[Report 1930] / Medical Officer of Health, Essex County Council.

Contributors

Essex (England). County Council.

Publication/Creation

1930

Persistent URL

https://wellcomecollection.org/works/px56s4yt

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

XLI.
1930.

BUREAU OF HYGIENE
LIBRARY
-9 OCT 1931
TROPICAL DISEASES

ADMINISTRATIVE COUNTY OF ESSEX.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1930.

WILLIAM A. BULLOUGH, M.B., M Sc., D.P.H.,

COUNTY MEDICAL OFFICER OF HEALTH.

Chelmsford:
PRINTED BY JOHN DUTTON, 8, TINDAL STREET.

INDEX—*continued.*

	PAGE.
Ophthalmia Neonatorum	119, 130
Orthopædic Treatment	120, 121
,, After-Care	122, 123
,, Masseuse	... 121
,, Surgeon	114, 120
Pemphigus Neonatorum	... 130
Physical Features of County	... 19
Population ...	... 18
Preface	... 5
Propaganda, Public Health	... 76
Provision of Midwifery Services	... 136
Public Assistance Committee	... 11
Public Assistance ...	... 143
,, Institutions, Survey of	144
,, ,, List of	... 145
,, ,, Use of	... 149
,, Bacteriological Facilities ...	... 149
,, Children's Homes	... 150
,, Order, 1930	... 154
Public Health and Housing Committee ...	... 11
Public Open Spaces ...	... 41
Public Health Act, 1925	... 104
Public Health (Prevention of Tuberculosis) Regulations, 1925	... 104
Public Health (Tuberculosis) Regulations, 1912	81, 82
Puerperal Fever ...	119, 130
Quinquennial Survey, Brief	... 8
Rateable Value ...	.. 18
Regional Town Planning Committees	40
Refuse Disposal ...	... 57
Rivers Pollution ...	... 45
Sale of Food and Drugs Acts	... 48
Sanatoria ...	... 93
Sanitary Inspectors ...	... 59
Scarlet Fever ...	... 23
Sanatorium Treatment in Essex	... 107
Sewage Works and Rivers Pollution	45
Shelters (Domiciliary)	... 106
Sources of Water Supplies	... 56
Smallpox, Notifications	... 23
Smallpox Hospitals ...	... 25
South Essex Joint Advisory Town Planning Committee	... 40
Staff, List of ...	... 14
Town Planning ...	40, 42
Trade, House and Other Refuse	... 57
Travelling Expenses (Maternity and Child Welfare) ...	... 119
Travelling Expenses (Tuberculosis)	104
,, ,, (Venereal Disease)	... 34
Travelling Health Exhibition	... 78
Tuberculosis ...	... 81
,, Dispensaries	... 86
,, Order, 1925	... 55
,, Care Associations	... 104
,, Nursing...	... 138
Vaccination ...	24, 152, 153
,, Order, 1930	... 152
Venereal Diseases, Scheme	... 31
,, ,, No. of Patients treated	... 33
,, ,, Propaganda	... 34
Visiting Stations (Tuberculosis)	... 89
Vital Statistics ...	... 19
Voluntary Hospitals, List of	... 36a
Water Supplies ...	... 56
X-ray Facilities (Tuberculosis)	97, 99, 108

PREFACE.

To the Chairman and Members of the Essex County Council.

I have the honour to submit to you my Twelfth Annual Report for the Administrative County of Essex for the year 1930. This is the 41st Report which has been issued, and, at the request of the Ministry of Health, it contains "information on certain matters in more detail than has been given in the Reports for the last four years." For the convenience of the general reader, I have summarised in this Preface the more important facts and incidents.

Throughout this Report, as suggested by the Ministry of Health, the populations used are those estimated by the Registrar-General for the year 1929, who gave the estimated figure 1,110,400 for 1929 and 1,162,000 for 1930. As a matter of interest, the Census figures for 1931 are given in Table XXIX, showing that the total population of the Administrative County, 1,198,601, has increased by 278,460 since 1921, an almost unprecedented rate of increase.

The birth-rate for 1930 was 16.8 as compared with 16.3 for the previous year, the total number of births being 18,700 and 18,218 respectively. The birth-rates for the two last quinquennial periods were 18.3 in 1921-25 and 16.5 in 1926-30.

The death-rate has fallen from 11.2 in 1929 to 9.9 in 1930, due very largely to the marked reduction in the number of deaths from Influenza and diseases of the respiratory system. The death-rates for the two quinquennial periods 1921-1925 and 1926-1930 are the same, namely, 10.4.

It is satisfactory to be able to report that the death-rate among infants under one year of age has been reduced to 45, which is the lowest ever recorded in this County, and compares very favourably with the rate of 60 for England and Wales.

Smallpox (Variola Minor) became markedly prevalent in the County during the year, the number of notifications increasing from 69 in 1929 to 602 in 1930, which is the highest number since 1902.

In respect to the prevalence of Scarlet Fever, Diphtheria and Enteric Fever during the years 1929 and 1930, the attack rate per 1000 for Scarlet Fever decreased from 3.55 to 3.45 ; for Diphtheria it increased from 1.98 to 2.8 ; and for Enteric Fever it also increased from 0.06 to 0.1.

Notifications of new cases of all forms of Tuberculosis increased from 1,357 in 1929 to 1,524 in 1930, but there was a slight decrease in the death-rate from 0.76 in 1929 to 0.75 in 1930. The total number of cases of Tuberculosis on the registers of the local Medical Officers of Health showed a further increase to 11,110.

During the year, important re-arrangements were made in the institutional accommodation for the treatment of tuberculosis, resulting in the provision of 474 beds as compared with 461 in the previous year. Further improvements have been carried out at the Harold Court Sanatorium, where the observation block provided

at the end of 1928 continued to be a helpful adjunct to the County Scheme. The Sible Hedingham Sanatorium, which had been in constant use since 1915, was relinquished in September, 1930. The High Beech Hospital, which was formerly used for surgical tuberculosis in children, is now being used only for those children who require convalescent treatment, and for children suffering from tuberculous glands. Patients from the two last mentioned Institutions were transferred to the new Sanatorium at Black Notley, which was opened by the Minister of Health. The Right Hon. A. Greenwood, M.P., on 26th April, 1930. The opening of this Institution, which is a great acquisition to the County Scheme for the treatment of tuberculosis, was a fitting culmination to the persistent efforts of the retiring Chairman of the County Public Health and Housing Committee, Alderman S. W. Robinson, J.P., as it was largely due to his energetic efforts on behalf of Essex consumptives that the scheme for the provision of the Institution received the sanction of the Ministry of Health.

There was no change during the year in the area for which the Essex County Council is responsible for the administration of the Maternity and Child Welfare Act and the Notification of Births Acts. Additions were made to the County Council's various schemes, particulars of which were given in a pamphlet (Form C.W. 42) for the information of local Child Welfare Committees. The additions included :—An extension of the Dental Scheme so as to provide dentures, the augmenting of the Hospital Treatment Scheme by arrangement with the Public Assistance Committee, five additional Child Welfare Centres, and a scheme for the provision of Ante-natal Clinics. Increasing attention has been given by the Committee to the question of maternal mortality, as it is felt that the continued loss of mothers is a challenge to this branch of preventive medicine. Efforts are being made to improve the midwifery service in the County, and to provide educational facilities, whilst the arrangements for ante-natal treatment at Welfare Centres are being extended, so as to bring skilled advice within reach of all expectant mothers. Tribute should be paid to the enthusiasm and keenness of the many voluntary workers at the Child Welfare Centres throughout the County. The absence of a County Maternity Hospital is keenly felt, but meanwhile arrangements have been made at Public Assistance Institutions and other hospitals for the treatment of not only complicated and difficult cases of confinement, but also for normal cases where the home conditions are not satisfactory.

Largely through the Chief Health Nurse and Assistant Chief Health Nurse, who continued to act as County Superintendent and Assistant County Superintendent respectively, close and helpful co-operation between the Essex County Council and the Essex County Nursing Association was maintained.

The scheme for the supervision and treatment of orthopaedic cases has continued to work successfully, 1,234 cases having been dealt with during the year, as compared with 926 for the previous year. Miss J. L. Hodge, who was the first whole-time trained Orthopaedic Masseuse for the County, resigned during the year, and her position was filled by Miss W. H. Tabor, whose duties include the supervision of the Ascertainment and Treatment Clinics, the visiting of homes to see that treatment is being continued, and that surgical appliances are being kept in a good state of repair and are being worn correctly.

With regard to general public health matters, 12,132 houses were erected in 1929 and 11,442 in 1930, making a total of 23,574.

An extensive milk sampling campaign was carried out during the year, 917 samples being submitted to biological examination. It is disappointing to record that the percentage of samples in which tubercle bacilli were found has shown a marked increase during the past three years, the figures being 7 per cent. for 1928, 9.6 per cent. for 1929, and 13.4 per cent. for 1930.

A special article is included in this report dealing with Sanitary Inspectors, who have to carry out many varied duties (which are becoming more important every year) for Local Sanitary Authorities.

Health propaganda has been carried out with increasing success, the County Council's Travelling Health Exhibition having proved very popular. The outstanding feature of the year in this connection was the holding of the Health Conference and Exhibition in the Shire Hall, Chelmsford, in March, 1930, when it was estimated that during the two days over 1,200 people passed through the Exhibition.

On pages 143 to 154 is given a review of the duties undertaken by the Public Assistance Committee since 1st April, 1930, and on page 36 a summary of the work under the Local Government Act, 1929. The smooth transfer of the various Poor Law systems in the Administrative County necessitated a tremendous amount of work on the part of the Chairman (Alderman A. Brooks) and Members of the Public Assistance Committee. Their first step was to familiarise themselves with the existing Institutions, and to study the needs of the Administrative County as a whole, with a view to recommending a progressive scheme of additions and improvements, which could be spread over a period of years. It is hoped to achieve close co-operation between the work of the Public Assistance Committee and other Committees dealing with cognate subjects, *e.g.*, Public Health and Housing Committee, Education Committee, and Mental Deficiency Committee.

The transfer of duties and responsibilities under the Local Government Act, 1929, will involve in the near future heavy capital expenditure, increased in large measure by the phenomenal growth of population in the last decade. Much expenditure will be required in connection with public assistance institutions, isolation hospitals, and mental deficiency institutions, in addition to extensions to sanatoria. It has to be borne in mind that, apart from the capital expenditure involved, a heavy increase in the annual maintenance charges must result.

It is not always appreciated that the cost of institutional treatment takes such a prominent part in the public health budget, *e.g.*, the cost of institutional treatment accounts for 74 per cent. of the total expenditure on treatment of tuberculosis, or 52 per cent. of the total expenditure on public health by the County Council.

In the existing financial conditions, considerable care will need to be taken in spending available capital money to the best advantage and in this connection the suggestion that isolation ward units could be built within the curtilage of general hospitals deserves serious consideration.

Brief Survey of the Quinquennial Period, 1926-1930.

The noteworthy features in the public health service of the past five years may be summarised as follows :—

(a) *Tuberculosis.* Extensions and improvements to the County scheme for the diagnosis and treatment of tuberculosis have been carried out, principally in connection with institutional treatment. The number of beds occupied at the end of 1925 was 342, as compared with 474 at the end of 1930.

The greatest asset to the County Council's scheme is the new Sanatorium at Black Notley, at which 184 beds are provided, but only 164 of those beds were actually available at the end of the year 1930.

(b) *Maternity and Child Welfare.* Additional legislation has further strengthened the schemes under this section for the benefit of babies and infants and expectant and nursing mothers.

It was necessary to appoint a special medical officer, an assistant chief health nurse, an orthopaedic masseuse, and additional health visitors, and to augment the staff of lady medical officers who give part-time service.

The Nursing Homes Registration Act, 1927, has brought under the supervision of the Public Health Committee no less than 54 Nursing Homes which are now inspected regularly.

(c) *Combined Medical Service.* The Combined Medical Service was maintained and extended to include the Urban Districts of Brentwood, Dagenham, Waltham Holy Cross and Witham, and the Rural District of Orsett, and was brought into operation in the new Urban Districts of West Mersea, Purfleet, Benfleet and Rayleigh.

The rapid growth in population of the Urban District of Dagenham necessitated later the discontinuance of the combined medical service in that area, and more recently at the request of the Chelmsford Borough Council, the combined service also ceased in that area.

During the period under review, the system of combined medical service in operation in this County was investigated by Dr. J. Pearse, of the Ministry of Health, whose final conclusions in the "Reports on Public Health and Medical Subjects, No. 45," dated October, 1927, were noted with considerable satisfaction, namely, "the definite advantages of the system are "such as to merit its continued encouragement, and the taking of such "steps as may be necessary to prepare for its further and more uniform "development."

This combination of medical services has now had 10 years' trial in this County, and throughout the whole of that period has operated successfully and efficiently. It has proved to be one of the best ways in which it is possible to secure for small Local Sanitary Authorities a Medical Officer of Health who is not engaged in private practice as a medical practitioner. Section 58 of the Local Government Act, 1929, requires every County

Council to formulate and submit to the Minister of Health, arrangements for securing by means of a combination of districts or otherwise that every Medical Officer of Health subsequently appointed for a district shall be restricted by the terms of his employment from engaging in private practice as a medical practitioner. By Memorandum L.G.A.41, dated January, 1931, the Ministry of Health suggest some of the considerations to be observed in formulating such arrangements, and they make special reference to the combined medical service as being one of the methods by which the services may be secured of Medical Officers of Health devoting the whole of their time to public duties.

(d) *Venereal Diseases.* Little alteration has been required in the scheme for the diagnosis and treatment of venereal diseases, and Essex is fortunate in being able to participate in the London and Home Counties Scheme, which includes facilities for treatment at nearly all the London Hospitals. There is need for the provision of additional clinics in the extra-metropolitan area, and efforts are being made accordingly.

(e) *Mental Deficiency.* It is pleasing to record that the legal difficulties in connection with the provision of extensions to accommodate mental defectives have been overcome.

(f) *Housing.* Housing of the people has continued to engage the attention of the Local Sanitary Authorities and their officers, the total number of houses erected in the Administrative County during the past five years with State assistance by Essex Sanitary Authorities being 8,158 and by other bodies or persons 42,181. The number erected without State assistance was 12,732.

Dwelling houses owned by the Local Sanitary Authorities in the Administrative County at the end of 1930 numbered 15,858. Such building has necessitated extensions, particularly during the past three years, to existing sewerage and sewage disposal works, when no less than 57 public inquiries were held by the Ministry of Health for sanction to borrow varying sums of money amounting to £1,314,120. Remarkable progress has, therefore, been and is being made in raising the standard of the general sanitation throughout the County.

Water mains have been extended and renewed in many districts, and during the period under review the last available large source of water supply, namely, the River Stour within the County of Essex, has been acquired by the South Essex Waterworks Co. Ltd., in order to meet the ever increasing demand for water in the southern portion of the County.

(g) *Refuse Dumps.* Special attention has been paid to the vexed question of the dumping of London refuse in Essex which became a menace to the health of the growing population near the northern bank of the Thames. Satisfactory recommendations appeared in the Report of the Departmental Committee on the Public Cleansing of London, dated May, 1930. Steps have since been taken to secure effective control over future dumps, but the prevention of all nuisances from existing dumps has not yet been achieved.

(h) *Other Work.* Improvements to sewage works have been secured by friendly co-operation with the Local Sanitary Authorities, with the result that the condition of the rivers may be said to be fairly satisfactory. The establishment of the Felstead Beet Sugar Factory in 1926, gave cause for anxiety, as in the first season the trade effluent caused gross pollution of the River Chelmer. It became necessary to take legal action, and eventually the necessary improvements were secured.

In respect to the milk supply the outstanding feature of the quinquennial period was the issuing of the Milk and Dairies Order, 1926, which gave further powers to Local Sanitary Authorities in respect to the supervision of dairies and cowsheds, and which empowered County Councils to carry out inspections of cattle.

The graded milk movement has made steady progress, the number of licences granted by the County Council for the production of Grade "A" Milk having increased from 27 in 1925 to 54 in1930.

To meet the demand for Public Health propaganda, particularly in Rural Districts, a travelling Health Exhibition has been provided, and has met with great success. Members of the staff of the County Health Department have been regularly engaged either in arranging and attending at Health Exhibitions, or in giving lectures throughout the Administrative County.

CONCLUSION.

I have very much pleasure in recording my appreciation of the confidence and support given to me by the Chairman and members of the Public Health and Housing Committee. Special reference must be made to the late Chairman of the County Council, Alderman H. E. Brooks, who, in his all too brief a period of office, displayed great interest in, and sympathetic consideration towards, the many public health problems of the County, in addition to his activities in all other branches of County administration ; also to the present Chairman of the County Council, Alderman J. H. Burrows, who for many years has been assiduous in promoting the interests of public health in the County ; also to the retiring Chairman of the Public Health and Housing Committee, Alderman S. W. Robinson, who in his period of office successfully carried through many improvements and extensions of the County public health services ; and to his successor, Alderman A. M. Mathews, who has already made his mark by his enthusiasm and devotion to the work. To my colleagues on the staff of the County Council, I desire to record my appreciation of their kindly co-operation. To all the Medical Officers of Health and other officers of the local Sanitary Authorities, to the medical, dental, nursing and clerical staffs, my best thanks are due for their efficient services. I am especially indebted to the Deputy County Medical Officer, Dr. T. P. Puddicombe, for his loyalty and support.

W. A. BULLOUGH,
County Medical Officer.

Public Health Department,
County Hall, Chelmsford,
August, 1931.

PUBLIC HEALTH AND HOUSING COMMITTEE.

Chairman—Alderman S. W. Robinson, resigned 24th May, 1930.
Alderman A. M. Mathews, elected 5th June, 1930.

Vice-Chairman—Alderman A. M. Mathews, up to 4th June, 1930.
Alderman F. D. Smith, elected 11th September, 1930.

ALDERMEN—

A. Brooks, H. E. Brooks, J. H. Burrows, C. W. Daines and E. W. Tanner.

COUNCILLORS—

J. R. Adams, Mrs. C. B. Alderton, P. Astins, Lieut.-Col. E. N. Buxton, A. G. Giller, H. Compton Guy, R. J. Hunt, W. A. Hurry, Mrs. J. H. Lester, J. C. Mead, J. Parish, W. T. Potts, C. S. Richardson, Dr. J. H. Swanton, G. J. Wetton, Mrs. B. W. Williams, H. E. Wood, E. G. Wright and E. J. Wythes.

MEDICAL AND NURSING SERVICES JOINT SUB-COMMITTEE.

ALDERMEN—

H. Brooks, H. E. Brooks, J. H. Burrows (*Chairman*), C. W. Daines, E. A. Hibbs, A. M. Mathews, S. W. Robinson (retired 24th June, 1930) and F. D. Smith.

COUNCILLORS—

Dr. J. P. Atkinson, Mrs. B. W. Williams and E. J. Wythes.
Co-opted Member—Mrs. K. M. E. Bell.

PUBLIC ASSISTANCE COMMITTEE.

Chairman—Alfred Brooks, Esq.

Vice-Chairman—Col. Gilbertson Smith.

Mrs. C. B. Alderton, A. R. Adams, Chas. Asplin, J. E. Ball, G. T. T. Bartram, A. Bradridge, E. G. Bratchell, Mrs. A. A. F. Brooks, Rev. B. C. Cann, H. C. Carruthers, Mrs. C. C. Chisholm, A L. Clarke, Mrs. C. Custerson, C. W. Daines, J. R. Furze, H. G. J. Foyster, A. G. Giller, A. W. Green, F. W. Green, E. A. Hibbs, Mrs. J. H. Lester, E. Luckin, Mrs. E. E. Maley, Col. A. E. Martin, H. J. Mitchell, Miss M. L. Mathieson, E. A. Mundy, T. Philpot, J. W. Rigby, J. Russell, W. C. Russell. J. T. Sanders, F. D. Smith, A. G. K. Serpell, F. G. Seabrooke, H. E. Shilton, Mrs. H. M. Tabor, H. B. Turner, O. Waters and Mrs. E. M. Wise.

TABLE I.

SHOWING RECORD OF RECEIPT OF ANNUAL REPORT FOR 1930 FROM EACH LOCAL MEDICAL OFFICER OF HEALTH.

Urban—

Barking	C. L. Williams	13th August, 1931
Benfleet	N. S. R. Lorraine	24th July, 1931
Braintree	P. J. Gaffikin	26th August, 1931
Brentwood	B. F. Beatson	26th June, 1931
Brightlingsea	*E. P. Dicken	27th May, 1931
Buckhurst Hill	*C. R. Dykes	23rd May, 1931
Burnham-on-Crouch	*R. Lloyd	2nd July, 1931
Canvey Island	N. S. R. Lorraine	21st July, 1931
Chelmsford B.	J. R. Tibbles	20th July, 1931
Chingford	A. Gardiner	12th June, 1931
Clacton-on-Sea	W. A. Milne	26th May, 1931
Colchester B.	W. F. Corfield	3rd July, 1931
Colchester Port	*T. C. Brentnall	31st March, 1931
Dagenham	E. W. C. Thomas	9th July, 1331
Epping	*H. A. Watney	18th July, 1931
Frinton-on-Sea	*J. C. Brockwell	18th August, 1931
Grays	W. T. G. Boul	24th June, 1931
Halstead	J. S. Ranson	25th July, 1931
Harwich B.	*G. Ford Porter	
Harwich Port	*G. Ford Porter	24th April, 1931
Hornchurch	A. Ball	9th June, 1931
Ilford B.	A. H. G. Burton	25th June, 1931
Leyton B.	A. W. Forrest	16th June, 1931
Loughton	*A. Butler Harris	19th May, 1931
Maldon B.	*H. Reynolds Brown	30th July, 1931
Maldon Port	*H. Reynolds Brown	2nd September, 1931
Purfleet	W. T. G. Boul	16th July, 1931
Rayleigh	H. S. R. Lorraine	10th August, 1931
Romford	A. Ball	27th June, 1931
Saffron Walden B.	S. R. Richardson	20th July, 1931
Shoeburyness	N. S. R. Lorraine	10th Sept., 1931
Tilbury	W. T. G. Boul	1st August, 1931
Waltham Holy Cross	L. S Fry	17th June, 1931
Walthamstow B.	A. T. W. Powell	10th July, 1931
Walton-on-the-Naze	*J. C. Brockwell	10th August. 1931
Wanstead	*P. Macgregor	17th June, 1931
West Mersea	W. H. Alderton	4th June, 1931
Witham	J. S. Bradshaw	4th June, 1931
Wivenhoe	*G. T. Kevern	12th May, 1931
Woodham	*R. Vere Hodge	24th June, 1031

Rural—

Belchamp	J. S. Ransom	26th June, 1931
Billericay	*J. Douglas Wells ..	
Braintree	P. J. Gaffikin	29th July, 1931
Bumpstead	A. Morgan	11th June, 1931
Chelmsford	J. F. Macdonald ..	10th July, 1931
Dunmow	P. J. Gaffikin	
Epping	*W. F. Erskine	25th July, 1931
Halstead	J. S. Ranson	15th July, 1931
Lexden and Winstree ..	W. H. Alderton ..	9th June, 1931
Maldon	J. F. Macdonald ..	10th July, 1931
Ongar	*A. S. David	2nd September, 1931
Orsett	W. T. G. Boul	24th June, 1931
Rochford	J. F. Macdonald ..	7th July, 1931
Romford	A. Ball	1st June, 1931
Saffron Waldon	S. R. Richardson ..	20th July, 1931
Stansted	R. F. Dunn	30th July, 1931
Tendring	J. Ramsbottom	23rd July, 1931

* Part-time Medical Officer of Health.

STAFF.

On 1st January, 1931.

(1) Medical.

(a) *County Medical Officer, School Medical Officer and Chief Tuberculosis Officer—*

W. A. Bullough, M.B., Ch.B., M.Sc., D.P.H.

(b) *Chief Assistant County Medical Officer—*

T. P. Puddicombe, D.S.O., M.B., B.S., M.R.C.S., L.R.C.P., D.P.H.

(c) *Consulting Surgeon (part-time) in Surgical Tuberculosis—*

Sir Henry J. Gauvain, M.C., M.A., M.D., F.R.C.S. (Eng.).

(d) *Consulting Physician (part-time) for Pulmonary Tuberculosis—*

W. B. Wood, M.A., M.D., B.Ch., M.R.C.P., D.P.H.

(e) *Assistant County Medical Officers* performing combined duties of School Medical Inspector, Tuberculosis Officer and Child Welfare Officer for County Council, and also holding the appointment of Local Medical Officer of Health under Combined Medical Service Scheme—

Name.	Qualifications.	Area.
W. H. Alderton	M.C., M.R.C.S., L.R.C.P., D.P.H.	Lexden and Winstree
B. F. Beatson	M.R.C.S., D.T.M. & H., D.P.H.	Brentwood
W. T. G. Boul	M.D., Ch.B., D.P.H.	Grays, Tilbury, Orsett
J. S. Bradshaw	M.B., Ch.B., D.P.H.	Braintree, Dunmow and Witham
L. S. Fry	B.A., M.D., D.P.H.	Waltham Holy Cross
A. Gardiner	M.B., Ch.B., D.P.H.	Chingford
N. S. R. Lorraine	M.D., Ch.B., D.P.H., F.R.S.(Edin.)	Benfleet, Rayleigh, Shoeburyness, etc.
W. A. Milne	M.B., Ch.B., D.P.H.	Clacton
J. Ramsbottom	M.B., Ch.B., D.P.H.	Tendring
J. S. Ranson	M.R.C.S., L.R.C.P., D.P.H.	Halstead, etc,
S. R. Richardson	B.A., M.D., B.Ch., B.A.O., D.P.H.	Saffron Walden

(f) *School Medical Inspectors and Child Welfare Officers (whole-time County Council)—*

Maud Bennett (Miss)	L.R.C.P., L.R.C.S.	Orsett
Charlotte R. Brown (Mrs.)	L.R.C.P., L.R.C.S., M.D.(Brux.)	Romford
E. L. Ewan	M.B., Ch.B., D.P.H.	Woodford
G. M. D. Lobban	M.B., Ch.B., D.P.H.	Dagenham
M. D. Rankine (Miss)	M.B., Ch.B., D.P.H.	Braintree
W. A. M. Stewart	L.R.C.P., L.R.C.S., D.P.H.	Chelmsford

(g) *Tuberculosis Officers*—(see also (e))

(i) *Whole-time County Council.*

Name.	Qualifications.	Dispensary or Sanatorium.
V. Feldman ..	.. M.D., M.R.C.P., D.P.H.	.. Harold Court Sanatorium
T. L. Ormerod..	.. M.A., M.B., B.Ch.,	.. Leyton
J. Sorley .	.. M.A., M.D., D P.H. LL.B.	.. Walthamstow
W. L. Yell ..	.. M.D., Ch.B., D.P H. ..	.. Ilford
M. C. Wilkinson	.. M.B., B.S., M.R.C.S., L.R.C.P.	.. Black Notley Sanatorium

(ii) *Part-time County Council.*

W. F. Corfield (M.O.H., Colchester)	M.D., D.P.H. ..	.. Colchester
C. L. Williams (M.O.H., Barking)	B.Sc., M.R.C.S., L.R.C.P., D.P.H.	Barking

(h) *County Bacteriologist*—

J. F. Beale .. .. B.A., M.R.C.S., L.R.C.P., D.P.H.

(i) *Medical Practitioners performing duties for County Council (part-time)*—

T. G. Cunningham (Miss), Waltham Abbey, C.W.O. only
D. H. Haler, Dagenham, S.M.I. only
E. Pirrie (Mrs.), Maldon, C.W.O. only.
J. B. Ratcliffe (Mrs.), Hockley, S M.I., C.W.O.
E. J. L. Smith (Miss), Bocking, S.M.I., C.W.O.

(2) County Health Inspector.

A. Marsh, M.R.San.I. and Cert. Insp. of Meat and Other Foods.

(3) County Orthopaedic Masseuse.

W. H. Tabor, C,S.M.M.G., M.E.

(4) Health Visitors.

Chief Health Nurse : D. M. Landon, Gen. Training, Cert. Mid. & R.S.I.
(Also County Superintendent, Essex County Nursing Association)

Assistant Chief Health Nurse : E. A. Davieson, H.V. Cert., Gen. Training & Cert. Mid.
(Also Asst. County Superintendent, Essex County Nursing Association.)

(a) *Whole-time County Council.*

Centre.	Name.	Qualifications.	Duties undertaken. T.B.	S.N.	C.W.
Stansted	Chittenden, A. E.	Gen. Training and Cert. Midwife	Yes	Yes	Yes
Braintree	Thomas, M. A.	Bd. of Ed. Cert. and Cert. Midwife	,,	,,	,,
Brentwood	White, G. M.	New H.V. Cert. Gen. Training and Cert. Midwife	,,	,,	,,

(b) *Whole-time Tuberculosis Nurses.*

Centre.	Name.	Qualifications.	Duties undertaken. T.B.	S.N.	C.W.
Barking	Sansom, R.	Gen. Training	Yes	No	No
Dagenham	Richards, E. F.	Board of Education (1923) Cert. & Cert. Midwife	,,	,,	,,
Ilford	Shepherd, M. A.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Martin, M.	New H.V. Cert., Gen. Training, Cert. Midwife, R.S.I.	,,	,,	,,
Leyton	Griffin, M. W.	Board of Education (1923) Cert., Cert. Midwife and R.S.I.	,,	,,	,,
,,	Bowman, T. E.	Cert. Midwife, Nursing Cert.	,,	,,	,,
,,	Lamborn, E.	Gen. Training, Cert. Midwife and R.S.I.	,,	,,	,,
Walthamstow	Purves, D.	Sanatorium Training	,,	,,	,,
,,	Brightman, A.	Children's Cert.	,,	,,	,,
,,	Ames, A.	Gen. Training and Cert. Midwife	,,	,,	,,

(c) *Whole-time School Nurses.*

Dagenham	Lunn, E. L.	Gen. Training	No	Yes.	No
,,	Thurtle, E.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Murphy, E. M.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Champion, C. F.	Gen. Training and Cert. Midwife	,,	,,	,,

(d) *Whole-time, but only giving part-time to County Council.*

Centre.	Name.	Qualifications.	Duties undertaken for C.C. T.B.	S.N.	C.W.
Lexden and Winstree and Wivenhoe	Meachen, N. V.	Gen. Training and Cert. Midwife	Yes	Yes	Yes
Lexden and Winstree	Jackson, M. J.	,, ,,	,,	,,	No
Grays	Miller, E. C.	New H.V. Cert., Gen. Training, Cert. Midwife, R.S.I.	,,	,,	,,
,,	Polley, A.	Gen. Training, Cert. Midwife, R.S.I.	,,	,,	,,
Tilbury	Marshall, E. M.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Hinde, K. M.	Board of Education Cert., Cert. Midwife, R.S.I. National Health Society H.V. Cert. 1915	,,	,,	,,
Wanstead	Clarke, H.	New H.V. Cert. Gen. Training and Cert. Midwife	,,	,,	,,
Colchester	Sasse, A. W.	Experience as H.V.	,,	No	,,

Centre.	Name.	Qualifications.	Duties undertaken. T.B.	S.N.	C.W.
Billericay	Cassidy, M.	Gen. Training and Cert. Midwife	Yes	Yes	Yes
Tendring	Wallace, A. C. G.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Croll, M.	New H.V. Cert. Gen. T. Cert. Midwife, R.S.I.	,,	,,	,,
,,	Steele, M.	Gen. Training	,,	,,	,,
Dunmow	Thomas, M. W.	New H.V. Cert. Gen. Training and Cert. Midwife R.S.I.	,,	,,	,,
Thaxted	Ives, D. M.	New H.V. Cert. Gen. Training and Cert. Midwife	,,	,,	,,
Epping	Myers, S. J.	New H.V. Cert. Gen. Training and Cert. Midwife	,,	,,	,,
Halstead	Jossaume, J.	New H.V. Cert., Gen. Training and Cert. Midwife	,,	,,	,,
Maldon	Limmer, I.	Gen. Training and Cert, Midwife	,,	,,	,,
Maldon R. and Burnham	Brown, R. A.	New H.V. Cert., Gen. Training and Cert. Midwife	,,	,,	,,
Maldon R. (North)	Anderson, J. A.	Board of Education Cert. Cert., Midwife, R.S.I.	,,	,,	,,
Ongar	Mann, R. L.	New H.V. Cert. and Cert. Midwife	,,	,,	,,
Saffron Walden	Woodman, E. M	Gen. Training and Cert. Midwife	,,	,,	,,
Belchamp	Starr, G. M.	New H.V. Cert., Gen. Training and Cert. Midwife	,,	,,	,,
Witham	Watson, H. J.	New H.V. Cert., Gen. Training, Cert, Midwife and R.S.I.	,,	,,	,,
Rochford	Smith, E. M.	Gen. Training and Cert. Midwife	,,	,,	,,
,,	Richardson, P. M.	New H.V. Cert., Gen. Training, Cert. Midwife and R.S.I.	,,	,,	,,
Chingford	Waterhouse, M.	King's College Cert.	,,	,,	,,
Buckhurst Hill	Glover, E.	Gen. Training, Cert. Midwife and R.S.I.	,,	,,	,,
Romford	Philpott, A. F.	Gen. Training and Cert. Midwife	,,	,,	,,
Hornchurch	Fawcett, E. H.	Gen. Training, R.S.I., and L.O.S.	,,	,,	,,
Chelmsford	Franks, E. L.	Gen. Training and Cert. Midwife	,,	,,	No
Woodford	Waterhouse, K.	Children's Cert. and Cert. Midwife	,,	,,	,,
Orsett	Wall, A. D.	Gen. Training	,,	,,	,,
Romford	Newby, A. E.	,,	,,	,,	,,

PART I.

ACREAGE AND POPULATION.

(*a*) ACREAGE. There has been no alteration in the acreage of the Administrative County since 1915, and the present area is 964,443 acres. In Table XXIX on page 155 is given a list of the 54 Sanitary Districts showing the acreage of each district.

(*b*) POPULATION. As the estimated population supplied by the Registrar-General for each sanitary district was not available until the end of June, 1931, the Ministry of Health has suggested that Medical Officers of Health may use the 1929 estimated population in calculating the birth and death rates, etc., provided a statement to this effect is included in the report.

The statistics in this report have therefore been calculated on the basis of the Registrar-General's estimate of the population for 1929, viz. :—

(*a*) For calculating birth-rate, the figure, which includes civilian and military population, is 1,115,570

(*b*) For calculating the death-rate, the figure, which includes only civilian population, is 1,110,400

The end of the intercensual period being very close, there is little advantage in including the usual table of estimated populations for the quinquennial period.

During the preparation of the report the preliminary Census figures for 1931 have been received, and are included in Table XXIX, Part V.

The table below compares the population at the Census, 1921, with the estimated figure for 1929, from which it will be observed that the percentage increase since 1921 is 21·2. The table also gives particulars of the municipal boroughs, urban and rural districts, the number of persons per acre, and has been enlarged to show information required by the Ministry of Health in regard to—

(*a*) Inhabited houses ;
(*b*) No. of families or separate occupiers ; and
(*c*) The rateable value.

TABLE II.

	Area in Acres, 1921.	Population.			No. of Persons per acre.	No. of Acres per person.	No. of inhabited houses.	No. of families or separate occupiers.	Rateable value.
		Census 1921.	Estimated Population, 1929.		(Calculated on Census figures).				
			For Birth-rate.	For Death-rate.					
Municipal Boroughs (8)	41,949	432,691	466,008	462,278	10·31	0·09	85,887	100,625	£26,580,403
Urban Districts (29) ...	101,553	255,056	366,362	365,472	2·50	0·39	42,347	47,206	
Rural ,, (17) ...	820,941	232,394	283,200	282,650	0·28	3·53	63,895	65,769	
	964,443	920,141	1,115,570	1,110,400	0·95	1·05	192,129	213,600	

A 1d. Rate produces £26,389.

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE COUNTY.

Essex is one of the Metropolitan Shires situated to the north-east of London, the southern boundary being the River Thames. The shape of the County is roughly that of a parallelogram, and though in parts it is flat and marshy, there are elevated areas and many beautiful sectors, such as Epping Forest and Hatfield Forest in the west and the Stour Valley in the north. The soil is mostly London Clay, under which is the chalk which outcrops at several points (*e.g.* Saffron Walden and Grays).

In the south-west and south, the County is thickly populated, more so now than in 1925, owing to the development of population and industry along the north bank of the Thames.

In consequence of the establishment of new works and docks there is now considerable industrial activity in the south of the County, which however is still largely a residential area for persons employed in London. The centre and northern areas of the County are mainly agricultural but there are also large engineering works at Chelmsford, Colchester, Earls Colne and Silver End, textiles at Braintree and Halstead, cement and brickmaking at Grays, breweries at Romford, Ilford and Chelmsford, and asbestos works at Barking.

None of the industries can be said to have had any serious influence on the health of those engaged in them with the exception of the asbestos works at Barking, where there has been some evidence of pulmonary asbestosis amongst the workpeople. Asbestosis was the subject of a special report by Dr. W. Burton Wood and Colleagues at the Victoria Park Hospital and was referred to in my Annual Report for 1928.

Meteorological data are set out in Table XIII on page 75.

VITAL STATISTICS.

Birth-rate. In the table below the chief vital statistics for the Administrative County of Essex are compared with those for England and Wales for the year 1930 and also for the two preceding quinquennial periods :—

	Essex.			England and Wales.		
	1921-1925.	1926-1930.	1930.	1921-1925.	1926-1930.	1980.
Birth-rate per 1,000 population	18·3	16·5	16·8	19·9	16·8	16·3
Death-rate ,, ,, ,, ...	10·4	10·3	9·9	12·2	12·1	11·4
Zymotic death-rate per 1,000 population ...	0·4	0·4	0·4	0·5	Not yet available.	
Infant mortality rate per 1,000 population ...	53	50	45	76	68	60

The birth rate per 1,000 population for 1930 was 16.8 compared with 16.3 in 1929, the number of registered births being 18,700 and 18,218 respectively.

Of the 18,700 births registered, 9,489 were males and 9,211 females, and included in these figures there are 600 illegitimate births (311 males and 289 females), equivalent to 3.2 per cent. of the total births.

In Table III on page 22 are given the birth rates for 1930 for each Sanitary District, along with comparative rates for the last two quinquennial periods. It will be seen that the rate for 1930 is slightly higher than the average rate for the quinquennial period 1926-30, but is lower than the average rate for the previous five years 1921-25.

The following statement indicates the highest and lowest average birth-rates occurring in the Sanitary Districts during the five years 1926-30 :—

Highest.		Lowest.	
Dagenham U...	29.9	Frinton-on-Sea U.	6.0
Tilbury U. ..	22.6	Canvey Island U.	8.8
Shoeburyness U.	21.1	Brightlingsea U.	10.9
Chingford U. ..	19·9	Wanstead U. ..	11.0
Barking U. ..	19.2	Clacton on-Sea U.	11.2

Death-rate. Of the 11,039 deaths registered in the Administrative County during the year 1930, 5,766 were males and 5,273 females, the death-rate being 9.9 per 1,000 population (the same as in 1926) compared with 11.2 in 1929. The explanation of the fall of 1.3 per 1,000 in the death-rate is the reduction in the number of deaths from Influenza and diseases of the Respiratory System, as will be readily seen from the following table :—

	1926.	1927.	1928.	1929.	1930.
Heart Disease, Cerebral Haemorrhage and Arterio Sclerosis	2,407	2,798	3,049	3,420	3,120
Cancer, Malignant Disease ..	1,363	1,448	1,505	1,511	1,540
Diseases of Respiratory System ..	1,293	1,494	1,207	1,753	1,027
Tuberculous Diseases	757	823	812	849	833
Influenza	147	515	132	546	104
Congenital Diseases	386	404	436	470	471

That Essex is a healthy County is shown by a comparison of the Essex total death-rate with that for England and Wales during the past five years :—

Year.	Administrative County of Essex.	England and Wales.
1926	9.9 ..	11.6
1927	10.8 ..	12.3
1928	10.0 ..	11.7
1929	11.2 ..	13.4
1930	9.9 ..	11.4

In my Annual Report for 1928, a table was included which gave details of the population, annual number of deaths and annual total death-rates in Essex in quinquennial periods for the previous 20 years. The table has been brought up to date, and is as follows :—

Period.		Mean Population.	Mean Annual No. of Deaths.	Mean Annual Death-rate.
1911-1915	..	1,037,434	11,847	11.5
1916-1920	..	*828,816	10,270	12.4
1921-1925	..	933,214	9,752	10.4
1926-1930	..	1,064,180	11,055	10.4

*Southend and East Ham constituted County Boroughs in 1914 and 1915 respectively.

The death rates for 1930 for each Sanitary District are compared in Table III on page 22 with the two quinquennial periods 1921-25 and 1926-30.

INFANT MORTALITY.

During the year, 850 infants under the age of one year died, 491 being males and 359 females. The infant mortality rate (*i.e.* the ratio of deaths of infants under one year of age per 1000 live births) is therefore 45, which is the lowest ever recorded in the Administrative County.

The number of deaths of illegitimate infants included in the above figures was 60, equivalent to an illegitimate infant mortality rate of 100.

No doubt the cool wet summer and the comparative absence of diarrhoeal diseases assisted in the reduction of the infant mortality rate, the number of deaths from diarrhoea being 72, compared with 109 in 1929. Nevertheless, the cumulative effect of the teaching of Mothercraft by the Health Visitors and Child Welfare Centres is undoubtedly a contributory factor in the steady improvement in the infant mortality rate.

The following table compares the infant mortality rates in the Administrative County and England and Wales during the past 10 years :—

Year.		Administrative County. Births.		Deaths under 1 year of age.		Rate per 1,000 Births.		England and Wales. Rate per 1,000 Births.
1921	..	18,298	..	1,089	..	59	..	83
1922	..	17,179	..	954	..	55	..	77
1923	..	17,330	..	794	..	46	..	69
1924	..	16,218	..	846	..	52	..	75
1925	..	16,516	..	859	..	52	..	75
1926	..	16,743	..	877	..	52	..	70
1927	..	16,661	..	851	..	51	..	69
1928	..	17,758	..	914	..	51	..	65
1929	..	18,218	..	970	..	53	..	74
1930	..	18,700	..	850	..	45	..	60

The Infant Mortality rates for 1930 for each Sanitary District are compared in Table III on page 22 with the last two quinquennial periods.

TABLE III.

TABLE SHOWING BIRTH-RATE, DEATH-RATE, INFANT MORTALITY RATE AND ZYMOTIC DEATH-RATE FOR THE YEAR, 1930 AND FOR THE TWO LAST QUINQUENNIAL PERIODS.

SANITARY DISTRICTS.	BIRTH-RATE.			DEATH-RATE.			INFANT MORTALITY RATE.			ZYMOTIC DEATH-RATE.		
	1921-25.	1926-30.	1930.	1921-25.	1926-30.	1930.	1921-25.	1926-30.	1930.	1921-25.	1926-30.	1930.
Urban.												
Barking	23.6	19.2	19.0	9.8	10.1	10.3	69	61	61	0.7	0.7	1.1
Benfleet	—	13.4	14.5	—	12.1	10.8	—	58	35	—	0.7	0.4
Braintree	17.8	16.5	18.0	11.7	11.6	10.6	36	43	78	0.1	0.1	0.1
Brentwood	15.9	11.9	11.2	10.4	9.1	7.1	56	36	12	0.3	0.1	0.1
Brightlingsea	16.7	10.9	9.9	12.3	13.5	11.2	49	45	47	0.1	0.2	0.2
Buckhurst Hill	17.6	13.9	12.5	10.3	10.4	8.9	56	47	—	0.3	0.2	0.2
Burnham-on-Crouch ..	14.1	13.4	10.8	13.0	13.0	13.0	52	37	26	0.3	0.2	0.3
Canvey Island	—	8.8	9.9	—	5.4	5.6	—	86	48	—	0.1	—
Chelmsford B.	17.1	16.2	18.0	9.9	10.6	10.4	41	54	42	0.2	0.3	0.2
Chingford	17.9	19.9	21.8	9.6	8.5	8.6	53	35	17	0.2	0.2	0.2
Clacton-on-Sea	13.0	11.2	10.4	10.1	10.4	11.2	29	46	37	0.1	0.1	0.2
Colchester B.	18.1	15.5	15.6	10.5	10.8	9.8	53	42	35	0.4	0.2	0.3
Dagenham	—	29.9	28.0	—	8.4	7.7	—	73	67	—	1.3	0.9
Epping	15.4	13.5	11.4	12.6	11.7	10.7	60	51	33	0.2	0.4	0.6
Frinton-on-Sea	12.8	6.0	3.1	6.7	8.4	8.8	43	39	—	0.1	—	—
Grays	20.7	17.5	17.0	9.6	9.9	8.9	52	44	22	0.5	0.4	0.1
Halstead	17.2	13.3	14.3	12.3	14.1	12.4	53	47	59	0.2	0.1	—
Harwich B.	21.6	17.6	16.9	10.6	10.4	10.3	61	46	49	0.4	0.2	0.2
Hornchurch	—	18.3	25.7	—	10.4	13.4	—	55	73	—	0.5	0.9
Ilford B.	16.8	15.3	15.9	9.2	8.7	8.4	48	43	33	0.3	0.3	0.3
Leyton B.	17.5	14.2	13.7	9.9	10.2	9.5	56	52	46	0.5	0.3	0.4
Loughton	16.0	15.6	15.3	9.6	8.7	10.2	17	33	18	0.2	0.1	0.1
Maldon B.	16.0	14.6	15.0	12.2	12.9	13.3	35	53	10	0.0	0.3	0.3
Purfleet	—	17.1	17.0	—	8.0	8.1	—	39	45	—	0.2	0.2
Rayleigh	—	17.7	21.1	—	13.8	10.6	—	108	73	—	—	—
Romford	18.0	18.3	20.9	11.1	11.4	10.2	53	56	43	0.4	0.5	0.3
Saffron Walden B. ..	14.5	11.9	9.2	13.5	14.0	13.8	62	44	19	0.4	0.3	0.2
Shoeburyness	21.7	21.1	21.5	9.2	10.1	9.9	55	31	29	0.2	0.3	0.3
Tilbury	24.9	22.6	23.5	9.3	8.6	7.9	61	66	52	0.6	0.7	0.6
Waltham Holy Cross ..	16.9	14.9	17.8	9.9	11.4	11.1	48	60	49	0.3	0.3	0.4
Walthamstow B.	19.2	16.3	15.7	9.8	10.2	9.3	56	48	40	0.5	0.4	0.5
Walton-on-the-Naze ..	14.6	11.5	12.2	9.9	10.7	10.0	66	30	—	0.3	0.1	—
Wanstead	13.5	11.0	11.3	9.8	10.2	11.2	32	47	30	0.3	0.3	0.3
West Mersea	—	12.2	10.3	—	11.0	11.2	—	64	87	—	0.1	0.4
Witham	16.6	16.0	15.2	12.6	10.9	11.5	71	50	45	0.1	0.3	—
Wivenhoe	15.6	12.9	14.2	13.8	13.3	12.5	52	33	30	0.4	0.3	—
Woodford	16.2	13.6	13.8	9.3	10.4	10.6	42	42	64	0.2	0.3	0.5
	18.1	16.6	17.0	10.0	10.0	9.5	54	52	46	0.4	0.4	0.4
Rural.												
Belchamp	17.5	14.9	13.7	14.2	13.5	13.7	60	48	54	0.2	0.1	0.2
Billericay	17.1	16.0	16.9	10.5	10.6	10.2	51	57	34	0.2	0.2	0.2
Braintree	15.7	15.3	16.4	13.4	12.1	11.4	44	46	73	0.1	0.1	0.2
Bumpstead	17.8	15.3	12.5	14.5	16.3	19.0	37	48	—	0.1	0.2	—
Chelmsford	18.2	15.6	14.5	11.1	10.9	11.3	48	40	46	0.2	0.2	0.1
Dunmow	15.8	14.5	13.0	12.9	13.3	13.0	52	50	30	0.1	0.2	0.1
Epping	17.6	14.4	14.5	10.9	11.7	11.6	46	50	61	0.2	0.2	0.3
Halstead	15.2	13.4	13.5	12.2	12.9	13.5	45	44	74	0.1	0.2	0.1
Lexden and Winstree ..	16.2	15.9	15.6	11.6	12.5	11.0	51	39	24	0.1	0.2	0.3
Maldon	16.9	13.9	12.6	11.4	12.1	11.3	50	54	62	0.2	0.2	—
Ongar	20.6	18.7	20.6	11.1	12.1	12.8	43	55	46	0.2	0.4	0.1
Orsett	19.7	18.0	19.8	9.2	9.8	10.6	53	47	48	0.3	0.5	0.3
Rochford	19.6	18.6	20.6	11.4	11.4	12.5	52	47	36	0.3	0.2	0.2
Romford	25.2	18.6	18.4	10.2	8.9	8.3	58	54	31	0.6	0.5	0.3
Saffron Walden	17.4	14.3	15.0	13.7	14.1	11.3	59	47	14	0.2	0.1	0.1
Stanstead	17.1	14.2	12.2	12.0	13.1	11.0	39	40	36	0.1	0.2	0.4
Tendring	18.6	16.1	15.3	10.7	11.4	10.2	49	41	52	0.3	0.1	0.2
Total, R.D.	18.6	16.2	15.9	11.3	12.1	11.2	51	48	44	0.3	0.2	0.2
" U.D.	18.1	16.6	17.0	10.0	10.0	9.5	54	52	46	0.4	0.4	0.4
" Ad. County ..	18.3	16.5	16.8	10.4	10.3	9.9	53	50	45	0.4	0.4	0.4

NOTIFICATION OF INFECTIOUS DISEASES.

Table XXXI in Part V of the report shows the usual summary of notifications of infectious disease in the various Sanitary Districts during 1930, together with the attack rate per 1,000 population.

Excluding 1,524 notifications of tuberculosis, it will be observed that there were 9,306 persons notified as suffering from infectious disease, the attack rate for the Administrative County being 8·4 per 1,000 population, as against 8·9 for 1929.

Scarlet Fever. There was a slight decrease in the number of notifications of this disease from 3,945 in the previous year to 3,867, the attack rate being 3·48 per 1,000 compared with 3·55 in 1929.

The number of deaths registered was 24, the case mortality rate per cent. being 0·62. Comparative figures for the previous year were 21 deaths, and a case mortality rate of 0·30.

Diphtheria. The incidence of this disease increased considerably during 1930, the number of notifications received being 3,103 with 146 deaths, compared with 2,195 notifications and 122 deaths in 1929. The case mortality rate per cent. was 4·70 compared with 5·56 in the previous year. The districts chiefly affected were Barking U., Dagenham U., Harwich B., Tilbury U., Bumpstead R., Saffron Walden R., and Ongar R. The County Council provided increased facilities under the Bacteriological Scheme for the carrying out of virulence tests with a view to effectually tracing "carriers" of the disease.

Enteric Fever. The number of notifications of this disease, namely, 117, is almost double that for 1929 (69). The highest number of cases were reported in the Chelmsford (15) and Colchester (13) Boroughs, and in the Rural Districts of Lexden and Winstree (6) and Romford (5). Only 7 deaths were recorded, the case mortality rate being 6·0 per cent. compared with 17·4 in 1929.

Smallpox.

Notification. There was a marked increase in the prevalence of Variola Minor during the year 1930, the number of cases notified being 602 as compared to 69 in the previous year. This is the highest number of cases notified in this County since 1902. The districts affected were Barking (46), Benfleet (3), Canvey Island (2), Chelmsford B. (4), Chingford (4), Clacton-on-Sea (1), Dagenham (58), Grays (2), Hornchurch (13), Ilford (25), Leyton (136), Maldon B. (4), Purfleet (1), Romford U. (12), Tilbury (50), Waltham Holy Cross (1), Walthamstow B. (190), Wanstead (2), Billericay R. (23), Orsett R. (19), Romford R. (6).

The same type of disease was prevalent in the adjoining County Boroughs and in the area of the London County Council. During the year 6,425 communications were received respecting cases of Smallpox in those areas. These were perused, and as a result, 490 communications were sent to local Medical Officers of Health in the Administrative County of Essex respecting contacts in their areas.

Assistance was given by members of the County Medical Staff to several local Medical Officers of Health in the County in the diagnosis of suspected cases of Smallpox.

