County of Essex	959,464	1,189,004	1,436,450	£10,632,454

The product of a 1d. rate is estimated at £41,973.

SOCIAL CONDITIONS.

The social conditions were given in the report for the year 1937.

VITAL STATISTICS.

The chief vital statistics of the Administrative County compared with those f England and Wales during 1946 are set out below :—

	Essex.		England and Wales.	
	1942–1946.	1946.	1942–1946	1946.
Birth-Rate per 1,000 population	18.4	20.6	17.0	19.1
Death-Rate per 1,000 population	11.2	10.4	11.6	11.5
Infant Mortality Rate per 1,000 Births ..	37	33	46	43
Still-Births Rate per 1,000 total live and still-births	26	25	Not available.	Not available.

INFECTIOUS DISEASES.

Notification.

A summary of the notification of infectious diseases in the various Coun Districts during 1946 is set out in Table VII on page 94. The table shows that 15,7 persons were notified to be suffering from infectious diseases as compared with 22,4 in the year 1945.

Scarlet Fever was less prevalent than in the previous year. The number of cases of Scarlet Fever notified was 1,886 in 1946 as against 2,045 in 1945, the number of deaths being three and nil respectively. There was a considerable decrease in the cases of Measles notified during the year, the figure being 7,296 in the year 1946 as compared with 15,591 in the year 1945, the deaths being five and 15 respectively.

The notifications of Whooping Cough showed an increase, the numbers being 3,287 in 1946 and 2,060 in 1945.

COMMENTS ON VITAL STATISTICS.

Table VIII at the end of the Report shews the birth and death-rates for the County and County Districts of Essex. The birth-rate in the County was 20.6 per 1,000 of the population, the rates for the preceding eight years being :—

1938	..	14.7	1942	..	17.1
1939	..	14.6	1943	..	17.7
1940	..	14.8	1944	..	19.4
1941	..	14.6	1945	..	17.3

The rates during the war are not comparable with those before the war as they are based on the civilian population of the County, while the births are the total births registered in the County. This makes them unduly high. As a large number of men were still in the forces during 1946, the rate of 20.6 is also an overstatement but it is clear that there has been a sharp rise in the birth rate. After the 1914–18 war the birth rate rose to a peak in the first six months of 1920, falling to below the pre-war level within the next year. The latest national figures suggest that the same thing may be happening again. The quarterly birth rate reached a maximum in the first quarter of 1947 and has since declined.

There were 752 still births registered in 1946, 2.47 per cent. of the total births. This rate which was falling slowly before the war (in 1933 it was 3.58 per cent and in 1939, 3.24 per cent.), quickened its fall during the war. It seems likely that this phenomenon, which has been observed generally, is connected with the better economic condition and improved nutrition of expectant mothers. It was shown by Sutherland in "The Lancet," 1946, Volume 2, page 955, that the still-birth rate was falling from 1939 to 1941 in the country as a whole for mothers at all ages so that the fall cannot be attributed solely to the lower average age of mothers during the war years. The following Table is reproduced from Sutherland's article :—

Still-birth Rate per 1,000 total births in England and Wales, 1939-41.

Year.	Age of Mother at birth of child 20–24	30–34	40–44
1939	26	39	68
1940	25	37	66
1941	24	34	63

The death-rate in the County in 1946 was 10.4 per 1,000 of the population. Th is the lowest since the 1939 rate of 9.9, but like the birth-rates, the death-rates sin 1939 have been artificially swollen, even apart from war deaths, as they refer to t civilian population which has been bereft of a large section of its young and healt members. No useful comparison can be made between the experience of the Coun districts as the age distributions of their populations are not known and so standardi tion factors cannot be calculated.

When we turn to Infant Mortality, we are on firmer ground as the Infant Mortal Rate is based on the number of live births, not on the total population. In 19 there were 991 deaths of infants under one year of age giving an Infant Mortal Rate of 33 per 1,000 live births. This is the lowest rate ever experienced in the Coun the rates for the last eight years being—

1938	..	42	1942	..	37
1939	..	36	1943	..	38
1940	..	43	1944	..	38
1941	..	41	1945	..	39

The average for the war years was 38.8 per 1,000 and the drop from this figure equivalent to the saving of the lives of 172 infants during 1946.

In trying to answer the question : " Is this fall general throughout the County confined to one or two areas ? ", we are hampered by the fluctuations always associat with small numbers. To lessen this difficulty, County Districts of similar type ha been combined so that no group of authorities has a population of less than 50,00 The Infant Mortality Rates in these areas for 1946 and for 1939–45 are shown in t following Table :—

County Districts.	Infant Mortality Rate. 1939–45.		1946.
Hornchurch	38	..	41
Chigwell, Chingford, Epping Urban District, Wanstead and Woodford..	34	..	28
Total dormitory group	36	..	34
Barking	35	..	33
Dagenham	45	..	31
Ilford	35	..	30
Romford	40	..	42
Walthamstow	38	..	34
Leyton and Waltham Holy Cross	40	..	28
Total dormitory industrial group	39	..	32

Thurrock	42	..	39
Colchester and Witham	39	..	37
Chelmsford, Braintree and Bocking and Halstead Urban Districts	40	..	41
Total urban group	40	..	39
Mixed Urban and Rural Group—			
Benfleet, Billericay, Brentwood, Rayleigh, Saffron Walden Urban Districts, Epping and Ongar Rural Districts	42	..	33
Rural group—			
Rural Districts except Epping and Ongar ..	39	..	31
Riparian group—			
Burnham, Brightlingsea, Canvey, Clacton, Frinton, Harwich, Maldon, West Mersea and Wivenhoe ..	41	..	33
County	39	..	33

From this we see that the Infant Mortality Rate in 1946 was much the same in each type of district except for the Urban group where it is high, though even this variation from the County rate may be a chance flunctuation. Individual districts, apart from the towns in the Urban group, to show high rates are Romford and Hornchurch. It is perhaps interesting to note that these districts are contiguous. It is found that the number of infant deaths which occurred in these two districts taken together is most unlikely to be a chance fluctuation from that expected at the County rate. When we compare the 1946 figures with the 1939–45 figures, much the same picture is seen, the towns in the Urban Group with Romford and Hornchurch have not experienced much change but the other areas have shown considerable falls. This is particularly noticeable for Dagenham, which had a very high war-time rate of 45, Leyton with Waltham Holy Cross and the Mixed and Rural Areas all with significantly lower rates.

In 1946, there were 45 maternal deaths, of which seven were notified as being caused by puerperal or Post-abortive Sepsis. The maternal death rate for 1,000 live births was 1.52, about the same as the 1945 rate of 1.53 but considerably lower than the previous lowest of 1.92 in 1941, and the pre-war rate of 2.68 (average for 1937–39). Distinguishing between deaths due to Sepsis and those due to other causes, it is found that the former have shown the greatest decline. The sepsis death rate for 1945 and 1946 combined is about a third of that for 1937 and 1938 combined but for "other causes," the ratio is about two thirds. It seems that, while not relaxing our efforts to avoid sepsis, we have also to consider how we can reduce such other causes as toxaemia and haemorrhage which are now becoming relatively of more importance.

Table IX shows the causes of death in 1946 in each of the County Districts and for the County as a whole. Turning to the latter figures, we see that Heart disease was

the principal cause of death with Cancer and Intra-Cranial Vascular Lesions (the laymen's "Stroke"), second and third. This is informative but it would be more interesting to know the principal causes of death at different ages. The Registrar General provides this information annually and it is set out in Table X. From this the principal causes of death in 1946 at various age-groups were found to be as follows the percentages being of the total number of deaths in the age-groups in question :—

Ages 0–1.

Congenital Malformations, Birth Injury and Infantile disease	39%
Premature Birth ..	25%
Pneumonia	17%
Diarrhoea	6%

Ages 1–14.

Pneumonia	10%
Non-pulmonary Tuberculosis	10%
Violent causes (other than traffic accidents)	9%
Road traffic accidents	8%
Cancer	7%

The infectious diseases of children—Cerebral Spinal Fever, Whooping Cough, Diphtheria, Measles and Poliomyelitis—together accounted for 12 per cent. of the deaths in the 1–14 age group.

Men aged 15–44.

Pulmonary Tuberculosis ..	21%
Heart disease.. ..	14%
Cancer	11%
Violent causes (other than traffic accidents but including suicide)	11%
Digestive disorders ..	7%
Road traffic accidents	6%

Women aged 15–44.

Pulmonary Tuberculosis ..	20%
Cancer	19%
Heart disease ..	12%
Maternal causes ..	7%
Violent causes (all kinds) ..	6%
Pneumonia	5%

Men aged 45–64.

Cancer	24%
Heart disease.. ..	23%
"Stroke"	8%
Pulmonary tuberculosis ..	7%
Bronchitis	7%
Digestive disorders ..	6%

Women aged 45–64.

Cancer	33%
Heart disease ..	19%
"Stroke"	14%
Digestive disorders	5%
Pneumonia	4%

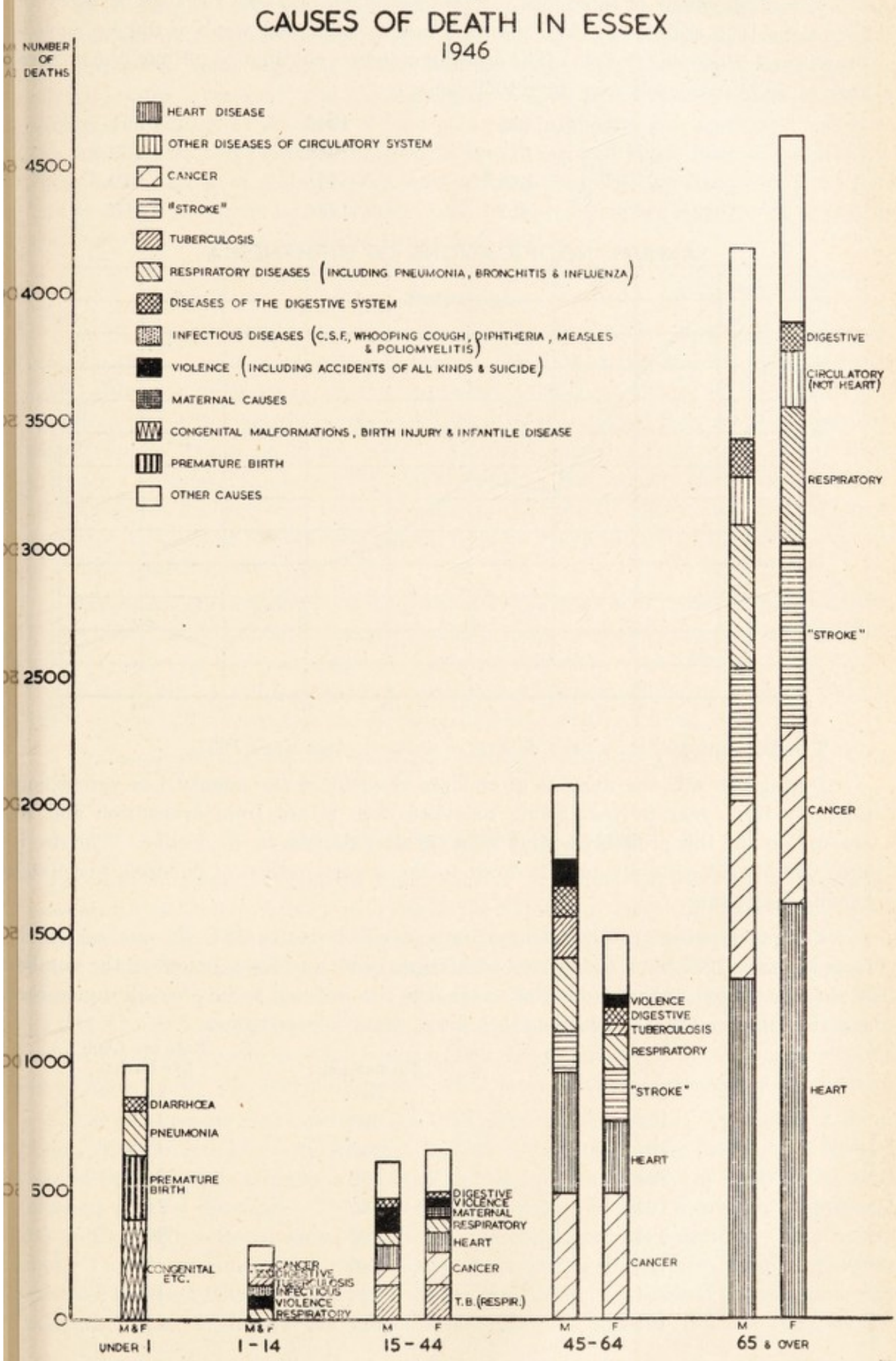
Men over 64.

Heart disease.. ..	31%
Cancer	17%
"Stroke"	12%
Bronchitis	8%

Women over 64.

Heart disease ..	35%
"Stroke"	16%
Cancer	15%
Bronchitis	6%

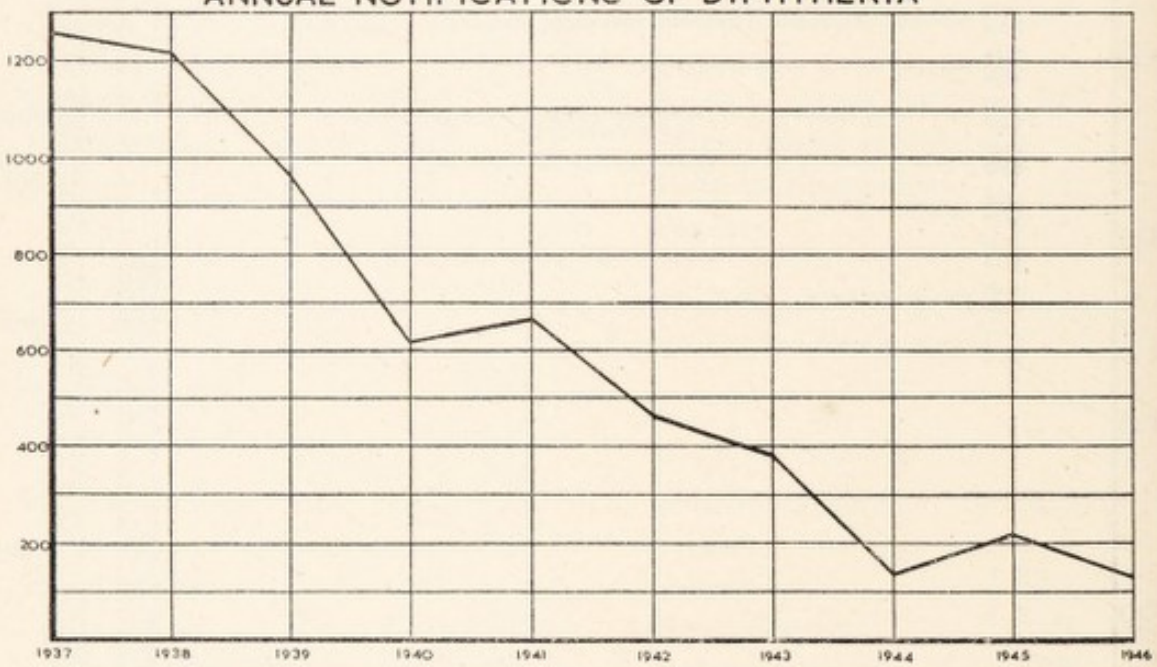
The principal causes of death at different ages are shown in the following diagram.



The notifications of infectious diseases are given in Table VII together with the figures for 1945 and 1944. This shows the usual wax and wane of disease such as Measles and Whooping Cough. The diphtheria figures continue to decline, the notifications of diphtheria each year since 1939 being :—

1939 ..	.. 965	1943 ..	.. 351
1940 ..	.. 617	1944 ..	.. 160
1941 ..	.. 662	1945 ..	.. 219
1942 ..	.. 457	1946 ..	.. 152

ANNUAL NOTIFICATIONS OF DIPHTHERIA



The diagram well shows the decline in notified cases since 1937.

During the war the number of children resident in the county has varied considerably from year to year owing to evacuation, return from evacuation and re-evacuation and this probably accounts for the irregularities in the decline. The rise in 1945 can almost certainly be put down to the general return of children, evacuated outside the county.

Puerperal pyrexia notifications show a decided rise to 327, the highest figure recorded since 1937 when the present regulations came into force, but when the number of cases is related to the number of births, the rise is found to be of small dimensions and the rate per 1,000 live births much lower than pre-war figures.

Year.	Notifications.	Rate per 1,000 live births.
1938	318	15.5
1939	308	14.7
1940	249	12.8
1941	192	10.5
1942	230	10.5
1943	225	10.0
1944	186	7.6
1945	228	10.2
1946	327	11.0

Malaria notifications increased to 35, no doubt due to men returned from overseas. After an abnormal incidence during 1944 and 1945, dysentery notifications dropped to 219, the lowest figure since the disease became notifiable. It will be noticed that the column headed " various " is at the high figure of 519. 95 of these are cases of scabies notified at Barking, 41 are cases of food poisoning notified at Colchester and a further 285 are cases of food poisoning notified in the Urban and Rural Districts of Maldon. These latter were part of the Witham outbreak reported elsewhere in this report. The true picture is not given by the figures, since food poisoning is not notifiable under the usual act, but under the Food and Drugs Act, 1938.

Statistician.

At the Royal Sanitary Institute Congress in June, 1946, considerable emphasis was placed on the fact that medical statistics throughout the country were not being dealt with in a satisfactory way. The Principal Medical Officer of the Ministry of Health deplored the fact that these statistics were not utilized fully for the preventive side of Public Health medicine. In the Annual Reports of County Medical Officers, there are a considerable number of tables of statistics, but owing to the absence of expert statisticians it has not been found possible in the past to collate and interpret these statistics with a view to obtaining reliable data on which to further the preventive side of Public Health work.

Arrangements have now been made whereby the services of Professor M. Greenwood F.R.S., D.Sc., F.R.C.P., M.R.C.S., are available in a consultative capacity in connection with the collation and interpretation of medical statistical work affecting the Administrative County. A full-time statistician has also been appointed to take up duty in 1947, and he will work under the direction of Professor Greenwood.

Professor Greenwood has prepared certain statistical reports. One of these follows in an abridged version.

INFANT MORTALITY IN ESSEX.

It has long been recognised that the rate of Infant Mortality—conventionally measured by a thousand times the ratio of the number of deaths of children under one year registered in a calendar year to the number of live births registered in that year—is one of the best, perhaps the best single index of the hygienic state of a community. There are many reasons for this. The first is that the index is easy to compute and its significance easy to grasp. Much caution is however necessary when we seek to compare index numbers for small communities, viz. numbers computed from absolutely small figures. Of this, more will be said when intra local comparisons are in question.

The next reason is the obvious one that, even under the most favourable environment, little children's lives are fragile. In 1931–3 the rate of infant mortality of females was 45 per 1,000 (the same as in England and Wales for all infants in 1944) in the rural districts of East England. The Government Actuary chose this area for a sectional life table in the national series because of its exceptionally low mortality at all ages, and, to our great grandfathers, accustomed to infant mortality rates which sometimes reached 200 per 1,000, 45 would have seemed incredibly low. But if we look down the columns of this very favourable record of mortality, we find that it is not until the age

of 72 that the death rate of women reaches and passes that of girl children in the first year of life. So it would seem that improvement is still possible.

The third reason is that we are entitled to believe that a very large proportion of those dangers which make a little girl's passage through a year as hazardous as that of an elderly woman, are preventable. The fall in mortality shows that much has been achieved to lessen the dangers to the life of infants and there is no reason to suppose that more is not possible. Mortality did not improve at all in the first half of the last 100 years. In 1841–50 it was 153 and in 1891–1900 it was 153 (the lowest rate in the intervening decennia was 142 in 1881–90). Then the tide turned, in 1901–10 it was 128 and now less than 50.

It is, however, proper to note that the whole of this improvement during the last half century, cannot fairly be credited either to increasing medical knowledge or to the organization of hygienic services. One would risk little in surmising, that if we knew no more of scientific puericulture than our great grandfathers and were as callous local administrators as Mr. Bumble's masters, the infant death rate in 1939 would have been a good deal higher than it was, but a good deal lower than in 1839. The birth rate was beginning to decline before the turn of the 20th century and this has affected infant mortality. No scientific and little economic knowledge is needed to satisfy anyone that, down to very recent times and in, say 80 per cent. of families, three children were better fed, housed and clothed than four and far better fed, housed and clothed than six. We may hope that, in time to come, this will cease to be a truism but it certainly was a truism in 1900–39. We must never forget that, down to our own time, infant mortality has been greatly influenced by social–economic status—as, of course, has mortality at most ages.

The object of this report is to give a picture of variations of infant mortality within the administrative county of Essex, between 1927 and 1946. It would be possible to make comparisons of the experience of the county as a whole from times earlier than 1910, but this would be of no great interest. The county is made up of so many heterogeneous items—industrial towns, dormitory areas, ancient boroughs, agricultural lands, watering places—that its infant mortality has changed very much as the greatest aggregate of all, England and Wales, has changed. In 1910, the statistical unit was changed from the registration district to the urban (including here municipal boroughs) or rural district—the units of administration. Like all reforms, this has its drawbacks; the most obvious is a difficulty of comparison with past experience, one which recurs as new administrative areas are created. Even within the last 20 years there have been many changes and it is not unlikely that in the near future there will be more. A minor difficulty is that the disparity in population between the smallest and the largest administrative units is now very great. For instance, in 1942, the estimated civilian population of Ilford was 144,460 and of Wivenhoe 2,110. In that year there were 2,412 registered births and 74 deaths of infants under one year in Ilford giving a rate of 31 per 1,000. In Wivenhoe 31 children were born and none died under the age of a year, a rate of 0 per 1,000 births. Of course one does not need a knowledge of mathematical statistics, only elementary common sense, to save one from drawing conclusions. Still it is, perhaps, possible that when a small district can show a very ow rate, its citizens may be tempted to comment on the fact and be less apt to do so

when the rate for a year happens to be very high. Had two babies died during 1942 in Wivenhoe its rate would have been one of the highest in the county. In the year 1942, the rate for the Administrative County was 38 per 1,000 births. There were five districts with rates above 60. Two of these had estimated populations of less than 10,000 and none had a population over 17,000. It is, of course, quite possible that a small or sparsely populated administrative area might, on that account, have a high (or low) rate of infant mortality, but we could not test such an hypothesis without having data extending over many years.

A table has been prepared setting out in detail the experience of all our 43 administrative areas in the Quinquennium, 1900–44. The table that follows is a summary of the original table obtained by grouping the smaller authorities so that each group contains areas of roughly the same type.

District or group of districts.	*Live Births 1940-44.*	*Deaths under 1 year. 1940-44.*	*Expected Deaths.*	*Expected Survivors.*	$\frac{(Obs.-Exp.)^2}{Exp.}$ *Deaths*	$\frac{(Obs.-Exp.)^2}{Exp.}$ *Survivors*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
DORMITORY AREAS						
Hornchurch	7,197	258	281.77	6,915.23	2.01	.08
Chigwell, Chingford, Epping Urban District, Wanstead and Woodford	9,415	314	368.60	9,046.40	14.65	.60
DORM.—INDUSTRIAL AREAS.						
Barking	5,708	194	223.47	5,484.53	3.84	.16
Dagenham	8,972	405	351.26	8,620.74	8.22	.33
Ilford	11,367	399	445.02	10,921.98	4.76	.19
Romford	5,407	215	211.69	5,195.31	0.05	.00
Walthamstow	8,121	326	317.94	7,803.06	0.20	.01
Leyton, Waltham Holy Cross	7,387	306	289.20	7,097.80	1.05	.04
URBAN AREAS.						
Thurrock	5,363	218	209.97	5,153.03	0.31	.01
Colchester and Witham	4,431	172	173.48	4,257.52	0.42	.02
Chelmsford, Braintree and Halstead	4,459	182	174.58	4,284.42	4.24	.17
URBAN–RURAL AREAS.						
Benfleet, Billericay, Brentwood, Rayleigh, Saffron Walden, Epping Rural District and Ongar Rural District	9,588	414	375.37	9,212.63	10.11	.42
RURAL AREAS.						
Rural Districts except Epping and Ongar	13,406	535	524.83	12,881.17	5.75	.23
RIPARIAN AREAS.						
Burnham, Brightlingsea, Canvey, Clacton, Frinton, Harwich, Maldon, West Mersea and Wivenhoe	4,209	174	164.80	4,044.20	13,68	.56
Total	105,030	4,112	4,111.98	100,918.02	69.29	2.82

The first three columns of this table need no explanation, they record plain facts. In the five years 1940–44, 7,197 live births were registered in Hornchurch and 258 deaths of children under a year of age, and so on. Column (4) does need explanation. "Expected Deaths"! Why and by whom "Expected." The purpose of this table is to test whether every part of Essex has, apart from "chance" variations, the same rate of infant mortality. The figures in column (4) are the numbers of deaths we should expect to get in each district if this hypothesis were true. We see that "expectation" is sometimes exceeded and sometimes not attained. Barking returned 194 deaths but 223 were expected, Ilford had 399 but 445 were expected. Dagenham had 405 but 351 were expected. Yes, but can we say these deviations are so great that they cannot be assigned to "mere chance." To answer that question involves some more arithmetic and, to be quite honest, there is one sense in which it cannot be answered at all. Arithmetic will enable us to say that, if our hypothesis is true, that is, if the chance of dying is the same throughout Essex, then the probability that we should get such wide differences from place to place as we find is very small. Arithmetic will never tell us more than that. If we find that the distribution of Infant Mortality throughout Essex is very unlikely, if the hypothesis of no local differences were true, it is easier for us, since we know of many factors—some controllable, others not—which might increase or decrease the chance of death in different places, to reject the hypothesis and hold that children in area X were exposed to greater risk than in area Y. But we must always remember the limitations of our method. All knowledge, even arithmetical knowledge, is power; but not omnipotence.

The last three columns permit the testing of the hypothesis. The difference between the number of deaths, or survivors, observed and those "expected" are squared and divided by the number expected, the results being shewn in column (6) and (7). This procedure is, when one thinks of it, reasonable, but its justification is really mathematical. It can be shewn that the larger the fraction in these columns the worse the agreement between fact and expectation, and the probability of obtaining such a figure if the hypothesis is true can be calculated. In this case, it is found that only once in more than 300 times should we expect "chance" to give us a worse agreement with expectation. These are not astronomical odds, but sufficient to justify us in rejecting the hypothesis. We may hope that a time will come when it will be true, for the ideal to be worked for is that throughout the Administrative County, the rate of infant mortality should be constant apart from chance variations from place to place, meaning by this variations which no human foresight can control. These there must always be.

If the conclusion is accepted that disparities in rates of infant mortality within our county are too great to be assigned to chance, the question arises as to whether they are permanent. For instance in 1940–44, Dagenham had a higher rate of mortality than Ilford. Was that true in an earlier period or do districts change places? To answer this question consider the table that follows where the figures in brackets are the registered births for 1927–34.

Infant Mortality in ten populous Local Authorities.

		1927–34.	1940–44.
Chingford	(2,932)	38.1	30.0
Ilford	(14,775)	43.9	27.0
Colchester	(5,849)	43.9	39.6
Chelmsford	(3,107)	47.6	40.4
Leyton	(13,598)	47.9	41.3
Romford	(5,047)	49.9	39.8
Walthamstow	(15,030)	51.2	40.1
Hornchurch	(4,041)	56.4	35.8
Barking	(7,614)	58.6	34.0
Dagenham	(15,257)	63.2	45.1

Three deductions can be made :—

(1) In each district there has been a notable decrease in the rate of infant mortality.

