

[Report 1925] / Medical Officer of Health, Essex County Council.

Contributors

Essex (England). County Council.

Publication/Creation

1925

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ADMINISTRATIVE COUNTY OF ESSEX.

REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE YEAR 1925.

WILLIAM A. BULLOUGH, M.B., M.Sc., D.P.H.,
COUNTY MEDICAL OFFICER OF HEALTH.

Chelmsford;

PRINTED BY JOHN DUTTON, 8, TINDAL STREET.

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PREFACE.

*To the Chairman and Members of the Public Health and Housing Committee
of the Essex County Council.*

I have the honour to submit to you my Seventh Annual Report for the Administrative County of Essex for the year 1925. This is the 36th Report which has been issued and, at the request of the Ministry of Health, it includes a general survey of the public health services during the five years 1921 to 1925.

For convenience, this Preface is divided into three sections, namely (1) Review of the year 1925, (2) Survey of the quinquennial period 1921 to 1925, and (3) Needs of the Future.

(1) REVIEW OF THE YEAR 1925. The health of the County during the year 1925 was distinctly good, the death-rate being 10·3 and infant mortality rate 52·0, as compared to 12·2 and 75·0 respectively for England and Wales. The County was again entirely free from Small-pox, and the number of cases of the remaining zymotic diseases compared favourably with previous years. The number of notifications and deaths from Tuberculosis, which was slightly more than in the previous years, is rather disappointing, but was foreshadowed in my Report of 1921, where it was stated that "the present economic outlook of the country will in all probability have an adverse influence on the Tuberculosis attack-rate and death-rate in the near future."

The total number of cases of tuberculosis remaining on the Treatment Register at the end of 1925 was: pulmonary 6,207 and non-pulmonary 2,447. New cases reported during 1925 totalled 1,204 as compared to 1,039 in 1924.

Attendances made at Treatment Centres for venereal disease constituted a record, the total being 18,116, compared to 17,262 in the previous year. Fresh cases numbered 671, or 121 less than last year, while 397 were on examination found not to be infected.

Unfortunately, the total number of houses erected in the County during 1925 is not available, but for the five years 1920 to 1924 the number of dwellings completed by private enterprise and under public schemes was 22,628. This is a satisfactory achievement and it would seem that the rate of building is now more than meeting the annual requirements and should therefore tend to relieve some of the gross overcrowding which has been previously unavoidable.

In the various sections of this report, details are given of the extension and development of the services, chief of which are (1) Hospital provision for maternity patients and crippled children, (2) artificial light treatment and additional beds for tuberculosis patients, (3) additional child welfare centres, (4) additional laboratory facilities, (5) special survey of the water supplies in the county, (6) appointment of a Senior Clinical (Part-time) Tuberculosis Officer, and (7) re-organization of the central clerical staff so as to permit the County Sanitary Inspector to devote his whole time to the duties of that office. These improved services have enabled the Department to cope more satisfactorily with the considerable increase in all branches of the work during 1925.

(2) **SURVEY OF THE QUINQUENNIAL PERIOD 1921 TO 1925.** As stated above, this report includes a survey of the past five years, and a study of each section will show that satisfactory progress has been made in spite of the restrictions due to the economy campaign of 1921. In that year retrenchment had to be made, developments postponed, institutional accommodation reduced and other facilities curtailed, notably under the County Scheme for the diagnosis and treatment of Tuberculosis. Later, however, circumstances impelled the Council to release this embargo, as it was felt to be false economy to hamper the development of a service which had for its object the safeguarding of the public health. Space does not permit of a detailed survey of the various sections of this report, but a brief reference to the salient points in each will suffice.

(a) *General Public Health.* Sir George Newman writes that "no Student of the official local sanitary reports can doubt the steady improvement which has taken place in the external sanitation of town and country." Contemporaneously, endeavours have been made to improve the personnel of the public health medical and inspectorial services by increasing the scope of the course for medical students for the Diploma of Public Health and for Sanitary Inspectors for the Examination Board's Certificate. This will ensure a supply of specialised officers to meet the ever-widening responsibilities of the work of a public health department. In the past medical men and inspectors have done yeoman service as part-time officials, but it is only natural that many of them have been outstripped by the rapid growth of preventive medicine with its ever-increasing flow of Acts, Orders and Regulations. So important and multifarious are these duties that all medical and lay representatives of a public health service should remember that "in their hands lies in large measure the future of preventive medicine in their local district and thus in the nation at large."

Generally speaking, the progress in general sanitation throughout the County may be regarded as satisfactory.

(b) *Smoke Abatement.* Useful steps have been taken during the past five years to control the nuisance from excessive smoke pollution, particularly along the northern bank of the River Thames. Impending legislation will enable Authorities to deal with this matter more efficiently and expeditiously.

(c) *Tuberculosis.* A valuable link has been added to the chain of the County Tuberculosis Service by the creation of the appointment of a Senior Clinical (part-time) Tuberculosis Officer, which, however, was not filled until 15th February, 1926, when Dr. W. Burton Wood took up duty. The staff of Tuberculosis Officers has also been augmented and may now be said to meet the minimum requirements of the County. In the absence of a much-needed Central Sanatorium, the best possible use has been made of the institutions at Harold Court, Black Notley, High Beech, Sible Hedingham, Colchester, Chingford and Ilford, where extensions and alterations have been made, with their inherent limitations. A scheme for large extensions at Black Notley, which is now before the Ministry of Health, will, if approved, result in the first up-to-date Sanatorium for the County. Meanwhile, extra beds at institutions outside the County, particularly at Bournemouth and Isle of Wight, are being utilised.

There are now eight Tuberculosis Care Associations in the County undertaking excellent work in their appropriate areas, most of which are populous centres. Such Associations are greatly needed in the rural parts of the County where it is often difficult for patients to maintain full benefit from the treatment provided by the County Council owing to home and financial circumstances.

(d) *Maternity and Child Welfare.* Since 1st April, 1921, there has been a gradual evolution in the Maternity and Child Welfare service, and at the end of 1925 the County Council was the authority under the Notification of Births Acts in 26 out of the 47 Sanitary Districts. This limitation of area is unfortunate and often leads to confusion and overlapping. It is desirable that the County Council should be the sole authority under those Acts for all the rural districts and for those urban districts which are not Part III. Education Authorities. A perusal of the appropriate section of this report will reveal the many and varied activities of the medical and nursing staff who are ably assisted by voluntary workers and by a network of district nurse-midwives employed by District Nursing Associations affiliated to the Essex County Nursing Association. This Association continues to be a useful adjunct to the County service by training, supplying and maintaining district nurse-midwives chiefly for the remote rural parishes. The first line of defence against disease is a healthy, well-nourished and resistant human body, and that Nation is wisest which concentrates upon the welfare of the beginning of human life to ensure that its foundation is well and truly laid. The returns show that this is the most encouraging and remunerative of all the health services.

(e) *Combined Medical Service.* Reference must be made to the chief development in the County Service during the past five years, namely, the Combined Medical Service. This was commenced in the Lexden & Winstree Rural District on 1st April, 1920, and has now extended to 33 of the 47 Sanitary Districts in the County. These 33 districts are served by 12 Medical Officers (whole-time) who carry out health duties in those areas on behalf of the local Sanitary Authorities and County Council. Overlapping and confusion are therefore avoided, and after five years' experience I am satisfied that the health services have been raised to a higher standard, with consequent benefit to the community. "Clearly," writes Sir George Newman, "one

man cannot do everything or be a specialist in all departments, but one man can have a fair and proper view of the wholeness of medicine, and so do his work as to allow for the 'give and take,' the strain and counter-strain, necessary in all sound construction."