DEATHS. There was one death reported as due to Smallpox, and this occurred in the Dagenham Urban District. This is the first death from Smallpox which has been registered since the onset of Variola Minor in this County in 1928.

With regard to this death, Dr. E. W. Caryl Thomas, the Medical Officer of Health, Dagenham, reports as follows :—

> " Smallpox appeared on one death certificate as a contributing cause. Actually, the disease had apparently nothing to do with the fatal termination. The case was a boy, aged 5, of family D. who was unrecognised as suffering from smallpox until found in the home when visiting school contacts. At the time of the visit, his skin lesions were almost healed, but he was found to be suffering from diphtheria to which he succumbed.

The great bulk of Smallpox which has occurred in England and Wales since 1923 has been of the kind known as Variola Minor, which is a definite strain or variety of Smallpox which breeds true, and can be readily distinguished from Variola Major.

The terms Variola Major and Minor have the authority of the last decennial International Conference on the Nomenclature of Causes of Death, Paris, October, 1929. Their English equivalents, " greater Smallpox " and " lesser Smallpox " are clumsy, whilst " mild Smallpox," which is often applied to Variola Minor, is apt to be misleading.

Experience has shown that the " English method " of notification, isolation, disinfection, vaccination and tracing and supervision of contacts, is competent to control Variola Major in spite of the failure to secure universal infant vaccination.

The same system, if adequately carried out at the commencement of an invasion of a locality by Variola Minor, succeeds in stamping it out, but if for any reason Variola Minor gets established in a district, then it will run its course for a number of years, abating through more or less natural causes

The general public are becoming less afraid of Smallpox owing to their familiarity with Variola Minor, and this makes it more than ever impossible to secure 100 per cent. of compulsory infant vaccination. It is admitted that the present system of compulsory vaccination is a sham, and does not effect its purpose. Moreover, the idea of compulsion, though ineffective, is apt to create opposition in the minds of a lot of people, who might by other methods be disposed to accept vaccination. Furthermore, we cannot ignore the possibility, even though remote, of Encephalitis Lethargica being a sequel to adolescent primary vaccination.

It would appear that the time has arrived when the present method of inefficient compulsory vaccination should be given up, and in its place voluntary vaccination and re-vaccination should be introduced by a steady educational campaign, mainly through the Health Visitors and District Nurses. If this were decided upon, then consideration would have to be given to such matters as, closer co-operation with the general practitioners, provision of vaccine lymph direct to general practitioners, and provision of additional powers for tracing and supervising contacts.

The only times when compulsory powers would be useful would be in connection with the vaccination of all contacts of notified cases of Smallpox.

The most appropriate time for voluntary vaccination would be shortly after reaching the age of one year, and for re-vaccination shortly before leaving school.

SMALLPOX HOSPITAL ACCOMMODATION.

Reference is made, under the heading of Isolation Hospitals below, to Section 63 of the Local Government Act, 1929, which requires every County Council to make a survey of the hospital accommodation for the treatment of infectious disease, and to prepare a scheme for submission to the Ministry of Health for the provision of adequate hospital accommodation for such diseases within the County.

Such a survey was made during the year by Members of a Special Sub-Committee and the County Medical Officer of Health. The present accommodation for the isolation and treatment of Smallpox in the geographical County of Essex is summarised in Table V on page 29. In respect to Area No. 8 shown in that table, the Local Sanitary Authorities included therein entered into an agreement in 1922 with the West Ham County Borough, who undertook to provide for the isolation and treatment of cases of Smallpox occurring in the whole of that area. Under this agreement, which expires in 1932, it was arranged that sporadic cases of Smallpox would be treated at the Orsett Smallpox Hospital, and that in the event of an epidemic the County Borough would open the Dagenham Smallpox Hospital, which is used by them as a sanatorium and which could be vacated at short notice. Since 1922, however, the Dagenham Sanatorium has been opened for Smallpox patients on one occasion only, as the County Borough were able to make arrangements with the London County Council to admit cases to the Joyce Green Hospital at Long Reach. The West Ham County Borough are not renewing this agreement, and other arrangements will, therefore, have to be made.

The above-mentioned Sub-Committee now have under consideration a report upon the Smallpox Hospital Accommodation with a view to preparing the scheme required by the Ministry of Health.

ISOLATION HOSPITALS.

For the purpose of securing the provision in every county of suitable means for the proper isolation and treatment of persons suffering from infectious disease, Section 63 of the Local Government Act, 1929, requires every County Council to undertake the following as soon as may be after 1st April, 1930 :—

(*a*) make a survey of the hospital accommodation for the treatment of infectious disease provided by the council and by the councils of any districts wholly or partly within the administrative county.

(*b*) prepare in consultation with the councils of all such districts and submit to the Minister of Health for his approval, a scheme for the provision of adequate hospital accommodation for the treatment of infectious disease within the county ; if necessary, consultations to be held with any County Borough adjoining the County.

No definition of "infectious disease" is given, except that the expression does not include tuberculosis or venereal disease.

Members of a Special Sub-Committee and the County Medical Officer of Health made a special survey of all the isolation hospitals in the Administrative County of Essex. The present accommodation provided by Local Sanitary Authorities of Joint Hospital Boards is summarised in Table IV on page 26.

The above-mentioned Sub-Committee now have under consideration a report upon the hospital accommodation for the treatment of infectious diseases with a view to preparing the scheme required by the Ministry of Health.

Fourteen of the Isolation Hospitals in the Administrative County applied for the usual grants at the rate of £5 per bed and £10 for motor ambulance under the conditions laid down by the County Council full particulars of which were set out in the Annual Report for 1925. When the above-mentioned survey was made, opportunity was taken of carrying out the annual inspection which forms part of the conditions under which the grants are paid. It was found that many of the hospitals had been compelled to utilise accommodation in other hospitals, proving the usefulness of paragraph 5 of these conditions, which requires each hospital "to be "prepared, if accommodation is available, to admit and treat patients from other "hospital areas upon agreed terms." Without the availability of such facilities, some of the Local Sanitary Authorities and Joint Hospital Boards would have been unable at certain periods of the year to provide isolation for a proportion of the cases of disease in their areas.

Table VI on page 30A shows the accommodation, number of cases treated, cost per bed, etc. at those hospitals for which grants for beds provided out of loan were recommended for the year ended 31st March, 1930. It will be noted that more patients were treated at the Isolation Hospitals, the figures being 4,441 for 1930, as compared to 3,626 for 1929. This therefore resulted in a decrease in the cost per patient treated per week, the figure being £20 15s. for 1930 as compared to £23 13s. 2d. for 1929.

During the year ended 31st March, 1930, grants at the rate of £2 10s. per bed for beds provided out of revenue were made to the following hospitals :—Colchester (40), Dunmow (4), Halstead (4), Orsett (48).

TABLE IV.

SHOWING PRESENT ACCOMMODATION IN THE GEOGRAPHICAL COUNTY OF ESSEX FOR THE TREATMENT OF INFECTIOUS DISEASES, EXCLUDING SMALL-POX.

Hospital Authority. 1.	Area served. Sanitary District. 2.	Acreage. 3.	Estimated population, 1929. 4.	No. of beds provided, allowing 144 sq. ft. floor space per bed. 5.
*Barking U.D.C.	Barking U.	3,805	42,160	33
Billericay R.D.C.	Brentwood U.	460	7,578	
	Billericay R.	49,394	35,950	
		49,854	43,528	30
Braintree J.H.B.	Braintree U.	2,224	8,568	
	Braintree R.	62,348	20,760	
		64,572	29,328	14
Chelmsford J.H.B.	Chelmsford B.	3,112	23,930	
	Chelmsford R.	83,045	28,600	
		86,157	52,530	43
Clacton U.D.C.	Clacton U.	4,069	15,510	18

TABLE IV *continued.*

Hospital Authority.	Area served. Sanitary District.	Acreage.	Estimated population, 1929.	No. of beds provided, allowing 144 sq. ft. floor space per bed.
1	2	3	4	5
Colchester B. ...	Brightlingsea U. ...	2,867	4,356	
	Colchester B. ...	11,333	44,890	
	Frinton U. ...	422	2,279	
	Walton-on-Naze U.	2,046	3,113	
	West Mersea U. ...	3,185	2,237	
	Wivenhoe U. ...	1,564	2,318	
	Lexden & Winstree R.	66,300	18,580	
	Tendring R. ...	73,131	23,720	
		160,848	101,493	137‡
Dunmow R.D.C. ...	Dunmow R. ...	73,503	15,510	12
*Epping R.D.C. ...	Epping R. ...	39,055	16,750	
	Ongar R. ...	47,236	10,460	
		86,291	27,210	14
Halstead J.H.B. ...	Halstead U. ...	647	5,887	
	Belchamp R. ...	26,500	4,090	
	Halstead R. ...	38,712	9,980	
		65,859	19,957	24
*Harwich B. ...	Harwich B. ...	1,541	11,890	25
Ilford B.	Ilford B. ...	8,496	116,200	110‡
*Leyton B. ...	Leyton B. ...	2,594	128,300	54
Maldon J.H.B. ...	Burnham U. ...	4,517	3,622	
	Maldon B. ...	3,028	6,612	
	Maldon R. ...	82,342	16,750	
	Witham U. ...	3,713	4,348	
		93,600	31,332	22
Orsett J.H.B. ...	Grays U. ...	1,359	18,480	
	Purfleet U. ...	8,899	9,141	
	Tilbury U. ...	1,855	17,090	
	Orsett R. ...	29,185	18,000	
		41,298	62,711	99

* Hospitals erected out of revenue.

‡ Excludes beds provided for tuberculosis patients.

TABLE IV—*continued.*

Hospital Authority.	Area served. Sanitary District.	Acreage.	Estimated population, 1929.	No. of beds provided, allowing 144 sq. ft. floor space per bed.
1.	2.	3.	4.	5.
Rochford R.D.C. ...	Benfleet U. ...	6,319	11,900	
	Canvey Island U. ...	4,400	6,386	
	Rayleigh U. ...	5,278	5,840	
	Rochford R. ...	39,006	14,830	
	Shoeburyness U. ...	1,036	5,683	
		56,039	44,639	18
Romford J.H.B. ...	Dagenham U. ...	6,556	76,970	
	Hornchurch U. ...	6,783	17,480	
	Romford U. ...	5,630	28,710	
	Romford R. ...	16,381	14,220	
		35,350	137,380	150
Saffron Walden J.H.B.	Bumpstead R. ...	11,874	2,320	
	Saffron Walden B. ...	7.502	5,656	
	Saffron Walden R. ...	59,975	9,650	
		79,351	17,626	13
Waltham J.H.B. ...	Buckhurst Hill U. ...	873	5,501	
	Chingford U. ...	2,808	16,090	
	Waltham Holy Cross U.	11,017	6,911	
	Woodford U. ...	2,161	22,490	
		16,859	50,992	46
Walthamstow B. ...	Epping U. ...	1,420	5,327	
	Loughton U. ...	3,961	7,137	
	Walthamstow B. ...	4,343	124,800	
		9,724	137,264	75
*Wanstead U.D.C. ...	Wanstead U. ...	1,679	17,950	18
	Totals ...	941,489	1,103,510	955
	Stansted R. ...	22,954	6,990	Uses Joint Hospital in Hertfordshire.

* Hospitals erected out of revenue.

‡ Excludes beds provided for tuberculosis patients.

TABLE V.

SHOWING SMALLPOX HOSPITALS IN THE GEOGRAPHICAL COUNTY OF ESSEX, DISTRICTS SERVED, AND NUMBER OF BEDS.

No.	Hospital Authority.	Area served. District.	Acreage.	Est. Popn. 1929.	No. of Beds provided allowing 144 sq. ft. floor space per bed.	Remarks.
1.	2.	3.	4.	5.	6.	7.
1.	Chelmsford J.H.B.	Chelmsford B.	3,112	23,930		
		Chelmsford R.	83,045	28,600		
			86,157	52,530	6	
2.	Colchester B.	Brightlingsea U.	2,867	4,356		Sporadic cases from Area 6 are treated at this hospital.
		Clacton U.	4,069	15,510		
		Colchester B.	11,333	44,890		
		Frinton U.	422	2,279		
		Harwich B.	1,541	11,890		
		Lexden & Wintree R.	66,300	18,580		
		Tendring R.	73,131	23,720		
		Walton-on-the Naze U.	2,046	3 113		
		West Mersea U.	3,185	2,237		
		Wivenhoe U.	1,564	2,318		
			166,458	128,893	10	
3.	Maldon J.H.B.	Burnham-on-Crouch U.	4,517	3,622		
		Maldon B.	3,028	6,612		
		Maldon R.	82,342	16,750		
		Witham U.	3,713	4,348		
			93,600	31,332	6	
4.	Orsett J.H.B.	Grays U.	1,359	18,480		Sporadic cases from Area 8 are treated at this hospital
		Orsett R.	29,185	18,000		
		Purfleet U.	8,899	9,141		
		Tilbury U.	1,855	17,090		
			41,298	62,711	26	

TABLE V—*continued.*

No.	Hospital Authority.	Area Served. District.	Acreage.	Est. Popn. 1929.	No. of Beds provided allowing 144 sq. ft. floor space per bed.	Remarks.
1.	2.	3.	4.	5.	6.	7.
5.	Rochford R.D.C.	Benfleet U.	6,319	11,900		
		Canvey Island U.	4,400	6,386		
		Rayleigh U.	5,278	5,840		
		Rochford R.	39,006	14,830		
		Shoeburyness U.	1,036	5,683		
			56,039	44,639	4	
6.	Halstead R.D.C.	Belchamp R.	26,500	4,090		Sporadic cases are treated at the Colchester Hospital. See No. 2.
		Braintree U.	2,224	8,568		
		Braintree R.	62,348	20,760		
		Dunmow R.	73,503	15,510		
		Halstead U.	647	5,887		
		Halstead R.	38,712	9,980		
		Saffron Walden B.	7,502	5,656		
		Saffron Walden R.	59,975	9,650		
			271,411	80,101	8	
7.	Walthamstow B.	Walthamstow B.	4,343	124,800	19	
8.	West Ham C.B.	West Ham C.B.	4,683	307,600		Sporadic cases are treated at the Orsett Hospital. See No. 4.
		East Ham C.B.	3,324	147,600		
		Barking U.	3,805	42,160		
		Billericay R.	49,394	35,950		
		Brentwood U.	460	7,578		
		Buckhurst Hill U.	873	5,501		
		Chingford U.	2,808	16,090		
		Dagenham U.	6,556	76,970		
		Epping U.	1,420	5,327		
		Epping R.	39,055	16,750		
		Hornchurch U.	6,783	17,480		
		Ilford B.	8,496	116,200		
		Leyton B.	2,594	128,300		
		Loughton U.	3,961	7,137		

TABLE VI.

Showing Accommodation, Number of Cases treated, Cost per Bed, etc., at those Isolation Hospitals for which Grants for Beds provided out of Loan were recommended for the Year ended 31st March, 1930.

	Billericay.	Chelmsford.	Clacton.	Colchester.	Dunmow.	Grays and Orsett.	Halstead.	Ilford.	Maldon.	Rochford.	Romford.	Saffron Walden.	Walthamstow.	Waltham Joint.	TOTAL.
Number for purpose of Grant ...	22	21	17	58	8	40	16	110	10	12	52	14	91	42	513
Grant from County Council ...	£120	£115	£85	£300	£40	£210	£90	£560	£60	£70	£270	£80	£465	£220	£2685
Cases treated during year :—															
Scarlet Fever	149	164	26	289	25	120	23	310	36	144	230	17	539	128	2200
Diphtheria	49	43	15	90	4	347	10	374	15	42	512	13	344	70	1928
Typhoid	1	—	—	10	—	—	2	2	1	—	2	—	—	—	18
Other Diseases	4	21	2	*135	—	9	1	*29	12	15	63	3	1	—	295
Total number of cases treated ...	203	228	43	524	29	476	36	715	64	201	807	33	884	198	4441
Bed-Days	7622	8067	1437	23782	396	22900	1077	31750	1916	6816	32701	1112	37483	5966	185025
Expenditure for the year :—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Repayment of Loans... ...	170 14 7	249 9 6	151 11 10	145 6 9	15 11 1	1656 5 10	64 0 0	1575 0 5	240 1 8	144 0 0	950 6 4	108 0 0	769 0 1	456 13 4	6696 1 5
Interest on loan	118 9 5	79 14 3	14 15 11	75 4 0	2 7 11	974 8 4	47 6 9	1897 16 3	29 8 11	9 2 6	497 10 6	66 0 9	81 17 8	67 1 4	3961 4 6
Total ... £	289 4 0	329 3 9	166 7 9	220 10 9	17 19 0	2630 14 2	111 6 9	3472 16 8	269 10 7	153 2 6	1447 16 10	174 0 9	850 17 9	523 14 8	10657 5 11
Structural Repairs	61 15 10	393 15 3	77 0 0	389 12 4	71 12 0	2390 11 10	210 5 10	1527 4 10	221 14 2	193 11 2	567 18 11	60 6 11	1222 7 1	417 14 4	7805 10 6
Food (Patients and Staff) ..	1440 17 7	878 9 9	263 7 11	1354 3 1	142 14 9	2242 0 9	162 5 4	3700 4 0	522 1 6	589 5 5	2486 14 2	235 14 3	5041 16 2	507 1 11	19566 16 7
Estab. and Patients' Expenses ...	1080 0 6	1389 14 1	924 14 3	5411 18 3	742 5 10	5518 5 9	926 10 2	13563 19 11	1842 17 0	1579 17 10	7412 2 9	484 14 9	10946 2 10	2293 3 4	54116 7 3
Maintenance... ...	2582 13 11	2661 19 1	1265 2 2	7155 13 8	956 12 7	10150 18 4	1299 1 4	18791 8 9	2586 12 8	2362 14 5	10466 15 10	780 15 11	17210 6 1	3217 19 7	81488 14 4
Overhead Charges ...	289 4 0	329 3 9	166 7 9	220 10 9	17 19 0	2630 14 2	111 6 9	3472 16 8	269 10 7	153 2 6	1447 16 10	174 0 9	850 17 9	523 14 8	10657 5 11
Total ... £	2871 17 11	2991 2 10	1431 9 11	7376 4 5	974 11 7	12781 12 6	1410 8 1	22264 5 5	2856 3 3	2515 16 11	11914 12 8	954 16 8	18061 3 10	3741 14 3	92146 0 3
Cost per patient per week £	2 12 9	2 11 11	6 19 5	2 3 5	17 4 6	3 18 1	9 3 4	4 18 2	10 8 8	2 11 8	2 11 0	6 0 2	3 7 5	4 7 10	3 16 6
,, ,, Food, Struct. and Estab. Ex. £	2 7 5	2 6 2	6 3 3	2 2 1	16 18 2	3 11 1	8 8 10	4 2 10	9 9 0	2 8 6	2 4 9	4 18 4	3 4 3	3 15 6	3 2 4
Cost per case treated, 1929-30 £	14 2 11	13 2 5	33 5 10	14 1 6	33 12 2	26 17 1	39 3 7	31 2 9	44 12 6	12 10 4	14 15 3	28 18 8	20 8 7	18 17 11	20 15 0
,, ,, year 1928-29 £	20 6 7	14 8 11	33 7 3	21 12 1	24 7 7	32 13 4	23 17 1	37 9 1	23 5 11	16 14 11	15 17 1	13 7 7	22 0 6	20 17 7	23 13 2

* Includes Tuberculosis cases treated under the County Council scheme.

TABLE V—*continued.*

No.	Hospital Authority.	Area served. District.	Acreage.	Est. Popn. 1929.	No. of Beds provided allowing 144 sq. ft. floor space per bed.	Remarks.
1,	2.	3.	4.	6.	6.	7.
	West Ham C.B.— *continued.*	Ongar, R.	47,236	10,460		
		Romford U.	5,630	28,710		
		Romford R.	16,381	14,220		
		Waltham Holy Cross U.	11,017	6,911		
		Wanstead U.	1,679	17,950		
		Woodford U.	2,161	22,490		
			218,316	1,031,384	189	
9.	Southend-on-Sea C.B.	Southend-on-Sea C.B.	7,082	114,600	10	
	Note:	Bumpstead R.	11,874	2,320		Has made no provision.
		Stansted R.	22,954	6,890		Uses hospital in Hertfordshire.

VENEREAL DISEASES.

Present Scheme.

The Administrative County of Essex has continued its participation in the London and Homes Counties Scheme for the treatment of Venereal Diseases whereby patients from the County area can attend the Venereal Diseases Clinics established at, or in connection with, most of the principal London Hospitals. Under the scheme these hospitals undertake to provide the following services:—

(*a*) The necessary accommodation for a Venereal Disease Clinic;

(*b*) A competent staff;

(*c*) Beds for in-patient treatment;

(*d*) Out-patient treatment at sessions held in evenings and other suitable times;

(*e*) Arsenobenzol compounds to medical practitioners on the approved list;

(*f*) Outfits to medical practitioners for taking specimens of blood and to furnish reports on specimens sent;

(*g*) Free instruction for practitioners and students and opportunities for practitioners to act as clinic assistants at approved rates of remuneration;

(*h*) Women doctors in clinics for women.

The arrangements have worked very satisfactorily, and have proved of great service, particularly to the population in the Extra-Metropolitan area. During the year all-day clinics were established at two of the London Hospitals in substitution for part-day clinics, whilst an up-to-date new clinic for females was completed at the West London Hospital.

As a result of the coming into force of the Local Government Act, 1929, the inspection and supervision as well as the financial aspect of the scheme will be brought under the London County Council instead of the Ministry of Health as heretofore.

One of the most important developments in connection with the Scheme took place in July, 1930, when the Venereal Diseases Clinic established at the London Hospital was, by agreement with the London County Council, transferred to premises situated in Turner Street, just behind the London Hospital. As a result of this re-arrangement, additional equipment and staff have been provided, and a whole-day Clinic established. As and from the end of 1930, accommodation for patients attending this Clinic who require in-patient treatment will be provided by the London County Council in their St. Peter's Hospital, Vallance Road, Whitechapel Road, E.1., instead of in the London Hospital.

Additional efforts have been made during the year to establish suitable Clinics in the neighbourhood of Dagenham, Leyton and Walthamstow to serve the large population in these areas, particularly with a view to the setting up of evening clinics. Negotiations are still proceeding, and it is hoped to obtain suitable facilities in connection with the King George Hospital, Ilford, and the Connaught Hospital, Walthamstow.

For patients residing in other parts of the Administrative County, arrangements have been continued for the provision of treatment at the Venereal Diseases Clinics at the following :—

Chelmsford General Hospital, London Road, Chelmsford.
Southend-on-Sea Borough Sanatorium, Balmoral Road, Westcliff-on-Sea.
East Suffolk and Ipswich Hospital, Anglesea Road, Ipswich.
Essex County Hospital, Lexden Road, Colchester.
Ad hoc Clinic, 22, Cobham Street, Gravesend (provided by the the Kent County Council).

Table VII on page 33 gives details of the number of patients receiving treatment under the Venereal Diseases Scheme during the year, 1930, from which it will be noted that the number of new cases from Essex treated for the first time was 1,388, compared with 1,229 for the year 1929. The largest increase is in connection with the London Hospitals where the number of new cases from Essex rose from 895 in 1929 to 1033 during the year under review. The number of attendances of Essex patients at the various clinics increased by over 5000 during 1930 to a total of 33614, which is the largest number of attendances ever recorded. There was a corresponding increase in the number of doses of Arsenobenzene Compounds administered.

Schedules giving full particulars of the London Hospitals and other Clinics available for Essex patients can be obtained on application to the County Medical Officer, County Hall, Chelmsford.

TABLE VII.

TREATMENT OF VENEREAL DISEASE, YEAR 1930.

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.	Doses of Arseno-Benzene Compounds.			Hostels.
		Syphilis.	Soft Chancre.	Gonorrhœa.	Not V.D.	Total.			Out-Patients	In-Patients	Total.	In-patient days.
London Hospitals	26,869	233	14	338	448	1033	26579	1210	—		2679	2601
St. Bartholomew's, London	1,073	1	—	7	2	10	156	—	13	—	13	—
Chelmsford ...	29	12	—	11	6	29	326	30	47	6	53	—
Colchester ...	72	30	—	23	18	71	1921	55	—	—	303	—
Ipswich ..	229	5	—	8	1	14	190	16	24	2	26	—
Southend ...	423	10	2	49	51	112	1617	—	105	-	105	—
Gravesend ...	391	31	4	67	17	119	2825	—	250	—	250	—
Total for 1930...	29,086	322	20	503	543	1388	33614	1311	—	—	3429	2601
Total for 1929...	26,516	315	14	466	434	1229	28523	1632	—	—	2817	2222
" 1928...	27,576	259	12	505	425	1201	25880	2831	—	—	2491	2373
" 1927...	30,466	276	6	550	488	1320	21756	3739	—	—	2781	2579
" 1926...	28,119	237	10	497	408	1152	18373	2841	—	—	2181	1403

Travelling Expenses. During the financial year ending 31st March, 1931, the County Council expended the sum of £55 4s. 7d. in travelling expenses incurred by necessitous patients to and from the Venereal Diseases Clinics.

Approved Practitioners. There are now 40 medical practitioners in the County who have been approved as qualified to administer Arsenobenzene Compounds.

Propaganda. By Circular No. 1023, dated 29th July, 1929, the Minister of Health referred to Section 85 of the Local Government Act, 1929, and stated that included in the grants from the Ministry of Health to be discontinued on 31st March, 1930, is the one paid direct by the Minister to the British Social Hygiene Council "towards expenditure on the dissemination of information in connection with Venereal Diseases." The Minister pointed out that under the Public Health (Venereal Diseases) Regulations, 1916, Local Authorities were empowered to undertake or arrange for suitable measures of education and publicity in connection with their schemes of treatment. After careful consideration of this matter, the County Council decided in January, 1930, to approve of a grant to the British Social Hygiene Council on the basis of 3s. per 1000 population towards their expenditure on the dissemination of information in connection with Venereal Diseases.

BACTERIOLOGICAL EXAMINATIONS.

The arrangements with Dr. J. F. Beale, of 91, Queen Victoria Street, London, E.C.4 (Tel. No. City 7116), whereby he acts as Bacteriologist for Essex have again worked very satisfactorily, and have proved of great assistance to the medical practitioners in the County. Table VIII on page 35 shows the volume of work which has been carried out under this heading, and it will be seen that there has been a tremendous increase in the total number of specimens from 20,756 in 1929 to 28,888 in 1930. The increase is almost entirely due to the large number of swabs which were examined in connection with Diphtheria prevalence.

A schedule giving full particulars of the County Bacteriological Scheme, together with a list of the examinations available, can be obtained on application to the County Medical Officer, County Hall, Chelmsford. Examinations not included in this list can only be carried out at the cost of the County Council with the prior approval of the County Medical Officer.

During the year arrangements for the following examinations to be carried out by Dr. Beale were continued :—

(*a*) Examination of river waters and sewage effuents.

(*b*) Examination of drinking waters.

(*c*) Guinea Pig inoculations for Virulence Tests.

With regard to the latter, the County Council agreed to increase the number of such examinations authorised to 120, and it will be noted from Table VIII that 118 were actually carried out.

TABLE VIII.

Shewing Number and Type of Specimens examined by the Bacteriologist for Essex—Year 1930.

Sanitary Districts.	Diphtheria.	Sputa.	Typhoid	Ringworm.	Miscellaneous.	Total Specimens examined.	††Biological Examinations.
Urban—							
Barking	†5460	‡466	18	5	19	5968	51
Benfleet	89	25	3	...	8	125	...
Braintree	117	‡32	5	...	3	157	2
Brentwood	128	‡44	6	...	3	181	...
Brightlingsea	20	7	4	...	2	33	1
Buckhurst Hill	19	5	3	..	5	32	.
Burnham-on-Crouch ..	4	9	2	...	...	15	...
Canvey Island ...	33	8	1	...	8	50	...
Chelmsford B.	†669	‡210	58	18	7	962	1
Chingford	210	123	15	4	3	355	...
Clacton-on-Sea	124	34	8	1	2	169	...
Colchester B.	2[illegible]	‡180	45	1	...	248	...
Dagenham	663	‡205	...	17	2	887	...
Epping	468	‡25	8	4	3	508	..
Frinton-on-Sea	8	3	...	..	...	11	...
Grays	†2978	‡108	8	10	5	3109	7
Halstead	25	‡22	4	3	2	56	...
Harwich B.	438	81	14	17	2	552	..
Hornchurch	39	23	2	...	1	65	...
Ilford B.	†1073	‡332	39	...	33	1477	33
Leyton B.	†2544	‡804	18	28	10	3404	...
Loughton	2	6	...	...	1	9	...
Maldon B.	73	‡33	8	...	2	116	...
Purfleet	39	10	..	...	1	50	..
Rayleigh	67	8	4	...	2	81	...
Romford	†1900	‡150	10	10	13	2083	18
Saffron Walden B. ...	†92	‡12	1	2	1	108	..
Shoeburyness	83	26	...	10	2	121	.
Tilbury	423	67	...	29	...	519	...
Waltham Holy Cross ...	†262	‡59	2	2	20	345	...
Walthamstow B. ...	294	‡549	12	14	13	882	...
Walton-on-the-Naze ...	3	2	..	...	1	6	...
Wanstead	12	50	1	...	4	67	...
West Mersea ...	15	2	1	...	...	18	...
Witham	46	29	1	1	2	79	...
Wivenhoe	...	7		...	..	7	...
Woodford	261	‡101	2	...	2	366	...
Total ...	18703	3857	303	176	182	23221	113
Rural—							
Belchamp	9	6	...	1	1	17	...
Billericay	†548	270	10	...	...	828	...
Braintree	†306	‡1357	2	2	41	1708	2
Bumpstead	15	6	...	...	...	21	...
Chelmsford	56	68	15	19	48	206	...
Dunmow	41	25	6	...	5	77	...
Epping...	138	39	...	1	3	181	
Halstead	106	40	1	3	2	152	...
Lexden & Winstree ...	74	28	5	4	19	130	...
Maldon	102	61	16	2	60	241	...
Ongar	93	23	...	5	9	130	...
Orsett	232	41	4	2	...	279	...
Rochford	†245	37	1	8	7	298	...
Romford	84	‡991	2	11	12	1100	...
Saffron Walden	48	10	1	...	1	60	..
Stansted	111	4	...	...	1	116	...
Tendring	88	28	2	1	4	123	3
Totals— Rural	2296	3034	65	59	213	5667	5
Urban	18703	3857	303	176	182	23221	113
Adminis. County ...	20999	6891	368	235	395	28888	118

† Includes specimens taken at Isolation Hospital in District.
‡ ,, ,, Sanatorium or Dispensary in District.
†† This does not include the Biological Examination of milk samples (see page 50).

LOCAL GOVERNMENT ACT, 1929.

Energetic steps have been taken by the County Council to deal with the requirements of the various sections of this Act, and the following is a brief synopsis of the position :—

SECTION 2 (*a*) and (*b*). See pages 127 and 152.

SECTION 13.—CONSULTATIONS WITH VOLUNTARY HOSPITALS *re* PROVISION OF HOSPITAL ACCOMMODATION. The requirements of this Section have been borne in mind by the Public Assistance Committee in connection with the provision of additional hospital accommodation in the County. As a result, a Conference was held at Romford in December, 1930, between representatives of the Voluntary Hospitals Provisional Committee for the County of Essex and members of the Public Assistance Committee. At this meeting it was decided that when the Public Assistance Committee were considering any questions which would affect a voluntary hospital, they would confer with the Voluntary Hospitals Provisional Committee on such matters.

For convenient reference a table (Table IX) has been prepared showing the Voluntary Hospitals serving the County. This table does not include the London Hospitals, which are used by many Essex inhabitants.

SECTION 14.—CONSEQUENTIAL AMENDMENTS OF CERTAIN ACTS. This section has conferred on County Councils the same powers for the provision of accommodation for the sick as is already possessed by local Sanitary Authorities under Section 131 of the Public Health Act, 1875. Sub-Section 2 of Section 14 enlarges the power to enable County Councils to make provision for the reception of pregnant women.

An important point to note is that the County Council has now power to provide orthopaedic treatment for persons over the age of 16 years. The present Joint Orthopaedic Scheme in operation under the Education and Public Health Committees is limited to persons under the age of 16 years, residing in the County Education or Child Welfare areas. In the past, persons over that age have been referred to the local Sanitary Authority or the Guardians or Voluntary Bodies for assistance towards any necessary treatment or appliances.

SECTION 46.—REVIEW OF COUNTY DISTRICTS. Considerable progress has been made in reviewing the County Districts, and it is hoped in the Autumn of 1931 that the Scheme of the County will be sent up to the Ministry of Health.

SECTION 57.—ASSISTANCE TOWARDS COST OF IMPROVING, PROVIDING, OR MAINTAINING SEWERS, SEWAGE DISPOSAL WORKS, OR WATER SUPPLIES. Under this Section the County Council may agree to contribute towards the expenditure incurred whether before or after the commencement of the Act by the Council of a district in improving, providing, or maintaining sewers, sewage disposal works or water supplies.

TABLE IX.

TABLE SHOWING VOLUNTARY HOSPITALS SITUATED IN OR SERVING THE COUNTY.

Name and General Character of Hospital (see note (i) below.)	Situation.	Facilities Provided (see note (ii) below).	Any Extension in view.	Total No. of beds.	Average number occupied.	No. of In-patients 1930.	No. of Out-patients, 1930.	Extent and nature of Waiting List.
GENERAL HOSPITALS.								
Chelmsford and Essex Hostal (G) ..	London Road, .. Chelmsford.	(a) (b) (d) (e) (f) (k) (m) (n)	Large extension completed.	94	80	1721	1191	200
Connaught Hospital (C) and (G)	Orford Road, .. Walthamstow, E.17.	(a) (b) (d) (e) (f) (g) (h) (j) (k) (m) (n)	New ward, office accommodation, Massage Room.	100	88.1	1406	14163	In-patients 158 Out-patients 74
East Ham Hospital (G) ..	Shrewsbury .. Road, East Ham, E.C.7.	(a) (b) (d) (f) (g) (h) (k) (m) (n)	Orthopaedic Department, Laboratory, Radium Treatment.	100	82.5	1484	6140	Large Ear, Nose and Throat.
Essex County Hospital (G) ..	Lexden Road, .. Colchester.	(a) (b) (d) (e) (f) (g) (h) (i) (j) (k) (m) (n) (c) Surgical only.	Nursing Home Extension. Thereafter additional in-patient accommodation.	160	130	1737	9132	Approx. 50
Forest Hospital (G) ..	Buckhurst Hill	(a) (b) (d) (m) (n) ..	No	40	25.76	656	Nil	Nil
*King George Hospital (G) ..	Eastern Avenue, Ilford.	(a) (b) (d) (e) (g) (h) (i) (j) (k) (m) (n)	To 300 beds, with additional Out-patient's Department and Convalescent or Recovery Branches.	138	New Wards just opened.	1339	4004	Surgical 64 Gynoec 18 Medical 4 Ear, Nose and Throat 77
St. Mary's Hospital for Women and Children (G).	Plaistow, E.13	(a) (b) (d) (f) (g) (h) (i) (j) (k) (m) (n)	Ward of 30 beds and new Out-Patients' Hall.	71	66	1090	8942	About 70 surgical.
Saffron Walden General Hospital (G) ..	Saffron Walden	(a) (b) (d) (f) (g) (m)	No	34	22	427	308	Hon. Medical Staff keep their own.
Southend Victoria Hospital (G)	Warrior Square, Southend-on-Sea	(a) (b) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n)	Completing New Hospital, 1932	96	80.67	1798	68045	General 49. Ear, Nose and Throat 40. Surgical Spec. 35.
Tilbury (G)	By Manor Road Gates, Tilbury	(a) (b) (d) (f) (g) (h) (j) (m) (n)	New Ward and Pay Bed Block needed but no funds available.	92	61.55	1317	5622	Tonsils and Adenoids 16
Queen Mary's Hospital (G) and (M)	West Ham Lane, Stratford, E.15.	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n)	New Operating Suite.	219	188	3461	Attendances 159,182	Extremely large.
Woodford Jubilee Hospital (G)	Woodford Green, Essex.	(a) (b) (d) (g) (k) (m) (n)	No	33	19.9	436	Nil	Nil
SPECIAL HOSPITALS.								
Brookfield Orthopaedic Hospital (C) ..	Oak Hill, .. Walthamstow, E.17.	(b) (c) (f) (m) ..	Operating Theatre	30	22	52	Nil	Nil
Plaistow Maternity Hospital (M)	Chesterton Road, Plaistow.	(a) (b) (c) (f) (j)	No	60	54.19	1461	17168	—
Plaistow Children's Hospital (C)	119, Balaam St., Plaistow, E.13.	(a) medical only (b) (d) (e) (g) (k) (n)	Out-Patients' Waiting Hall	28	28	1460	1497	12 Orthopaedic. 433 Tonsils and Adenoids.
Seaman's Hospital (Men only)	Albert Dock, .. London, E.16.	(a) (b) (f) (j) (k) (m) (n)	Desirable to increase from 53 to 70, but no funds available.	53	46.28	716	6414	Nil
COTTAGE HOSPITALS.								
Braintree and Bocking ..	London Road, .. Braintree.	(a) (b) (k) (m) ..	No	22	14	200	277	—
Brentwood District Hospital ..	Shenfield Common, Brentwood	(a) (b) (d) (k) (m) (n)	New Hospital. 30 to 40 beds.	19	—	263	Nil	—
Clacton & District Hospital ..	Tower Road, .. Clacton.	(a) (b) (d) (m) ..	Light Therapy and Massage.	32	Unable to state.	232	389	—
Eden Cottage Hospital ..	Hatfield Broad Oak.	(a) (b) ..	No	7	4	33	—	—
Epping & District Cottage Hospital. ..	Bell Common, .. Epping.	(a) (b) (d) (m) ..	No	11	11	413	Nil	—
Halstead Cottage Hospital ..	North Street, .. Halstead.	(a) (b) (m) (n) ..	Adaptation of two small villas adjoining for Maternity Wards.	14	10	258	114	—
Harwich & District Hospital	Dovercourt, .. Harwich.	(b) (d) (e) (f) (g) (k) (m) (n)	New Out-Patients' Department.	26	16	132	760	—
Ongar War Memorial Cottage Hospital.	Shelley, Ongar	(a) (b) (f) (g)	No	20	8	90	226	25 Surgical.
Victoria Cottage Hospital ..	Pettits Lane, .. Romford.	(a) (b) (d) (g) (m) ..	No	31	21	628	168	20 General.
Waltham Abbey War Memorial	Farm Hill, .. Waltham Abbey.	(a) (b) (f) (g) (m) ..	Children's Ward. Casual Ward. Enlarge X-Ray Department.	8	7	234	251	20 Tonsils, Mastoid, Abdominal, etc.

*N.B.—Auxiliary Out-patient Department at Becontree with ambulance service to parent Hospital. Consultative appointment. Out-patient Department, Ilford, at which the services of specialists are available free of charge. New X-Ray Department. Massage Department. Theatre Suite, etc.

KEY :—

Note i.

G—General Hospital; M—Maternity Hospital; C—Children's Hospital.

Note ii.

(a) General Medical and Surgical Treatment; (b) Operating Theatre; (c) Maternity Beds; (d) Children's Wards; (e) Orthopaedic Department; (f) Dental Department; (g) Nose, Throat and Ear Department; (h) Ophthalmic Department; (i) Dermatological Department; (j) Laboratory; (k) Light Therapy; (l) Radium Treatment; (m) X-Ray Treatment; (n) Massage Treatment.

A Special Sub-Committee was appointed to consider the action to be taken in regard to applications received for assistance under Section 57.

Three applications for assistance were received from Rural Districts during the year. No action was taken in regard to one of the applications and the others are still under consideration.

As stated in my last Annual Report, the high cost of providing water supplies, sewers, &c., in scattered rural districts is the principle obstacle. Isolated parishes which are sorely in need of schemes of this kind are unable to bear the cost when levied as a special rate. Section 56 of the Local Government Act, 1929, however, empowers Rural District Councils to help such parishes from the general rate. The Braintree Rural District Council has taken full advantage of this Section by abolishing all special expenses and making them a charge over the whole Rural District. As a result, they were able to assist parishes with existing schemes and to arrange for the provision of sewage disposal schemes for several parishes. The Lexden and Winstree Rural District Council, in connection with the provision of water supplies for seven parishes—see page 56, decided to spread the cost of any deficiency of such scheme over the whole rural district. These Rural Councils are to be congratulated on the ready way in which they have come to the assistance of the parishes within their areas.

The County Council's Special Sub-Committee has not yet made any recommendation that the County Council should be asked to make grants and, if so, under what conditions. Doubtless, however, the common sense view is that before any application for assistance can be entertained, Rural Councils must show that they have done their share towards assisting isolated parishes by making the cost of any schemes a general charge over the whole Rural District; further, that charges to householders for water supplies must be on an economic basis.

SECTION 58.—APPOINTMENT OF MEDICAL OFFICERS OF HEALTH NOT ENGAGED IN PRIVATE PRACTICE. Consideration of the requirements of this Section in regard to the formulation of arrangements for securing the appointment of whole-time Medical Officers of Health has been deferred, pending the completion of the Council's scheme under Section 46.

SECTION 60.—MATERNITY AND CHILD WELFARE WORK. The County Council, in July, 1930, decided to make application to the Ministry of Health for the transfer of the Maternity and Child Welfare powers from the following District Councils to the County Council :—

Clacton U.D.	Chelmsford R.D.
Waltham Holy Cross U.D.	Lexden and Winstree R.D.

For the time being, consideration of the transfer of the powers in the following districts has been deferred, pending the review of those districts proposed under Section 46 :—

Buckhurst Hill U.D.	Wanstead U.D.
Grays U.D.	Woodford U.D.
Loughton U.D.	Orsett R.D.
Tilbury U.D.	

SECTION 63.—HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES. Details of the action taken in connection with the hospital accommodation for infectious diseases will be found on pages 25 and 26 of this report.

SECTION 101.—CONTRIBUTIONS TO VOLUNTARY ASSOCIATIONS. In September, 1929, the County Council approved a scheme under this Section whereby for the three financial years 1930-31, 1931-32, and 1932-33, the County Council will make annual contributions to each of the following Voluntary Associations :—

Voluntary Associations.	Amount of Annual Contribution.
Essex County Nursing Association..	In accordance with agreement with County Council.
Plaistow Maternity Hospital ..	£23.
Witham District Nursing Association ..	£13, plus fees from County Council for County C.W. cases.
Chelmsford Diocesan Association ..	£284.

In addition, the following Associations under the scheme receive grants from the District Councils concerned :—

Walthamstow Child Welfare Society.

Invalid Children's Aid Association (Walthamstow Branch).

Wanstead and Woodford Mothers' Centre.

HOUSING.

The particulars recorded in Tables X and XI on pages 38A and 38B for each Sanitary District relate to the two years 1929 and 1930. It will be seen from Table XI, on page 388, that the local Sanitary Authorities in the Administrative County of Essex at the end of 1930 owned 15,858 houses and that the total number of houses built by those authorities during the past two years was 3,378.

TABLE XI.

SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE PUBLIC HEALTH AND HOUSING ACTS DURING THE YEAR 1930.

Sanitary District.	New Houses Erected During 1930.								Unfit Dwelling Houses.						Houses rendered fit in consequence of informal action by Local Authority or their Officers.	Action under Statutory Powers.																			
	Total.	By			With State Assistance under Housing Acts by											Proceedings Under Section 3 of Housing Act, 1925.				Proceedings Under Public Health Acts.			Proceedings Under Sections 11, 14 & 15 of Housing Act, 1925.					No. of Houses owned by Local Authority.	No. of Houses built during last two years and held under Housing Act, 1925.		
		The Local Authority.	Other Local Authorities.	Other Bodies and Persons.	The Local Authority for the Purpose of			Other Bodies or Persons.	Total No. inspected for Housing Defects under Public Health or Housing Acts.	No. of Inspections made under Public Health or Housing Acts.	No. inspected and recorded under Housing Consolidated Regs., 1925.	No. of Inspections made under Housing Consolidated Regs., 1925.	No. found so dangerous or injurious to health as to be unfit for human habitation.	No. found not to all respects reasonably fit for human habitation.		No. of Dwelling Houses in respect of which notices were served requiring Repairs.	No. of Dwelling Houses rendered fit after formal Notices. By Owners.	By Local Authority in default of Owners.	No. of Dwelling Houses Closing Orders became operative.	No. of Dwelling Houses in which defects were remedied after formal Notice. By Owners.	By Local Authority in default of Owners.	No. of representations made with view to making of Closing Orders.	No. of Dwelling Houses in respect of which Closing Orders were made.	No. of Dwelling Houses Closing Orders determined Houses being rendered fit.	No. of Dwelling Houses Demolition Orders made.	No. of Dwelling Houses demolished in pursuance of Demolition Orders.		Part III.	Part II.	Other Powers.
URBAN.																																			
Barking	1064	59	970	35	..	59	..	..	3204	6577	659	659	8	2497	4827	117	107	10	..	2486	553	..	8	8	..	4	4	1161	265	..	..
Benfleet	84	..	..	84	..	..	..	..	75	146	..	..	3	46	32	—	4	..	..	13	26	2	3	3	..	..	..	52	..	..	..
Braintree	70	28	..	42	..	28	..	..	218	682	163	448	10	101	104	..	..	..	..	55	55	..	10	10	1	..	1	355	28	..	21
Brentwood	51	38	..	13	..	..	38	..	275	573	8	32	7	27	27	2	..	..	2	91	91	..	1	4	..	5	5	131	..	..	28
Brightlingsea ..	2	..	..	2	..	..	..	..	19	..	..	..	..	9	27	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Buckhurst Hill ..	23	..	..	23	..	..	..	..	97	174	30	40	..	67	66	..	..	..	..	1	..	..	..	..	..	..	..	24	..	..	..
Burnham-on-Crouch ..	15	..	..	15	..	..	..	..	210	230	345	360	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38	..	..	..
Canvey Island ..	146	..	..	146	..	..	..	..	80	271	4	15	1	1	9	1	1	..	..	..	1	1	1	1	2	3	5	2	..	..	2
Chelmsford B. ..	102	40	..	62	..	..	..	..	1377	2173	141	434	10	121	105	..	..	..	..	222	289	..	6	6	3	..	..	1245	350	..	..
Chingford	842	..	..	842	..	..	..	..	395	634	12	47	2	10	68	..	..	..	..	8	5	..	..	..	..	..	..	149	..	..	..
Clacton-on-Sea ..	138	..	..	138	..	..	..	..	346	813	185	376	1	240	244	25	26	..	..	30	16	5	..	..	..	..	..	145	..	..	..
Colchester B. ..	148	84	..	64	..	49	..	..	685	3614	68	324	8	571	337	26	31	6	7	93	76	7	4	4	..	..	..	684	189	..	..
Dagenham	365	12	170	183	..	..	12	170	682	1470	445	894	52	250	46	204	204	..	..	237	237	..	2	2	2	..	1	270	..	..	12
Epping	19	..	..	19	..	..	..	..	31	70	31	70	2	16	12	..	..	..	..	..	..	..	2	2	..	..	..	32	..	..	..
Frinton-on-Sea ..	18	..	..	18	..	..	..	1	9	9	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	11	..	..	..
Grays	100	48	..	52	..	..	48	..	520	880	520	679	2	229	222	7	7	..	..	..	..	..	2	2	2	..	..	603	..	..	122
Halstead	67	61	..	6	..	..	61	..	474	1210	158	158	4	349	146	111	137	..	..	..	..	..	3	4	2	..	..	127	..	..	61
Harwich B.	46	..	..	46	..	..	..	..	391	481	256	298	5	51	21	1	1	..	..	32	26	..	1	5	..	..	..	150	..	..	..
Hornchurch	1375	..	..	1375	..	..	..	..	369	1292	213	613	..	212	121	1	..	..	..	82	49	..	1	1	1	..	..	268	40	..	..
Ilford B.	1797	..	..	1797	..	..	..	..	1272	3048	361	1497	..	545	436	272	106	..	..	3	3	..	..	..	..	..	..	647	120	..	..
Leyton B.	222	..	..	222	..	..	..	..	3548	12296	1054	..	12	2140	1669	128	70	16	..	1	1	..	12	2	1	..	..	295	..	..	..
Loughton	68	..	..	68	..	..	..	..	61	243	62	243	..	12	12	2	2	..	..	..	..	..	..	..	..	..	..	51	..	..	32
Maldon B.	64	50	..	14	..	50	..	..	27	27	..	..	..	17	1	17	14	3	..	64	64	..	..	..	..	..	..	236	50	..	..
Purfleet	174	166	..	8	..	..	..	..	361	829	299	617	5	347	351	18	7	..	11	4	4	..	5	5	..	20	17	570	..	..	200
Raylegh	95	8	..	87	..	..	..	..	3	6	3	6	..	3	1	1	1	..	6	10	1	..	1	..	..	..	..	60	..	..	8
Romford	815	..	..	815	..	..	..	..	407	637	..	..	273	255	..	..	..	..	..	18	18	..	..	..	..	..	..	62	..	..	..
Saffron Walden B. ..	31	24	..	7	..	24	..	..	207	475	97	210	12	2	1	12	10	..	..	9	..	..	..	..	..	..	..	80	24	..	..
Shoeburyness	77	..	..	77	..	..	..	..	167	262	68	164	..	117	109	8	8	..	..	..	..	..	..	..	1	..	..	56	..	..	..
Tilbury	260	250	..	10	..	..	250	..	784	2473	144	391	1	488	381	51	50	1	..	55	52	3	1	1	..	..	..	2242	..	..	541
Waltham Holy Cross	48	36	..	12	..	36	..	..	224	485	117	267	2	106	108	..	..	..	..	15	15	..	2	2	..	..	..	114	86	..	..
Walthamstow B. ..	663	64	..	599	..	64	..	..	5951	..	412	..	..	323	2206	103	91	6	..	16	16	..	..	..	..	..	..	963	128	..	..
Walton-on-the-Naze	13	..	..	13	..	..	..	..	13	17	..	..	2	11	..	11	11	..	..	2	2	..	..	..	..	..	..	58	..	..	..
Wanstead	49	..	..	49	..	..	..	..	437	560	84	135	..	80	70	..	..	..	..	7	7	..	..	..	..	..	..	70	..	..	..
West Mersea	13	..	..	13	..	..	..	..	39	39	15	15	..	24	19	..	..	..	..	5	5	..	..	..	..	..	..	30	..	..	..
Witham	33	20	..	13	..	..	..	..	55	150	..	..	..	16	38	..	1	..	..	42	32	..	..	..	..	..	..	144	..	..	12
Wivenhoe	2	..	..	2	..	..	..	2	50	65	50	65	1	12	12	—	..	..	..	..	..	..	..	..	..	..	..	16	..	..	..
Woodford	217	..	..	217	..	..	..	..	944	1791	801	1293	..	233	206	..	..	..	..	7	7	..	..	..	..	..	..	150	..	..	..
Urban Total ..	9316	988	1140	7188	..	310	409	173	24007	42794	6805	10170	423	9528	12054	1118	889	42	26	3708	1642	18	65	62	15	35	33	11384	1280	..	1069
RURAL.																																			
Belchamp	22	16	..	6	16	..	..	6	49	194	54	194	32	86	42	..	..	..	..	42	41	..	9	8	6	..	..	30	..	16	..
Billericay	706	..	..	706	..	..	..	..	678	816	218	290	11	207	93	68	59	..	3	53	37	..	4	4	1	..	..	39	..	..	..
Braintree	85	38	..	47	..	..	38	2	550	1559	550	1559	21	121	100	21	18	..	5	12	12	..	14	14	2	2	3	571	..	..	118
Brentwood	13	12	..	1	..	..	12	1	48	106	29	106	9	20	20	..	..	..	..	20	20	..	..	..	..	..	6	73	..	..	12
Chelmsford	140	16	..	124	..	..	16	..	611	766	97	131	5	40	114	..	..	..	..	28	31	..	4	4	3	..	..	603	..	..	50
Dunmow	86	60	..	26	..	..	60	4	480	736	326	572	12	268	224	1	1	..	2	2	2	..	12	12	5	..	..	288	..	..	160
Epping	107	22	..	85	..	22	..	..	374	854	24	74	17	215	147	40	31	..	..	68	68	..	18	16	..	15	3	339	48	..	..
Halstead	37	24	..	13	..	..	24	..	172	349	172	349	20	121	150	..	..	..	..	3	..	..	9	9	15	..	..	142	..	..	76
Lexden and Winstree	118	70	..	48	..	..	70	..	680	1457	189	719	23	176	141	20	18	..	..	5	4	..	13	6	9	6	6	330	..	..	130
Maldon	75	26	1	48	..	26	..	2	107	380	52	485	16	36	23	..	..	..	..	3	3	..	16	16	2	1	1	385	74	..	..
Orsett	65	14	..	51	14	..	..	..	20	35	18	30	..	15	12	10	10	..	..	..	..	..	..	..	..	..	..	186	..	14	76
Ongar	241	94	..	147	..	94	..	..	506	1834	318	1216	5	215	159	10	10	..	6	86	63	..	14	6	2	1	5	602	214	..	..
Rochford	151	8	..	143	..	..	8	..	180	360	98	134	4	161	32	41	34	..	..	28	25	..	4	4	1	1	1	70	..	..	8
Saffron Walden ..	156	..	..	156	..	..	..	..	347	736	204	468	..	196	129	3	3	..	..	31	29	..	..	..	..	..	..	178	..	..	..
Stansted	29	..	..	29	..	..	..	..	75	192	10	28	1	..	20	20	20	..	..	20	20	..	..	..	..	..	..	84	..	..	..
Tendring	83	..	..	83	..	..	..	..	540	540	540	540	1	59	87	15	12	..	1	..	..	..	..	..	..	..	..	58	..	..	..
									467	997	112	132	3	126	82	4	4	..	..	2	2	..	3	3	..	3	3	294	..	..	..
Rural Total ..	2126	400	1	1725	30	142	228	15	5884	12011	3011	7027	180	2002	1375	253	220	..	17	403	357	..	120	102	46	29	31	4474	336	30	670
Rural & Urban Total	9316	988	1140	7188	..	310	409	173	24007	42794	6805	10170	423	9528	12054	1118	889	42	26	3708	1642	18	65	62	15	35	33	11384	1280	..	1069
Total for Administrative County ..	11442	1388	1141	8913	30	452	637	188	29891	54805	9816	17197	603	11530	13429	1371	1109	42	43	4111	1999	18	185	164	61	64	64	15858	1616	30	1739

TABLE X.

SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE PUBLIC HEALTH AND HOUSING ACTS DURING THE YEAR 1929.

Sanitary Districts.	New Houses erected during 1929.			Unfit Dwelling Houses.				Houses rendered fit in consequence of informal action by Local Authority or their Officers	Action under Statutory Powers. Proceedings under Section 3 Housing Act, 1925.				Proceedings under Public Health Acts.			Proceedings under Sections 11, 14 & 15 of Housing Act, 1925.					
	Total.	With State assistance under Housing Acts, by		Total No. inspected for Housing Defects under Public Health or Housing Acts.	No. inspected and recorded under Housing Consolidated Regs. 1925.	No. found so dangerous or injurious to health as to be unfit for human habitation.	No. found not in all respects reasonably fit for human habitation		No. of Dwelling Houses in respect of which Notices were served requiring repairs.	No. Dwelling Houses rendered fit after formal Notices. By Owners.	No. Dwelling Houses rendered fit after formal Notices. By Local Authority in default of Owners.	No. of Dwelling Houses Closing Orders became operative.	No. of Dwelling Houses Notices served requiring defects to be remedied.	No. Dwelling Houses in which defects were remedied after formal Notice. By Owners.	No. Dwelling Houses in which defects were remedied after formal Notice. By Local Authority in default of Owners.	No. of representations made with view to making of Closing Orders.	No. of Dwelling Houses in respect of which Closing Orders were made.	No. of Dwelling Houses Closing Orders determined Houses being rendered fit.	No. of Dwelling Houses Demolition Orders made.	No. of Dwelling Houses demolished in pursuance of Demolition Orders.	No. of Houses demolished voluntarily
		Local Authority.	Other Bodies or Persons.																		
URBAN.																					
Barking ...	700	206	494	4413	1148	10	2420	2191	112	109	3	...	379	379	...	9	9	...	...	...	...
Benfleet ...	7	...	...	207	...	...	31	...	...	...	...	...	31	...	...	...	...	...	...	...	...
Braintree ...	60	...	42	178	96	3	84	80	5	5	...	3	84	73	...	3	2	...	3	3	7
Brentwood ...	8	...	7	235	7	5	2	...	2	...	...	3	126	126	...	1	4	...	...	...	...
Brightlingsea ...	20	...	15	78	11	4	18	15	4	...	...	4	1	...	...	...	...	...	...	...	...
Buckhurst Hill ...	16	...	16	100	26	...	50	70	...	...	...	...	...	...	...	...	...	...	...	...	...
Burnham-on-Crouch ...	48	18	26	260	300	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...
Canvey Island ...	66	...	...	29	...	8	4	20	4	4	...	...	...	...	...	...	...	...	...	...	...
Chelmsford B. ...	671	246	382	1739	64	8	160	131	...	...	...	...	265	229	...	8	8	2	8	2	...
Chingford ...	417	...	...	...	60	...	...	15	1	1	...	...	5	5	...	8	8	...	4	9	...
Clacton-on-Sea ...	175	...	5	388	164	...	236	135	45	18	...	...	37	13	...	...	...	...	...	...	...
Colchester B. ...	219	105	42	780	84	3	704	610	60	60	2	...	86	92	2	3	3	...	1	...	...
Dagenham ...	1681	...	1572	1515	280	2	278	53	225	218	...	2	183	175	...	4	3	...	...	2	...
Epping ...	35	...	31	38	...	...	10	9	...	...	...	...	...	...	...	...	...	...	...	...	...
Frinton-on-Sea ...	10	...	1	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grays ...	147	78	36	439	230	...	220	198	11	11	...	...	...	...	...	...	...	...	...	...	...
Halstead ...	14	...	5	338	58	3	280	138	91	72	...	2	...	...	...	...	...	...	...	...	...
Harwich B. ...	94	...	53	70	47	8	9	19	...	...	...	...	19	19	...	3	3	1	...	...	...
Hornchurch ...	1213	40	788	251	108	12	196	131	30	20	...	...	44	34	1	7	4	...	...	...	...
Ilford B. ...	1215	124	1091	1085	206	...	479	390	101	52	...	...	3	3	...	12	12	2	...	...	...
Leyton B. ...	228	...	...	3228	823	1	1998	1705	49	25	16	...	2	2	...	...	...	...	...	...	...
Loughton ...	71	...	...	40	40	...	10	10	...	...	...	...	...	...	...	1	1	...	...	...	3
Maldon B. ...	21	...	18	103	28	...	16	2	14	13	1	...	75	75	...	...	...	3	2	2	...
Purfleet ...	59	50	9	189	150	10	156	147	20	11	...	9	16	14	...	...	...	...	...	...	...
Rayleigh ...	8	...	...	12	...	...	12	2	...	...	...	...	...	...	...	6	6	...	...	...	2
Romford ...	591	...	240	518	...	...	264	235	...	...	...	...	114	114	...	...	...	...	...	...	...
Saffron Walden B. ...	...	...	...	199	78	...	3	3	...	...	...	...	16	16	...	...	...	...	6	...	...
Shoeburyness ...	40	...	6	232	52	...	160	136	18	16	2	...	...	...	...	...	...	...	...	...	...
Tilbury ...	317	311	...	743	81	...	412	373	37	35	...	...	2	2	...	...	...	...	...	...	...
Waltham Holy Cross ...	60	50	3	214	123	1	115	108	...	...	...	...	10	10	...	...	...	...	...	...	...
Walthamstow B. ...	556	64	18	6057	516	...	357	1972	85	73	5	...	5	5	...	...	...	...	...	...	...
Walton-on-the-Naze ...	18	...	...	26	...	...	5	4	13	5	...	...	2	2	...	...	...	...	...	...	...
Wanstead ...	72	...	...	421	3	...	76	132	...	...	...	...	8	8	...	...	...	...	...	...	...
West Mersea ...	23	...	13	36	25	...	18	18	...	...	...	...	...	...	...	...	...	...	...	...	...
Witham ...	19	...	11	86	10	1	28	20	...	...	...	...	...	...	...	...	...	...	...	...	...
Wivenhoe ...	5	...	5	118	...	...	...	2	...	...	...	...	...	...	...	1	1	1	...	3	...
Woodford ...	148	...	...	2997	774	...	218	187	...	...	...	...	11	11	...	...	...	...	...	...	...
Urban Total ...	9052	1292	4929	27369	5682	79	9029	9277	927	748	29	23	1524	1412	3	66	64	9	24	21	12
RURAL.																					
Belchamp ...	3	...	3	321	109	27	41	41	...	...	...	...	41	40	...	10	10	...	...	...	...
Billericay ...	603	...	228	355	298	7	203	72	51	37	...	7	36	34	...	7	7	...	...	5	...
Braintree ...	346	80	251	259	50	7	89	100	6	6	...	...	...	...	...	7	7	...	3	...	2
Bumpstead ...	1	...	1	46	38	1	1	38	...	...	...	...	7	7	...	1	1	...	...	...	...
Chelmsford ...	271	74	132	1156	103	19	118	126	...	...	...	...	30	21	...	19	19	3	2	2	...
Dunmow ...	126	100	16	78	22	7	70	62	4	4	...	...	1	1	...	7	7	...	...	...	...
Epping ...	99	26	2	367	15	3	254	220	...	...	...	...	34	34	...	3	3	1	4	4	...
Halstead ...	77	52	16	471	194	22	68	27	...	...	...	...	41	41	...	22	22	3	...	...	...
Lexden and Winstree	127	60	43	688	201	31	192	159	14	12	...	...	16	14	...	14	14	3	5	2	...
Maldon ...	167	48	23	286	75	7	56	64	...	...	...	...	8	7	...	7	7	1	2	...	...
Ongar ...	136	76	6	24	24	1	24	12	12	12	...	...	...	...	...	...	...	...	...	...	...
Orsett ...	373	120	190	793	138	12	160	99	8	1	...	1	43	42	...	12	12	1	3	3	...
Rochford ...	445	62	197	300	32	9	130	43	62	58	...	...	50	41	...	8	8	...	1	1	...
Romford ...	207	...	98	352	221	1	143	94	3	3	...	...	30	28	...	1	1	...	...	...	...
Saffron Walden ...	7	...	...	114	22	2	...	...	22	20	...	...	92	89	...	2	2	...	...	...	...
Stansted ...	13	...	4	435	435	...	73	98	17	17	...	...	...	...	...	...	...	...	...	...	...
Tendring ...	139	...	98	234	78	...	88	70	1	...	...	...	...	...	...	...	...	...	...	...	...
Rural Total ...	3080	698	1368	6270	2055	156	1701	1325	200	170	...	8	429	459	...	120	120	12	20	17	2
Boro' & Urban Total	9052	1292	4929	27369	5682	79	9029	9277	927	748	29	23	1524	1412	3	66	64	9	24	21	12
Total for Administrative County ...	12132	1990	6237	33639	7737	235	10730	10602	1127	918	29	31	1953	1871	3	186	184	21	44	38	14

New dwelling houses erected.

The number of dwelling houses erected for the two years was as follows :—

Erected by.	1929.	1930.
Local Authorities with State Assistance ..	1,990 ..	1,388
Other bodies or persons with State Assistance ..	6,237 ..	1,141
Private enterprise	3,905 ..	8,913
Total ..	12,132 ..	11,442

The largest number of dwelling houses erected during these two years was in Ilford (3,012), Hornchurch (2,588), Dagenham (2,046), Barking (1,764), Billericay (1,309), Walthamstow (1,219).

Inspections for 1929 and 1930.

63,530 dwelling-houses were inspected for defects under the Public Health and Housing Acts, and 22,260 or 35 per cent., were found not to be in all respects reasonably fit for human habitation ; whilst 838 or 1·3 per cent., were found to be in a state so dangerous or injurious to health as to be unfit for human habitation.

24,231 dwelling-houses were rendered fit as the result of informal action by the Local Sanitary Authorities or their officers.

Action Under Statutory Powers. Statutory notices as under were issued during the 2 years, with the results indicated below :—

	1929.	1930.
Number of dwelling-houses regarding which notices were served requiring repairs	3,080	5,482
Number of dwelling-houses rendered fit by owners after service of formal notices	2,789	3,108
Number of dwelling-houses rendered fit by Local Authorities in default of owners after service of formal notices	32	62
Number of dwelling-houses in respect of which Closing Orders become operative in pursuance of declarations by owners of intention to close	31	43

Unfit Dwelling-Houses. Inspections resulted in the responsible officers making 371 representations to their respective Local Sanitary Authorities in respect to dwelling-houses which appeared "to be in a state so dangerous or injurious to health as to be unfit for human habitation."

HOUSING ACT, 1930.

The outstanding feature of the year in respect to housing was the passing of the Housing Act, 1930, the principal objects of which are to simplify the procedure and facilitate the task of clearing away existing slums, and to prevent the creation of new slums by stopping the deterioration of other areas. The Act also simplifies and improves the procedure under which unfit houses may be repaired or demolished.

Part IV of the Act deals with housing in rural districts. By circular No. 1138, dated 19th August, 1930, the Ministry of Health points out that "the proper housing "of the agricultural workers must form an essential element in any progressive "agricultural policy and in this matter also the responsible local authorities must "play their part. The Act provides for the co-operation of the county councils and "rural district councils in attacking this serious and important problem and the "Minister trusts that in every county the authorities will without delay meet "together to formulate plans for dealing comprehensively with the rural needs."

Part IV of the Act provides that "it shall be the duty of the council of every "county, as respects each rural district within the county, to have constant regard to "the housing conditions of persons of the working classes, the extent to which over-"crowding or other unsatisfactory housing conditions exist and the sufficiency of the "steps which the council of the district have taken, or are proposing to take, to "remedy those conditions and to provide further housing accommodation"; further "that the Council of every rural district shall in the year nineteen hundred and "thirty, and thereafter at such intervals, not being in any case less than one year, as "the county council may direct, furnish to that council such information with regard "to the matters mentioned in subsection (1) of this section as the county council may "reasonably require for the purpose of enabling them to carry out their duties under "this section."

A contribution at the rate of £1 per house shall be payable by the County Council to a rural district council under certain conditions, in respect of so many of the houses provided with the approval of the Minister as are in that year occupied for a period or periods of nine months by members of the agricultural population.

Each Rural District Council in the Administrative County has been asked to furnish particulars regarding unfit houses, overcrowding, temporary dwellings, and the housing needs of their district.

Regional Town Planning Committees.

(a) *South Essex Joint Advisory Town Planning Committee.*

The aims and objects of this Committee, which was formed in June, 1922, are to prepare a Town Planning Scheme and Statement for the area on the northern bank of the Thames from Shoeburyness in the east to the large centres of population at East and West Ham in the west of the Administrative County.

Since 1928, Mr. S. D. Adshead, Professor of Town Planning, London University, has been preparing a regional report and plan for this area. Parts 1, 2 and 3 relating to survey, development of the Port of London, and transport, have already been submitted to the Committee.

(b) *West Essex Advisory Joint Town Planning Committee.*

On 1st May, 1930, a Conference of authorities in West Essex was held at the Ministry of Health. The conference passed the following resolutions :—

(*a*) That this meeting recommends that the local authorities in West Essex should form a Sub-Regional Planning Committee for their area ; and

(*b*) That the members present will recommend their respective Councils to support the proposals in the report of the Greater London Regional Planning Committee.

The following authorities were asked to appoint representatives on this Joint Committee :— County Council of Essex, the Councils of the Boroughs of Leyton and Walthamstow, the Urban Districts of Brentwood, Buckhurst Hill, Chingford, Epping, Loughton, Waltham Holy Cross, Wanstead and Woodford, and the Rural Districts of Epping and Ongar. Each of these authorities was also asked to concur in conferring the following powers upon the Joint Committee :—

(1) To investigate the conditions and resources of the Region.

(2) To prepare in broad outline a regional town plan.

(3) To advise in the promotion, co-ordination and linking up of Town Planning Schemes.

(4) To consider and make suggestions or recommendations on any matter relating to effective town or regional planning or development or upon any other matter which may be referred to it.

(5) To make suggestions and recommendations to any Government Department or Local Authority on any matter coming within the scope of the Committee's activity.

(6) If considered desirable to admit to the membership of the Joint Committee representatives of any other Local Authority in the vicinity who pass the necessary resolution concurring in the appointment of the Joint Committee.

(7) To co-operate with any other body whose functions may be similar to all or any of the functions of the Joint Committee.

PUBLIC OPEN SPACES.

Representation was made to the County Council by the South Essex Joint Advisory Town Planning Committee and the Greater London Regional Planning Committee in respect to the reservation of a portion of the summit of the Laindon Hills as a public open space. They considered such reservation highly desirable, not only for the benefit of the locality, and for the greatly increasing population in the Dagenham area and its environs, but also for the County as a whole.

It is pleasing to record that at a meeting of the Essex County Council on 8th November, 1930, it was resolved :—

That the Clerk of the Orsett Rural District Council be informed that the Council do concur generally in the proposal for the inclusion of approximately forty acres at the summit of the Laindon Hills in the Town Planning Scheme of the Orsett Rural District Council affecting that area as a Public Open Space and that, as regards liability for claims of owners of property injuriously affected, the Council would be prepared to make a substantial contribution on a basis to be mutually agreed between the two Authorities.

TOWN PLANNING SCHEMES.

According to a report by the Clerk of the County Council, dated 5th March, 1930, the position in the Administrative County of Essex in respect of Town Planning Schemes is as follows :—

Boroughs.

The Boroughs of Colchester, Harwich and Ilford have submitted Schemes to the Ministry of Health, but the Boroughs of Chelmsford, Leyton, Maldon, Saffron Walden and Walthamstow have taken no action.

Urban Districts.

The Urban District Councils of Loughton, Rayleigh and Woodford have Schemes in operation, the Urban District Councils of Chingford and Benfleet have adopted draft Schemes, and the Urban District Councils of Canvey Island, Dagenham, Epping, Hornchurch, Purfleet, Romford and Tilbury have taken preliminary steps, the Urban District Council of Waltham Holy Cross have joined the Greater London Area Town Planning Scheme, but in the other Urban Districts no action seems to have been taken, except that the Urban District Council of Clacton have appointed a Joint Committee with Tendring Rural District Council.

Rural Districts.

The Rural District Council of Tendring have taken preliminary steps to adopt a Town Planning Scheme in conjunction with the Urban District Council of Clacton for the Parish of Little Holland, part of the Parish of Great Holland, the Parish of Little Clacton, and a small part of the Parish of St. Osyth.

The Rural District Council of Chelmsford have schemes in course of preparation for the Parishes of (I) Runwell, (II) Great Baddow, Little Baddow, Boreham, Broomfield, Buttsbury, Chignal, Danbury, Margaretting, Sandon, Springfield, Stock, Widford and Writtle, and (III) Ingatestone and Fryerning.

The Rural District Council of Epping have taken preliminary steps for a scheme for the Parishes of Chigwell, Theydon Bois, Theydon Garnon, Epping Upland, Epping Green, Roydon, Great Parndon, Little Parndon, Harlow, Sheering, Latton, Matching, North Weald, Netteswell and Magdalen Laver. The Rural District Council of Ongar have taken preliminary steps for a scheme for the Parishes of Stapleford Abbotts, Stapleford Tawney, Lambourne, Theydon Mount, Stanford Rivers, Greenstead, High Ongar, Bobbingworth, Moreton, Fyfield, Shelley, Chipping Ongar, Norton Mandeville, Blackmore, Stondon Massey, Kelvedon Hatch, and Doddinghurst.

The Rochford Rural District Council have adopted resolutions to prepare a Town Planning Scheme for the whole of their District except Foulness and

Havengore, and the Billericay Rural District Council have adopted similar Resolutions. The Orsett and Romford Rural District Councils are taking prescribed steps for adopting Schemes for their Districts.

Other Rural District Councils do not appear to have taken any action.

During the year, consideration was given to the best method of undertaking the work of town planning as imposed upon the County Council by Sections 40—45 of the Local Government Act, 1929. At a meeting of the General Purposes Committee on 28th October, 1930, it was resolved :—

That it be recommended that a Town Planning Committee be constituted directly responsible to the Council, and that in addition to Town Planning, matters relating to Playing Fields and Open Spaces be referred to such Committee.

That the Council be informed that in the opinion of the Committee there should be close co-operation between the proposed Committee and the Highways and the Public Health and Housing Committees and that the proposed Committee should be as far as possible representative of the whole County.

HOUSING (RURAL WORKERS) ACT, 1926.

The administration of this Act has been delegated by the County Council to the Agricultural Committee, and the duties thereunder are carried out by the County Land Agent who has kindly supplied the following report upon the work carried out during the year 1930 :—

The number of additional requests received for Forms of Application during the year 1930, was eighty-two. Forty Forms were returned relating to 79 Cottages.

The Districts in which the Cottages are situate are as follows :—

Sanitary District.	No. of Applications.	No. of Cottages.	No. of Cottages in respect of which Grants have been made.	Total Grants in the year. £
Braintree R.D.	8	17	14	1,169
Belchamp ,,	3	9	8	412
Chelmsford ,,	4	7	3	300
Dunmow ,,	3	4	4	390
Epping ,,	1	3	—	—
Halstead ,,	4	12	11	940
Lexden & Winstree R.D.	2	3	3	300
Maldon R.D.	9	17	12	1,127
Ongar ,,	3	4	1	100
Orsett ,,	1	1	1	100
Tendring ,,	2	2	—	—
	40	79	57	£4,838

Of the cottages included in the above applications, 57 were approved for grants, as above, one was not approved, 10 were withdrawn, and 11 were still under consideration at the end of the year.

The total number of cottages reconditioned under the Act, in Essex, up to the 31st December, 1930, was 168.

PARTICULARS OF THREE TYPICAL CASES OF COTTAGES RECONSTRUCTED OR IMPROVED BY GRANTS MADE BY THE COUNCIL UNDER THE ACT, DURING 1930.

(1) *Parish of Pentlow.* Paine's Manor Farm.

Three timber built, lath, plaster and thatched cottages which, before renovation, were in a very dilapidated condition and untenantable.

Works approved and carried out :—

Cover roofs with tiles in place of thatch. Renew whole of external plastering, pull down one chimney and re-build. Renew all windows and doors. Renew all floors on ground floor and case all floors on first floor. New stoves and ranges, new partitions, new staircases and food stores, new wash-houses for two cottages and new e.c.s. New well.

Grant made to owner £300.

(2) *Parish of Castle Hedingham.*

Row of eight brick and tiled cottages situate near Church.

Works approved and carried out :—

Pull down old leanto additions at back and erect new additions to provide new kitchens (with copper and sink) with bedrooms over. New staircases, provision of w.c.s Strip and re-tile roofs of existing portion of cottages. Form eight new dormer windows. Old staircases to be pulled out. New floors and partitions inserted and food stores formed. Old e.c.s to be converted into wood stores. Water supply to be laid on from main to sinks and w.c.s New drainage system.

Grant made to owner £725.

(3) *Parish of Rivenhall.* Hoo Hall, near to Chelmsford and Colchester Main Road.

Very pretty group of six timber built, part plaster, part weather-boarded, part brick and tiled cottages.

Works approved and carried out :—

Convert into four cottages, strip and re-roof the entire property. Knock off the whole of the external plastering and boarding and re-lath and plaster. Erect two new chimneys. Form new partitions, food stores, new staircases and new windows.

Grant made to owner £400.

SEWAGE WORKS AND RIVERS POLLUTION.

LOANS. During the year four Municipal Boroughs, seven Urban District Councils, and six Rural District Councils made application to the Ministry of Health for sanction to borrow varying sums of money, a gross total of £298,929, for works of sewerage and sewage disposal, and in consequence public inquiries were held on the dates shown in the following table :—

Date of Inquiry.	Local Sanitary Authority.	Parish.	Catchment Area.	Loan required.	Purpose.
1930.				£	
Feb. 5th	Brightlingsea U.	—	Colne	3700	Sewerage
,, 26th	Waltham Holy Cross U.	—	Lea	15500	Sewage Disposal
,, 27th	Leyton B.	—	,,	10486	Sewerage
March 14th	Chelmsford R.	Broomfield, Gt. and Lt. Waltham	Chelmer	18185	,,
		Ingatestone, Fryerning	Wid	6000	,,
April 1st	Dagenham U.	—	Thames	23900	,,
,, 9th	Rochford R.	Hawkwell, Hockley, Ashingdon, Eastwood, Rochford	Roach	58112	Sewerage & Sewage Disposal
,, 10th	Saffron Walden B.	—	Cam	9100	,, ,,
,, 23rd	Chelmsford B.	—	Chelmer	12950	Sewerage
May 1st	Maldon R.	Tolleshunt Knights	Blackwater	12000	Sewerage & Sewage Disposal
July 7th	Dagenham U.	—	Thames	28985, 5497	,, ,,
Oct. 7th	Wivenhoe U.	—	Colne	15000	,, ,,
,, 8th	Braintree R.	Hatfield Peverel	Ter	26000	,, ,,
,, 9th	Waltham Holy Cross U.	—	Lea	15000	Sewerage
,, 10th	Epping R.	Sheering	,,	17000	Sewerage & Sewage Disposal
Nov. 13th	Braintree U.	—	Brain	13000	Sewerage
,, 26th	Harwich B.	—	Sea	6314	Sewerage & Sewage Disposal
Dec. 17th	Orsett R.	Orsett	Mardyke	2200	,, ,,
			Total ...	£298,929	

SEWAGE WORKS. Table XII on page 46 gives particulars of visits paid by the County Health Inspector to the various sewage works and rivers in the Administrative County. It will be seen that 108 samples were obtained, 76 or 71·4 per cent. being satisfactory or on the border line, whilst 32 or 29·6 per cent. were unsatisfactory. This is the lowest percentage of unsatisfactory samples recorded during the past 11 years.

BLACKWATER CATCHMENT AREA. The pollution of the River Blackwater at Bocking, Coggeshall and Kelvedon in the Braintree Rural District, details of which were given in the Annual Report for 1926, still continue. It is gratifying to record,

TABLE XII.

Showing Sewage Works, Number of Visits, and Number of Samples Taken during the Year 1930.

Catchment Area.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken. No. satisfactory or on border line.	No. unsatisfactory.	Total.
Brain ..	Braintree	Braintree U... ..	2	2	—	2
	Black Notley Sanatorium ..	Braintree R... ..	1	1	—	1
Blackwater ..	Hatfield Peverel ..	Braintree R... ..	2	—	2	2
	Silver End	Braintree R... ..	2	2	—	2
	Witham	Witham U.	1	—	1	1
Cam	Saffron Walden ..	Saffron Walden B. ..	2	2	—	2
Chelmer ..	Chelmsford	Chelmsford B. ..	3	3	—	3
	Dunmow	Dunmow R. ..	1	1	—	1
	Felstead	Dunmow R. ..	2	1	1	2
	Thaxted	Dunmow R. ..	2	1	1	2
Colne ..	Earls Colne	Halstead R. ..	1	—	—	—
	Halstead	Halstead U. ..	2	—	2	2
Crouch ..	Great Burstead ..	Billericay R. ..	3	3	—	3
Ingrebourne ..	Brook Street, South Weald ..	Billericay R. ..	3	1	2	3
	Upminster	Romford R. ..	2	2	1	3
	Brentwood Joint ..	Brentwood U. / Billericay R.	3	2	1	3
	Harold Wood	Hornchurch U. ..	2	6	1	7
Lee	High Beech Hospital ..	Waltham Holy Cross U.	3	3	—	3
Mardyke ..	Bury Farm, Great Warley ..	Romford R. ..	2	1	1	2
	South Ockendon ..	Orsett R.	2	2	—	2
Roding ..	Buckhurst Hill ..	Buckhurst Hill U. ..	3	2	—	2
	Chigwell	Epping R.	2	2	—	2
	Chigwell Row	Epping R.	2	2	—	2
	Grange Hill	Epping R.	1	1	—	1
	Loughton	Loughton U. ..	2	2	—	2
	Ongar	Ongar R.	3	2	1	3
	Woodford	Woodford U. ..	2	2	1	3
	Thornwood	Epping R.	2	2	—	2
	Theydon Bois ..	Epping R.	2	2	—	2
	North Weald	Epping R.	1	—	1	1
	Moreton	Ongar R.	2	—	2	2
	Hainault	Ilford B.	4	—	2	2
	Abridge	Ongar R.	1	—	1	1
Rom ..	Hornchurch	Hornchurch U. ..	2	2	—	2
Wid	Billericay	Billericay R. ..	4	4	—	4
	Ingatestone	Chelmsford R. ..	2	2	—	2
	Shenfield	Billericay R. ..	2	2	—	2
	Blackmore	Ongar R.	1	—	1	1
	Great Warley	Romford R. ..	4	—	4	4
Holland Brook	Thorpe-le-Soken ..	Tendring R. ..	1	1	—	1
Sea	Kirby-le-Soken ..	Tendring R. ..	1	1	—	1
Samples from rivers, streams, ditches, &c.			6	7	5	12
Trade effluents			8	7	1	8
		Total	99	76	32	108

however, that sewerage and sewage disposal schemes for these three parishes have been completed, and that as soon as electricity is available the pumping plants will be brought into use.

The Braintree Rural District Council have also taken steps to provide a more adequate sewerage and sewage disposal scheme for the Parish of Hatfield Peverel.

CHELMER CATCHMENT AREA. The Felstead Beet Sugar Factory, which was first opened in October, 1926, resumed operations in October, 1930. Since the previous season further improvements had been carried out to the cooling plant and to the small domestic sewage works. During the 1930-31 season, visits were made to the factory and samples taken.

Each sample readily complied with the County Council's standard of 10·0 for a passable effluent. Nevertheless, in view of the enormous volume of effluent every effort should be made to keep the impurity figure as low as possible.

Trade Effluent—Temperature. Reference was made in the last Annual Report to the inadequate cooling of the effluent, which resulted in a fungoid growth developing in the bed and on the sides of, and on the vegetation in, the Stebbing Brook and River Chelmer. The temperature of each sample obtained was taken during the season under review, with the results indicated below :—

Date.	Stebbing Brook immediately above Intake.	Trade Effluent.	Stebbing Brook 100 yards below Intake.
1930.	°C.	°C.	°C.
October 23	10·8	29·3	30·5
November 24	4·4	28·8	—
December 1	6·6	31·0	—
,, 23	4·5	20·0	13·5
,, 31	6·5	27·5	10·0
1931.			
January 7	3·5	22·5	18·5

Representations were made in writing to the Works Manager on two occasions calling his attention to the marked rise in temperature of the water of the River Chelmer after it receives the Stebbing Brook, and to the fact that a trade effluent of such a high temperature has a deleterious effect upon the River Chelmer by markedly increasing the temperature of the water therein and favouring the growth of algoid and fungoid matter and the multiplication of bacteria.

Domestic Sewage Works.—As previously stated, these works were improved during the year by the provision of a filter bed, but they were still unable to deal adequately with the flow of sewage during the season. The effluent from these works had, therefore, to be impounded again in a meadow near to the River Chelmer and Stebbing Brook. A sample of a small leakage from this meadow was examined, and gave an impurity figure of 250, and was therefore very unsatisfactory. Steps were taken at once to stop this leakage.

Conclusion. The conclusions to be drawn from this season's working of the factory at Felstead may be summarised as follows :—

(i) The temperature of the trade effluent as it discharged into the Stebbing Brook was again far too high. By letter, dated 20th January, 1931, the Works Manager stated that "the matter of further cooling our effluent will be considered and put before our Directors. No doubt an improvement can be effected."

(ii) The small sewage works for dealing with the domestic sewage were improved, but were still inadequate. By letter, dated 20th January, 1931, the Works Manager stated that "we intend to enlarge our domestic sewage works during the summer."

(iii) The impurity figure of the trade effuent which discharged into the Stebbing Brook readily complied with the County Council's standard of 10.0 throughout the whole season.

Roding Catchment Area. The improvements to several of the sewage works in this area necessitated by the increasing population were completed during the year, with the exception of the extensions at the Wanstead and Woodford Sewage Works. It is important that a good standard should be maintained in the effluents from the sewage works in this Catchment Area, as in a prolonged dry season they constitute practically the whole of the flow in the River Roding.

FOOD AND DRUGS.

For sampling purposes under the Food and Drugs (Adulteration) Act, 1928, the Administrative County is divided into three areas, namely, northern, southern and metropolitan, in each of which there is a Chief Food and Drugs Inspector with qualified and unqualified assistants. Samples are submitted direct by each Chief Food and Drugs Inspector to the County Analyst, Dr. Bernard J. Dyer, 17, Great Tower Street, London, E.C., who has kindly supplied me with a copy of his Annual Summary for the period 1st December, 1929, to 30th November, 1930, from which extracts have been taken, and included in the following :—

	Samples Analysed.	Samples Unsatisfactory.	Percentage of Unsatisfactory Samples.
Northern District of the County ..	1,908	43	2.3
Southern District of the County ..	2,313	62	2.7
Metropolitan District of the County	2,282	29	1.3
Borough of Walthamstow ..	52	3	2.7
Chingford Urban District Council ..	7	—	
Wanstead Urban District Council ..	52	—	
West Ham Union	1	—	
Totals, 1930	6,615	137	2.1
,, 1929	5,800	102	1.8
,, 1928	4,797	143	3.0
,, 1927	4,118	146	3.5
,, 1926	3,367	110	3.3

It will be seen that during the past five years, there has been a marked increase, nearly 100 per cent., in the number of samples taken, and that the percentage of unsatisfactory samples was higher in 1930 than the figure for 1929.

Milk. Thirty-seven samples showed evidence of added water in quantities ranging from 2 per cent. to 18 per cent.

Sixty-three samples were deficient in fat in quantities ranging from 4 per cent. to 46 per cent. of the minimum quantity proper to normal milk.

One sample was tainted with Lysol or some similar disinfectant.

One sample referred to as " milky water " was fluid containing a small proportion of milk which an itinerant vendor was found in the act of using for the purpose of dilution for which he is being prosecuted (proceedings pending) under the provisions of the Milk and Dairies (Amendment) Act, 1922.

Butter. One sample contained 2 per cent. excess of water.

Four samples contained small quantities of boric acid.

One sample sold as butter consisted wholly of margarine.

Cheese. Among the cheese samples analysed were 35 samples of " packet " or " processed " cheese wrapped in tin-foil. All of these were contaminated to some extent with tin. In 28 cases, however, the contamination did not exceed 2 grains per pound (and was in many cases much less), while in 7 other cases (all Gruyere cheese) the quantity of tin was regarded as excessive, ranging from 2.2 grains to 5.5 grains per pound.

Stout. A sample of stout was found to be tainted with carbolic acid. Presumably the bottle had been used as a temporary receptacle for disinfectant and subsequently returned to the bottler, and despite any presumable attempt at cleansing had transmitted the taste of the disinfectant to the stout with which it was next filled.

Boric Acid. A sample of boric or boracic acid was found to contain 400 parts of lead per million as against the limit of 25 parts laid down in the British Pharmacopoeia.

MILK SUPPLY.

Milk and Dairies (Consolidation) Act, 1915.

No routine inspections of dairy herds by Veterinary Surgeons were undertaken during 1930, the activities being confined to the taking of samples of milk by the County Food and Drugs Inspectors and the County Health Inspector for microscopical and biological examination.

There were two distinct sampling campaigns during the year, namely (1) from farms in two special areas, and (2) from central dairies or in course of delivery.

(1) Samples from Special Areas. During the period 11th June to 9th December, 1930, the County Food and Drugs Inspectors visited all the farms in the Sanitary Districts in the areas of the Colchester and Southern Guardians Committees. They obtained 480 samples, 7 being from farms which are licensed by the Essex County Council to produce Grade A milk.

(*a*) *Biological Examinations.* All the samples were submitted to biological examination with the following results :—

No. of samples examined	480
Less inconclusive tests owing to deaths of guinea pigs from intercurrent infection	38
	442

	No.	Per cent.
Samples found to contain tubercle bacilli	25	5·6
Samples found *not* to contain tubercle bacilli ..	417	94·4
	442	100·0

The 25 positive samples were from 22 farms including one farm which is licensed to produce Grade A milk. Each dairy herd at the 22 farms was inspected by the County Council's appropriate part-time Veterinary Surgeon, with the following results :—

(i) 25 cows (from 17 farms) were slaughtered under the Tuberculosis Order, 1925, 12 being in an advanced stage of tuberculosis, and 8 were not in an advanced stage of tuberculosis. In 5 instances the post mortem results were not recorded by the Veterinary Surgeon.

(ii) The Veterinary Surgeon failed to find any cows suffering from tuberculosis at 5 farms.

(*b*) *Coliform Bacteria Test.* Each sample was also examined for the presence of coliform bacteria in as small a quantity of milk as one-thousandth of a cubic centimetre. The results were as follows :—

	No.	Per cent.
Samples in which coliform bacteria were present in 1/1000 of a cubic centimetre	118	24·6
Samples in which coliform bacteria were absent in 1/1000th of a cubic centimetre	362	75·4
	480	100·0

These results indicate that a quarter of the milk supply did not comply with a reasonable standard of cleanliness. In every case where the coliform bacteria were found in 1/1000th cubic centimetre, a copy of the bacteriologist's report was sent to the local Medical Officer of Health with a letter pointing out that although no standard of cleanliness for ordinary milk has been laid down, such milk cannot be regarded as satisfactory when coliform bacteria are found in so small a quantity as 1/1000th of a cubic centimetre. Their presence suggests some deficiency in the methods of cleanliness practised at the farm or dairy. The local Medical Officer of Health was asked to arrange for the farm to be inspected with a view to ensuring that the farmer complies regularly with the requirements of the Milk & Dairies Order, 1926.

The following Table shows the Sanitary Districts from which 480 samples were obtained, and gives a summary of the results of the biological examinations and the coliform bacteria test :—

Guardians Committee Area.	Sanitary District.	No. of Samples obtained.	Results of Biological Examinations.		Coliform Bacteria present in 1/1000th c.c.
			Inconclusive.	Positive.	
Colchester	Brightlingsea U.	6	—	—	2
	Clacton-on-Sea U. ..	13	2	1	5
	Colchester B.	39	1	2	3
	Frinton-on-Sea U. ..	—	—	—	—
	Harwich B.	8	—	—	6
	Walton-on-Naze U. ..	3	1	—	1
	West Mersea U.	5	—	1	—
	Wivenhoe U.	5	1	—	2
	Lexden and Winstree R. ..	147	7	10	22
	Tendring R.	179	13	5	55
	Total	405	25 (6.2%)	19 (5.0%)	96 (23.7%)
Southern	Barking U.	2	—	—	—
	Dagenham U.	7	3	—	2
	Hornchurch U.	9	—	—	4
	Ilford B.	8	2	2	2
	Romford U.	14	1	—	3
	Romford R.	35	7	4	11
	Total	75	13 (17.3%)	6 (9.7%)	22 (29.3%)
	Grand total ..	480	38 (7.9%)	25 (5.6%)	118 (24.6%)

Attention is drawn to the Lexden & Winstree and the Tendring Rural Districts, the former having the greater number of positive samples from a smaller number of farms. This may be due to the fact that the dairy herds in the Tendring Rural District were inspected in 1927 by one of the County Council's part-time Veterinary Surgeons. On the other hand, the results of the coliform bacteria test in these two Rural Districts show that greater vigilance is needed in the Tendring Rural District.

(2) Samples from Central Dairies or in Course of Delivery. These samples were taken by the County Food and Drugs Inspectors and by the County Health Inspector, and were submitted to biological examination with the following results :—

Number of samples examined	437
Less inconclusive tests owing to deaths of guinea pigs from intercurrent infection	42
	395

	No.	Per cent.
Samples found to contain tubercle bacilli	53	13.4
,, ,, not to contain tubercle bacilli ..	342	86.6
	395	100.0

The 53 positive samples were obtained from 47 farms, including three farms which are licensed to produce Grade A milk. Each dairy herd at the 47 farms was inspected by the County Council's appropriate part-time Veterinary Surgeon with the following results :—

(i) 44 cows from 33 farms were slaughtered under the Tuberculosis Order, 1925, 28 being in an advanced stage of tuberculosis and 14 not in an advanced stage of tuberculosis. In two instances the post-mortem results were not recorded by the Veterinary Surgeon.

(ii) 16 cows have been disposed of otherwise at seven of the farms.

(iii) The Veterinary Surgeons failed to find any cow suffering from tuberculosis at seven farms.

Conclusions. (1) In the two selected areas, namely, the Colchester and Southern Guardians Committee areas, the percentage of samples in which tubercle bacilli were found is lower than the percentage obtained in the Administrative County of Essex during 1928, 1929 and 1930, the figures being as follows :—

	1928.	1929.	1930.
Administrative County ..	7.0 per cent.	9.6 per cent.	13.4 per cent.
Two selected areas ..	—	—	5.6 ,,

The figures are, however, not strictly comparable, as the sampling in the two special areas was at the farms, whilst elsewhere it was at central dairies or in course of delivery. There are grounds for assuming that news regarding the sampling at the farms was known generally, and may have resulted in some cases in the exclusion from the bulk supply of milk from doubtful cows.

(2) The results of the coliform bacteria test, namely, that nearly a quarter of the milk supplies in the two special areas did not comply with a reasonable standard of cleanliness are disappointing after the many years excellent educational propaganda by clean milk competitions and demonstrations undertaken in this County.

(3) Whilst the sampling in the two special areas served a useful purpose, the Committee did not feel justified in repeating the experiment in two other areas. It was therefore decided that during the year 1931-32 a further 500 samples of milk from central dairies or in course of delivery throughout the Administrative County should be obtained and submitted to the coliform bacteria test and biological examination.

(4) Enquiries were made into the 80 (or 8·7 per cent.) inconclusive results in both sampling campaigns owing to the premature death of the guinea pig from secondary infection. It was found that generally speaking in the winter months half the inconclusive results were due to contaminated milk samples, and half to ordinary disease in guinea pigs, but in the summer months the contaminated milk samples accounted for, at the very least, 75 per cent. of the inconclusive results. Every care is taken by the Bacteriologist to obtain a healthy stock of guinea pigs, and during the summer of 1930 arrangements were made to send certain samples in ice boxes.

Section 4. During the year eight notifications were received under Section 4 of the Milk & Dairies (Consolidation) Act, 1915, to the effect that biological examinations of eight samples of mixed milk from 16 farms within the County of Essex had revealed the presence of the tubercle bacilli. Each dairy herd at these 16 farms was inspected by the County Council's appropriate part-time Veterinary Surgeon with the following results :—

(1) Ten cows from six farms were slaughtered under the Tuberculosis Order, five being in an advanced stage of tuberculosis, and five not in an advanced stage of tuberculosis.

(2) One cow had been disposed of otherwise at one farm.

(3) The Veterinary Surgeons failed to find any cow suffering from tuberculosis at eight farms.

Milk and Dairies Order, 1926.

The Local Sanitary Inspectors in one Borough, three Urban Districts and eight Rural Districts took advantage of the County Council's laboratory facilities by submitting samples of milk for the coliform bacteria test and microscopical examination for the presence of tubercle bacilli, with the results indicated below :—

Sanitary District.	Microscopical Examination. Neg.	Pos.	Coliform Bacteria Test. Sat.	Unsat.
Benfleet U.	7	—	6	1
Buckhurst Hill U.	5	—	2	3
Canvey Island U.	8	—	7	1
Chelmsford B.	1	—	1	—
Chelmsford R.	46	—	31	15
Dunmow R.	4	—	3	1
Epping R.	2	—	2	—
Lexden and Winstree R.	17	—	7	10
Maldon R.	55	—	26	29
Ongar R. ..	4	—	4	—
Rochford R.	2	—	1	1
Tendring R.	3	—	—	3
	154	—	90	64
			(58·4%)	(41·6%)

This table readily shows the limitation of the value of microscopical examination of bulk samples of milk for the presence of tubercle bacilli.

In respect to the coliform bacteria test, the standard already referred to has been used, namely, the sample has been regarded as positive where the coliform bacteria were present in 1/1000th cubic centimetre. Presumably, the high percentage, namely, 41·6 as compared to 24·6 in the samples taken from the two special areas already referred to, is due to the fact that most of the samples were from selected farms where the Sanitary Inspector had reason to suspect that sufficient care was not being taken in the methods of cleanliness.

In 1928, a pamphlet was produced by the East Anglian Institute of Agriculture setting forth the "Modern Methods of Milk Production." The demand for that pamphlet was so great that it was necessary to have it reprinted and brought up to date in the light of experience gained in the last three years. Copies of this leaflet can be obtained on application to the Principal, East Anglian Institute of Agriculture, Chelmsford.

In this connection also there is need for a well illustrated simple poster suitable for displaying in cowsheds and dairies, and outlining some of the more important modern methods of milk production. It is understood that the Health and Cleanliness Council, 5, Tavistock Square, London, W.C.1, are considering what can be done in this direction.

Grade "A" Milk.

54 licences to produce and sell Grade A milk were granted by the County Council during the year under the Milk (Special Designations) Order, 1923, as compared to 47 for the year 1929.

Two hundred and twenty-seven visits were paid to Grade A and other farms by the County Health Inspector, who obtained 180 samples for bacteriological examination. The conditions noted at each farm were generally satisfactory. In each case where a sample did not comply with the Grade "A" standard, advice and assistance were readily given by the East Anglian Institute of Agriculture with excellent results.

Lectures on Milk Hygiene.

At the request of the Agricultural Committee, the County Health Inspector again gave 10 lectures on Milk Hygiene to the students at the East Anglian Institute of Agriculture, Chelmsford, during the Spring Term of 1930. The subjects dealt with were sanitary conditions, air space and ventilation, water supplies, methods of milking and handling of milk, transportation, prevention of contamination, pasteurisation, sterilization, legislation affecting milk production, and milk in relation to public health.

Tuberculosis Order, 1925.

The Agricultural Committee are responsible for the administration of this Order, and have again taken active steps to eliminate and slaughter tuberculous cows, as will be seen from the following figures which have been furnished by the Clerk of the County Council :—

	1929.	1930.
No. of animals examined by Veterinary Surgeons ..	24611	28866
No. of animals slaughtered under the Order	778	836
No. of such animals found on post mortem to be—		
(*a*) Not tuberculous	0	2
(*b*) Tuberculous—not advanced	406	511
(*c*) Tuberculous—advanced	372	323
Compensation paid by County Council	£4302	£5273
Salvage	£1595	£1718

It will be seen from the above figures that 28·6 % of the cows slaughtered under the Tuberculosis Order were found on post mortem examination to be in an advanced stage of the disease. This percentage shows a marked improvement on the figures for 1929 and 1928 which were 47·8 and 52·8 respectively. The natural result has been an increase in the amount of compensation paid by the County Council, namely, £5,273 as compared to £4,302 for 1929.

Since the Tuberculosis Order, 1925, came into force on 1st September, 1925, the following results have been recorded :—

Total No. of animals slaughtered under the Order	4380
Total No. found on post mortem examination to be in an advanced stage of the disease	2135
Total amount of compensation paid by the County Council ..	£24633
Salvage obtained	£6440

WATER SUPPLIES.

During the year four Rural District Councils made application to the Ministry of Health for approval to loans for works of water supplies, and in consequence public inquiries were held on the dates shown below :—

Date of Inquiry.	Local Sanitary Authority.	Parish.	Amount of Loan.	Purpose.
1930.			£	
January 14th	Lexden & Winstree R.	Abberton Langenhoe Peldon Great Wigborough Little Wigborough Salcot Virley	12,600	Scheme of Water Supply
April 10th	Saffron Walden R.	Newport	5,700	Works of Water Supply
May 15th	Do.	Quendon Rickling	4,500	do.
October 8th	Braintree R.	Hatfield Peverel Terling	16,000	do
		TOTAL ..	£38,800	

The parishes included in the Lexden & Winstree Rural District Council's Scheme, which was the subject of a public inquiry on 14th January, 1930, were referred to in last year's Annual Report. A great shortage of water was experienced in those parishes during the summer of 1929, and the Rural District Council had to carry water to many of the parishes for distances varying from one to ten miles. The local Medical Officer of Health reports that the cost of the scheme is to be supported by a general rate on the whole rural district ; that a plentiful supply of water has been obtained from a borehole 250 feet in depth, the last 62 feet being in the chalk ; and that this important progressive step " will mark an epoch in the history of the district, " and the Rural Council are to be congratulated on their foresight in furthering an " undertaking which will bring health and prosperity to the district concerned."

Sources of Water Supplies.

The outstanding feature of the past five years has been the acquiring by the South Essex Waterworks Company, Ltd., of the last available large scale source (River Stour) of water within the County of Essex.

As pointed out in last year's Annual Report. 21 per cent. of the parishes in the Rural Districts are without a public supply of any kind, and are entirely dependent on shallow wells, rainwater, springs and ponds. Fortunately, the total rainfall was slightly more in 1930 than in 1929, and was more equably distributed throughout the year, which prevented a recurrence of the acute shortages of water experienced in many parishes during the drought of 1929.

TRADE, HOUSE AND OTHER REFUSE.

Two Local Sanitary Authorities made application to the Ministry of Health for approval to loans for works of refuse disposal, the following public inquiries being held in connection therewith :—

Date of Inquiry.	Local Sanitary Authority.	Amount of Loan.	Purpose.
1930.			
September 2 ..	Frinton-on-Sea U.	£750 ..	To purchase land in Malting Lane in the Parish of Kirby-le-Soken for the purpose of a refuse tip, and for the provision of proper means of access thereto.
October 23 ..	Chelmsford B. ..	£4000 ..	To purchase land adjoining the River Can for refuse disposal purposes.

London Refuse. The Departmental Committee on London Cleansing, appointed to consider the report on "Public Cleansing in London" made by Mr. J. C. Dawes (Inspector of Public Cleansing of the Ministry of Health), issued their report in May, 1930. In their report the Departmental Committee stated that they had given to all parties concerned an opportunity of being heard, and evidence written or oral or both had been received.

> "In the evidence given on behalf of the Essex County Council reference "was made to the long period of years over which their attention had been "directed to the dumping of refuse from outside the County, particularly at "Hornchurch, and to the unsightly and insanitary features of the practice. "The County Council in addition to urging additional legislation which would "prevent a local sanitary authority from dumping refuse outside its own "area without satisfactory safeguards, pressed strongly for some immediate "remedy for the existing unsatisfactory conditions, if, as seemed probable, "there was likely to be delay in providing an alternative method of disposal "for the refuse of London. One of the witnesses for the County Council, "who is also a Commissioner of Sewers for the levels of Rainham and Fob-"bing, referred to the injurious effect upon the Commissioners' fre h water "drainage channels, and stated also that a constant watch has to be kept "by the Marsh Bailiff to counter the damage which might result from rats "weakening the sea walls."

They had also received the following resolutions :—

(a) From the Conference of Representatives of the County Councils of Buckinghamshire, Essex, Hertfordshire, Kent and Middlesex :—

"That in the opinion of the conference, a local authority should not "be permitted to deposit, by its servants, agents, or contractors, refuse "or other rubbish outside its own area without the previous approval of "the County Council and the District Council within whose area the "refuse is deposited, and subject to such conditions as may be prescribed "by such Councils, this restriction not to apply to ordinary stable "manure sent direct to a farm for agricultural purposes; and that in "the event of a County Council or local authority refusing consent, an "appeal should lie to the Minister of Health, whose decision should be "final."

This resolution has received the support of the County Councils' Association.

(*b*) From the Essex Riverside Advisory Committee :—

"(i) That this Council view with grave concern the continual "dumping of London refuse in the Thames-side areas (particularly in "the neighbourhood of Dagenham, Hornchurch, Rainham and "Wennington) and the deplorable conditions which are due to the "presence of the existing dumps.

"(ii) That in view of the serious menace to the health of the rapidly "growing communities in and around the said areas (apart from the "general nuisance arising from smells), strong representations be again "made to the Minister of Health urging him to take every possible "step to prevent further dumping of refuse by outside authorities in "these districts."