(2) The two districts with lowest rates of mortality in 1927–34 were the districts of lowest mortality in 1940–44 and the district of highest mortality in 1927–34 had still the highest mortality in 1940–44. But—

(3) There are striking changes of order.

I think that enough evidence has been submitted to convince the reader that within our county there are indeed great discrepancies and that further investigation of causes or possible causes is required. To assist such an investigation is one of the tasks of our new medical-statistical service. But, and this is one of the main purposes of this memorandum, not only will the task be lengthy, it will be frustrated at the outset, if premature conclusions are drawn from unanalysed data. Any tiro in journalism can take such figures as those I have given and give " sensational " calculations of the saving of life which would be effected if the rate of infant mortality in Dagenham were as low as in Ilford ; any arm chair speculator can imagine reasons why there should be such a difference. Many factors which might affect the rate of infant mortality have been studied by medical statisticians. Examples are :—the birth rate, the proportion of the population living two or more to the room, the proportion of married women industrially employed, the proportion of employed males engaged in unskilled labour and the proportion of infants brought up by hand.

We do not, I think, need now elaborate arithmetical studies of the effects of bad social-economic conditions on Infant Mortality, but something finer, more minute. Actually a trial on our county data showed that, on the average, the higher the overcrowding index (the conventional index is the proportion of the population in an area housed two or more to the room) the higher the rate of infant mortality ; it also showed that there were exceptions which need close study. That means Social surveys based on local knowledge. Along those lines, I think, we may succeed in accelerating the decline of Infant Mortality in all districts.

Diphtheria Immunization.

The co-operation between the County Council and the County District Councils in regard to diphtheria immunization was continued throughout the year. As a result

of a letter, dated 12th June, 1946, received from the Ministry of Health in relation to a National Campaign for diphtheria immunization, arrangements were made to provide supplies of various leaflets for distribution to mothers through the County Council Health Visitors and Clinics. In addition newspapers publicity, film shows and poster displays were a great asset in this propaganda campaign.

Dr. J. A. H. Brincker, of the Ministry of Health, has kindly provided figures, based on returns received from County District Councils in Essex, in regard to the actual number of children immunized during the year. From these, it appears that the following numbers of children in the Administrative County were immunized against diphtheria during 1945 (figures in brackets are those for 1944) :—

Age Groups 0—5	21,756	(7,979)
Age Groups 5—15	4,819	(12,370)
	26,575	(20,349)

The following information shows the number of diphtheria notifications and the number of deaths from the disease during the year 1943–46 :—

	1943.	1944.	1945.	1946.
Notifications ..	351 ..	160 ..	219 ..	152
Deaths	18 ..	12 ..	14 ..	16

SCABIES.

Under the Scabies Order, 1941, County Councils and District Councils were given concurrent powers. Since then, the County Council has greatly assisted local authorities in a number of ways, particularly by loaning premises and medical and nursing staff, and by the treatment of cases as in-patients in County Council Hospitals. During the war, Combined Treatment Centres were used as First Aid Posts with gas cleansing facilities. These facilities were found to be ideal for the treatment of scabies and were utilized to the full. Treatment of infants under five and school children still continues at the Centres and School Clinics.

ESSEX EPIDEMIOLOGICAL COMMITTEE.

This Committee, which was formed in 1939, consists of Pathologists, Medical Officers of Health, Medical Superintendents and General Medical Practitioners, its terms of reference being " 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." Eight meetings were held during the year, when consideration was given to many subjects, including typhoid fever, gastro enteritis, erythroblastosis foetalis, poliomyelitis, smallpox, puerperal pyrexia, ice cream, infection among infants born in nursing homes, acute rheumatism, aertrycke outbreak and whooping cough vaccine.

SMALLPOX.

After being absent from the County since 1924, Smallpox made its re-appearance in the Thurrock Urban District in January, 1946. The infection was brought into the

rea by a corporal who had recently returned from India and who had assisted in ooking after cases of smallpox on the journey. Sixteen cases occurred in the area, ncluding the corporal, and four of them proved to be fatal.

An excellent joint report by Dr. W. T. G. Boul, Medical Officer of Health for the hurrock Urban District, and Dr. W. F. Corfield, Medical Superintendent of the mallpox Hospital at Colchester, was published in August, 1946, and this is reprinted elow :—

SMALLPOX AND VACCINATION.

W. T. G. Boul
M.B.E., M.D., Manc., D.P.H.
MEDICAL OFFICER OF HEALTH,
URBAN DISTRICT OF THURROCK

W. F. Corfield
M.D. Lond., D.P.H.
MEDICAL OFFICER OF HEALTH,
BOROUGH OF COLCHESTER

While returning from India a corporal (H.R.), of the Royal Army Medical Corps, assisted in looking ter cases of smallpox. He reached his home in Grays, Essex, on January 18th, 1946, and visited his ephew (A.R.) next day and again on January 24th. On February 11th a doctor drew the attention of ne of us to the boy (A. R.), owing to a peculiar rash, and it was clear that he was a typical case of odified variola. He had been first taken ill on February 3rd and had had the usual early symptoms nd signs of the disease.

On the same day the R.A.M.C. corporal was visited and medically examined. He had had no mptoms of illness and said he was perfectly fit, but on examination three ill-developed pustules were served upon his back and a small pustule upon one wrist. Variola was diagnosed. Both these tients and all subsequent cases were removed to the Colchester Isolation Hospital.

All routine measures for vaccination on a large scale were at once put into force, as contacts with th cases had been extensive. Though the corporal had returned home on January 18th and lived with s wife and two children, not one of them caught the infection, but only his nephew, whom he had seen ly casually, though he had left in the house three gifts (two leather wallets and a silk scarf) that he d brought from India. Both his wife and his children, aged 12 and 8 years, had been vaccinated in fancy.

C. R., the brother of A. R., was next taken ill, and the sanitary inspector (Mr. Rd.) who arranged e disinfection of the houses and bedding of the corporal and his nephew. By some oversight this man d not been revaccinated. The disease was hæmorrhagic, and he died within six days. His wife and tle daughter, aged 5 years, were unvaccinated. They were at once vaccinated and removed, as ngerous contacts, to Colchester. The wife (Mrs. Rd.) was taken ill, and smallpox developed eight days er her admission to hospital.

LATER CASES.

Further cases followed. On February 27th a general hospital reported that a man (Mr. Ph.) had en admitted during the night with a diagnosis of purpura. He had been taken ill on February 18th. was the second case of hæmorrhagic smallpox, and he died in the isolation hospital eleven days after s first symptoms. This man had been a wholesale bread-roundsman working in many districts of the trametropolitan area of London.

Strenuous and extensive efforts were necessary to cope with the greatly increased number of ntacts and the increasing demands for vaccination by the general public. Inquiries showed that the ead-roundsman's wife (Mrs. Ph.) had had " influenza " about February 2nd. She obtained no medical vice and recovered on February 7th. On March 2nd a woman (Mrs. C.) with a suspicious rash, who d been ill since February 26th, was found to have smallpox. She was the mother of Mrs. Ph. and had rsed her through her " influenza." A more complete examination of Mrs. Ph. brought to light ght scarring on the face, chest, and arms, most probably due to smallpox pustules. This diagnosis s confirmed by a blood examination.

On March 10th the small son (A. Ph.) of Mr. and Mrs. Ph. developed smallpox and was removed to spital. During this outbreak one of us (W. T. G. B.) probably had so-called contact disease. Twelve ys after some three hours' close contact with Mr. Rd. he had general malaise, shivering, and nasal arrh. The condition cleared completely within fifteen hours.

Meanwhile in the Colchester Hospital a nurse (L.) in the smallpox wards had been taken ill 25 days after she took over duty in these wards. She went to bed with a slight sore throat, headache, and pyrexia (101.8° F). Next day the temperature was 100.2° F, and a morbilliform rash was developing. The temperature fell to subnormal as the rash developed and became general. On the fifth day the temperature rose to 99° F and after that it remained normal. Her symptoms had subsided by the third day; no macules or true rash of any description developed, though she was kept in bed a few days longer. At the end of a week she protested she was quite well, and she returned to duty on the twelfth day.

It was hoped that the outbreak was over, but unfortunately a girl (M. Pe.) living in Southend, whose parents belonged to the Peculiar People, was taken ill on March 16th, and a rash quickly developed. It was thought to be chickenpox, and no doctor was consulted. When seen on March 28th she was a typical case of confluent smallpox and she died the same day. Her parents (Mr. and Mrs. Pe.) had been vaccinated in infancy. They refused revaccination. Her brother (R. Pe.) had never been vaccinated and for five days longer he refused vaccination, and then, too late, agreed to be done.

On April 1st, Mrs. Pe. developed smallpox, and on April 5th, Mr. Pe. and R. Pe. also showed signs of the disease. All three were isolated in the Colchester Hospital. Mr. and Mrs. Pe. had mild modified attacks, but R. Pe. rapidly became hæmorrhagic and died on April 11th.

A neighbour (Mrs. W.), who had helped to nurse M. Pe., was admitted to the hospital with mild modified smallpox on April 7th. This was the end of the Grays, Thurrock, and Southend outbreaks. One more patient was admitted on April 14th to the Colchester Isolation Hospital. He was a sailor (R. L.) who had recently returned from India to his home in Ilford. His condition was very similar to that of Corporal H. R. He had one typical smallpox pustule and two doubtful ones, and never had any symptoms. He was a contact on board a different ship from H. R., and it may be concluded that his attack had no connexion with the other cases.

It will be seen that, excluding the sailor, the cases were divided into three groups, and no direct connexion could be discovered between them, though it seems probable that all originated from the first case (H. R.); as distances between the groups were short, communication between the Thurrock district and Southend is simple, and contacts are frequent.

The first group consisted of H. R., A. R., C. R., and Mr. Rd.; and, as a subgroup, Mrs. Rd. and I should be included. The second group was Mr. and Mrs. Ph., A. Ph., and Mrs. C. As the Ph. family live within a quarter of a mile of H. R.'s family, there can be little doubt where the infection arose. Lastly, the Southend group was made up of the Pe. family and their friend, Mrs. W.

Naturally, after the occurrence of the first case, the doctors of the area were warned of the risk of smallpox, and it is worth noting that every case, whether severe or extremely mild, when seen by a doctor came under suspicion at once as a possible case of smallpox, every centre of infection was immediately controlled, and secondary cases were extremely few.

RELATION TO VACCINATION.

The table sets out the cases with their ages and vaccination particulars. H. R. and R. L. had been vaccinated and revaccinated. H. R. had been unsuccessfully vaccinated in 1945. Neither of them had any symptoms of illness, and the only signs were a few scattered pustules. L. was a nurse at the isolation hospital who was detailed to look after the smallpox cases. She was a case of smallpox sine variolis.

Mr. Rd., Mr. and Mrs. Ph., Mr. and Mrs. Pe. and Mrs. W. had all been vaccinated in infancy and never revaccinated. With Mr. Rd. and Mr. Ph. the immunity thus obtained had not lasted; and when exposed to a virulent type of smallpox, they showed no resistance. Mrs. Ph., Mr. and Mrs. Pe. and Mrs. W. were more fortunate; their immunity had lasted surprisingly well, and the attacks of smallpox were in none of these cases severe. R. Pe. refused primary vaccination until too late. M. Pe. had never been vaccinated, and the result was disastrous.

Mrs. C. was interesting in that, though she was 67 years old and had been in close contact with Mrs. Ph., vaccination in infancy and revaccination at the age of 18 years led to a very mild modified attack.

Directly Mr. Rd. was diagnosed, his wife and little daughter, neither of whom had been previously vaccinated, were at once vaccinated. Mrs. Rd. developed a definite but mild attack. The little daughter, aged 5 years, though living in the smallpox wards throughout her mother's illness, never showed any signs of the disease but put on weight and left the hospital greatly improved in health.

Samples of blood and pustule crusts from several of these cases were examined by Professor A. W. Downie, of the University of Liverpool. He found the serum of Nurse L. positive in a dilution of 1–80; and, writing about this case, he said: "I think the result of her serum confirms your diagnosis that she suffered from an abortive attack of smallpox."

ANALYSIS OF CASES OF SMALLPOX.

Case.	*Age (years.)*	*Type.*	*Vaccinated.*	*Revaccination.*	*Result.*
H. R.	36	Modified	1/4	1941/1	Recovery
A. R.	13	Modified	1/1	—	Recovery
C. R.	11	Modified	1/1	C/1	Recovery
Mr. Rd.	32	Hæmorrhagic	5 years/4	—	Death
Mr. Ph.	42	Hæmorrhagic	1/4	—	Death
Mrs. Ph.	37	Modified	1/4	—	Recovery
Mrs. C.	67	Modified	1/4	18 years/4	Recovery
A. Ph.	9	Modified	C/3	—	Recovery
Mrs. Rd.	33	Modified	C/2	—	Recovery
L.	26	Abortive	22 years/1	—	Recovery
M. Pe.	20	Confluent	Nil	—	Death
Mrs. Pe.	54	Modified	1/4	Refused	Recovery
Mr. Pe.	59	Modified	1/4	Refused	Recovery
R. Pe.	24	Hæmorrhagic	C/3*	—	Death
Mrs. W.	69	Modified	1/5	Refused	Recovery
R. L.	26	Modified	1/1	C/1	Recovery

*After refusing vaccination for five days. I/1, in infancy, 1 mark; C/1, as contact, 1 mark.

ABORTIVE SMALLPOX.

It is of interest to study these cases in connexion with what has been called contact disease and has been described by Conybeare (1939), who gives an account of seven well-vaccinated persons who, after contact with a case of smallpox, had symptoms very similar to the prodromal stage of smallpox and then recovered with subsequent lassitude. Two of these patients had skin eruptions which, in one case, were "consistent with a diagnosis of variola." Rolleston (1925) says:—

> "A special form of modified smallpox is the non-eruptive variety known as *variola sine exanthemate* or *variola sine variolis* . . . . In such cases the onset is severe, with high fever, intense headache and backache, and all other prodromal symptoms may be present, including erythematous or petechial eruptions . . . its true nature is shown by its occurrence in an epidemic focus and by the sudden termination of the disease on the third day before the appearance of the papular eruption. Such cases are apt to be encountered among recently vaccinated persons shortly after joining the staff of a smallpox hospital, and several examples have lately been reported among recently vaccinated soldiers (Vorpahl, Klaholt, Kathe)."

Harries and Mitman (1940) describe variola sine eruptione as "smallpox confined to the initial toxæmia occurs in the previously vaccinated. . . . Occasionally a few small and atypical focal lesions may appear and be possibly overlooked."

In view of the so-called abortive case in this outbreak and the extracts quoted above, it seems reasonable to conclude that such cases may show some or all of the prodromal signs and symptoms of smallpox, and that these then fade out without any appearance of the true rash. We suggest that abortive smallpox would be a better and simpler name for the conditions previously described as variola sine eruptione, variola sine variolis, and contact disease.

VACCINATION OF CONTACTS.

The present outbreak led to a considerable demand for vaccination. The contacts of H. R. were numerous, and many of them unknown ; and A. R., during the first three days of his illness, had attended church services, a Sunday school, a wedding, and a technical school. Vaccination was offered to all known contacts, and a special vaccination session for children was held in the technical school. The public vaccinators were hard pressed, because, besides ordinary contacts, all laundries, libraries and salvage-collecting personnel were warned. By February 23rd the list of known contacts exceeded 1,000, and assistance was given by the county medical and nursing staffs.

On March 3rd it was decided to open special vaccination centres. Up to this time all contacts had been vaccinated at the public vaccinators' surgeries (except the special clinic held for school children). By March 9th five centres had been opened. These were greatly appreciated, as the weather had been particularly bad and there had been long queues standing in rain and snow outside the doctors' surgeries. In the five days, March 4th–9th, 15,000 vaccinations were performed in the district. The assistance given by the Government Lymph Establishment at Colindale Avenue, London, N.W.9, was greatly appreciated.

On the whole, everything worked well, yet experience showed where improvements might have been possible. After the first few days it was realised that it would not be possible to reinspect all vaccinated contacts ; so the public were informed that the only people who would be seen again a week after their vaccinations were (1) those who had been vaccinated for the first time and whose vaccination had not taken ; (2) all infants under the age of one year (for vaccination certificates); and (3) all persons vaccinated by private doctors. The vaccinators by this time consisted of public vaccinators, other practitioners, medical officers on the staffs of health departments, and medical students working under supervision. It was necessary for private doctors' patients to be seen again so that records for payment, etc., might be completed. Some improvement might have resulted from giving known contacts a document that would have given them priority in the queues.

All contacts were vaccinated in three places, and members of the general public in only one. Meanwhile the sanitary inspector's staff had been reinforced, and all contacts were visited daily for seventeen days. Any found to be ailing, however slightly, were transferred to a special contact list and visited daily by a medical officer, and returned to the original list when a negative diagnosis had been made.

As indefinite rashes from vaccination, smallpox, or for some other reason might arise, a ward of 12 beds was held in readiness at the local isolation hospital for the reception of any such cases. Three cases were admitted, and the provision of this ward proved to be a definite safeguard.

A single large room, free of unnecessary furniture, was found to be the ideal vaccination centre, with if possible, additional shelter for applicants. The queue should be divided into smaller queues according to the number of vaccination teams. Each vaccinating team should consist of a clerical assistant (to whom the patient goes first) to enter particulars on the form, a nurse to prepare arms, the medical officer, and a volunteer to cover the vaccination mark with strapping after drying.

CONCLUSIONS.

The following conclusions may be drawn from this experience :—

(1) It is desirable that persons in attendance on smallpox patients on board ship should be *specifically* notified to the medical officers of health of the districts to which they proceed when they land in this country.

(2) Vaccination in infancy may protect for very many years, but does not necessarily do so.

(3) It appears likely that one vaccination mark does not protect as completely as two or more. It seems desirable that a primary vaccination should consist of three marks, and a revaccination of at least two.

(4) During an outbreak, when there is a rush to vaccination centres, contacts should be given priority by a system of tickets.

(5) For doubtful rashes an observation ward in the nearest isolation hospital is of great value.

(6) Abortive smallpox would be a good name for the illness now known as variola sine variolis, variola sine eruptione, or contact disease.

Our thanks are due to Dr. T. Stevensen Logan, M.O.H. for Southend, for the information concerning the Southend cases.

REFERENCES.

Conybeare, E. T. (1939). *Lancet*, i, 813.
Harries, E. H. R., Mitman, M. (1940) Clinical Practice in Infectious Diseases, Edinburgh, p. 262.
Rolleston, J. D. (1925) Acute Infectious Diseases, London, p. 336.

The outbreak was also considered by the Essex Epidemiological Committee at their meeting on 2nd April, 1946, and the following special points arose from the discussion at that meeting :—

(*a*) The only possible connection between the case in Southend and the outbreak in Thurrock was either through the deceased handling infected material from Thurrock passing through the laundry at which the deceased had been employed, but there was no definite proof of the deceased having handled the infected material ; or through the deceased having attended a gathering of " Peculiar People " in Corringham, which is in the Thurrock Urban District.

(*b*) It was considered necessary that all possible contacts, however remote, should be followed up after the occurrence of a case of smallpox.

(*c*) Dr. Boul's re-arrangement of the vaccination machinery, by which he lost track of the subsequent history of all those who had been vaccinated, was the best thing which could have been done in the emergency.

(*d*) Contact illness has to be recognised in outbreaks of this kind.

(*e*) It is advisable to provide for a car to accompany the ambulance when conveying smallpox patients from their homes to the Smallpox Hospital, so that should the ambulance break down there are readily available alternative means of transport, or means for obtaining assistance.

Outbreak of Infection due to Salmonella Typhi-murium.

In July and August 1946, an outbreak of food poisoning occurred in the centre of the County. Enquiries revealed that the outbreak was restricted to the area which obtained its supplies of meat from a central slaughterhouse in the Urban District of Witham. The occurrence of diarrhoea and vomiting in that Urban District was first noticed by a local medical practitioner on 5th and 6th July, 1946. Apart from secondary cases the outbreak lasted for three weeks. Enquiries revealed that a total of 3,000–4,000 persons was affected and three deaths occurred among a population risk of about 40,000.

Dr. F. E. Camps, Consulting Pathologist, carried out a detailed investigation, an abridged account of which appears on pages 89–94 of the Monthly Bulletin of the Ministry of Health (Vol. 6) for May, 1947. Full use was made of the County Council's laboratory service and medical, inspectorial, and clerical assistance was rendered by members of the staff of the County Public Health Department.

The following Summary is extracted from Dr. Camps abridged account to which reference has already been made :—

(1) An outbreak of infection due to Salmonella Typhi-murium in a number of adjoining urban and rural districts of Essex is described.

(2) About 3,000–4,000 cases and three deaths occurred, giving a morbidity rate of about 10 per cent. and a case fatality rate of about 0.1 per cent.

(3) No difference in incidence was noticeable between the sexes, but children aged 2–5 years and middle-aged persons suffered most heavily.

(4) The reservoir of the infection proved to be an area slaughter-house in which the conditions were very unhygienic.

(5) The origin of the infection was probably an infected pig which was slaughtered, and which contaminated the other carcases by infecting the wiping-down cloths.

(6) The main vehicle of infection was home-killed raw meat, but an important secondary vehicle was canned meat, which became contaminated in the butchers' shops where the two types of meat were handled together.

(7) A relatively high mean atmospheric temperature contributed to the degree of the bacterial contamination of the food.

(8) The outbreak illustrates the necessity for good bacteriological facilities and for knowledge of how they may best be used.

(9) Stress is also laid on the importance of early notification of the disease by general practitioners.

CANCER.

The number of deaths occurring in the County from cancer during the year 1946 is shown in the table below. The death rate per 1,000 of the population decreased from 1.93 in 1945 to 1.8 in the year under review :—

	Age Period.						
	0—	1—	5—	15—	45—	65—	Total.
Borough and Urban Districts	1	9	6	168	846	1152	2182
Rural Districts ..	—	4	1	27	133	244	409
Total for Administrative County	1	13	7	195	979	1396	2591

Steps have been taken to implement the requirements of the Ministry of Health in respect to the treatment of Cancer, and the Ministry have approved Interim Arrangements for the Diagnosis and Treatment of Cancer and Kindred Matters under the Cancer Act, 1939. These provide for facilities for Diagnosis and Treatment, including

in-patient treatment at the London Hospital and the Oldchurch County Hospital, Romford, the payment of travelling expenses, and the examination of pathological specimens at the London Hospital.

During the year, the Essex Hospitals Joint Advisory Council set up a Cancer Sub-Committee to consider formulating an interim scheme which would meet the requirements of the geographical County, with a view to this ultimately being submitted to the Ministry of Health for approval, after the Authorities concerned had had an opportunity of giving it full consideration. The Cancer Sub-Committee has now submitted its report to the Essex Hospitals Joint Advisory Council and have made a number of recommendations, which take into account the requirements of the area as a whole. These are mainly suggestions in regard to the establishment of Diagnostic Clinics and Radiotherapy Sub-Centres and the appropriate staffing, and the collation of statistical matter. The Cancer Sub-Committee have also suggested that the work to be carried out at these Clinics and Sub-centres should be co-ordinated with that now undertaken in connection with the treatment of Cancer at the London Hospital and at St. Bartholomew's Hospital.

Steps are being taken to develop an interim scheme from the proposals outlined, covering the geographical County, for submission to the Ministry of Health, pending the formation of a comprehensive scheme by the statutory Regional Hospital Board.

TREATMENT OF VENEREAL DISEASES.

Incidence.

During the year 1946 the number of fresh cases of Venereal Disease amongst Essex patients was 1,117 as compared with 738 for the previous year. The number of Non-Venereal cases was 2,874 as compared with 703 for 1941. Total attendances increased from 31,481 in 1945 to 42,173 in 1946.

The increase in the number of Non-Venereal cases since 1941 is considered to be due to the publicity campaign carried out through the agency of the daily papers, and by exhibition of notices on the hoardings and in public lavatories. In this connection over 500 posters showing dates of sessions in the Venereal Diseases clinics were issued to local authorities during the year 1946, and an arrangement was also made with the L.M.S. and L.N.E.R. Companies for exhibition of posters in lavatories at 120 Railway Stations in Essex.

Wax Penicillin.

Owing to the use of Wax Penicillin which became available during the year it was possible to treat a number of syphilis cases as out patients who otherwise would not have received Penicillin treatment owing to pressure on hospital beds.

Induced Malaria.

A number of cases of neuro-syphilis was successfully treated with malaria in the Queen Mary Block of Oldchurch County Hospital, the malarial blood for injection being obtained from the Mental Hospital at Horton.

TABLE I.

Treatment of Venereal Disease, Year 1946.

Treatment Centre	*Patients from all Areas* *Total No. treated for first time*	*ESSEX PATIENTS*						
		Total Number treated for first time suffering from					*Total No. of Attendances of Essex Patients*	*In-patient Days*
		Syphillis	*Soft Chancre*	*Gonorrhoea*	*Not V.D.*	*Total*		
London Hospitals	39,200	117	2	325	1,430	1,874	16,989	271
St. Bartholomew's, London	964	1	—	3	11	15	86	—
Romford	963	93	11	186	660	950	12,120	981
Chelmsford	197	21	2	44	130	197	850	194
Colchester	375	40	—	102	199	341	3,271	343
Harwich	60	2	—	4	29	35	342	—
Ipswich	628	1	—	1	2	4	97	—
Southend	641	13	—	36	94	143	1,464	—
Gravesend	494	16	—	28	93	137	2,028	—
Tottenham	1,317	9	—	5	44	58	322	—
Bishops Stortford	167	7	—	14	29	50	538	—
Queen Mary's, Stratford	560	8	2	24	93	127	2,066	—
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	—
„ 1944	24,796	217	4	412	1,585	2,218	29,435	—
„ 1943	26,605	205	4	374	1,490	2,073	30,125	—
„ 1942	19,430	211	4	422	913	1,550	28,117	—

ocial Workers.

By the resignation of Miss Brignall during the year we found ourselves deprived f the Venereal Disease Social worker and owing to shortage of almoners a suitable eplacement was not found on advertising the post. We were fortunate in obtaining e part-time services of an ex-nursing sister (Mrs. Rogerson), who has carried out the uties of social worker for the largest clinic (Romford). As regards the Colchester and helmsford Clinics visits for contact tracing and to defaulting patients have been carried ut by health visitors of the Headquarter Staff and of districts, and this procedure has een very successful.

nstruction of Medical Officers.

During the year four medical officers attended the Oldchurch clinic for instruction nd were granted the customary Venereal Disease Certificate on completion of the eriod.

ttendance at Clinics.

On page 26 is set out the usual table giving the number of new patients and tendances at clinics.

ravelling Facilities.

During the financial year ended 31st March, 1947, fares of necessitous patients to nd from the nearest clinic were paid by the Council at a cost of £36 11s. 11d.

egulation 33b.