(f) *Venereal Disease.* The initial scheme has required very little alteration and has fulfilled expectations. Clinics for intermediate treatment are necessary in the populous extra-metropolitan towns.

(g) *Other Work.* Water supplies, river pollution and milk supplies have engaged special attention, and the last-mentioned increased in importance by the sanctioning of graded milks under the Milk (Special Designations) Order, 1923. This made County Councils the licensing authority for the production of Grade "A" Milk, which, in reality, is a guaranteed clean milk. It is common knowledge that much of the milk now sold is dirty, being produced under unsatisfactory conditions. The recent Milk and Dairies Order, 1926, should be the means of improving such conditions, but meanwhile Essex may justly be proud of having the greatest number of farms producing Grade "A" Milk in England and Wales.

Propaganda in public health has increased in importance during recent years, for "there is no public duty of more consequence than the education of the English people in health." Once again public demand has created legislation (Public Health Act, 1925), and local authorities and County Councils are now empowered to arrange for public lectures on health subjects. Steps are being taken by a Special Sub-Committee to formulate a definite scheme for Essex. By these means it is hoped to secure the active co-operation of every citizen who, in the words of Sir George Newman, should remember that "(1) he should safeguard his own health and that of those dependent upon him, (2) he should use reasonably and fully the facilities provided by his employer and the local authority, (3) he should, as a good citizen, support the State in the ever-widening interest and responsibility which it takes in the maintenance of public health and for which he pays, and (4) he should seek to increase his knowledge of nature and of her ways. Whatever other learning he can do without, he cannot long survive the continued neglect of her laws."

(3) **IMMEDIATE NEEDS OF THE FUTURE.** Turning to the future, it is clear that changes are pending in public health administration in England and Wales, more especially in connection with the poor law system. The rapid change in social habits (for example, the influence of the motor 'bus on the life of rural communities) and the wonderful discoveries of medical science mark the need of a new synthesis of health organization and forces. Generally speaking, the County Council should be responsible for the larger services, such as Laboratories, Institutions, Consultative Staffs, Conservation of Water Supplies, Food and Drugs, River Pollution, Town Planning and Smoke Abatement, whilst giving to the new Local Authorities (with a minimum population and acreage) additional powers for local services, such as School Medical Inspection, Welfare Centres, Tuberculosis Dispensaries, Domiciliary and Personal, and

Propaganda. Curative and preventive medicine must be linked up and made mutually more effective.

The loss of life of mothers in connection with childbearing is a reproach which requires a skilled and complete midwifery service with sufficient beds and obstetricians to safeguard life and health. Cripples must be prevented by extension of the present provisional scheme. Sufficient sanitary houses must be built to allow existing unsatisfactory houses to be closed and demolished. Endeavours must be made to ensure fresh and wholesome food supplies without sophistication or devitalisation. Finally, education and still more education on health matters is necessary so that every citizen shall be able to take full advantage, at home and work, of the environment which is continually improving. The foundation of such knowledge must be laid in the Elementary and Secondary Schools.

I take this opportunity of recording my appreciation of the co-operation and counsel of yourself and the members of the Committee during my seventh year of office. My thanks are also due to my predecessor, Dr. John C. Thresh, who has continued to assist as Honorary Consultant in County Public Health matters. I am also indebted to the Medical Officers of Health and other officials of the local Sanitary Authorities for their ready co-operation and to the medical, dental, nursing and clerical staff for their loyal services.

I am especially indebted to my Chief Assistant (Dr. T. P. Puddicombe), for his loyalty and help.

W. A. BULLOUGH,
County Medical Officer.

PUBLIC HEALTH DEPARTMENT,
DUKE STREET,
CHELMSFORD.

24th August, 1926.

PUBLIC HEALTH AND HOUSING COMMITTEE.

Chairman—Alderman S. W. Robinson.

Vice-Chairman—Councillor A. M. Mathews.

ALDERMEN—

A. Attwell (deceased)
J. H. Burrows
W. S. Chisenhale-Marsh
C. E. Gooch
D. T. Jackson
C. G. Musgrave
E. W. Tanner

COUNCILLORS—

Dr. J. P. Atkinson
F. P. Brindley
Major E. N. Buxton
W. Cash
C. W. Daines
The Rev. H. Dunnico, M.P.
G. Gardiner
A. G. Giller
W. A. Hurry
A. E. May
J. Parish
W. T. Potts
F. D. Smith
Major A. P. W. Wedd
Miss F. Wilde
E. G. Wright
E. J. Wythes

MEDICAL AND NURSING SERVICES JOINT SUB-COMMITTEE.

ALDERMEN—

J. H. Burrows (*Chairman*)
C. E. Gooch
S. W. Robinson

COUNCILLORS—

Major E. N. Buxton
W. A. Hurry
A. M. Mathews
E. J. Wythes

Miss U. B. Chisenhale-Marsh.

TABLE I.

SHOWING RECORD OF RECEIPT OF ANNUAL REPORT FOR 1925 FROM EACH
LOCAL MEDICAL OFFICER OF HEALTH.

Sanitary District.	Medical Officer of Health.	Date Annual Report received.
<i>Urban—</i>		
Barking ...	... Kerr Simpson ...	... 12th July, 1926
Braintree ...	... P. J. Gaffikin ...	... †
Brentwood ...	... *S. Frazer ...	... 25th June, 1926.
Brightlingsea ...	... *E. P. Dicken...	... 17th July, 1926
Buckhurst Hill ...	... *C. R. Dykes ...	... 26th June, 1926
Burnham-on-Crouch ...	... *T. D. White ...	... 26th June, 1926
Chelmsford B. ...	... R. H. Vercoe ...	... †
Chingford ...	... M. Barker ...	... 18th May, 1926
Claeton-on-Sea ...	... W. A. Milne ...	... 30th April, 1926.
Colchester B....	... W. F. Corfield ...	... 8th July, 1926
„ Port ...	... *E. H. Heaton ...	... 26th February, 1926
Epping ...	... *H. A. Watney ...	... 3rd August, 1926
Frinton-on-Sea ...	... *G. Craigie Bell ...	... 3rd May, 1926
Grays ...	... +W. B. Wood ...	... 14th July, 1926
Halstead ...	... J. S. Ranson ...	... 6th September, 1926
Harwich B. ...	... *G. Ford Porter ...	... 5th July, 1926
„ Port ...	... „ ...	... 28th April, 1926
Ilford ...	... A. H. G. Burton ...	... 25th June, 1926
Leyton ...	... J. F. Taylor...	... 25th June, 1926
Loughton ...	... *A. Butler Harris ...	... 8th May, 1926
Maldon B. ...	... *H. Reynolds Brown ...	... 4th August, 1926
„ Port ...	... „ ...	... 4th August, 1926
Romford ...	... A. Ball ...	... †
Saffron Walden B. ...	... S. R. Richardson ...	... 20th August, 1926
Shoeburyness ...	... N. S. R. Lorraine ...	... 15th June, 1926
Tilbury ...	... +W. B. Wood...	... 8th June, 1926
Waltham Holy Cross ...	... *P. Streatfield...	... 20th May, 1926
Walthamstow ...	... J. J. Clarke ...	... 26th July, 1926
Walton-on-the-Naze ...	... *J. C. Brockwell ...	... 31st July, 1926
Wanstead ...	... *P. Macgregor ...	... 22nd June, 1926
Witham ...	... *E. C. Gimson ...	... 6th August, 1926
Wivenhoe ...	... *G. T. Kevern...	... 19th May, 1926
Woodford ...	... *R. Vere Hodge ...	... 15th May, 1926

†These reports had not been received when the Annual Report was printed in September, 1926.