The following extracts which have special reference to the dumping of London refuse in the Administrative County of Essex, are taken from the summary of conclusions and recommendations in the report of the Departmental Committee :—

"(17). That the system of dumping crude refuse without taking "adequate precautions to prevent nuisance arising should not be allowed to "continue; and that the Metropolitan Sanitary Authorities who now, "either directly or indirectly, send their refuse to insanitary dumps outside "the county should be pressed to secure at once the discontinuance of these "dumps for their refuse and in any event to take whatever measures may "be practicable to minimise the unsatisfactory conditions which now exist.

"(18) That refuse can be disposed of without causing nuisance where "the precautions advised by the Ministry are strictly observed, and, "although it is doubtful whether this method could be permanently used to "any great extent for the huge quantities which have to be dealt with in "London, that it could be adopted pending the carrying out of a new "scheme or schemes."

"(19). That county councils or local authorities should not be given "power to exclude refuse from districts other than that in which it is proposed "to be deposited, or to exercise a veto over sites proposed to be used for "tipping refuse, but that sufficient control could be secured by the local "authorities by the adoption and strict enforcement of suitable bye-laws, "with heavier penalties for infringement; and that, whilst the existing law "enables further action to be taken by local authorities and county "councils against offending parties, it might be amended when opportunity "offers on the lines indicated in paragraph 41 of this report.

After considering the above-mentioned report, the Public Health and Housing Committee summoned a conference of the Local Sanitary Authorities in the Administrative County who are affected by the dumping of London refuse. This conference was held on 9th December, 1930, when the following resolution was passed :—

"That this Conference urges the County Council to recommend all "Local Authorities interested that they should make Bye-laws, as far as "possible, on the lines of the Model Bye-laws furnished by the Ministry of "Health."

In respect to existing dumps, which chiefly concern the Hornchurch Urban and Romford Rural Districts, it was agreed that these authorities should consider the matter further with a view to a conference being held between themselves and the representatives of the London Boroughs and of the Contractors who deal with the refuse from those Boroughs.

SANITARY INSPECTORS.

Introduction. Some of the duties now undertaken by Sanitary Inspectors were in the past carried out by a variety of persons. As early as 1582, reference is made to "the danger of pestilence and riot" and to the need for assistance in discovering and preventing offences. The Lord Mayor of London was asked in 1619 "to give suitable directions to the Constables." "Messengers with search warrants" were also used for "spying into personal habits," whilst "watchmen" and "searchers" were appointed during outbreaks of plague, the former to keep every infected house under observation "suffering no persons to go more out of the said house, nor no 'searcher to go abroad without a red rod in their hand."

In 1832, when Cholera was prevalent, the Board of Health for each large town was charged with the duty "to appoint Inspectors : each Inspector to visit daily, and 'to enquire carefully after the health, and comforts of the inmates of, say, 100 houses, 'more or less, according to circumstances."

Appointment. In the year 1840, the House of Commons appointed a Select Committee "to enquire into the circumstances affecting the health of the inhabitants 'of large towns, with a view to improved sanitary arrangements for their benefit." Evidence was taken for three months, when several important recommendations were made which included the following :—"That in every large town there ought 'to be an Inspector to enforce regulations for sanitary purposes."

This recommendation was incorporated in the Public Health Act, 1848, which authorised the Local Authorities to appoint Inspectors of Nuisances, although many similar appointments (the first being at Ashton-under-Lyne in 1844) had already been made in some of the principal towns in England. It was a permissive Act which created Boards of Health with power to appoint fit and proper persons to be Inspectors of Nuisances and to make bye-laws for regulating the duties and conduct of such officers. Then followed health legislation which culminated in the Public Health Act, 1875, which was "an Act for consolidating and amending the Acts relating to 'Public Health in England." The sections in that Act relating to the appointment of Inspector of Nuisances are as follows :—

> S.189. Every urban authority shall from time to time appoint fit and proper persons to be medical officer of health, surveyor, INSPECTOR OF NUISANCES, clerk, and treasurer.
>
> S.190. Every rural authority shall from time to time appoint fit and proper persons to be medical officer or officers of health, and INSPECTOR or INSPECTORS OF NUISANCES ; they shall also appoint such assistants and other officers and servants as may be necessary and proper for the efficient execution of this Act. . . . . .
>
> S.192. The same person may be both surveyor and inspector of nuisances. . . . . .

By the Local Government Act, 1888, Section 24 (2) (*c*), County Councils were required to pay out of the Exchequer Contribution Account, which consists of the sums from time to time received by a County Council under certain statutory provisions, to each local authority half the cost of the salary of the inspector of nuisances where his qualifications, appointment, salary and tenure of office are in accordance with the regulations made by the Ministry of Health. This Section was repealed by Section 85 of the Local Government Act, 1929, under the Third Schedule of which every County Council and County Borough Council is required, under certain conditions, to continue to make the like payments. The County Council and County Borough Council are to be re-imbursed out of the "General Exchequer Contribution" to be provided by Parliament under Section 86 of the Local Government Act, 1929.

The Public Health (Officers) Act, 1921, provides that "an inspector of nuisances shall henceforth be designated a sanitary inspector." The appointment of a Sanitary Inspector, one half of whose salary is repayable by a County or County Borough Council, is subject to the approval of the Minister of Health. Such repayment is usually limited to the salary of the Senior Sanitary Inspector. Procedure for appointing is laid down in the Sanitary Officers Order, 1926.

Examinations for Sanitary Inspectors. As previously stated, local Boards of Health were empowered by the Public Health Act, 1848, to appoint "fit and proper persons" as Sanitary Inspectors. No emphasis appears to have been laid on the need for qualifications and it may be inferred that only too frequently in those early days influence had greater weight than suitability and fitness in securing such positions. Subsequent to the passing of the Public Health Act, 1875, the Sanitary Institute of Great Britain, which was formed in 1876, and which became the Royal Sanitary Institute in 1888, appreciated the importance of some training for Sanitary Inspectors

and established voluntary examinations for the purpose of granting certificates of proficiency. The Public Health (London) Act, 1891, first laid down the necessity for proper qualifications, Section 108 enacting that "A Sanitary Inspector 'appointed after the first day of January, one thousand eight hundred and ninety-five, 'shall be holder of a certificate of such body as the Local Government Board may from 'time to time approve, that he has by examination shown himself competent for such 'office, or shall have been, during three consecutive years preceding the year one 'thousand eight hundred and ninety-five, a Sanitary Inspector or Inspector of 'Nuisances of a district in London, or of an urban sanitary district out of London 'containing, according to the last published census, a population of not less than 'twenty thousand inhabitants."

This legislation led to the formation in 1899 by the Royal Sanitary Institute and other bodies of the "Sanitary Inspectors Examination Board," which superseded the Royal Sanitary Institute in respect to the granting of certificates qualifying for positions as Sanitary Inspectors in the Metropolis. Persons who held certificates of the Royal Sanitary Institute prior to 24th April, 1899, remained qualified for appointments in London.

The Royal Sanitary Institute and other bodies continued to hold examinations and grant certificates, the holders of which could apply for posts as Sanitary Inspectors in areas outside London.

In 1926, the "Royal Sanitary Institute and Sanitary Inspectors Examination Joint Board" was formed and displaced previous examination bodies. Their regulations state that "candidates proposing to qualify themselves for the certificate 'of the Board with a view to appointment by Local Authorities are advised first to 'satisfy themselves that their health and physical conditions are such that they are 'likely to be able to comply with Local Authorities' medical requirements, more 'particularly where superannuation schemes are in operation." Candidates must produce evidence of education and training, *e.g.* (*a*) having passed one of the prescribed examinations or acquired approved general and technical knowledge; (*b*) having attended an approved six months' course of lectures and demonstrations and (*c*) having undergone practical training for a prescribed period in the work and duties of a Sanitary Inspector.

A certificate is not granted to any candidate under 21 years of age.

Qualifications. Under paragragh 16 of the Sanitary Officers' Order, 1926, "a person shall not be qualified to be hereafter appointed or re-appointed as a sanitary 'inspector of any district or combination of districts unless he is the holder of—

'(*a*) a certificate of the Royal Sanitary Institute and Sanitary Inspectors' 'Examination Joint Board; or

'(*b*) a certificate of the late Sanitary Inspectors' Examination Board; or

'(*c*) a certificate issued before the 1st day of January, 1899, by the Sanitary 'Institute, now known as the Royal Sanitary Institute; or

'(*d*) in the case of an appointment as sanitary inspector of a district or com-'bination of districts outside London, a certificate of the Royal 'Sanitary Institute issued before the 1st day of January, 1926.

'Provided that if the local authority employ a qualified veterinary surgeon for 'purposes connected with the inspection of meat, they may, with the approval of the 'Minister, appoint him as a sanitary inspector for the purpose only of exercising the 'powers and duties of such an officer in relation to meat, notwithstanding that he does 'not possess one of the qualifications prescribed by this Article."

The Ministry of Health has power to waive this requirement in cases in which they contribute to the officer's salary; further the requirement is not binding where no contribution from the Ministry of Health is required.

Duties. The Sanitary Officers' Order, 1926, revokes all previous Orders and lays down the duties to be undertaken by Sanitary Inspectors—see Schedule II. page 68. In addition to these duties most Sanitary Inspectors act as Inspectors under the Petroleum & Shops Acts, whilst some are supervisors of scavenging and Collectors of Rents from teannts of Council Houses. In this connection, the Local Government Board, in a Memorandum, dated December, 1910, stated that "where the duties appertaining to the 'office of Inspector of Nuisances do not require the whole time of the officer, local 'authorities would be well advised to see if by the addition of other public offices to 'that of Inspector of Nuisances they can secure that the officer shall give his whole 'time to their service. The following offices are most conveniently combined with that 'of Inspector of Nuisances :—Surveyor under the Public Health Act (except in districts 'where building operations are very active); Inspector under the Infant Life Pro-'tection Act; Inspector under the Shop Hours Act; Inspector for certain purposes of 'the Factory and Workshops Acts; Assistant Officer under the Unsound Food Regu-'lations; Superintendent of Scavenging. It must be understood that the work of 'these offices does not form any part of the duties of an Inspector of Nuisances as 'such and must be remunerated by a special salary for which no repayment can be 'claimed.

"It will be observed that the office of Surveyor of Highways is omitted from the 'above list of offices which may be combined with that of Inspector of Nuisances. 'The Board have come to the conclusion, as a result of experience, that the com-'bination of these offices, especially in rural districts, is often not desirable. In 'districts of small area, however, there is not so great objection to combination of 'these offices; but, before giving their sanction to such an arrangement, the Board 'would require to be satisfied that the officer would devote sufficient time to his 'work as Inspector of Nuisances to ensure the adequate discharge of the duties of 'this office."

It will be seen from Schedule II (see page 68) that a Sanitary Inspector has a wide range of duties which he is required to "perform under the general direction of the 'medical officer of health." Such duties include the systematic inspection of the district to keep himself informed of the sanitary circumstances of the district; supervision of offensive trades; inspection of houses, farms, dairies, shops or premises used for the preparation or sale of food. In other words, he generally assists the Medical Officer of Health in the non-medical work of a Health Department, and where the latter is a part-time officer, the responsibilities and duties of the Sanitary Inspector are

increased accordingly. In the large centres of population, it is becoming usual for Local Author-ities to sectionalise the work, and to have Inspectors for specific purposes, *e.g.*, Food Inspectors, Smoke Inspectors, Sampling Inspectors, Housing Inspectors, Workshop Inspectors.

The formidable duties of Sanitary Inspectors require up-to-date technical knowledge on many and varied subjects, a working knowledge of the numerous Public Health Acts, Orders and Regulations, advisory rather than inspectorial methods, ability to make clear and reliable verbal and written reports either to the Committees or Medical Officers of Health, and cordial co-operation with other officers of the Council. Such duties therefore call for and are increasingly attracting to the service men with a good standard of education, and possessing the necessary tactfulness and courtesy.

In Schedule III (see page 70) is given a list of the principal Acts, Regulations and Orders affecting the duties of Sanitary Inspectors in areas outside London.

Administrative County of Essex. On 10th January, 1930, the County Medical Officer asked each local Medical Officer of Health for particulars regarding each Sanitary Inspector under the following headings :—

Name. Age. Qualifications. Date appointed.

Emoluments as Sanitary Inspector.

Salary.

Travelling Allowance.

Approximate time given weekly to Duties of Sanitary Inspector.

Duties undertaken additional to those set out in para. 19 of Sanitary Officers Order, 1926.

Approximate time given weekly to such other duties.

Emoluments for such Other Duties.

Salary.

Travelling Allowance.

The information regarding all the Inspectors in the Administrative County was not completed until 7th October, 1930.

Number of Sanitary Inspectors. Schedule I (see page 67) (a summary of which is given below) has been compiled from the information received, and compares the number of whole-time and part-time Sanitary Inspectors with the number of equivalent whole-time Sanitary Inspectors for each Sanitary District. The last mentioned figure errs in many instances on the generous side after taking into account such factors as the approximation given by the local Medical Officer of Health, the salary paid for the duties of Sanitary Inspector and general knowledge of the area.

Sanitary Authorities.	Acreage 1921.	Popn., Est. 1929.	No. of Sanitary Inspectors. Whole-time.	Part-time.	Approximate equivalent No. of Whole-time Sanitary Inspectors.
Municipal Boroughs (8)	41,949	462,278	23	3	24
Urban Districts (29)	101,553	381,062	22	14	28
Rural Districts (17)	820,941	267,060	15	11	22
Totals (54)	964,443	1,110,400	60	28	74

For the purpose of this report, the terms " whole-time " and " part-time " have been interpreted as follows :—

(*a*) Whole-time—A Sanitary Inspector who devotes his whole time to the area of one Local Sanitary Authority and to the duties laid down in the Sanitary Officers Order, 1926, but undertaking in addition the supervision of scavenging and the duties under the Petroleum Acts and Shops Acts, and in a very few instances, collecting rents from Council Houses.

(*b*) Part-time—An officer who undertakes some or all of the duties referred to under (*a*) plus the duties of Surveyor, or who is partly employed in adjacent Counties, or who gives part of his time to the official duties.

Ages. In Essex at the time of writing, there are four Sanitary Inspectors aged 65 years and over ; 16 between 55 and 65 years of age ; 20 are between 45 to 55 years of age, and 48 are under 45 years of age.

Qualifications.

(a) *Sanitary Inspector's Certificate.* Of the 88 Sanitary Inspectors in the Administrative County, 83 possess a Sanitary Inspector's Certificate, and of the remaining five, two are Members of the Institute of Municipal and County Engineers.

(b) *Meat and other Foods Certificate.* In the Borough and Urban Districts, 36 (or 58.0 per cent.) of the 62 Sanitary Inspectors possess this additional certificate ; whilst in the Rural Districts 13 (or 50 per cent.) of the 26 Sanitary Inspectors possess that additional certificate.

(c) *Other Qualifications.* 29 Sanitary Inspectors possess other certificates, *e.g.*, Municipal and County engineers, sanitary science, sanitary engineering, building construction, smoke, advanced hygiene or registered plumber.

SALARIES AND ALLOWANCES.

(a) *Borough and Urban Districts.* The total maximum salaries payable to the 62 sanitary inspectors for duties as sanitary inspectors is approximately £18,200, or an average of £290 per inspector. Salaries vary from £210 to £550 per annum for whole-time inspectors.

In respect to travelling expenses, the position appears to be as follows :—

11	Inspectors	receive actual expenses.
5	,,	have cycle provided.
6	,,	have a cycle allowance varying from 30s. to £5 per annum.
8	,,	receive an annual allowance varying from £5 to £50, average £27 per annum.
1	,,	receives 3½d. per mile for use of car.
1	,,	receives 2½d. per mile for use of motor cycle.
30	,,	receive no allowance.

(b) *Rural Districts.* The total of the maximum salaries payable to the 26 sanitary inspectors for duties as sanitary inspectors is approximately £7,010, or an average of £270 per Inspector. Salaries vary from £200 to £500 per annum for whole-time Inspectors.

In respect to travelling expenses, the position appears to be as follows :—

16	Inspectors	receive annual allowances varying from £25 to £100 per annum, the average being £45 per annum.
2	,,	receive 3½d. and 5¼d. per mile respectively for use of car.
8	,,	do not receive a separate allowance.

The eight Inspectors to whom no separate travelling allowance is paid have an average inclusive annual salary of £276, and have to cover an average acreage of 37,564. Such an arrangement is unsatisfactory, as the more energetic an Inspector is in his outside duties, the less payment does he receive for services rendered. In this connection, the Local Government Board, in their Memorandum, dated December, 1910, stated that "in large districts, particularly in rural districts, the efficient discharge 'of the duties of an Inspector of Nuisances depends to a great extent upon the facilities 'which the officer possesses for getting about his district, and in fixing the terms of an 'appointment the local authority should see that those terms do not afford any 'inducement to the Officer to restrict the number of journeys which he undertakes in 'pursuance of his duties."

GENERAL OBSERVATIONS.

(1) The average acreage and population served per equivalent whole-time Sanitary Inspector is as follows :—

	Population.	Acreage.
In Municipal Boroughs	19,000 ..	1,725
In Urban Districts	13,752 ..	3,665
In Rural Districts	12,084 ..	37,146
In Administrative County ..	14,977 ..	13,008

In a Memorandum, dated December, 1910, the Local Government Board pointed out that "in districts possessing a population of over 10,000, it is generally desirable 'that an Inspector of Nuisances should devote his whole time to the duties of that 'office." Since that Memorandum was issued additional duties have been given to Sanitary Inspectors. (Note : In England and Wales there are approximately 3,000 Sanitary Inspectors, equal to 1 per 13,000 of the population).

(2) There is great variation in both urban and rural districts in the sufficiency of the service provided, *e.g.* :—

(a) *Urban Areas.* In one Urban District with 42,000 population and 3,805 acres, three whole-time Inspectors are employed, whilst another district with a population of 24,000 and 3,112 acres has one whole-time Inspector.

(b) *Rural Areas.* One Rural District (population 23,720, acreage 73,131), has $2\frac{3}{4}$ equivalent whole-time Inspectors as compared to another district with one Inspector serving a population of 18,580, and acreage 66,300.

(3) All the 88 Sanitary Inspectors with five exceptions, possess the necessary qualifying certificate, two of the latter being Members of the Institute of Municipal and County Engineers.

(4) 58 per cent. of the Sanitary Inspectors in the Borough and Urban Districts and 50 per cent. of those in the Rural Districts possess the Meat and Other Foods Certificate of the Royal Sanitary Institute.

(5) A definite and sufficient travelling allowance should be paid to every Sanitary Inspector in a rural area.

(6) General experience shows that where the same officer is both Sanitary Inspector and Surveyor (either of Highways or Housing) the tendency is for him to give the bulk of his time to the duties of Surveyor. The result is that the duties of Sanitary Inspector are carried out spasmodically, and therefore, inefficiently. On the contrary, the efficiency of the public health service is secured in those areas where one officer devotes his whole time to the duties of Sanitary Inspector, more particularly when clerical assistance is provided.

SCHEDULE I.

Return showing Number of Sanitary Inspectors in the service of the various Local Sanitary Authorities in the Administrative County of Essex.

District.	Acreage.	Est. Popn., 1929.	Sanitary Inspectors. Whole-time.	Part-time.	Approximate equivalent whole-time.
1.	2.	3.	4.	5.	6.
Urban—					
Barking	3,805	42,160	3	—	3.00
Benfleet	6,319	11,900	1	—	1.00
Braintree	2,224	8,568	1	—	1.00
Brentwood	460	7,578	—	1	0.33
Brightlingsea	2,867	4,356	—	1	0.50
Buckhurst Hill	873	5,501	—	1	0.50
Burnham-on-Crouch	4,517	3,622	—	1	0.20
Canvey Island	4,400	6,386	1	—	1.00
Chelmsford B.	3,112	23,930	1	—	1.00
Chingford	2,808	16,090	1	—	1.00
Clacton	4,069	15,510	2	—	2.00
Colchester B.	11,333	44,890	2	—	2.00
Dagenham	6,556	76,970	4	—	4.00
Epping	1,420	5,327	—	1	0.50
Frinton	422	2,279	—	1	0.25
Grays	1,359	18,480	1	—	1.00
Halstead	647	5,887	—	1	0.50
Harwich B.	1,541	11,890	1	1	1.33
Hornchurch	6,783	17,480	1	—	1.00
Ilford B.	8,496	116,200	5	1	5.75
Leyton B.	2,594	128,300	7	—	7.00
Loughton U.	3,961	7,137	—	1	0.40
Maldon B.	3,028	6,612	—	1	0.25
Purfleet	8,899	9,141	1	—	1.00
Rayleigh	5,278	5,840	—	1	0.30
Romford	5,630	28,710	1	—	1.00
Saffron Walden B.	7,502	5,656	1	—	1.00
Shoeburyness	1,036	5,683	—	1	0.40
Tilbury	1,855	17,090	1	—	1.00
Waltham Holy Cross	11,017	6,911	1	—	1.00
Walthamstow B.	4,343	124,800	6	—	6.00
Walton-on-the-Naze	2,046	3,113	—	1	0.40
Wanstead	1,679	17,950	1	—	1.00
West Mersea	3,185	2,237	—	1	0.60
Witham	3,713	4,348	—	1	0.33
Wivenhoe	1,564	2,318	—	1	0.50
Woodford	2,161	22,490	2	—	2.00
	143,502	**843,340**	**45**	**17**	**52.04**

District. 1.	Acreage. 2.	Est. Popn., 1929. 3.	Sanitary Inspectors. Whole-time. 4.	Part-time. 5.	Approximate equivalent whole-time. 6.
Rural—					
Belchamp	26,500 ..	4,090 ..	—	1	0.40
Billericay	49,394 ..	35,950 ..	2	—	2.00
Braintree	62,348 ..	20,760 ..	1	1	1.50
Bumpstead	11,874 ..	2,320 ..	—	1	0.40
Chelmsford	83,045 ..	28,600 ..	2	—	2.00
Dunmow	73,503 ..	15,510 ..	1	1	1.75
Epping	39,055 ..	16,750 ..	2	—	2.00
Halstead..	38,712 ..	9,980 ..	—	1	0.80
Lexden & Winstree ..	66,300 ..	18,580 ..	—	1	0.90
Maldon	82,342 ..	16,750 ..	1	1	1.50
Ongar	47,236 ..	10,460 ..	—	1	0.75
Orsett	29,185 ..	18,000 ..	2	—	2.00
Rochford	39,006 ..	14,830 ..	1	—	1.00
Romford..	16,381 ..	14,220 ..	1	—	1.00
Saffron Walden ..	59,975 ..	9,650 ..	—	1	0.75
Stansted	22,954 ..	6,890 ..	—	1	0.50
Tendring	73,131 ..	23,720 ..	2	1	2.85
Total—Rural ..	820,941 ..	267,060 ..	15	11	22.10
,, Boroughs and Urban ..	143,502 ..	843,340 ..	45	17	52.04
Total—Administrative County	964,443 ..	1,110,400 ..	60	28	74.14

SCHEDULE II.

Giving list of duties of Sanitary Inspectors as prescribed by the paragraphs 19 and 20 of the Sanitary Officers Order, 1926.

Para. 19. " The sanitary inspector as regards the district or part of the district ' for which he is appointed shall, except as provided in Article 20 of this Order—

' (1) perform under the general direction of the medical officer of health all the ' duties imposed on a sanitary inspector by statute and by any orders, ' regulations or directions from time to time made or given by the ' Minister, and by any bye-laws or instructions of the local authority ' applicable to his office ;

' (2) by inspection of his district both systematically and at intervals as occasion ' requires, keep himself informed of the sanitary circumstances of the ' district, and in respect of the nuisances therein that require abate- ' ment ;

'(3) report to the local authority any noxious or offensive businesses, trades, or 'manufactories established within his district, and the breach or non-'observance of any bye-laws or regulations made in respect thereof;

'(4) report to the local authority any damage done to any works of water supply, 'or other works belonging to them, and also any case of wilful or 'negligent waste of water supplied by them, or any fouling by gas, filth, 'or otherwise, of water used or intended to be used for domestic purposes;

'(5) from time to time, and forthwith upon complaint, visit and inspect the 'shops and places kept or used for the preparation or sale of any article 'of food to which the provisions of the statutes and regulations in that 'behalf apply, and examine any article of food therein, and take such 'proceedings as may be necessary:

'Provided that in any case of doubt arising under this paragraph, he shall 'report the matter to the medical officer of health, with the view of 'obtaining his advice thereon;

'(6) when and as directed by the local authority, procure samples of food, drink, 'and drugs and submit such samples to be analysed by the analyst 'appointed under the Sale of Food and Drugs Acts, 1875 to 1907, and 'take such proceedings as may be necessary;

'(7) give immediate notice to the medical officer of health of the occurrence 'within his district of any infectious or epidemic disease or other serious 'outbreak of illness; and whenever it appears to him that the inter-'vention of such officer is necessary in consequence of the existence of 'any nuisance injurious to health, or of any overcrowding in a house or 'of any other conditions affecting the health of the district, forthwith 'inform the medical officer of health thereof;

'(8) if directed by the medical officer of health to do so, remove, or superintend 'the removal of, patients suffering from infectious disease to an infectious 'diseases hospital, and perform or superintend the work of disinfection 'after the occurrence of cases of infectious disease;

'(9) if so directed by the local authority, supervise the scavenging of his district 'or any part thereof;

'(10) if so directed by the local authority, act as officer of the local authority 'under the Diseases of Animals Acts, 1894 to 1909, the Canal Boats 'Acts, 1877 and 1884, the Rats and Mice (Destruction) Act, 1919, and 'under any orders or regulations made thereunder;

'(11) if so directed by the local authority, act as designated officer for the purposes 'of Part IV. of the Housing Consolidated Regulations, 1925;

'(12) if so directed by the local authority, superintend and see to the due execution 'of all works which may be undertaken by their direction for the 'suppression or removal of nuisances;

'(13) enter from day to day, in a book or on separate sheets or cards provided by 'the local authority, particulars of his inspections and of the action 'taken by him in the execution of his duties;

'(14) at all reasonable times, when applied to by the medical officer of health, 'produce to him his books, or any of them, and render to him such 'information as he may be able to furnish with respect to any matter 'to which the duties of sanitary inspector relate;

'(15) as soon as practicable after the 31st day of December in each year, furnish 'the medical officer of health with a tabular statement containing the 'following particulars :—

'(*a*) the number and nature of inspections made by him during the 'year;

'(*b*) the number of notices served during the year, distinguishing 'statutory from informal notices;

'(*c*) the result of the service of such notices."

Para. 20. Where in any district there shall be two or more sanitary inspectors, nothing in this Order shall be deemed to prevent the local authority from distributing among them the duties directed by this Order to be performed by a sanitary inspector.

SCHEDULE III.

List of Principal Acts, Regulations and Orders affecting the Duties of Sanitary Inspectors in Areas outside London.

(1) *Principal Acts.*

Public Health Act, 1875.
Rivers Pollution Prevention Acts, 1876 and 1893.
Canal Boats Acts, 1877 and 1884.
Public Health (Water) Act, 1878.
Local Government Acts, 1888, 1894 and 1929.
Sale of Horseflesh, &c., Regulation Act, 1889.
Infectious Diseases (Notification) Act, 1889 and 1899.
Infectious Diseases (Prevention) Act, 1890.
Public Health Acts Amendment Acts, 1890 and 1907.
Factory and Workshop Acts, 1901 and 1907.
Public Health (Regulations as to Food) Act, 1907.
Children Act, 1908.
Rag Flock Acts, 1911 and 1928.
Shops Acts, 1912 and 1913.
Milk and Dairies (Consolidation) Act, 1915.
Rats and Mice Destruction Act, 1919.
Public Health Officers Act, 1921.
Milk and Dairies (Amendment) Act, 1922.
Public Health Act, 1925.
Housing Acts, 1925 and 1930.
Public Health (Smoke Abatement) Act, 1926.
Food and Drugs (Adulteration) Act, 1928.
Petroleum (Consolidation) Act, 1928.

(2) *Regulations and Orders.*

Anthrax Order, 1910.
Public Health (Foreign Meat) Regulations, 1908 and 1909.
Rag Flock Regulations, 1912.
Sale of Milk Regulations, 1912.
Memo. 62 (Foods), 1922.
Rats and Mice Destruction (Transfer of Powers) Order, 1922.
Public Health (Condensed Milk) Regulations, 1923 and 1927.
Public Health (Dried Milk) Regulations, 1923 and 1927.
Milk (Special Designations) Order, 1923.
Public Health (Meat) Regulations, 1924.
Rural District Councils (Slaughter-houses) Order, 1924.
Housing Act (Form of Orders and Notices) Order, 1925.
Housing Consolidated Regulations, 1925.
Public Health (Prevention of Tuberculosis) Regulations, 1925.
Public Health (Imported Food) Regulations, 1925.
Public Health (Preservatives in Food) Regulations, 1925 and 1927.
Tuberculosis Order, 1925.
Public Health (Imported Milk) Regulations, 1926.
Milk and Dairies Order, 1926.
Sanitary Officers Order, 1926.
Public Health (Infectious Diseases) Regulations, 1927.

MENTAL TREATMENT ACT, 1930.

The Mental Treatment Act, 1930, is one of the most important enactments placed on the Statute Book in recent years, and reforms of a far-reaching character are foreshadowed in its provisions. The Act is largely based on the recommendations of the Royal Commission on Lunacy and Mental Disorder, which issued its report in 1926. There are 22 Sections and 4 Schedules, and the Minister of Health, in referring to the Act has stated " if this Act means anything at all, it means that we have ceased to think ' of mental disease as something that is so indecent that it has to be kept in a separate ' category by itself ; and, therefore, it is of the utmost importance that from the outset ' we should regard mental disease as one of the problems within the ambit of the whole ' public health problem of this country."

The object of the new Act is to help the unfortunate individual who is suffering from incipient " mental illness," and to provide the necessary facilities for treatment. For the first time the reception of voluntary patients into public mental hospitals is authorised, and this should encourage the treatment of patients in the early stages of the disease. Such voluntary patients may be either private or rate-aided, and it is laid down that they can leave the mental hospital to which they have been admitted by giving 72 hours' notice in writing to the person in charge.

In addition, provision has been made in the Act for the treatment of " temporary patients," *i.e.*, those who are likely to benefit by a course of treatment, but who are incapable of expressing themselves as willing or unwilling to receive treatment. In such instances a written application for admission of a patient to a mental hospital must be made by a relative or a fully authorised person of the local authority, and the

application must be accompanied by a recommendation from two medical practitioners. The Act provides that these patients should not be retained for more than six months, but the patient's stay may be extended for additional periods to a further six months in all by the special sanction of the Board of Control.

Another, and probably the most important provision made by the Act, is the statutory recognition of out-patient clinics. Local authorities are authorised to make arrangements for the treatment as out-patients of persons suffering from mental illness, either gratuitously or on other terms. By these means it is hoped that patients will secure in the early stages of their illness the advice and assistance of mental specialists, which has hitherto not been possible in most instances until the illness had developed sufficiently for the patient to be certified. In this connection, the County Public Assistance Committee, on the suggestion of the Medical Superintendent of the Brentwood Mental Hospital, has provided the necessary accommodation at the Oldchurch Hospital, Romford, for an Out-Patient Clinic. This is held weekly and attended by Dr. W. G. Masefield, the Medical Superintendent of the Brentwood Mental Hospital. Prior to this Act, an Out-Patient Clinic had been established at the Essex County (Voluntary) Hospital, Colchester, by Dr. R. C. Turnbull, Medical Superintendent of the Severalls Mental Hospital, and this Clinic continues to carry out excellent work.

In the new Act the expression " mental hospitals " replaces that of " asylums " and the terms " pauper " and " lunatic " cease to be used in relation to any person of, or alleged to be of, unsound mind (except criminal lunatics, and in relation to persons detained as lunatics outside England). Authority is given for the use of the expressions " rate-aided person," " rate-aided patient," " patient of unsound mind," or " of unsound mind," as the context may require. Power is given to make contributions to voluntary associations for after-care, &c., of mental patients. This is a very important provision, and one which should receive careful consideration in Essex where there exists already a live Voluntary Association carrying out similar work under the Mental Deficiency Acts.

The Local Authority may also appoint a Supervising Medical Officer to have general supervision over all their mental hospitals.

In Essex the position is peculiar, as the Committee of Visitors includes representatives from the Borough of Colchester, so that the Committee is not solely and entirely a Committee of the County Council. Nevertheless, it is hoped to secure close co-operation between the General Public Health Services and the Committee of Visitors, so as to bring mental illness into line with the general trend of preventive medicine.

Further, from the passing of the Act, the treatment of mental illness in public mental hospitals is dissociated entirely from the Poor Law system, and it is provided that a person shall not be deemed to be in receipt of poor law relief by reason only that he is being maintained under the provisions of the Lunacy Acts in any place as a rate-aided patient.

The main sections of the Act came into operation on the 1st January, 1931. An important Circular 761 issued by the Board of Control in May, 1931, comments on the necessity for increased accommodation in, or in connection with, Mental Hospitals to relieve overcrowding, and to provide for the new class of voluntary patients and the potential increase in the number of mental patients.

MENTAL DEFICIENCY.

Ascertainment has proceeded during the year on similar lines to previous years, the cases referred for examination being examined and reported upon by Dr. T. P. Puddicombe, the Deputy County Medical Officer.

Two hundred and twenty-five individual cases have been examined and classified as follows :—

	Males.	Females.	Totals.
Feeble minded	59 ..	46 ..	105
Imbeciles	38 ..	36 ..	74 (*a*)
Idiots	11 ..	12 ..	23
Moral Defectives	3 ..	1 ..	4
Not certified under the Act ..	13 ..	6 ..	19 (*b*)
Totals	124 ..	101 ..	225

(*a*) includes 11 males and 2 females and (*b*) 5 males and 1 female referred for advice by the Justices.

Of the feeble minded 4 were subject to epileptic attacks. The imbeciles include 24 mongols and 3 epileptics. The idiots include 6 epileptics. The moral defectives include two post encephalitic cases.

During 1930, 32 cases were placed in Institutions, 9 under guardianship, and 79 under statutory supervision. The numbers at the end of the year under some form of control were as follows :—

In Institutions	528
Under Statutory Supervision	744
Under Guardianship	34

The Essex Voluntary Association has continued to render invaluable service in assisting in ascertainment, following up and home enquiries ; also in the making of preliminary enquiries in regard to suitable supervision and guardians and receiving and making reports on individual cases. The occupation centres, of which there are four established, are supervised and staffed by this Association, who report through their Secretary direct to the Clerk to the County Committee for the Care of the Mentally Defective.

The position in regard to institutional accommodation is still strained in that there is a long waiting list and only occasional vacancies. It is, however, now understood that the legal difficulties in regard to the proposed extensions have been surmounted and there is thus every prospect of an early commencement of the new buildings. Nevertheless, it must be many months before this proposed extra accom-modation can be available. In view of the large number of, as yet, unascertained cases in the Public Assistance Institutions and the need for removing some cases accommodated in Mental Hospitals, it is regrettable that the pressure for accommodation for ordinary sick cases in Public Assistance Institutions prevents one

of these being set aside at once for the reception of a proportion of these mentally afflicted persons. Could this be arranged, it would greatly relieve the present position and certainly fill the gap whilst awaiting the new buildings.

BLIND PERSONS ACT, 1920.

The Essex County Association for the Care of the Blind has continued, by arrangement with the Essex Education Committee, to carry out the work under this Act.

The number of Blind Persons on the Register at the end of the year was 1,188, an increase of 127. Of this number 106 were under 16 years of age, leaving 1,082 adult blind, 28 of whom were undergoing periods of training at the end of the year. 814 cases are classed as untrainable, an increase of 95.

One hundred and ninety seven persons of seriously defective sight, 60 blind persons from other areas and 69 cases not definitely classed as blind were also under the supervision of the Association. Closer co-operation was arranged with the various Education Authorities in the County as regards the blind children with satisfactory results.

Home Workers.

The scheme has continued whereby the supervision of these, supply of materials and marketing of goods made has been carried out by the London Society of Training and Teaching the Blind with headquarters at Swiss Cottage. An important conference has taken place in regard to the scheme, with a view to instituting any necessary facilities for improvements.

The Assistant County Medical Officers, when required, have made examinations and furnished the necessary certificates in respect to the degree of blindness and suitability for training

METEOROLOGY:

The information given in the table below has again been kindly supplied to me by the County Meteorological Station, Chelmsford. It will be noted that the total rainfall during the year 1930 (23.10 inches), is one inch more than in 1929 (22.04 inches). On the whole, however, the rainfall was more equably distributed throughout the year, as will be seen by the fact that during the 8 months February to September, 1929, only 8.51 inches of rain fell, whereas during the corresponding months of 1930, 14.75 inches of rain were registered. Consequently, the summer of 1930 was not so fine and dry as in 1929, June being the driest month with only four rainy days and a rainfall of 0.53 inches.

The highest maximum temperature of the year was registered during the heat wave towards the end of August, when the thermometer rose to 90° on the 29th of that month.

TABLE XIII.

OBSERVATIONS FROM THE COUNTY METEOROLOGICAL STATION AT CHELMSFORD.

1930.	Dry bulb readings.	Wet bulb readings.	Maximum readings.	Minimum readings.	Absolute maximum.	Date of absolute maximum.	Absolute minimum.	Date of absolute minimum.	Number of rainy days.	Rainfall in inches.
January	41.9	40.7	47.7	37.4	58	19th	27	21st	23	1.82
February	37.0	35.5	42.0	33.6	49	27th and 28th	29	20th	10	0.56
March	41.3	39.2	49.3	35.0	60	28th	24	20th	10	1.24
April	48.0	45.8	53.0	40.6	68	25th	30	21st and 22nd	19	2.05
May	53.7	50.0	61.2	44.7	71	28th and 29th	33	1st	21	2.06
June	63.3	59.3	70.5	50.3	80	30th	39	9th	4	0.53
July	63.0	58.8	69.2	52.2	82	6th	44	13th	15	2.72
August	63.4	59.5	71.9	52.8	90	29th	45	17th, 20th and 25th	15	2.00
September	59.5	56.2	65.2	50.5	79	5th	43	2nd	18	3.59
October	52.5	50.3	58.9	44.4	69	17th	30	27th	17	1.06
November	44.1	42.9	50.2	37.0	57	21st	23	5th and 17th	19	3.09
December	38.2	37.5	43.7	33.9	50	27th	26	6th	25	2.38
TOTALS—										
Year 1930	...	...	...	...	...	...	...	...	...	23.10
,, 1929	...	...	...	...	...	...	...	...	...	22.04

CANCER.

The following table shows the number of deaths registered as being due to Cancer malignant disease in the Administrative County, and also in England and Wales during the past 5 years.

Year.	Administrative County.		England and Wales.	
	Deaths.	Rate per 1,000 Population.	Deaths.	Rate per 1,000 Population.
1926	1,363	1·37	53,220	1·36
1927	1,448	1·41	54,078	1·38
1928	1,505	1·39	56,253	1·42
1929	1,511	1·36	56,896	1·44
1930	1,540	1·39	Not available.	

Arising out of the inquiries during recent years made by the Departmental Committee on Cancer, a further memorandum was issued by the Ministry of Health under cover of Circular 1136 dated 31st July, 1930, which referred to the desirability of local authorities acquiring a more complete knowledge of the re-actions to cancer of the local community, and suggested that this would act as a basis for ameliorative measures. The Memorandum has been referred to the Public Assistance Committee for consideration from the standpoint of collecting information at their various Institutions.

PUBLIC HEALTH PROPAGANDA.

The County Propaganda Sub Committee held five meetings during the year when the principal matter under discussion was in connection with the Health Conference and Exhibition held in Chelmsford in March, 1930.

(1) Health Conference and Exhibition. A special feature of the year was the Health Conference and Exhibition held in the Shire Hall, Chelmsford, on 27th and 28th March, 1930. The main object of this effort was to confer with representatives and officers of Local Sanitary Authorities in the Administrative County of Essex on the question of "Local and County Health Services," and "The Housing of the Rural Workers." A Health Exhibition was associated with the conference to demonstrate the extent and nature of health exhibits which are available, to impress upon the general public the necessity for adopting every practical measure for the preservation of health, and to call attention to the various health services.

In the booklet giving the arrangements of the Conference and Exhibition, the late Chairman of the Essex County Council, Alderman H. E. Brooks, concluded his Foreword by pointing out that "the beneficent results of all this combined effort "can only be realised by those who are brought into close contact with the work, "but I would have the ratepayers of Essex believe that the money they help to "provide for it is yielding real and valuable fruit and is doing much to raise the "standard of health and comfort amongst those in the County of Essex who stand "most in need of this assistance."

(a) *Exhibits* were provided by the following :—

Name.	Stand Frontage Lineal Feet.
Essex County Council..	29
British Mosquito Control Institute ..	18
British Social Hygiene Council	10
Council for the Preservation of Rural England	10
East Anglian Institute of Agriculture ..	21
Health and Cleanliness Council	12
Institute of Hygiene	18
League of Nations Union	8
National Milk Publicity Council	10
New Health Society	10
Total frontage	146

(b) *The Opening Ceremony* was held at 3 p.m. on 27th March, 1930, when Alderman J. H. Burrows, Vice-Chairman of the County Council, declared the Exhibition open. Alderman H. E. Brooks, Chairman of the Essex County Council, was also present. An address was given by Miss Susan Lawrence, M.P., Parliamentary Secretary to the Minister of Health. Alderman S. W. Robinson, Chairman of the

Public Health and Housing Committee, occupied the Chair, and was supported by the Vice-Chairman, Alderman A. M. Mathews, Councillor E. N. Buxton, and Councillor C. W. Daines, Chairman and Vice-Chairman respectively of the County Propaganda Sub-Committee.

(c) *Programme.* The programme for the two days was as follows :—

Thursday, 27th March, 1930.

3.0 p.m. Welcome by Alderman J. H. Burrows, J.P., Vice-Chairman of the Essex County Council.
Chairman : Alderman S. W. Robinson, J.P., Chairman of the Public Health and Housing Committee.

3.15 p.m. Speaker : MISS SUSAN LAWRENCE, M.P., Parliamentary Secretary to the Minister of Health.
Vote of Thanks to Miss Lawrence :
Proposed by Alderman A. M. Mathews, J.P.
Seconded by Councillor E. N. Buxton, M.C.
Vote of Thanks to the Chairman :
Proposed by Councillor C. W. Daines, J.P.
Seconded by Councillor P. Astins.

4.30 p.m. Conference of Representatives and Officers of Local Sanitary Authorities.
Chairman : Alderman S. W. Robinson, J.P.
Subjects : (1) "Local and County Health Services."
Introduced by : Alderman J. H. Burrows, J.P.
Alderman J. O. Thompson, O.B.E., J.P., Mayor of Chelmsford.
(2) General Discussion.
(3) "Housing (Rural Workers) Act, 1926."
Introduced by Councillor T. Eustace Smith.

6.30 p.m. Film Display. "Where there's life there's 'ope."

6.45 p.m. Milk Cooking Demonstration by Miss Campbell, of the National Milk Publicity Council.

7.15 p.m. Film Display. "A Dangerous Handicap."

7.45 p.m. Lantern Lecture on "Mosquito Control" by John F. Marshall, Esq., Director of the British Mosquito Control Institute.

8.30—9.30 p.m. Film Display. "Giro the Germ" (Part I).
"Almost a Tragedy"—"Giro the Germ" (Part II).
"Drifting."

Friday, 28th March, 1930.

10 a.m. to 12 noon. Elder Scholars from Schools in Chelmsford and adjoining districts admitted to the Exhibition in charge of Teachers.

3 p.m. Health Exhibition opened to the general public.

6.30 p.m. Film Display, "The Climber."

7 p.m. Milk Cooking Demonstration by Miss Campbell, of the National Milk Publicity Council.

7.30 p.m. Film Display. "Ten Little Dirty Boys."

7.45 p.m.	Lantern Lecture.	"Sunlight is Life" by Col. G. S. Parkinson, General Secretary, Central Council for Health Education.
8.30 p.m. to 9.30 p.m.	Film Display.	"Hearts and Hands."
		"Tommy Tucker's Tooth."
		"Delay is Dangerous."
		"Giro the Germ." (Parts I and II).

(d) *Conference.* This Conference was held in the Grand Jury Room and was well attended by representatives and officers of Local Sanitary Authorities. The subjects which are detailed in the preceding programme were fully discussed.

(e) *General.* Large crowds assembled for the opening ceremony, and it was estimated that during the two days over 1,200 people passed through the Exhibition. A good attendance at the lectures, demonstrations and film displays in the Grand Jury Room was also maintained.

(2) Travelling Health Exhibition. Detailed reference was made in last year's report to the establishment of a Travelling Health Exhibition, which is available for use in any part of the County. Many applications were received during the year for assistance in holding health exhibitions. The practice followed was to secure local co-operation by getting the local Voluntary Committee to provide the hall, printing and advertising, hospitality for the demonstrators, and to be responsible for the details of the opening ceremony, leaving the County Council to provide all exhibits.

In respect to exhibits, wherever possible, the County Council's Travelling Exhibition was supplemented by assistance from the Health and Cleanliness Council who also provided film displays; the National Milk Publicity Council, who provided cooking demonstrations; and the Dental Board of the United Kingdom. In this way, the County Council assisted at Health Exhibitions in the following districts:—Rochford, Shoeburyness, Ongar, Maldon, Laindon, Brentwood, South Benfleet, Terling, Hatfield Peverel, Burnham-on-Crouch, Chingford, Layer-de-la-Haye, Fordham, Messing and Stanway.

The programme adopted at the above-mentioned Health Exhibitions was as follows:—

11.30 a.m. to 12.30 noon.	School Children. Film Display or Talks by Demonstrators.
2.30 p.m.	Opening Ceremony.
2.45 p.m.	Short Talks by Representatives of Health and Cleanliness Council and Dental Board of the United Kingdom.
3.15 p.m.	Cooking Demonstration by National Milk Publicity Council.
4 p.m.	Short Talk.
4.15 p.m.	Tea.
4.45 p.m.	Film Display.
5 p.m.	Distribution of Prizes.

(3) Health Lectures. Members of the Staff of the County Public Health Department gave 53 Health Lectures during the year to Women's Institutes, Women's Guilds, Nursing Associations, Brotherhoods, etc.

MOSQUITOES.

At the Health Conference and Exhibition held at the Shire Hall, Chelmsford, on 27th and 27th March, 1930, particulars of which are given on page 76, opportunity was taken of demonstrating the various types of mosquitoes which are prevalent in this County, and the preventive measures which have been found to be most effective. The British Mosquito Control Institute kindly provided excellent exhibits, and offered verbal advice throughout both days. Mr. John F. Marshall, Director of the British Mosquito Control Institute, also gave a lantern lecture on " Mosquito Control."

The following are typical extracts from the Annual Reports, which have been received for the year 1930 from the local Medical Officers of Health in respect to the prevalence of mosquitoes in their areas :—

Benfleet U. " *Anti-Mosquito Operations.* Spraying of ponds and ' stagnant ditches with paraffin was commenced in June and continued for a " number of months with beneficial results."

Buckhurst Hill U.D. " The various Forest Ponds were treated during ' the breeding season to destroy the mosquito larvae."

Woodford U. " Numerous ponds exist, particularly upon the forest ' land and on the high grounds of Woodford Green and Woodford Bridge. ' As these are suitable places for the breeding of mosquitoes, the ponds are ' sprayed at frequent intervals between the months of April and November. ' Several private ponds have, by the consent of the owners, been also treated.

' The efficacy of the treatment has been somewhat discounted by the ' existence of the adjoining extensive forest area with its swamps and under- ' growth, which forms an excellent breeding place for the insect."

Epping R. " Efforts have been continued throughout the year to destroy " Mosquitoes. In a rural district like Epping, a large part of which is " Forest, this Mosquito Control is an extremely difficult proposition. To " carry out the work properly it calls for a large amount of time.

" Pools, ditches and other likely places are examined for Mosquito " larvae, and the larvae are examined microscopically to ascertain whether " or not they are a biting species. If such are found to be those which are " a menace to health, the pool or accommodating water is sprayed with " paraffin oil, or if practicable a germicide is mixed with the water. It is " not the practice to spray all ponds indiscriminately whether they contain " larvae or not, or even if they only contain the larvae of harmless or " non-biting mosquito.

" Our efforts do not meet with the results we desire and this perhaps " is partly due to inactivity of neighbouring Authorities.

" We have found larvae of the following species :— Theobaldia Annulata, " Theobaldia Morsitans, Aedes Rusticus, Anopheles Maculipennis, Culex " Pipiens.

" The presence of the Anopheles Mosquito, which is that responsible for " the spread of Malaria, gives rise to some anxiety especially so since the " number of persons subject to Malaria have increased since the War, and " it is only the Malaria patient this particular Mosquito needs to complete " the cycle of malarial infectation."

Orsett R. " The district suffers to some extent from the prevalence of 'these insects, but no special measures were taken for their suppression 'during the year."

PART II.

TUBERCULOSIS.

Notifications.

A summary of the notifications made in the Administrative County of Essex during the period 29th December, 1929, to 27th December, 1930, is given below :—

TABLE XIV.

	Notifications on Form A.													Total Notifications on Form B.	Notifications on Form C.	
	Primary Notifications.											Total Primary Notifications.	Total Notifications on Form A.			
	Age Periods															
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards				Poor Law Institutions.	Sanatoria.
Pulmonary, Males	1	8	12	20	77	82	145	142	82	47	9	625	727		76	329
,, Females	—	3	11	23	69	82	156	78	41	13	9	485	561	Nil.	59	283
Non-Pulmonary, Males	5	55	65	23	16	16	21	7	8	5	—	221	227		3	79
,, Females	3	42	50	21	20	14	20	14	2	3	4	193	202		5	81

The gradual decrease in primary notifications noted during the previous three years was not maintained in 1930. The high number of notifications during 1930 is, however, probably due to the great attention which has been given to the prompt notification of cases of tuberculosis by the Tuberculosis Officer if he is unable to find that the case is being or has been notified by the General Practitioner. The attention of the District Tuberculosis Officers is periodically called to those new cases in their area which have not been notified, so that the necessary steps to ensure notification may be taken.

With regard to no notifications being made on Form B, mention was made in the Annual Report for 1929 as to the probable reason, namely, the closer co-operation between the School Medical Inspectors, the Tuberculosis Officers and the General Practitioners. Although no Form B notifications were received during 1930, the total number of children notified, *i.e.*, up to 15 years of age, increased from 277 in 1929, to 342 in 1930. The number of such cases in 1926 was 367. On the other hand, the number of children notified as pulmonary cases has decreased from 135 in 1926 to 78 in 1930, whereas the number of children notified as suffering from non-pulmonary tuberculosis has increased from 232 in 1926, to 264 in 1930.

The probable explanation of the smaller number of pulmonary cases is the continued effort which is being made to bring all children suspected to be suffering from tuberculosis under the County Scheme, and to subject them to special observation tests, either at the dispensary or in sanatoria. This has ensured notification

only being carried out when there is no doubt about the diagnosis of tuberculosis. Thus many children who in the past years would have had their names added to the notification register with a diagnosis of tuberculosis that had not been properly confirmed, have been saved the stigma (probably for a lifetime) of tuberculosis.

During 1930, the Ministry of Health issued the Public Health (Tuberculosis) Regulations, 1930. These Regulations have consolidated and amended the Public Health (Tuberculosis) Regulations, 1912, 1921 and 1924, and came into operation on the 1st January, 1931. Under these Regulations the use of Form B. (Notification by a School Medical Inspector) has been abolished. All school children suffering from tuberculosis are now notifiable on the same form prescribed for other primary notifications.

TABLE XV.

SHOWING SUPPLEMENTAL RETURN IN REGARD TO CASES NOT NOTIFIED UNDER THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912, DURING THE YEAR 1930.

	Age periods.											Total cases.
	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and upwards.	
Pulmonary, Males	1	—	3	7	11	15	45	46	25	18	3	174
,, Females	—	—	5	7	14	19	44	25	22	8	3	147
Non-pulmonary, Males	5	8	9	15	2	2	3	4	3	—	3	54
,, Females	3	4	6	5	1	—	6	5	1	2	—	33

The total number of cases shown in this Table shows an increase over those for 1929, namely, 310 in 1929, and 408 in 1930. Most of the cases shown in this Table are cases transferred into the County from other areas and already notified in the district where they were living at the time they were diagnosed as suffering from tuberculosis, but are re-notifiable in their new sanitary district. Unless such re-notification takes place, therefore, these cases have to be regarded as coming to the notice of the Medical Officer of Health otherwise than by notification. However, as these cases are included in the total number of cases shown in the notification register kept by the Medical Officer of Health, the position with regard to "known" cases of tuberculosis is not affected.