The number of cases reported on Defence Regulation 33B declined from 121 in 945 to 48 in 1946 : a summary of the working of this Regulation during the year is t out below :—

	M.	F.	Total.
(1) (*a*) Total number of contacts in respect of whom Form 1 was received	3	45	48
(*b*) Number in (*a*) transferred from other areas	—	2	2
(2) Number of cases in (1) in which attempts were made during the current period outside the scope of the Regulation, to persuade the contact to be examined before the latter had been named on a second Form 1	1	41	42
Contacts found	1	27	28
Contacts examined or already under treatment ..	1	19	20
(3) (*a*) Number of those on (1) in respect of whom two or more Forms 1 were received	—	6	6
(*b*) Number included in (3) (*a*) in respect of whom the first Form 1 was previously reported under (1)	—	2	2
(*c*) Number included in (3) (*a*) transferred from other areas	—	—	—

TABLE II.

Vaccination—Year 1946.

Guardians Committee Areas	No. of Births in "Birth List Sheets" registered 1st Jan. to 31st Dec., 1945	No. of these Births entered by 31.1.47 in Cols. I, II, IV and V of the "Vaccination Register" (Birth List Sheets), viz. :—					No. of Births which on 31.1.47 remained unentered in the "Vaccination Register" on account of :			No. of these Births remaining 31.1.47 neither entered in the "Vaccination Register" nor temporarily accounted for in "Report Book"	No. of Certificates of successful Primary Vaccination of Children under 14 received during 1946	No. of Statutory Declarations of Conscientious objection received by V.O. during 1946
		Col. I. Successfully vaccinated	Col. II.		Col. IV. No. of Statutory Declarations	Col. V. Died unvaccinated	Postponement by medical certificate	Removal to Districts the Vaccination Officers of which have been apprised	Removal to places unknown and cases not found			
			Insusceptible of vaccination	Had Small-pox								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13
Braintree ..	862	309	7	—	334	21	2	16	3	170	415	313
Chelmsford ..	3,089	1,236	5	—	921	94	11	573	68	181	1,833	936
Colchester ..	2,372	1,226	11	—	795	51	6	115	109	59	1,784	876
Epping ..	1,332	423	4	—	742	27	12	91	24	9	396	564
Saffron Walden ..	440	253	3	—	139	14	2	13	14	2	507	119
Southern ..	6,877	2,631	24	—	2,702	221	54	397	211	637	4,935	3,054
South-Eastern ..	2,591	914	8	—	1,032	64	14	322	41	196	4,159	951
South-Western ..	3,416	1,483	9	—	1,276	80	19	135	298	116	3,367	1,684
	20,979	8,475	71	—	7,941	572	120	1,662	768	1,370	17,396	8,497

The Total of the figures in columns 3 to 11 agree with the figure in Column 2.

(4) Number of those in (3) (*a*) who were—

(i) Found	—	6	6
(ii) Examined after persuasion or already under treatment	—	2	2
(iii) Served with Form 2	—	4	4
(iv) Examined after Service of Form 2	—	4	4
(v) Prosecuted for failure—			
(*a*) to attend for and submit to medical examination	—	—	—
(*b*) to submit to and continue treatment ..	—	1	1
(vi) Transferred to other areas	—	—	—
(vii) Cannot be found	—	—	—

PARENTHOOD CLINIC.

The County Council were fortunate in obtaining the services of Mr. Reynold H. Boyd in connection with the establishment of a Parenthood Clinic at St. John's Hospital, Chelmsford. This Clinic did not actually open until 1947, and a full report of the first year's activities will be included in the Annual Report for that year. Mr. Boyd specialises in the investigation and treatment of cases of infertility and sterility, and a feature of the Clinic is that husband and wife attend together. Preliminary reports suggest that considerable success has been achieved at the Clinic, and, so far, four successful pregnancies have now been confirmed in the first thirty-two cases investigated.

VACCINATION.

During the year ended 31st December, 1945 (the latest period for which complete information is available) the Vaccination Officers' returns summarized in Table II show that 20,979 births were registered. Of these, 8,475 were successfully vaccinated and in 8,497 instances a statutory declaration of conscientious objection was made. Of the remaining 4,007 births, 768 removed to places unknown, 1,662 removed to districts of other Vaccination Officers who were duly notified. In 120 cases vaccination was postponed by medical certificate, 71 proved insusceptible to vaccination and 572 died unvaccinated. At the end of the year, 1,370 births remained which had not been entered in the vaccination register or temporarily accounted for in the report book.

HEALTH PROPAGANDA.

An endeavour has been made in this report to summarize the health educational efforts made throughout the Administrative County during the year 1946. It is realised that this summary is far from complete and takes no account of the many local activities in this direction, including the many talks and lectures which are given by District Medical Officers of Health, District Sanitary Inspectors and other members of the staffs of the local Health Departments. Neither is there any record of the day to day direct talks to mothers and school children by the Health Visitors and District Nurses who avail themselves of every opportunity to pass on information regarding general health matters.

Central Council for Health Education.

The Central Council, to whom the County Council makes an annual contribution, not only assists County and County Districts in many ways, but also provides direct assistance in the form of lectures. Their report upon lectures arranged and given between 1st April, 1946, and 31st March, 1947, which has been kindly provided by their Area Representative, is given below :—

Dates, 1946.	Meetings.	Average attendance per meeting.
March 31st, April 7th and 14th	Youth Course, Friends Hall Youth Club, Walthamstow	64
May 3rd ,10th and 17th	Youth Course, Triptons Youth Club, Dagenham	90
March 14th, May 9th, 16th, 23rd, 30th, June 6th	Six lectures to Ilford Detachment of the Red Cross	45/50
July 22nd, 23rd and 24th	Sex Education course to Senior Girls, Romford High School	90
September 10th, 17th and 24th	Public Youth Course at Woodford, Mixed audience	96
October 9th, 16th and and 23rd	Public Youth Course at Wanstead, Mixed audience	93
November 12th, 19th and 26th	Youth Course, Friends Youth Club, Barking	60
December 1st, 8th and 15th	Youth Course, Marsh Street Youth Centre, Walthamstow	42
January 13th, 27th and February 10th	Youth Course, Vange Youth Club, Vange	34
February 6th	Parents Meetings, Loughton Youth Centre, Loughton	4
February 13th, 27th and March 13th	Youth Course, Loughton Youth Centre, Loughton	27

Factory Circularization.

To complete the factory circularization carried out in the previous financial year a further hundred factories in the Ilford and Thurrock districts were each sent a sample packet of literature covering all aspects of health. A copy of the letter, and a list of the literature sent to factories, was sent to each Medical Officer whose district had been circularized.

In connection with the above, orders have been received from time to time from the recipients of the samples, for literature for distribution to their workers.

Women's Land Army.

Hostels for Land Girls made excellent centres for recreational and educational facilities. The Women's Land Army organization quickly recognized this during the war and again, at their request, speakers have been provided from the County's medical and nursing staffs. This year 22 lectures were given at 12 hostels.

Women's Institutes, Women's Guilds, etc.

Several members of the County Nursing staff are on the Women's Institutes Panel of lecturers and they gave during the year 20 talks on such subjects as mothercraft, home nursing, heredity, public health, what Essex does for children, how to keep fit.

LABORATORY SERVICE.

Bacteriological Laboratory Service. The comprehensive service as outlined in Form P.H. 28, dated March, 1942, and by agreement with the Ministry of Health, was continued throughout the year. Specimens were again received and examined at the six laboratories included in that agreement. A summary of the work undertaken at each laboratory is given below on the unit basis which has been in operation since October, 1943 :—

Laboratory.	No. of Units.
Billericay, St. Andrew's Hospital	39,807
Black Notley, Essex County Council Hospital	44,737
Colchester, Essex County Hospital	99,851
Epping, St. Margaret's Hospital	63,051
Oldchurch County Hospital, Romford	32,292
Broomfield, Essex County Council Hospital	13,481
Total	293,219

Taken at the average rate of four units per specimen, the total number of specimens were 61,361 for the year 1946, against 94,971 for the year 1945.

Supplementary Laboratory Service. The Counties Public Health Laboratories vacated their temporary laboratories at Gidea Park on 24th June, 1946, having established and equipped new laboratories at 66, Victoria Street, London, S.W.1. (telephone : Victoria 5838/9). Dr. Roy C. Hoather, the Principal, is to be congratulated upon the efficient manner in which this transfer took place without interrupting in any way the flow of samples to the laboratory and reports from the laboratory. Below is given a summary of the work carried out for the Essex County Council in the laboratory during the year 1946 :—

Kind of Sample.	No. of Examinations.
Water	478
Sewage effluents	253
Milk, Ice Cream and other foods	1,683

There is a marked increase in the number of samples of milk, ice cream, and other foods, due largely to the greater demand by the public for ice cream and to the consequent necessity for maintaining a satisfactory quality of ice cream so far as cleanliness is concerned. The County's arbitrary standard of cleanliness continued in operation, namely, (*a*) there should not be more than 200,000 bacteria per millilitre, and (*b*) coliform bacillus must be absent in 0.01 of a millilitre. This was the standard adopted for Grade A milk prior to the introduction of the new designation of Accredited milk in 1938.

Seven Municipal Boroughs, five Urban Districts and two Rural Districts took advantage of the free facilities provided by this Laboratory Service and submitted 312 samples of ice cream, 60 (or 19.2 per cent) of which failed to comply with the above mentioned arbitrary standard.

OTHER LABORATORY SERVICES. Samples of milk (see page 34), 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 III on pages 30 to 32 gives details of the samples of sewage and trade effluent obtained during the year involving 341 visits, and the taking and examining of 266 samples. The results obtained revealed that 113 or 42.4 per cent. were unsatisfactory as compared to 28.8 per cent. for 1945.

Copies of all results are supplied to the County District Councils and to the private firms concerned, and observations are asked for in unsatisfactory cases. In these days of shortages of labour and materials, little can be done either to remedy existing defects or to carry out extensions at sewage works to deal with the increasing flow of sewage due to the erection of temporary as well as permanent houses. Meanwhile, pollution of rivers continues and to a marked extent in a few instances.

The sewage works at Aerodromes and Military Camps were again kept under observation, necessitating 72 visits. A total of 48 samples was obtained from these works and 11 or nearly 23.0 per cent. were unsatisfactory, the percentage for 1945 being 19.0. Early attention was usually given to all representations made regarding unsatisfactory conditions and/or samples. At the time of writing, several of these works have become redundant, but one disposal works is being taken over by the Rural District Council concerned to serve the needs of the surrounding villages.

TABLE III.

SHEWING SEWAGE WORKS, NUMBER OF VISITS AND NUMBER OF SAMPLES TAKEN DURING THE YEAR, 1946.

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. ..	3 ..	1	9	10
Blackwater	Bocking	Braintree and Bocking U. ..	4 ..	2	2	4
Do.	Coggeshall ..	Braintree R. ..	5 ..	4	—	4
Do.	Kelvedon	Do. ..	4 ..	2	1	3
Do. ..	Latchingdon ..	Maldon R. ..	1 ..	—	—	—
	Carried forward ..	.. .. ..	17 ..	9	12	21

Catchment Area.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken. No. satisfactory or on border line.	No. unsatisfactory.	Total.
	Brought forward	.. .. ..	17 ..	9	12	21
Blackwater	Silver End	Witham U. ..	4 ..	4	—	4
Do. ..	Tillingham	Maldon R. ..	2 ..	—	2	2
Do. ..	Witham	Witham U. ..	4 ..	4	—	4
Brain ..	Braintree	Braintree and Bocking ..	5 ..	—	4	4
Do. ..	White Notley ..	Braintree R. ..	3 ..	2	—	2
Cam ..	Newport	Saffron Walden R. ..	4 ..	1	2	3
Do. ..	Saffron Walden ..	Saffron Walden B. ..	2 ..	—	2	2
Chelmer ..	Chelmsford ..	Chelmsford B. ..	2 ..	—	2	2
Do. ..	Dunmow	Dunmow R. ..	4 ..	—	3	3
Do. ..	Felsted	Do. ..	5 ..	1	3	4
Do. ..	Thaxted	Do. ..	4 ..	1	2	3
Colne ..	Earls Colne.. ..	Halstead R. ..	3 ..	1	1	2
Do. ..	Halstead	Halstead U. ..	4 ..	—	4	4
Do. ..	Layer Breton ..	Lexden and Winstree R. ..	3 ..	—	1	1
Do. ..	Sible Hedingham ..	Halstead R. ..	3 ..	—	1	1
Do. ..	Tiptree	Lexden and Winstree R. ..	3 ..	1	1	2
Do. ..	Great Bentley ..	Tendring R. ..	4 ..	—	3	3
Crouch ..	Burnham	Burnham U. ..	2 ..	—	2	2
Do. ..	Great Burstead ..	Billericay U. ..	4 ..	4	—	4
Do. ..	Laindon	Do. ..	4 ..	—	4	4
Do. ..	Wickford (Louvaine Avenue) ..	Do. ..	4 ..	2	1	3
Holland ..	Thorpe-le-Soken ..	Tendring R. ..	3 ..	1	1	2
Brook						
Ingrebourne	Brentwood ..	Brentwood U. ..	5 ..	2	3	5
Kirby Creek	Kirby-le-Soken ..	Frinton and Walton U.	1 ..	—	1	1
Mardyke ..	Bury Farm ..	Hornchurch U. ..	4 ..	1	2	3
Do. ..	South Ockendon ..	Thurrock U. ..	3 ..	3	—	3
Do. ..	Orsett	Do. ..	4 ..	—	3	3
Do. ..	Thorndon Park Estate (Southern) ..	Brentwood U. ..	4 ..	4	—	4
Ramsey ..	Ramsey	Tendring R. ..	2 ..	—	1	1
Do. ..	Dovercourt ..	Harwich B. ..	3 ..	—	3	3
Roach ..	Rayleigh (East) ..	Rayleigh U. ..	4 ..	1	3	4
Do. ..	Great Stambridge ..	Rochford R. ..	4 ..	3	—	3
Do. ..	Great Wakering ..	Do. ..	7 ..	4	1	5
Roding ..	Abridge	Ongar R.	4 ..	2	1	3
Do. ..	Chigwell	Chigwell U. ..	3 ..	3	—	3
Do. ..	Chigwell Row ..	Do. ..	4 ..	2	1	3
Do. ..	Epping Southern ..	Epping U. ..	4 ..	3	1	4
Do. ..	High Ongar Main Road Council Houses ..	Ongar R.	1 ..	—	1	1
Do. ..	Moreton	Do.	2 ..	—	1	1
Do. ..	North Weald ..	Epping R. ..	6 ..	4	—	4
Do. ..	Stanford Rivers ..	Ongar R.	4 ..	3	—	3
	Carried forward	.. .. ..	162 ..	66	73	139

Catchment Area.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken. No. satisfactory or on border line.	No. unsatisfactory.	Tatal.
	Brought forward		162	66	73	139
Ramsey	Theydon Bois	Epping R.	4	3	—	3
Do.	Theydon Mount Council Houses	Ongar R.	3	1	1	2
Do.	Wanstead	Wanstead and Woodford B.	4	4	—	4
Do.	Woodford (East)	Do.	4	2	2	4
Sea	Great Holland	Frinton and Walton U.	2	—	2	2
Do.	St. Osyth (East)	Tendring R.	3	2	—	2
Do.	St. Osyth (West)	Do.	3	2	—	2
Do.	Little Oakley	Do.	2	—	—	—
Stort	Hatfield Broad Oak	Dunmow R.	2	1	—	1
Do.	Hatfield Heath	Do.	4	3	—	3
Stour	Dedham	Lexden and Winstree R.	4	2	1	3
Do.	Lawford	Tendring R.	1	—	1	1
Do.	Parkeston	Do.	2	—	—	—
Do.	Steeple Bumpstead	Halstead R.	3	2	—	2
Ter	Hatfield Peverel	Braintree R.	5	2	1	3
Wid	Billericay	Billericay U.	4	2	2	4
Do.	Ingatestone	Chelmsford R.	3	—	3	3
Do.	Mountnessing	Do.	2	—	2	2
Do.	Shenfield and Hutton, etc.	Brentwood U.	8	7	—	7
Aerodromes and Military Camps			72	37	11	48
Other samples, including private sewage works, rivers, streams, ditches, etc.			33	13	11	24
Trade effluents			11	4	3	7
	Total		341	153	113	266

RURAL WATER SUPPLIES AND SEWERAGE ACT, 1944.

This Act places at the disposal of the Minister of Health a sum of £15,000,000 to assist schemes prepared by Local Sanitary Authorities for the provision or improvement of water supply and for the provision of sewerage facilities in rural localities in England and Wales.

Under Section 2 of the Act, if the Minister undertakes to make a contribution for either a water or sewage scheme, the County Council concerned is also required to contribute. Consequently, Local Authorities must obtain, for submission to the Ministry of Health, the County Council's observations on all schemes for which applications are to be made for grants.

Up to 31st December, 1946, the Essex County Council had been asked for their observations upon schemes submitted by three Urban and nine Rural District Councils and estimated to cost £1,172,000, 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

PUBLIC HEALTH ACT, 1936. SECTION 307.

Contributions to Rural District Councils. In accordance with the provision f the County Council's approved Scheme to give effect to Section 307 of the Public Iealth Act, 1936, and the Rural Water Supplies and Sewerage Act, 1944, the County ouncil agreed to make to the undermentioned Rural District Councils payment of the ollowing amounts, being the approved estimated grants payable in respect of the nancial year 1946–7 :—

Rural District.	Amount. £
Braintree	4,906
Dunmow	2,998
Epping	695
Halstead	862
Ongar	1,080
Rochford	450
Saffron Walden	1,732
	£12,723

MILK SUPPLY.

ilk (Special Designations) Regulations, 1936-46.

(*a*) Licences. The increase in the number of licences to produce Tuberculin ested milk and the decrease in the number of licences to produce Accredited milk have ontinued. Comparative figures for 1945 and 1946 are given below :—

Grade of Milk.	No. of Licences. 1945.	1946.
Tuberculin Tested milk	265 ..	308
Accredited milk	730 ..	680
Totals	995 ..	988

Below is given a summary of the action taken by the Milk Sub-Committee in egard to contraventions of the Regulations, more particularly in regard to several onsecutive unsatisfactory samples of milk :—

	1946.
No. of Notices of intention to revoke licences	27
No. of licences revoked	8
No. of licences suspended	3
No. of appeals (unsuccessful) made to Ministry of Health	1

(*b*) Samples of Designated Milk. Samples were taken from farms and at Central Depots. There was a further reduction in the number of samples taken, due to lack of staff and to the increasing demands from farmers for advice in regard to the improvements which are necessary to bring farms up to the standard for the production of Tuberculin Tested milk. Samples taken in 1946 numbered 4,688 compared to 5,290 for 1945.

Every sample is submitted to the Methylene Blue Reduction Test, but samples are also put to the Coliform Bacteria Test during the pre-licence period and when circumstances demand. The following table summarizes the results of the Methylene Blue Reduction Test only :—

Quarter ended.	Total.	Satisfactory. No.	Satisfactory. per cent.	Unsatisfactory. No.	Unsatisfactory. per cent.	(1945).
31st March ..	965 ..	917	95 ..	48	5.0	(5.5)
30th June ..	1,430 ..	1,249	87.3 ..	181	12.7	(23.7)
30th September..	1,178 ..	849	72.1 ..	329	27.9	(39.4)
31st December ..	1,095 ..	1,038	94.8 ..	57	5.2	(9.8)
	4,668 ..	4.053	86.8 ..	615	13.2	(19.6)

There is a marked improvement in the number of satisfactory samples. Probably the main contributory factor was the coolness of the weather during the summer of 1946. On the other hand, licensees continued producing milk under difficulties, particularly shortage of labour, fuel and equipment.

Assistance was again made available by the Essex Institute of Agriculture to those licensees who were having difficulty in producing satisfactory samples of milk.

(*c*) New Buildings and Improvements to existing Buildings. As stated above, more time is being devoted to assisting farmers in the preparation of plans and specifications for new, and for adapting and improving, cowsheds, cooling rooms and washing-up rooms. These include an increasing number of milking parlours which can be provided cheaper than large cowsheds, where cows are cleaned and milked, being otherwise accommodated in the fields or in covered yards. All this work is dovetailed in with the County Health Inspector's work on the Building Panel of the County War Agricultural Executive Committee.

(*d*) Water Supplies to Farms. The Grant-in-Aid Scheme formulated by the Ministry of Agriculture and Fisheries has operated throughout the year. Every application for assistance is considered by the Water Supplies Panel of the County War Agricultural Executive Committee. The County Health Inspector serves on this Panel, and by this means keeps in touch with the work and is able to advise upon the public health aspects of each scheme.

(*e*) National Milk Testing and Advisory Service. This service provided by the Essex War Agricultural Executive Committee was extended during the year

Unsatisfactory producers of ordinary raw milk were reported to and considered by the Milk Production Sub-Committee, upon which the County Council has two representatives.

Biological Examinations.

Reports were received on 610 samples of milk taken during routine visits to farms and central depots, giving the following results :—

37 inconclusive.
553 free from tubercle bacilli.
20 (3.5 per cent.) contained tubercle bacilli.

Every positive case was followed up by the Divisional Inspector of the Ministry of Agriculture and Fisheries.

Milk-in-Schools Scheme.

Endeavours are made to sample the milk supplied by each approved Purveyor each school term. This year, the following samples were obtained at the schools by the Weights and Measures Inspectors, and examined as indicated :—

(*a*) Biological Examinations 14 inconclusive. 164 free from tubercle bacilli. Two (1.2 per cent.) contained tubercle bacilli. Prompt and appropriate action was taken by the Divisional Inspector of the Ministry of Agriculture and Fisheries in regard to the two positive cases.

(*b*) Bacteriological Examinations. 357 samples, 49 (13.7 per cent.) failing to pass the prescribed tests. Every unsatisfactory sample was followed up.

RURAL HOUSING.

The Joint Advisory Committee on Rural Housing for the Administrative County of Essex which held its first meeting on 29th November, 1944, met on 19th June and 16th October, 1946, when they had under consideration the previous year's activities, revised statutory provisions based on the expired Housing (Rural Workers) Acts, reports of survey progress and standards of fitness.

In regard to the Housing (Rural Workers) Acts, the Joint Committee submitted replies to the questionnaire from the Ministry of Health received during the year, to the effect that the conditioning of rural houses by local labour should be continued, that it does not appear to affect local conditions for building new houses and that reconditioning of rural houses does show that accommodation is slightly increased.

Consideration was again given to the Memorandum regarding standards of fitness, dated 17th August, 1944, and approved subject to minor amendments on 1st March, 1945, submitted by the Essex Branch of the Sanitary Inspectors Association. It was deemed desirable to ask the Essex Branch to consider the practicability and desirability of formulating some Memorandum in relation to the Standard of Fitness in such a form as to enable members of the Advisory Committee readily to appreciate the salient

points governing the application of such standard to individual properties. Eventually the Joint Clerks prepared and circulated the Memorandum set out on pages 36 to 42 and 50 to 53.

Provision of houses for the agricultural population also received consideration on 24th January, 1947, at a conference between representatives of the Joint Committee and the Essex War Agricultural Executive Committee. As a result, all Rural District Councils were requested to give sympathetic consideration to the housing needs of agriculture and to consider how this need can be met within the framework of each Council's general housing proposals.

Quarterly reports were obtained from the Rural District Councils on an agreed form showing provision of permanent and temporary housing accommodation, permanent housing, temporary housing, private enterprise, requisitioned properties, progress report on Survey and particulars of staff available for the Survey. These reports for the year 1946 are summarized on pages 43 to 49.

On 24th October, 1946, and as instructed by the Joint Committee, a letter was sent to the Ministry of Health enquiring whether in view of the onerous duties now cast upon Rural District Councils the Minister will give any indication as to the date when surveys should be completed and the extent to which individual properties should at this stage be surveyed for classification into the prescribed categories. The Minister's reply dated 7th November, 1946, included the following :—

(*a*) It is appreciated that because of the shortage of staff and other post-war difficulties, local authorities have not universally found it practicable to complete the Rural Housing Survey in their areas within twelve months of the end of the war.

(*b*) The Minister is of opinion that the survey should proceed . . . but individual detailed inspection might, for the time being, be confined to houses falling into Category 5 . . . Detailed inspections of Categories 2, 3 and 4 should proceed when practicable.

(*Note*—For particulars of the above-mentioned categories see page 38 of this Report).

RURAL HOUSING.

Reconditioning of existing Properties.

Recommendations adopted by the Joint Advisory Committee on Rural Housing for the Administrative County of Essex on 1st March, 1945, based upon memorandum of the Essex Branch of the Sanitary Inspectors' Association, as amended by the Essex Branch of the Rural District Councils Association.

(References below to the " Circular " and the " Report " are intended respectively to relate to Ministry of Health Circular 64/44, dated 24th May, 1944, and to the Third Report of the Rural Housing Sub-Committee of the Central Housing Advisory Committee as adopted by that Committee and submitted to the Ministry of Health in 1944. As regards the " Circular " the relevant text is set out in full in these recommendations but in the case of the " Report," reference should be made to the appropriate paragraphs in the prints supplied to all Members of the Joint Advisory Committee).

1. Staffing for carrying out Survey.

References :—Circular—paragraphs 9 and 11 (set out below).
Report—paragraphs 92, 105, 106, 131.

"9. The second main recommendation in the Report concerns the carrying out of a comprehensive survey of housing conditions in rural areas. The Minister is most anxious to see such a survey carried out as a basis for the long-term programme to improve rural housing conditions. He realises that owing to the present shortage of staff it may not, in all cases, be possible to put this survey in hand immediately, but he hopes it will be done as soon as possible. He would be glad if the joint county committees, when established, would consider what arrangements can be made for carrying it out within each county and would inform him of the result as soon as practicable. Consideration should be given to the standards to be adopted within the county, any mutual aid required between the authorities and the possibility of enlisting the services of voluntary bodies interested in housing for non-recurrent work which does not require technical qualifications. At the same time it should be noted that the survey must not delay the carrying out of urgent works of repair.

11. The Minister fully accepts the recommendations concerning the Ministry of Health and steps are being taken to give effect to them. The question of augmenting the supply of Sanitary Inspectors for the long-term programme is under consideration by the Minister in consultation with the Sanitary Inspectors Association and the Royal Sanitary Institute and Sanitary Inspectors Examination Joint Board. Regarding the recommendation relating to the management of Council houses, the Minister has now appointed to his staff, an adviser on housing management whose advice will be available to local authorities on request."

As the normal work of the Sanitary Inspector must be carried on, it is impossible to carry out the initial housing survey within twelve months without an adequate staff of Sanitary Inspectors being provided in each rural district.

In this connection it is estimated that one Sanitary Inspector devoting his whole time to the initial housing survey should be able to inspect 2,400 houses per year in a rural area, subject to all necessary clerical assistance being provided.

RECOMMENDATIONS.

(*a*) That as a first step the Joint Committee should press at the earliest possible moment for the release from Military service of those Sanitary Inspectors, on the staff of Rural District Councils, found to be necessary in the preparation of the survey.

(*b*) That if the survey is to be completed within twelve months from the cessation of hostilities in Europe, additional Sanitary Inspectors must be provided. In this connection it is observed that the Ministry of Health is taking the necessary steps to achieve that end.

(*c*) That the necessary whole-time clerical assistance be provided. One whole-time clerk should be provided for every two Sanitary Inspectors engaged whole time on the housing survey.

2. Houses to be included in Survey.

References :—Circular—paragraph 9 (see Section " 1 " above) (Appendix (set out below).

Report—paragraphs 124, 134.

" APPENDIX.

Rural Housing Survey.