*Part-time Medical Officer of Health.

+Succeeded by Dr. W. T. G. Boul on the 22nd February, 1926.

Sanitary District.	Medical Officer of Health.	Date Annual Report received.
<i>Rural—</i>		
Belchamp ...	... J. S. Ranson...	... †
Billericay ...	... *J. Douglas Wells	... †
Braintree ...	... P. J. Gaffikin...	... †
Bumpstead ...	... A. Morgan ...	... 18th June, 1926
Chelmsford ...	... J. Macdonald	... 31st August, 1926
Dunmow ...	... P. J. Gaffikin	... †
Epping ...	... *W. F. Erskine	... 15th July, 1926
Halstead ...	... J. S. Ranson	... †
Lexden and Winstree	... W. H. Alderton	... 17th June, 1926
Maldon ...	... J. Macdonald	... 12th July, 1926
Ongar ...	... *A. S. David ...	... 7th August, 1926
Orsett ...	... *W. Allingham	... †
Rochford ...	... J. Macdonald	... †
Romford ...	... A. Ball ...	... †
Saffron Walden	... S. R. Richardson	... 15th September, 1926
Stansted ...	... R. F. Dunn ...	... 28th July, 1926
Tendring ...	... J. Ramsbottom	... 28th July, 1926

†These reports had not been received when the Annual Report was printed in September, 1926.

*Part-time Medical Officer of Health.

STAFF*On 31st December, 1925.***(1) Medical.**

(a) *County Medical Officer, School Medical Officer & 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) *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.	Centre.
W. H. Alderton ..	M.C., M.R.C.S., L.R.C.P., D.P.H.	Lexden and Winstree
M. Barker ..	M.R.C.S., L.R.C.P., D.P.H.	Chingford
P. J. Gaffikin ..	M.C., M.D., B.Ch., B.A.O., D.P.H.	Braintree
N. S. R. Lorraine ..	M.D., Ch.B., D.P.H., F.R.S. (Edin.)	Shoeburyness
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
S. R. Richardson ..	B.A., M.D., B.Ch., B.A.O., D.P.H.	Saffron Walden
R. H. Vercoe ..	B.A., M.R.C.S., L.R.C.P., D.P.H.	Chelmsford (S.M.I. only for County Council)
W. B. Wood ..	M.A., M.D., B.Ch., M.R.C.P., D.P.H.	Grays

(d) *School Medical Inspectors and Child Welfare Officers (Whole-time, County Council—*

Maud Bennett (Miss) ..	L.R.C.P., L.R.C.S.	Orsett
M. D. Rankine (Miss) ..	M.B., Ch.B., D.P.H.	Braintree
E. U. Vawdrey (Mrs.) ..	L.R.C.P., L.F.P.S.	Woodford
Charlotte H. Brown (Mrs.)	L.R.C.P., L.R.C.S., M.D. (Brux.)	Romford

(e) *Tuberculosis Officers—*

(i) *Consulting Surgeon in Surgical Tuberculosis—*

Sir Henry J. Gauvain M.A., M.D., M.C.

(ii) *Whole-time. (County Council).*

L. S. Fry ..	B.A., M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.	Epping (also acts as S.M.I. & C.W.M.O.)
R. A. C. Macnair ..	M.B., Ch.B.	Romford
J. Sorley ..	M.A., M.D., D.P.H., LL.B.	Leyton & Walthamstow
A. G. Wilkins ..	M.B., Ch.B.	Harold Court San.

(iii) *Part-time. (County Council).*

W. F. Corfield ..	M.D., D.P.H.	Colchester
G. N. Meachen ..	M.D., B.S.	Southend-on-Sea
K. Simpson ..	M.D., M.R.C.P., D.P.H.	Barking

(See also c).

(f) *County Bacteriologist—*

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

(2) Health Visitors.

Chief Health Nurse: D. M. Landon, Gen. Training, Cert. Mid. & R.S.I.

(a) Whole-time County Council.

Centre.	Name.	Qualifications.	Duties undertaken.		
			T.B.	S.N.	C.W.
Stansted	Chittenden, A. E.	Gen. Training & Cert. Midwife	Yes	Yes	Yes
Braintree	Skey, A. F.	Gen. Training & Cert. Midwife	"	"	"
Brentwood	White, G. M.	" "	"	"	"
Billericay	Hinton, A. L.	Board of Education Cert. & Cert. Mid.	"	"	"
Tendring	Wallace, A. C. G.	Gen. Training & Cert. Midwife	"	"	"
"	Steele, M.	Gen. Training	"	"	"
Dunmow	Neall, G.	Board of Education Cert. & Cert. Mid.	"	"	"
Epping	Richardson, L.	Experience as H.V., R.S.I. & Cert. Mid.	"	"	"
Halstead	Jossaume, J.	Gen. Training & Cert. Midwife	"	"	"
Malden	Clapson, C. R.	" "	"	"	"
Maldon R. and Burnham	Little, M. A.	" "	"	"	"
Ongar	Mann, R. L.	San. Training & Cert. Midwife	"	"	"
Saffron Walden	Woodman, E. M.	Gen. Training & Cert. Midwife	"	"	"
Belchamp	Starr, G. M.	" "	"	"	"
Witham	Watson, H. J.	" "	"	"	"
Rochford	Smith, E. M.	" "	"	"	"
"	Richardson, P. M.	" " & R.S.I.	"	"	"
Chingford	Waterhouse, M.	King's College Cert.	"	"	"
Buckhurst Hill	Glover, E.	Gen. Training, Cert. Midwife & R.S.I.	"	"	"
Chelmsford	Wood, A. M.	King's College Cert.	"	"	No
Woodford	Carnall, E. F.	Gen. Training	"	"	"
Orsett	Wall, A. D.	"	"	"	"
Romford	Newby, A. E.	"	"	"	"
"	Philpott, A. F.	" & Cert. Mid.	"	"	"
Dagenham	Richards, E. F.	Board of Education Cert. & Cert. Mid.	"	"	"

(b) Whole-time Tuberculosis Nurses.

Ilford	Martin, M.	Gen. Training	"	No	"
Leyton	Griffin, M. W.	Board of Education Cert., Cert. Mid. & R.S.I.	"	"	"
"	Lamborn, E.	Gen. Training, Cert. Mid. & R.S.I.	"	"	"
Walthamstow	Purves, D.	Sanatorium Training	"	"	"
"	Brightman, A.	Gen. Training	"	"	"

(c) 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	Ling, L. E.	Gen. Training & Cert. Midwife	Yes	Yes	Yes
Lexden and Winstree	Jackson, M. J.	" "	"	"	No
Grays	Moorman, E. H.	Gen. Training	"	"	"
"	Button, E. L.	Cert. Mid. & experience as H.V.	"	"	"
Tilbury	Marsh, E. J.	Gen. Training & Cert. Midwife	"	"	"
"	Page, S. V. B.	" "	"	"	"
Colchester	Sasse, A. W.	Experience as H.V.	"	No	"
Harwich	Cockin, E. J.	Gen. Training, Cert. Mid. & R.S.I.	"	"	"

(d) District Nurse acting as Health Visitor.

Clacton	Bounds, C. E.	Gen. Training & Cert. Midwife	"	Yes	No
Walton-on-the- Naze	Sollars, A.	Cert. Mid.	"	"	Yes

County Sanitary Inspector: A. Marsh, M.R. San. I.

PART I.

NATURAL AND SOCIAL CONDITIONS OF THE COUNTY.