TABLE XVI.

SHOWING NUMBER OF CASES OF TUBERCULOSIS REMAINING ON THE REGISTERS OF NOTIFICATIONS KEPT BY THE DISTRICT MEDICAL OFFICERS OF HEALTH ON THE 31ST DECEMBER, 1930.

Year.	Pulmonary.			Non-Pulmonary.			Total Cases.
	Males.	Females.	Total.	Males.	Females.	Total.	
1930	4176	3690	7866	1636	1598	3234	11,100
1929	4016	3587	7603	1521	1503	3024	10,627
1928	3959	3562	7521	1506	1478	2984	10,505
1927	3861	3357	7218	1398	1393	2791	10,009
1926	3580	3146	6726	1310	1305	2615	9,341

The above table shows a steady increase during the past five years in the number of cases on the notification registers kept by the Medical Officers of Health throughout the County. Whilst it is probable that some of these registers still contain the names of patients, which for various reasons should no longer be shown on the registers Medical Officers of Health are now making every effort to bring their registers up to date. Where the Medical Officer of Health also acts as Tuberculosis Officer, first-hand knowledge of the movements and condition of most of the tuberculosis patients in his area has undoubtedly assisted him in this work.

The importance of the notification register containing only the names of definitely diagnosed cases of tuberculosis, cannot be stressed too strongly. For example, the number of definitely diagnosed cases on the dispensary register at the end of 1930 was 5,834, whilst the number of cases shown on the notification registers was 11,100. In other words only approximately 50 per cent. of the notified cases in the County were under the supervision of the Tuberculosis Officers. A reasonable proportion of this difference can be accounted for by those patients who do not desire to avail themselves of treatment under the County scheme, but it should be seriously considered whether there are not still remaining on the notification registers the names of a large number of patients which should for one reason or another be removed.

Particulars of every notified case are forwarded to the respective Tuberculosis Officers each week, who arrange for the patient to be seen either by himself or the Health Visitor with a view to explaining the facilities which are available in the County for the treatment of tuberculosis.

From Table XVIII, it will be seen that of the total number of deaths from tuberculosis recorded by District Registrars, 9 per cent. were not notified until after death, and therefore cannot be regarded as notifications, 18 per cent. were notified within 3 months of death, whilst 16 per cent. were not notified at all. These figures are very unsatisfactory, and Medical Officers of Health should take all possible steps to remind General Practitioners that notification of tuberculosis is compulsory. Unless notified it is difficult to bring to the patient's notice the facilities which are available under the County scheme for treatment, and also prevents the very desirable early examination of contacts. Although a reasonable number of those cases notified within 3 months of death can be accounted for by (1) acute meningitis in children, (2) patients who would not "give in" until the disease had commenced a rapid course, and (3) those cases which the General Practitioner assumed had already been notified, it is to be regretted that despite the full facilities available for arriving at a definite diagnosis in difficult cases, many patients remain unnotified until it is too late for them to benefit from any form of treatment.

TABLE XVII.

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		851	0·86	Not		269	0·27	Not		1120	1·13
1917-21	available		752	0·89	available		199	0·24	available		951	1·13
1922-26	1110	1·16	656	0·69	320	0·34	148	0·15	1430	1·50	804	0·84
1926	1240	1·25	616	0·62	359	0·36	141	0·14	1599	1·61	757	0·76
1927	1178	1·14	677	0·66	351	0·34	146	0·14	1529	1·48	823	0·80
1928	1011	0·93	677	0·63	365	0·33	135	0·12	1376	1·26	812	0·75
1929	996	0·90	716	0·64	361	0.32	133	0.12	1357	1·22	849	0·76
1930	1110	1·00	704	0·63	414	0·37	129	0·12	1524	1·37	833	0·75

Reference has already been made to the increased number of notifications in 1930, and the above Table shows the attack and death rates since 1912. It will be seen that the attack rate 1·00 for 1930 in respect to pulmonary tuberculosis, even though higher than the previous two years, is lower than it was 5 years ago, *i.e.*, in 1926 it was 1·25. It is pleasing to record, however, that the slightly higher death rate (0·76) from all forms of tuberculosis recorded for 1929, has again reverted to 0·75 for 1930—the latter being the rate for 1928. It is anticipated that even though an increase in the attack rate may be recorded during the next few years (owing to better notification taking place rather than an actual increase in the incidence of tuberculosis) the death rate will continue to decrease.

TABLE XVIII.

SHOWING DEATHS FROM TUBERCULOSIS REGISTERED WITH LOCAL REGISTRARS OF BIRTHS AND DEATHS IN THE ADMINISTRATIVE COUNTY DURING 1930, AND PARTICULARS REGARDING NOTIFICATION UNDER THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912. (*Transferable Deaths are excluded*).

DISTRICTS.	No. of Deaths.	When Notified.								No Information.
		After Death	Within 3 months of death.	Within 3–6 months of death.	Within 6-12 months of death.	Within 1–2 years of death.	Within 2–4 years of death.	More than 4 years before death.		
Urban.										
Barking	33	3	9	3	5	5	2	5		1
Benfleet	8	1	1	...	...	2	2	...		2
Braintree	4	...	1	...	...	...	1	1		1
Brentwood	1	...	...	...	...	1	...	...		...
Brightlingsea	2	...	1	...	...	...	1	...		...
Buckhurst Hill ...	2	1	1	...	...	...	...	...		...
Burnham-on-Crouch	3	...	...	..	1	...	1	...		1
Canvey Island	3	...	...	1	..	...	...	1		1
Chelmsford B.	15	2	1	3	...	...	4	1		4
Chingford	7	..	1	2	1	2	...	...		1
Clacton-on-Sea	8	1	2	2	...	1	1	1		...
Colchester B.	37	1	10	3	4	5	3	6		5
Dagenham	55	6	13	2	10	5	5	3		11
Epping	4	...	1	1	...	...	..	1		1
Frinton-on-Sea	...	...	...	...	...	...	...	...		...
Grays	12	...	3	2	2	1	4	...		...
Halstead	3	...	1	...	..	..	2	...		...
Harwich B.	5	1	2	...	1	...	1	...		...
Hornchurch	6	1	1	2	1	1	...	...		...
Ilford B.	59	7	13	2	6	12	8	4		7
Leyton B.	76	5	10	5	7	11	9	14		15
Loughton	...	..	...	...	...	...	...	...		...
Maldon B.	7	1	...	...	1	1	...	2		2
Purfleet	7	3	...	1	...	...	...	...		3
Rayleigh	1	1	...	...	...	...	..	...		...
Romford	16	...	1	2	5	3	...	1		4
Saffron Walden B.	3	...	...	...	1	1	1	...		...
Shoeburyness	4	...	1	...	1	1	1	...		...
Tilbury	10	...	1	1	2	1	2	3		...
Waltham Holy Cross ...	3	...	2	...	..	..	...	1		...
Walthamstow B.	77	8	13	4	12	8	13	12		7
Walton-on-the-Naze	...	...	...	...	..	...	..	...		...
Wanstead	3	...	1	1	...	1	..	...		...
West Mersea	...	...	...	...	..		...	...		...
Witham	3	1	...	..	1	...	1	...		...
Wivenhoe	1	...	1	...	...	...	...	...		...
Woodford	8	..	1	...	2	3	...	1		1
Totals ...	486	43	92	37	63	65	62	57		67
Rural.										
Belchamp	4	..	2	..	1	1	..	...		...
Billericay	28	5	3	...	2	5	6	4		3
Braintree	18	2	...	2	2	3	3	...		6
Bumpstead	...	...	...	...	...	...	..	...		...
Chelmsford	4	...	1	...	2	...	...	...		1
Dunmow	3	...	1	1	...	...	...	...		1
Epping	9	...	2	2	1	...	1	...		3
Halstead	3	1	...	1	...	1	...	...		...
Lexden and Winstree ...	17	1	3	...	3	3	2	1		4
Maldon	5	...	1	1	...	...	2	1		...
Ongar	8	1	...	1	1	...	1	2		2
Orsett	13	2	1	...	..	1	2	2		5
Rochford	15	...	...	2	2	2	...	2		7
Romford	14	2	3	...	1	5	2	1		...
Saffron Walden	6	1	3	..	...	...	1	1		...
Stansted	1	...	...	...	...	...	...	1		..
Tendring	14	1	3	...	1	3	1	1		4
Totals	162	16	23	10	16	24	21	16		36
URBAN DISTRICTS	486	43	92	37	63	65	62	57		67
RURAL DISTRICTS	162	16	23	10	16	24	21	16		36
TOTALS	648	59	115	47	79	89	83	73		103

Dispensaries.

Table XIX shows the dispensaries as at the end of 1930. New premises at Ilford and Walthamstow were occupied during the year and are much more satisfactory for use as Tuberculosis Dispensaries than were the premises formerly occupied.

Table XX shows the work done at and in connection with the dispensaries during the year.

The number of new cases (excluding contacts) examined during the year was 2,273. The number of similar cases examined in 1926 was 2,258. There has, however, been a distinct increase in the number of contacts examined during the past five years, the figures being as follows :—

Year.	No. of Contacts examined.
1926	355
1927	534
1928	872
1929	958
1930	978

This increase would seem to indicate that difficulties which have been experienced in past years in arranging for contacts to be examined are being overcome. There is no doubt that this branch of the dispensary work in preventing the spread of infection and in discovering patients in the early stages is most important. Of the 978 contacts examined during 1930, 89 were found to be definitely suffering from tuberculosis, 424 were doubtfully tuberculous, and 465 were considered to be non-tuberculous.

The number of patients remaining on the dispensary registers at the end of 1930 was 6,135 as compared with 6,287 at the end of 1929 and 5,[illegible]95 in 1926.

The number of attendances of patients at dispensaries increased slightly over last year's figures, there being 20,271 attendances during 1930, and 20,091 attendances during 1929. Symptomatic treatment is not given by Tuberculosis Officers at dispensaries, and the distribution of medicines, oil and malt, etc., has been reduced to a minimum as far as possible. Most of these attendances represent patients who require definite examination by the Tuberculosis Officers. It is interesting to record that although there were 20,080 attendances made by patients in 1926, and an amount of approximately £320 expended on medicine, oil and malt, etc., during that year, with a slightly increased number of attendances during 1930, the amount expended on medicines, oil and malt, etc., was approximately £215.

The total number of consultations which the Tuberculosis Officers had with Medical Practitioners in 1930 was 3,182. In 1929 there were 2,726 consultations, and in 1926 there were 1,823. It is to be hoped these figures indicate that the General Practitioner is regarding the Tuberculosis Officer in his primary capacity of Consultant for Tuberculosis and that more and more "doubtful" cases are being referred to the dispensary for an expert opinion.

The remaining figures in Table XX show very little fluctuation during the past five years, with the exception of X-ray examinations. During 1930 there were 938 such examinations, in 1929 there were 780, and in 1926 the number was 381. Much

has been said and written about the importance of radiology for both pulmonary and non-pulmonary tuberculosis, and the District Tuberculosis Officers have taken full advantage of the increased provision made in the County Scheme for obtaining X-ray photographs. The time is not far distant when all new cases sent for examination at the dispensary either with a view to the establishment of a diagnosis, or for treatment under the County Scheme, will undergo an X-ray examination.

From Table XXIII it is now possible to observe the present condition of those patients who were first registered under the County scheme for treatment prior to 1926. It will be seen from the Table that the following was the condition at the end of 1930 of the 4,348 pulmonary patients whose names were added to the dispensary registers from the inception of the County Tuberculosis Scheme in 1913 to the end of 1925.

	No.	Per cent. of Total.
Cured	476	10.9
Disease arrested	867	19.9
,, not arrested	659	15.2
Dead	734	16.9
Removed from register for various reasons, lost sight of, &c.	1,549	35.6
Condition not ascertained	63	1.4

N.B.—The Ministry of Health have laid down that the disease in a case of pulmonary tuberculosis must be quiescent for two years and arrested for three years, *i.e.*, five years in all, before the case can be regarded as " cured ".

Of the 476 " cured " it should be mentioned that 429 were " T.B. Minus " cases, *i.e.*, those in which Tubercle Bacilli had never been demonstrated in the sputum, but it will be appreciated that a Tuberculosis Officer is more hesitant in showing as " cured " those patients whose sputum has contained Tubercle Bacilli. This would seem to be confirmed by the relatively large number (288) " T.B. Plus " cases shown as " disease arrested " at the end of 1930.

Table XXIV deals with non-pulmonary tuberculosis. The period laid down by the Ministry of Health before a case of non-pulmonary tuberculosis can be regarded as " cured " is less than in pulmonary tuberculosis, *i.e.*, the disease must be quiescent or arrested for a period of three years. At the end of 1930 the following was the condition of those patients whose names were on the dispensary registers previous to 1926, or added to the register in 1926 and 1927 :—

	Previous to 1926.		1926.		1927.	
	No.	Per cent. of Total.	No.	Per cent. of Total.	No.	Per cent. of Total.
Cured	218	18.3	20	4.8	5	1.6
Disease arrested ..	286	24.0	142	34.4	96	30.7
,, not arrested ..	177	14.9	79	19.1	99	31.6
Dead	61	5.1	18	4.3	23	7.3
Removed from register for various reasons, lost sight of, &c. ..	427	35.8	139	33.7	80	25.6
Condition not ascertained	22	1.8	15	3.6	10	3.2

These figures may be regarded as satisfactory and indicate the success which is resulting from modern methods of treating non-pulmonary tuberculosis (particularly bone and joint disease).

Institutional Treatment.

Despite the very careful consideration which is given to all recommendations for institutional treatment received from Tuberculosis Officers and the greater use of beds in Public Assistance Institutions which has been possible now that the County Council have control over these institutions, it will be seen from Table XXI (*a*) that an average number of 474 beds were kept occupied during 1930, as compared with 461 in 1929, and 423 in 1926. Table XXI (*b*) shows that the number of patients who received treatment during the year was 913 as compared with 859 in 1929. In 1926, with only an average of 423 beds available, 1019 patients received treatment. The explanation is that prolonged treatment is now being given to those patients who show satisfactory progress whilst in institutions, and those patients admitted for segregational purposes are retained as long as the patient consents to remain.

It is again regretted that the provision of adequate accommodation for the advanced type of female patients suffering from pulmonary tuberculosis has not been possible but the position has not been nearly so acute as in previous years owing to the availability of beds at the Oldchurch (Public Assistance) Hospital, Romford. The difficulty of getting patients to accept beds in Public Assistance Institutions is now lessening, and this is particularly noticeable at the Oldchurch Hospital, Romford, where the facilities for tuberculosis patients are extremely good. The local Tuberculosis Officers now visit the Public Assistance Institutions regularly and are thus able to consult with the Medical Officers in regard to the tuberculosis patients. As the majority of the patients admitted are from the Tuberculosis Officer's own area it will be appreciated that much valuable help can be given from this co-ordination.

Table XXII shows the results of the treatment of patients who were discharged from institutions during the year.

Of the 639 pulmonary cases, 18·5 per cent were discharged as quiescent, 44·6 per cent. improved, 23·1 per cent. showed no material improvement and 13·8 died. It should be remembered that included in these figures are those patients who were admitted to institutions primarily for segregational purposes and who were not expected to derive any definite improvement from institutional treatment, except in so far as their general condition would improve with careful nursing, etc. Bearing this in mind, therefore, the number of patients who were definitely benefitted by institutional treatment is satisfactory.

TABLE XIX.

DISPENSARIES AND VISITING STATIONS AT 31st DECEMBER, 1930.

Address	Hours of Attendance.	Tuberculosis Officer.
1 BARKING— 37, Linton Road	Mondays, 3 to 5 p.m. Thursdays, 10.30 a.m. to 12.30 p.m.	Dr. C. Leonard Williams
2 BRAINTREE— 71, Rayne Road	Wednesdays, 11.30 a.m. to 1 p.m.	Dr. P. J. Gaffikin
3 BRENTWOOD— 39, Queens Road	Wednesdays, 4 to 6 p.m.	Dr. V. Feldman
4 BRIGHTLINGSEA— New Church Schools	Wednesdays, 1st and 3rd in each month, 2 to 3 p.m.	Dr. W. A. Milne
5 CHELMSFORD— General Hospital, London Road	Fridays, 2 to 4 p.m.	Dr. J. S. Bradshaw
6 CLACTON— Skelmersdale Road	Fridays, 11 a.m. to 12 noon	Dr. W. A. Milne
7 COLCHESTER— 12, Trinity Street	Tuesdays, 10.30 a.m. to 12.30 p.m. Thursdays, 10.30 a.m. to 12.30 p.m.	Dr. W. F. Corfield Dr. W. H. Alderton
8 DAGENHAM— Ford Road	Mondays, 9.30 to 11.30 a.m.	Dr. W. L. Yell
9 CHADWELL HEATH— Becontree Avenue	Thursdays, 9.30 to 11.30 a.m.	Dr. W. L. Yell
10 DUNMOW— 47, Stortford Road	Tuesdays, 1st and 3rd in each month, 10.30 to 11.30 a.m.	Dr. P. J. Gaffikin
11 EPPING— Women's Institute, St. John's Road	Tuesdays, 11 a.m. to 1 p.m.	Dr. L. S. Fry
12 GRAYS— Hilldrop House, 59, London Road	Mondays, 4 to 6 p.m. Thursdays, 2 to 4 p.m.	Dr. V. Feldman
13 HALSTEAD— Out-Patients' Dept., Cottage Hospital	Wednesdays, 2nd and 4th in each month, 11.30 a.m. to 1.30 p.m.	Dr. J. S. Ranson
14 HARWICH— 27, West Street	Tuesdays, 11 a.m. to 12 noon.	Dr. J. Ramsbottom
15 ILFORD— 130, Cranbrook Road	Mondays, 7.30 to 8.30 p.m. Tuesdays, 3 to 5 p.m. Wednesdays, 10 a.m. to 12 noon. Fridays, 4 to 6 p.m.	Dr. W. L. Yell
16 LEYTON— 180, High Road	Mondays, 2 to 4 p.m., and 6 to 8 p.m. Tuesdays, 10 a.m. to 12 noon. Thursdays, 10 a.m. to 12 noon, and 2 to 4 p.m. Fridays, 2 to 4 p.m.	Dr. T. L. Ormerod
17 MALDON— Wantz Chase	Tuesdays, 2nd and 4th in each month, 10.30 to 11.30 a.m.	Dr. J. S. Bradshaw
18 ROMFORD— 29, Eastern Road	Tuesdays and Fridays, 9.30 a.m. to 12.30 p.m.	Dr. A. Gardiner
19 SAFFRON WALDEN— General Hospital	Tuesdays, 1st and 3rd in each month 2 to 4 p.m.	Dr. S. R. Richardson
‡20 SOUTHEND— 30, Clarence Street	Wednesdays, 2.15 (Men) 3.15 (Women)	Dr. N. S. R. Lorraine
21 WALTHAMSTOW— Old Monoux School, High Street	Mondays, 2 to 4 p.m. Tuesdays, 2 to 4 p.m. Wednesdays, 10 a.m. to 12 noon, and 6 to 8 p.m. Thursdays, 2 to 4 p.m. Fridays, 10 a.m. to 12 noon	Dr. J. Sorley
22 WEELEY— Tendring R.D.C. Offices	Saturdays, 10 a.m. to 1 p.m.	Dr. J. Ramsbottom
23 WOODFORD— The Shrubbery, High Rd.	Thursdays, 5 to 7 p.m.	Dr. T. L. Ormerod

‡ For cases from Rochford Rural District, Benfleet U., Rayleigh U. and Shoeburyness Urban District by arrangement with the County Borough of Southend.

TABLE XX.

SHOWING THE WORK OF THE DISPENSARIES DURING THE YEAR 1930.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults.		Children		Adults.		Children		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New Cases examined during the year (excluding contacts):—												
(a) Definitely tuberculous ...	355	240	9	9	31	39	64	55	386	279	73	64
(b) Doubtfully tuberculous ...	..	.	..	...	..	.	..	...	335	298	183	142
(c) Non-tuberculous ...	...	...	.	...	...	...	...	...	99	135	151	128
B.—Contacts examined during the year:—												
(a) Definitely tuberculous ...	33	41	1	...	...	1	8	5	33	42	9	5
(b) Doubtfully tuberculous ...	...	...	...	...	...	...	...	...	75	132	90	127
(c) Non-tuberculous ...	...	...	...	...	..	...	...	...	52	115	149	149
C.—Cases written off the Dispensary Register as												
(a) Cured	23	45	14	10	8	9	17	21	31	54	31	31
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ..	...		...	...	...	..	...	...	519	728	776	740
D.—Number of Persons on Dispensary Register on Dec. 31st:—												
(a) Diagnosis completed ...	2055	1624	298	296	265	281	554	461	2320	1905	852	757
(b) Diagnosis not completed ...	...	...	...	...	...	...	...	...	89	64	72	76

1. Number of persons on Dispensary Register on January 1st 6287
2. Number of patients transferred from other areas and of "lost sight of" cases returned 643
3. Number of patients transferred to other areas and cases "lost sight of" . 637
4. Died during the year 499
5. Number of observation cases under A (b) and B (b) above in which period of observation exceeded 2 months ... 724
6. Number of attendances at the Dispensary (including contacts) .. 20271
7. Number of attendances of non-pulmonary cases at Orthopædic Outstations for treatment or supervision ... 146
8. Number of attendances at General Hospitals or other Institutions approved for the purpose, of patients for
   (a) "Light" treatment ... 850
   (b) Other special forms of treatment 567
9. Number of patients to whom Dental Treatment was given at or in connection with the Dispensary... ... 59
10. Number of consultations with medical practitioners:—
    (a) At homes of applicants ... 545
    (b) Otherwise 2637
11. Number of other visits by Tuberculosis Officers to Homes... 1315
12. Number of visits by Nurses or Health Visitors to Homes for Dispensary purposes 19904
13. Number of
    (a) Specimens of sputum, &c., examined 2232
    (b) X-ray examinations made in connection with Dispensary work 938
14. Number of insured persons on Dispensary Register on the 31st December .. 3186
15. Number of insured persons under Domiciliary Treatment on the 31st December 1173
16. Number of reports received during the year in respect of insured persons:—
    (a) Form G.P. 17 2
    (b) Form G.P. 36 96

TABLE XXI.

Residential Institutions.

(*a*) Average Number of Beds available for Patients during the Year 1930.

—	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.		Total.
	Observation.	Sanatorium Beds.	Hospital Beds.	Disease of Bones & Joints.	Other Conditions.	
Adult Males	5	101	57	15	8	186
Adult Females	4	105	17	10	8	144
Children under 15	15	56	5	49	19	144
Total	24	262	79	74	35	474

(*b*) Return showing the extent of Residential Treatment during the year 1930.

			In Institutions on Jan. 1st.	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31st.
Number of Patients ...	Adults.	M.	178	399	312	71	194
		F.	130	325	274	17	164
	Children.	M.	57	88	77	1	67
		F.	52	80	67	1	64
Number of Observation Cases	Adults.	M.	5	47	42	2	8
		F.	3	46	45	...	4
	Children.	M.	10	58	56	1	11
		F.	8	41	40	...	9
Total ...			443	1084	913	93	521

TABLE XXII.

Showing the Immediate Results of Treatment of Patients and of Observation of Doubtful Cases discharged from Residential Institutions during the Year 1930.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.												Total
			Under 3 months.			3-6 months.			6-12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Pulmonary Tuberculosis.	Class T. B. minus.	Quiescent	5	15	3	5	6	6	3	2	1	1	1	3	51
		Improved	18	10	...	1	8	2	2	2	1	2	2	1	49
		No material improvement	3	7	...	...	...	.	2	...	...	1	..	...	13
		Died in Institution	2	2	1	...	2	...	...	...	...	1	..	...	8
	Class T. B. plus. Group 1.	Quiescent	3	5	1	3	4	...	...	1	...	1	2	.	20
		Improved	11	3	2	6	4	...	6	2	..	2	4	...	40
		No material improvement	9	7	...	3	2	...	1	...	.	..	1	...	23
		Died in Institution	...	1	...	1	...	...	...	...	...	1	...	...	3
	Class T. B. plus. Group 2.	Quiescent	9	9	...	4	7	...	1	6	..	2	7	...	45
		Improved	67	22	...	31	20	..	18	11	...	4	10	...	183
		No material improvement	31	23	...	13	8	..	4	7	...	6	..	...	92
		Died in Institution	24	2	...	11	3	...	9	..	..	6	...	...	55
	Class T. B. plus. Group 3.	Quiescent	...	1	..	...	1	..	...	..	...	...	...	...	2
		Improved	2	2	...	1	2	...	2	1	...	3	...	...	13
		No material improvement	6	4	...	2	1	..	2	2	...	3	...	...	20
		Died in Institution	10	5	1	1	2	...	2	...	...	1	...	..	22
Non-Pulmonary Tuberculosis.	Bones and Joints.	Quiescent or Arrested	1	1	3	...	2	4	1	...	9	3	4	19	47
		Improved	3	7	1	...	...	2	...	...	1	1	1	4	20
		No material improvement	1	...	8	...	...	...	1	...	...	1	1	1	13
		Died in Institution	...	...	...	1	.	...	...	...	...	...	...	...	1
	Abdominal.	Quiescent or Arrested	..	...	4	...	5	4	...	...	1	...	...	1	15
		Improved	1	4	1	...	...	3	...	1	...	...	..	...	10
		No material improvement	...	1	...	...	...	...	...	...	...	...	1	..	2
		Died in Institution	...	...	...	...	...	...	..	...	...	...	...	...	...
	Other Organs.	Quiescent or Arrested	...	1	...	..	...	.	...	...	...	...	...	...	1
		Improved	...	1	1	...	..	...	...	1	...	1	...	...	4
		No material improvement	..	1	...	..	...	...	..	...	...	1	..	...	2
		Died in Institution	...	...	...	1	...	...	...	...	...	...	..	...	1
	Peripheral Glands.	Quiescent or Arrested	...	5	17		1	22	...	...	3	...	...	1	49
		Improved	..	...	5	1	1	4	...	...	2	...	...	...	13
		No material improvement	...		1	...	...	1	...	...	1	...	...	...	3
		Died in Institution	..*	..	...	...	...	...	...	.	...	...	..	...	...
			Under 1 week.			1-2 weeks.			2-4 weeks.			More than 4 weeks.			
Observation for purpose of diagnosis.		Tuberculous	...	...	...	4	...	...	6	5	2	3	11	7	38
		Non-tuberculous	...	1	...	2	6	2	15	8	6	12	13	73	138
		Doubtful	...	...	1	...		...	...	...	...	...	1	5	7
		Died	...	...	...	.	...	...	...	...	...	2	...	1	3*

*Cause of death :—
(1) Miliary tuberculosis.
(2) Pulmonary abscess (Non. tb.).
(3) Carcinoma of lungs.

TABLE XXIII.

(a) PULMONARY TUBERCULOSIS.

Table showing in summary form the condition of all patients whose case records are in the possession of the Dispensaries at the end of 1930, arranged according to the years in which the patients first came under public medical treatment for Pulmonary Tuberculosis, and their classification as shewn on Form A.

Condition at the time of the last record made during the year to which the Return relates.			Previous to 1926.					1926.					1927.					1928.					1929.					1930.				
				Class T.B. Plus.					Class T.B. Plus.					Class T.B. Plus.					Class T.B. Plus.					Class T.B. Plus.					Class T.B. Plus.			
			Class T.B. Minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Class T.B. Minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Class T.B. Minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Class T.B. Minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus).	Class T.B. Minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus).	Class T.B. Minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus).
ALIVE.	Discharged as cured.	Adults. M.	118	17	9	...	26	...	...	...	..	..	...	...	...	..	...	...	.	...	..	...	...	...	...	...	...	...	...	...	...	...
		Adults. F.	164	8	8	2	18	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
		Children. M.	101	...	1	...	1	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...
		Children. F.	46	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Disease arrested.	Adults. M.	238	76	82	5	163	80	30	14	2	46	69	9	21	1	31	32	9	23	1	33	...	...	...	...	...	...	...	...	...	...
		Adults. F.	170	26	69	20	115	77	18	14	...	32	66	9	12	1	22	42	16	11	1	28	...	...	...	...	...	...	...	...	...	..
		Children. M.	80	1	6	...	7	36	...	...	...	...	23	...	1	...	1	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Children. F.	91	1	2	...	3	22	2	...	...	2	2	2	...	...	2	15	3	...	...	3	...	...	...	...	...	...	...	...	...	...
	Disease not arrested.	Adults. M.	72	58	221	21	300	17	23	44	8	75	29	28	79	9	116	28	23	61	11	95	96	28	110	7	145	101	36	170	20	226
		Adults. F.	76	15	74	29	118	26	17	31	6	54	42	25	62	3	90	50	14	71	12	97	95	24	88	11	123	97	38	105	12	155
		Children. M.	35	3	4	1	8	14	1	..	...	1	10	...	1	...	1	10	.	...	1	1	14	3	...	...	3	9	3	...	...	3
		Children. F.	45	2	3	..	5	15	..	...	...	...	19	...	.	...	...	7	...	...	...	...	8	1	1	...	2	7	..	...	...	...
Condition not ascertained during the year			40	8	14	1	23	23	4	3	...	7	18	4	3	...	7	14	5	2	...	7	14	2	4	...	6	...	...	...	...	...
Lost sight of or otherwise removed from Dispensary Register ...			1095	221	181	52	454	330	85	93	25	203	213	77	83	30	190	78	10	35	1	46	67	12	48	1	61	31	4	16	1	21
DEAD.		Adults. M.	87	52	161	144	357	51	28	99	45	172	41	20	93	54	167	27	18	79	41	138	16	14	82	29	125	8	4	27	21	52
		Adults. F.	48	16	106	94	216	38	13	46	35	94	30	21	63	30	114	15	15	57	25	97	15	11	45	30	86	6	4	22	13	39
		Children. M.	7	...	1	1	2	3	...	2	1	3	4	...	...	...	.	...	...	...	..	...	...	...	...	1	1	1	...	1	...	1
		Children. F.	7	...	6	4	10	1	1	1	1	3	3	...	2	2	4	...	...	1	1	2	1	...	2	3	5	1	2	...	...	2
TOTALS			2520	505	949	374	1828	733	222	123	123	692	594	195	420	130	745	113	113	340	91	547	326	95	380	82	557	261	91	341	67	499

TABLE XXIV.

(*b*) NON-PULMONARY.

Table showing in summary form the condition of all patients whose case records are in the possession of the Dispensaries at the end of 1930, arranged according to the years in which the patients first came under public medical treatment for Non-Pulmonary Tuberculosis and their classification as shown on Form A.

Condition at the time of the last record made during the year to which the Return relates.			Previous to 1926.					1926.					1927.					1928.					1929.					1930.				
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.
ALIVE. Discharged as cured.	Adults.	M.	10	4	2	4	20	1	1	2	2	6	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		F.	16	5	1	15	37	3	1	1	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Children.	M.	28	11	4	45	88	1	...	...	1	2	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		F.	17	5	6	45	73	1	2	...	1	4	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Disease arrested.	Adults.	M.	31	8	6	4	49	11	...	4	3	18	9	3	1	5	18	10	2	3	4	19	3	1	2	2	8	...	...	...	...	...
		F.	26	8	11	8	53	6	3	1	12	22	7	3	2	5	17	3	2	2	6	13	1	...	...	1	2	...	...	...	...	...
	Children.	M.	46	18	7	31	102	12	3	2	40	57	13	1	2	17	33	13	4	...	24	41	3	3	...	8	14	...	...	...	...	...
		F.	43	6	8	25	82	11	4	1	29	45	7	3	1	17	28	5	2	...	10	17	1	2	3	7	13	...	...	...	...	...
Disease not arrested.	Adults.	M.	26	3	12	4	45	3	1	2	6	12	8	2	5	2	17	2	2	3	3	10	14	2	8	8	32	10	1	8	8	27
		F.	10	4	8	6	37	4	1	3	6	14	9	1	4	4	18	8	2	4	2	16	15	8	7	15	45	12	6	5	11	34
	Children.	M.	32	3	5	8	48	14	1	...	13	28	17	2	1	14	34	12	4	1	20	37	11	10	1	27	49	23	11	...	27	84
		F.	28	5	4	10	47	7	3	1	14	25	12	3	1	14	30	6	5	...	13	24	17	12	5	24	58	16	5	4	34	65
Transferred to Pulmonary ...			...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Condition not ascertained during the year... ...			14	3	4	1	22	6	5	3	1	15	2	4	1	3	10	1	4	2	6	13	3	2	5	4	14	...	...	...	...	...
Lost sight of or otherwise removed from Dispensary Register ...			147	85	68	127	427	32	26	19	62	139	28	10	6	36	80	22	13	6	21	62	13	5	...	20	38	5	...	1	6	12
DEAD.	Adults.	M.	17	3	4	4	28	2	1	2	...	5	...	2	1	1	4	2	...	1	2	5	2	1	1	...	4	1	...	1	...	2
		F.	7	3	2	3	15	4	1	...	1	6	5	5	1	1	12	2	2	1	1	6	...	...	...	1	1	...	...	1	...	1
	Children.	M.	8	2	2	2	14	3	...	...	...	3	4	2	...	...	6	...	1	...	1	2	1	1	...	...	2	...	...	...	...	...
		F.	2	2	...	...	4	1	2	1	...	4	...	...	...	1	1	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...
TOTALS			517	179	342	342	1192	122	55	42	194	413	123	42	26	122	313	87	44	24	113	267	84	47	32	118	281	67	23	20	115	225

Of the 181 non-pulmonary cases, 61·9 per cent were discharged as quiescent, 26·0 per cent. improved, 11·0 per cent. showed no material improvement, and 1·1 per cent. died. These results are, of course, expected from the treatment which it is now possible to give to non-pulmonary tuberculosis, particularly early cases of bone and joint disease.

There were 186 patients admitted to institutions during the year for diagnostic purposes, and of these 20·4 per cent. were diagnosed as tuberculous, 74·2 as non-tuberculous, and in 3·8 per cent. a definite diagnosis could not be made. Three patients (1·6 per cent.) died whilst under observation.

COUNTY COUNCIL SANATORIA. (*a*) BLACK NOTLEY.

Opening of New Sanatorium.

The outstanding feature of the year was the opening of the new Black Notley Sanatorium for women and children suffering from pulmonary and non-pulmonary tuberculosis.

On the 26th April, 1930, the Minister of Health, the Right Hon. Arthur Greenwood M.P., formally opened the sanatorium in the presence of a large and representative gathering, and the following short history and general description of the new sanatorium was included in a brochure giving the full programme of the opening ceremony :—

> The original Scheme of the Council for the treatment of Tuberculosis, framed in 1912, provided for the provision of beds in various existing Hospitals and Private Sanatoria. Subsequently Sanatoria were established by the County Council at Harold Court, for men, at Black Notley, for women, at Sible Hedingham, for children, and at High Beech, for children suffering from non-pulmonary tuberculosis.
>
> It was early recognised, however, that it was desirable to establish a large Sanatorium, and in 1913 endeavours were made to secure a site. Eventually Sporeham's Farm, Sandon, was purchased; the Great War, however, intervened before a Sanatorium could be erected upon this site.
>
> The question of the erection of a Sanatorium again received consideration in 1919. It was then thought that a more suitable site for Sanatorium purposes could be found and Sporeham's Farm was sold. Subsequently negotiations were entered into for the acquisition of Rectory Farm, Danbury, but the Minister of Health after holding a Local Inquiry refused to approve the proposal of the Council for the acquisition and utilisation of the site for tuberculosis purposes. As a result the County Council considered proposals for the re-erection or enlargement of one of their existing Sanatoria. Negotiations were entered into with the owner of land adjoining the existing Sanatorium at Black Notley and some twenty-five acres of additional land were purchased.
>
> The proposal to erect a new Sanatorium at Black Notley to provide accommodation for women and children suffering from pulmonary tuberculosis and for children suffering from non-pulmonary tuberculosis, thus providing treatment in one Institution for patients formerly treated at Black Notley, Sible Hedingham and High Beech, and at the same time providing additional accommodation for each type of case, was duly approved by the Council in 1925.
>
> Tenders for the erection of the Sanatorium were invited in 1927, and the work was in due course entrusted to Welwyn Builders, Limited.
>
> Foundation stones of the new Institution were laid by the then Chairman of the County Council, the late Alderman W. S. Chisenhale-Marsh, and by Alderman S. W. Robinson, Chairman of the Public Health and Housing Committee, on 3rd July, 1928.

DESCRIPTION OF SITE AND BUILDINGS.

The site adjoins that of the old Sanatorium and is 25 acres in area, making with the site of the old Sanatorium, a total area of about 31 acres. The general level of the ground slopes gradually towards the South, being thus particularly well suited to its purpose.

The various buildings are laid out with a South-East aspect. The main approach is by means of a Drive about 320 yards long, which leads from the Main Road to an open Court in front of the Main Administrative Block. See block plan on frontispiece.

King Edward VII. Memorial Hall.

Midway along the Main Drive and placed axially upon same is the King Edward VII. Memorial Hall, towards the cost of which a grant of £2,635 was made out of the King Edward VII. Memorial Fund. This Hall provides a place of recreation for the patients. A Bronze Memorial Tablet is affixed to the right-hand side of the entrance porch. The Foundation stone of this building was laid on August 3rd, 1928, by General R. B. Colvin, C.B., D.L., acting for the Lord Lieutenant, the late Lord Lambourne, G.C.V.O. Seating accommodation is provided in this building for nearly 200, and a cinematograph apparatus and a loudspeaker for wireless broadcast or gramophone amplification have been installed.

Pulmonary Pavilions.

Continuing along the Main Drive leaving the Memorial Hall on the left, one sees on the right the two Children's Pulmonary Pavilions, one for boys and one for girls, each accommodating 25 beds. The two Adult Pulmonary Pavilions each also accommodating 25 beds being situated on the West of the Administrative Block. All the Pavilions are of light construction, the walls being hollow brick slabs built on reinforced concrete rafts and are roofed with double Roman tiles, the floor surfaces are of the jointless type. Wide Verandahs are a feature of all the Pavilions, those of the Pulmonary Pavilions having glazed skylights.

Administration Block.

The Administration Block is two storeys in height and is built of brick with white stucco finish. The floors are fireproof, and the building is roofed with double Roman tiles.

On the Ground Floor of this Block on the right-hand side of the Main Entrance the following rooms are situated :—Matron's Office, Medical Superintendent's Room, Dispensary, Laboratory, Steward's Room and Men's Dining Room, and on the left-hand side are situated the Probationer's Sitting Room, Sister's Sitting and Dining Room, Staff Nurses' Sitting Room, Nurses' Dining Room and the Head Laundress's and Cook's Bed Sitting Rooms.

The back part of this floor accommodates the Kitchen, Scullery, Bake House and Stores, and the Kitchen Staff Dining Room.

Attached to this building at the rear is the Patients' Dining Hall, 56ft. 0in. by 24ft. 0in., with servery communicating with the Kitchen.

On the First Floor of the Administration Block are the Bedrooms for the accommodation of the Staff.

Laundry.

The Laundry is situated on the North side of the Administration Block and is equipped with the latest machinery for laundry purposes. A disinfector is also installed in this building.

Power House.

The Power House is situated next to the Laundry. The whole of the principal buildings with the exception of the Memorial Hall and School which have independent installations are warmed and supplied with hot water by heat generated in this building, the heating being by the low pressure steam system circulated by vacuum pumps conducted in pipe trenches between the various buildings. The Main Switch Board for lighting which is from the public mains is also situated in this building.

Wireless receiving apparatus is installed throughout the buildings.

Surgical Pavilions.

Two Surgical Pavilions for 32 Patients each, occupy the Northern portion of the site and centrally placed between them and connected by corridors on either side is the Operating Block. These Surgical Pavilions have wide verandahs to which are fitted adjustable sun-blinds.

Operating Block.

The Operating Block contains the Operating Theatre, Anaesthetic Room, and Sterilizing Room, &c., also the Plaster Room as well as X-Ray and Light Treatment Sections. The front portion of this block is two storeys high and provides on the Ground Floor a room for the Medical Officer, Artificial Pneumothorax Room, Matron's Dining Room, and a Sewing Room. The Matron's Sitting Room and Bedroom occupying the First Floor.

Isolation Pavilion.

The Isolation Pavilion containing six single bed wards is situated to the West of the Laundry, and is similar in construction to the other Pavilions.

School.

A detached School Block with two large classrooms is also provided. The South Walls of these classrooms are formed by large folding doors allowing the maximum of light and air.

Medical Superintendent's House.

The Medical Superintendent's House which is approached from a turning off the South side of the Main Drive is a detached two-storey building finished to harmonise with the other buildings.

Garage and Mortuary.

Embodied in the Scheme is a Garage, also a Mortuary, together forming a detached building, and an additional garage is being built.

Lodges.

Two lodges, one at either side of the Main Entrance built in the form of separate bungalows, house the Engineer and Porter, and near, a pair of cottages are provided, one for the Head Gardener, and the other for Male Staff.

Water Supply.

The Water Supply is from a deep well from which water is pumped to a tower for storage purposes. Automatic pumps situated in the Pump House supply the requisite pressure for fire protection purposes, &c.

Drainage.

The buildings are drained by a dual system of drainage, the soil drainage being carried under the main road to the Sewage Disposal Works of the Sanatorium some distance away where it is dealt with by means of two Filter Beds with revolving sprinklers, the effluent being irrigated over the land. Surface water is discharged at convenient places into adjacent streams.

Grounds.

Four Tennis Courts, two grass and two hard courts, have been laid down for the use of Patients and Staff. A large Kitchen Garden is being cultivated and an area has been planted with fruit trees to supply produce to the Sanatorium. A combined Store and Tool House is being erected in connection with same.

Contract and Total Cost.

The Contract price for the erection of the buildings including the provision of the heating and hot water plant and other services amounted to £77,613, the General Contractors being the Welwyn Builders, Ltd., of Welwyn Garden City, Herts, the work being carried out from the designs of the County Architect, Jno. Stuart, Esq., F.R.I.B.A., and under whose supervision the work was executed.

The total cost of the new Sanatorium, including site, buildings, services and equipment is approximately £100,802.

Accommodation Provided.

With the adaptation of a portion of the original sanatorium for the treatment of adult male surgical cases, 20 beds became available for this type of case early in 1931. The beds occupied at the end of 1930 were as follows :—

Women (pulmonary)	.. ..	75
Women (surgical)	.. ..	32
Children (pulmonary)	.. ..	25
Children (surgical)	.. ..	32
Total	..	164

General.

Patients were first admitted to the new sanatorium on the 26th April, 1930, and at the end of the year there were 164 patients under treatment.

The initial difficulties of obtaining sufficient and efficient staff are being surmounted and the general working of the institution is settling down satisfactorily. There is no doubt that the sanatorium will meet a long-felt need in the County, and its up-to-date equipment including modern X-Ray and Light Apparatus, will facilitate the carrying out of modern forms of treatment.

Tribute should be paid to Miss A. B. Clay, who commenced duty as Matron of the Black Notley Sanatorium in March, 1916 and retired in June, 1929, after having served the County Council faithfully for thirteen years. Her devotion to duty was highly appreciated by the Committee, officers and patients alike.

It was very fortunate that Miss M. Ruck, the Matron of the new sanatorium, was able to take up her duties on the 24th September, 1929. Her wide experience and knowledge were quickly realised in the making of the preliminary arrangements, particularly in connection with the furnishing and equipping of the sanatorium. The list of furniture and equipment which she produced was approved almost without alteration and the thanks of the Committee and myself are due to her for this laborious duty.

A report has been submitted by Dr. M. C. Wilkinson, Resident Medical Officer, upon the work carried out at the new Sanatorium since it was opened in April, 1930, until the end of the year. He reports that the Pulmonary section of the Sanatorium consists of four pavilions, each having twenty-five beds. Two pavilions are for adult females, one for adolescent females, the other for children. In addition to pulmonary cases, children suffering from tuberculous glands of the neck and tuberculous peritonitis are admitted to the children's pavilion. The non-pulmonary section consists of two pavilions, each divided into two wards and each having thirty-two beds. One pavilion is for women, the other for children.

During 1930 these pavilions were opened gradually according as it was found possible to obtain a suitable and adequate staff of nurses. The pulmonary pavilions were opened earliest and were full by the beginning of May. Forty patients from the old Sanatorium were transferred to the new pavilions. Admissions to the non-pulmonary and to the children's medical pavilions began in July, but these pavilions were not completely full until November. The filling of the children's surgical pavilion was delayed by an epidemic of Scarlet Fever.

The following particulars illustrate some aspects of the treatment of patients admitted in 1930. There were two hundred and sixty-five new admissions, making in addition to the patients transferred from the old sanatorium, a total of three hundred and five patients treated : they were as follows :—

In women's pulmonary pavilions	..	..	178
In children's medical pavilion	..	..	58
In children's surgical pavilion	..	..	33
In women's surgical pavilion ..	..	..	36

Of the pulmonary patients more than a hundred were young adults, an age group in which tuberculosis is a particularly dangerous disease. Hence artificial pneumothorax played a large part in the treatment of pulmonary patients : fifty-four cases were treated by this means. For induction or refills of pneumothorax, patients are taken to a special room fitted for artificial pneumothorax work, near the X-ray department : five hundred and seventy-three refills were done during the year. During 1930 it was not found possible to extend the work still further, as the necessity of enlarging the X-ray room retarded the installation of the apparatus. At the time of writing this report, pneumothorax treatment is controlled by screen examinations after refill. Adhesions are now localised by X-ray examination and thoracoscopy and the division of adhesions performed at the Sanatorium. During 1930 two patients were transferred to Victoria Park Hospital for this operation.

Routine treatment for all patients on admission is rest in bed. As soon as practicable graduated exercise and light work are started. The exercise consists of walks of measured distances either in the Sanatorium grounds or, for the more convalescent patients, on the neighbouring roads. In certain cases treatment by rest was combined with a course of injections of Sanocrysin or of Collosol Calcium.

Trial was also made of treatment by injections of Biocholine and also of Sodium Thiosulphate. The following numbers of patients received these treatments :—

Patients receiving courses of Sanocrysin	..	12
Patients receiving courses of Collosol Calcium	..	14
Patients receiving courses of Biocholine ..	..	7
Patients receiving courses of Sodium Thiosulphate	..	3

The commonest complication from which patients were found to be suffering was tuberculous laryngitis : a routine inspection of throats is carried out, and fourteen cases received treatment for this complaint during 1930.

Twenty-one children admitted to the medical pavilion with suspicious pulmonary symptoms were discharged as negative after a period of observation. In nine other cases definite evidence of primary infection of childhood was found : in three cases pulmonary tuberculosis of adult type was present.

There were twenty-four cases of tuberculous cervical glands treated and three cases of tuberculous peritonitis : these children received general Sanatorium treatment with the addition of Light Treatment, real or artificial. The majority were able to attend the open-air school. No case of glands of neck in children required excision in 1930.

The patients admitted to the non-pulmonary pavilions were for the most part cases of tuberculosis of the spine, hip, knee or ankle. An essential part of the treatment of these cases is splintage, to produce traction or fixation. A small splint-making shop was provided in the Power House and the Sanatorium Engineer rendered invaluable assistance in the manufacture of splints and fitting them to beds.

A well-equipped plaster room adjoins the operating theatre and this was in constant use for plaster work. The celluloid jackets, hip spicas, or knee splints which many patients require on discharge are made at the Sanatorium. Metal splints were purchased from a firm which makes surgical instruments.

As an adjuvant to treatment of non-pulmonary conditions a Light Room has been provided, containing two carbon arc lamps and two Mercury Vapour lamps for general treatment and a Kromayer lamp and a Sollux lamp for local treatments. During the winter months of 1930, sixty-two patients had courses of artificial heliotherapy. In the majority of cases general light baths were used in conjunction with local treatment to the area affected. Three treatments a week were given. During the summer heliotherapy was carried out on the ward verandahs.

The number of patients requiring operation in 1930 was few. The following operations under a general anaesthetic were performed :—

For tuberculous glands of neck—excision ..	5
For tuberculous hip—incision and drainage ..	4
Infected psoas abscess—drainage	1
For tuberculous peritonitis—incision of abscess ..	1
Curettage of sinuses	2
For onychogryposis	1
	14

These operations were sufficient to show that the arrangements of the theatre block which connects the two pavilions for non-pulmonary cases, are very convenient, as patients do not have to leave the building en route to or from an operation. The advantage of an anaesthetic room is appreciated as a large number of patients will be children. As a routine, anaesthesia was induced with Gas and Oxygen from a Boyle's apparatus. The separate cubicles in the non-pulmonary wards are very useful as recovery rooms.

All sterilizing of ward drums is done in the theatre sterilizer under supervision of the Theatre Sister.

In addition forty-seven minor operations were performed in the wards. The majority of these were aspirations or incision of abscesses.

Nursing Staff. The following was the composition of the Nursing Staff in 1930 :—

Matron.
Assistant Matron.
Home Sister and Sister Tutor.
Night Sister.
Theatre Sister.
Four Ward Sisters.
Three Staff Nurses.
Twenty-six Probationers.

Lectures and instruction are given to the probationers with a view to preparing them for the Examination of the Society of Superintendents of Tuberculosis Institutions.

X-rays. Three hundred and sixty-nine radiographic examinations of patients were made in 1930. These were done at the Essex County Hospital, Colchester, pending the opening of the X-ray department at the Sanatorium.

Dental Treatment. Facilities and equipment for dental treatment have been provided at the Sanatorium. A fortnightly visit is paid by the dentist. During 1930 twenty-eight patients had extractions and eighteen patients fillings.

Scarlet Fever Epidemic. An epidemic of Scarlet Fever in the children's surgical pavilion delayed the completion of admissions to this pavilion until November. The first two cases occurred on September 12th, and in all there were thirteen cases. The last case occurred on October 11th. As at that time the nursing staff in the wards was at minimum strength, it was not possible to open the Isolation Block at once. The first seven cases were transferred to their local Isolation Hospitals. On October 8th the Isolation Block was opened. The epidemic was of a very mild type, but it afforded proof of the necessity of the Isolation Block to which children suffering from bone and joint tuberculosis can be transferred without interruption of treatment. Efforts to trace the source of the infection were not successful.

Patients' Games and Recreation. An effort is made to provide as much recreation for patients as is compatible with treatment. Further developments in this work are anticipated. Books and games are provided in the wards. For ambulant patients the King Edward VII Memorial Hall built as a recreation hall for patients is useful for all types of recreation. In it a cinema performance is given each week. A fortnightly Whist Drive has been arranged and held by the Patients' Recreation Committee. Occasional concerts are given. Wireless in the wards is provided for all patients. During the summer the patients are able to play croquet and clock golf on the lawn provided.

School. Education by two teachers is provided for the children of school age under treatment in the Sanatorium. The school building is used for the ambulant children : the recumbent children are taught in the wards. Each child receives four hours school a day. The work consists of elementary subjects of education in the morning and craft work in the afternoon. The school was opened in September, 1930, and up to the end of the year sixty-two children came under instruction.

Sanatorium Ambulance and Car. An ambulance and a saloon car have been supplied to the Sanatorium and are used to convey patients to and from their homes.

Statistics. I append statistics of the cases admitted and discharged from April to December, 1930.

Black Notley Sanatorium.

New Admissions during April 24th to December 31st, 1930.

	Adults.	Children.
Pulmonary tuberculosis between years 14 and 28	86	3
Pulmonary tuberculosis over 28 years	23	—
Observation cases diagnosed as negative	20	21
Diagnosis of tuberculosis reversed	2	5
Tuberculous cervical glands	7	21
Tuberculous peritonitis	6	3
Tuberculous pleurisy	2	4
Primary infection of childhood	—	9
Tuberculosis of spine	9	14
Tuberculosis of hip	4	8
Tuberculosis of knee	1	2
Tuberculosis of elbow	2	—
Tuberculosis of ankle	—	3
Tuberculosis of sacro-iliac joint	1	—
Lupus	1	1
Other tuberculous lesions	5	2
	169	96

Total .. 265

Discharges from April 24th to December 31st, 1930.