The object of the survey is to provide a record of the condition of every " working-class " house in the district as a basis for a programme of improvement of rural housing conditions to be carried out over a period of years. It will be for the local authority to determine which houses should be regarded as included in the definition having regard to the terms of the Housing Acts, but there are obvious advantages in extending the survey to cover as many houses as possible..

The procedure prescribed by the Housing Acts and the Regulations made thereunder will apply to the survey, and the houses surveyed should be examined in relation to the matters specified in the Regulations.

The survey will be the first comprehensive survey of the condition of houses to be carried out on a nation-wide scale and it will lose much of its value if it is not based on a reasonably uniform standard and the results classified in a uniform manner on which conclusions may be based affecting rural areas throughout the country.

Before the war, progressive housing authorities had established a standard of fitness which, subject to minor variations in different parts of the country, had been very generally accepted. The survey should be based on this standard. The Joint County Committee will provide the means whereby general acceptance of this standard can be obtained.

The classification which should be adopted is that recommended by the Rural Housing Sub-Committee and reproduced below, which corresponds with the provisions of the various Acts under which action might be taken.

Category.	Condition of Dwelling.	Normal Action.
1	Satisfactory in all respects	No action.
2	Minor defects	Informal action or Public Health Acts.
3	Requiring repair, structural alteration or improvement	Section 9 or Section 11 Housing Act, 1936. Acquisition by local authority in appropriate cases.
4	Appropriate for reconditioning under the Housing (Rural Workers) Acts.	Housing (Rural Workers) Acts. Section 11, Housing Act, 1936. Acquisition by local authority in appropriate cases.
5	Unfit for habitation and beyond repair at reasonable expense.	Section 11 (individual houses). Section 25 (Clearance Areas) Housing Act, 1936.

The exact form in which the record of the results of the survey is kept, *e.g.*, register, card index, or file, will be matter for the individual authority, but the record must clearly indicate the category in which each house has been put and the action taken from time to time to deal with any defects. The classification of individual houses should be altered as defects are remedied.

In present circumstances it may well be impracticable to make a detailed examination of houses known to fall into categories 1 or 2 but all others should be individually inspected.

The survey, when completed, should be kept constantly up to date by subsequent periodic inspections at sufficiently frequent intervals to cover the whole district at least once in five years and the results of such inspections recorded in the register.

It will be for local decision whether the particulars needed to bring the overcrowding records up to date should be obtained in the course of the survey. Where substantial changes in the population have taken place due to war-time conditions which are not expected to continue, it may be felt that this matter should be postponed."

RECOMMENDATION.

That until otherwise pronounced by the Ministry of Health the survey should be restricted to houses occupied or of the type suitable for occupation by persons of the working classes.

3. Standards of Fitness.

References :—Circular—Appendix (See Section " 2 " above).
Report—Chapter VII and paragraph 162.

As a guide for carrying out these surveys, the standard of fitness for human habitation as laid down in the Housing (Financial Provisions) Act, 1938, Rural Housing Manual, issued by the Ministry of Health in 1938, paragraph 23, be adopted. This reads as follows :—

> " Fit for human habitation " implies generally that a dwelling should be free from serious dampness, satisfactorily lighted and ventilated, properly drained and provided with adequate sanitary conveniences and with a sink and suitable arrangements for disposing of slop water, and be in good general repair. It should also have a satisfactory water supply, adequate washing accommodation, facilities for preparing and cooking food, and a well-ventilated store for food.

RECOMMENDATIONS.

That the following interpretation and/or additions be given to the above-mentioned standard of fitness :—

(*a*) That the window lighting space of each room should be well distributed, should be approximately equal to one-tenth of the floor area, and that the openable portion of each window should be at least one-half of the total window area.

(*b*) That where it is impracticable to secure a height of eight feet in each room as required by the Building Bye-laws, the height of any room should not be less that 6ft. 9ins., or if the room is a room wholly or partly in the roof of the building, it shall be 6ft. 9ins. at the least in height over not less than one-half of the area of the room, measured at a height of five feet above the floor level of the room.

(*c*) That when the general condition of the property is reasonably good in all other respects, such property should not be condemned in cases where the height of rooms is less than the standard to be adopted, but that the condition of such property be kept under review.

In connection with this standard of fitness, attention is drawn to bye-laws which can be made by local authorities under Section 6 of the Housing Act, 1936, as follows :—

" (*a*) for fixing, and from time to time varying, the number of persons who may occupy such a house, and for the separation of the sexes therein ;

(*b*) for the registration and inspection of such houses ;

(*c*) for enforcing drainage and promoting cleanliness and ventilation of such houses ;

(*d*) for requiring provision adequate for the use of, and readily accessible to each family, of—

(i) closet accommodation ;
(ii) water supply and washing accommodation ;
(iii) accommodation for the storage, preparation, and cooking of food ;

and, where necessary, for securing separate accommodation as aforesaid for every part of any such house which is occupied as a separate dwelling ;

(*e*) for the keeping in repair and adequate lighting of any common staircases in such houses ;

(*f*) for securing stability, and the prevention of and safety from fire ;

(*g*) for the cleansing and redecoration of the premises at stated times, and for the paving of the courts and courtyards ;

(*h*) for the provision of handrails, where necessary, for all staircases of such houses ;

(*i*) for securing the adequate lighting of every room in such houses ;

(*j*) for the prevention of nuisances arising from or in a part of a building or an underground room in respect of which a closing order under section twelve of this Act is in force ;

(*k*) as respects houses situate in the administrative county of London, for the taking of precautions in the case of infectious disease."

Such bye-laws are in force in certain Rural Districts in the County.

RECOMMENDATION.

That all rural authorities should consider adopting such bye-laws.

. **Recording Inspection.**

References :—Circular—Appendix (See Section " 2 " above).
Report—Paragraphs 125, 131, 133.

RECOMMENDATION.

That forms of recording in use throughout the County, while varying in the matter f detail from rural district to rural district, are substantially uniform and sufficiently omprehensive for the purpose of the survey.

The attention of Rural District Councils be drawn to the suggestions contained in he Memorandum of the Rural District Councils Association, dated 28th September, 944, and that they be asked to adopt those suggestions as a broad basis for guidance. See Addendum).

. **Classification.**

References :—Circular—Appendix (See Section " 2 " above).
Report—Paragraphs 125 to 130.

RECOMMENDATIONS.

(*a*) *Category 1.* " *Satisfactory in all respect* " shall include only those houses which omply in all respects with the standard of fitness recommended in Section 3, page 4.

(*b*) *Category 2.* " *Minor Defects* " shall include those houses lacking in amenities hich can be required to be provided under the Public Health Act and/or requiring inor repairs.

(*c*) *Category 3.* " *Requiring repair, structural alteration or improvement* " shall nclude those houses lacking in amenities specified in paragraph 23 of the Rural Housing Ianual quoted in Section 2, pages 3 and 4 and/or requiring repairs of a major character ut which can be brought up to the standard of fitness recommended on page 4, at an stimated cost of not more than 50 per cent. of the estimated value of the house after he completion of the works.

That the " estimated value " of a house be based upon the return which the owner ould be entitled to receive under the Housing Legislation after all the improvements ave been completed.

In connection with houses coming within this category some may be eligible for grant under the Housing (Rural Works) Acts.

(*d*) *Category 5.* " *Unfit for habitation and beyond repair at a reasonable expense* " hall include those houses which cannot be brought up to the standard of fitness which s recommended on page 4, at a cost of less than 50 per cent. of the value of the house fter the completion of the works and are also unsuitable for reconditioning under the Housing (Rural Workers) Acts.

(*e*) *Category 4.* " *Appropriate for reconditioning under the Housing* (*Rural Workers*) *Acts* " :—

The following letter from the County Land Agent, Essex County Council, dated 7th March, 1946, sets out the primary conditions which must be met in connection with the reconditioning of houses under the Housing (Rural Workers) Acts :—

"Almost every type of Rural Cottage that exists in Essex today, from the old timber framed, lath and plaster and thatched cottage to the brick and tile (or slate), cottage erected during the last century is suitable for reconditioning—providing certain primary conditions exist, or can be made possible.

These conditions are as follows :—

1. Suitability of the site on which the cottage is erected :—

(*a*) free from liability of flooding ;

(*b*) Subsoil capable of being drained if necessary to prevent dampness to walls and floors ;

(*c*) capable of ready access at all times of the year (this condition would be satisfied if, say, a doctor or nurse could reach the cottage by car) ;

(*d*) not adversely affected by road widening, town planning or similar proposals.

2. Provision of a wholesome water supply sufficient for the domestic purposes of the inmates exists or can be secured by extension of water main or the sinking of new well.

3. Cottage must be capable of being rendered free from dampness in any form.

4. Structural walls, either brick or timber should be sound, and the Cottage could with improvements and, if necessary, additions, be rendered fit for habitation.

Further conditions required by the Housing (Rural Workers) Act are :—

5. The Cottage shall be for the occupation of a Rural Worker or a person whose economic condition is substantially the same.

6. The estimated cost of the work to be carried out to each Cottage shall not be less than £50—not including ordinary works and repairs not incidental to any improvement.

7. If the property is leasehold, the term remaining unexpired shall not be less than 30 years.

8. Any historical, architectural, or artistic interests attached to the Cottage shall not be destroyed or seriously diminished.

9. The reconditioning will provide—

(*a*) food store properly lighted and ventilated ;

(*b*) provisions for washing detached from living rooms ;

(*c*) proper sanitary arrangements.

10. The grant is made subject to the plans and specifications being submitted to the Rural District Council for their approval."

RECOMMENDATION.

That the standard laid down in the foregoing letter be approved for general application by Rural District Councils.

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., 1946	Acquired during qr. ended 31st Mar., 1947	Period ended 31st Dec., 1946	Acquired during qr. ended 31st Mar., 1947	Period ended 31st Dec., 1946	Acquired during qr. ended 31st Mar., 1947	Period ended 31st Dec., 1946	Acquired during qr. ended 31st Mar., 1947	Period ended 31st Dec., 1946	Acquired during qr. ended 31st Mar., 1947	Period ended 31st Dec., 1946	Acquired during qr. ended 31st Mar., 1947
Braintree	9*	1	30.88*	4.65	182*	20	2	—	Approx. 6	—	20	—
Chelmsford	2	1	80.25	6.6	641	52	4	—	7.5	—	70	—
Dunmow	9	4	37	19	208	96	—	—	—	—	—	—
Epping	16	3	101	8	740†	64	—	—	—	—	—	—
Halstead	24	3	25.82	4.20	186	32	4	—	9.10	—	50	—
Lexden and Winstree	26	2	44.08	2.52	194	12	—	—	—	—	—	—
Maldon	16	—	80.08	—	506	—	—	—	—	—	—	—
Ongar	14	—	95.670	—	628	—	6	—	7.11	—	76	—
Rochford	6	—	51.56	—	442	—	—	—	—	—	—	—
Saffron Walden ..	32	—	80.86	—	513	—	5	—	5.18	—	45	—
Tendring	23	—	82.89	—	540	—	2	—	10.45	—	80	—

* { Does not include sites in hand before war for which post war approval of Ministry of Town and Country Planning has not been obtained.
{ Four sites approved but not acquired erroneously included in previous returns. Figures now corrected.
†Does not agree with figures given in last return. Slight adjustments made.

APPENDIX " A "—*continued.*

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 approved		No. of houses in respect of which tenders 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., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947
Braintree	58	4(*a*)	46	10(*a*)	46	10(*a*)	40	10(*a*)	18	32(*b*)	—	—
Chelmsford	114	152	114	152	114	152	88	128	80	102	10	26
Dunmow	204	—	122	—	122	—	106	16	106	106	—	—
Epping	520	14	314	14	228	14	170	22	124	14	6	8
Halstead	186	—	70	16	62	8	62	8	34	33	14	5
Lexden and Winstree	—	—	88	34	88	34	84	30	51	48	23	7
Maldon	—	—	120†	—	90†	24	66	18	52†	26	6	—
Ongar	94	18	94	—	94	—	80	14	55	14	25	—
Rochford	116	—	116	—	78	32	78	—	48	6	—	—
Saffron Walden ..	326	—	62	20	62	8	42	28	22	48	—	—
Tendring	90	48	90	48	90	38	78	—	90	—	34	—

†Amended figures.

(*a*) Non cumulative figures. Relate to particular quarter only.

(*b*) Cumulative total at end of quarter.

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 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., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947
Braintree	20	—	—	—	—	—	20(c)	—	4(c)	3(c)	3(c)	4(c)
Chelmsford	90	90	70	70	70	70	70	70	—	—	70	70
Dunmow	—	—	—	—	—	—	—	—	—	—	—	—
Epping	—	—	—	—	—	—	—	—	—	—	—	—
Halstead				SEE	NOTE	"A"	BELOW					
Lexden and Winstree	—	—	—	—	—	—	—	—	—	—	—	—
Maldon	—	—	—	—	—	—	—	—	—	—	—	—
Ongar	76	—	76	—	76	—	76	—	—	—	40	—
Rochford	—	—	—	—	—	—	—	—	—	—	—	—
Saffron Walden ..	—	—	—	—	—	—	—	10	—	—	—	—
Tendring	80	—	77 (Site Works)	—	77 (Site Works)	—	77 (Site Works)	—	—	—	—	—

NOTE—"A"—Slabbing in process in respect of 20 houses. Roads and sewers in course of construction for 18 houses. Site works for 12 houses under construction by arrangements with Ministry of Works.

(c) By direct labour.

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., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947
Braintree	—	11(*e*)	16	12	—	7	—	—	2	1	—	1
Chelmsford	45	22	102	83	38	31	—	—	2	2	1	—
Dunmow	67	8	47	42	20	5	5	—	5	3	—	2
Epping	99	2	73	57	26	18	—	—	—	—	—	—
Halstead	—	—	17	15	15	2	—	—	—	—	—	—
Lexden and Winstree	86*	11*	26	16	20	14	13	—	10	7	4	2
Maldon	51	3	20	—	6	—	1	—	—	—	1	—
Ongar	55	9	17	17	19	6	—	—	—	—	—	—
Rochford	—	—	—	—	—	—	—	—	—	—	—	—
Saffron Walden ..	46	5	17	1	5	10	7	1	4	—	3	—
Tendring	52	—	34	28	18	9	3	—	—	—	—	—

*49 houses included in these columns have been approved under Council's Building Byelaws, but Licences to build not yet issued.

(*e*) Refers to plans approved under Byelaws. Does not mean to infer that a Civil Building Licence will be issued.

REQUISITIONED PROPERITES.

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., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar. 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947	Period ended 31st Dec., 1946	Quarter ended 31st Mar., 1947
Braintree	—	—	—	—	—	—	—	—	—	—	65	66(*a*)
Chelmsford	11	10	—	—	43	42	—	—	—	—	1	1
Dunmow	—	—	5	—	85*	—	—	—	1	—	—	—
Epping	—	—	2	—	54	1 requisitioned 1 derequisitioned	—	—	23	—	—	—
Halstead	—	—	—	—	4	—	—	—	—	10	—	—
Lexden and Winstree	—	—	2	2	4	4	—	—	—	—	—	—
Maldon	1	—	1	—	9	1 derequisitioned	—	—	—	—	—	—
Ongar	—	—	—	—	—	—	—	—	—	—	68	67
Rochford	—	—	—	—	14	1	—	—	—	—	—	—
Saffron Walden ..	2	2	1	1	41	41	—	—	11†	11†	—	—
Tendring	—	—	—	—	—	—	—	—	13	43	20	22

†One disused Army Camp consisting of 11 huts has been transferred to the Council—at present seven families are housed on the site—the huts are to be converted into temporary dwellings.
(*a*) Cumulated total at end of quarter.
*One property released.

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 qr. ended 31st Dec., 1946	Surveyed during qr. ended 31st Mar., 1947	Total surveyed to qr. ended 31st Dec., 1946	Surveyed during qr. ended 31st Mar., 1947	Total surveyed to qr. ended 31st Dec., 1946	Surveyed during qr. ended 31st Mar., 1947	Total surveyed to qr. ended 31st Dec., 1946	Surveyed during qr. ended 31st Mar., 1947	Total surveyed to qr. ended 31st Dec., 1946	Surveyed during qr. ended 31st Mar., 1947		
Braintree	2,190	—	1,056	—	247	—	392	—	323	—	4,208	1,289
Chelmsford					SURVEY COMPLETED.							
Dunmow	275	—	128	—	178	60	8	12	136	90	887	3,118
Epping	391	26	249	97	359	48	112	8	94	17	1,396	1,539
Halstead†	66	—	215	—	215	—	—	—	17	—	513	4,234
Lexden and Winstree	466	88	1,201	291	525	173	165	15	308	32	3,264	1,336
Maldon	—	—	755*	59*	325	33	189	20	175	19	1,688‡	2,812
Ongar	294	2	139	17	134	—	36	2	215	—	839	2,160
Rochford	390	163	622	228	331	147	9	—	50	39	1,979	3,361
Saffron Walden** ..	156	18	1,354	187	322	78	16	8	230	23	2,409	1,591
Tendring	7	104	33	336	119	20	67	1	416	17	1,120	6,119

*Fit or with minor defects only.

**Plus 17 "Queries" surveyed. Breakdown in transport facilities and severe weather experienced has had detrimental effect on progress. Additional Inspector now appointed.

‡Includes 113 week end properties not categorized.

†Not possible to make any progress with Survey owing to inability to obtain services of additional Sanitary Inspector.

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*			*Aditional 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	2	1	1	2	1	1	—	—	—
Chelmsford				SURVEY	COMPLE	TED			
Dunmow	2	2	2	1	2	2	1*	—	—
Epping	—	—	—	—	1	1	—	—	—
Halstead†	1	—	1	—	—	—	1	1	1
Lexden and Winstree	2	—	1	3 part-time	—	1	—	—	—
Maldon	2	—	1	1	1	1	—	—	—
Ongar	1	—	2	1	—	3	1	—	—
Rochford	—	1	—	—	1	½	—	1	—
Saffron Walden	1	—	—	2‡	1	1	—	—	—
Tendring	3	—	2	1 part-time	—	—	1	—	1

*Appointed. Commenced 1st May, 1947.

†Particulars not re-submitted for quarter ended 31st March. See not on Appendix "B."

‡Additional Sanitary Inspector commenced duties 21st April, 1947.

6. Reconditioning.

References :—Report—Chapter 8.

Paragraphs 52 and 53 of the Report, contain the following statements :—

> 52. " It is imperative that the relative inferiority of rural and particular agricultural housing should not be allowed to persist after the war."
>
> 53. " So long as the improvement of housing conditions in the country keeps pace with progress in the towns, country people no less than town people will be ready to endure the inevitable hardships and discomforts of the interim period while arrears are being overtaken. But, if in this the country lags behind the towns, these young people will be driven to seek accommodation in the towns and the country will be deprived of the best and most enterprising of its youth,"

and the statement in paragraph 23 of the Rural Housing Manual " there is a minimum standard of health, decency, and convenience which should be exacted before additions and conversions can be considered worth while."

RECOMMENDATIONS.

That, in connection with reconditioning every effort should be made to raise the standard of fitness in the light of modern requirements and that all specifications served under Section 9, Housing Act, 1936, or accepted under Section 11, Housing Act, or under the Housing (Rural Workers) Acts, must be such as will bring the house in all respects up to the minimum standard of fitness as set out upon page 4, and having carefully considered paragraphs 23–41 Rural Housing Manual, the following additional recommendations are made :—

(*a*) that the site of the house shall be free from liability of flooding ;

(*b*) that the subsoil shall be capable of being drained if necessary to prevent dampness in walls or floors ;

(*c*) that there shall be ready access to the house at all times of the year ;

(*d*) that the site shall not be adversely affected by road widening, town planning or similar proposals ;

(*e*) that wherever practicable the front entrance door shall not give direct access to a living room.

(*f*) that wherever practicable secondary means of access shall be provided ;

(*g*) that the ground immediately adjoining a house shall be at least six inches below the level of any floor (other than a cellar or basement floor) for a distance of at least three feet from the external walls of the house ;

(*h*) that wherever possible separate access to each bedroom be required ;

(*j*) that " if the existing stairs are too steep or lead directly into one of the bedrooms," or are otherwise so badly designed as to be dangerous or to prevent the taking of furniture to the bedrooms " they should be re-designed and adequately lighted " (paragraph 38, Rural Housing Manual), except that it be provided that when conditions generally in the house are other

satisfactory standard, the house shall not be condemned because of the existence of a bedroom into which the stairs lead directly, and when the alterations of such stairs would probably cause reconstruction to a considerable extent, and of a costly nature, subject to such property being kept under periodical review ;

(*k*) that " a separate water closet or earth closet should be provided for each house. The closet must be properly lit and ventilated. An earth closet should be entered from out-of-doors, and a water closet should never have to be entered directly from a living room or scullery. Where there is an earth closet and no public scavenging, there must be sufficient ground in which to bury the contents." (Paragraph 40, Rural Housing Manual).

That having regard to the statement in paragraph 162 of the Report :—

(*l*) mains water to an internal tap be required wherever and whenever such a supply is available ;

(*m*) where there is an adequate public or private supply of water and sewerage or adequate private sewage disposal provided, or will be provided within a reasonable time, that a bath be required to be installed ;

(*n*) where electricity or gas is available, that such forms of artificial lighting be required to be laid on to every room ;

(*o*) all houses be required to be provided with a paved path to the front entrance and a paved area at the back of the house together with a paved pathway to the closet if this is entered or situated externally to the house ;

(*p*) a plot of ground providing a suitable drying ground for washing and for a garden be required ; and

(*q*) suitable storage accommodation be required for prams, bicycles, garden tools, and for coals.

In carrying out work of reconditioning every effort should be made to avoid estroying the character of the house and provision should be made for this in ie wording of specifications.

The above Memorandum was prepared by the Joint Clerks at the direction of the oint Advisory Committee on Rural Housing under Minutes dated 16th October, 1946, id incorporates the original Memorandum submitted by the Essex Branch of the anitary Inspector's Association as amended and adopted by the Joint Advisory ommittee on 1st March, 1945.

ADDENDUM.

Suggestion considered and approved by the Rural District Councils Association.

(*References below to " recommendations " are the recommendations contained in Chapter XII of the Report*).

(i) That, as regards recommendation 2, the Association consider localized ublicity by the local authorities to be as essential as, and possible more effective than,

the development of publicity by the Ministry of Health, especially in the matter of r conditioning, but central and local co-operation in this field should be encourage The authorities should therefore be enjoined to undertake such publicity, preferabl in suitable combination with each other and in consultation with other bodies, f example, the Royal Institute of British Architects, having the same object in view.

(ii) That, as regards recommendation 4, the Association wish to emphasize th desirability of county councils co-operating with rural districts to the fullest possib extent, and in this connection they draw special attention to the duties and powe imposed and conferred upon county councils by Sections 88, 89 and 115 of the Housin Act, 1936.

(iii) That, on recommendation 14, the Association consider that the coun councils should be strongly advised to participate in the establishment and workin of the proposed joint county committees, which are commended by the Minister Health in his Circular.

(iv) That, with reference to recommendation 15, the Association consider tha for the reasons stated in paragraphs 95 and 109, it is extremely important for a hi and uniform standard of fitness to be adopted within the area of each administrati county, and this will be a major task for the joint county committee. In this connectio the Association desire to draw attention to the Schedule to the Ministry's Circular

(v) That, on recommendation 18, the Association approve whole-heartedly the proposal that a thorough and comprehensive survey of housing conditions shou be undertaken in every rural district in England and Wales. They note that th survey is intended to be substantially completed within the first year after the cessati of European hostilities, and this seems reasonable in view of the prevailing st shortage. The Association consider, however, that the work should begin at once.

(vi) That, as regards recommendation 31, the Association consider it mo desirable that the doubt on the question whether local authorities have power to va the " normal agricultural rent " should be removed.

(vii) That, on recommendation 35, the Association welcome the proposal th qualified architects should be employed for all new housing schemes, but they wish make it abundantly clear that in their opinion the services of a qualified practition may be equally necessary in connection with the reconditioning of houses.

(viii) That, on recommendation 36, the Association are impressed with th importance of the small builder in rural areas, and they consider that he should encouraged to resume his activities at the earliest possible date instead of at the end the war.

(ix) That, as regards recommendation 38, the Association fully approve of t proposal that each joint county committee should endeavour to agree upon a unifor scheme of rents and rebates.

(x) That, with regard to finance, the Association support the proposal (s recommendation 29) that the financial provisions of the Housing (Rural Workers) Ac should be reviewed immediately in the light of present-day conditions; they al support the view (see recommendation 40) that the Exchequer subsidy for new hous

ould be sufficient to bridge the gap between the tenant's rent and the economic rent thout materially increasing the rate contribution under the Housing (Financial ovisions) Act, 1938, and they are in favour of the proposal (see recommendation 43) r a special Exchequer subsidy in aid of the impoverished districts. Finally, they nsider it important to point out that in all these cases future expenditure must evitably reflect the necessary provision of increased amenities as well as higher ilding costs.

(xi) That the Association welcome paragraph 169 of the report, as they consider at it should, if fully implemented, help materially in the preservation of villages ssessing features of architectural and topographical attraction.

(xii) That, subject to the foregoing observations, the Association approve generally the report, and they recommend it to the favourable consideration of all county uncils.

FOOD AND DRUGS ACT, 1938.

I am indebted to the County Analyst for the following information in regard to the rk undertaken by him during the year 1946 :—

Samples analysed	1,202
Samples unsatisfactory	115

MENTAL DEFICIENCY ACTS, 1913—1927.

Dr. A. R. Forbes, Assistant County Medical Officer, continued to examine and port on cases suspected of being Mentally Defective, for consideration by the atutory Committee for the Care of the Mentally Defective. Arrangements for the amination and report on cases for the Courts of Justice were continued. Dr. W. H. derton, Assistant County Medical Officer, assisted as in previous years.

A total of 118 cases were examined and classified as follows :—

Diagnosis	Number examined		
	Male	Female	Total
Feeble-minded	38	32	70
Imbecile	11	16	27
Idiot	5	3	8
Not certifiable under the Acts ..	11	2	13
Total	65	53	118

At the end of 1946, the Statutory Committee were responsible for the care and ntrol or supervision of 3,074 persons, classified under the following headings :—

	Male.	Female.	Total.
In Institutions (excluding cases on licence)	484	368	852
In places of safety (Section 15)	92	87	179
Under Statutory Supervision	1,002	795	1,797
Under Guardianship (including cases on licence)	18	25	43
On licence from Institutions	85	118	203
Totals	1,681	1,393	3,074

MENTAL TREATMENT ACT, 1930.

The Consultant Psychiatric Clinics held at the Chelmsford and Colchester Hospitals continued to function under Dr. A. G. Duncan, Medical Superintendent, Severalls Mental Hospital, Colchester. The clinic at the Oldchurch County Hospital, Romford continued under Dr. W. G. Masefield until his retirement in May, 1946, when he was succeeded by Dr. G. S. Nightingale as Medical Superintendent of the Brentwood Mental Hospital.

Dr. A. G. Duncan reports as follows :—

" The statistics of the out-patient Clinics in 1946 were as follows :—

	Colchester.	Chelmsford.
Total attendances	529	134
New patients seen	222	54

The Clinic at Colchester continues to be held every Monday afternoon, and the amount of work involved necessitates always having one of my medical Staff with me to assist. As you know, it is proposed to establish new Clinics at Clacton and Braintree, which should help to relieve the congestion at Colchester.