Population.

The population of the Administrative County at the Census in 1921 was 920,141 and no change in the boundaries of Sanitary Districts has occurred since that date. The Registrar-General has again furnished separate figures in connection with the estimated population for the year ended 31st December, 1925, namely:—

- (1) For calculating birth-rate, the figure which includes civilian and military population is ... 964,000
- (2) For calculating the death-rate, the figure which includes only civilian population is ... 958,700

A common population figure (estimated) was, however, furnished by the Registrar-General for every Sanitary District, with the exception of Colchester Borough, Harwich Borough, and Shoeburyness Urban District, each of which contains an appreciable non-civilian population.

The usual Summary, showing average number of persons per acre and acres per person, is set out below:—

TABLE II.

	Area in Acres, 1921.	Population.				Persons per acre.	Acres per person.
		Census 1921.	Estimated Population, 1925.		(Calculated on Census figures).		
			For Birth- rate.	For Death- rate.			
Municipal Boroughs (5) ...	26,516	89,672	94,820	90,220	3.38	0.29	
Urban Districts (25) ...	75,566	556,655	574,180	573,680	7.36	0.13	
Rural „ (17) ...	862,361	273,814	295,000	294,800	0.32	3.15	
	964,443	920,141	964,000	958,700	0.95	1.05	

Table III. gives the estimated populations for calculating birth and death-rates during the five years 1921-25:—

TABLE III.

YEAR.	Administrative County. Estimated populations for.		Urban Districts. Estimated populations for.		Rural Districts. Estimated populations for.	
	Birth-rate.	Death-rate.	Birth-rate.	Death-rate.	Birth-rate.	Death-rate.
1921.	912,605	910,797	641,320	639,512	271,285	271,285
1922.	919,754	917,414	645,475	643,135	274,279	274,279
1923.	932,700	930,360	653,100	650,760	279,600	279,600
1924.	953,700	948,800	665,300	660,600	288,400	288,200
1925.	964,000	958,700	669,000	663,900	295,000	294,800
Quinquennial in- crease	51,395	47,903	27,680	24,358	23,715	23,515
Percentage	5'64	5'26	4'32	3'81	8'74	8'67

It will be seen from the above Table that the rate of increase in the rural districts is more than double the rate for urban districts. This is largely due to the rapid development of the Becontree Estate in the Romford Rural District and to the developing of many building sites, especially along the new Eastern Avenue from London to Southend-on-Sea.

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE COUNTY.

Essex is one of the Metropolitan Shires, with about one-half of the whole population of the County centred in the south-western corner lying immediately adjacent to the Metropolis. The County in form is roughly a parallelogram measuring 48 miles from north to south and 63 miles from north-east to south-west.

In the County there are to be found populous urban areas, residential suburbs, wide agricultural districts, small manufacturing centres, residential seaside resorts, and a seafaring, fishing and dockside population.

The geological formation is given in detail in "The Water Supplies of Essex" by Whitaker and Thresh, 1916.

VITAL STATISTICS.

A summary of the chief vital statistics for the Administrative County and England and Wales for 1925 is given on page 17, including comparative average rates for the quinquennial periods 1916-20 and 1921-5 :--

TABLE IV.

RATES PER 1,000 POPULATION.

	ESSEX.			ENGLAND & WALES.		
	1916-20.	1921-25.	1925.	1916-20.	1921-25.	1925.
Birth-rate...	18.3	18.3	17.1	20.1	19.9	18.3
Death-rate	12.4	10.4	10.3	14.5	12.2	12.2
Infant Mortality, rate per 1,000 births	68	53	52	91	76	75
Zymotic Death-rate	0.6	0.4	0.3	0.8	0.5	0.5

In every instance the death-rates for Essex are lower than those for England and Wales, again substantiating the statement, which has been made in previous annual reports, that Essex is undoubtedly a healthy county.

Birth-Rate.

The number of births registered in the Administrative County during the year 1925 was 16,516, equal to a birth-rate of 17.1 per 1,000 population, whilst the rate for England and Wales was 18.3, the rates for the previous year being 17.0 and 18.8 respectively.

The total number illegitimate births in the Administrative County was 499, being 3.02 per cent. of the total number of births.

Comparative rates for the last two quinquennial periods are given in the following table :—

TABLE V.

Period.		Essex. Rate.	England and Wales. Rate.
1916-20 (average)	...	18.3	20.1
1921	...	20.0	22.4
1922	...	18.6	20.4
1923	...	18.6	19.7
1924	...	17.0	18.8
1925	...	17.1	18.3

It will be seen that whilst the fall in the rate for England and Wales has continued, there was a slight increase in the rate for Essex during 1925.

Table XXXV. in Part IV. gives the following highest and lowest rates :—

HIGHEST.			LOWEST.		
*Romford R.	...	27.8	Walton-on-Naze U.	...	10.4
*Tilbury U.	...	25.0	Saffron Walden B.	...	11.3
*Shoeburyness U...	...	24.2	*Frinton U.	...	12.4
*Barking U.	...	21.4	Braintree R.	...	13.0
Ongar R.	...	20.4	*Epping U.	...	13.3
Rochford R.	...	20.3	Brightlingsea U. ...	...	13.4

Districts marked with an asterisk (*) fell into these categories last year.

Death-Rate.

The number of deaths registered in the Administrative County during 1925 was 9,920, equal to a death-rate of 10·3 per 1,000 population, whilst the rate for England and Wales was 12·2, the rates for the previous year being 10·7 and 12·2 respectively.

Comparative rates for the last two quinquennial periods are given in the following table :—

Period.			Essex. Rate.	England and Wales. Rate.
1916-20 (average)	...	...	12·4	14·5
1921	...	...	10·2	12·1
1922	...	...	11·1	12·8
1923	...	...	9·8	11·6
1924	...	...	10·7	12·2
1925	...	...	10·3	12·2

Chief Causes of Death.

The chief causes of death are as follows :—

	Deaths.
Heart Disease	1,472
Respiratory Diseases	1,439
Cancer, Malignant Disease	1,301
Tuberculous Diseases	839

It will also be noticed that the number of deaths at the age of 65 years and over amounts to 4,657, being 46·9 per cent. of the whole of the deaths.

Transferable Deaths.

During 1925, slips in respect of 2,348 inward and 3,366 outward transferable deaths received from the Registrar-General were distributed to local Medical Officers of Health. Difficulties arose in respect to some of the inward transfers, necessitating correspondence with the Registrar-General and the local Medical Officers of Health concerned.

Infant Mortality.

During the year 1925 there were registered in the Administrative County 859 deaths of infants under one year of age, equal to a mortality rate per 1,000 births of 52, which was the rate for 1924. The rate for England and Wales is also the same during the past two years, namely, 75.

Table VI. on page 19 shows the Infant Mortality rate for each sanitary district in the County, together with the average rates during the periods 1916-20 and 1921-25.

The deaths of 56 illegitimate children under the age of one year occurred during the year, representing an illegitimate infantile mortality rate of 112 per 1,000 births.

TABLE VI.

SHOWING THE BIRTH-RATE AND THE CHIEF MORTALITY RATES FOR THE PERIODS 1916-20, 1921-25, AND FOR THE YEAR 1925.