Adults.

	Quiescent.	Improved.	Not Improved.
Pulmonary tuberculosis between 14—28 years	16	22	10
Pulmonary tuberculosis over 28 years	14	5	5
Observation cases discharged as negative	19	—	—
Admitted as tuberculous, diagnosis not confirmed	2	—	—
Tuberculous cervical adenitis	4	1	—
Tuberculous peritonitis	2	—	—
Tuberculous pleurisy	2	—	—
Tuberculous spine	1	1	—
Tuberculous hip	1	—	—
Salpingitis	—	1	—
Mixed pulmonary and non-pulmonary	—	—	1
	61	30	16

Children.

	Quiescent.	Improved.	Not Improved.
Under 14—pulmonary tuberculosis	2	—	1
Observation cases discharged as negative	17	—	—
Admitted as tuberculous, diagnosis not confirmed	2	—	—
Tuberculous cervical adenitis	6	1	2
Tuberculous pleurisy	1	—	—
Primary infection of childhood	3	—	—
Tuberculous spine	2	—	—
	33	1	3

Total number of discharges .. 144

(*b*) Sible Hedingham. With the opening of the new sanatorium at Black Notley there was no need for the County Council to retain their tenancy of the sanatorium at Sible Hedingham where 31 children were accommodated. This institution was accordingly closed in September, 1930.

The Sible Hedingham Sanatorium was first opened in 1915 when accommodation was provided for 12 women. In 1916 it was decided to use the sanatorium for children suffering or suspected to be suffering from pulmonary tuberculosis, and also tubercular glands. There were 16 beds available in 1916 but by the provision of shelters the accommodation was gradually increased until at the time of closing the sanatorium there were 31 beds available. The number of children who passed through the sanatorium during this period was 1,348, and there is no doubt that most of the children were permanently benefitted by their stay at the sanatorium. The great

success achieved at this sanatorium and the remarkably few complaints received, are undoubtedly due to a great extent to the excellent care and attention given by the Matron, Miss A. Roberts, to the children placed under her charge. Miss Roberts was Matron of this sanatorium during the whole period it has been used. The Tuberculosis Officers visiting the sanatorium for medical supervision have changed, but from September, 1923, Dr. Ranson undertook the duties of Visiting Tuberculosis Officer, and I am indebted to him for the efficient way in which these duties were performed.

The thanks of the Committee are also due to the Halstead Rural District Council for the use of their premises which were originally intended for use as a smallpox hospital.

(*c*) High Beech. The County Council having decided to continue their lease of the High Beech Sanatorium it has been considered advisable to use this institution, where there are 36 beds, for non-pulmonary surgical cases in children, who only require convalescent treatment and for children suffering from tuberculous glands. The acute cases of bone and joint disease have been transferred to the Black Notley Sanatorium.

(*d*) Harold Court. The adult males suffering from pulmonary tuberculosis have mainly been treated at the Harold Court Sanatorium (60 beds). As far as possible early and intermediate cases have only been sent to this sanatorium.

Various minor improvements have been carried out at the sanatorium during the year which have resulted in better treatment of the patients and the comfort of the staff This Institution has become much more popular with the patients and it is now fulfilling an important part in the treatment of male patients. Further improvements in the institution are contemplated.

Alderman F. D. Smith has taken a great interest in this institution and a good deal of the better outlook at Harold Court is due to his unremitting attention, ably supported by the Medical Officer, Matron and Staff.

Institutions under Agreement. The Colchester, Chingford and Ilford Sanatoria have continued to be utilised for the following types of patients :—

Sanatorium.	No. of Beds.	Type of Case.
Colchester	18	Women, pulmonary. Six beds are utilised for cases of both sexes requiring hospital treatment
Chingford	20	Women, pulmonary. Until the opening of the Black Notley Sanatorium surgical cases were also treated at this sanatorium
Ilford	12	Men, non-pulmonary

The beds at these sanatoria have been kept continuously occupied and there has always been a waiting list.

Institutions not under Agreement. During the year an average number of 215 beds was occupied by Essex patients in institutions where beds are taken as and when required. Most of these beds were taken at the following institutions :—

Liverpool Road Hospital, London.
Victoria Park Hospital.
Royal National Sanatorium, Bournemouth.
Preston Hall Colony.
Papworth Hall Colony.
King George Sanatorium, Bramshott.
Lord Mayor Treloar Cripples Hospital, Alton.

I am particularly indebted to the authorities of the Liverpool Road Hospital for continuing to admit Essex male patients suffering from moderately advanced and advanced disease. The hospital is excellently equipped for this type of patient and bearing in mind the mental attitude usually prevalent in patients suffering from the later stages of the disease, the fact that most of the patients speak in warm terms of the care and attention they receive at the hospital, is in itself a testimonial to the arduous work performed by Dr. Massingham, the Medical Officer of the Hospital.

It is also a pleasure to record the great assistance given to the County Scheme by the Victoria Park Hospital Authorities where patients presenting special difficulties in diagnosis, and patients suffering from tuberculous pleurisy, etc., and requiring hospital treatment have been admitted. Much of the value of this co-operation is, of course, due to the fact that Dr. W. Burton Wood, the Consultant to the County Council for Pulmonary Tuberculosis, is on the Medical Staff of the Victoria Park Hospital. It has thus been possible to keep in close touch with the Essex patients in the hospital.

New Cases and Mortality during 1930.

The following Table is given as requested by the Ministry of Health in Circular 1119, dated 18th June, 1930. and gives particulars of new cases of tuberculosis and of all deaths from the disease in the county during 1930. All primary notifications are included, and also any other new cases of tuberculosis which came to the knowledge of the Chief Tuberculosis Officer during the year.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-pulmonary.		Pulmonary.		Non-pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0— 1	2	—	10	6	1	1	6	4
1— 5	8	3	63	46	3	1	22	10
5—10	15	16	74	56	5	10	10	11
10—15	27	30	38	26				
15—20	88	83	18	21	74	92	14	12
20—25	97	101	18	14				
25—35	190	200	24	26	185	143	13	12
35—45	188	103	11	19				
45—55	107	63	11	3	125	42	5	4
55—65	65	21	5	5				
65 and upwards ..	12	12	3	4	11	11	3	3
	799	632	275	226	404	300	73	56

Public Health (Prevention of Tuberculosis) Regulations, 1925.

Public Health Act, 1925. (Section 62).

No action was taken by the County Council under either the Public Health (Prevention of Tuberculosis) Regulations, 1925, or Section 62 of the Public Health Act, 1925.

Extra Nourishment.

The amounts spent on the provision of extra nourishment during the past five years are shown below :—

	£	s.	d.
1926	189	17	3
1927	109	17	5
1928	111	18	0
1929	56	1	8
1930	54	13	2

Since 1921 when the Ministry of Health indicated certain categories of patients most suitable for grants of extra nourishment, the amounts expended have gradually decreased each year. The Tuberculosis Officers refer to the local Relieving Officers or Tuberculosis Care Associations those patients who are in need of extra nourishment but who do not come within the Ministry of Health categories.

Travelling Facilities for Patients.

An amount of £86 6s. was expended during the year in providing necessitous patients with free travelling vouchers upon their admission and discharge from Institutions.

Tuberculosis Care Associations.

From Table XXV will be seen the activities of the Care Associations established in the County. It is regretted that the Colchester Tuberculosis Care Association ceased to function as such during 1930, although it is understood that tuberculosis patients can receive assistance from the Colchester Charity Organization Society.

Attention cannot be drawn too frequently to the valuable assistance which is afforded to the County Tuberculosis Scheme by these Care Associations, particularly in the giving of assistance to patients anxious to obtain suitable employment after discharge from a sanatorium, in making arrangements for the carrying on of the home whilst the bread-winner is undergoing institutional treatment, or arranging for the care of the children if the mother has to enter a sanatorium.

TABLE XXV.

TUBERCULOSIS CARE ASSOCIATIONS IN ESSEX.

(The information given in this Table is in respect to the year ended 31st March, 1931).

Name of Association.	Day and Time of Meetings.	Income including Balance in hand.	Expenditure.		Total No. of Cases assisted.	Nature of Assistance Provided.
			Assistance.	Other Items.		
		£ s. d.	£ s. d.	£ s. d.		
BARKING ...	Third Wednesday in each month at 8 p.m.	213 18 2	77 14 9	4 10 6	23	Extra nourishment Boots & clothing
CHELMSFORD ...	Third Monday in each month at 7 p.m.	378 16 9	212 16 9	38 12 4	49	Extra nourishment Convalescent holiday treatment Clothing Loan of appliances, etc.
DAGENHAM ...	Third Thursday in each month at 8.15 p.m.	518 1 8	360 13 10	19 19 8	65	Extra nourishment Clothing Dentures, etc.
HALSTEAD ...	Second Tuesday in each month at 3 p.m. (except August)	Drawn from Central Fund of Halstead Care of Children Committee	5 3 7½	2 6½	6	Extra nourishment Boots
ILFORD ...	First Thursday in each month at 7.30 p.m.	711 17 4	566 0 0	26 12 0	94	Extra nourishment Convalescent holiday treatment Dentures Clothing, etc.
LEYTON ...	Third Friday in each month at 7 p.m.	565 0 8½	260 8 5	69 4 5	98	Extra nourishment Convalescent holiday treatment Dentures Clothing
ROMFORD ...	Third Thursday in each month	380 6 11	158 5 5	30 17 11	65	Extra nourishment Convalescent holiday treatment Travelling expenses Clothing, etc.
SAFFRON WALDEN	Fourth Tuesday in each month at 2.30 p.m.	131 1 0	103 1 5	7 10 7	41	Extra nourishment Convalescent holiday treatment Appliances, &c.
WALTHAMSTOW	First Friday in each month at 7 p.m.	497 1 1	279 11 0	52 9 0½	86	Extra Nourishment Convalescent holiday treatment Dentures Travelling expenses

Grants were made by the County Council as follows to the Care Associations for "After Care" purposes in respect of the year ended 31st March, 1931 :—

Care Association.	Amount of Grant.	Care Association.	Amount of Grant.
	£		£
Barking ..	.. 28	Ilford ..	.. 80
Chelmsford	.. 50	Leyton ..	.. 82
Dagenham	.. 50	Romford ..	.. 40
Halstead ..	.. 20	Saffron Walden	.. 15
		Walthamstow	.. 48

In addition to these grants, the County Council allow an amount of not exceeding £20 per annum for expenditure by each Care Association in connection with printing, stationery, etc. Clerical assistance is given to some of the Associations.

Continued assistance has been given to the Dagenham Tuberculosis Care Association by the National Association for the Prevention of Tuberculosis who contribute 50 per cent. towards the cost of clerical assistance.

It is with great regret that record is made of the death of Mr. C. W. Samain who for many years has given excellent service on behalf of consumptives, particularly in the Extra-Metropolitan district. He commenced his career with the County Council in 1907, and was in charge of the Tuberculosis Section at the Central Office until his health broke down in 1920. Since that time he pluckily kept to his work and chiefly interested himself in the inception and management of Tuberculosis Care Associations.

Shelters.

During the year an average number of 85 shelters was in use by patients at their homes.

Dental Treatment.

The importance of patients suffering from tuberculosis undergoing any necessary dental treatment has continued to be emphasized by the Tuberculosis Officers, particularly when patients are recommended for sanatorium treatment. The County Dental Scheme for tuberculous patients provides treatment for patients when such dental treatment can be considered as ancilliary to treatment for tuberculosis. As the majority of Approved Societies provide dental treatment as one of their "additional benefits" the number of patients requiring to avail themselves of the County Dental Scheme is not very large. Facilities are available at the County Sanatoria for dental treatment to be given after a patient has been admitted although whenever possible arrangements are made for the dental treatment to be carried out before admission.

The County Council have now approved of the provision of dentures being included in the dental scheme.

Sanatorium Treatment in Essex.

I have received the following report from Dr. W. Burton Wood on the treatment carried out under the County Scheme :—

The Victorian Consumptive was confined in a chamber from which all fresh air was excluded and in which so far as possible any movement of air was prevented. Stale air and still air if not considered curative were thought at least to postpone the inevitable fatal issue. To make assurance doubly sure the patient's bed was covered with a canopy and surrounded by curtains. Readers of that almost forgotten classic " The Cowslip " will remember that when her mama was very ill Miss Jane gave proof of her filial piety by sometimes peeping through the curtains. An admirable woodcut depicts the maiden carefully separating the heavy folds just sufficiently to disclose the corner of a pillow and despite her tender years evidently fully aware to the danger of exposing mama to a draught. An appreciation of the value of fresh air resulted in the discovery of Sanatorium treatment and the establishment of a system of therapy practised long ago in the days of Galen when consumptive patients sought healing on the slopes of the hills surrounding the bay of Naples. Contrasted with the results of the treatment of consumption in unventilated and sunless rooms the benefits derived from sanatorium treatment were sufficiently striking and its general adoption brought new hope to the tuberculous throughout the civilized world. But in process of time appreciation of the value of fresh air and reaction from Victorian traditions led to extravagant ideas. It was considered essential that the consumptive whatever his age or physical condition should live in a constant draught and be denied all the comforts of existence particularly the comfort of warmth in winter. Even in our own day elderly patients suffering from chronic and incurable disease are frequently sent from their homes to endure the rigours of an English winter, its fogs and its snows, in open huts. Such practices can only bring sanatorium treatment into disrepute and prevent the recognition of its supreme value when employed with intelligence. Fresh air for the tuberculous has become something of a fetish. Fresh air is healthful for all. The recent recognition of the fact that young people need not wait till they have developed tuberculosis before enjoying the advantages of fresh air and sun bathing recalls the story of the Chinese genius whose epoch-making discovery that the enjoyment of roast pork does not necessitate the burning of a house as recorded by Charles Lamb. The open air life of the Sanatorium is of benefit not because the patient has tuberculosis, but because he has a system the resisting power to which disease can be raised by healthy conditions. But fresh air is not a cure for tuberculosis.

Unless much money is to be wasted and many false hopes raised more careful selection of cases suitable for sanatorium treatment will have to be exercised in the future than has been in the past : and recent developments have made this possible. In the early days of Sanatorium treatment it was observed that patients arriving with signs of active disease seldom responded favourably to treatment. Efforts were therefore made to secure " early cases " for treatment. An elaborate system of physical examination was devised to detect the earliest beginnings of disease until at last a generation of physicians arose who claimed to be able to diagnose pulmonary

tubercle before signs, symptoms or bacteriological proof of the disease were forthcoming. These "early cases" were duly "cured." It may be a source of surprise that patients who exhibited none of the classical signs and few of the classical symptoms of a much feared and usually fatal disease should have been willing to enter sanatoria. The explanation is to be found in the fact that the neurotic patient, anxious to escape life's storms in some quiet haven, eagerly accepts a diagnosis which, on account of its associations with youth and beauty, is particularly acceptable and on account of its seriousness entitles its victims to a large measure of consideration and sympathy. The genuinely tuberculous endeavour to cloak their symptoms, to minimise their sufferings and refuse to admit what they know to be true. The spurious case exaggerates cough, magnifies every symptom, is proud of dilating on his distresses, and though seldom a conscious fraud he realises the privileges of the invalid without having any cause to fear the results of disease.

There is no occasion to blame either our forbears or ourselves for the mistakes we made. We were right in seeking the early case and in maintaining that the early case was curable. We failed in our endeavours because the methods of physical examination by finger taps and stethoscope are not sufficiently delicate to reveal early disease and indeed not infrequently fail to determine the presence of advanced disease even when employed by an expert. Fortunately the recent great advances in the science of radiography have enabled us to dispense with guess work and to diagnose the presence of tuberculous disease in its early stages with a confidence and accuracy impossible half a dozen years ago. Needless to say such precision is only possible when skiagrams are of first class quality and are interpreted in the light of wide experience. A poor skiagram may confuse the issue and prove worse than useless.

It is thus obvious that we are now in a position to select cases suitable for sanatorium treatment and to reject the unsuitable. With the knowledge we now possess the sanatorium should become an institution for the cure of tuberculosis. The sanatorium has fulfilled this function very inadequately in the past. The majority of patients may have benefitted by it but cure has only resulted in a small minority. And of this minority only a few were suffering from active disease at the time of admission. For most, periods of cat and mouse treatment have merely delayed the downward course towards death.

One of the problems that has caused grave concern to all interested in the prevention and cure of tuberculosis is the special susceptibility of girls and young women to contract the disease. Between the ages of 15 and 25 the mortality among females far exceeds that among males. The excess of the female population in this country accentuates the need for special provision for young female consumptives while the fact that at this age they are seldom entirely self-supporting and very rarely have others dependent on their earnings makes possible the prolonged treatment often necessary to obtain healing. Further, it is among this adolescent and young adult group that the early case is usually found. At a later period in life pulmonary tuberculosis is so insidious in its onset that until the disease is far advanced the patient has no suspicion that he is suffering from anything worse than the bronchitis which is almost universal in certain classes of society especially during the winter months.

The onset of tuberculosis in the adolescent or young adult is frequently and probably usually accompanied by a febrile attack. This attack is commonly regarded as a feverish cold or "influenza." Cough follows the attack and if slight may be disregarded by the patient till a second attack of "influenza" or the persistence of cough rouses the suspicion of relatives. Especially if there is a history of consumption in the family pressure is brought to bear on the patient and sooner or later an unwilling and protesting young woman arrives at the tuberculosis dispensary. At this stage the signs revealed by physical examination may be slight or even absent but a radiogram will show characteristic shadows, usually in the upper third of one or other lung. Examination of the sputum even at this early stage may reveal tubercle bacilli. Indeed, so constantly are these present if a thorough search is made for them that a diagnosis of tuberculosis is seldom justified in their absence. A negative sputum result and a clear skiagram are usually sufficient to acquit the patient of disease. It is the type of case referred to above that is most suitable for sanatorium treatment. The patient is young and in the absence of proper treatment will almost certainly die within the course of a very few years. Adequate treatment is possible because the giving up of work for two or three years will not involve the ruin of a home. Most important of all the disease is of recent origin, is limited in extent and the tissues still retain the capacity for repair and complete healing even though the lung has already commenced to soften and break down. In later life the disease is usually not discovered till it has involved a considerable area of one or both lungs, a bungling attempt at cure by nature has resulted in the formation of hard scar tissue and fibrous walled cavities and true healing is no longer to be expected while social claims prevent prolonged institutional treatment even in those cases in which cure or even permanent benefit might be anticipated.

The principles of sanatorium treatment are fresh air, nourishing food and rest. Of these the last is the most important, for the only successes obtained in the treatment of all the graver forms of tuberculosis, whether affecting joints, bones or lungs have been obtained through rest, both general and local. If we are able to treat tuberculosis with some measure of success to-day it is due neither to the surgeon's knife nor to the pharmacologist's prescriptions, nor to the bacteriologist's vaccines, but to the application of the simple principle of putting the diseased part at rest and allowing natural healing processes to work. But for the fact that rest assists the defence to resist attack we should be almost powerless to treat tuberculosis. The Sanatorium is a rest house. The industrial worker cannot, the more opulent will not, rest at home.

In addition to general rest, local rest is in most cases necessary if a cure is to be achieved. The surgeon achieves this by an ingenious system of splints and straps. The physician cannot apply splints to the lungs, but by methods even more ingenious than those of the surgeon he is able to put the lungs at rest. His system is known as "Collapse Therapy," the simplest form of which is artificial pneumothorax (A.P.), a method of introducing graduated quantities of air or gas into the chest cavity in such a way that the diseased lung is deflated and can be kept out of action for a period of some years if necessary. In most cases the earlier stages of "Collapse Therapy" can only be carried out in an institution. Despite the temporary improvement that usually

resulted from general rest, as formerly carried out in sanatoria, the permanent results were so disappointing that doubt had arisen whether indeed the sanatorium system was worth while. The results of local rest as obtained by "Collapse Therapy" have changed our whole conception of the possibilities of rest treatment. Clinical details would be out of place in a report of this kind, but two examples may be given to illustrate the result of "A.P." treatment.

A young woman, a school teacher, attended the Tuberculosis Dispensary at Victoria Park Hospital for examination as a "contact." She had had a slight cough for three weeks. X-ray examination showed a faint cob-web-like shadow in the right lung, involving an area that could have been covered by a shilling piece. Three weeks later the lung had commenced to break down and a cavity was already visible in the diseased area. The lung was then put at rest by artificial pneumothorax. At this time tubercle bacilli were first found in the sputum. The patient remained in hospital for a few months and then went to the seaside in Essex for a convalescent holiday, visiting the clinic at hospital every two or three weeks for "re-fills" of air in order to maintain the collapse of the lung. During the year following the commencement of treatment she remained in perfect health and no further tubercle bacilli were expectorated. At the end of this time she was admitted to Black Notley Sanatorium in order that the case might be kept under special observation while the re-fills were discontinued and the lung permitted to re-expand. When the expansion was complete, physical and X-ray examination showed only a scar at the site of the cavity and no evidence of active disease in either lung. The patient was soon after passed as fit for work and returned to her duties under the L.C.C.

A girl aged 16 years was admitted to Black Notley Sanatorium some three years ago suffering from acute adolescent phthisis with a large cavity in the right lung. The lung was treated by artificial pneumothorax and the outlook seemed very hopeful when the opposite and previously healthy lung broke down. A rapid extension of the disease occurred and a large cavity formed. While a partial collapse of the right lung was maintained, the left lung was also subjected to artificial pneumothorax, and the movements of both lungs were in this way kept at a minimum. The patient is still in the sanatorium. She is free from symptoms and is in excellent health. The right lung has now been allowed to expand. Only a few scars remained and all evidence of the former cavity is obliterated. The lung is apparently sound. The left lung has not yet been allowed to expand, but there is good reason to hope that at the conclusion of treatment, which will have involved three years continuous residence in the sanatorium, this lung will also be soundly healed.

The strongest supporters of "A.P." treatment are the patients themselves. The first A.P. apparatus installed at the old Black Notley Sanatorium was given by the patients as a Christmas present to the medical staff, an act of generosity which was at once recognised by the County Council who granted an equal sum of money. There is no foundation for the idea that patients will not submit to treatment which involves a rigorous discipline and prolonged exile from home, at any rate as far as girls and young women are concerned.

Boys are far less amenable and men often cannot sacrifice the time necessary to obtain a cure. But when patients realise that everything possible is being done to achieve a cure, when an atmosphere of hope is maintained and when their comfort and feelings are considered, it is surprising to note the courage and persistence which are maintained despite suffering and weariness and the constant dread of death on the threshold of life.

A discussion of the various adjuncts to artificial pneumothorax treatment which include complicated operative procedures would be out of place here. Provision for all of these is now made in connection with the Black Notley Scheme where every form of treatment carried out at the large continental centres in Switzerland and elsewhere is now available for Essex patients.

If stress has been laid on the hopeful aspects of modern treatment we should not forget how grave is the threat to the life of every tuberculous patient. If many successes have been achieved there have been many failures to record. Phthisis remains one of the most dangerous of all diseases that afflict the young. It is perhaps doubtful if medical treatment will ever be able to accomplish much more than is at present possible in the cure of individual cases. The chief hope for the individual lies in early diagnosis and this depends upon the recognition by medical practitioners of the danger signals of incipient disease and the services of an efficient dispensary system. With regard to the latter the tuberculosis officer cannot carry out his duties efficiently unless he has access to an X-Ray Department.

The subject of pulmonary tuberculosis in children has been dealt with in recent reports. The Annual Report of the County Medical Officer for the year 1928 includes special reference to the difficult problems connected with the diagnosis of obscure pulmonary conditions in early life and the provision for the treatment of child "contacts" and "suspects." On account of the rarity of pulmonary tuberculosis as a disease of children of school age the fifty beds originally allocated to children in the pulmonary section at Black Notley Sanatorium were reduced to twenty-five, the equal number of beds set free being transferred for the use of adolescent girls. There has been no reason to regret this decision. The additional accommodation for young consumptives has been invaluable and the beds available for children have proved amply sufficient to meet the demand. The pulmonary beds in the children's section are available for cases of phthisis of the adult type (one of the rarest of childhood diseases), tuberculous pleurisy (which is somewhat more common), severe "primary infections," tuberculosis of the glands at the lung roots, allergic manifestations (*e.g.*, epituberculosis) and observation cases. Children from infected households in whom a tuberculous taint is suspected but who do not exhibit any signs or symptoms of active disease, cases in which X-Ray examination reveals some slight evidence of old primary infection and delicate children who are known to have been exposed to the risk of infection can be admitted to the observation section but are not retained unless evidence of active disease is discovered. The open air school rather than the sanatorium is the proper place for these. A sanatorium should not be regarded as a convalescent home and at Black Notley every effort is made to insist on a rigorous standard of diagnosis.

In the past there has been great difficulty in obtaining accommodation for consumptives suffering from advanced and incurable disease. The difficulty in the case of male patients was overcome when the Committee of the Liverpool Road Fever Hospital placed their wards at the disposal of the County Council. The services rendered by this Institution have been invaluable. The success of this experiment has been due in no small measure to the kindness and skill of Dr. Massingham, the Medical Superintendent, to whom special thanks are due. It is a pleasure to be able to record that at last suitable provision has also been made for corresponding women patients who are now admitted to the new pavilion at the Oldchurch Hospital (Public Assistance), Romford. The appointment of Dr. Yell as visiting officer of the tuberculosis department of this hospital cannot fail to be productive of much good.

Space does not permit of more than passing reference to Harold Court where Medical Superintendent, Matron and Nurses have maintained a high standard despite the great difficulties imposed by old buildings and inadequate equipment; to Chingford, a most comfortable institution for cases of moderately advanced disease in women, or to Colchester which meets the needs of incurables from the surrounding district and also provides beds for women patients for whom simple sanatorium treatment is indicated.

At the end of another quinquennium, I should like to express my thanks to the County Medical Officer for much kindness and assistance, to my colleagues at the dispensaries, association with whose work has been a constant source of pleasure and interest, and lastly, but not least, to the Medical Officers, the Matron and Nursing staff at Black Notley Sanatorium. It is said that to travel hopefully is better than to arrive. Black Notley represents the end of a long journey for those interested in tuberculosis work in Essex. Well planned, beautifully furnished, admirably equipped, it represents the modern sanatorium at its best so far as plant is concerned. But for those who enjoy the pleasure of hopeful travel it is only the beginning, a beginning full of hopefulness to Essex patients.

W. Burton Wood.

PART III.

MATERNITY AND CHILD WELFARE ACT, 1918.
NOTIFICATION OF BIRTHS ACTS, 1907 & 1915.

(1) County Area. The County Council was responsible during the year 1930 for administering the above Acts in the following 33 Sanitary Districts :—

Sanitary Districts.	Acreage	Census Population, 1921.	No. of Births notified by		No. of Births Unnotified.	Deaths of Infants under 1 year.	Deaths of Mothers in child-birth.	No. of Notifications of	
			Mid-wives.	Doctors and Parents.				Puerperal Fever.	Ophthalmia Neonatorum.
Maldon B.	3,028	6,590	29	82	2	1	...	...	1
Saffron Walden B. ...	7,502	5,874	24	19	4	1	1	...	...
Benfleet U.	6,319	6,136	87	75	3	6	2	...	...
Braintree U.	2,224	6,970	107	50	3	12	...	1	...
Brentwood U. ..	460	6,853	43	44	...	1	1	1	...
Brightlingsea U. ...	2,867	4,500	11	27	1	2	1	...	...
Burnham-on-Crouch U. ...	4,517	3,434	23	20	...	1	...	...	...
Canvey Island U. ...	4,400	1,795	33	10	...	3	...	...	...
Chingford U.... ...	2,808	9,482	95	156	27	6	...	2	2
Epping U.	1,420	4,196	25	46	3	2	...	2	...
Frinton-on-Sea U. ...	422	3,032	2	8	1	...	...	...	...
Halstead U.	647	5,923	27	59	7	5	...	...	...
Hornchurch U. ...	6,783	10,891	185	206	16	33	2	3	1
Rayleigh U.	5,278	3,650	37	51	10	9	1	...	...
Shoeburyness U. ...	1,036	6,413	108	13	...	4	...	...	...
Walton-on-the-Naze U. ...	2,046	3,664	4	34	2	...	1	...	...
West Mersea U. ...	3,185	1,908	5	22	...	2	...	...	...
Witham U.	3,713	3,717	33	37	1	3	...	..	1
Wivenhoe U.... ...	1,564	2,329	...	35	1	1	...	...	...
Belchamp R.... ...	26,500	4,219	26	20	1	3	...	1	..
Billericay R.	49,394	24,211	375	214	11	21	5	9	...
Braintree R.	62,349	18,779	172	148	13	25	2	...	...
Bumpstead R. ...	11,874	2,376	16	5	3	...	...	..	...
Dunmow R.	73,503	15,352	111	96	10	6	...	2	1
Epping R.	39,055	14,625	160	73	13	15	1	1	2
Halstead R.	38,712	9,743	54	53	13	10	...	...	...
Maldon R.	82,342	16,479	107	78	5	13	2	...	1
Ongar R.	47,236	10,054	70	110	8	10	...	...	1
Rochford R. ...	39,006	11,282	177	342	6	11	2	1	...
Romford R.	16,381	9,467	100	104	7	8	...	2	...
Saffron Walden R. ...	59,975	10,087	102	40	3	2	1	1	...
Stansted R.	22,954	6,828	48	44	5	3	2	1	...
Tendring R.	73,131	21,721	220	152	11	19	2	2	...
Totals	702,631	272,580	2,616	2,473	190	238	26	29	10

(2) Medical Staff. Particulars in regard to the Medical Staff are given on page 14. In regard to those members undertaking child welfare work the following alterations were made during the year :—

Dr. N. S. R. Lorraine was appointed Medical Officer of Health for the Rayleigh and Benfleet Urban Districts as and from 1st January, 1930. To enable him to undertake these additional duties, Dr. R. H. Vercoe carried out some child welfare work.

After Dr. Vercoe's death in March, 1930, Dr. J. B. Ratcliffe undertook these child welfare duties, and at the end of the year Dr. Ratcliffe was attending seven Child Welfare Centres for the County Council.

Dr. M. Barker, Combined Medical Officer at Chingford, resigned and terminated duty in March, 1930. Dr. Archibald Gardiner, Assistant County Medical Officer in the Romford Area, was appointed in his place. The vacancy in the Romford area was filled by transferring Dr. G. M. D. Lobban from Dagenham in September, 1930, and he took over the duties of Child Welfare Medical Officer in Hornchurch Urban and Romford Rural Districts.

Dr. Annie Gardiner relinquished her duties at the Brentwood and Warley Centres in August, 1930, and Dr. B. Fraser Beatson, Combined Medical Officer, Brentwood, took over these two Centres.

Dr. Mary D. Rankine continued to give increasing time to Central Office duties, and in October, 1930, Dr. Edith J. Legerton Smith was appointed as a part-time Assistant County Medical Officer, to undertake some of Dr. Rankine's outside work and also to relieve Dr. Evelyn Pirrie of the Child Welfare Centres in the Braintree area.

Dr. P. J. Gaffikin resigned his appointment as Combined Medical Officer in the Braintree and Dunmow Districts, terminating duty on 31st December, 1930. It was decided that his successor, Dr. J. S. Bradshaw, Combined Medical Officer, Witham, should undertake tuberculosis work only for the County Council, and in 1931, therefore, the services of Dr. Edith J. Legerton Smith were extended.

The part-time services of Dr. Evelyn Pirrie were also revised during 1930, and at the end of the year Dr. Pirrie was attending seven Child Welfare Centres for the County Council.

Dr. C. A. Weller has attended the Thaxted Child Welfare Centre since it opened in April, 1930.

In October, 1930, Dr. L. S. Fry, Combined Medical Officer, Waltham Holy Cross, relieved Dr. Ewan of Child Welfare duties in the Ongar Rural District.

Dr. W. S. Willmore attends the Felsted Child Welfare Centre, which opened in November, 1930.

The arrangements for the attendance of an Orthopaedic Surgeon (Mr. B. Whitchurch Howell, F.R.C.S.) at Clinics, at a fee of £3 3s. per session, plus travelling expenses, were continued.

(3) Health Visitors. The only material change in the Health Visiting Staff which took place during the year was that the arrangements with the Clacton District Nursing Association and Mrs. Sollars, of Walton-on-Naze, and also with the Harwich Town Nursing Association, for part-time services were terminated, and as and from 1st October, 1930, an additional whole-time Health Visitor commenced duty in the Tendring peninsula, performing the duties in connection with Child Welfare, School and Tuberculosis Nursing.

On 31st December, 1930, the Health Visiting Staff undertaking Child Welfare work on behalf of the County Council numbered as follows :—

Whole-time (also undertaking School and Tuberculosis duties)	24	Equivalent whole-time H.V. for C.W.=9¼
Whole-time (part-time C.C. and part-time L.A.) ..	1	

N.B.—The above figures do not include the Chief Health Nurse and her Assistant.

The District Nurse-Midwives continued to assist the Health Visitors as far as possible.

A summary of the work undertaken during the twelve months ended 31st December, 1930, is given in Table XXVI.

(4) Child Welfare Scheme. During the year steps were taken to prepare a comprehensive pamphlet (Form C.W.42) indicating to all interested the scope of the Maternity and Child Welfare Scheme in Essex, and the detailed procedure to be followed in connection with the formation and maintenance of Child Welfare Centres. Particulars were also included of the various schemes in operation, *e.g.*, provision of milk, dental treatment, home helps, treatment of minor ailments, conveyance of mothers to Centres, treatment of maternity patients, obstetric specialist, accommodation available for the reception of patients suffering from Puerperal Fever and Puerperal Pyrexia, Ophthalmia Neonatorum, &c. In addition a full list of the duties of Medical Officers and Hon. Secretaries of Child Welfare Centres was given, together with particulars of all the Child Welfare Centres, not only in the County Council Child Welfare area, but also in autonomous Child Welfare areas in the County.

(5) Child Welfare Centres. Table XXVII shows the Child Welfare Centres under the County Council's Scheme.

The following new Child Welfare Centres were established during the year :—

Vange, Thaxted, Purleigh, Eastons and Felsted.

Weighing scales were provided for the Weighing Centre established at Ashdon.

(6) Combined Treatment Centres. For particulars regarding Combined Treatment Centres see page 141 of this Report.

(7) Provision of Milk. The two schemes outlined in the report for the year 1922, for the provision of Milk (a) for districts served by Centres, and (b) for districts not served by Centres were continued, with the slight amendment to the scale for determining necessitous cases set out in the Report for the year 1928.

(a) *Districts served by Child Welfare Centres.* The total amount claimed from the County Council by Child Welfare Centres was £435 8s. 2d., representing assistance to 263 families.

TABLE XXVI.

Showing Summary of Child Welfare work carried out by each Health Visitor and District Nurse-midwife.

Nursing Area. Districts.	Notifications received. Live Births.	Notifications received. Still Births.	H.Vs. No. of Visits. Pre-Natal.	H.Vs. No. of Visits. Post-Natal.	D.N.Ms. No. of Visits. Pre-Natal.	D.N.Ms. No. of Visits. Post-Natal.	Total Visits. Pre-Natal.	Total Visits. Post-Natal.
Saffron Walden B. & Saffron Walden R. (part)	157	5	17	456	827	2050	844	2506
Bumpstead & North Halstead and Belchamp R.	103	3	51	1375	513	795	564	2170
Halstead U. & South Halstead and Belchamp R.	151	3	46	1360	333	638	379	1998
Wivenhoe U. and West Mersea U. ...	60	2	14	179	23	39	37	218
*Tendring West, Tendring (part), Frinton U., Walton U., Brightlingsea U., and Tendring East	445	13	96	2499	1143	2787	1239	5286
Stansted R.	104	6	20	395	679	1074	699	1469
Dunmow R. (South) and Braintree R. (part)	136	6	21	539	538	1257	559	1796
Braintree U. & R. (North)	211	7	34	772	606	437	640	1209
Braintree R. (South) and Witham U. ...	284	7	6	1332	1173	1579	1179	2911
Braintree R. (North) Dunmow R. (North)	106	2	73	329	792	1456	865	1785
Epping U. & R. (part)	263	6	34	624	946	1392	980	2016
Ongar Rural	175	5	180	1793	893	892	1073	2685
Burnham U. and Maldon R. (South) ..	90	3	6	1321	649	1514	655	2835
Maldon B. and Maldon R. (S.W.) ...	132	4	7	759	95	468	102	1227
Maldon R. (North)	108	2	22	866	389	877	411	1743
Chingford U.	247	4	15	649	87	96	102	745
Chigwell Parish	33	2	9	280	143	222	152	502
Romford R. (part)	83	2	3	603	98	172	101	775
Hornchurch U. and Romford R. (part) ...	453	10	27	1636	185	129	212	1765
Brentwood U. part Billericay R. and Romford R. (part)	242	6	20	490	727	1453	747	1943
Billericay R. (part)	372	12	44	994	1026	1242	1070	2236
Rochford R. (part) and Shoeburyness U. ...	571	21	74	1621	716	1736	790	3357
Rochford R., Canvey Island U., Benfleet U. and Billericay (part) ...	422	10	26	637	765	562	791	1199
Totals ...	4948	141	845	21509	13346	22867	14191	44376

*As these areas were re-arranged as and from 1st October, 1930, the total figures of the Tendring Peninsula have been given.

(b) *Districts not served by Centres.* Under this scheme 148 mothers and 65 infants were granted supplies of cows' milk or dried milk for varying periods, free of charge, at a total cost of approximately £322 15s. 10d.

Dried milk was also supplied at cost price to Child Welfare Centres and persons recommended by the Health Visitors to the extent of £471 16s. 1d.

(8) Dental Treatment. The provisions of this Scheme were extended so as to include dentures, and an increasing number of mothers are taking advantage of the Scheme, with consequent benefit in their health and in the health of their children. Fifty-three patients received treatment during the year at a total cost of £149 6s. 0d., of which the County Council paid £70 7s. 8d.

TABLE XXVII.

Name and Address of Centre.	Approximate population served.	Sessions.	Total attendances of infants and children in 1928.	1929.	1930.	Medical Officer.	Annual Maintenance Grant. £ s. d.
Abridge, Parish Room ...	1244	2nd and 4th Wednesdays	352	342	473	L. S. Fry	7 10 0
Belchamp St. Paul, Gages Farm	607	2nd and 4th Wednesdays	251	180	239	J. S. Ranson	3 0 0
Billericay, Women's Institute Hall	4000	2nd and 4th Tuesdays	511	484	530	B. F. Beatson	20 0 0
Bocking, Village Hall ...	2000	2nd and 4th Thursdays	457	387	485	E. J. L. Smith	12 0 0
Braintree, Congregational Chapel, London Road Boy Scouts' Hut	6970	2nd and 4th Tuesdays 1st, 3rd and 5th Tuesdays	1850	2189	1959	E. J. L. Smith	30 0 0
Brentwood, Montpelier House	6853	Alternate Fridays	1010	1222	1167	B. F. Beatson	10 0 0
Brightlingsea, New Church Schools	4500	1st and 3rd Wednesdays	487	308	281	W. A. Milne	20 0 0
Burnham-on-Crouch, St. Mary's Hut	5900	1st and 3rd Fridays	667	621	697	E. Pirrie	20 0 0
Canvey Island, Baptist Church	4000	3rd Wednesdays ...	241	343	480	N. S. R. Lorraine	20 0 0
Chingford (South), Brotherhood Hall	6000	Tuesdays ...	1325	1830	3111	A. Gardiner	30 0 0
Chingford (North), South Room, Church Hall, The Ridgeway	6000	Thursdays ...	1703	2154	2278	A Gardiner	20 0 0
Debden, Memorial Hall ..	1214	4th Wednesdays ...	189	198	208	S. R. Richardson	5 0 0
Dunmow, Congregational Church Schoolroom	6795	1st and 3rd Fridays	—	328	463	E. J. L. Smith	C.C. Centre
Earls Colne, Village Hall ..	2732	1st and 3rd Wednesdays	159	177	231	J. S. Ranson	15 0 0
Eastons, Village Hall (opened Nov. 1930)	1250	1st Wednesdays ...	—	—	46	E J. L. Smith	10 0 0
Epping, Women's Institute Hall, St. John's Road	4196	Thursdays ...	2391	2005	1694	A. Watney	20 0 0
Felsted Memorial Hall (opened Nov. 1930)	1969	2nd Tuesdays ...	—	—	52	W. S. Willmore	10 0 0
Hadleigh, Congregational Church Hall	2246	1st and 3rd Tuesdays	577 9 mths	753	692	J. B. Ratcliffe	10 0 0
Halstead, Technical School	5923	2nd and 4th Thursdays	807	1018	1462	J. S. Ranson	20 0 0
Harlow, Women's Institute Club	3200	2nd Fridays ...	168	221	242	T. G. Cunningham	5 0 0
Hatfield Heath, Trinity Hall Little Hallingbury, branch opened May, 1929, at Church Room	2102	4th Fridays ... 4th Wednesdays ...	246	359	262	T. G. Cunningham	10 0 0
Hatfield Peverel, Village Hall	1600	2nd and 4th Thursdays	624	483	503	E. Pirrie	7 10 0
Hedinghams Y.M.C.A. Hut, Sible Hedingham and Women's Institute, Castle Hedingham	2723	1st and 3rd Tuesdays	401	471	708	J. S. Ranson	15 0 0
Heybridge, Waring Hall ...	2200	2nd and 4th Tuesdays	220	207	318	E. Pirrie	10 0 0
Hornchurch, Church Hall, Park Lane	9727	Mondays ...	1006	1131	3251	G. M. D. Lobban	C.C. Centre
Laindon, Manor Mission Hall	3000	Wednesdays ...	517	1123	1797	B. F. Beatson	15 0 0
Maldon, Health Centre, Wantz Chase	6590	Fridays ...	1680	2063	2179	W. H. Alderton	10 0 0

Table XXVII—continued.

Name and Address of Centre	Approximate population served.	Sessions.	Total attendances of infants and children in 1928.	1929.	1930.	Medical Officer.	Annual Maintenance Grant. £ s. d.
Matching Tye, Women's Institute Hall	500	3rd Fridays ...	163	211	164	T. G. Cunningham	5 0 0
Ongar, Council Schools, Chipping Ongar	5631	2nd and 4th Thursdays	545	460	568	L. S. Fry	20 0 0
Parkeston, Wesleyan Schoolroom, Garland Road	2000	Alternate Tuesdays	277	347	240	J. Ramsbottom	10 0 0
Pitsea, St. Michael's Hall, Rectory Road	7000	2nd and 4th Wednesdays	752	850	665	J. B. Ratcliffe	20 0 0
Purleigh, The Hut	1700	2nd and 4th Tuesdays	—	—	86	E. Pirrie	10 0 0
Radwinter	600	2nd Wednesdays ..	183	223	150	S. R. Richardson	5 0 0
Rainham, Social Hall ...	2196	1st, 3rd and 5th Thursdays	468	422	557	G. M. D. Lobban	C.C. Centre
Ramsden Heath, Club Room, Leslie Cottage, Downham	1342	1st Thursdays	164	221	174	B. F. Beatson	7 10 0
Rayleigh, Memorial Hall ...	4000	2nd and 4th Tuesdays	406	471	736	N. S. R. Lorraine	20 0 0
Rivenhall and Silver End (Silver End Garden Village Hall)	1200	1st, 3rd and 4th Thursdays	458	593	1055	E. J. L. Smith	15 0 0
Rochford, Congregational Rooms	5076	2nd and 4th Mondays	657	827	1216	J. B. Ratcliffe	20 0 0
Saffron Walden, Central Hall, High Street	5874	Fridays ..	1377	1320	1195	S. R. Richardson	20 0 0
Sheering, Parish Room ...	778	1st Fridays ..	87	123	161	T. G. Cunningham	5 0 0
Shoeburyness, Council Offices	6413	1st and 3rd Thursdays	910	817	662	N. S. R. Lorraine	20 0 0
South Benfleet, Baptist Church (Kents Hill Road)	5000	1st and 3rd Mondays	504	523	519	J. B. Ratcliffe	20 0 0
Stansted, Central Hall ...	3184	1st and 3rd Wednesdays	586	581	686	S. R. Richardson	15 0 0
Steeple Bumpstead, Lecture Hall	1784	1st and 3rd Wednesdays	275	202	231	J. S. Ranson	10 0 0
Terling, Red Triangle Hut	1250	1st and 3rd Wednesdays	433	394	488	E. Pirrie	7 10 0
Thaxted, Bolford St. Schoolroom (opened April, 1930)	1200	1st Friday	—	—	293	C. A. Weller	10 0 0
Theydon Bois, Sorrell Room	1267	Fridays ...	465	642	1069	W. F. Erskine	5 0 0
Thundersley, Church Schools	1972	1st and 3rd Fridays	556	617	535	J. B. Ratcliffe	10 0 0
Tollesbury, Parish Room ...	1721	3rd Tuesdays ...	273	225	277	E. Pirrie	10 0 0
Upminster, St. Lawrence Hall	3559	Alternate Fridays	1110	945	1558	G. M. D. Lobban	C.C. Centre
Vange, Gordon Hall Institute (opened March, 1930)	4500	1st and 3rd Thursdays	—	—	275	J. B. Ratcliffe	20 0 0
Great Wakering, Village Hall	2584	2nd and 4th Thursdays	337	174	521	J. B. Ratcliffe	12 10 0
Warley, Parochial Hall, Brentwood	5974	Alternate Fridays	804	951	709	B. F. Beatson	12 10 0
Weeley, Public Health Offices	4000	1st and 3rd Fridays	130	155	174	J. Ramsbottom	C.C. Centre
West Mersea, Church Hall	1696	2nd Wednesdays...	268	248	187	W. H. Alderton	10 0 0
Wickford, Mission Hall ...	2000	3rd Mondays ...	270	449	371	B. F. Beatson	10 0 0
Witham, Church House, Collingwood Road	3717	2nd and 4th Wednesdays	486	544	668	E. J. L. Smith	20 0 0
Great Yeldham, Reading Room	1000	1st and 3rd Thursdays	157	210	316	J. S. Ranson	5 0 0

(9) Home Helps. The attention of the Voluntary Committees of Child Welfare Centres was drawn to the provisions of the Home Helps Scheme. As a result nine applications were received, as follows :—Brentwood (1), Brightlingsea (2), Laindon (1) and Maldon (5).

(10) Travelling Expenses of Mothers attending Child Welfare Centres. In those instances where no public omnibus service is available for mothers attending the Child Welfare Centres, the County Council has approved a scheme to assist Local Voluntary Committees in defraying the cost of hiring a conveyance for mothers and children living some distance from the Child Welfare Centre. The following Centres have taken advantage of this scheme :—Bocking, Burnham-on-Crouch, Debden, Epping, Ongar, Purleigh, Rivenhall and Silver End, Rochford, Stansted, Terling, Thaxted and Tollesbury.

(11) Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926. During the year ended 31st December, 1930, copies of notifications made by medical practitioners were received from Medical Officers of Health in the Administrative County and the County Child Welfare Area as follows :—

	Administrative. County.	C.C. Child Welfare Area.
Puerperal Fever ..	73 ..	31
Puerperal Pyrexia ..	106 ..	31

(See also pages 130 and 140).

(i) *Obstetric Specialist.* The arrangements for the services of the Obstetric Specialist, Andrew McAllister, Esq., F.R.C.S., of 79, Wimpole Street, W.1, previously referred to, were continued.

During the year 1930 the Obstetric Specialist was called in respect to one patient only.

(ii) *Institutional Treatment.* Under the arrangements for hospital treatment for patients suffering from Puerperal Fever or Puerperal Pyrexia, four patients were admitted to Hospitals under agreement.

(iii) *Skilled Nursing.* The arrangements were continued with the Essex County Nursing Association for the provision of skilled nursing in the homes of patients when the circumstances render the removal of the patient to hospital difficult or impossible.

(iv) *Bacteriological Examinations of (a) lochia (b) blood.* Facilities for these examinations were available under the County Laboratory Scheme.

(12) Public Health (Ophthalmia Neonatorum) Regulations, 1926. The arrangements made under these Regulations were fully set out in the Report for the year 1927.

During the year ended 31st December, 1930, copies of 89 notifications of Ophthalmia Neonatorum, made by medical practitioners to Medical Officers of Health in the Administrative County, were received. (See pages 129 and 130).

One patient was admitted to Hospital (St. Margaret's) during the year under the County Council's arrangement for the treatment of this disease.

(13) Hospital Treatment for Maternity Patients. The arrangements with certain hospitals for the admission of the following types of maternity patients were continued :—

(*a*) Complicated or difficult cases of confinement where hospital treatment is essential.

(*b*) Cases of confinement where, in the opinion of the Medical Attendant, the patient cannot with safety be confined in her own home.

An important extension of the facilities available for the treatment of these patients took place in May, 1930, when arrangements were made between the Public Health Committee and the Public Assistance Committee for the admission to certain Institutions of such patients residing in the Council's Child Welfare Area.

During the year sixteen patients were admitted under the above schemes at a cost of £80 13s. 6d., the amount recovered from patients being £19 2s. 1d.

(14) Treatment of Minor Ailments—Children under School Age. This scheme was continued and 26 children under school age received operative treatment during the year.

(15) Treatment of Orthopaedic Patients. Full details of the scheme for the treatment of orthopaedic patients adopted by the Public Health and Education Committees were given in the Annual Report for 1927.

The following summary of developments during the year 1930 and work carried out under the scheme will be of interest.

(a) *Number of Cases on Books.* At the end of 1930, 1,234 cases had been dealt with under the scheme since its inception. Of these about 402 have completed their treatment or left the County area, so that approximately 832 cases still require treatment, supervision or observation.

(*b*) *Ascertainment and Re-examination Clinics.* During 1930 Mr. Whitchurch Howell attended 57 clinic sessions for the County Council in the districts shown below, and carried out 1,167 examinations of County patients.

Orthopaedic Clinic.	No. of Sessions.	No. of examinations.
Braintree	3	76
Brentwood	3	85
Chelmsford	3	25
Clacton	4	55
Colchester	4	73
Dagenham	4	128
Epping	2	23
Grays and Tilbury	12	316
Halstead	3	42
Harwich	5	29
Maldon	3	63
Romford	3	119
Saffron Walden	2	15
Southend	2	19
Stansted	2	8
Woodford	7	91
1930	62	1167*
1929	58	952
1928	53	684

*Includes 1041 Examinations of School Children.

(c) *Hospital Treatment.* The following figures show the position regarding institutional treatment on 1st January, 1930, as compared with that on 1st January, 1931 :—

	No. recommended and accepted by Committee for hospital treatment.		Being investigated.		Total.
	Education.	C.W.	Education.	C.W.	
1-1-30	5	3	25	3	36
1-1-31	7	1	14	6	28

Number in Hospital under the County Scheme.

	Education.	Child Welfare.	Total.
1-1-30	7	1	8
1-1-31	8 1/3rd	1	9 1/3rd

(NOTE :—The 1/3rd of a bed mentioned above means that the County Council was only responsible for one third of the cost of the hospital treatment of one patient).

In regard to hospital treatment under the County Council's arrangement, during the year 51 Education and 13 Child Welfare patients completed hospital treatment, and 51 Education and 13 Child Welfare patients were admitted into Hospital.

(d) *Orthopaedic Masseuse.* The whole-time Orthopaedic Masseuse, Miss J. L. Hodge, resigned and terminated duty in November, 1930. Her place was taken by Miss W. H. Tabor, C.S.M.M.G., M.E.

Clinic.	Masseuse.	County Council Patients.						
		No. of sessions.	No. of attendances.	No. of patients treated.	Form of Treatment.			
					Massage.	Exercises.	Elec.	Supervision.
Grays and Tilbury	Miss Yarborough, C.S.M.M.G., M.E.	206	1169	221	12	81	—	138
Romford	Miss Reynard, C.S.M.M.G., M.E.	98	901	80	8	71	2	2
Woodford	Miss Parsons, C.S.M.M.G.	152	383	37	10	25	-	4
Epping	Miss Parsons, C.S.M.M.G.,	101	133	16	10	11	2	—
Maldon	Miss Tabor, C.S.M.M.G., M.E.	48	127	24	1	12	—	11
Brentwood	Miss Tabor, C.S.M.M.G., M.E.	92	528	61	—	58	—	3
Colchester Hospital (from May, 1930)	By arrangement with the Hospital	80	134	7	6	7	—	—

(e) *Treatment Centres.* During the year no new Orthopaedic Treatment Centres were established, except that arrangements were made with the Essex County Hospital, Colchester, for after-treatment at their Out-Patients' Department.