The Chelmsford Clinic is still on the second, fourth and fifth Wednesdays of the month. When the Clinics are re-organized, I think it will be necessary to consider the over-lap of the Psychiatric out-patient department at Chelmsford Hospital, and this Psychiatric Clinic."

Dr. G. S. Nightingale reports as follows with regard to the Clinic at the Oldchurch County Hospital, Romford :—

" The pressure in the Psychiatric Out-Patient Department continues and in order to cope with the increasing demand during 1946 it was found necessary to increase the number of sessions, first to two per week and later to three per week, each attended by two Senior Psychiatrists from Brentwood Mental Hospital; in addition to the attendance of Dr. Forbes on one of the afternoons. Even with this increase of Doctor-sessions, the waiting list for appointments averages a week, proof perhaps of the value the Local Practitioners derive from the Clinic.

During 1946, 550 new cases were seen and 913 old cases, a total of 1,46[illegible] attendances. Of the new cases, 33 were seen in the General Wards of the Hospital and a considerable number referred from other out-patient departments.

A table showing the expansion of the Psychiatric Out-Patient work at the Clinic is of interest ;—

Total attendances—

1940	255
1941	583
1942	881
1943	922
1944	1,027
1945	1,177
1946	1,463

Miss Cook, the Psychiatric Social Worker from Brentwood attended all sessions and was of great assistance in the investigation and adjustment of environmental factors producing breakdowns in patients. Her resignation recently and the difficulty of finding a replacement has curtailed this valuable adjunct to treatment.

The lack of an Acute Psychiatric Ward (the modern equivalent of the old "Observation Ward") at this Hospital or elsewhere, since the closing in June of the Ward at Goodmayes Hospital, has proved a serious hindrance to the investigation of certain cases.

In conclusion, I would like to express my very real appreciation of the help given to the running of this Clinic by the Medical Superintendent of Oldchurch Hospital and of the ready co-operation of his Staff at all times."

BLIND PERSONS ACTS, 1920—38.

The facilities provided for the certification, medical supervision and general care of the blind have continued, under the supervision of Mr. T. Collyer Summers, F.R.C.S., Consultant Ophthalmologist, and the Ophthalmic Specialists. Dr. A. H. Staples, M.R.C.S., L.R.C.P., D.O.M.S., was appointed full-time Medical Officer for Ophthalmic Work in May 1946, and the part-time services of Miss L. H. Macfarlane, M.D., D.P.H., D.O.M.S., and Messrs. W. Glasse Watson, M.B., D.O.M.S., G. T. Foster-Smith, M.B., B.S., J. E. Bendor Samuel, M.B., B.S., M.R.C.S., L.R.C.P., and J. Graham White, M.D., continued to be available.

331 persons were examined by the Specialists in connection with the Blind Persons Acts.

On the 31st March, 1947, a total of 2,282 (males 1,030 and females 1,252) were on the Blind Persons Register. Of these 2,232 were classified as employable, viz. males 974, females 1,158, and 149 in Social Welfare Institutions. Of the trades, etc., followed by the blind workers the main occupations show the following numbers :—

Mat makers	18	Machine knitters	18
Piano tuners	19	Baskets	21
Poultry	13	Dealers	12
Music	9	Telephone operators	17
Boot repairers	8	Clerks and typists	13
Miscellaneous	55		

In addition 37 blind persons were in sighted industry. The total number of blind persons employed was 240.

PART II.

PROVISION OF HOSPITAL SERVICES.

Hospitals.

During the year 1946, many more beds which had been reserved for E.M.S. purposes in the Council's and in Voluntary Hospitals were released by the Ministry of Health, but at the end of the year there were still 621 beds reserved for the admission of E.M.S. patients, as under :—

Oldchurch County Hospital	40
E.C.C. Hospital, Black Notley	300
St. John's Hospital, Chelmsford	100
St. Margaret's Hospital, Epping	50
Orsett Lodge Hospital	50
Chelmsford and Essex Hospital	5
Clacton and District Hospital	5
Essex County Hospital, Colchester	50
Harwich and District Hospital	6
Tilbury Seamen's Hospital	15

Casualty Bureau.

With the diminution of the E.M.S. reservations, the Ministry of Health decided that the work of the Casualty Bureau should be transferred from the Public Health Department to the Regional Office of the Ministry at Cambridge. This transfer was effected on 1st October, 1946.

Accommodation for the Chronic Sick.

There was still the greatest difficulty in finding accommodation for chronic sick cases, owing to the continuing shortage of nursing staff. The nursing problem is dealt with on pages 59 to 61.

Consideration was given during the year 1946, to the question of the appropriation, as a first instalment, of four Social Welfare Institutions, and steps were taken for a survey to be made of existing facilities and services at all hospitals and institutions under the control of the County Council. The Minister of Health, however, whilst commending the proposal as being in accordance with his policy and the intentions of the Local Government Act, 1929, considered that, in view of the new legislation affecting hospitals, the time was not opportune to proceed with the consideration of the details of such appropriation. He indicated that he appreciated the unprecedented difficulties due to the scarcity of beds and staff for the chronic sick, but doubted whether the steps contemplated would ease either of these problems. In view of the Minister's decision, no further action was taken in the matter.

Maternity Accommodation.

The adaptation of one of the wards in the Orsett Lodge Hospital was completed, thus providing a maternity unit of 15 beds on modern lines. Arrangements were also in hand at the end of the year for the conversion of a ward at St. Andrew's Hospital, Billericay, into a maternity unit for the accommodation of eight maternity cases.

Physical Training Instructors.

Careful consideration was given to the question of the employment of ex-service physical training instructors as remedial gymnasts in the hospitals and sanatoria under the control of the Public Health and Housing Committee, and such an appointment has been made at the Essex County Council Hospital, Black Notley. Similar arrangements will be made for the Oldchurch County Hospital and the Essex County Council Hospital, Wanstead, when circumstances permit.

Post-Graduate Training of Demobilised Medical Officers.

The County Council co-operates in the scheme for providing post-graduate education for medical officers on release from the Forces by creating additional posts for such officers at the Oldchurch County Hospital and the Essex County Council Hospital, Black Notley. These were selected on the nomination of the London and Cambridge Universities, and were qualified men and women who required additional experience. Arrangements were made for the post-graduate education of eleven such medical officers during the year.

Catering arrangements in Hospitals.

Consideration was given during the year to catering in hospitals, and a review was made of the arrangements for the feeding of patients and staff, bearing in mind that the control by rationing of many of the most important food stuffs meant that the problem was of greater importance than in normal times. It must be generally agreed that catering in many hospitals is at the moment unsatisfactory, and that considerable changes are desirable. Both patients and staff alike would benefit considerably if the catering arrangements were approached from a more scientific point of view. Particular attention was paid to the Second Memorandum on Hospital Diet issued by the King Edward's Hospital Fund for London, in which it is pointed out that (*a*) throughout the country efforts are being made to improve conditions that have been poor in the past ; (*b*) good feeding of hospital patients and staff must be regarded as a primary and essential part of hospital organization ; and (*c*) it is important that there should be suitably qualified dietitians in charge of the catering arrangements in hospitals. Approval was given to the appointment of a dietitian to supervise the catering arrangements in the hospitals under the control of the Public Health and Housing Committee.

Improvement of Hospital Accommodation.

The difficulty experienced by hospitals in securing and retaining nursing and domestic staff, and the question of the improvement of hospital accommodation generally, particularly for nurses and domestics, and of domestic facilities with a view to easing the work of nursing and domestic staff are matters of national concern. A review was undertaken during 1946 of the Hospitals and Sanatoria under the control of the Public Health and Housing Committee, and a list of proposals which are considered necessary in order of priority, having particular regard to the needs of the next five years, was prepared and submitted to the Minister of Health. Particular attention has been paid to minor schemes which could receive attention without much building labour.

Establishment of Central Public Health Laboratory.

During the 1939–45 war, the Medical Research Council maintained an Emergency Public Health Laboratory Service, which was specially organized along lines agreed upon with Professor S. P. Bedson of the London Hospital. During 1946, he Government decided to continue the Public Health Laboratory Service on a permanent basis, and the Medical Research Council agreed to remain responsible for its direction at least during an initial period of five years. The intention is that the Service should undertake work required by Medical Officers of Health in relation to the diagnosis, prevention, and control of infective disease. At the request of the Medical Research Council preliminary work was carried out in regard to the establishment of a central public health laboratory at St. John's Hospital, Chelmsford, where suitable extensions could be made, and it has been recommended that the existing laboratories at the hospitals named below should be maintained :—

Romford	Oldchurch County Hospital.
*Billericay	St. Andrew's Hospital.
*Black Notley	Essex County Council Hospital.
*Colchester	Essex County Hospital.
*Epping	St. Margaret's Hospital.
Broomfield	Essex County Council Hospital.

All these laboratories, except Colchester, are provided by the Essex County Council, but those marked with an asterisk are designated laboratories, for which the Ministry of Health undertake full financial responsibility.

In conformity with the above arrangements, the examination of public health specimens from those County Districts previously served by the laboratory at the Essex County Council Hospital, Broomfield, is now carried out at the existing laboratory at St. John's Hospital, Chelmsford, although it has not yet been found possible for the actual structural alterations to be put in hand. A Specialist Medical Officer has also been appointed at that laboratory, who will ultimately be in administrative charge of the Pathological Laboratory Service for the County of Essex.

Essex County Hospital, Wanstead (Medical Superintendent: Dr. D. H. Irwin.

Number of patients admitted during the year 1946 :—1,782.

No. of patients treated in the X-ray Department :—
940 In-patients. 2,312 Out-patients.

No. of patients treated in the Physiotherapy Department :—
706 In-patients. 11,265 Out-patients.

No. of patients treated in the Casualty and Out-patient Department :—20,864.

The Maternity Department was opened in December, 1946, the first patient being admitted on 8th December, 1946.

It was recommended and approved by the Committee that a new X-ray set be installed at an estimated cost of £4,235 3s. 0d.

It was recommended and approved by the Committee that two tennis courts be provided for use by the staff at an estimated cost of £708 1s. 0d.

Ambulance Services.

The uncertainty which existed between the end of the war and the passing of the National Health Service Act caused many Ambulance Authorities to delay the placing of orders for vehicle replacements while other authoritie who did place orders found themselves faced with a waiting period between the placing of their orders and the delivery of new vehicles of anything ranging from one to two years. In consequence, the deterioration of the rolling stock which had become inev table during the war years was accentuated and some vehicles had to be withdrawn from service.

Great nterest was manifested throughout the County in a new Thames Fordson forward control ambulance with Lomas fittings which was built for the County and allocated during the year to Black Notley Sanatorium. This was the only new addition to the County Council's fleet.

Although there was marked deterioration in the plant, the number of cases dealt with increased due, no doubt to more hospitalization and increased out-patient work by clinics and dispensaries while, with the rise in the birth rate, a larger number of maternity cases was carried.

The Hospital Car Service continued to render great assistance in the transport of patients receiving treatment under the various schemes sponsored by the County Council and, during the year, the vehicles attached to this service, in addition to the work performed by them on behalf of district councils and voluntary hospitals, travelled 21,375 miles while conveying County Council patients.

Although there was a decline in the number of E.M.S. patients for whom transport was required, the E.M.S. Ambulance Service which continued to be operated by the County Council on behalf of the Ministry of Health travelled 28,136 miles on E.M.S. duties. In addition, this service covered 19,203 miles in conveying County Council patients. The use made of the sitting case cars of this service in conjunction with the privately owned cars of the Hospital Car Service proved conclusively that cars, or, at least, vehicles suitably adapted for the conveyance of sitting cases, must play a prominent part in the Ambulance service of the future.

On the 1st June the Acting County Ambulance Officer for Civil Defence who, for a considerable time had been co-operating with the County Medical Officer on matters concerning the peace-time Ambulance Service was transferred to the staff of the Public Health Department to co-ordinate the ambulance arrangements throughout the County and to prepare the way for the unified service which will operate from the appointed day under the National Health Service Act, 1946.

NURSING SERVICES.

Civil Nursing Reserve.

At the end of 1946, there were 198 members on the Essex Register of the Civil Nursing Reserve ; 119 of these members were giving whole-time service. In addition to these, there were 37 emergency members.

The considerable decrease in numbers is partly due to the demobilization of H.M. Forces which meant that many members wished to return to their household duties. In other cases, members left the Civil Nursing Reserve to take up employment in offices and factories.

General.

At the end of 1946, there were 366 vacancies for nurses of all categories in the County Council's Public Health Hospitals and Sanatoria. As a consequence of this, and the shortage of domestic staff, there were over 1,000 vacant beds. This has continued to be a matter of great concern, and the repercussions on the sick population of the County are deplored.

In September, 1946, after consultation with the Ministry of Labour and National Service, the County Council adopted a centralized reception scheme for Irish girls to undertake training, the Council reimbursing the Ministry for the cost of bringing the girls to this country.

On arrival in London, they are met and taken to the Oldchurch County Hospital. At that Hospital, the girls are allocated to hospitals and institutions under the control of the Public Health and Housing Committee and Social Welfare Committee for training as student nurses or as pupil assistant nurses. Girls are not sent to Tuberculosis or Mental Institutions against their wishes, and any girl found unsuitable for training is offered alternative employment by the Ministry of Labour or returned to Eire.

By the end of 1946, 23 girls arrived through the scheme and had commenced training. Unfortunately, the numbers recruited week by week have been steadily diminishing, and there have been difficulties with girls who have decided after a very short time that they do not like nursing and have resigned to take up other work. The scheme has, however, been of use in filling a few of the many vacancies for student nurses.

A Nursing Publicity Campaign was held in Romford for one week in March, 1946. An Exhibition formed the focal point of the campaign, and attracted nearly 2,000 people. The film "Student Nurse" was seen by about 1,000 people, and at least 200 who had seen the exhibition afterwards visited Hospitals.

As is usually the case with such campaigns, the results were not immediately obvious, but there can be little doubt that from a long-term point of view the effort was well worth while. One indication of this is that several of the school girls who saw the exhibition expressed their intention to take up a nursing career when they left school.

During the year, further steps were taken to bring into effect the recommendations contained in the codes of working conditions for hospital nurses and domestic staff which had been issued by the Ministry of Health and approved by the Council.

It was agreed that vacancies in the establishment of female nurses and student nurses and domestic staff in Public Health hospitals and sanatoria should be filled as far as circumstances permit by the appointment of male nurses and male ward orderlies as the case may be. This again, in a small measure, helped to reduce the number of vacancies.

A standard form of certificate is now presented to persons who complete a prescribed period of training as student nurses at the Council's hospitals and sanatoria.

In addition, medals are also provided for such nurses who successfully pass the hospital examinations, and book prizes are also given to the most successful students.

In March, the General Nursing Council approved the Oldchurch County Hospital as a complete training school for male nurses, for a provisional period of two years.

It was necessary to employ the services of nurses from Nursing Co-operations during the year. In May, the County Council, together with all other appropriate Authorities in the Home Counties, adopted a scale of fees as a maximum payable to Nursing Co-operation nurses. These are the Rushcliffe rates, plus 50 per cent. of the resident cash salary in the case of a female nurse or midwife, and 30 per cent. in the case of a male nurse. These fees are still regarded by certain agencies as being below their normal charges and accordingly they have withheld their services from the County Council.

During the year, three licences for the supply of nurses were granted to three agencies under the Nurses Acts, 1943 and 1945.

Ministry of Health Circular 227/46 pointed out that the primary duty of all Local Health Authorities is to maintain the efficiency and smooth running of their Health Services, and to ensure the welfare of the patients for whom they are responsible. All other considerations are regarded as secondary and, while the Minister is anxious that doctors, nurses, and members of similar professions should join a trade union or appropriate professional association, he considers that this matter should not be determined by the unilateral action of Local Authorities.

During the year, a Recruitment of Nurses Sub-Committee was established. The terms of reference of this Sub-Committee include consideration of all aspects of the problems relating to the recruitment of Nurses.

Assistant Nurses.

Training of Assistant Nurses continued throughout the year at St. Margaret's Hospital, Epping; Lodge Hospital, Orsett; St. Andrew's Hospital, Billericay, and St. John's Hospital, Chelmsford. The General Nursing Council has continued its approval of these training schools for a further period.

The only Preliminary Training School is at St. Margaret's Hospital, Epping, and all candidates have to pass through this school. As reported last year, the difficulty still arises of candidates wishing to remain at St. Margaret's, and not move on to the other Hospitals.

Approval is being sought to the setting up of a Preliminary Training School at St. John's Hospital, Chelmsford, and, when the staffing situation eases, consideration will be given to the possibility of establishing a Preliminary Training School at Orsett.

At the end of the year under review, 44 girls were under training as follows :—

St. Margaret's Hospital, Epping	21
Lodge Hospital, Orsett	11
St. John's Hospital, Chelmsford	9
St. Andrew's Hospital, Billericay	3

Domestic Work in Hospitals.

Ministry of Health Circular 217/46 suggested that Authorities should review their arrangements for organizing the domestic work in their hospitals, with the object of discovering whether there were any changes which ought to be effected.

It was pointed out that the Hospital service cannot hope to obtain enough domestic workers, unless the general background and conditions of their work are comparable with those prevailing in other fields of employment.

The Circular referred to the recommendations on the Employment of Domestic Staff in Hospitals, as published by the King Edward's Hospital Fund for London, and drew particular attention to the status of domestic work, accommodation, and amenities, appointment of domestic supervisors and welfare officers, ward orderlies, ma e domest c workers, part-time help by Voluntary Organizations and domestic workers from Europe.

Where necessary and appropriate, the suggestions outlined in the report have been adopted by the County Council.

The Council have adopted the recommendations of the " Mowbray " Commission relating to the rates of pay and conditions of service of hospital domestic and other staff.

REHABILITATION.

During the year 1946, much attention was paid to the rehabilitation and resettlement of Disabled Persons. This is not entirely a medical matter, but involves close co-operation between the Medical Authorities, Education Authorities, Ministry of Labour and Industrial Employers.

The Ministry of Health issued a memorandum, dated 1st July, 1946, in regard to the rehabilitation of disabled persons, pointing out that plans were being considered for the better co-operation of the various organizations assisting in the rehabilitation, after-care and employment of the disabled. The Ministry proposed that Local Rehabilitation Committees should be set up in England and Wales, and that such committees should review the situation thoroughly, and set up appropriate machinery to implement any recommendations. The work of the proposed committees would be complementary to that now undertaken under the provisions of the Disabled Persons Employment Act, and close co-operation would be maintained be ween the new committees and the existing Disabled Advisory Committees. It should be noted that these latter committees are mainly concerned with questions of registration of disabled persons and their employment.

As a first step, it was thought that a number of selected geographical counties should be taken, including Essex, and that the situation should be reviewed to assess the need for, and the value of further committees. The Ministry suggested that the County Council should sponsor the new committee, and call a meeting of the representatives of local hospitals doing rehabilitation work, the British Red Cross Society, the Order of St. John, the W.V.S., and the British Legion. As a result of such meetings one or more local committees would be constituted, in order to secure fair representation of the interested parties, *e.g.*, both Local Authority and Voluntary Hospitals.

The Ministry indicated in their memorandum that the following would be the main activities of the committees :—

(*a*) The establishment of an Information Office for the purpose of collecting and making available full particulars of all schemes of rehabilitation, vocational training, registration and employment of disabled persons, the method of obtaining appropriate assistance and generally of all local schemes for the benefit of the disabled.

(*b*) The maintenance of an up-to-date record of all disabled persons in the district requiring the type of assistance which the committee could provide for the purpose of the allocation of cases to the most suitable society. The committee could not confine itself to war disabled, but would include any disabled person whom it could help.

(*c*) The establishment and maintenance of contact with the Disablement Advisory Committees and Disablement Rehabilitation Officers in the area and with local hospitals, employment exchanges, industrial medical officers and welfare organizations.

(*d*) The co-ordination of local effort on behalf of the disabled with a view to the prevention of overlapping or failure to assist any disabled person not already provided for.

(*e*) The offering of advice as to the best means of securing such medical rehabilitation, vocational training, sheltered employment or special after-care at home as may be required by each case.

(*f*) The organization of such forms of service as may lie within the competence of the organization represented on the local committee, including any or all of the following :—

(i) regular assistance to almoners and rehabilitation departments at local hospitals ;

(ii) the provision of transport to and from hospital rehabilitation departments, the offices of the Ministry of Pensions, etc. ;

(iii) home visiting for the purpose of informing disabled persons and their relatives of existing facilities for obtaining rehabilitation, vocational training and suitable employment, together with offers of help, where needed, in the care of children during the attendance of mothers at rehabilitation centres ;

(iv) assistance to district nurses and health visitors in the after-care of home-bound disabled and the provision of medical and other comforts as required ;

(v) assistance to patients engaged in sheltered employments, additional to that provided by the employer ;

(vi) the co-ordination and, where necessary, the provision of domiciliary occupation for home-bound disabled persons capable of regular gainful occupation, including the distribution of the necessary materials and the collection and sale of the finished products ;

(vii) the organization of varied forms of diversionary occupation for the more severely disabled who are unable to take part in gainful employment, but are intelligent and eager to be provided with interesting work.

The main aim must be to regard the disabled person as a full member of the community and to see that his or her capabilities for useful or active work are carefully assessed rather than that the emphasis should be placed on the disablement factor.

A conference was held early in 1947 and a working party has been formed to go into the whole question of rehabilitation and to examine the various aspects of the problems involved.

Roffey Park Rehabilitation Centre.

Full use continues to be made of the facilities whereby patients from Essex suffering from general debility or neurosis can receive appropriate treatment at the Roffey Park Rehabilitation Centre, Horsham, Sussex, and twenty patients from Essex were sent to the Centre during 1946.

Haymeads Hospital, Bishop's Stortford.

The beds available for the treatment of Public Health cases living in Essex, near the Hertfordshire border, have been fully used to the benefit of patients who would otherwise have had to travel long distances, and during the year 166 patients from Essex received in-patient treatment at Haymeads Hospital.

MEDICAL REST HOMES AND HOSTELS.

Staffing difficulties continued during the year at the two Medical Rest Homes which are now administered by the Social Welfare Committee as Agents for the Minister of Health, namely, "Beechlands," 42, Alderton Hill, Loughton, and "Brookfield," Oak Hill, Woodford Green. The difficulties at "Brookfield" were such that it was necessary to close the Home temporarily from 31st May to 31st August, 1946, but both Homes were open on the 31st December, 1946.

The three Hostels detailed below are, now administered by the Social Welfare Committee on behalf of the Minister of Health :—

Cambridge House, Roydon.
79, Western Road, Brentwood.
81, Western Road, Brentwood.

PART III.

TUBERCULOSIS.

During the first full year following the cessation of hostilities, many projects for improving the facilities for dealing with the tuberculous population were considered, only to be found impracticable of fulfilment owing to the inevitable conditions following the war.

The County Tuberculosis Scheme, therefore, continued to function along similar lines to those which existed during the actual war years and every effort was made to utilize such facilities as were available, to the best possible advantage to all concerned.

The following Tables and comments supply a general view of the work done during 1946 :—

TABLE IV.

(a) Summary of notifications during the period from 1st January, 1946, to 31st December, 1946, in the area of the Administrative County of Essex.

	Formal Notifications.												
	Primary Notfications of New Cases of Tuberculosis.												Total Notifications.
	Age Periods.												
	0—	1—	5—	10—	15—	20—	25—	35—	45—	55—	65—	Total (all ages)	
Pulmonary, Males ..	4	13	20	16	56	132	207	208	123	86	38	903	1014
,, Females ..	2	7	16	15	97	125	149	79	31	20	10	551	645
Non-Pulmonary Males ..	6	27	30	25	8	13	27	11	9	4	2	162	173
,, ,, Females	2	17	33	14	10	19	18	11	5	4	2	135	152

(b) New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health during the above-mentioned period, otherwise than by formal notification.

	Age Periods											
	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total
Pulmonary, Males ..	—	2	3	4	16	25	34	19	15	5	10	133
,, Females	—	1	2	4	16	32	34	16	3	5	1	114
Non-Pulmonary, Males ..	—	2	7	3	1	2	2	1	1	—	—	19
,, Females	—	1	3	6	—	2	3	1	—	—	—	16
											Total	282

The sources from which information as to the above-mentioned cases was obtained are shown below :—

Source of Information	No. of Cases	
	Pulmonary	Non-Pulmonary
Death Returns { from local Registrars	8	2
Death Returns { transferable deaths from Registrar-General ..	—	—
Posthumous Notifications	10	8
" Transfers " from other areas (other than transferable deaths) ..	125	9
Other sources (Forms I and II)	104	16
Total	247	35

TABLE V.

NOTIFICATION REGISTER.

	Pulmonary.			Non-Pulmonary.			Total Cases
	Males	Females	Total	Males	Females	Total	
Number of cases of Tuberculosis remaining at the 31st December, 1946, on the Registers of Notifications kept by District Medical Officers of Health in the County.	5655	4576	10,231	2117	2005	4122	14,353

TABLE VI.

SHOWING ATTACK AND DEATH RATES FROM TUBERCULOSIS IN THE ADMINISTRATIVE COUNTY OF ESSEX.

YEAR.	Pulmonary Tuberculosis.				Non-Pulmonary Tuberculosis.				Tuberculosis (All Forms).			
	Notifications.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Notifications.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Notifications.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.
1912-16	Not available.		851	0.86	Not available.		269	0.27	Not available.		1120	1.13
1917-21			752	0.89			199	0.24			951	1.13
1922-26	1110	1.16	656	0.69	320	0.34	148	0.15	1430	1.50	804	0.84
1927-31	1110	1.00	710	0.64	382	0.34	141	0.13	1492	1.34	851	0.77
1932-36	1145	0.89	644	0.50	391	0.30	131	0.10	1536	1.19	775	0.60
1937-41	1161	0.87	612	0.45	348	0.26	116	0.09	1509	1.13	728	0.54
1942	1387	1.09	622	0.49	431	0.34	126	0.10	1818	1.43	748	0.59
1943	1417	1.11	639	0.50	436	0.34	109	0.09	1853	1.45	748	0.59
1944	1335	1.06	593	0.47	364	0.29	113	0.09	1699	1.35	706	0.56
1945	1273	0.99	548	0.42	337	0.26	112	0.09	1610	1.25	660	0.51
1946	1454	1.00	511	0.35	297	0.21	78	0.05	1751	1.22	589	0.40

Although the attack rate for cases of Pulmonary Tuberculosis shows an increase the death rate from both Pulmonary and Non-Pulmonary Tuberculosis shows a further decline.

There would not appear to be any obvious reason for the increase in the attack rate for Pulmonary Tuberculosis which has mainly been connected with male adult

of 25 years and over. It is possible that a number of men suffering from chronic Pulmonary Tuberculosis, but who have not previously been diagnosed as such, are now succumbing to the strain of the war years.

The total number of cases of Tuberculosis on the Registers kept by the District Medical Officers of Health continues to increase, the figure being 14,353 as compared with 10,631 at the end of 1938. Bearing in mind the falling death rate, it can only be assumed that the improvement in the diagnostic field, together with the great advance made in the treatment of the disease during the past decade, has resulted in the "additions" on the Notification Register being greater than the "removals" rather than any known increase in the prevalence of the disease itself.