SANITARY DISTRICTS.	Birth rate.			Death-rate.			Infantile Mortality Rate.			Zymotic Death-rate		
	1916-20.	1921-25.	1925.	1916-20.	1921-25.	1925.	1916-20.	1921-25.	1925.	1916-20.	1921-25.	1925.
URBAN—												
Barking ...	24.1	23.6	21.4	13.9	9.8	10.0	85.0	69.0	80.0	1.5	0.7	0.6
Braintree ...	17.3	17.8	16.2	12.2	11.7	11.5	61.0	36.0	35.0	0.2	0.1	0.1
Brentwood ...	18.4	15.9	15.7	13.5	10.4	11.7	74.0	56.0	36.0	0.4	0.3	0.2
Brightlingsea ...	18.3	16.7	13.4	13.3	12.3	11.3	60.0	49.0	17.0	0.2	0.1	—
Buckhurst Hill ...	18.2	17.6	17.1	12.2	10.3	10.6	79.0	56.0	34.0	0.7	0.3	—
Burnham-on-Crouch ...	17.1	14.1	14.2	14.0	13.0	14.2	78.0	52.0	—	0.3	0.3	—
Chelmsford B. ...	18.6	17.1	15.1	11.2	9.9	9.2	72.0	41.0	27.0	0.3	0.2	—
Chingford ...	17.9	17.9	15.6	10.7	9.6	8.4	66.0	53.0	50.0	0.3	0.2	0.1
Clacton-on-Sea ...	15.4	13.0	12.2	13.9	10.1	9.0	74.0	29.0	33.0	0.6	0.1	0.1
Colchester B. ...	18.8	18.1	16.2	13.3	10.5	9.4	68.0	53.0	55.0	0.7	0.4	0.2
Epping ...	15.8	15.4	13.3	13.3	12.6	11.5	59.0	60.0	34.0	0.3	0.2	—
Frinton-on-Sea ...	12.1	12.8	12.4	8.8	6.7	7.1	46.0	43.0	115.0	0.1	0.1	—
Grays ...	20.3	20.7	17.7	13.5	9.6	9.2	80.0	52.0	65.0	1.0	0.5	0.5
Halstead ...	15.2	17.2	14.7	14.4	12.3	14.3	46.0	53.0	69.0	0.1	0.2	—
Harwich B. ...	26.6	21.6	20.2	12.9	10.6	10.6	72.0	61.0	51.0	0.8	0.4	0.3
Ilford ...	15.8	16.8	15.9	10.3	9.2	9.5	62.0	48.0	52.0	0.5	0.3	0.2
Leyton ...	18.4	17.5	15.7	12.5	9.9	10.1	77.0	56.0	54.0	0.7	0.5	0.4
Loughton ...	16.4	16.0	13.9	10.8	9.6	8.8	56.0	17.0	12.0	0.4	0.2	—
Maldon B. ...	17.0	16.0	14.1	14.4	12.2	12.8	57.0	35.0	22.0	0.6	0.0	—
Romford ...	18.7	18.0	16.4	12.6	11.1	11.3	73.0	53.0	44.0	0.8	0.4	0.3
Saffron Walden B. ...	14.1	14.5	11.3	15.2	13.5	12.5	55.0	62.0	95.0	0.2	0.4	0.1
Shoeburyness ...	23.7	21.7	24.2	10.9	9.2	9.4	48.0	55.0	51.0	0.8	0.2	0.4
Tilbury ...	27.0	24.9	25.0	15.8	9.3	8.6	83.0	61.0	45.0	0.7	0.6	0.3
Waltham Holy Cross ...	18.6	16.9	13.9	12.7	9.9	7.8	76.0	48.0	41.0	0.5	0.3	0.1
Walthamstow ...	19.0	19.2	17.9	11.5	9.8	10.0	70.0	56.0	51.0	0.6	0.5	0.4
Walton-on-the-Naze ...	17.4	14.6	10.4	11.8	9.9	10.8	98.0	66.0	74.0	0.9	0.3	—
Wanstead ...	13.2	13.5	13.3	9.9	9.8	9.4	40.0	32.0	24.0	0.2	0.3	0.3
Witham ...	18.1	16.6	16.6	14.0	12.6	9.7	76.0	71.0	16.0	0.6	0.1	0.3
Wivenhoe ...	18.4	15.6	16.0	14.2	13.8	13.4	81.0	52.0	—	0.2	0.4	0.4
Woodford ...	16.4	16.2	15.2	11.0	9.3	9.1	48.0	42.0	39.0	0.4	0.2	0.1
Total—												
Urban ...	18.5	18.1	16.6	12.1	10.0	9.9	70.0	54.0	51.0	0.6	0.4	0.3
RURAL—												
Belchamp ...	15.4	17.5	15.8	17.2	14.2	14.6	54.0	60.0	61.0	0.4	0.2	0.2
Billericay ...	16.7	17.1	18.1	13.1	10.5	10.6	46.0	51.0	40.0	0.4	0.2	0.1
Braintree ...	15.9	15.7	13.0	14.0	13.4	13.1	68.0	44.0	20.0	0.3	0.1	0.1
Bumpstead ...	19.7	17.8	16.2	14.5	14.5	14.0	60.0	37.0	79.0	0.5	0.1	—
Chelmsford ...	19.1	18.2	17.4	13.7	11.1	10.7	66.0	48.0	37.0	0.3	0.2	0.4
Dunmow ...	16.8	15.8	14.2	14.4	12.9	13.3	64.0	52.0	51.0	0.2	0.1	0.1
Epping ...	16.1	17.6	15.3	12.2	10.9	9.7	54.0	46.0	43.0	0.3	0.2	0.4
Halstead ...	15.2	15.2	14.0	14.3	12.2	13.5	53.0	45.0	52.0	0.2	0.1	0.1
Lexden and Winstree ...	17.0	16.2	15.5	13.2	11.6	11.5	58.0	51.0	43.0	0.3	0.1	0.05
Malcon ...	17.3	16.9	15.4	13.7	11.4	10.1	54.0	50.0	43.0	0.2	0.2	—
Ongar ...	19.2	20.6	20.4	15.8	11.1	10.5	78.0	43.0	57.0	0.3	0.2	0.1
Orsett ...	20.7	19.7	17.5	12.1	9.2	8.8	75.0	53.0	74.0	0.7	0.3	0.1
Rochford ...	17.7	19.6	20.3	13.1	11.4	12.2	56.0	52.0	53.0	0.4	0.3	0.5
Romford ...	18.9	25.2	27.8	11.2	10.2	10.8	60.0	58.0	73.0	0.5	0.6	0.7
Saffron Walden ...	15.9	17.4	16.1	13.5	13.7	12.4	62.0	59.0	62.0	0.4	0.2	0.2
Stansted ...	16.7	17.1	14.4	12.6	12.0	10.1	52.0	39.0	30.0	0.3	0.1	—
Tendring ...	20.3	18.6	17.6	14.2	10.7	11.0	70.0	49.0	56.0	0.5	0.3	0.3
Totals—												
Rural ...	17.8	18.6	18.2	13.2	11.3	11.2	62.0	51.0	54.0	0.4	0.3	0.3
Urban ...	18.5	18.1	16.6	12.1	10.0	9.9	70.0	54.0	51.0	0.6	0.4	0.3
Adminis. County ...	18.3	18.3	17.1	12.4	10.4	10.3	68.0	53.0	52.0	0.6	0.4	0.3

CANCER.

The number of deaths from Cancer, malignant disease, during the last five years in Essex and in England and Wales has been as follows :—

Year.	Essex.		England and Wales.	
	Deaths.	Rate per 1,000 population.	Deaths.	Rate per 1,000 population.
1921	1,101	1'21	46,022	1'21
1922	1,144	1'24	46,903	1'22
1923	1,208	1'30	48,668	1'27
1924	1,197	1'26	50,389	1'30
1925	1,301	1'35	51,939	1'31

A great deal of research in respect to the causation of Cancer is being undertaken by various bodies, but although certain discoveries have been made, it is a regrettable fact that at present the only safe course for sufferers is by means of early diagnosis to secure radical surgical treatment.