REPORT OF ORTHOPAEDIC MASSEUSE.

Miss Tabor has submitted the following report on the County Orthopaedic Scheme :—

(a) *Ascertainment Clinics.*

It will be noted from the particulars given above that the attendances at the Ascertainment Clinics have been steadily increasing during the last few years, due to the fact that parents are beginning to realise the incalculable benefit to their children of obtaining early and efficient treatment for deformities. Also, it is satisfactory to note that there has been a marked diminution in the number of cases where parents have refused sanction to an operation.

(b) *Treatment Centres.*

(i) *Brentwood.*

	No. of Patients.	No. of Attendances.
1929 ..	6 ..	19 (opened Nov.)
1930 ..	61 ..	528

The attendances at Brentwood have been good on the whole, and the numbers are increasing.

The Brentwood Red Cross Society still render valuable assistance at the Centre, and in escorting some of the younger children to and from the Centre.

(ii) *Colchester.*

During the year negotiations were carried out with the Authorities of the Colchester Hospital, with a view to arrangements being made for County patients to receive treatment in the Out-Patients' Department of the Hospital by the Orthopaedic Masseuse. Arrangements were completed in May, 1930, and up to date three patients have made 134 attendances during 1930.

(iii) *Grays.*

	No. of Patients.	No. of Attendances.
1929 ..	218 ..	2033
1930 ..	221 ..	1169

The work at this Centre has been undertaken by a part-time Orthopaedic Masseuse, Miss Yarborough, who has carried out remedial treatment, exercises, &c., in accordance with the recommendations of the Surgeon.

Much valuable assistance has been rendered by the members of the local branch of the St. John's Ambulance Brigade.

(iv) *Maldon.*

	No. of Patients.	No. of Attendances.
1929 ..	8 ..	68 (opened Sept.)
1930 ..	24 ..	127

The number of patients attending this Centre is still low, but increasing efforts are being made to follow up the patients residing in the area and to encourage their attendance for any necessary after-treatment at the Centre.

(v) *Romford.*

	No. of Patients.	No. of Attendances.
1929 ..	69 ..	912
1930 ..	80 ..	901

The remedial treatment at this Centre has been undertaken by a part-time Orthopaedic Masseuse, Miss Reynard, though towards the end of the year the number of patients attending began to decline.

Consideration is being given to the establishment of an after-treatment centre in the Dagenham area under the County Orthopaedic Masseuse, and this Centre, it is hoped, will be available for patients residing in the Romford area, if and when it is decided to close the latter Centre.

(vi) *Woodford and Epping.*

	No. of Patients.	No. of Attendances.
1929 ..	50 ..	541
1930 ..	53 ..	516

Miss Parsons carries out the remedial treatment and the number of attendances indicates that the facilities at these Centres are appreciated by the patients living in the area.

The Centres are run in conjunction with the local branch of the British Red Cross Society, who render invaluable service in connection with the running of the Centre, conveyance of patients, &c.

(c) *General.*

As the result of the growth of the work at the various after-treatment centres, there has scarcely been time for really satisfactory supervision of the boots and appliances of the patients. Every opportunity was taken to impress upon parents that the care of these appliances prolongs their use, and is consequently more beneficial to the child and more economical to themselves.

NURSING HOMES REGISTRATION ACT, 1927.

A detailed report was given in the 1928 Report of the provisions under the Act and the procedure adopted by the County Council.

(i) *Particulars of Registration.* The Clerk of the Council has furnished the following information in regard to Nursing Homes for the year 1930 :—

	Maternity Homes only.	Other Nursing Homes.
No. of applications for registration	Nil ..	8
No. of Homes registered	Nil ..	8
No. of Orders made refusing or cancelling registration	1 ..	1
No. of Appeals against such Orders ..	Nil ..	Nil
No. of applications for exemption from registration	Nil ..	1
No. of cases in which exemption granted ..	Nil ..	1

The Corporation of Walthamstow made application during the year 1930 for the delegation of the powers and duties of the Council under the Act, but the Public Health and Housing Committee did not see their way to recommend that such application be granted. In March, 1931, the Corporation renewed their application and this will be considered in due course.

(ii) *Regulations for Staffing of Nursing Homes.* In 1930 the County Council, following on a report regarding staffing of nursing homes, approved of the following Regulations, to apply to all new registrations, and to come into force in existing Nursing Homes as from 1st September, 1931 :—

In considering the staffing of nursing and maternity homes, it is convenient to divide them into four groups as follows :—

(*a*) An Institution for pregnant women and confinement.

(*b*) An Institution for persons requiring surgical or medical treatment.

(*c*) A Home for the reception of convalescent children and the aged, chronic and infirm.

(*d*) A Mixed Home for the reception of patients under categories (a), (b), and/or (c).

(a) *An Institution for Pregnant Women and Confinement.*

It is necessary that there should be in all Homes under this heading a certified midwife resident on the premises, or a resident qualified nurse acting under the direction and personal supervision of a registered medical practitioner, and that such certified midwife or qualified nurse should not be engaged in practice outside the Home. Where there are two or more midwives or qualified nurses on the staff of a Home it will be sufficient for this purpose if one of them is always on duty at the Home. Hitherto the County Council have not insisted on the midwife being resident in all cases.

In the existing economic conditions it would be a hardship to insist in some cases on any additional staff for those Homes where there are not more than two beds. Where there are more than two beds, there should be additional staff based on the following scale :—

(i) Three to six beds—one resident assistant nurse, who need not necessarily be " qualified."

(ii) For more than six beds and not more than twelve there should be an additional resident certified midwife and an additional resident assistant nurse or midwife.

(iii) For over twelve beds the staff should be according to circumstances.

N.B.—It is understood that where the patients are doctors' cases, a qualified nurse can take the place of a certified midwife.

(b) *An Institution for Persons requiring Surgical or Medical Treatment.*

These institutions vary considerably in their requirements for nursing staff, but generally there should be :—

(i) A resident qualified nurse who would act as superintendent.

(ii) For the first three medical or surgical patients there must be in addition one resident assistant nurse.

(iii) For four to six patients there must be two resident assistant nurses.

(iv) For each additional six patients over the initial six, there should be one additional resident assistant nurse.

An assistant nurse is not necessarily a qualified nurse.

(c) *A Home for the reception of Convalescent Children and the Aged, Chronic and Infirm.*

These Homes do not require such a high standard of staff, as many of the patients are only on the border-line of illness.

(i) There must be a resident qualified nurse, and it is possible in usual circumstances for this resident qualified nurse to look after (alone), four of this class of patient.

(ii) For from five to eight patients, an additional resident assistant nurse must be employed.

(iii) For from nine to twelve patients an additional resident assistant nurse is necessary.

(iv) For over twelve patients, the staff to be according to the circumstances.

(d) *A Mixed Home for the reception of Patients under Categories (a), (b) and/or (c).*

The staff of mixed Homes taking patients under headings (a), (b), and/or (c) should be arranged based on the requirements indicated above.

N.B.—In all the above instances it is assumed that there is sufficient domestic staff, and extra help is obtained where there are acute or special cases requiring personal and individual attention.

(iii) *Presence of Boarded-out or Foster Children in Registered Nursing Homes.* At the same time the Council also decided :—

That in future no Nursing Home be allowed to receive boarded-out children and/or foster-children in addition to patients.

That persons already registered in respect of nursing homes who admit boarded-out children and/or foster-children be informed that they will not be allowed to admit such children on and after 31st August, 1931, and that arrangements must be made for the removal of any child admitted prior to that date.

(iv) *Revision of Byelaws.* An attempt was also made to revise the Council's Byelaws under the Nursing Homes Registration Act, 1927, so as to include the following, which practical experience has shown are desirable for the efficient control of registered nursing homes :—

1. In addition to recording in the Register in accordance with Clause 2 (2) (*g*) of the Essex (Nursing Homes) Byelaws, 1928, particulars regarding any patient suffering from an infectious disease while at the home, a Keeper of a Nursing Home shall, within a period of twenty-four hours, inform the County Medical Officer of Health of any such case giving particulars thereof and the action taken to prevent the spread of infection.
2. A Keeper of a Nursing Home which is a Maternity Home shall notify forthwith to the County Medical Officer of Health a rise in the temperature of any patient to 100.4° F. for twenty-four hours, or its recurrence within that period.
3. A Keeper of a Nursing Home shall notify the County Medical Officer of Health forthwith of any resignation from or appointment to the Nursing Staff of the Home, and in the case of the latter furnish full particulars of the qualifications of the person appointed.
4. No variation in the accommodation of a Home either in regard to the allocation of rooms or as to the class of patient to be admitted shall be made by a Keeper of a Nursing Home until the approval in writing of the Local Supervising Authority to such variation has been first received.

On being submitted to the Ministry of Health, however, it was ruled that the proposed alterations were *ultra vires*, and that the terms of Section 4 of the Act are not sufficiently wide to authorise additions to the Byelaws.

(v) *Fire Precautions.* The question of fire precautions has also received careful consideration, and the County Architect has been asked to submit a full report thereon.

(vi) *Investigations into Outbreaks of Infectious Disease in Nursing Homes.* During the year a special Sub-Committee conducted a detailed investigation into a serious outbreak of Puerperal Fever in a registered nursing home, as a result of which two patients died. It was ascertained that the chief cause of the spread of the disease was the failure of the keeper of the home (a certified midwife) to appreciate the necessity for strictly isolating a patient with a high temperature as well as the staff in attendance on such patient. Moreover, some of the medical practitioners concerned had not fully realised the necessity for promptly advising the keeper when a patient was in a condition which may render her liable to be a source of infection. As a result of this investigation the Sub-Committee decided to recommend the County Council to cancel the registration of the nursing home. An appeal was lodged, and at the end of the year the matter was still under consideration.

CHILDREN ACT, 1908—PART I.

Infant Life Protection.

Second 2 of the Local Government Act, 1929, laid down that the functions under Part 1 of the Children Act, 1908, should be discharged by Councils of Counties and County Boroughs as functions under the Maternity and Child Welfare Act, 1918, except that where a Council of a district have established a Maternity and Child Welfare Committee these functions are discharged by the Council of the district.

It was found impossible for the County Council's Health Visitors to commence duty as Infant Life Protection Visitors as and from the "appointed day," *i.e.*, 1st April, 1930, and therefore by arrangement with the Public Assistance Committee the existing services were continued until the 1st October, 1930, when the Health Visitors then took over the duties of Infant Life Protection Visitors in their nursing areas.

In one or two areas, particularly Saffron Walden, Billericay and Rochford, this additional work has thrown rather a heavy burden on to the Health Visitors concerned, and it was necessary to ask the Council to appoint an additional Health Visitor in the Rochford and Billericay Districts. The new appointment will take effect from 1st April, 1931.

A copy of Ministry of Health Memorandum L.G.A. 28, along with detailed instructions, were issued to the Health Visitors concerning this new branch of their duties.

MIDWIVES ACTS, 1902-1926.

(a) Allocation of Powers. The coming into force of Section 62 of the Local Government Act, 1929, had considerable effect on the area for which the County Council is responsible as Local Supervising Authority under the above Acts. Applications were considered from the Ilford and Leyton Borough Councils for the delegation of the powers, and after careful consideration the County Council decided to raise no objection to the Ministry of Health making an Order for the transfer of the powers of supervision of midwives to these two Borough Councils as and from the 1st October, 1930. This alteration in the area should be borne in mind when comparing the figures given below with those for previous years.

(b) Practising Midwives. During the year under review 348 midwives notified their intention to practise in the Administrative County, excluding the Ilford and Leyton midwives. Of these, 304 were actually in practice at the end of the year 1930. These midwives are classified as follows :—

Total No. of Midwives in practice at end of year.		Trained. Dependent.		Trained. Independent.		*Bona-fide*, including untrained and L.O.S. Certificated.
304	..	166*	—	119	..	19

*Includes nurses at Barking Municipal Home and Walthamstow Nurses' Home.

The total number of live births and still births which occurred during the year 1930 in the Administrative County excluding Ilford and Leyton Boroughs was 15,629 and of these 7,141 (45·6 per cent.) were attended by midwives in the capacity of a midwife, and 2,841 (17·1 per cent.) as maternity nurses under the supervision of medical practitioners.

Each midwife was asked to state the number of confinement cases which she attended as a midwife during the year 1930, and it was found that 127 trained and 7 *bona-fide* midwives attended 10 or less cases each : 72 trained and 1 *bona-fide* attended 11—20 cases each ; 37 trained and 5 *bona-fide* attended 21—40 cases each : 15 trained and 3 *bona-fide* 41—60 cases each ; 20 trained and 2 *bona-fide* 61—100 cases

each ; and 9 trained and 1 *bona-fide* midwives attended over 100 cases each. These figures do not include cases attended by 5 midwives in nurses' homes at Walthamstow and Barking.

(c) HANDYWOMEN. Chiefly through the medium of the Health Visitors and local Registrars information is obtained in regard to births attended by uncertified women. Whenever sufficient evidence is forthcoming the whole of the facts are placed before the Committee with a view to proceedings being taken. During the year 1930 reports were received regarding 6 cases of confinement attended by six women who were not certified and who acted as midwives without being under the direction and personal supervision of the doctor. It was not considered necessary to institute legal proceedings, but letters of warning were sent by the County Medical Officer.

(d) NOTIFICATIONS. The following list shows the number of notifications received from certified midwives in accordance with the rules of the Central Midwives Board during the year as compared with the previous four years :—

	1926.	1927.	1928.	1929.	1930.
Records of Medical Aid ..	1492	1592	1851	2085	2285
Records of Still-births ..	127	122	114	109	117
Deaths of Mothers	2	6	9	6	10
Deaths of Infants	54	39	69	70	73
Artificial Feeding	62	51	51	74	78
Liability to be a source of Infection	86	‡165	‡207	‡257	‡303
Laying-out for Burial ..	256	261	222	230	235
Ophthalmia Neonatorum or Discharging Eyes	112	142	184	250	294

‡This figure includes all cases of high temperature.

The 2285 cases (31.9 per cent.) where midwives sought the assistance of a doctor were for various reasons, namely :—

Albuminuria	47 cases.	Pemphigus Neonatorum or Spots on Infant ..	59 cases.
Contracted Pelvis ..	6 ,,	Phimosis	21 ,,
Dangerous Feebleness of Infant	53 ,,	Phlebitis	5 ,,
Eclampsia	17 ,,	Placenta Adherent ..	60 ,,
Haemorrhage :—		Placenta Praevia ..	10 ,,
Ante-partum	65 ,,	Premature Birth ..	62 ,,
Post-partum	55 ,,	Prolonged Labour ..	321 ,,
Hydramnios	3 ,,	Presentation (abnormal)	124 ,,
Instrumental Assistance..	11 ,,	Pyrexia (High Temp).	111 ,,
Malformation of Child ..	28 ,,	Rigid Os	6 ,,
Miscarriage, Abortion ..	94 ,,	Ruptured Perineum ..	410 ,,
Miscellaneous Causes ..	366 ,,	Spina Bifida	6 ,,
Ophthalmia Neonatorum or Discharging Eyes ..	294 ,,	Thrombosis	7 ,,
		Uterine Inertia ..	44 ,,

Puerperal Fever, Puerperal Pyrexia and Ophthalmia Neonatorum.

Special investigations were made into all cases of high temperature of mother and discharging eyes of infant in a midwife's practice. The results of these investigations showed that during 1930, in six cases of high temperature and eight of discharging eyes, the rules of the Central Midwives Board were not properly carried out. Warning letters were sent or verbal cautions given to the midwives concerned.

One midwife was interviewed by the County Medical Officer for infringement of rules in a case of discharging eyes.

Particulars of the number of cases of Ophthalmia Neonatorum notified in the Administrative County during the year are given in the following table, together with the percentage of such cases per 1,000 births :—

CASES OF OPHTHALMIA NEONATORUM NOTIFIED. YEARS 1926-30.

Year.	Total Births.	Number of Cases notified of Ophthalmia Neonatorum.	No. of Cases per 1000 Births.
1926	16,743	72	4.3
1927	16,661	84	5.0
1928	17,758	79	4.4
1929	18,218	75	4.1
1930	*15,629	*80	5.1

*Less Ilford and Leyton.

Pemphigus Neonatorum.

All suspected cases of Pemphigus Neonatorum occurring in a midwife's practice are investigated with a view to seeing that every possible precaution is taken to prevent a spread of the disease.

Enquiries were made into 60 suspected cases occurring in Barking (7), Billericay R. (2), Braintree U. and R. (3), Clacton U. (1), Dagenham (13), Dunmow R. (2), Grays (7), Hornchurch (1), Ilford (2), Leyton (4), Maldon R. (1), Orsett R. (4), Rochford R. (3), Tilbury (5), and Walthamstow (5).

One midwife was reported to the Central Midwives Board regarding her conduct in a case of Pemphigus Neonatorum and the Local Supervising Authority was asked to keep her under strict observation and submit further reports on her conduct and mode of practice. Another midwife was interviewed by the Committee and severely censured. Four midwives received written cautions.

Inspection Visits.

Eleven hundred and seventy-nine routine visits were made to midwives during the year, and of these 584 were undertaken by Assistant County Medical Officers and 595 by the Chief Health Nurse and her Assistant.

Written cautions were sent to 21 midwives for minor infringements of the rules other than those referred to in the paragraphs relating to Puerperal Fever, Ophthalmia Neonatorum and Pemphigus Neonatorum on page 130.

One midwife was interviewed by the Committee and severely censured in connection with her attendance on a patient who subsequently died.

Doctors' Fees.

In accordance with Section 14 of the Midwives Act, 1918, during the year ended 31st December, 1930, the County Council paid the sum of £2,225 19s. 6d. as fees to medical practitioners and recovered from patients during the year the sum of £689 11s. 3d.

The following comparative table is of interest, shewing (a) the number of medical aid notices received from midwives during the past five years, and (b) the corresponding number of doctors' claims made against the County Council in respect of such notices. This table shows that the numbers are steadily increasing :—

Year.	No. of Medical Aid Notices received from Midwives.	Percentage of Confinements attended by Midwives in which medical aid was sought.	No. of Medical Aid Notices for which Doctors' claims have been received.	Total amounts of claims.			Amounts recovered from patients.		
				£	s.	d.	£	s.	d.
1926	1492	20.5	789	1,323	2	3	346	16	9
1927	1592	21.6	1056	1,545	5	0	397	5	6
1928	1851	23.7	1153	1,825	2	3	635	16	9
1929	2085	25.3	1352	2,112	19	6	852	2	2
1930	2285	31.9	1507	2,225	19	6	689	11	3

Lectures.

The Essex Midwives Association arranged a special course of lectures in Chelmsford which was held in May and June, 1930. Dr. Remington Hobbs gave lectures on "Complications of Puerperium" with particular reference to puerperal sepsis. They were greatly appreciated by the 75 midwives who attended the lectures. The County Council assisted the Association by a grant towards the Lecturer's fees, travelling expenses etc.

Essex County Nursing Association.

(a) Revision of Agreement. The agreement which has been in force for many years between the Essex County Council and the Essex County Nursing Association for the training, establishment and equipping of district nurse-midwives in conjunction with the local District Nursing Associations was revised during the year and the following is an extract of the principal provisions in the new Agreement :—

Clause 3. That the Agreement be determined by either party giving to the other six calendar months' notice in writing to terminate on the 31st March in any year.

Clause 1 of Schedule. That the period of sixteen months' training referred to in Clause 1 of the Schedule to the Agreement, be increased to eighteen months.

Clause 2 of Schedule. That Clause 2 of the Schedule be amended, so as to read as follows :—

> " When such nurse-midwife has passed her qualifying examination as a midwife, the Association to do their utmost to secure her an engagement in the Administrative County Area as and when required by the Council, at a minimum commencing salary of £105 per annum rising to minima of £110 and £115 per annum at the commencement of the second and third years respectively.
>
> All nurse-midwives trained by the Association as aforesaid to sign an undertaking to practise, if required, in the Administrative County Area for three years from the date of completion of training, provided that the Association shall have power, with the approval of the County Council, to release in very special circumstances a nurse-midwife from such undertaking."

Clause 6 of Schedule. That the number of nurse-midwives to be retained at the Leytonstone Home under Clause 6 of the Schedule to the Agreement, be increased from three to four.

Clause 7 (a) of Schedule. That Clause 7 (a) of the existing Agreement be divided into two Clauses as follows :—

(i) A grant of £85 for each nurse-midwife established in a District approved by the County Medical Officer of Health.

(ii) A grant of £85 each towards the cost of the training each year of not exceeding two of the emergency nurse-midwives referred to in Clause 6.

Clause 7 (b) of Schedule. That the annual grant towards the maintenance of the emergency nurse-midwives referred to in Clause 6 be increased from £200 to £266.

Additional Clause. That a Clause be added to the Agreement to provide for the making by the County Council to the Association of an annual grant of not exceeding £50 towards the expenses of the Association in sending a number of their Senior Nurses each year to a Post-Graduate Course.

(b) General. For the four quarters of the year 1930 the following grants were paid by the County Council to the County Nursing Association in accordance with the Agreement :—

	£	s.	d.
(i) Cost of training District Nurse-Midwives	1,650	0	0
(ii) Maintenance of three Emergency Nurses	249	10	0
(iii) Grants to affiliated District Nursing Associations ..	5,559	13	11
(iv) Equipping District Nurse-Midwives for new areas ..	60	0	0
(v) Clerical and organising expenses	220	0	0
(vi) £2 per Nurse-Midwife for central expenses	311	10	0
(vii) Grant towards Post-Graduate Course	37	10	0
(viii) Deficit (proportion)	58	6	9
	£8,146	10	8

(c) District Nursing Associations. At the end of 1930 the number of District Nursing Associations in the Administrative County which were affiliated to the County Nursing Association and which employed 171 Nurses, was as follows :—

No. of affiliated D.N. Associations	No. undertaking Midwifery and District Nursing.	No. performing Maternity District Nursing duties only.
152	142	10 (4 of which undertake general nursing only).

A summary of the visits made by the District Nurses belonging to affiliated Associations during the past five years is given below :—

		1926.	1927.	1928.	1929.	1930.
Midwifery		25,721	29,089	30,500	33,766	34,775
Maternity		28,355	27,445	30,355	30,393	31,664
District General		185,296	184,577	193,060	205,600	209,927
District Tuberculosis		4,526	4,674	4,510	4,928	3,154
Health Visiting	Pre-Natal	13,813	13,937	16,380	17,800	20,614
	Post-Natal	19,465	22,008	22,684	22,715	27,100
Home visits (School Children)		7,525	8,879	8,629	9,605	8,831
Total No. of visits ..		284,701	290,609	306,118	324,807	336 065

Of the 152 affiliated Associations, 146 participate in the County Council's Combined Nursing Scheme.

(d) Parishes Served—

Number in the County (excluding extra-Metropolitan area) ..	377
Number served by affiliated District Nursing Associations ..	314

MATERNAL MORTALITY.

Since the beginning of the present century, a good deal of attention has been given to the important question of maternal mortality. It has been repeatedly pointed out that though the birth-rate has fallen considerably, and reductions have been made in the general total death-rate and infant mortality rate, the proportion of deaths of mothers in childbirth (usually expressed " maternal mortality ") has not declined. In fact, 20 years ago, the maternal death-rate was 4.0 per 1,000 women giving birth to live children, whereas the corresponding rate in 1929 was 4.3 per 1,000.

Thus, out of six or seven hundred thousand confinements annually in England and Wales we are still losing about 3,000 mothers directly from childbearing whilst there are many others who die at a later stage, due to sepsis or accident at the of confinement. In addition 60,000 women are to some extent crippled annually as a result of confinement, many gravely, and they bear the mark of injuries and infection received for the rest of their lives.

Remedial Measures.

Among the measures which have been framed with the ultimate object of reducing maternal mortality may be mentioned :—

(a) *The Midwives Acts, 1902-1926.* These Acts deal with the qualification, registration and supervision of midwives, and payment of medical practitioners' fees etc.

(b) *The Notification of Births Acts, 1907 and 1915.* These Acts provide for the notification of births to local authorities.

(c) *Maternity and Child Welfare Act, 1918.* This Act empowers local authorities to make such arrangements as may be sanctioned by the Ministry of Health for attending to the health of expectant and nursing mothers, and children who have not attained the age of five years.

(d) *Nursing Homes Registration Act, 1927,* which deals with the registration and supervision of nursing and maternity homes.

As a result of the widespread interest shown by the general public in the subject of maternal mortality, the Minister of Health in 1928 set up two Departmental Committees on the following subjects :—(*a*) Training and Employment of Midwives ; (*b*) Maternal Mortality and Morbidity.

Ministry of Health Departmental Committees.

Training of Midwives. The report of this Committee was published in 1929, and dealt with the raising of the standard of education and training, their employment, remuneration and supervision of midwives. The Committee also urged the establishment of a national maternity service. These recommendations are still under consideration.

MATERNAL MORTALITY AND MORBIDITY. One of the first steps taken by this Committee was to arrange for investigations into maternal deaths based on a questionnaire, which was issued by the Ministry of Health to be completed by whole-time Medical Officers of Health of Local Supervising Authorities.

The Committee's interim report which was issued in June, 1930, dealt with the results of investigations into about 2,000 maternal deaths. Of these, 1,596 were due directly to child-bearing or pregnancy, and 404 were due to independent disease concurrent with child-bearing or pregnancy. The 1,596 deaths were made up as follows :—

Sepsis	616
Eclampsia	218
Operative shock, &c.	145
Ante-partum haemorrhage	125
Post-partum haemorrhage	92
Other toxaemias, including chorea and mania ..	99
Embolism	113
Abortion	168
Extra-uterine gestation	20
	1,596

The Committee have endeavoured to find what they call "the primary avoidable factor," and taking our present stage of knowledge of midwifery into consideration, they found a primary avoidable factor in 39 per cent. of the 1,596 deaths, whilst if abortion and other relative factors are included, the percentage rises to 48 per cent. The 626 cases where a primary avoidable factor was found may be sub-divided as follows :—

Absence of, or inadequate, ante-natal examination	226
Error of judgment	224
Lack of reasonable facilities	64
Negligence of patient and friends	112
Total	626

It would therefore appear that with the existing state of midwifery and medical practice, at least one half of the lives ought to have been saved with ordinary prudence, skill and care. The cause of such terrible loss of life is due to an accumulation of small errors and inefficiency rather than any particular fault on the part of one person.

The recommendations of the Departmental Committee for reducing maternal mortality are :—

(*a*) Efficient ante-natal care of expectant mothers.

(*b*) Improved medical education in obstetrics.

(*c*) Post-graduate instruction of general practitioners and midwives.

(*d*) The establishment of a national maternity service, which should include :—

(1) The provision in every case of the services of a qualified midwife to act either as midwife or as maternity nurse.

(2) The provision of a doctor to carry out ante-natal and post-natal examination in every case, and to attend during pregnancy, labour and the puerperium, as may prove necessary, all cases showing any abnormality.

(3) The provision of a consultant, when desired by the doctor in attendance, during pregnancy, labour and the puerperium.

(4) The provision of hospital beds for such cases as need institutional care.

(5) The provision of certain ancillary services (*e.g.* transport, sterilised equipment, laboratory facilities).

Provision of Midwifery Services.

In connection with the provision of midwifery services, the Essex County Council through the Essex County Nursing Association have now provided District Nurse-Midwives in every parish in the County outside the Extra-metropolitan Area with the exception of 63 parishes. Energetic steps are being taken in connection with these remaining parishes, one of the most effective being the provision of small motor cars, which widens the range of the Nurses and enables them to arrive at the homes of their patients in quicker time and without being physically and mentally exhausted through push-cycling over many miles of country roads.

Education of Mothers.

Women should be taught to realise that it is only by medical supervision throughout the expectant period that difficulties can be anticipated and adequately dealt with in good time. There is, however, even a bigger problem than this, for we cannot expect A1 mothers from C3 women, and in spite of all that has been done to improve the health and well being of the community during the past 30 or 40 years, we are still unfortunately a long way from the ideal when all the mothers in this country will be healthy individuals. No matter what ante-natal precautions are taken, a rickety mother is bound to have a difficult confinement, and in a number of such cases disaster is almost bound to occur. In addition to the above preventive measures, therefore, we should foster all those sanitary and hygienic measures in the home, in the workshop and elsewhere, which tend to produce a healthier and happier community.

Causes of Maternal Deaths in Essex.

The following table shows the number of maternal deaths in the Administrative County of Essex each year since 1920 :—

	1930.	1929.	1928.	1927.	1926.	1925.	1924.	1923.	1922.	1921.	1920.
Urban—											
Puerperal Sepsis	24	21	21	20	14	6	16	15	11	19	27
Other accidents of pregnancy and parturition	41	21	32	23	22	22	22	28	23	28	27
Rural—											
Puerperal Sepsis	9	6	7	4	4	6	5	1	7	—	7
Other accidents of pregnancy and parturition	16	10	12	9	10	15	8	12	15	5	19

The following figures will be of interest in respect to twenty-four maternal deaths which occurred in the County Council's Child Welfare area during the year 1930 :—

Primi-para.	Multi-para.	Leg.	Illeg.	Period of death after delivery.			Age of Mother.			
				One day.	1 day to 1 week	Over 1 week.	Under 20.	20-30.	31-40.	Over 40.
11	13	22	2	10‡	6	8	1	11	11	1

‡ Includes two deaths during pregnancy.

Ante-Natal Clinics (Memorandum 145/M. & C.W.)

In Essex, further consideration was given to the Ministry of Health Memorandum 145/M.C.W., which dealt with "Ante-natal Clinics—their Conduct and Scope," and in 1931 the County Council decided, as an experimental measure, to establish Ante-natal Clinics at Braintree, Chingford, Hadleigh and Laindon, and provided the necessary special equipment for such Clinics. An experienced Medical Officer and special Nurse are provided, and the Clinics are held in the premises used for Child Welfare Centre purposes. So far the attendances have been very gratifying, and there is no doubt that when further progress has been made in the education of expectant mothers in regard to the value of ante-natal supervision, a demand will be created for an increased number of Ante-natal Clinics, which it is hoped will have a corresponding effect in reducing the maternal mortality in Essex.

In addition, it is hoped through the establishment of these clinics, and the work done at the ordinary Child Welfare Centres, to reduce considerably the large amount of invalidism, and ill-health from which many women suffer after confinement, and which is a serious factor in the family life of the people.

Report of Chief Health Nurse.

The Chief Health Nurse (Miss D. M. Landon) has furnished the following report in connection with her duties during 1930 :—

Health Visiting. The outstanding feature of the past year has been the cheerful way in which the Health Visitors have taken over the duties of Infant Life Protection Visitors. The amount of extra work caused by these duties varies considerably in different areas, but it has meant a great deal of extra clerical work and Miss Davieson and I both feel that it has been very cheerfully and conscientiously done in almost all cases. When I look back on the days when I worked as a Health Visitor I feel that the responsibility and work has increased enormously, especially in the clerical work.

Schools. The standard of cleanliness in almost all cases is a high one. Dagenham probably suffers most from a new population and the lack of adequate nursing staff in previous years, but there appears to be a marked improvement this year.

Owing to lack of time the Health Visitors are unable to do as much home visiting and educational work as is desirable in all cases. It is a pity when the School Nurse has to be merely an inspector for cleanliness.

Tuberculosis Nursing. The new Instructions issued in March, 1930, have, I feel, decidedly improved the tuberculosis nursing in bringing it to a greater uniformity throughout the County. It is difficult for the Health Visitors to work as much as is desirable amongst the contacts owing to many being at work and some very much resenting such supervision.

Child Welfare. The Child Welfare work throughout the County varies, but the standard is being well maintained in spite of the great pressure of work put upon some of the Health Visitors.

Welfare Centres. There is room for improvement both in premises and the educational work in some of these, but the majority of Committees are enthusiastic and co-operate excellently with the Health Visitors. I think, however, there are places where there might be closer co-operation between the officials and the lay Committees.

The Health Exhibitions have been the greatest possible help during the year in stimulating enthusiasm for Public Health work, and I have not heard any adverse criticism on any exhibition.

District Nurse-Midwives. The standard of work by the District Nurse-Midwives has been well maintained, but it has been very difficult at times to supply sufficient to fill all vacancies. The younger midwives are showing an increasingly intelligent interest in their ante-natal work.

I feel that the most pressing need at the present time in a good many areas is that of transport. It is sometimes almost impossible for District Nurses to give adequate attention to a patient with merely a bicycle. One or two districts have started to provide motor cars, but the initial cost and maintenance make this almost impossible in many areas, especially at the present time when it is so difficult to raise money and where the Contributory Hospital Scheme is injuring a good many Nursing Associations which are running a Club System. Theoretically amalgamation of the Districts and the provision of a motor car are ideal, but in practice it is often extremely difficult to alter existing Associations.

Report of Dr. Mary D. Rankine.

I have received from Dr. Mary D. Rankine the following report on the general aspect of the Maternity and Child Welfare work in the County area during 1930 :—

This branch of Public Health is rapidly growing each year, and there are many side issues. The whole put together has but one purpose, and that is to promote the welfare of the expectant and nursing mother, the infant and the young child.

(a) *Ante-Natal Clinics.* With the object of promoting the health and safety of the mothers before, during and after their confinements, Ante-Natal Clinics have been established, and during the past year several new Clinics have been opened in this County.

The necessity for ante-natal supervision cannot be too strongly insisted upon ; without such, there can be very little hope of diminishing to any appreciable extent maternal mortality, infant deaths, and all the other unfortunate complications which so often result after pregnancy.

The attendances at the Ante-Natal Clinics are increasing, and the co-operation of the midwives will be a great factor in their success. The careful and up-to-date midwives will encourage their patients to attend, and will, if possible, accompany them to the Clinic.

A number of patients have been referred to these Ante-Natal Clinics by private medical practitioners for further advice and observation.

At the first examination the patient's full history is recorded and a complete physical examination is made, and measurements taken. If any medical treatment is required, the patient is referred to her own medical adviser, and any abnormality likely to cause obstetrical complications is noted. Dental treatment, if necessary, can be arranged.

During the early months the patient is asked to attend monthly, and after the seventh month at fortnightly intervals. Notes are kept for each case, and the results of each examination recorded.

(b) *Still-Births.* In considering the question of ante-natal supervision the causes of still-births must also be considered.

The notified still-births are about three per cent. of the live births. This is an unfortunate waste of life, and it is necessary to consider the causes and the prevention of such. It can be definitely stated that many of these still-births are due either to complications during labour, which might have been foreseen by careful examination during pregnancy, or to certain maternal diseases, which should have been detected and treated in the ante-natal period.

(c) *Post-Natal Examinations.* It is now recognised that every woman should have a through post-natal examination, which should be made about six weeks after confinement.

A large number of women are permanently injured or invalided after pregnancy, or they suffer from conditions, which, although they do not produce serious illness, cause a great deal of discomfort and invalidism. Such complications or injuries would be detected at such examination, and treatment given.

(d) *Puerperal Sepsis.* The high maternal mortality from Puerperal Sepsis continues, and it has been proved that puerperal infection is especially liable to occur after a severe or prolonged labour, and where operative interference has been carried out. Many of these complications might have been prevented had there been adequate ante-natal supervision.

(e) *Child Welfare Centres.* The number of these Centres has increased during the last year, and several weighing centres have been started. Although the latter undoubtedly serve a useful purpose, the presence of a doctor at each centre is advisable.

The detection of abnormalities and disease in their earliest manifestations is the work of a trained and skilful doctor. The Clinics are intended for mothers with their infants and children up to school age, and if regular medical examinations are carried out, any defects or ailments which may be discovered can receive appropriate treatment. Dental Treatment is available for nursing mothers and children up to school age, and at some Clinics this is well taken advantage of, but at other Centres this branch of the work requiries to be developed. Every effort is being made to bring all the Child Welfare Centres up to a high and uniform standard of efficiency.

(f) *Nursing Homes Registration Act, 1927.* All registered Homes have been inspected at regular intervals. The cleanliness, equipment and the arrangements made for the comfort of the patients have received particular attention at each visit.

A number of Homes have been entirely satisfactory in these respects; a few have given cause for complaint, and every effort has been made to bring such Homes up to a satisfactory standard.

After the end of August, 1931,it will not be permissible for Nursing Homes to receive boarded-out children, as the presence of such is considered undesirable.

(g) *Inspection of Midwives.* Each practising midwife in the County is visited at regular intervals during the year. The duties of the midwife are many and arduous, and in most cases are carried out in a very satisfactory manner. Courses of post-graduate instruction continue to be given, and these are much appreciated by those who are able to attend. As in previous years, special investigations have been carried out in each case of a maternal death. All cases of Puerperal Pyrexia occurring in the midwives' practices have been enquired into. Special visits have been paid to the homes in cases of Ophthalmia Neonatorum and Pemphigus.

COMBINED MEDICAL SERVICE.

The Combined Medical Service Scheme, outlined in detail in previous reports, was continued during the year. Table XXVIII gives details of the 13 schemes in operation on 1st January, 1931.

Dr. R. H. Vercoe, Medical Officer of Health, Chelmsford, who had also undertaken County Council duties, died in March, 1930, and subsequently the Chelmsford Borough Council decided that his successor would not be able to undertake County work.

On 1st January, 1930, Dr. N. S. R. Lorraine, Combined Medical Officer in the Shoeburyness and Canvey Island Urban Districts, also took over the duties of Medical Officer of Health in the new Urban Districts of Rayleigh and Benfleet.

The Combined Medical Officer of the Braintree and Dunmow Districts, Dr. P. J. Gaffikin, resigned and terminated duty on 31st December, 1930. Dr. J. S. Bradshaw, Combined Medical Officer, Witham, was appointed to fill the vacancy, and the County Council work in these districts performed by him was reduced to District Tuberculosis Officer's duties only, other arrangements being made for the School and Child Welfare duties.

Dr. Archibald Gardiner, Assistant County Medical Officer, was appointed Combined Medical Officer at Chingford in place of Dr. M. Barker, and commenced duty March, 1930.

As a result of the death of Dr. Frazer, Medical Officer of Health, Brentwood, the combined medical service was extended to that area, and the local Assistant County Medical Officer, Dr. B. F. Beatson, was appointed Medical Officer of Health of Brentwood on 1st October, 1930.

COMBINED TREATMENT CENTRES.

The Combined Treatment Centres under the County Council at the end of 1930 were as follows. This list does not include Clinics solely used as School Clinics or Tuberculosis Dispensaries, or as Child Welfare Centres, but those used for more than one of these three services by the County Council :—

	Centre.	Purpose for County Council.	Date opened.
1.	Braintree—71, Rayne Road	School Clinic and Tuberculosis Dispensary	Transferred to these premises November, 1928.
2.	Brentwood—Montpelier House	School Clinic, Tuberculosis Dispensary and Child Welfare Centre	April, 1929.
3.	Brightlingsea — New Church Schools	School Clinic, Tuberculosis Dispensary, and Child Welfare Centre	September, 1924.
4.	*Clacton-on-Sea—Skelmersdale Road	School Clinic and Tuberculosis Dispensary	January, 1921.

*Used by Local Sanitary Authority as Child Welfare Centre and Maternity Home.

	Centre.	Purpose for County Council.	Date opened.
5.	†Dagenham—		
	(*a*) Ford Road ..	School Clinic	Transferred to these premises April, 1930.
	(*b*) Becontree Avenue	School Clinic	July, 1930.
	(*c*) King George Hospital, Out-patients Dept., Five Elms	Tuberculosis Dispensary ..	January, 1931.
		School Clinic	April, 1931.
6.	Dunmow—47, Stortford Road	School Clinic and Tuberculosis Dispensary	October, 1926.
7.	Epping—Women's Institute, St. John's Road	School Clinic, Child Welfare Centre, and Tuberculosis Dispensary	School Clinic and T.B. Dispensary transferred to these premises June, 1928.
8.	Halstead—Cottage Hospital	School Clinic and Tuberculosis Dispensary	November, 1923.
9.	Maldon—Health Centre, Wantz Chase	School Clinic, Tuberculosis Dispensary and Child Welfare Centre	May, 1928.
10.	Rochford—Congregational Rooms	School Clinic and Child Welfare Centre	Used for School Clinic from October, 1927.
11.	Romford—29, Eastern Road	School Clinic and Tuberculosis Dispensary	School Clinic transferred to these premises in July, 1925.
12.	Saffron Walden—Cottage Hospital	School Clinic and Tuberculosis Dispensary	Transferred to these premises June, 1927.
13.	Shoeburyness—Council Offices	School Clinic and Child Welfare Centre	August 1921.
14.	Stansted—Central Hall	School Clinic and Child Welfare Centre	April, 1919.
15.	Weeley—Public Health Offices	School Clinic, Tuberculosis Dispensary and Child Welfare Centre	November, 1926.
16.	Woodford — "The Shrubbery"	School Clinic and Tuberculosis Dispensary	Used for Tuberculosis Dispensary from March, 1927.

†Used by Local Sanitary Authority as Child Welfare Centres, &c.

TABLE XXVIII.—SHOWING COMBINED MEDICAL SERVICE SCHEMES IN OPERATION, 1st JANUARY, 1931.

Area No.	Sanitary District.	Est. Pop. 1929, for Birth rate.		Acreage.		Date Scheme commenced.	Name of Officer.	Duties.†
*1	Lexden & Winstree R. *a* ...	18580		66300		1st April, 1920	W. H. Alderton ..	M.O.H. and Assist. C.M.O.
	West Mersea U. ...	2237		3185				,, ,,
	Wivenhoe U. ...	2318		1564				Assistant C.M.O. only
			23135		71049			
2	Clacton-on-Sea U. *a* ...	15510		4069		1st June, 1920	W. A. Milne ...	M.O.H. and Assist. C.M.O.
	Brightlingsea U. ...	4356		2867				Assist. C.M.O. only
	Walton-on-Naze U. ...	3113		2046				,, ,,
	Frinton-on-Sea U. ...	2279		422				,, ,,
			25258		9404			
3	Tendring R. ...	23720		73131		11th Sept., 1920	J. Ramsbottom ...	M.O.H. and Assist. C.M.O.
	Harwich Borough *a*, *b* ...	12160		1541				Assist. C.M.O. only
			35880		74672			
‡4	Grays U. *a*	18480		1359		1st August, 1922	W. T. G. Boul ..	M.O.H. and Assist. C.M.O.
	Tilbury U. *a* ...	17090		1855				,, ,,
	Purfleet *a* ...	6851		8899				,, ,,
	Orsett R. *a*	20290		29185				,, ,,
			62711		41298			
5	Saffron Walden Borough	5656		7502		1st Jan., 1923...	S. R. Richardson ..	M.O.H. and Assist. C.M.O.
	Saffron Walden R. ...	9650		59975				,, ,,
	Stansted R. ...	6890		22954				Assist. C.M.O. only
			22196		90431			
6	Halstead U. ...	5887		647		1st Sept., 1923	J. S. Ranson ...	M.O.H. and Assist. C.M.O.
	Halstead R. ...	9980		38712				,, ,,
	Belchamp R. ...	4090		26500				,, ,,
	Bumpstead R. ...	2320		11874				Assist. C.M.O. only
			22277		77733			
7	Braintree U. ...	8568		2224		1st Oct., 1923...	J. S. Bradshaw ..	M.O.H. and T.O. only.
	Braintree R. ...	20760		62348				,, ,,
	Dunmow R. ...	15510		73503				,, ,,
	Witham U.	4348		3713				,, ,,
			49186		141788			
8	Barking U. *a*, *b* ...		42160		3805	1st April, 1920	C. L. Williams ...	M.O.H. and T.O.
9	Colchester Borough *a*, *b*		48350		11333	13th July, 1921	W. F. Corfield ...	M.O.H. and T.O.
10	Shoeburyness U. ...	6413		1036		1st Feb., 1925...	N. S. R. Lorraine	M.O.H. and Assist. C.M.O.
	Canvey Island U. ...	6386		4400				,, ,,
	Rayleigh U.	5840		5278				,, ,,
	Benfleet U.	11900		6319				,, ,,
	Rochford R. ...	14830		39006				Assist. C.M.O. only
			45369		56039			
11	Chingford U. ..		16099		2808	19th Oct., 1925	A. Gardiner ...	M.O.H. and Assist. C.M.O.
12	Waltham Holy Cross U. *a*	6911		11017		24th July, 1929	L. S. Fry ...	M.O.H. and Assist. C.M.O.
	Epping U.	5327		1420				Assist. C.M.O. only
	Epping R. (less Chigwell)	14077		34919				,, ,,
	Ongar R.	10460		47236				,, ,,
	Buckhurst Hill U. *a* ...	5501		873				,, ,,
	Loughton U. *a* ...	7137		3961				,, ,,
			49413		99426			
13	Brentwood U. ...	7578		469		1st Oct., 1930...	B. F. Beatson ...	M.O.H. and Assist. C.M.O.
	Billericay R. ..	36230		49394				Assist. C.M.O. only.
			43808		49854			

* Dr. Alderton also acts as Assist. C.M.O. in part of the Maldon area.
‡ Dr. W. T. G. Boul was assisted by Dr. Maud Bennett in School and Child Welfare work.
† M.O.H. : Local Medical Officer of Health. Assist. C.M.O. : Assistant County Medical Officer. T.O. : Tuberculosis Officer. S.M.I. : School Medical Inspector. *a* Autonomous Child Welfare Areas. *b* Autonomous Education Areas.

PART IV.

PUBLIC ASSISTANCE.

INTRODUCTION.

Although the Local Government Act, 1929, came into operation on 1st April, 1930, it might serve a useful purpose if in this report an attempt were made, not only to record the events which have happened since that date, but also to envisage some of the more important changes which, it is hoped, will be introduced into the Public Medical Service. The Reform Act of 1832 led to a reform of the Poor Law Act, 1834. In the middle of the 19th century, the Poor Law Guardians were the Rural Sanitary Authorities during the period when Commissions and Enquiries were laying the basis of the foundation of our modern system of preventive medicine. The progress of public health was rapid, culminating in the epoch-making Act of 1875. A parallel reform of the Poor Law was long delayed, and it was not until the Reports of the Royal Commission on the Poor Law of 1905-1909 that the issues were comprehensively represented. It should be noted that the Poor Law Guardians worked under Central Administrative Control, whereas municipalities enjoyed local autonomy. There has thus been overlapping of the work of Guardians in respect to medical relief of the poor with that of the Public Health Service for the general community. Identical services were being simultaneously rendered by Public Health Authorities to the general population, and by the Poor Law Authorities to a section only of that population. Moreover, that section of the community was defined (and that by a definition in a constant state of flux), solely by the fact that they were for the time being in respect to one service or another in a state of destitution.

The Local Government Act, 1929, is directed to remedy these evils as follows :—

(1) THE POOR LAW AND PUBLIC HEALTH. The Act provides for the absorption of the Poor Law Medical Service within the Public Health Service, and in addition makes County Councils and County Boroughs responsible for (*a*) Vaccination ; (*b*) Infant Life Protection ; (*c*) Vital Statistics ; (*d*) The provision, maintenance and management of public institutions for the treatment of physical and mental disease.

In the past there has been one hospital provision for the pauper and another for the non-pauper.

In future, there will be one system for all under the control of authorities who are responsible for prevention as well as treatment.

(2) ADMINISTRATIVE SCHEME. In accordance with Section 4 of the Local Government Act, the County Council prepared an administrative scheme, particulars of which were published in my Annual Report for the year 1929. The scheme is mainly concerned with the appointment of a Public Assistance Committee, the powers of that Committee, and the sub-division of the County into eight

Guardians Committees Areas for administration of relief. It will be readily seen that care had to be exercised in avoiding any clashing between the Public Assistance Committee and the Public Health and Housing Committee, as their powers and duties closely touch on several points. In fact, there would appear to be many advantages in combining the two Committees, or in any case, the personnel of the elected Members of the two Committees might be identical. There will also need to be considered in due course :—

(*a*) The desirability of discharging certain of the transferred functions through a Committee of the County Council other than the Public Assistance Committee to which most of the transferred powers otherwise have been referred.

(*b*) The advisability of providing certain forms of medical assistance under the Public Health and other Acts mentioned in Section 5 (1) rather than under the Public Assistance Committee and the Poor Law.

(*c*) The possibility of appropriating any or all of the transferred Institutions to hospital authorities, and to administer them under one or other of the Public Health Acts, &c.

(*d*) The making of suitable arrangements with autonomous Education and Child Welfare Authorities. This will need special consideration if and when any action is taken under (*b*) above.

It remains to be seen how many, and which, of the Poor Law Medical Services can be absorbed into the Public Health organisation of the area.

In most Counties final decisions on many of these points necessarily had to be delayed until after the appointed day (1st April, 1930), as early arrangements were necessary to carry on without loss of continuity the duties that had hitherto devolved on Boards of Guardians whilst preparing for a later date comprehensive schemes of unified health services.

At once the difficulty of divided unions was felt, and it was necessary to enter into agreements with adjacent County Boroughs and County Councils for the future management and use of the Institutions belonging to a divided union. The arrangements for utilising the transferred Institutions in different parts of the County necessarily varies, as much depends on transport services, availability of medical and surgical staff, and existing institutions already available whether voluntary or rate supported. Particulars of these Institutions are given in Part II of Table A (see page 146).

(3) Survey of Public Assistance Institutions. One of the first steps taken by the County Council was to arrange for a comprehensive survey to be carried out by a Special Sub-Committee of the various Poor Law Institutions to be taken over from the Guardians, and in addition full reports were received from the County Medical Officer and the County Architect in regard to such Institutions. Included in the County Medical Officer's section of this report was a statement showing for Guardians Committees' Areas the available accommodation for the sick, convalescents, &c., either in hospitals, nursing homes, convalescent homes, or at clinics, dispensaries, &c. This Report was published on 26th March, 1930.

The following table gives particulars of the accommodation and medical staff in the various Institutions, and the number of beds available at the end of 1930.

TABLE "A."

PUBLIC ASSISTANCE INSTITUTIONS.

I.—Essex.

Area.	Institution.	Name, Address and 'Phone No. of Medical Officer.	Beds Available on 31st December, 1930.						Total.
			Able-bodied.			Sick.			
			M.	F.	C.	M.	F.	C.*	
Colchester	Colchester	W. F. Payne, Sussex Lodge, Lexden Rd., Colchester. 'Phone No. Colchester 2650.	79	53	9	79	65	8	293
	Stanway	Do. Do.	34	32	—	46	62	16	190
	Tendring ..	F. Atthill, Laurels, Gt. Bentley. 'Phone No. Gt. Bentley 11.	61	73	—	40	41	3	218
Braintree	Braintree	T. W. Panter, Bradford St., Bocking. 'Phone No. Braintree 13.	113	60	18	31	58	10	290
Saffron Walden	Saffron Walden	H. Bartlett, Saffron Walden. 'Phone No. Saffron Walden 27.	36	34	—	28	34	8	140
Epping ..	Epping ..	C. E. Denning, High Street, Epping. 'Phone No. Epping 27.	26	23	—	85	117	14	265
South Eastern	Orsett ..	F. A. M. Nelson, Orsett. 'Phone No. Orsett 7.	131	20	26	79	105	16	377
Southern ..	Romford ..	W. S. O'Loughlin, Oldchurch Hospital, Romford. "Phone No. Romford 418.	218	204	—	235	260	179	1096
Chelmsford	Billericay ..	J. D. Wells, Billericay 'Phone No. Billericay 11.	135	68	19	30	33	11	296
	Chelmsford	J. T. Whitley, Thorneybrook, London Rd., Chelmsford. 'Phone No. Chelmsford 194.	105	64	—	55	68	17	309
	Maldon ..	E. Miles, 11, Wantz Chase, Maldon (Temporary).	77	67	—	28	30	—	202
		Totals ..	1015	698	72	736	873	282	3676

*Excluding cots in Maternity Wards.

II.—Outside Institutions where Beds are available for Essex by Arrangement with Outside Authorities.