During 1946, notifications were received of 252 Service men and women discharged from the Forces on account of Tuberculosis and of this number 119 were recommended for institutional treatment under the County Tuberculosis Scheme. During the same year, the Ministry of Pensions awarded pensions to 200 ex-Service men and women for tuberculous conditions resulting from war service.

Dispensaries.

The increase in the number of patients on the Dispensary Registers referred to in the Annual Report for 1945 has continued during 1946. At the end of 1946, there were 8,559 on the Registers as compared with 8,022 at the end of 1945. There is no doubt that there is less reticence on the part of both patients and general practitioners to avail themselves of the facilities which are available under the County Tuberculosis Scheme.

Towards the end of the year, it was possible to occupy new Dispensary premises in Romford. These premises consist of a double-fronted house, suitably adapted, and the Dispensary now is a very up-to-date Clinic with its own X-ray Department and facilities for giving artificial pneumothorax refills to out-patients.

In view of the increased work anticipated as a result of this modern Tuberculosis Clinic, the County Council agreed to the Romford area being served by a whole-time Tuberculosis Officer. Dr. Thompson, who was already responsible for this area with additional duties as visiting Medical Officer to the Harold Court Sanatorium, was accordingly relieved of the Harold Court Sanatorium duties to enable him to devote his whole time to the work of Tuberculosis Officer for Romford. An additional post of Tuberculosis Officer was approved by the County Council for the Brentwood and Billericay Districts, such post to include the duties of Medical Officer to the Harold Court Sanatorium.

At Colchester a whole-time Tuberculosis Officer's post has been created and in October, 1946, Dr. Kellerman was transferred from the Walthamstow area to occupy this post. It is intended that the Colchester Dispensary should serve as a central Dispensary for the Colchester, Clacton, Harwich and Brightlingsea areas and arrangements are being made for this Dispensary to be adapted to enable it to have its own X-ray Department with facilities for giving artificial pneumothorax refills to out-patients.

Improved facilities for seeing tuberculous patients in the Harwich district were also made during the year. Accommodation was offered by the Harwich Borough Council in their newly created Health Department, Main Road, Dovercourt, and a session is held there twice a month.

It was also possible to greatly improve the Tuberculosis Clinic facilities available in the Thurrock area. A Clinic had been held in rooms in an ordinary dwelling house but under special financial arrangements, the County Council were allowed to use a block in the Thurrock I.D. Hospital which was suitably adapted for Tuberculosis Clinic purposes and where an X-ray Department has been installed with facilities for giving artificial pneumothorax refills to out-patients. The transfer to this new Dispensary took place in July ,1946.

In the Chelmsford area, although the facilities which had been provided at the Chelmsford and Essex Hospital were reasonably satisfactory, it was found that the tuberculosis work for out-patients could be facilitated and improved by holding the clinic for out-patients at the Essex County Council Hospital, Broomfield, which deals entirely with tuberculous patients. In July, 1946, arrangements were made for the Tuberculosis Dispensary serving this area to be held at the Broomfield Hospital and with all the facilities of the Hospital available, *e.g.*, X-ray Department etc., this change has resulted in a great improvement.

There are other Tuberculosis Dispensaries in the County which are not suitable, and negotiations are proceeding with a view to alternative and better premises being obtained.

Institutional Treatment.

The acute staffing difficulty, particularly in respect to nursing staffs, began to make itself felt very seriously during the year. It was not possible to open any of the beds previously closed on account of the lack of staff and a serious reduction of 50 beds at the Broomfield Hospital became necessary. The waiting list, which was already causing much anxiety, especially in connection with male patients, became further congested, and during the whole of the year averaged approximately 350. Many of these male patients awaiting admission to the Broomfield Hospital were men found to be suffering from Pulmonary Tuberculosis as the result of service in the Forces and although most of these were in Military Hospitals they suffered much disappointment in not being removed quickly to the Hospital in the County dealing with this disease.

District Tuberculosis Officers were advised that, owing to the limited accommodation available and the length of the waiting list, really careful selection of patients for admission to institutions would need to be exercised. As far as practicable, patients were admitted according to the date of their entry on the waiting list but special consideration was given to any patient recommended for priority of admission either because of the need for immediate treatment or owing to extremely difficult home conditions.

During the year, the County Council agreed to proceed with the scheme for adapting the premises known as the Passmore Edwards Convalescent Home, Clacton-on-Sea, to make the premises suitable for the reception of 30 female patients suffering from Pulmonary Tuberculosis. The intention is that most of the patients admitted

to this adapted institution will have passed through the Essex County Council Hospital, Black Notley, but who still require some period of convalescence before they are ready to return to normal home life. It is, however, anticipated that some considerable delay will occur before the premises can be brought into use for this purpose.

The following are reports from the Medical Superintendents of the three County Council Sanatoria :—

Essex County Council Hospital, Broomfield.

It has been customary to refer to shortages of staff and materials as constituting our main difficulties during the war, but this year the shadow of the nursing shortage which we had long tried to evade made the closing of beds imperative, and by April a fifty bed ward was empty and remains a standing reproach. Hospitals and sanatoria devoted to the treatment of tuberculosis are likely to suffer severely from the scarcity which, though nation-wide, is unevenly distributed. For them the problem is not one of selection and wastage, but the stark one of recruitment. It is idle to extend old or build new hospitals for the treatment of tuberculosis unless nurses are forthcoming.

Admissions	125	Artificial pneumothorax refills—	
Discharges	149		
Transfers	13	In-patients ..	4,832
Deaths	15	Out-patients ..	2,865
In-patients X-rayed ..	2,309	Aspirations—	
Out-patients X-rayed ..	2,048	In-patients	239
Staff X-rayed	463	Out-patients	12
Thoracoplasty ..	66 stages	Inductions	42
Adhesions ..	44 cases	Gastro-entero-stomy	1 case
Thoracoscopies ..	5 ,,		
Phrenic crushes ..	11 ,,	Injection and ligation of veins	4 cases
Phrenic avulsions ..	2 ,,		
Anterior stage ..	4 ,,	Manipulation of elbow ..	1 case
thoracoplasty ..	4 ,,		
Monaldi drainage ..	3 ,,	Incision of abscess	1 ,,
Bronchoscopies ..	10 ,,	Excision of scar	1 ,,
		Plasters ..	5 cases
		Light treatment ..	262 treatments

The discharges may be examined in more detail :—

	Obs.	T.B. minus.	T.B. + I.	T.B. + II.	T.B. + III.	Non-T.B.
Classification on admission	5	45	11	111	2	—
Classification on discharge	—	28	21	107	1	2
Quiescent	—	27	16	51	—	—
Not quiescent	—	1	5	56	1	—
Died	—	—	—	14	1	—

	Result of Thoracoplasty. Preliminary cavity drainage.	No preliminary drainage.
Completed	1	17
Sputum made negative	—	7
Sputum negative or absent but T.B. plus with intensive methods ..	—	1
Sputum rare positive	1	4
Sputum positive	—	5
Improved	1	17
Not improved	—	—
Died	—	—

	A.P. induced before admission. Uni-lateral.	Bi-lateral.	A.P. induced at Broomfield. Uni lateral.	Bi-lateral.	One A.P. induced before and 1 after admission.
Number	17	—	51	3	6
Satisfactory ..	12	—	32	3	6
Unsatisfactory ..	6	—	17	—	—
Adhesions cut ..	5	—	46	2	1
Abandoned ..	2	—	1	—	—
Significant effusion ..	3	—	13	—	2

Phrenic Operations.

	No benefit.	Sputum negative or cavity closed.
Alone	—	1
With A.P.	1	1
With pneumoperitoneum ..	1	1

Miniature Mass Radiography.

		Sputum results.	
Family history ..	5	Negative admission and negative discharge ..	9
A.P. induced ..	3	Positive admission and negative discharge ..	7
Quiescent ..	9	Negative admission and postive discharge ..	–
Improved ..	6	Positive admission and positive discharge ..	2

There were five cases of pleurisy with effusion.

Family history was positive in 47 cases.

Average age of patients on discharge was 28.

The record above represents the bare bones of the clinical work carried out during 1946, and is remarkable only in its similarity to those of previous years. The same principles as before have been followed in treatment—the well-tried sanatorium routine in which both patient and disease are treated, and, in suitable cases, the newer art of cavity closure for the local lung condition, employing its various surgical techniques. The aim in all cases has been to return the patient home with his respiratory discharges freed from tubercle bacilli which might be a

danger to himself and to others; to that end the guidance afforded by intensive laboratory work has been invaluable. From the nature of tuberculosis, in the absence of a specific remedy, it is impossible to achieve such results in all cases, but, even with the higher standard for " quiescence " which more accurate assessment requires, more cases can be classified as " quiescent " on discharge now than was possible some years ago. How that may be reflected in the survival rates the future will show. It is generally recognized that the length of stay in sanatorium has been inadequate in the past, but it is disquieting that those discharged during the year have been in-patients for an average period of eighteen months. Their long stay may be due to over-long retention, to wrong selection of cases for admission, or simply to chance. Certainly there were some unusually long-term cases, *e.g.* :—

In 1940 a fifteen year old boy was admitted with acute tuberculosis of the left lung in which cavities had formed, and minimal disease in the right lung. After a year on strict bed-rest there was some improvement in the left lung, but he had developed right sided pleurisy with effusion. Throughout his many vicissitudes and during periods of severe hæmorrhage from the lung in the following two years this boy co-operated in his treatment in every possible way, lying in bed on his affected side with a determined but confident immobility. By mid-1945 the disease in the right lung had cleared, and that in the left was stationary though two cavities persisted. These were closed by a thoracoplasty operation done in three stages and involving removal of eight ribs. During 1946, intensive search failed to reveal tubercle bacilli in sputum, respiratory secretions or gastric contents, and he returned home to resume studies for the profession he had intended to enter before illness overtook him.

Should we let such patients die because they require so long treatment ?

W. L. YELL,
Medical Superintendent.

Essex County Council Hospital, Black Notley.

After the strenuous war and post war period, the year 1946 showed a rapid decline in the general work in the E.M.S. part of the hospital. More than 18,000 patients, drawn from all the Services and of most nationalities, had been treated, but the return of the Forces to civilian life was followed by an equally rapid depletion of the Civil Nursing Reserve and other auxiliary Nursing Services. During 1946, a large number of wards in the hutted hospital had to be closed and the work was limited to the treatment of emergencies, including fracture and accident cases, chronic sick, and a small turnover of general medical and surgical work. At the end of the year a pattern for future activities began to emerge. It was agreed that a number of the hutted wards should be adapted to make them suitable for the treatment of patients suffering from pulmonary tuberculosis and orthopædic conditions.

There has been no similar falling off in the admission of tuberculous patients to the Sanatorium part of the hospital. No great increase of tuberculosis has

followed the 1939–1945 war, similar to that which occurred after the 1914–1918 war; but the slow decline in incidence of the disease was temporarily arrested. The pressure on beds for tuberculous patients has been heavy. Fortunately the technical side of treatment and diagnosis has continued to improve in spite of the war, so that the possibility of cure of the disease becomes greater. Particularly the application of surgery to the treatment of skeletal tuberculosis has been fruitful under Sanatorium conditions. It is probable that when streptomycin becomes available there will be still greater chances of recovery for the tuberculous patient, but Sanatorium treatment will not be any less needed.

The statistics of the work during 1946 were as follows :—

Treatment of Pulmonary Tuberculosis.

There were 251 patients admitted for the treatment of pulmonary tuberculosis during 1946 and 227 discharged. Special treatments were given as follows :—

Artificial pneumothorax inductions	108
Pneumoperitoneum inductions	46
Artificial pneumothorax refills	3,525
Pneumoperitoneum refills	1,355
Operations for thoracoscopy and division of adhesions	96
Operations for phrenic paralysis	48
Aspirations or air replacements	140
Out-patient artificial pneumothorax refills	1,401
Out-patient artificial pneumoperitoneum refills	121

The treatment of these patients has been carried out by Dr. R. C. Cohen, M.D., D.P.H., who also has been responsible for the district tuberculosis work in the Dunmow, Braintree and Witham areas. Consultative clinics have also been held at the Sanatorium.

There were 40 confinements in the Maternity Unit during 1946.

Non-Pulmonary Tuberculosis.

During 1946, 242 patients were admitted for the treatment of non-pulmonary tuberculosis and 243 discharged. I am indebted to Mr. S. L. Higgs, F.R.C.S., Consulting Surgeon for Surgical Tuberculosis to the Essex County Council, for his supervision and encouragement of this work.

The patients treated were divided into the following categories :—

Skeletal tuberculosis	96
Genito-urinary tuberculosis	20
Abdominal tuberculosis	30
Tuberculous cervical glands	53
Primary thoracic infection of children	24
Observation negative	19
	242

Operations for patients suffering from non-pulmonary tuberculosis were performed as follows :—

For skeletal tuberculosis—		Genito-urinary tuberculosis—	
Posterior fusion of spine	7	Cystoscopies	23
Excision of knee	9	Nephrectomy and ureterectomy	5
Excision of elbow	1	Epididymectomy	9
Fusion of shoulder	1	Abdominal tuberculosis—	
Fusion of ankle	1	Laparatomy	1
Hip fusion	12	Salpingectomy	1
For paraplegia	2	Various—	
Removal of tuberculous bone	9	Rib resection	1
Plasters under anæsthetics	12	Palmar ganglion	2
For tuberculous cervical adenitis—		For sinus or abscess	33
Tonsillectomies	18	Various	13
Incision and curettage of abscess	14		
Excision of glands	43		
Total	217		

The work of the Splint Department has progressed satisfactorily and a surgical boot maker has now been engaged to augment the work. During 1946, 378 surgical appliances were manufactured and 94 surgical alterations to boots were carried out. The provision of bed splints for patients is also the work of this Department. As well as the work from the hospital, all the work of the Surgical Tuberculosis Consultative Clinics and of some of the Orthopædic Clinics in the county is done in the Black Notley Splint Department.

Consultative Clinics for surgical tuberculosis were held at various centres in the county by myself.

General Medical and Surgical Work.

1,529 patients completed their treatment during 1946. A general surgical and medical unit were maintained and in addition a special fracture unit. At the end of the year a start was made with the more specialized orthopædic work. Operations performed were as follows :—

E.N.T.—		General Surgical—	
Tonsillectomy	65	Hernia	55
Other E.N.T. operations	12	Appendicectomies	32
Orthopædic—		Intestinal operations	29
For fracture	35	Trendelenberg operations	17
Bone and Joint operations	28	For hæmorrhoids	18
Manipulations under anæsthesia	26	Skin grafts	8
Debridement of wounds	20	Genito-urinary operations	41
Operations on nerves	3	Gynacological operations	10
Operations on tendons	4	For abscess	49
		Various	82
Total	534		

The surgical work was carried out by the visiting staff of Mr. Ronald Reid, M.S., F.R.C.S., Mr. H. A. H. Harris, F.R.C.S., and Mr. Kurt Jacobi, M.D., and Mr. Dennis Dunn, F.R.C.S., of the resident Surgical Staff. Dr. Bathurst Norman, M.D., F.R.C.P., was appointed to the staff as Consulting Physician to the hospital during the year, and with Dr. A. Grant, M.D., was responsible for the general medical work.

Special Departments.

Radiography. This work has been under the direction of Dr. Franklin-Wood, D.M.R.E. A high standard of work has been maintained. The number of patients X-rayed was :—

	In-patients.	Out-patients.
Sanatorium	2,484 ..	852
E.M.S.	1,871 ..	529
Total ..	5,736	

Laboratory. The work in this Department has been carried out by Dr. Ross McKenzie and her staff.

For Sanatorium patients	30,026	examinations.
For E.M.S. hospital	19,469	,,
For Public Health	13,066	,,
Total ..	62,581	

Blood Transfusion Service. During 1946, the blood transfusion service was carried on by Dr. A. Grant, M.D., and later when Dr. Grant was called for service with the Army by Dr. Kurt Jacobi, M.D. The importance of this service to the hospital is considerable and Dr. Grant and Dr. Jacobi are to be congratulated on keeping the service in being in spite of difficulties.

It remains to mention the Nursing Staff under the Matron, Miss M. Ruck, R.R.C. The work which has been summarized in this report shows that special hospitals in the county can provide a wide variety of experience in medicine and surgery. Though less in numbers, the Nurses have maintained the work at a high standard. Finally with the evanescence of the E.M.S. the arbitrary division between the hutted and the Sanatorium parts of the hospital has ceased.

M. C. WILKINSON,
Medical Superintendent.

Harold Court Sanatorium.

During the year there has been no major change in the work of this Sanatorium. As before, adult females in all stages of pulmonary disease were treated here, several being found suitable for various forms of collapse therapy. In addition, advantage has been taken of the arrangements with the London Chest Hospital whereby patients were transferred there for surgical treatment.

Dental treatment was carried out on several patients by the County Dental Staff, and the County Ophthalmic Surgeon visited this Sanatorium as required.

Other consulting staff were available if needed, and Dr. M. C. Wilkinson, of Black Notley, visited the Sanatorium for consultations regarding non-pulmonary lesions.

The following statistics give a brief account of the actual clinical work done during the past year :—

No. of patients admitted during the year	46
No. of patients discharged home	34
No. of patients transferred to other institutions	12
No. of patients died	12

A.P. Treatment.

No. of inductions	14
Refills given (In-patients)	315
Refills given (Out-patients)..	102
No. of screen examinations	739

X-ray examinations. 152 in-patients, and 12 members of the Staff were x-rayed at Brentwood District Hospital. Five in-patients were x-rayed at the Ilford Tuberculosis Dispensary, and one member of the Staff was X-rayed at Victoria Hospital, Romford.

The diversional therapy has continued under the guidance of the Occupational Therapist who visited the Sanatorium once a week.

The patients have a library which they have used to a considerable extent, and they also have a film show every other week.

War damage repairs have been carried out in the main building, and this has made available eleven rooms for domestic staff. There is, however, still a shortage of staff, both domestic and more especially nursing, but the short-handed staff have continued to give good and loyal service.

E. WOOLF,
Medical Superintendent.

The accommodation provided at the Isolation Hospitals at Thurrock, Ilford, Chingford and Colchester, together with 60 beds available at St. Margaret's, Epping (Social Welfare Institution), have proved invaluable, especially for patients suffering from the intermediate and later stages of the disease not requiring any active treatment. Unfortunately, early in the year, it was found necessary to cease using 13 beds for this type of case which had been available at the Halstead Isolation Hospital.

Whatever the future may hold in respect to spectacular cures for Pulmonary Tuberculosis, there seems every reason to anticipate that the demand for institutional beds for patients suffering from this disease will exceed the supply for some considerable time.

Financial Allowances.

The restriction of these allowances to patients coming within certain medical categories appears to have been more readily understood during 1946 than in the

months immediately following the introduction of the allowances. Nevertheless, the Tuberculosis Officers were frequently placed in a dilemma as to whether to recommend a patient as medically eligible or not. The number of patients receiving the allowance has not altered to any great extent since 1945 when there were 634 patients receiving allowances as compared with 600 patients receiving the allowance at the end of 1946.

Mass Miniature Radiography.

The following is a report submitted by Dr. Hugh Ramsay, the Medical Director of the Mass Miniature Radiography Unit operating in this County, and covers a period of one year, ending 31st March, 1947 :—

" The work of the Unit has proceeded on much the same lines in the second as in the first year. Factory sites have been used for each investigation, some more convenient than others, but all of them calling for a considerable amount of improvisation. Nevertheless, the technical work of the Unit has been maintained at a high standard. The situation should be easier in the future, as the mobile van, promised for so long, has just been delivered and should soon be in action. This will make transport of the apparatus easier, and the dark-room in the van itself should solve one of the main technical difficulties associated with transportable X-ray apparatus.

The total number of examinations is small as a result of a continuing shortage of technical staff, there being at the moment only one qualified radiographer, assisted temporarily by one of the clerks working under his supervision. Every effort has been made to deal with this difficulty, but without success.

The winter fuel crisis interfered seriously with the arrangements made for investigations in factories, and for a period of many weeks it was impossible to visit factories. Fortunately, however, the Brentwood Mental Hospital investigation could be undertaken at that time, and as a result, the Unit was out of action for a period of two weeks only. This allowed a very thorough investigation of statistics to be carried out, and records were brought up to date wherever possible. It is in fact doubtful whether the best can be made of the statistical matter available without an interval occasionally for concentrating on statistics only. In the normal week's work the routine figures for return to the Ministry and the County Medical Officer, are all that can easily be given attention.

Relations with the various factories where investigations have been done have been good throughout. There is an excellent spirit of co-operation, and liaison personnel spare no pains to make the visit of the Unit a success.

During the year a visit was paid to the Unit by Professor Wilson of the London Hospital, accompanied by a class of students. All aspects of Mass Radiography work were demonstrated. We have been asked to arrange a demonstration for a class of D.P.H. students ; this will take place in the near future.

Altogether the year's work, though limited for reasons beyond our control, has been satisfactory in many ways. Interest on the part of the public remains high, a factor which should be very helpful in future investigations in that very

considerable part of the County area still untouched. Many difficulties have, of course, been encountered in the day to day running of the scheme, but the untiring efforts of the staff, to whom I would like to pay here a sincere tribute, have kept the Unit at work throughout. Their task is not an easy one, and it is only their interest and keenness which have enabled efficient work to be done.

The following statistics, with some comments, should perhaps be helpful in giving an impression of the work for the year. Reference to the figures for cases referred to Tuberculosis Clinics, and to the figures for active cases, will give the best impression of the work thrown on the County Tuberculosis Service by the Unit. All have at least one examination at the Clinic, some a second examination after an interval, and some of course require a longer period of supervision. The active cases have to be added to the waiting list for sanatorium treatment."

Total miniatures	18,541	
Large films	1,397	7.5 per cent.
Investigated	593	3.2 ,,

Disposal of cases Investigated.

Normal, Nil significant, or already under Medical care	184
Referred to T.B. Clinic	385
Referred to Cardiac Clinic	11
Referred to Private Doctor	13

Twenty persons requested to attend for large films (0.1 per cent.), and 26 requested to attend for investigation (4.4 per cent) did not do so.

As a result of investigation on the Unit itself, and on cases referred elsewhere, the figures as regards Tuberculosis are as follows :—

Post-Primary Tuberculous Lesions.

Inactive	380	2.0 per cent.
Active (in need of sanatorium treatment) ..	80	0.4 ,,

It should be noted that the above figures include an investigation at Brentwood Mental Hospital. The incidence of tuberculosis in mental cases is known to be much higher than in the ordinary population. The main effect of the Brentwood investigation was a disproportionate increase in the number of large films, the number of cases investigated, and the amount of tuberculosis discovered.

The figures for Brentwood are as follows :—

Miniatures	2,088	
Large films	241	11.1 per cent.

All abnormalities requiring attention were reported to the Hospital Medical Officers, and, in the case of tuberculosis, to Dr. Woolf, the district Tuberculosis Officer, for investigation in the Hospital.

Post-Primary Tuberculosis.

Inactive	89	4.2 per cent.
Active	31	1.5 ,,

Excluding Brentwood, the figures are :—

Miniatures	16,453	
Large films	1,156	7 per cent..
Investigated	471	2.9 per cent.
Referred to T.B. Clinic	263	1.6 ,,

Post-Primary Tuberculosis.

Inactive	301	1.8 per cent.
Active (in need of treatment)	49	0.3 ,,

After Care.

The ten voluntary Tuberculosis Care Associations continue their helpful co-operation with the County Tuberculosis Scheme and during the year ended 31st March, 1947, the Associations expended in the aggregate the sum of £5,872 in providing help of various kinds to necessitous families.

It is obvious that these Care Associations would be able to function only in a very limited way if they were not assured of the financial assistance provided by the County Council's grant which is on the basis of 30/- per thousand population covered by the Associations' activities.

Facilities exist under the County Tuberculosis Scheme for making grants of milk to patients whose circumstances are not only necessitous but who also come within special medical categories, *e.g.*, patients awaiting admission to institutions for treatment and patients who, having had institutional treatment, are recommended to have a grant of milk to ensure the maintenance of benefit gained whilst in an institution. During 1946, there were 329 grants of milk made under the County Scheme.

Open Air Shelters.

There were 51 open air shelters in use by patients in gardens of their homes during 1946.

PART IV.

MATERNITY AND CHILD WELFARE.

County Area.

The various Schemes in connection with the County Council's Maternity and Child Welfare work were continued during the year in the 31 (out of a total of 43) Sanitary Districts in which the County Council is the Welfare Authority. The area remains the same as in 1945.

In 37 out of the 43 Sanitary Districts, the County Council is the Local Supervising Authority under the Midwives Acts.

The number of births, notified and unnotified, in the County Council's Welfare Area is given below, together with the number of notifications of Maternal Deaths.

No. of Births notified by— Midwives.	Dr. and Parents.	No. of Births Unnotified.	No. of Notifications of Maternal Deaths.
5,548	3,962	57	11

Maternal Deaths.

The Maternal Mortality rate for the County Council's Welfare Area was 1.26 as compared with a rate of 1.4 for the Administrative County, and 1.06 for England and Wales.

At the request of the Ministry of Health, special investigations are made in cases of maternal deaths, and information which is treated in an entirely private and confidential manner is forwarded to the Ministry of Health. These investigations are made purely to establish as far as possible the contributory causes of maternal deaths and from the statistical data resulting therefrom the Ministry of Health may in due course be able to propose some practical measures for still further reducing the incidence of these deaths.

Ante-Natal Clinics, Maternity and Child Welfare Centres, Weighing Centres, Toddlers' Clinics and Women's Welfare Clinics.

The policy of developing the facilities for maternity and child welfare particularly in the rural areas has been continued and at the end of the year 1946, the following had been established in the County Welfare Area :—

37 Ante-Natal Clinics.
126 Child Welfare Centres.
6 Toddlers' Clinics.
27 Weighing Centres.
10 Women's Welfare Centres.

During the year, new Clinics were established as follows :—

Child Welfare Centres—

Nazeing (formerly weighing centre).
Walton (re-opened).

Weighing Centres—

Great Hallingbury.
Hullbridge.
Tolleshunt D'Arcy.
Lawford.
Debden. (Empire Radar Station).
Chrishall (re-opened).
Canewdon.

As a result of the increasing number of attendances it was necessary to establish additional sessions at the Clinics indicated below :—

Ante-Natal Clinics.	Women's Welfare Clinic.
Maldon	Colchester.
Hornchurch (Westland Avenue)	
Waltham Abbey	
Clacton	

Maternity and Child Welfare Centres.

The work carried on by Voluntary Committees of Child Welfare Centres forms a very important and essential part of the general Maternity and Child Welfare work and every endeavour is made to foster and encourage the continuance of this voluntary aspect of the work.

Provision of Milk and Medicaments.

The Ministry of Food National Dried Milk Scheme for expectant and nursing mothers and children under the age of five years was continued with the co-operation of the Health Visitors and Voluntary Workers at Child Welfare Centres.

The following information has been supplied by the Ministry of Food relating to vitamins supplied during the year under review in the County Welfare Area.

Orange juice (vitamin C)	259,532	bottles.
Cod liver oil (vitamin A and D)	36,975	,,
A. and D. tablets (vitamin A and D) ..	9,878	,,

Dental Treatment and Dentures.

The facilities available for dental treatment and provision of dentures for expectant and nursing mothers and dental treatment for children under five years of age were continued.