It is the absence of any definite knowledge upon which suitable advice could be given that weakens the special propaganda work organized by the British Red Cross Society and other bodies. Experience shows that unless exceedingly moderate language is used in such propaganda, more harm is done by creating a state of Cancerphobia amongst the hearers, rather than inculcating useful habits and courses of living that would tend to prevent the actual disease or mitigate its effects if already existent.

NOTIFICATION OF INFECTIOUS DISEASES.

In Table XXXVII. of Part IV. is given a summary of notifications of infectious diseases received in the various Sanitary Districts during the year 1925.

SMALL-POX.

For the fifth year in succession no case of Small-pox has been notified in the Administrative County of Essex. Throughout England and Wales, however, 5,405 cases occurred during the year, which is a marked increase on the figures for the previous four years which are shown below :—

Year.	No. notified.			
1921	...	...	...	315
1922	...	...	...	973
1923	...	...	...	2,485
1924	...	...	...	3,765
1925	...	...	...	5,405

Particulars were received from various parts of the country regarding persons who were entering the County after being in contact with cases of Small-pox, and the appropriate Medical Officers of Health were informed accordingly.

The London County Council have been good enough to continue the arrangement whereby the services of Dr. W. McConnell Wanklyn are loaned to any Medical Officer of Health in the Administrative County of Essex on application to the County Medical Officer. During the year six such applications were received and six patients examined, and in each instance Dr. Wanklyn was satisfied that the patient was not suffering from Small-pox. Essex is fortunate in being able to call on such an experienced Consultant whose services have been much appreciated.

Dr. Wanklyn's services can be obtained at any time by telephoning to the County Medical Officer (Chelmsford 120) or in emergency telephoning direct to Dr. Wanklyn, whose numbers are :—

Office : Hop 5000. Private : Riverside 2678.

Hospital Accommodation. Each Local Sanitary Authority, with three exceptions (Leyton Urban, Walthamstow Urban and Bumpstead Rural), has made some provision for the isolation and treatment of Small-pox cases, either by establishing a hospital for their own area or by combining with other Local Sanitary Authorities in the maintaining of a Joint Hospital. Some of the hospitals in the former category cannot be described as efficient or sufficient in the event of an outbreak of the disease, this being notably so in Burnham Urban, Maldon Borough and Rural and Witham Urban.

A summary of the accommodation provided for Small-pox cases is given below :—

(1) NORTH-WEST ESSEX, comprising :—

District.			Estimated population, 1925.
(a)	Belchamp R. ...	...	4,155
	Braintree U. ...	...	7,098
	„ R. ...	...	19,010
	Dunmow R. ...	...	15,110
	Halstead U. ...	...	5,920
	„ R. ...	...	9,636
	Saffron Walden B. ...	...	5,574
	„ R. ...	...	9,960

The Hospital is situated at Sible Hedingham (Telephone No. 7 Sible Hedingham), and is utilised by the County Council as a sanatorium for children under agreement with the Halstead Rural District Council. Sporadic cases occurring in any of the above-mentioned districts would be treated at the Colchester Small-pox Hospital by arrangement, but in the event of an outbreak the County Council are under agreement to vacate the hospital within 24 hours. The hospital provision is satisfactory.

(b) Stansted Rural. Population (Estimated, 1925), 6,914.

This Rural Council is one of the nine Local Sanitary Districts (eight of which are in Hertfordshire) forming the Combined Districts of East Herts and Essex, united for appointing a whole-time Medical Officer of Health under Section 286 of the Public Health Act, 1875. The Small-pox Hospital is provided by a Joint Hospital Board and is situated in the Hadham District between Much Hadham and Bishops Stortford.

(2) NORTH-EAST ESSEX comprising :—

District.	Estimated population, 1925.
Brightlingsea	4,314
Clacton-on-Sea U.	12,480
Colchester B.	48,400
„ Port	—
Frinton-on-Sea U.	2,093
Harwich B.	12,650
Lexden & Winstree R.	19,540
Tendring R.	22,310
Walton-on-the Naze U.	2,591
Wivenhoe U.	2,315

The Small-pox Hospital (Telephone No. 24 Colchester) serving these districts is provided by the Colchester Borough Council, with whom each Authority has an agreement. It has accommodation for 20 patients and stands half-a-mile from the Isolation Hospital at Mile End, from which it is administered when open.

Harwich Port Sanitary Authority have made arrangements with the Ipswich Borough Council to receive their cases.

This arrangement makes satisfactory provision for the whole of the extreme north-eastern portion of the County.

(3) MID-ESSEX, comprising :—

District.	Estimated Population, 1925.
(a) Chelmsford B.	21,900
Chelmsford R.	26,000

The Small-Pox Hospital (Telephone No. 196 Chelmsford) serving these districts is provided by the Chelmsford Joint Hospital Board and is situated at Galleywood, having accommodation for six patients. Land is available on which tents could be erected if required.

(b) Burnham Urban. Estimated population, 3,429.

No building is provided, but the Urban Council have arranged for a tent to be placed in a field on the adjoining marshes. This is unsatisfactory, but the Urban Council have endeavoured so far without success to make suitable arrangements with

contiguous hospital boards. The only satisfactory solution would be the establishment of a central hospital for Mid-Essex, or that the Burnham Council should make an arrangement with the West Ham County Borough—see paragraph (5) below.

District.				Estimated Population, 1925.	
(c)	Maldon B.	...	...	...	6,296
	„ Port	...	...	...	—
	Maldon R.	...	...	...	16,590
	Witham U.	...	...	...	3,785

No permanent hospital is provided, but the Maldon Joint Hospital Board own land at Little Totham with a shed where a temporary building could be erected for the accommodation of Small-pox patients at short notice. In addition, the Rural Council have wooden buildings, &c., at Asheldham, which are kept in case of an outbreak of Small-pox in the parishes not in the hospital area. This provision cannot be regarded as satisfactory.

(4) SOUTH-EAST ESSEX, comprising :—

District.				Estimated Population, 1925.	
	Rochford R.	...	...	...	27,530
	Shoeburyness U.	...	...	...	5,666

The Small-pox Hospital serving these districts is provided by the Rochford Joint Hospital Board and is situated at Nobles Green, Eastwood. It consists of two wards with accommodation for 10 beds.

(5) SOUTH-WEST ESSEX, comprising :—

District.				Estimated Population, 1925.	
(a)	Grays U.	...	...	...	18,320
	Orsett R.	...	...	...	23,900
	Tilbury U.	...	...	...	12,400

The Small-pox Hospital (Telephone No. 233 Tilbury), serving these districts is situated at Stifford, in the Orsett Rural District, and is provided by the Orsett Joint Hospital Board, having accommodation for 22 patients. The provision is satisfactory.

West Ham County Borough have made a reciprocal agreement with the Orsett Joint Hospital Board.

(b) The undermentioned Local Sanitary Authorities have an agreement with the West Ham County Borough whereby sporadic cases of Small-pox can be treated at the Orsett Small-pox Hospital, whilst in the event of an epidemic cases could be sent to the Dagenham Small-pox Hospital, which is now used by West Ham as a Sanatorium and which can be vacated at short notice. The provision is satisfactory.