Outside Authorities.	Beds Available by Agreement.		Beds Occupied December, 1930.	
Herts. C.C.				
Bishops Stortford Institution		51		39
Middlesex C.C.				
Edmonton Institution	21		13	
North Middlesex Hospital	33		17	
Enfield Poor Law Schools	13		11	
		67		41
East Ham Corporation.				
Aldersbrook Children's Homes		131		138
West Ham Corporation.				
Central Home, Leytonstone	571		586	
Whipps Cross Hospital	312		295	
Forest Gate Hospital	201		203	
Home for Aged Poor	118		113	
Margate Home..	19		—	
		1221		1197
Southend Corporation.				
Rochford Hospital	128.3		126	
Rochford Institution	75.7		82	
Rochford Children's Homes	14.6		17	
		218.6		225
West Suffolk C.C.				
Risbridge and Sudbury Institutions	No agreed quota			23
Institutions of various other Authorities ..	No agreed quota			425

N.B.—The Essex County Council's Agreements commenced on 1st April, 1930, for the following periods :—Herts. C.C.—4 years, Middlesex C.C.—3 years, East Ham Corporation—25 years, West Ham Corporation—25 years and Southend Corporation—21 years.

A further table is given below showing total number of beds provided for poor, excluding casuals, on night of 1st January, 1930, and number of inmates in receipt of relief, &c., in the various Institutions throughout the County, as shown in the Ministry of Health circular 1163c, dated 5th January, 1931.

TABLE "B."

Institution.	No. of beds provided for poor (other than casuals) on night of 1st Jan., 1930.	Number of Inmates in receipt of relief (excluding casuals).			Average nightly No. of Casuals.
		Greatest No. on any one day during year.	Smallest No. on any one day during year.	Average daily number.	
1	2	3	4	5	6
Romford	1081	1007	775	862	74
Orsett	334	315	267	286	19
Colchester	330	212	172	200	15
Billericay	309	255	199	226	26
Braintree	300	204	173	187	52
Chelmsford	300	243	203	220	50
Tendring :—					
1. General Institution ..	259				
2. Grouped Cottage Homes ..	36	260	227	240	7
Epping	257	232	198	211	20
Maldon	208	187	145	168	20
Lexden and Winstree ..	200	125	103	117	7
Saffron Walden	126	103	81	93	20
Separate Establishments for Children (other than Institutions for Sick Children) :—					
Romford (Scattered Homes)	190	184	156	164	—
Chelmsford (Scattered Homes)	57	37	28	33	—
Lexden & Winstree (Home)	50	50	39	46	—
Epping (Grouped Cottage Homes)	49	46	33	46	—
Dunmow (Home) ..	20	17	13	14	—
Orsett (Home) ..	18	18	14	17	—
Tendring (see Institutions)					

Improvements, alterations or extensions were arranged for or carried out at the following Institutions during the year :—

TABLE "C."

Name of Institution.	Improvements, Alterations and Extensions Sanctioned.	Estimated Cost.
		£
*Romford	New Nurses' Home	35,000
,, ...	Ante-Natal Dept.—Alterations ..	700
Billericay	General Repairs and Alterations ..	2,350
Tendring	Extension of Balcony	1,150
Orsett	Extension of Nurses' Home ..	6,197
,, ...	Extension of Laundry	536
,, ...	Opening of New Hospital Wards	Approved by the late Guardians

*In addition—New Pavilions to accommodate 180 patients sanctioned by the late Romford Guardians, were completed.

(4) Medical aspect of the Work. The medical responsibilities of Guardians has in recent years been extended by the gradual widening (with official sanction) of the meaning of the word "destitute." In some areas, this term now denotes any persons unable to provide for themselves the particular form of medical treatment of which they may be in urgent need. In many large unions, such as West Ham and Romford, the Poor Law Infirmaries provided the kind of medical and surgical assistance formerly obtainable only at large general hospitals. In rural areas progress has been slow, and there is little or no provision for surgical patients. Some of the Institutions have separate infirmaries, but most are mixed institutions (workhouses). In the latter, the provision for the sick is often of an obsolete type and unfitted for the care and nursing of any but the simplest cases of illness. Economical grouping and classification of patients on a County basis rather than on the present union basis may be anticipated, but some increase of hospital accommodation will be required to meet fully our future obligations and requirements. It may be difficult to appropriate one or more of the existing Institutions, with necessary adaptations, for a particular medical service to serve the whole County.

The position and size of the Institutions are being carefully considered, but in any case the ascertainment of present and future needs with the available accommodation and resources will have to be carefully studied before far-reaching decisions are made. The important fact to be realised at this moment is that a new organisation is being set up which will provide, it is hoped, a better and fuller medical service adapted to the needs of those who require it most urgently.

(5) Proposed New Institutions or Extensions. During the year, special attention has been focussed on this aspect, and, as a result, proposals have been considered for additions to an Institution at Colchester and an Institution at Takeley to replace the Saffron Walden Institution, which is obsolete. Careful enquiries as to the types of patients hitherto admitted to the institutions serving these areas were made, and are given in the following table "D." :—

TABLE "D."

Institution.	Patients at present in Institution.			Percentage average No. beds occupied.			Estimated Percentage of Annual Admissions.		
	Acute	Chrn.	Infm.	Acute	Chrn.	Infm.	Acute	Chrn.	Infm.
Stanway Area :—									
Stanway	10	26	11	21%	55%	24%	29%	40%	31%
Colchester	2	35	71	2%	32%	66%	20.5%	25%	54.5%
Tendring	4	36	35	5%	48%	47%	5%	44%	41%
Takeley Area :—									
Bishops Stortford ..	1	12	16	3%	41%	56%	3%	41%	56%
Saffron Walden ..	—	36	16	—	70%	30%	1%	69%	30%

In addition, negotiations have been completed for the purchase of a site containing approximately 50 acres, at Great West Hatch, Chigwell, with a view to the erection of a new Institution to serve the south western area of the County.

(6) Use of Public Assistance Institutions for Public Health Purposes. During the year arrangements were made between the Public Assistance Committee and the Public Health Committee for the utilisation of beds in the Public Assistance Institutions for the following purposes :—

(*a*) *Tuberculosis.* It was agreed that in respect of tuberculosis patients admitted to such institutions for treatment (as distinct from segregation), under the County Tuberculosis Scheme, a maintenance charge of 45s. per week per patient would be charged to the Public Health Committee.

After inspection and careful consideration of the accommodation available it was found that the Institutions which are most suitable for the reception of tuberculous patients are Chelmsford, Orsett and Romford.

(*b*) *Maternity.* It was also agreed that maternity patients requiring institutional treatment should be admitted to the Colchester, Romford, Maldon, Chelmsford, Orsett, Epping, Billericay, Stanway and Tendring. Institutions at a weekly maintenance fee per patient of £2 2s.

Similar facilities were offered to the autonomous Child Welfare Authorities in the County, and have been accepted by the following :—Grays, Tilbury and Purfleet Urban District Councils, and Orsett Rural District Council.

In one or two instances where the Guardians had previously had arrangements with the Autonomous Child Welfare Authorities for the treatment of such cases, the Public Assistance Committee are considering revising these arrangements to bring them into line with the above.

(7) Bacteriological Facilities. Consideration was given to a uniform system of bacteriological examinations for the Public Assistance Committee's Institutions somewhat on the lines of that made by the Public Health Committee. Subsequently arrangements were made with Dr. J. F. Beale, Bacteriologist for Essex, for the examination of any necessary specimens in accordance with a tariff. This arrangement was made for a trial period of twelve months in the first place, and at the end of that time was continued.

(8) Consultant Services. Arrangements were made whereby the services of Mr. B. Whitchurch Howell, Orthopaedic Surgeon, are available in respect to Public Assistance patients for their examination and treatment.

Consideration is being given to the provision of consultant services for surgical, medical and special types of disease.

(9) Children's Homes. The following table (" E ") gives particulars of the Children's Homes in the Administrative County, together with the number of beds available and beds occupied at the end of December, 1930 :—

TABLE "E."

Area.	Address of Home.	Beds available April, 1930.		Beds occupied December, 1930.	
		Boys.	Girls.	Boys.	Girls.
Colchester ..	Villa Road, Stanway	24	27	22	25
	Institution Grounds, Tendring ..	12	—	19	23
	The Limes, Tendring	—	12		
	The Firs, Tendring	—	12		
Braintree ..	" Friars", Bradford Street, Bocking	16	15	15	15
Saffron Walden	New Street, Dunmow	8	12	9	8
Epping ..	Cottage Homes, Coopersale ..	25	25	19	14
South Eastern	61 & 63, Whitehall Road, Little Thurrock ..	9	9	—	10
Southern ..	Central Homes, 5-6, Laurie Square, Romford	—	23	97	66
	Boys' Receiving Home, 7, Laurie Square, Romford ..	15	—		
	Boys' Receiving Home, 8, Laurie Square, Romford ..	18	—		
	1, The Croft, Heath Park Road, Romford ..	—	12		
	2, The Croft, Heath Park Road, Romford ..	—	12		
	" Dudbrook", King Edward Road, Romford	—	12		
	" Fernbank", King Edward Road, Romford	—	12		
	Gilmore House, 42, Brentwood Road, Romford	24	—		
	Richmond House, 44, Brentwood Road, Romford ..	—	24		
	" Holmlea", 26, Manor Road, Romford ..	18	—		
	" Plaisance", 28, Manor Road, Romford ..	20	—		
Chelmsford ..	Greenbourne, Writtle	26	—	26	19
	Beehive Lane, Great Baddow ..	—	24		
	Cottage Home, Tiptree ..	16	8	13	10

During the year, extensive repairs, alterations or improvements were sanctioned at the following homes, as shown :—

Romford..	.. Children's Homes—Renovations	£1,235
Tendring	.. New Boys' Homes, &c. ..	£4,200

(10) Boarded-Out Children. On 1st April, 1930, the County Council took over responsibility for the boarding-out of 139 children, and the following table (" F "), shows the number of such children in the various Guardians Committee's areas :—

TABLE "F."

Area.	No. of Children.	Method of Supervision adopted.
Colchester	29	Voluntary Visitors.
Braintree	13	Part-time salaried Officer.
Saffron Walden	14	Do. Do.
Epping	14	Do. Do.
South Western	10	Do. Do.
South Eastern	13	Voluntary Visitors
Southern	19	Do.
Chelmsford	27	(a) Part-time salaried Officer. (b) Voluntary Visitors.
	139	

Consideration was given to the question of the supervision of these children, particularly as to the desirability of (*a*) appointing a number of Boarding-Out Committees, or (*b*) whether the Guardians Areas Committees could undertake this work in addition to their other duties. Eventually it was decided to adopt the latter course, and in the last column of the above table is noted the method adopted to ensure the satisfactory well-being of these children.

Where children are chargeable to Essex, and are boarded-out in other Counties or County Boroughs (or *vice versa*), the County Council has decided to make reciprocal arrangements with the authorities concerned in connection with the supervision of the children.

(11) Medical Staff.

(a) *Institutions.* Particulars of the Medical Officers of the various institutions are given in Table " A " I. on page 145.

(b) *District Medical Officers and Public Vaccinators.* There are 126 District Medical Officers and Public Vaccinators in the Administrative County. As changes are continually taking place there is no point in giving the full list in this report.

(12) Co-operation with Medical Staff. During the year, communications were addressed to the Medical Officers of Institutions, and to the District Medical Officers in regard to the following matters :—

(*a*) *Institution Medical Officers.*

(i) Arrangements for admission and interchange of patients between various Institutions with the object of expediting treatment.
(ii) Classification of patients in hospitals.
(iii) Accommodation for mental defectives.
(iv) Admission of maternity patients under arrangements made between Public Health Committee and Public Assistance Committee.
(v) Procedure for obtaining consultant's advice in regard to tuberculosis, maternity, orthopaedic and mental patients.

(vi) Measures to be adopted in dealing with outbreaks of infectious diseases in institutions.
(vii) Bacteriological facilities now available.
(viii) Ascertainment clinics for orthopaedic children.
(ix) Locum arrangements when Medical Officer is on holiday.
(x) Notifications of tuberculosis under Public Health (Tuberculosis) Regulations, 1930.

(b) *District Medical Officers.*

(i) Admission of patients to institutions.
(ii) Provision of specialist's services for orthopaedic, maternity, tuberculosis and mental patients.
(iii) Arrangements for the carrying out of X-ray examinations.
(iv) Facilities available for the carrying out of bacteriological examinations.

(13) Vaccination Order, 1930. Section 2 of the Local Government Act, 1929, provides that the functions relating to vaccination shall be discharged by the Councils of Counties as functions relating to public health.

With the object of facilitating the smooth transfer of these functions the Minister of Health, in January, 1930, issued the Vaccination Order under cover of Circular 1068. This Order deals chiefly with the terms of the contracts with Public Vaccinators and Vaccination Officers, their duties, tenure of office, remuneration and conditions of service, &c. Reference is made to the requirements of the Vaccination Acts, 1867 to 1907, under which the County Council are required to divide their area into Vaccination Districts and to enter into a contract with a duly registered medical practitioner to act as public vaccinator for the district. The scheme of division of the area into districts and any alteration of it, as also the public vaccinator's contract, are subject to the approval of the Ministry of Health. The Minister, however, suggested that in view of the association between registration and vaccination work, the Council might prefer to defer any alteration of the vaccination districts until a general review of the registration districts and sub-districts within the County Council's area which will be undertaken in connection with the preparation of a scheme under Section 24 of the Act.

No difficulties took place in connection with the transfer of these contracts in unions situated entirely within the administrative county. In order to avoid administrative difficulties in unions which extended into another County, or County Borough the Minister of Health, in January, 1930 (Circular 1067), suggested to the Guardians of these divided unions that they should give notice to determine their contracts with the public vaccinators (including cases in which the contract relates to vaccination in Public Assistance Institutions) on 31st March, 1930. Furthermore, with a view to avoiding any break in the continuity of public vaccination in such areas, it was suggested that the County Council should enter into fresh contracts as and from 1st April, 1930, with those public vaccinators whose contracts with the Guardians had been terminated in respect of such portions of the public vaccinators' districts as were comprised within the administrative county area. Accordingly, authority was given for the renewal of contracts with the

existing public vaccinators for the Essex parishes in the Bishops Stortford, Edmonton, Linton, Risbridge, Rochford, Sudbury, and West Ham Unions and also for contracts to be entered into with the Medical Officers in such Poor Law Institutions situated within the administrative county approved by the Public Health Committee for the performance of vaccination within such institutions.

Subsequently, the Public Health and Housing Committee considered the principle adopted by the Public Assistance Committee with regard to the appointment of District Medical Officers, which, briefly, was as follows :—

> "That in the case of Unions extending into more than one county, the parish doctors shall not be re-appointed if they propose to act in another county."

As the parish doctors usually hold the appointment of public vaccinator it is proposed, in future, to act in conformity with this principle, and not appoint as Public Vaccinators medical practitioners who hold, or intend to hold, appointments under other County or County Borough Councils.

At the request of the Public Health and Housing Committee, the Public Assistance Committee have agreed to allow the Relieving Officers who are at present acting as Vaccination Officers to continue in that capacity pending the preparation of the scheme under Section 24 mentioned above.

Situated in the administrative County of Essex are a number of Children's Homes which originally belonged to Boards of Guardians of Metropolitan Boroughs outside the administrative county. These institutions, on 1st April, 1930, were transferred to the London County Council, but it appears that that Council are not empowered to exercise any functions relating to public vaccination. As the Borough Councils of the Metropolitan Boroughs from which the children are sent will have no power to exercise any functions as to public vaccination in an institution situated in Essex, it appears that the Essex County Council must make arrangements for the performance of vaccination in such institutions and to pay fees and expenses of this work.

Vaccination Work. The following table gives particulars of the number of primary and re-vaccinations carried out by the Public Vaccinators in the administrative county of Essex during the year ended 30th September, 1930 :—

TABLE "G."

Vaccination—Year ended 30th September, 1930.

Guardians' Committee Area.	No. of Notifications of Smallpox.	Successful Vaccinations. Primary		Re-vaccinations.
		Under 1 year.	1 year and upwards.	
Colchester	1	429	47	31
Braintree	Nil.	262	23	13
Saffron Walden	Nil.	194	16	14
Epping	1	270	14	11
South Western	326	924	2272	2352
South Eastern	78	420	253	664
Southern	102	1313	304	266
Chelmsford	23	515	91	60

(14) LEGISLATION.

(a) *Poor Law Act*, 1927.

In 1927, the various Poor Law statutes were consolidated by the Poor Law Act, 1927. The changes brought about by the Local Government Act, 1929, which transferred the local administration of the Poor Law to the County and County Borough Councils as and from the 1st April, 1930, necessitated the re-enactment of the 1927 Act with certain amendments so as to adapt it to the new conditions, and this was effected by the Poor Law Act, 1930.

(b) *Public Assistance Order*, 1930.

Subsequently, in accordance with the powers granted to him by the Poor Law Act, 1930, the Minister of Health issued the Public Assistance Order, 1930, which consolidates and adapts the existing orders regarding Poor Law administration for the use of County and County Borough Councils. This Order came into operation on the 1st April, 1930, and among the many new provisions included are those dealing with the appointment of a Public Assistance Officer and the position of the Chief Financial Officer and the Medical Officer of Health as advisers to the Public Assistance Committee.

TABLE XXIX.

BIRTHS, DEATHS, ANNUAL RATES, &c., 1930.

Sanitary District	Area (Acres). Census, 1921.	Area (Acres). Census, 1931.	Population. Census, 1921.	Population. Census, 1931.	Registrar-General's figures. Estimated population 1929 for: Birth-rate.	Estimated population 1929 for: Death-rate.	Live Births.	Still Births.	Deaths at all ages.	Deaths under 1 year of age.	Deaths at Various Ages. (Figures supplied by Medical Officers of Health.) Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Total Deaths.	Annual Rates per 1,000 of Estimated Population. Birth-rate.	Death-rate.	Zymotic Death-rate.	T. B. Respiratory Death-rate.	Other Respiratory Death-rate.	Infant Mortality Rate per 1000 births.
URBAN.																								
(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)
Barking	3,805	3,809	35,923	51,277	42,160	42,160	799	33	435	49	47	16	15	25	29	55	102	146	435	19·0	10·3	1·1	0·8	0·9	61
*Bentley	6,319	6,316	6,136	12,031	11,900	11,900	173	3	128	6	7	...	2	4	8	14	28	57	120	14·5	10·8	0·4	0·6	0·8	35
Braintree	2,224	2,224	6,970	8,912	8,568	8,568	154	8	91	12	12	...	1	2	1	8	27	40	91	18·0	10·6	0·1	0·5	1·2	78
Brentwood	409	409	6,853	7,209	7,578	7,578	85	2	54	1	1	1	1	2	2	1	19	27	54	11·2	7·1	0·1	0·1	1·1	12
Brightlingsea ...	2,867	2,852	4,596	4,145	4,356	4,356	43	2	49	2	2	...	...	...	1	6	9	31	49	9·9	11·2	0·2	0·5	0·2	47
Buckhurst Hill ...	873	874	5,008	5,495	5,501	5,501	69	1	49	...	...	1	2	...	2	2	15	27	49	12·5	8·9	0·2	0·2	0·7	...
Burnham-on-Crouch ...	4,517	4,507	3,434	3,385	3,622	3,622	39	...	47	1	...	1	...	...	2	3	9	19	34	10·8	13·0	0·3	1·1	0·8	26
*Canvey Island	4,400	4,351	1,715	3,530	6,386	6,385	63	1	36	3	3	1	2	...	1	7	7	12	33	9·9	5·6	...	0·8	0·5	48
Chelmsford B.	3,112	3,113	10,769	26,537	23,930	23,930	431	18	250	18	18	4	1	10	10	21	57	129	250	18·0	10·4	0·2	0·5	0·9	42
Chingford	2,808	2,810	9,482	22,051	16,090	16,090	350	7	120	6	6	3	1	6	4	21	34	64	139	21·8	8·6	0·2	0·7	0·7	17
Clacton	4,069	4,052	17,051	15,851	15,510	15,510	161	12	173	6	6	1	2	5	6	15	41	92	168	10·4	11·2	0·2	0·5	0·5	37
Colchester B.	11,333	11,333	43,393	48,607	48,350	44,896	753	26	442	26	27	8	11	14	37	20	106	219	442	15·6	9·8	0·3	0·3	0·9	35
*Dagenham	6,556	6,554	9,127	49,305	76,970	76,970	2,152	63	595	145	146	31	31	55	25	133	79	95	595	28·0	7·7	0·9	0·9	1·3	67
Epping	1,420	1,420	4,195	4,986	5,327	5,327	61	1	57	2	2	3	1	2	3	6	10	30	57	11·4	10·7	0·6	0·6	1·3	33
Frinton	422	419	3,602	2,196	2,279	2,279	7	1	20	...	...	...	...	...	1	...	4	15	20	3·1	8·8	...	0·4	...	...
Grays	1,369	1,369	17,350	18,172	18,480	18,480	314	12	164	7	7	3	3	2	6	21	43	79	164	17·0	8·9	0·1	0·6	1·0	22
Halstead	647	649	5,923	5,878	5,887	5,887	84	5	73	5	5	...	...	1	4	7	12	45	74	14·3	12·4	...	0·7	0·7	59
Harwich B.	1,541	1,512	13,046	12,710	12,160	11,800	206	10	123	10	11	2	4	1	7	21	32	45	123	16·9	10·3	0·2	0·4	1·0	49
*Hornchurch	6,783	6,783	10,801	28,417	17,640	17,480	454	9	234	33	33	7	3	11	11	24	54	91	234	25·7	13·4	0·9	0·7	1·1	73
Ilford B.	8,496	8,493	85,194	123,046	116,200	116,200	1,845	63	980	61	61	9	20	37	43	111	258	441	980	15·9	8·4	0·3	0·5	0·7	33
Leyton B.	2,594	2,594	128,430	128,317	128,300	128,300	1,707	87	1222	81	81	20	19	36	57	137	336	536	1222	13·7	9·5	0·4	0·6	1·0	46
Loughton	3,961	3,962	5,149	7,300	7,137	7,137	109	7	73	2	2	...	...	3	2	7	23	36	73	15·3	10·2	0·1	0·1	1·0	18
Maldon B.	3,028	3,004	6,500	6,559	6,612	6,612	99	3	88	1	1	1	...	3	3	7	17	58	90	15·0	13·3	0·3	0·9	1·3	10
*Purfleet	8,899	8,900	7,913	8,531	9,141	9,141	155	8	74	7	7	...	3	6	3	13	20	22	74	17·0	8·1	0·2	0·7	0·3	45
*Ratleigh	5,278	5,644	3,650	6,256	5,840	5,840	123	3	62	9	...	...	...	...	...	...	...	...	...	21·1	10·6	...	0·2	0·5	73
Romford	5,630	5,627	19,442	35,918	28,710	28,710	600	16	294	26	26	1	3	18	14	35	79	118	294	20·9	10·2	0·3	0·8	0·6	43
Saffron Walden B. ...	7,502	7,502	5,874	5,930	5,656	5,656	52	3	78	1	1	2	...	1	3	5	18	48	78	9·2	13·8	0·2	0·7	0·9	19
Shoeburyness	1,036	1,031	6,413	6,717	6,413	5,683	138	1	56	4	4	2	2	1	3	2	11	31	56	21·5	9·9	0·3	0·7	0·7	29
Tilbury	1,855	1,879	9,610	16,826	17,400	17,000	402	10	135	21	20	8	10	9	9	27	19	32	134	23·5	7·9	0·5	0·8	1·1	52
Waltham Holt Cross ...	11,017	11,016	6,847	7,116	6,951	6,951	123	1	77	6	6	1	...	2	5	8	11	44	77	17·8	11·1	0·4	0·9	0·7	49
Walthamstow B.	4,343	4,342	129,395	122,965	124,800	124,800	1,959	69	1160	78	78	21	34	44	53	139	316	479	1160	15·7	9·3	0·5	0·6	1·0	49
Walton-on-the-Naze ...	2,046	1,951	3,664	3,095	3,113	3,113	38	3	31	...	...	1	...	1	1	4	9	15	31	12·2	10·0	...	0·3	1·3	...
†Wanstead	1,679	1,679	15,238	19,183	17,900	17,900	293	9	201	6	6	7	3	6	3	14	61	101	201	11·3	11·2	0·5	0·6	0·8	30
*West Mersea	3,185	3,171	1,901	2,067	2,237	2,237	23	2	25	2	2	...	1	...	...	2	8	12	25	10·3	11·2	0·4	...	0·4	87
Witham	3,713	3,712	3,717	4,367	4,348	4,348	66	7	50	3	3	1	2	...	1	4	13	24	48	15·2	11·5	...	0·5	0·7	45
Wivenhoe	1,564	1,562	2,229	2,193	2,318	2,318	33	1	29	1	1	...	...	...	1	2	5	20	29	14·2	12·5	...	0·4	...	30
†Woodford	2,161	2,163	21,236	23,946	22,400	22,400	311	13	238	20	20	4	2	9	8	25	58	112	238	13·8	10·6	0·5	0·4	0·8	64
Total	143,502	143,650	687,747	919,148	847,900	843,340	14,434	539	8,032	661	661	154	181	321	344	954	1,979	3,438	8,032	17·0	9·5	0·4	0·6	0·9	46
RURAL.																								
Belchamp	26,500	26,501	4,219	3,963	4,090	4,090	56	3	56	3	3	...	1	...	3	5	7	37	56	13·7	13·7	0·2	1·2	1·5	54
Billericay	49,594	49,383	24,211	39,694	36,320	35,500	611	26	368	21	20	6	8	14	20	51	92	156	368	16·9	10·2	0·2	0·9	0·9	34
Braintree	42,348	42,352	16,779	21,856	20,760	20,760	341	16	227	25	25	1	4	8	7	18	56	118	237	16·4	11·4	0·2	0·5	1·2	73
Brentwood	11,874	11,873	2,376	2,304	2,320	2,320	29	1	44	...	...	...	1	1	2	3	11	26	44	12·5	19·0	...	1·3	1·7	...
Chelmsford	83,045	83,045	24,636	28,641	28,600	28,600	414	15	323	19	...	...	...	...	...	...	...	...	...	14·5	11·3	0·1	0·8	0·8	46
Dunmow	73,503	73,501	15,352	15,564	15,510	15,510	201	13	201	6	6	3	...	4	3	15	48	120	201	13·0	13·0	0·1	0·4	1·2	39
Epping	39,655	39,657	14,625	17,345	17,020	16,750	247	12	194	15	15	3	2	5	5	16	44	162	193	14·5	11·6	0·3	0·5	0·9	61
Halstead	38,712	38,715	9,743	9,845	9,980	9,980	135	2	135	10	10	1	...	1	3	9	33	78	135	13·5	13·5	0·1	0·1	0·7	71
†Lexden and Winstree ...	66,300	66,246	17,168	18,976	18,580	18,580	289	8	204	7	7	...	8	5	5	20	45	115	205	15·6	11·0	0·3	0·7	0·4	24
Maldon	82,341	81,961	16,419	16,280	16,750	16,750	211	4	189	13	...	...	...	...	...	...	...	...	...	12·6	11·3	...	0·4	0·6	62
Ongar	47,236	47,236	10,054	11,520	10,460	10,460	215	9	134	10	10	...	...	4	3	9	37	71	134	20·6	12·8	0·1	0·8	1·8	46
†Orsett	29,185	29,158	14,987	20,724	18,000	18,000	337	8	191	17	17	3	2	7	6	24	57	74	191	19·8	10·6	0·3	0·5	0·8	48
†Rochford	39,606	38,465	11,281	17,046	14,830	14,830	306	17	185	11	11	3	3	3	5	21	52	87	185	20·6	12·5	0·2	1·1	1·2	36
†Romford	16,381	16,376	9,467	15,102	14,220	14,220	262	7	118	8	8	...	3	4	3	20	29	45	117	18·4	8·3	0·3	0·9	0·7	31
Saffron Walden	40,975	39,976	10,087	9,691	9,650	9,650	141	7	109	7	2	3	5	6	6	3	20	64	109	15·0	11·3	0·1	0·6	1·2	14
Stansted	22,954	22,952	6,828	6,981	6,890	6,890	84	3	56	3	3	1	1	3	1	9	20	38	76	12·2	11·0	0·4	0·1	0·4	36
Tendring	73,131	72,239	21,721	24,083	23,720	23,720	364	11	243	19	21	3	2	4	9	26	68	110	243	15·3	10·2	0·2	0·5	0·8	52
Total	820,941	819,046	232,394	279,653	267,610	267,060	4,364	161	3,607	189	189	30	40	75	114	268	710	1,551	3,607	15·9	11·2	0·2	0·6	0·9	44
Registrar-General's Figures: Total Boro' & Urban Districts ...	143502	143,650	687747	919,148	847900	843340	14434	539	8032	661	661	154	181	321	344	954	1979	3438	8032	17·0	9·5	0·4	0·6	0·9	46
Total Rural Districts	820941	819,046	232394	279,453	267610	267060	4364	161	3607	189	189	30	40	75	114	268	710	1551	3607	15·9	11·2	0·2	0·6	0·9	44
Total Administrative County ...	964443	962,696	920141	1198,601	1115570	1110400	18,798	681	11639	850	850	184	221	396	458	1222	2689	4989	11639	16·8	9·9	0·4	0·6	0·9	45

The figures in Cols. 12—20 are given by the M.O.H., whereas the totals are supplied by the Registrar-General.

The figures in Cols. 12—20 are given by the M.O.H., whereas the totals are supplied by the Registrar-General.

The Census 1931 figures have just been received at the time of going to press, and are included in the table for information.

The Annual Rates in Cols. 21—25 have been calculated on the Registrar-General's estimated figures for 1929.

*Indicates newly created districts since 1921.

TABLE XXX.

CAUSES OF DEATH—YEAR 1930.

(Figures supplied by the Registrar-General).

Sanitary District.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Encephalitis Lethargica.	Meningococcal Meningitis.	Tuberculosis of Respiratory System.	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Rheumatic Fever.	Diabetes.	Cerebral Hemorrhage, &c.	Heart Disease.	Arterio-Sclerosis.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases.	Ulcer of Stomach or Duodenum.	Diarrhœa, &c. (under 2 years.)	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Acute and Chronic Nephritis.	Puerperal Sepsis.	Other Accidents and Diseases of Pregnancy and Parturition.	Congenital Debility and Malformation Premature Birth.	Suicides.	Other Deaths from Violence.	Other Defined Diseases.	Causes Ill-defined or Unknown.	Total.	Special Causes included in Total. Poliomyelitis	Special Causes included in Total. Polio-encephalitis
URBAN.																																			
Barking ...	...	...	24	2	2	13	6	...	...	34	2	54	4	5	17	78	9	20	11	5	4	4	2	...	22	...	2	21	9	15	70	...	435	...	...
Benfleet ...	...	...	...	...	...	5	1	1	...	7	2	16	...	1	8	30	3	2	7	1	1	...	...	...	3	...	2	5	3	7	23	...	128	...	...
Braintree	...	...	...	...	...	...	...	...	...	4	4	11	1	...	6	23	7	4	6	...	...	1	...	...	...	...	...	4	1	4	15	...	91	...	...
Brentwood	...	...	1	...	...	...	1	...	...	1	...	5	...	2	1	7	2	2	6	...	...	...	...	1	2	1	...	...	...	2	20	...	54	...	...
Brightlingsea	...	...	...	...	...	...	...	...	...	2	...	8	...	3	4	7	3	1	...	...	...	1	...	...	2	...	1	1	...	1	15	...	49	...	...
Buckhurst Hill	...	...	...	...	...	1	1	...	...	1	1	6	...	...	7	10	...	2	1	1	...	...	2	1	1	...	...	...	1	1	11	1	49	...	...
Burnham-on-Crouch	...	...	1	...	...	...	...	...	...	4	1	6	...	...	4	10	...	2	...	1	1	...	1	1	5	...	...	...	1	1	8	...	47	...	...
Canvey Island	...	...	...	...	...	...	1	...	...	5	1	5	...	...	2	4	...	2	1	...	...	...	...	...	1	...	...	2	1	4	7	...	36	...	...
Chelmsford B.	...	...	2	...	...	1	1	...	...	13	3	37	...	5	13	42	10	8	10	4	...	2	...	...	6	3	...	14	2	10	64	...	250	...	...
Chingford	...	...	1	1	...	1	4	...	1	11	...	26	...	1	3	24	3	4	4	3	3	1	1	...	4	...	...	5	1	3	34	...	139	...	...
Clacton	...	...	...	1	...	2	...	1	...	7	3	30	...	4	18	28	18	3	5	...	1	...	...	1	6	...	...	3	4	9	27	2	173	...	...
Colchester B.	...	...	4	...	5	3	4	1	...	34	7	51	1	4	23	92	16	18	17	4	6	1	2	1	27	...	4	17	5	20	75	...	442	...	...
Dagenham	...	1	18	5	4	29	9	...	1	67	11	37	1	1	12	68	5	20	75	3	7	14	6	2	7	5	9	63	2	31	82	...	595	1	...
Epping	...	...	3	...	...	...	...	...	...	3	1	8	...	...	4	10	...	1	5	1	1	...	...	...	...	...	...	1	1	1	17	...	57	...	...
Frinton	...	...	...	...	...	...	...	...	...	1	...	7	...	...	...	5	2	...	...	...	...	...	...	1	1	...	...	...	...	2	1	...	20	...	...
Grays	...	...	...	...	1	...	2	...	1	12	1	31	2	...	12	30	4	10	7	1	1	...	...	...	3	...	...	5	2	5	34	...	164	...	...
Halstead	...	...	...	...	...	...	2	...	...	4	...	10	...	1	3	9	5	3	...	1	...	...	1	...	5	...	...	4	1	2	21	1	73	...	...
Harwich B.	...	...	...	1	1	1	1	1	...	5	3	23	...	1	8	15	2	4	7	1	1	...	3	...	7	...	1	7	5	4	21	...	123	...	...
Hornchurch	2	...	4	...	1	6	1	...	...	12	1	28	3	3	16	42	6	3	12	4	2	3	3	1	4	1	1	20	3	15	37	...	234	...	...
Ilford B.	1	...	9	1	2	12	11	1	2	61	8	154	11	15	55	218	25	24	51	12	13	9	10	3	29	2	5	27	4	23	182	...	980	...	...
Leyton B.	2	...	26	2	1	12	11	3	2	81	19	183	4	18	81	256	15	58	57	17	9	7	8	2	35	...	6	40	16	45	206	...	1222	...	...
Loughton	...	...	...	...	...	...	...	...	...	1	...	18	...	1	6	10	1	3	4	...	1	1	1	1	1	...	...	...	...	2	22	...	73	...	...
Maldon B.	...	...	2	...	...	...	...	...	1	6	2	7	...	1	8	28	1	7	4	1	...	...	...	1	4	...	...	...	2	2	10	1	88	...	...
Romford	...	...	2	1	...	7	2	1	1	17	2	31	2	1	17	72	7	7	11	...	4	...	3	2	4	2	3	19	3	18	54	1	294	...	...
Saffron Walden B.	...	...	...	...	1	...	3	...	...	4	...	7	...	...	9	13	9	2	2	1	1	...	1	1	4	1	...	1	4	2	12	...	78	...	...
Shoeburyness	...	...	...	1	1	...	...	...	...	4	...	11	1	...	3	11	...	1	2	1	...	...	...	...	...	...	...	2	1	2	15	...	56	...	...
Tilbury	...	...	2	...	...	6	4	...	1	13	2	13	...	1	6	11	1	6	12	1	...	2	1	1	3	...	1	10	5	13	20	...	135	...	...
Waltham Holy Cross	...	...	1	...	...	...	...	...	...	6	1	8	1	...	3	18	3	...	4	1	3	2	1	...	2	...	1	2	1	3	16	...	77	...	...
Walthamstow B.	1	...	28	2	2	22	12	3	2	80	9	167	6	14	51	224	33	42	81	8	19	8	8	7	37	6	3	45	14	34	191	1	1160	...	...
Walton-on-the-Naze	...	...	...	...	...	...	...	...	...	1	...	5	...	...	1	7	1	2	2	...	...	...	1	...	...	1	...	...	...	1	7	2	31	...	...
Wanstead	...	...	1	...	...	4	1	...	...	11	2	26	1	3	12	43	8	4	7	3	4	...	3	1	10	1	1	5	1	11	38	...	201	...	...
West Mersea	1	...	...	...	...	...	...	...	...	...	1	5	...	1	...	6	1	...	1	...	1	...	...	...	...	...	...	...	...	2	6	...	25	...	...
Witham	...	...	...	...	...	...	1	...	...	2	2	6	...	...	5	16	2	2	1	...	...	...	...	...	3	...	...	3	...	1	4	2	50	...	...
Wivenhoe	...	...	...	...	...	...	1	...	1	1	...	9	...	...	...	8	...	...	...	...	1	...	1	...	2	...	...	...	...	2	3	...	29	...	...
Woodford	...	...	6	...	1	3	4	...	...	10	...	43	2	5	16	48	7	5	12	2	...	1	2	...	8	1	...	11	1	8	42	...	238	...	...
	7	1	137	17	22	128	85	12	13	532	92	1112	41	91	439	1553	212	274	429	77	84	57	62	28	251	24	41	351	98	316	1435	11	8032	1	...
RURAL.																																			
Belchamp	...	...	...	...	...	1	1	...	...	5	...	8	1	1	2	14	2	3	2	1	...	...	...	...	1	...	...	3	1	3	7	...	56	...	...
Billericay	...	...	1	...	...	4	2	...	...	31	5	58	4	1	13	55	18	13	14	6	1	1	3	1	18	3	2	14	2	15	81	2	368	...	...
Braintree	...	...	...	1	2	...	1	...	1	10	5	39	...	2	11	41	14	13	8	3	4	2	...	1	7	...	2	17	1	13	38	1	237	...	...
Bumpstead	...	...	...	...	...	...	1	...	...	3	...	4	...	1	4	10	1	3	...	1	...	...	...	...	1	...	...	...	1	...	14	...	44	...	...
Chelmsford	...	...	2	1	...	...	1	1	...	23	2	41	...	4	18	54	15	14	6	4	5	...	2	...	5	2	2	13	5	17	85	1	323	...	...
Dunmow	...	...	1	...	...	1	4	...	...	7	...	44	...	2	19	40	11	9	9	1	1	...	1	1	6	...	...	4	3	7	30	...	201	...	...
Epping	...	...	1	...	...	2	1	...	...	8	1	21	...	2	14	40	9	6	8	1	...	2	1	2	3	1	...	8	4	10	49	...	194	...	...
Halstead	...	...	...	...	...	...	1	...	...	1	2	19	...	3	5	32	10	1	3	3	1	1	1	...	4	...	...	7	...	5	36	...	135	...	...
Lexden & Winstree	...	...	...	...	1	3	1	...	...	13	5	24	...	3	13	60	8	5	7	...	...	1	...	1	5	...	2	4	2	5	45	...	204	...	...
Maldon	...	...	...	...	...	...	1	...	...	7	4	24	...	4	20	47	7	7	3	1	1	...	2	...	5	...	2	10	3	8	33	...	189	...	...
Ongar	...	...	...	...	...	...	...	...	...	8	1	23	...	...	11	27	3	4	11	3	2	1	...	...	3	...	...	4	2	4	27	...	134	...	...
Orsett	...	...	1	1	...	2	3	1	1	9	1	27	2	2	14	27	2	3	10	2	...	1	...	...	7	1	1	10	...	10	53	...	191	...	...
Rochford	...	...	...	...	...	1	...	...	...	16	3	30	1	2	13	51	3	9	8	1	...	2	...	...	7	...	2	4	1	6	25	...	185	...	...
Romford	...	...	...	1	...	1	...	...	...	13	...	14	...	1	4	21	5	1	8	1	...	3	4	...	3	1	...	5	1	7	25	...	118	...	...
Saffron Walden	...	...	...	...	...	3	1	...	...	6	6	16	...	1	8	18	11	7	4	1	1	1	...	...	5	1	...	1	1	2	19	...	109	...	...
Stansted	...	...	...	...	...	...	1	1	...	1	...	8	...	3	8	21	2	...	3	...	...	...	1	...	4	1	1	...	2	2	25	...	76	...	...
Tendring	...	...	2	3	...	...	1	...	...	11	2	28	1	4	17	43	10	11	6	3	2	...	2	2	7	...	2	16	4	8	58	1	243	...	...
Rural	...	...	8	7	3	18	19	3	2	172	37	428	9	36	194	591	131	109	106	32	18	15	17	8	89	9	16	120	33	122	650	5	3007	...	...
Boro' & Urban	7	1	137	17	22	128	85	12	13	532	92	1112	41	91	439	1553	212	274	429	77	84	57	62	28	251	24	41	351	98	316	1435	11	8032	1	...
Total for Administrative County	7	1	145	24	25	146	104	15	15	704	129	1540	50	127	633	2144	343	383	535	109	102	72	79	36	340	33	57	471	131	438	2085	16	11039	1	...

TABLE XXXI.

NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK RATES, 1930.

(Figures obtained from the Weekly Notification Returns.)

Sanitary Districts.	Estimated Population 1929.	Scarlet Fever.		Diphtheria.		Enteric Fever.		Puerperal Fever.		Puerperal Pyrexia.		Erysipelas.		Ophthalmia Neonatorum.		Tuberculosis, Respiratory.		Other Tubercular Diseases.		Pneumonia.		Encephalitis Lethargica.	Acute Poliomyelitis.	Small-pox.	Varicella.	Total
		No.	Per 1,000	No.	Per 1,000.	No.	Per 1,000	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	No.	No.	No.	No.
URBAN.																										
Barking	42160	176	4·2	360	8·5	5	0·1	2	0·05	10	0·2	38	0·9	12	0·3	70	1·7	24	0·6	61	1·4	...	...	46	1	805
Benfleet	11900	34	2·9	23	1·9	...	...	...	...	1	0·08	2	0·2	...	...	12	1·0	4	0·3	2	0·2	...	...	3	...	81
Braintree	8568	38	4·4	6	0·7	2	0·2	1	0·1	1	0·1	...	...	...	...	7	0·8	5	0·6	2	0·2	...	...	...	...	62
Brentwood	7578	31	4·1	20	2·6	...	...	1	0·1	1	0·1	6	0·8	...	...	7	0·9	2	0·3	4	0·5	...	...	...	...	72
Brightlingsea	4356	1	0·2	...	...	1	0·2	...	...	...	...	1	0·2	...	...	3	0·7	2	0·5	8	1·8	...	...	...	1	17
Buckhurst Hill	5501	6	1·1	14	2·5	2	0·4	...	...	...	...	2	0·4	...	...	3	0·5	4	0·7	3	0·5	...	...	...	...	34
Burnham-on-Crouch	3622	5	1·4	3	0·8	...	...	...	...	...	...	...	...	...	...	...	...	2	0·5	4	1·1	...	...	...	...	14
Canvey Island	6386	10	1·6	7	1·1	1	0·2	...	...	...	...	1	0·2	...	...	11	1·7	...	...	21	3·3	...	1	2	...	54
Chelmsford B.	23930	111	4·6	36	1·5	15	0·6	6	0·2	5	0·2	5	0·2	4	0·2	14	0·6	11	0·5	9	0·4	...	...	4	...	220
Chingford	16090	64	4·0	37	2·3	2	0·1	2	0·1	1	0·06	9	0·6	2	0·1	20	1·2	8	0·5	7	0·4	...	...	4	...	156
Clacton-on-Sea	13510	29	1·9	16	1·0	1	0·06	...	...	...	...	4	0·2	...	...	11	0·7	4	0·2	3	0·2	...	...	1	...	69
Colchester B.	44890	140	3·1	61	1·4	13	0·3	7	0·2	5	0·1	13	0·3	4	0·1	56	1·2	19	0·4	50	1·1	3	...	...	3	374
Dagenham	76970	504	6·5	376	4·9	4	0·05	8	0·1	8	0·1	33	0·4	30	0·4	87	1·1	52	0·7	119	1·5	1	1	58	8	1289
Epping	5327	33	6·2	16	3·0	...	...	2	0·4	1	0·2	3	0·6	...	...	6	1·1	6	1·1	11	2·0	...	...	...	...	78
Frinton-on-Sea	2279	2	0·9	1	0·4	...	...	...	...	...	...	...	...	...	...	2	0·9	...	...	...	...	...	...	...	...	5
Grays	18480	48	2·6	58	3·1	2	0·1	...	...	3	0·2	13	0·7	3	0·2	17	0·9	6	0·3	9	0·5	...	1	2	1	163
Halstead	5887	...	...	2	0·3	1	0·2	...	...	1	0·2	1	0·2	...	...	8	1·4	1	0·2	11	1·9	...	...	...	...	25
Harwich B.	11890	13	1·1	68	5·7	1	0·08	...	...	...	...	3	0·2	...	...	8	0·7	7	0·6	6	0·5	1	...	...	...	107
Hornchurch	17480	75	4·3	62	3·5	2	0·1	3	0·2	1	0·06	6	0·3	1	0·06	15	0·9	4	0·2	2	0·1	...	1	13	...	186
Ilford B.	116200	290	2·5	342	2·9	10	0·08	...	...	10	0·08	57	0·5	5	0·04	128	1·1	33	0·3	68	0·6	1	...	25	14	983
Leyton B.	128500	468	3·6	312	2·4	10	0·08	6	0·05	14	0·1	72	0·6	11	0·08	125	1·0	32	0·2	47	0·4	1	...	136	2	1236
Loughton	7157	5	0·7	2	0·3	...	...	...	...	...	...	...	...	...	...	4	0·6	4	0·6	...	...	...	...	...	...	15
Maldon B.	6612	18	2·7	4	0·6	...	...	...	...	...	...	2	0·3	1	0·1	8	1·2	4	0·6	3	0·4	...	...	4	...	44
Purfleet	9141	25	2·7	21	2·3	...	...	...	...	...	...	1	0·1	1	0·1	7	0·8	4	0·4	8	0·9	...	...	1	...	62
Rayleigh	5840	20	3·4	1	0·2	...	...	...	...	...	...	...	...	...	...	4	0·7	3	0·5	1	0·2	...	...	...	...	29
Romford	28710	109	3·8	142	4·9	2	0·07	2	0·07	1	0·03	4	0·1	2	0·07	31	1·1	12	0·4	4	0·1	...	...	12	...	321
Saffron Walden B.	5656	3	0·5	9	1·6	...	...	...	...	1	0·2	1	0·2	...	...	2	0·3	2	0·3	...	...	...	...	...	...	18
Shoeburyness	5683	29	5·1	10	1·8	...	...	...	...	...	...	1	0·2	...	...	6	1·1	2	0·3	...	...	...	...	...	...	48
Tilbury	17090	66	3·8	132	7·7	1	0·06	...	...	3	0·2	3	0·2	2	0·1	27	1·6	8	0·5	16	0·9	...	2	50	...	310
Waltham Holy Cross	6911	21	3·0	4	0·6	1	0·1	1	0·1	2	0·3	3	0·4	1	0·1	6	0·9	5	0·7	23	3·3	...	...	1	...	68
Walthamstow	124800	609	4·9	497	4·0	5	0·04	14	0·1	8	0·06	57	0·4	8	0·06	129	1·0	35	0·3	152	1·2	2	...	190	3	1709
Walton-on-the-Naze	3113	7	2·2	...	...	...	...	...	...	3	1·0	2	0·6	...	...	1	0·3	2	0·6	2	0·6	...	...	...	...	17
Wanstead	17950	63	3·5	28	1·6	1	0·06	...	...	2	0·1	7	0·4	...	...	12	0·7	6	0·3	20	1·1	...	...	2	...	141
West Mersea	2237	1	0·4	2	0·9	3	1·3	...	...	1	0·4	...	...	...	...	...	...	1	0·4	...	...	...	...	...	...	8
Witham	4348	8	1·8	3	0·7	...	...	...	...	2	0·5	1	0·2	1	0·2	5	1·1	3	0·7	2	0·5	...	...	...	...	25
Witnesse	2318	19	8·2	...	...	...	...	...	...	...	...	...	...	...	...	4	1·7	...	...	1	0·4	...	...	...	...	24
Woodford	22490	40	1·8	64	2·8	1	0·04	1	0·04	4	0·2	8	0·4	...	...	26	1·2	10	0·4	25	1·1	1	1	...	...	181
	827750	3121	3·8	2739	3·3	86	0·1	56	0·07	89	0·1	359	0·4	88	0·1	883	1·1	327	0·4	704	0·8	10	7	554	33	9056
RURAL.																										
Belchamp	4090	11	2·7	1	0·2	...	...	1	0·2	1	0·2	2	0·5	...	...	6	1·5	1	0·2	...	...	...	...	...	...	23
Billericay	35950	172	4·8	60	1·7	2	0·06	9	0·2	4	0·1	9	0·2	...	...	33	0·9	17	0·5	16	0·4	...	...	23	7	352
Braintree	20760	41	2·0	14	0·7	...	...	...	...	2	0·1	5	0·2	...	...	14	0·7	10	0·5	26	1·2	...	...	...	...	112
Bumpstead	2320	7	3·0	10	4·3	...	...	...	...	...	...	2	0·9	...	...	5	2·2	1	0·4	...	...	...	...	...	...	25
Chelmsford	28600	92	3·2	35	1·2	4	0·1	1	0·03	3	0·1	6	0·2	1	0·03	22	0·8	10	0·3	1	0·03	...	...	...	1	176
Dunmow	15510	39	2·5	6	0·4	4	0·3	2	0·1	3	0·2	5	0·3	1	0·06	13	0·8	5	0·3	22	1·4	...	...	...	...	109
Epping	16750	25	1·5	35	2·1	2	0·1	1	0·06	...	...	4	0·2	2	0·1	8	0·5	1	0·06	8	0·5	...	...	...	...	86
Halstead	9980	...	...	2	0·2	1	0·1	...	...	1	0·1	1	0·1	...	...	7	0·7	2	0·2	1	0·1	...	...	...	...	15
Lexden and Winstree	18580	57	3·1	15	0·8	6	0·3	2	0·1	2	0·1	7	0·4	2	0·1	22	1·2	9	0·5	4	0·2	...	...	...	...	126
Maldon	16750	23	1·4	7	0·4	3	0·2	...	...	1	0·06	4	0·2	1	0·06	10	0·6	6	0·4	8	0·5	...	...	...	...	63
Ongar	10460	57	5·4	10	0·9	...	...	...	...	1	0·09	1	0·09	1	0·09	5	0·5	1	0·09	13	1·2	...	...	...	...	89
Orsett	18000	46	2·6	55	3·3	1	0·05	...	...	...	...	13	0·7	...	...	26	1·4	5	0·03	12	0·7	...	...	19	...	181
Rochford	14830	45	3·0	21	1·4	...	...	1	0·07	1	0·07	7	0·5	...	...	13	0·9	4	0·3	11	0·7	...	...	...	...	103
Romford	14220	42	3·0	24	1·7	5	0·3	2	0·1	...	...	3	0·2	...	...	15	1·1	4	0·3	2	0·1	...	...	6	1	104
Saffron Walden	9650	20	2·1	3	0·3	1	0·1	1	0·1	1	0·1	2	0·2	...	...	9	0·9	2	0·2	...	...	1	...	...	...	40
Stansted	6890	3	0·4	25	3·6	...	...	1	0·1	...	...	3	0·4	...	...	1	0·1	1	0·1	2	0·3	...	...	...	...	36
Tendring	23720	66	2·8	37	1·6	2	0·08	2	0·08	1	0·04	4	0·2	...	...	18	0·7	8	0·3	5	0·2	...	...	...	...	143
	282650	746	2·6	364	1·3	31	0·1	23	0·08	21	0·07	78	0·3	8	0·03	227	0·8	87	0·3	131	0·5	1	...	48	9	1774
Tot. Boro's & Urban Districts	827750	3121	3·8	2739	3·3	86	0·1	56	0·07	89	0·1	359	0·4	88	0·1	883	1·1	327	0·4	704	0·8	10	7	554	33	9056
Total Rural Districts	282650	746	2·6	364	1·3	31	0·1	23	0·08	21	0·07	78	0·3	8	0·03	227	0·8	87	0·3	131	0·5	1	...	48	9	1774
Total for Admin. County	1110400	3867	3·5	3103	2·8	117	0·1	79	0·07	110	0·1	437	0·4	96	0·09	1110	1·0	414	0·4	835	0·7	11	7	602	42	10830

SCHOOL OF HYGIENE * AND TROPICAL MEDICINE *
LIBRARY
27 AUG 1963