During the year under review, a total of 1,061 patients were treated as indicated below :—

No. of expectant mothers who received dental treatment only ..	418
No. of expectant mothers who received dental treatment and were provided with dentures	135
No. of nursing mothers who received dental treatment only ..	160
No. of nursing mothers who received dental treatment and were provided with dentures	142
No. of children under five years of age who recieved dental treatment	206

Home Helps Scheme.

Full particulars of this scheme were set out in the report for the year 1945. The services of whole-time and occasional Home Helps are utilized, and the following table gives particulars of Home Helps employed, together with cases attended during the year 1946, as compared with the years 1944 and 1945.

	1944.	1945.	1946.
No. of whole-time Home Helps ..	4	8	19
No. of occasional Home Helps ..	90	150	303
No. of cases attended ..	120	313	701

The following is an analysis of the cases attended, showing (i) the areas of the County in which use has been made of the Scheme and (ii) whether attended by full-time or occasional Home Helps :—

	Full-time.	Occasional.
Urban Districts—		
Benfleet	3	4
Billericay	10	68
Braintree and Bocking	—	9
Brentwood	35	15
Burnham-on-Crouch	1	—
Canvey Island	1	—
Chigwell	18	34
Chingford Borough	5	109
Epping	—	4
Halstead	—	2
Hornchurch	66	173
Maldon Borough	—	6
Rayleigh	16	26
Waltham Holy Cross	—	13
Witham	—	2
Rural Districts—		
Braintree	—	6
Chelmsford	9	12
Dunmow	—	1
Epping	—	4
Halstead	—	16
Maldon	—	6
Ongar	—	6
Rochford	1	12
Saffron Walden	—	8
	165	536

In accordance with Ministry of Health Circular 110/46, arrangements are being made for the appointment of a whole-time Organizer so that the Scheme can be more rapidly developed as there is every indication that the Home Help Service will become increasingly important with the inception of the National Health Service Act, 1946.

Meetings have been held at Brightlingsea, Canvey Island and Chingford, attended by representatives of various women's organizations, and the Scheme fully explained with a view to obtaining not only suitable applicants to act as Home Helps, but also to bring to the notice of the general public that these facilities are available.

Puerperal Pyrexia Regulations, 1939.

Copies of notifications made by medical practitioners were received from Medical Officers of Health of County Districts in the administrative County in respect of 32[illegible] cases of Puerperal Pyrexia as against 232 for the year 1945. Of these 69 were in respect to cases in the County Welfare Area. (74 in 1945).

Under arrangements made by the Committee three patients from the County Welfare Area were admitted to hospital during the year. These arrangements provide where necessary for the services of a consultant obstetrician, and also for any bacteriological work which is found necessary.

Public Health (Ophthalmia Neonatorum) Regulations, 1926-1937.

These regulations have been issued to ensure that notification of this infection should be made at the earliest possible moment to the Welfare Authority so that if necessary, appropriate action can be taken. During the year ended 31st December 1946, 52 cases of Ophthalmia Neonatorum were notified in the Administrative County and of these eight related to patients residing in the County Welfare Area. Of these five were treated at home, three were admitted to hospital, and in no case was the vision impaired.

Hospital Treatment of Maternity Patients.

The arrangements outlined in previous reports for the admission of maternity patients to hospital for confinement have been continued, although owing to shortage of accommodation and staff, it was necessary to institute a system of priorities whereby patients were admitted to hospital in cases where there existed some conditions likely to complicate pregnancy, or where the home conditions were entirely unsuitable for confinement. Nevertheless, 2,273 patients were admitted during the year, as compared with 2,116 for the year 1945.

The opening of the Maternity Unit at Essex County Hospital, Wanstead, in December, 1946, although in the initial stage only providing accommodation for six patients, has nevertheless been a welcome help towards relieving the position in the South-Western portion of the County. In addition, a similar Unit was opened at Orsett Lodge Hospital in August, 1946, with provision for 15 patients. Arrangements were also made with the Keeper of the Prested Hall Nursing Home, Kelvedon, for the admission of a limited number of County maternity patients. During the year, the Maternity Unit established during the war by the Plaistow Hospital at Suntrap, High Beech, was closed, although arrangements were made with the Plaistow Hospital Authorities for patients who would normally have been admitted to Suntrap to be accommodated at the Plaistow Maternity Hospital.

As indicated in last year's report, the Writtle Park Maternity Home was closed March, 1946, and the Danbury Park Maternity Home in May, 1946.

In May, 1946, the Ministry of Health issued Circular 96/46, relating to the Rise the Birth Rate, and arrangements were made for the secondment of Health Visitors ad School Nurses on a rota basis to various Maternity Units, in order to assist the eriously depleted staffs. Arrangements were also made to utilize the County Council's ome Help Scheme to its fullest extent, so that women could be confined at home, nd by co-operation with the W.V.S. clerical assistance was provided at Child Welfare entres whilst the Health Visitor was undertaking Hospital duties. Where possible, e British Red Cross Society assisted by providing transport for District Nurse idwives.

reatment of Minor Ailments—Children under school age.

The arrangements were continued whereby children under school age received perative treatment for the removal of Adenoids and Tonsils or for Circumcision. During the year 72 children were treated.

reatment of Orthopaedic Patients.

The following information gives the number of children under five years of age who ere dealt with under the County Orthopædic Scheme.

Hospital In-patient treatment	19
Attendance at After-treatment centres	853
Examinations by Orthopædic Surgeons	513

Twenty-four After-treatment Centres were in operation at the end of the year.

bstetric Specialists.

From the information given below, it will be clearly seen that the services of Mr. Alan Brews, the County Council's Part-time Obstetric Specialist, have continued o be of valuable assistance, not only to Assistant County Medical Officers and Medical Practitioners in the area for which the County Council is the Local Supervising Authority nd Welfare Authority, but also at various Hospitals in the County.

Clinic or Hospital.	No. of Patients examined.
*Danbury Park	9
†St. John's Hospital, Chelmsford	202
†Chingford Combined Treatment Centre	62
St. Margaret's Hospital, Epping	206
Essex County Council Hospital, Black Notley	24
Various	18
	521

*Closed 1st May, 1946.
†Consultative Clinic.

In addition, he carried out 106 operations, and of these 45 were major operations.

At the end of the year, arrangements were also made for Dr. Margaret Puxon to services to be available as Consulting Gynæcologist and Obstetrician, her services being used mainly in the Colchester and surrounding areas.

Nursing Homes.

The number of Registered Homes at the end of the year was as follows :—

(*a*)	Maternity Homes only	20
(*b*)	Maternity and Nursing Homes	16
(*c*)	Nursing Homes (including Convalescent Homes) ..	16

Routine inspections have been made at regular intervals and the general conditions existing at the Homes have maintained a satisfactory standard throughout the year in spite of the difficulties encountered in obtaining staff. In one case, it was found necessary for a strong letter of warning to be forwarded to the Keeper owing to failure to comply with the County Council's Bye-laws.

Child Life Protection.

The following statement relates to the administration of Section 206 of the Public Health Act, 1936, regarding foster children.

Number of Foster Parents on the register :—

(*a*)	At the commencement of year	189
(*b*)	At the end of the year	187*

*This figure includes 28 Foster Mothers participating in the Guaranteed Payment Scheme referred to later in this report.

Number of children who died during the year	Nil.
Number of children on whom inquests were held	Nil.
Number of Child Protection Visitors	55
Number of visits made during the year	1,326

There are also a number of boarding schools who accept into their care, children under the age of nine years, and also several Homes run by voluntary bodies. During the year, two of these Homes were granted exemption from inspection under the provisions of Part VII of the Public Health Act, 1936.

With the publication of the Curtis Report relating to the care of children who are deprived of a normal home life, steps are being taken to implement the suggestions contained therein and further particulars will be given next year.

Adoption of Children (Regulation) Act, 1939.

This Act which came into operation on 1st June, 1943, provides *inter alia* :—

> That any person (other than a registered Adoption Society or a local Authority, and not being the parent or guardian or a near relative of the child or the person in whose care or possession he is to be placed) who participates in making arrangements for the adoption of a child under the age of nine years must give notice in writing of the arrangements to the Welfare Authority for the area in which the adopter resides, not less than seven days before possession is taken of the child by the adopter.

During the year 48 notifications were received which resulted in the adoption of 40 children. In the remaining eight cases the arrangements for adoption were still pending at the end of the year in respect of five children, two children had been returned to the care of their own mothers and in one instance the proposed adopter had removed from the district.

Midwifery Service.

At the end of the year, the following Midwives employed under the County Council's Scheme were resident and practising in the area for which the County Council is the local Supervising Authority. Particulars of the number of cases attended during the year are also given :—

	Midwifery.	Maternity.
17 County Council Midwives	797 ..	270
29 Welfare Council Midwives	1,538 ..	524

The following table shows the number of Midwives in domiciliary practice at the end of the year :—

Total No. of Midwives in Domiciliary practice at end of year.	Trained. Dependent.	Trained. Independent.
348 ..	309 ..	39

The total number of live births and still births which occurred in 1946 in the thirty-seven out of forty-three Sanitary Districts comprising the area for which the County Council is the local Supervising Authority under the Midwives Act (*i.e.* excluding the Boroughs of Barking, Colchester, Dagenham, Ilford, Leyton and Walthamstow), was 16,769, and of these 8,836 (52.69 per cent.) were attended by midwives in the capacity of midwife, and 3,842 (22.09 per cent.) in the capacity of Maternity Nurse.

The following gives particulars of the notifications received from State Ceritfied Midwives during the year in accordance with the rules of the Central Midwives Board :—

Records of Medical Aid	2,395*
Records of Still-Births	105
Deaths of Mothers	9
Deaths of Infants	80
Artificial Feeding	138
Liability to be a source of infection	191
(These figures include all cases of High Temperature)	
Laying out for burial	129
Ophthalmia Neonatorum or discharging eyes	82
(Includes cases notified as Ophthalmia Neonatorum)	

*Percentage of confinements attended by Midwives in which medical aid was sought 27.1.

(*a*) Gas and Air Analgesia.

The arrangements have been continued for the training of Midwives in the administration of Gas and Air Analgesia at Oldchurch County Hospital, Romford. The course lasts for a period of two weeks and midwives are sent to the Hospital as and when they can be spared from the district. Up to the end of the year 1946, there were 93 Midwives

in practice who had qualified in the use of the apparatus. Of these, 35 successfully passed the course during the year 1946. The number of cases in which analgesics were administered by Midwives in domiciliary practice during the year was 454.

Every endeavour is made for the apparatus to be provided as soon as possible although it will be appreciated that owing to manufacturing difficulties some delay is at present inevitable.

(*b*) Housing Accommodation.

Difficulties are still being experienced in finding proper and suitable accommodation for Midwives, although by co-operation with District Councils, arrangements have been made for the allocation of houses for Domiciliary Midwives and also for the provision of houses in future housing schemes.

Post Graduate Refresher Courses.

In accordance with the Rules of the Central Midwives Board, Domiciliary Midwives should attend Post Graduate Refresher Courses at regular intervals, but during the year under review, it was only possible to arrange for three Midwives to attend such a course, owing to the heavy demands for midwives arising out of the increase in the birth rate, coupled with the general shortage of Midwifery Staff.

In one case, the County Council assisted an independent Midwife who had applied for assistance in connection with her attendance at a Post Graduate Course, and a course in Gas and Air Analgesia at the Mothers Hospital, Clapton.

Provision of Blood Pressure Apparatus.

Arrangements have been made whereby County Council, Welfare Council and District Nurse Midwives can be provided with Blood Pressure Apparatus, and up to the end of the year 1946, 26 were provided.

National Uniform for Midwives.

In October 1946, the Central Midwives Board made provisional arrangements for the establishment of a National Uniform for Midwives, and subsequently arrangements were made by the Central Midwives Board for this National Uniform to be introduced from 1st February, 1947. In practically every case, County Council and Welfare Council Midwives have been provided with the appropriate uniform, although it is not intended that the wearing of the National Uniform shall be compulsory.

Doctors' Fees.

The undermentioned comparative table is of interest, showing (*a*) the number of Medical Aid Notices received from Midwives during the years 1945 and 1946; and (*b*) the corresponding number of doctors' claims made against the County Council in respect of such notices for the same periods.

No. of Medical Aid Notices received.		No. of Medical Aid Notices for which Doctors' claims have been received.	
1945.	1946.	1945.	1946.
2,167 ..	2,395 ..	1,421 ..	1,776

Essex County Nursing Association.

The following particulars give the number of District Nursing Associations in the Administrative County which are affiliated to the County Nursing Association :—

No. of affiliated D.N. Associations.	No. undertaking Midwifery and District Nursing.	No. performing General Nursing duties only.
147	140	7

The 147 Associations referred to above employ 167 District Nurse Midwives and 17 District Nurses (General).

The high standard of the midwifery service has been maintained throughout the year. The co-operation between District Nurse Midwives and Health Visitors was continued.

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

During the year, 55 mothers and babies were admitted to this Hostel, the average length of stay being 68 days. There is no doubt that this Hostel, by providing accommodation for mothers and babies after confinement, is serving a very useful purpose, although it was observed that with the termination of hostilities, there was a decided decrease in the number of recommendations received. In order that full use of the accommodation available could be maintained, the Committee agreed that mothers who needed a short period of convalescent treatment after confinement could be admitted with their babies, and that in suitable cases, expectant mothers could also be admitted. At the end of the year, a visit was paid to the Hostel by Social Workers from India, Uruguay and Denmark, the arrangements being made by the National Council of Social Service.

Care of Premature Infants.

As indicated in previous reports, information is obtained from the Notification of Birth card in respect of infants weighing 5½ lbs. or less at birth and the following particulars are submitted of such cases for the year 1946 :—

	Total.	Died during first 24 hours.	Survived at end of one month.
Domiciliary	213	16	169
Institutional	247	24	195

All these cases are kept under special observation by the Health Visitor, and any necessary advice given to the mothers concerned. Where necessary the services of a Home Help are provided.

Dr. K. H. Tallerman, the part-time Consulting Pædiatrician continues to be of great assistance to Assistant County Medical Officers and Medical Practitioners. The consulting Clinics indicated below attended by Dr. Tallerman have also been of great assistance :—

Oldchurch County Hospital, Romford.
St. John's Hospital, Chelmsford.
St. Margaret's Hospital, Epping.
Essex County Council Hospital, Black Notley.
Essex County Council Hospital, Wanstead.

During the year, Dr. Tallerman paid visits to various Day Nurseries coming under the control of the County Council.

Arrangements will be made to improve this service in accordance with the recommendations contained in Ministry of Health Circular 20/44 by the provision of—

(i) Special equipment, including draught-proof cots, electric blankets, pads, etc.

(ii) Special wards in hospitals and special form of transport to convey premature infants to hospital.

(iii) Health Visitors and Midwives with special training and experience with premature infants.

Care of Illegitimate Children.

The care of the illegitimate child continues to be of the utmost importance, and as indicated on page 26, 84 foster-mothers were participating in the County Council's Scheme, whereby a guaranteed payment of 12/6d. per week and £3 per quarter clothing allowance is paid to suitable foster-mothers who undertake the care and maintenance of babies apart from their mothers.

The Residential Nursery at Writtle Wick referred to later in this report is also of valuable assistance in the care of these children, where they are placed for a short period until such time as the mother can make other arrangements, or until a foster-mother under the scheme referred to above can be obtained. In addition, the Hostel for Mothers and Babies at "Ardmore," Buckhurst Hill, continues to fulfil an important part in the care of these children; co-operation with the Chelmsford Diocesan Moral Welfare Association has been continued and grants allocated to assist in maintaining the various shelters established by this Association, and in respect of the Diocesan Maternity Home at Sunnedon House, Coggeshall.

General.

(*a*) Supplies of Sheets for Expectant Mothers.

The Scheme has been continued for the issuing of priority dockets to expectant mothers who are being confined in their own homes, whereby sheets are obtainable and during the year, 15,251 priority dockets were issued as compared with 8,838 for the year 1945.

(*b*) Maternity Outfits.

During the year, 397 Maternity Outfits were provided either free or at cost price to expectant mothers in accordance with the patients' financial circumstances.

(*c*) American Red Cross Layettes.

A number of these have been provided to necessitous cases.

Elimination of Verminous Conditions.

Through the Health Visitors, the County Council continues to assist mothers in regard to the promotion of cleanliness and good habits of children and the elimination of verminous conditions.

Diphtheria Immunisation. Circular 194/45, dated 14th November, 1945.

From 1st January, 1946, the responsibility for securing the immunization against Diphtheria of all children from one year upwards to school age was transferred to Welfare Authorities from Local Sanitary Authorities. Hitherto, the Local Sanitary Authority had been required to provide the service, the County Council assisting when required by placing Medical Officers and premises at the disposal of the Sanitary Authority. Co-operation with the Local Sanitary Authorities has been continued, and where existing arrangements proved satisfactory, these have not been disturbed. The Health Visitors follow up all births notified and bring to the notice of the parents the importance and the facilities available relating to Diphtheria Immunization, and in this connection first birthday greeting cards are utilized. Propaganda weeks are also held in order to bring the benefits of immunization to the notice of the mothers.

Nursery Provision for Children under five years of age.

Residential Nursery Accommodation—Writtle Wick, Chelmsford.

Pending the opening of the Residential Nursery at Writtle Wick, near Chelmsford, arrangements were made for the St. Luke's Nursery at Dunmow to be temporarily carried on at the Halstead Isolation Hospital. At the time of going to press, Writtle Wick is in operation for a limited number of children, and full details will be given in next year's report.

Day Nursery Accommodation.

As indicated in last year's report, arrangements were made for all Day Nurseries to be continued as such. During the period of hostilities, these Nurseries were administered by the County Council on behalf of the Ministry of Health, and on 1st April, 1946, were taken over by the County Council.

The following gives particulars of the Day Nurseries in operation at the end of the year :—

Name.	Accommodation.	Opened.
Hornchurch, 75, North Street (whole-time)	30 children	1st July, 1942.
Witham, " Brookcote," Chipping Hill (whole-time)	20 children	14th September, 1942.
Rainham, Rainham Hall (whole-time)	45 children	6th January, 1943.
Waltham Abbey, " The Cedars," Sewardstone Road (whole-time)	40 children	16th March, 1943.
Friends' Meeting House, Saffron Walden (part-time)	36 children	1st December, 1941.

Name.	Accommodation.	Opened.
Chingford, 136–138, Chingford Mount Road (full-time)	52 children	20th September, 1943.
Chingford (Hatch Lane) (whole-time)	50 children	12th April, 1944.
Upminster, 23, Hall Lane (whole-time)	40 children	1st December, 1943.
Hornchurch, 8 and 9, Elm Park Parade (whole-time)	30 children	29th December, 1943.

There is no doubt that additional Day Nursery accommodation will be necessa in the future, in order to allow more mothers to take up essential work.

At the majority of the Nurseries referred to above, the pressure on the accom modation is extremely acute particularly in the Hornchurch and Chingford areas an every endeavour is being made for the establishment of additional Nurseries. addition, representation has been received for the establishment of a Day Nursery Buckhurst Hill, and although no suitable premises are available, consideration is bei given to the acquisition of a site.

Combined Medical Service.

(1) Hornchurch Urban District.

Dr. P. X. O'Dwyer continued to act as temporary Medical Officer of Health f the Hornchurch Urban District until the appointment of Dr. J. Gorman as Medic Officer of Health in succession to Dr. A. Ball. Dr. Gorman commenced duty on t 1st October, 1946.

(2) Clacton, Frinton and Walton Urban Districts.

Dr. J. Ramsbottom continued as Medical Officer of Health and Assistant Coun Medical Officer for Clacton, Frinton and Walton Urban Districts, it being agreed the Authorities concerned that the appointment of a permanent Medical Officer Health be deferred in view of the provisions of the National Health Service Act, 194 regarding schemes of Divisional Administration.

(3) Borough of Wanstead and Woodford.

Dr. F. G. Brown continued to act as temporary Medical Officer of Health a Assistant County Medical Officer pending the approval of the Ministry of Health his being appointed to the combined post of Medical Officer of Health and Assista County Medical Officer.

(4) Borough of Chingford.

Dr. W. D. Hyde resigned from the appointment of Medical Officer of Health to t Borough of Chingford as from 16th September, 1946, on being appointed Medic Officer of Health, Enfield.

Dr. J. L. Miller-Wood, Senior Medical Officer, carried out the duties as Acting Medical Officer of Health pending the appointment of a permanent Medical Officer of Health.

(5) Billericay Urban District.

Subsequent to the retirement of Dr. J. D. Wells, Dr. P. X. O'Dwyer was appointed to the combined appointment of temporary Medical Officer of Health and Assistant County Medical Officer, commencing duty in this capacity on the 1st October, 1946.

Combined Nursing Service.

On the 31st December, Health Visiting staff were employed on Child Welfare work on behalf of the County Council as follows :—

54 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. 22.

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. District Nurse Midwives continue to assist the Health Visitors as far as possible.

Domiciliary Medical Service.

During the year the shortage of practitioners became less acute and arrangements continued to work smoothly, all appointments made following upon the resignation or death of an existing Medical Officer being made with very little difficulty. In this respect the following temporary appointments were made in the undermentioned Medical Relief Districts :—

West Bergholt	Bartlow Hamlet and Hadstock
Stanford-le-Hope	Burnham-on-Crouch
Chelmsford	Belchamp Walter
Colchester (South Ward)	Grays (West)
Stock	Chigwell

There were a considerable number of changes in the panels set up under the Free Choice of Doctor Scheme in the various districts where the Scheme is in operation.

PART V.

PUBLIC ASSISTANCE.

Most valuable work was carried out at all the Institutions during the year under extremely difficult conditions. The shortage of nursing staff was more acute than ever, and no praise is too high for the nursing staff who gallantly carried on their work of looking after the chronic sick.

During the year, the Public Assistance Committee officially changed its name to the Social Welfare Committee, and the change of name emphasized the desire of the Committee to look upon the old Poor Law as being a thing of the past, and gave a pointer to the new legislation which is being introduced.

Orsett Lodge Hospital—Geriatric Rehabilitation.

The experiment in Geriatric Rehabilitation at Orsett Lodge Hospital has been extended by means of a statistical survey of the length of stay of sick elderly patients under an enlightened form of care and medical treatment. This survey has been carried out by Mr. Cosin, F.R.C.S., the Medical Superintendent, in collaboration with Professor Greenwood, the Consulting Statistician to the Essex County Council.

Mr. Cosin has found it possible to rehabilitate a very large proportion of the elderly patients admitted to hospital in spite of the handicap of increasing shortages of nursing staff resulting in the closure of wards. He has laid great stress in sub-dividing a Geriatric Department, such as exists at Orsett Lodge Hospital, into different categories for the varying physical capabilities of rehabilitated patients. His classification consists of :—

(1) The Acute Geriatric Wards to which all elderly patients are admitted for appropriate medical or surgical treatment after an accurate diagnosis and survey of their condition has been made. The length of stay is usually less than 90 days and, in nearly all cases, less than six months.

(2) The Long Stay Annexe for the Frail Ambulant cases is provided for those patients who are improving but need extra physical help or treatment from the Physiotherapist.

(3) The Long Stay Annexe for the Ambulant cases is provided for those patients who are completely independent except for nursing and medical supervision and intermittent medical treatment.

(4) The Long Stay Annexe for the Permanently Bedfast cases. It is this type of case, as Mr. Cosin points out, which requires so much nursing and any steps taken to diminish this number are a great help towards the solution of the nursing shortage.

As a result of the statistical analysis over a period between 7th November, 1944 and 10th January, 1947, it was found that of 780 patients over 60 years of age who were admitted, 37 per cent. were discharged, the stay usually being of less than six months duration, while 38 per cent. died. Of the 21 per cent. resident at the end of the period,

14 per cent. were in Long Stay Annexes for the Ambulant or Frail Ambulant, while 4 per cent. were permanently bedfast—*that is had been in bed after the first six months of hospital residence.* To this latter figure, however, must be added those patients who died after a hospital stay of more than six months, which amounted to 6 per cent.

Mr. Cosin's conclusions are, therefore, that about 10 per cent. of the total Geriatric admissions can be considered as permanently bedfast, with a hospital stay exceeding six months, for the period under observation, although later figures appear to show that even this can be reduced.

Secondly the proportion which were rehabilitated and therefore not in need of a full-time nursing service, was 15 per cent. The average length of stay of the patients who died was 87.6 days while that of patients who were discharged was 51.6 days. It would appear then that the average duration of stay of the patients over 60 for the two years period under review is between 60 and 70 days. This compares very favourably with the pre-war estimate of 260 days given by Dr. Cohen in the Working Party's report on the Nursing profession.

If these results can be achieved elsewhere, then a very great step towards the solution of the nursing shortage will be evident.

This analysis will be completed by the social and statistical survey of the discharged patients on which Mr. Cosin is now working in collaboration with the Nuffield Trust.

PART VI

TABLE VII.

NOTIFICATIONS OF INFECTIOUS DISEASE

52 Weeks ended 30th December, 1946.

(Figures obtained from the Quarterly Corrected Returns, Civilians only).