District.			Estimated Population, 1925.
Barking U.	...	...	38,450
Billericay R.	...	...	27,810
Brentwood U.	...	...	7,072
Buckhurst Hill U.	...	...	5,094
Chingford U.	...	...	10,310
Epping U.	...	...	4,414
Epping R.	...	...	15,190
Ilford U.	...	...	93,590
Loughton U.	...	...	6,013
Ongar R.	...	...	10,320
Romford U.	...	...	20,670
Romford R.	...	...	38,680
Waltham Holy Cross U.	...	...	6,976
Wanstead U.	...	...	15,880
Woodford U.	...	...	21,800

GENERAL. It cannot be said that the above-mentioned schemes make satisfactory provision for the Administrative County as a whole, as they are piecemeal in character and tend to overlap one another. The extra-metropolitan portion of Essex is so interwoven with the metropolis that provision for the isolation and treatment of small-pox should be common to all these populous districts. The rest of the Administrative County could be served adequately by the Orsett Small-pox Hospital for South-Essex and Colchester and Sible Hedingham Hospitals for North-Essex. This would liberate the remaining institutions for other purposes.

To bring about this re-arrangement, the County Council would need to obtain the necessary powers and past experience shows that a serious emergency or even catastrophe will be necessary before this can be achieved.

ISOLATION HOSPITALS.

Under Section 21 of the Isolation Hospitals Act, 1893, the County Council may, where they deem it expedient to do so for the benefit of the County, contribute out of the County rate a capital or annual sum towards the *structural* and the *establishment* expenses of an Isolation Hospital or to either class of such expenses.

Section 2 of the Isolation Hospitals Act, 1901, extends the above provisions, so as to include the power to contribute to any hospital provided by a local authority (including a joint board) within the meaning of the Public Health Act, 1875, for the reception of patients suffering from infectious disease, whether within the area of the County Council or not, but the consent of the Local Government Board shall be required to an annual contribution under this section by the County Council to a hospital, the cost of providing which, or of any permanent extension or enlargement of which, has been defrayed otherwise than out of borrowed money.

Conditions under which Grants are made by County Council.

On 28th August, 1902, the Public Health Committee decided that the County Medical Officer when inspecting the hospitals yearly should give his attention to the following points :—

1. The adequacy of the precautions taken to prevent infection being conveyed by inmates to persons outside, with special reference to the nature of the enclosure.
2. The position and area of the hospital site and the adequacy of the hospital for the whole of the district served.
3. The general character and arrangement of the several buildings, the condition of repair, adequacy of lighting, heating, ventilation, drainage, and water supply.
4. The amount of accommodation provided, allowing 2,000 cubic feet for each bed; the number of diseases which can be treated at the same time with proper separation of the sexes.
5. The arrangement and furnishing of the wards and administrative block and the convenience for nursing.
6. The efficiency of the staff and of the administration generally.
7. The adequacy of the arrangement for moving patients, for admitting and discharging patients, and for disinfection.
8. Whether the cost of the hospital was met by loan or otherwise.

Amounts of Grants.

On 10th November, 1904, the Public Health Committee decided that a grant of £5 per bed be made, and that every Isolation Hospital Authority applying for a grant be asked to make a return on a certain definite form, giving particulars of the money expended during the financial year. This grant was subject to there being 2,000 cubic feet of space for each bed and based also on the conditions enumerated above.

In the year 1919-20 the scheme was extended, so as to include a grant of £10 per annum to each hospital possessing a motor ambulance.

Memorandum by Ministry of Health.

In January, 1924, the Ministry of Health circulated a memorandum which was designed to represent to those who are responsible for the health of communities, the importance of providing hospital accommodation for the isolation of cases of infectious diseases, and of doing so before the actual invasion of their districts by such diseases.

The Ministry also state that an Isolation Hospital was intended primarily for the protection of the public at large rather than for the benefit of individuals, and it is undesirable that admission should be subject to restricted charges and conditions which may tend to prevent the use of the hospital by the poorer portion of the community, that is to say, by those who have less facilities for isolation and treatment at their homes.

The Ministry also emphasise the importance of avoiding the establishment of several smaller hospitals where one central hospital would be to the advantage of the community both from the point of view of efficiency and economy.

As a rough estimate, one bed for every 1,000 inhabitants is sometimes adopted, but the Ministry agree that in view of the diverse circumstances of different districts, this cannot be regarded as a definite standard.

Amongst the most useful and practical advice in regard to the hospital structure, the Ministry state that in all ward blocks, except cubicle blocks of hospitals for infectious diseases other than Small-pox, each bed must have at least 12 linear feet of wall space, 144 square feet of floor space, and 1,872 cubic feet of air space. It will be seen that the cubic capacity is slightly less than the 2,000 cubic feet fixed as a basis by the County Council for grant purposes.

Amended Conditions under which Grants are made by County Council.

During the year 1925, the conditions under which annual grants are made to Boards of Isolation Hospitals were carefully reviewed, and on 17th February, 1925, the County Council approved the following scheme. Under this augmented scheme the County Council may, with the approval of the Ministry of Health, make grants to Boards whose hospitals were not provided out of loan. Another new provision is the availability of grants towards exceptional expenses out of loan on improvements, offering an inducement to Boards of small hospitals to improve such hospitals, *e.g.*, by installing electric light in lieu of unsatisfactory oil lamps, &c.

Scheme of Grants in aid of Isolation Hospitals.

(1) That the grants made by the County Council in accordance with the Isolation Hospitals Act, 1893, to the Boards of Isolation Hospitals within the Administrative County, in future be on the following basis:—

- (a) Five pounds (£5) per annum per bed per 2,000 cubic feet accommodation in buildings erected out of loan.
- (b) Ten pounds (£10) per annum for providing a motor ambulance.
- (c) Special grant towards exceptional expenses out of loan on improvements carried out during the year to the satisfaction of the County Architect.

(2) That the grants be extended to Isolation Hospitals provided out of revenue of the local authority in accordance with the resolution of the Council in February, 1922, when approved by the Ministry of Health.

(3) That the foregoing grants to the Boards of Isolation Hospitals be made, subject to the following conditions being complied with to the satisfaction of the County Medical Officer of Health :—

i. To make adequate provision for the reception, isolation and care of persons suffering or suspected to be suffering from infectious disease within the area served by the Hospital Board.

ii. To provide adequate and efficient medical, nursing and domestic staff and adequate accommodation for such staff.

iii. To provide adequate arrangements for conveyance of patients to and from the hospital and for all necessary disinfection.

iv. To make adequate provision for the general administration, repairs, upkeep, water supply, lighting, heating, furnishing, fire appliances, ventilation, drainage and cleanliness of all buildings.

v. To be prepared, if accommodation is available, to admit and treat patients from other hospital areas upon agreed terms.

vi. To ensure that charges and conditions are not so restrictive as to prevent the hospital from carrying out its primary duty, namely, the protection of the public.

vii. To meet at least quarterly, or oftener as required, and receive written reports from the Medical Superintendent and Matron.

viii. To grant every facility to the County Medical Officer of Health in the annual inspection of the hospital.

ix. To arrange for the following to be furnished to the County Medical Officer of Health :—

(a) Annual Return, including Statement of Accounts, not later than 31st May each year.

(b) Annual Report from Medical Superintendent dealing with types of disease treated, adequacy of arrangements, medical and nursing, care of patients, &c.

(c) Monthly Return, including number of patients suffering from the various diseases admitted and discharged.

Copies of the above amended conditions were sent in October, 1925, to the Hospital Boards concerned, one or two of whom had difficulty in accepting Clause v. It was, therefore, deemed desirable to issue a circular, an extract from which is given below, to certain of the Hospital Boards explaining the County Council's object in including the paragraph in the conditions :—

"The whole purpose of this clause is that in the event of a neighbouring isolation hospital being overcrowded owing to an epidemic of infectious disease, or if, for any other cogent reason such hospital is unable to satisfactorily deal with patients from its own area, accommodation shall be available at your Hospital for the reception of cases from that area. It is only under such reasonable circumstances that the County Council require a Hospital Authority to receive cases from other areas. Sufficient reserve for local requirements would always take precedence of outside cases.