	Scarlet Fever.	Whooping Cough.	Diphtheria.	Measles.	Pneumonia.	Cerebro-Spinal Fever.	Acute Poliomyelitis.	Acute Poliomyelitis.	Encephalitis Lethargica.	Dysentery.	Ophthalmia Neonatorum.	Puerperal Pyrexia.	Small Pox.	Para-Typhoid Fever.	Enteric Fever.	Erysipelas.	Chicken Pox.	Malaria.	Others.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
URBAN.																				
...ing B.	156	243	7	605	72	2	—	—	—	7	9	17	—	—	1	27	—	—	2	1148
...ham	8	20	4	12	5	—	1	—	—	1	—	2	—	—	—	4	—	1	—	58
...ley	30	114	15	77	32	—	—	—	—	—	—	1	—	—	1	6	14	—	51	341
...ter and Bocking	2	5	—	41	—	1	—	—	—	3	—	—	—	—	—	—	—	—	—	52
...tford	21	163	6	81	10	1	—	—	—	4	—	3	—	—	—	4	—	1	34	328
...ntinsea	—	1	—	102	11	—	—	—	—	—	—	—	—	—	—	—	—	1	3	118
...ham-on-Crouch	—	8	—	103	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	114
...ey Island	2	—	1	66	2	—	—	—	—	—	1	—	—	—	—	1	—	—	—	73
...ford B.	6	206	—	288	13	2	—	—	—	3	—	52	—	2	—	5	—	—	—	577
...ell	23	42	4	50	17	—	—	—	1	2	—	1	—	—	2	5	—	—	—	149
...ford B.	74	88	—	212	103	3	—	—	—	13	2	2	—	—	—	9	—	—	1	567
...on	19	7	2	211	2	1	1	—	—	—	—	—	—	—	—	1	7	—	7	258
...ldeigh B.	51	78	1	62	33	5	—	—	—	12	3	14	1	—	—	9	—	1	51	321
...ham B.	205	319	15	733	194	1	2	—	—	14	11	19	—	1	—	33	—	—	7	1554
...ton	12	46	—	97	6	—	—	—	—	8	—	5	—	—	—	2	—	—	—	176
...ton and Walton	6	2	—	52	5	—	—	—	—	1	—	—	—	—	—	—	1	—	1	68
...ford	1	1	—	10	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	13
...ver R.	16	12	1	8	3	—	—	—	—	—	2	—	—	—	—	2	—	—	5	49
...ouchurch	204	150	4	478	87	5	2	—	—	4	2	2	—	1	—	15	—	6	—	960
...ford B.	220	342	9	1135	262	4	2	—	—	21	5	58	1	2	1	55	—	13	28	2158
...ton B.	203	155	16	441	139	3	2	—	—	23	4	20	—	1	1	24	—	—	—	1032
...ton R.	4	25	1	9	1	—	—	—	—	1	—	1	—	—	—	3	21	—	19	86
...ham	5	27	1	31	11	—	—	—	—	1	—	—	—	—	—	7	—	—	—	83
...ford R.	76	200	7	552	86	5	—	—	—	3	1	33	—	1	1	31	—	1	—	997
...ton Malden B.	5	5	2	19	2	—	—	—	—	—	—	—	—	—	—	3	—	—	—	36
...ence	67	62	22	48	88	5	—	—	—	11	3	5	7	7	5	10	55	11	57	463
...ham Holy Cross	7	21	—	18	1	—	—	—	1	4	—	—	—	—	—	3	—	—	—	55
...hampton B.	177	199	23	505	82	7	—	—	—	25	4	32	—	2	3	34	—	—	—	1093
...ley and Woodford B.	72	170	2	182	40	1	1	—	—	19	1	8	—	1	1	13	—	—	67	578
...Hersia	—	16	—	21	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	39
...ln	6	44	1	122	11	2	—	—	—	2	—	1	—	—	—	2	—	—	—	191
...ewick	5	6	—	1	4	—	—	—	—	—	1	—	—	—	—	2	—	—	9	28
Total	1685	2778	144	6372	1326	48	11	—	2	182	49	277	9	18	16	311	98	35	342	13703
RURAL.																				
...ather	3	11	1	157	—	3	—	—	—	6	1	5	—	—	—	—	—	—	—	187
...ehford	37	149	—	86	6	—	—	—	—	—	—	2	—	1	—	5	—	—	5	282
...ow	3	84	1	48	5	—	2	—	—	3	—	—	—	1	—	—	—	—	—	147
...ro	28	62	—	160	8	1	—	—	—	2	—	—	—	—	—	3	—	—	9	213
...ford	4	22	—	26	6	2	—	—	—	2	—	—	—	—	—	1	—	—	3	66
...ton and Wivenhoe	9	30	1	46	13	1	—	—	—	5	—	2	—	—	—	1	—	—	8	116
...ll	6	53	—	45	1	—	—	—	—	—	—	1	—	—	—	3	—	—	100	218
...ford	16	2	—	32	1	—	—	—	—	13	—	—	—	—	—	—	—	—	—	58
...ton Walden	30	41	4	115	17	3	—	—	—	6	2	37	—	1	—	7	—	—	4	267
...ford	22	37	—	175	10	—	—	—	—	—	—	1	—	—	—	3	—	—	—	248
...ford	49	27	1	94	16	1	—	—	—	—	—	2	—	—	—	3	—	—	30	212
Total	201	509	8	924	83	11	2	—	—	37	3	50	—	3	—	26	—	—	177	2034
...—Districts and Urban Districts	1685	2778	144	6372	1326	48	11	—	2	182	49	277	9	18	16	311	98	35	342	13703
...—Rural Districts	201	509	8	924	83	11	2	—	—	37	3	50	—	3	—	26	—	—	177	2034
...for Administrative County	1886	3287	152	7296	1409	59	13	—	2	219	52	327	9	21	16	337	98	35	519	15737
...for 1945	2045	2060	219	15594	1141	68	42	—	1	558	40	228	—	11	9	391	6	11	109	22431
...for 1944	2448	4893	109	3044	1186	59	7	—	—	516	31	186	—	4	4	351	68	6	174	13137

TABLE VIII.

BIRTHS, DEATHS, ANNUAL RATES, &c., 1946.

Sanitary District	Census 1931		Registrar-General's Figures.					Deaths at Various Ages (figures supplied by Medical Officer of Health)												Crude annual rates per 1,000 estimated population					Infant Mortality Rate per 1,000 live Births
	Acreage	Adjusted Population	Estimated Population	Live Births	Still Births	Deaths at all Ages	Deaths under 1 Year of Age	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 55	55 and under 65	65 and under 75	75 and upwards	Total Deaths	Birth Rate	Death Rate	Zymotic Death Rate	T.B. Res. Death Rate	Other Res. Death Rate	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
URBAN																									
Barking B.	3,877	51,270	74,390	1,586	48	601	52	52	5	7	11	21	13	42	78	95	130	147	601	21.3	8.1	0.03	0.46	1.00	33
Benfleet	6,361	12,091	18,960	361	9	232	6	6	1	1	3	1	4	2	18	24	73	99	232	19.0	12.2	—	0.26	1.16	17
Billericay	29,567	27,708	39,710	772	14	488	26	24	1	3	2	5	10	20	33	64	148	175	485	19.4	12.3	0.05	0.23	1.52	34
Braintree and Bocking	6,812	13,497	16,680	323	13	166	6	6	—	2	3	1	4	5	14	22	46	63	166	19.4	9.9	—	0.36	0.66	18
Brentwood	18,269	23,694	27,730	500	19	299	25	25	—	1	3	5	7	7	20	47	70	114	299	18.0	10.8	0.11	0.29	1.08	50
Brightlingsea	2,852	4,147	4,232	76	3	62	3	3	—	—	—	—	—	2	3	7	19	28	62	18.0	14.6	—	—	1.18	39
Burnham-on-Crouch	5,352	3,492	3,582	79	3	52	1	1	—	—	—	1	—	2	1	8	16	26	55	22.1	14.5	—	0.84	0.12	13
Canvey Island	4,351	3,532	9,103	207	6	126	7	7	—	1	1	4	3	3	10	28	27	42	126	22.7	13.8	—	0.76	1.00	34
Chelmsford B.	4,772	27,457	34,670	700	23	344	38	38	2	1	1	5	4	13	23	58	86	113	344	20.2	9.9	0.11	0.26	1.45	54
Chigwell	8,971	16,338	28,190	575	17	295	15	15	—	3	1	3	11	12	20	42	79	110	296	20.4	10.5	—	0.35	0.92	26
Chingford	2,868	22,076	43,290	884	16	329	24	24	—	2	2	8	9	23	39	54	73	96	330	20.4	7.6	0.05	0.37	0.65	27
Clacton-on-Sea	6,470	16,737	20,080	383	8	295	9	9	1	—	1	6	6	9	16	34	92	121	295	19.1	14.7	—	0.25	0.89	23.4
Colchester B.	12,011	49,131	48,710	1,091	27	541	41	40	—	6	5	4	11	22	44	81	141	188	542	22.4	11.1	0.08	0.16	1.00	38
Dagenham	6,554	89,362	106,530	2,380	63	692	74	74	6	3	19	25	28	59	110	116	122	127	689	22.3	6.5	0.06	0.41	1.07	31
Epping	1,488	5,081	6,188	117	1	78	2	2	1	—	—	3	1	2	7	10	16	36	80	18.9	12.6	0.16	0.48	0.97	17
Frinton and Walton	6,293	7,324	6,853	129	4	101	6	6	—	—	1	—	1	2	6	13	36	36	101	18.8	14.7	—	0.15	0.58	46
Halstead	1,176	6,012	6,215	87	3	71	1	1	1	—	1	2	—	2	5	10	24	25	71	14.0	11.4	—	0.48	1.29	11
Harwich B.	1,512	12,046	11,250	266	3	145	14	14	1	—	1	3	—	10	8	31	25	52	145	23.6	12.9	0.18	0.44	1.33	53.6
Hornchurch	19,768	39,389	95,460	2,029	54	866	84	86	8	6	8	18	33	41	94	150	167	263	874	21.2	9.1	0.11	0.48	1.01	41
Ilford B.	8,425	131,061	173,900	3,443	94	1,653	102	102	3	10	10	42	38	87	160	237	399	545	1,653	19.8	9.5	0.04	0.33	1.08	30
Leyton B.	2,594	128,313	101,910	2,223	53	1,181	64	64	5	8	10	15	31	52	80	199	303	414	1,181	21.8	11.6	0.12	0.43	1.77	29
Maldon B.	4,809	8,542	9,290	184	3	119	5	5	1	—	1	2	4	3	5	22	31	45	119	19.8	12.8	—	0.21	0.86	27
Rayleigh	5,727	6,407	8,320	146	5	106	1	1	—	1	3	—	1	8	6	15	31	40	106	17.6	12.7	—	0.48	1.56	7
Romford	9,342	37,840	65,920	1,462	31	644	62	61	3	8	6	7	18	37	67	109	155	170	641	22.2	9.8	0.11	0.50	0.98	42
Saffron Walden B.	7,562	5,930	6,796	108	3	89	6	6	—	—	1	—	—	4	8	10	17	43	89	15.9	13.1	—	0.15	1.76	55
Thurrock	38,324	61,644	67,430	1,595	33	620	63	62	5	4	8	20	23	26	57	99	144	167	615	23.6	9.2	0.13	0.31	1.07	39
Waltham Holy Cross	10,958	7,092	7,390	136	3	88	3	3	2	—	—	2	4	5	6	13	24	35	94	18.4	11.9	0.14	0.14	1.22	22
Walthamstow B.	4,342	132,972	118,050	2,544	70	1,331	87	87	4	8	13	28	109		342		740		1,331	21.5	11.3	0.10	0.39	1.64	34
Wanstead and Woodford B.	3,842	43,129	57,570	1,117	22	641	35	35	2	3	7	4	16	25	61	105	154	229	641	19.4	11.1	0.10	0.49	1.34	31
West Mersea	3,171	2,067	2,286	54	1	34	1	1	—	—	—	—	1	—	3	4	15	9	33	23.6	14.9	—	0.88	—	18
Witham	7,329	6,751	7,960	170	3	85	6	6	—	—	1	—	2	2	7	8	25	34	85	21.3	10.7	0.13	0.13	0.88	35
Wivenhoe	1,493	2,193	2,285	41	2	21	1	1	—	—	—	—	—	—	—	1	13	7	22	17.9	9.2	—	0.44	0.88	24
Total—Borough and Urban	256,982	1,004,325	1,230,930	25,768	657	12,395	870	870	131		120	1,134			3,055		7,085		12,395	20.9	10.0	0.07	0.37	1.18	34
RURAL																									
Braintree	59,556	16,378	17,170	302	4	236	6	6	1	—	2	—	9	4	12	26	58	118	236	17.6	13.7	0.06	0.12	1.00	20
Chelmsford	86,506	27,836	35,190	693	14	396	16	17	—	1	4	5	7	10	28	48	97	179	396	19.7	11.3	0.06	0.17	1.10	23
Dunmow	72,487	15,320	17,810	342	8	225	12	12	2	—	1	5	3	7	12	21	57	105	225	19.2	12.6	—	0.39	1.29	35
Epping	34,851	13,576	16,280	292	12	185	6	6	2	1	4	2	2	6	17	32	52	74	198	17.9	11.4	0.06	0.24	0.85	21
Halstead	76,693	15,997	15,940	274	5	227	7	6	1	1	2	3	1	11	10	30	59	104	228	17.2	14.2	0.06	0.12	1.00	23
Lexden and Winstree	66,097	19,418	20,850	369	6	235	15	15	—	2	1	1	3	4	19	33	48	106	232	17.7	11.3	0.09	0.24	0.91	41
Maldon	78,507	13,348	13,400	268	9	204	4	4	1	1	5	—	3	12	13	25	48	92	204	20.0	15.2	—	0.22	1.64	15
Ongar	47,236	11,523	13,870	284	8	159	12	12	1	2	—	1	1	4	15	25	32	58	151	20.5	11.5	—	0.29	1.16	42
Rochford	36,080	13,069	16,830	319	11	245	16	15	—	1	1	2	4	8	18	37	66	87	245	19.0	14.6	—	0.42	1.80	50
Saffron Walden	78,585	15,543	15,970	286	4	192	12	12	1	2	—	1	1	7	12	26	45	85	192	17.9	12.0	—	0.18	0.56	42
Tendring	65,884	21,771	22,210	442	14	256	15	15	—	2	1	3	4	4	16	39	63	109	256	19.9	11.5	0.09	0.22	1.00	34
Total—Rural	702,482	184,679	205,520	3,871	95	2,560	121	121	20		19	141			508		1,751		2,560	18.8	12.5	0.04	0.23	1.11	31
Total—Borough and Urban	256,982	1,004,325	1,230,930	25,768	657	12,395	870	870	131		120	1,134			3,055		7,085		12,395	20.9	10.0	0.07	0.37	1.18	34
Total—Administrative County	959,464	1,189,004	1,436,450	29,639	752	14,955	991	991	151		139	1,275			3,563		8,836		14,955	20.6	10.4	0.07	0.35	0.13	33

The figures in Columns 9–20 are given by the District Medical Officers of Health, whereas the totals are supplied by the Registrar-General.

TABLE IX.

CAUSES OF DEATH—YEAR 1946.

(Figures supplied by the Registrar-General).

Sanitary District.	Typhoid & Paratyphoid Fevers.	Cerebro-Spinal Fever.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Tuberculosis of Respiratory System.	Other forms of Tuberculosis	Syphilitic Diseases.	Influenza.	Measles.	Acute Poliomyelitis. Poliomyelitis.	Acute Infectious Encephalitis.	Cancer of Buccal Cavity and Oesophagus (M). Uterus (F).	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.	Diarrhœa (under 2 years).	Appendicitis.	Other Digestive Diseases.	Nephritis.	Puerperal and Post-Abortive Sepsis.	Other Maternal Causes.	Premature Birth.	Congenital Malformations Birth Injury, Infantile Disease.	Suicide.	Road Traffic Accidents.	Other Violent Causes.	All Other Causes.	Total.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	
URBAN																																					
Barking B.	...	...	...	...	1	34	3	4	3	...	...	...	9	20	7	79	3	56	142	24	38	31	7	9	2	2	11	15	...	3	15	23	4	5	6	45	601
Benfleet	...	...	...	...	...	5	1	1	3	...	...	...	4	9	2	28	2	21	89	6	12	8	2	1	...	1	5	5	...	...	...	4	2	2	3	16	232
Billericay	...	...	...	1	1	9	3	...	2	...	...	...	9	26	13	39	...	46	121	28	27	26	7	11	...	2	15	5	1	...	7	15	5	7	7	55	488
Braintree & Bocking	...	...	...	...	...	6	4	...	3	...	...	...	3	4	3	18	3	22	43	3	4	5	2	3	...	...	7	2	...	...	2	2	1	4	2	20	166
Brentwood	...	...	...	...	2	8	...	1	...	...	...	...	4	10	7	27	1	39	53	27	12	13	5	4	1	1	9	6	...	...	10	11	3	3	5	37	299
Billericay	...	...	...	...	...	...	...	...	...	...	...	...	2	1	2	13	...	6	18	2	...	5	...	1	...	...	1	...	...	...	...	2	1	...	3	5	62
Billericay	...	...	...	...	...	3	...	1	...	...	...	...	...	1	1	3	1	7	22	...	2	2	...	...	...	...	2	1	...	...	...	...	...	...	...	6	52
Burnham-on-Crouch	...	...	...	...	...	7	1	2	1	1	...	...	4	4	1	11	...	13	45	1	7	1	1	2	...	...	3	1	...	1	2	2	...	3	3	10	126
Canvey Island	...	...	...	2	...	9	...	6	1	1	...	...	5	4	9	38	3	26	88	6	18	26	6	3	1	...	7	9	...	2	8	19	3	4	4	36	344
Chelmsford B.	...	...	...	...	...	10	...	1	5	...	...	1	2	12	3	41	1	40	78	15	13	9	4	2	...	1	6	7	...	...	5	9	1	2	6	21	295
Chigwell	...	...	...	1	...	16	1	3	1	...	...	...	2	14	12	29	1	42	88	12	12	9	7	6	1	1	9	8	...	1	5	14	...	2	8	24	329
Chingford B.	...	...	...	...	...	5	...	1	8	...	...	...	7	12	3	41	...	51	87	12	11	7	...	5	...	1	4	3	...	...	1	6	4	...	3	23	295
Clacton-on-Sea	...	...	...	...	...	8	...	2	5	...	...	1	15	17	14	55	4	66	163	10	25	17	7	6	4	1	11	12	...	3	12	17	10	4	6	45	541
Colchester B.	...	1	...	...	...	1	...	...	1	...	...	...	9	26	12	86	4	39	195	19	60	45	9	6	4	3	14	15	1	1	26	29	1	12	10	39	692
Dagenham B.	...	2	...	1	1	44	10	4	5	...	...	...	...	5	2	13	...	7	26	4	4	2	...	...	1	...	...	1	...	...	...	3	...	...	...	8	78
Epping	...	...	...	...	...	3	...	...	1	...	...	...	3	1	1	17	1	9	27	3	1	...	3	3	...	1	1	6	...	...	1	5	...	...	4	12	101
Frinton & Walton	...	...	...	...	...	1	...	...	1	...	...	...	1	1	2	5	2	8	16	...	5	1	2	...	...	...	2	...	1	...	1	...	...	...	1	19	71
Halstead	...	...	...	...	...	3	...	...	1	...	...	...	2	2	...	17	1	22	41	3	9	4	2	...	2	...	...	3	...	...	1	6	1	...	5	18	145
Harwich B.	...	3	...	...	...	46	5	4	8	...	3	2	7	24	23	93	4	79	204	33	47	39	11	7	11	6	17	18	1	4	14	40	12	9	11	81	866
Hornchurch	...	3	...	1	1	57	9	14	20	...	...	1	29	53	33	203	14	183	402	57	81	74	33	17	5	4	30	36	...	8	30	44	20	15	22	154	1,653
Ilford B.	...	3	...	2	1	44	3	1	13	2	...	...	17	36	17	115	7	120	272	42	122	48	11	20	7	4	20	20	2	1	18	24	14	6	17	152	1,181
Leyton B.	...	...	...	...	...	2	...	...	3	...	...	...	2	3	2	11	1	15	46	3	3	5	...	...	...	...	4	2	...	1	3	3	1	...	1	8	119
Maldon B.	...	...	...	...	...	4	1	...	2	...	...	...	2	4	3	6	2	17	24	2	7	6	...	...	2	2	2	2	...	...	...	2	...	2	1	15	106
Rayleigh	...	...	...	1	1	33	4	4	4	...	...	...	10	17	15	63	2	49	172	28	26	33	6	9	4	2	9	18	...	2	19	31	9	4	3	65	644
Romford B.	1	...	...	...	...	1	2	...	4	...	...	...	2	2	4	8	1	12	23	2	3	4	5	1	...	1	...	1	...	...	2	1	...	1	...	8	89
Saffron Walden B.	...	1	...	1	2	21	7	4	6	...	...	...	11	19	6	64	6	67	126	40	33	29	10	10	6	...	23	19	...	3	18	18	2	9	16	41	620
Thurrock	...	3	...	...	...	1	...	2	...	...	...	...	1	3	1	10	1	9	26	5	3	6	...	1	1	...	2	2	...	...	1	2	...	1	1	9	88
Waltham Holy Cross	...	...	...	...	...	1	...	6	13	1	...	2	17	46	21	139	13	149	278	44	106	71	17	19	3	5	29	21	...	2	22	33	12	9	24	155	1,331
Walthamstow B.	...	5	...	3	6	46	12	6	16	...	...	...	...	...	...	2	...	7	14	1	...	...	...	...	...	...	2	1	...	...	...	1	...	...	...	4	34
Wanstead & Woodford B.	1	...	...	...	...	28	2	5	13	1	...	...	9	20	17	78	3	74	146	24	38	31	8	6	4	2	12	13	...	3	4	16	7	8	8	60	641
West Mersea	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	7	14	1	...	...	...	...	...	...	2	1	...	...	...	1	...	...	...	4	34
Witham	...	...	...	1	...	1	1	...	...	...	...	...	...	3	...	7	1	12	27	4	3	4	...	...	...	...	2	4	...	...	1	3	...	2	1	9	85
Witham	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	1	5	8	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	21
	2	21	...	14	16	463	69	66	130	4	3	7	188	398	236	1,360	82	1,318	3,070	461	733	562	165	152	57	40	259	256	6	35	228	385	113	114	181	1,201	12,395
RURAL.																																					
Braintree	...	1	...	1	...	2	...	...	...	...	...	1	6	7	2	27	1	38	67	8	10	7	...	5	...	...	5	6	...	...	2	4	1	2	4	29	236
Chelmsford	...	...	...	1	...	6	1	...	5	...	...	...	2	15	7	36	2	50	113	13	18	17	4	5	1	...	11	7	1	...	1	11	10	5	6	48	396
Dunmow	...	...	...	...	...	7	...	...	2	...	...	1	1	10	1	23	6	22	68	12	13	8	2	...	...	...	8	7	...	...	...	9	2	5	3	15	225
Epping	...	...	...	...	...	4	...	1	...	...	...	...	3	7	3	19	2	17	64	8	9	4	1	...	1	...	7	8	...	1	1	5	...	4	1	15	185
Halstead	...	...	...	...	...	2	...	...	1	...	...	...	2	9	4	20	3	35	61	1	5	9	2	2	1	...	6	4	...	...	2	2	2	2	4	48	227
Leyden & Winstree	...	...	...	1	...	5	2	...	3	...	...	...	4	6	2	12	...	34	99	5	5	10	4	1	1	...	3	8	...	...	4	4	4	1	3	14	235
Maldon	...	...	...	...	...	3	2	...	2	...	1	...	5	4	4	25	2	27	63	7	16	5	1	...	...	...	3	1	...	1	1	2	3	1	8	17	204
Ongar	...	...	...	...	...	4	1	...	1	...	...	...	2	6	5	20	...	14	54	5	4	10	2	3	...	...	3	5	...	1	...	4	1	1	3	10	159
Rochford	...	...	...	...	...	7	2	2	2	...	...	...	3	7	3	26	3	33	66	7	14	14	2	2	...	2	8	4	...	...	3	9	1	...	2	23	245
Saffron Walden	...	...	...	...	...	3	1	...	3	1	...	...	2	11	7	19	3	17	57	9	2	1	6	1	...	1	5	10	...	...	3	7	1	2	6	15	192
Tendring	...	...	...	...	...	5	...	1	4	1	...	...	1	6	2	23	3	40	69	5	15	7	...	2	1	1	6	8	...	...	3	4	3	1	7	38	256
Rural	...	1	...	3	...	48	9	4	23	1	1	2	31	88	40	250	25	327	781	80	111	92	24	21	5	4	65	68	1	3	20	61	28	24	47	272	2,560
Boro' & Urban	2	21	...	14	16	463	69	66	130	4	3	7	188	398	236	1,360	82	1,318	3,070	461	733	562	165	152	57	40	259	256	6	35	228	385	113	114	181	1,201	12,395
Total for Administrative County	2	22	...	17	16	511	78	70	153	5	4	9	219	486	276	1,610	107	1,645	3,851	541	844	654	189	173	62	44	324	324	7	38	248	446	141	138	228	1,473	14,955
Total for 1945	...	22	1	12	14	548	112	77	83	15	4	6	235	470	230	1,544	114	1,466	3,757	507	798	688	186	171	87	40	345	266	7	27	171	369	109	146	663	1,344	14,834
" 1944	...	12	4	44	12	599	113	92	97	4	1	15	227	432	262	1,406	111	1,445	3,535	513	765	667	190	172	77	54	362	307	11	41	218	362	114	147	970	1,581	14,969

TABLE X

CAUSES OF DEATH IN THE ADMINISTRATIVE COUNTY OF ESSEX—BY AGE AND SEX

Cause of Death	Males							Females						
	0 –	*1 –*	*5 –*	*15 –*	*45 –*	*65 –*	*Total*	*0 –*	*1 –*	*5 –*	*15 –*	*45 –*	*65 –*	*Total*
1. Typhoid and paratyphoid	—	—	—	—	—	—	0	—	—	—	1	—	1	2
2. Cerebral-spinal fever	3	7	2	2	1	—	15	3	1	1	1	1	—	7
3. Scarlet fever	—	—	—	—	—	—	0	—	—	—	—	—	—	0
4. Whooping cough	5	3	—	—	—	—	8	5	4	—	—	—	—	9
5. Diphtheria	—	2	6	—	—	—	8	1	1	3	3	—	—	8
6. Tuberculosis—respiratory	2	1	1	130	150	38	322	3	—	4	130	35	17	189
7. Tuberculosis—other forms	3	12	3	14	12	4	48	1	9	5	11	2	2	30
8. Syphilitic disease	1	—	—	2	28	26	57	1	—	—	3	6	3	13
9. Influenza	4	2	—	4	22	41	73	1	2	—	8	19	50	80
10. Measles	1	2	—	—	—	—	3	—	1	1	—	—	—	2
11. Acute poliomyelitis and polioencephalitis ..	—	—	1	—	—	1	2	—	—	2	—	—	—	2
12. Acute infectious encephalitis	—	—	—	3	2	—	5	—	—	—	2	1	1	4
13. Cancer of mouth and oesophagus	—	—	—	4	23	63	90	*	*	*	*	*	*	*
14. Cancer of uterus	—	—	—	—	—	—	0	—	—	—	14	57	58	129
15. Cancer of stomach and duodenum	—	—	—	10	95	145	250	—	—	—	11	80	145	236
16. Cancer of breast	—	—	—	1	—	2	3	—	—	—	33	130	110	273
17. Cancer of all other sites	—	6	3	54	372	488	923	1	7	4	68	222	385	687
18. Diabetes	—	—	1	5	8	24	38	—	—	2	8	20	39	69
19. Intra-cranial vascular lesions	1	—	—	11	159	520	691	1	—	—	16	209	728	954
20. Heart disease	—	—	5	84	470	1,321	1,880	—	1	1	76	276	1,617	1,971
21. Other circulatory diseases	—	—	—	7	73	189	269	—	—	—	10	42	220	272
22. Bronchitis	10	1	2	20	150	339	522	9	2	2	9	36	264	322
23. Pneumonia	99	12	5	18	67	136	337	72	10	2	30	52	151	317
24. Other respiratory diseases	2	2	1	8	45	48	106	1	—	—	11	22	49	83
25. Ulcer of stomach or duodenum	—	—	—	20	58	60	138	—	—	—	3	13	19	35
26. Diarrhoea under two years	34	3	—	—	—	—	37	21	4	—	—	—	—	25
27. Appendicitis	—	2	3	6	8	4	23	—	2	5	2	5	7	21
28. Other digestive diseases	8	2	5	12	54	80	161	8	2	—	17	50	86	163
29. Nephritis	—	1	2	22	61	102	188	—	2	2	21	35	76	136
30. Puerperal and post-abortion sepsis ..	—	—	—	—	—	—	0	—	—	—	7	—	—	7
31. Other maternal	—	—	—	—	—	—	0	—	—	—	36	2	—	38
32. Premature birth	143	—	—	—	—	—	143	105	—	—	—	—	—	105
33. Congenital malformation, birth injury and other infant diseases	222	8	3	8	5	1	247	168	3	1	17	8	2	199
34. Suicide	—	—	1	21	47	22	91	—	—	—	17	22	11	50
35. Road traffic accidents	—	2	15	36	31	17	101	—	—	6	9	14	8	37
36. Other violent causes	12	10	9	45	30	29	135	9	5	1	13	9	56	93
37. All other causes	16	12	18	69	109	494	718	15	5	11	72	115	537	755
All Causes	566	90	86	616	2,080	4,194	7,632	425	61	53	659	1,483	4,642	7,323

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