"Modern facilities for motor transport of patients makes it undesirable that one isolation hospital should be practically empty whilst at the same time a neighbouring hospital is overcrowded or unable to take all the patients which require isolation in a fever hospital. Table IV. in my Annual Reports for the years 1922, 1923 and 1924, clearly demonstrates the wide variation in the cost per bed and the cost per patient at the various institutions according to whether the beds have been fully utilised or have remained practically empty."

ACCOMMODATION PROVIDED. A summary of the accommodation provided for the isolation of infectious cases in the Administrative County is given on page 29, which also shows the area served by, and the name of the Medical Officer of, each hospital.

The hospitals marked with an asterisk in the statement on the following page were erected out of loan and are therefore eligible for annual grants from the County Council. During the year these hospitals were inspected and the annual grant (see Table VII.) was allowed when improvements recommended by the County Medical Officer at certain hospitals had been carried out.

In respect to the six hospitals which were not erected out of loan, and to the extensions built out of revenue at those hospitals which were erected out of loan, these are to be inspected and reported upon with a view to consideration being given to their eligibility or otherwise for grants under paragraph 2 of the Scheme of Grants-in-Aid.

Since October, 1923, a monthly return has been furnished by each of the 15 hospitals whose beds are eligible for grants showing the number of beds occupied by patients suffering from infectious disease on the date of the return. Table VIII. on page 32 summarises these returns and compares them with the number of beds which rank for grant.

In the report for 1921 reference was made to the large number of beds found unoccupied at the annual inspection and yet practically full hospital staffs had to be maintained. Since the advent of motor ambulances it is quite as convenient to

Isolation Hospital.	Area Served.		No. of Beds Provid.	Name of Medical Officer.
	Sanitary District.	Population.		
Barking	Barking U.	38,450	50	Dr. Kerr Simpson
*Braintree	Braintree U.	7,098	8	Dr. H. G. K. Young
	" R.	19,010		
*Billericay	Brentwood U.	7,072	22	Dr. J. Douglas Wells.
	Billericay R.	27,810		
Burnham	Burnham U.	3,429	20	Dr. T. D. White
*Colchester	Brightlingsea U.	4,314	175	Dr. W. F. Corfield
	Colchester B.	48,400		
	Frinton U.	2,093		
	Walton-on-Naze U.	2,591		
	Wivenhoe U.	2,315		
	Belchamp R.	4,155		
	Lexden & Winstree R.	19,540		
	Tendring R.	22,310		
*Chelmsford	Chelmsford B.	21,900	43	Dr. R. H. Vercoe
	" R.	26,000		
*Clacton	Clacton U.	12,480	17	Dr. W. A. Milne
*Dunmow	Dunmow R.	15,110	18	Dr. J. N. Gardiner
Epping	Epping U.	4,414	25	Dr. C. E. Denning
	" R.	15,190		
*Grays and Orsett	Grays U.	18,320	87	Dr. S. G. Floyd
	Tilbury U.	12,400		
	Orsett R.	23,900		
*Halstead	Halstead U.	5,920	16	Dr. C. Gordon Roberts
	" R.	9,636		
Harwich	Harwich B.	12,650	42	Dr. G. Ford Porter
*Ilford	Ilford U.	93,590	85	Dr. A. H. G. Burton
Leyton	Leyton U.	132,700	92	Dr. J. F. Taylor
*Maldon	Maldon B.	6,296	10	Dr. H. Reynolds Brown
	" R.	16,590		
	Witham U.	3,785		
*Rochford	Rochford R.	27,530	24	Dr. A. C. Lewis
	Shoeburyness U.	5,666		
*Romford	Romford U.	20,670	70	Dr. A. Ball
	" R.	38,680		
	Ongar R.	10,320		
*Saffron Walden	Saffron Walden B.	5,574	21	Dr. S. R. Richardson
	" R.	9,960		
*Waltham Holy Cross	Buckhurst Hill U.	5,094	42	Dr. F. A. Harger
	Chingford U.	10,310		
	Waltham Holy Cross U.	6,976		
	Woodford U.	21,800		
*Walthamstow	Walthamstow U.	130,800	100	Dr. J. J. Clarke
	Loughton U.	6,013		
Wanstead	Wanstead U.	15,880	20	Dr. P. Macgregor

N.B.—Bumpstead Rural and Stansted Rural are participating authorities in joint schemes which provide accommodation outside the Administrative County.

transfer a patient 30 or 40 miles with ease, comfort and safety as it was formerly to move a patient three or four miles by horse ambulance. With these facilities, the whole Administrative County could be served adequately by half of the existing hospitals, and the remaining half could then be used for other public health purposes, such as hospitals for advanced tuberculosis patients, open-air schools for weakly children, maternity hospitals, convalescent homes for orthopædic patients, etc.

An examination of Table VIII on page 32 discloses the fact that exceedingly few of the hospitals named therein are ever taxed to their maximum capacity. Moreover, when appropriate groups of hospitals are considered it will be seen that on very few occasions the total number of patients in all the hospitals could not be accommodated in one of them.

It is acknowledged that the incidence of infectious disease has not been heavy during the months under consideration but they are by no means atypical. Excessive pressure in any one area could be relieved without much difficulty under paragraph 3 (v) of the Scheme of Grants-in-Aid. However, this matter is referred to the Isolation Hospital Boards and Committees for their earnest consideration as considerable economies could be effected without detriment either to the efficiency of the isolation system or to the welfare of the patients. It is not generally realised that the cost of maintaining the 14 grant-earning Isolation Hospitals in Essex amounted to £63,042 during 1925.

This being the first year under which the revised conditions of grant operate, an annual report has been furnished by the medical officer of each hospital. Several medical officers asked the County Medical Officer to suggest the form which their annual report should take, but it was not considered to be a wise plan to lay down definitely the headings on which the report should be based. A few headings were suggested for inclusion amongst other matters, and an annual return of diseases treated was asked for.

A study of the returns from the various hospitals show that at few of them are any diseases treated other than Typhoid, Diphtheria and Scarlet Fever. The great change in recent years in the frequency and morbidity of these three diseases, and also the recurrence of epidemics of other infectious diseases, such as Cerebro-Spinal Fever, Encephalitis Lethargica, Infantile Paralysis, Puerperal Fever, &c., suggest that a considerable broadening of the view point should be taken by the authorities concerned. There would be considerable justification to admit to hospital only the more serious types of Scarlet Fever or where the home conditions particularly require isolation, whilst some of the latter mentioned diseases could be admitted in their place. It is appreciated that in some of the smaller hospitals the arrangements for nursing, &c., would be exceedingly difficult if at any one time four or more different diseases were being treated. If, however, all Isolation Hospitals in the County were pooled, it would be very easy to allocate one hospital for a particular disease for the whole or a large

TABLE VII.

Shewing Accommodation, Number of Cases treated, Cost per Bed, etc., at those Isolation Hospitals, for which Grants were recommended for the Year ended 31st March, 1926.

	Billericay.	Chelmsford.	Clacton.	Colchester.	Dunmow.	Grays and Orsett.	Halstead.	Ilford.	Malden.	Rochford.	Romford.	Saffron Walden.	Walthamstow.	Waltham Joint.	TOTAL.
Number for purpose of Grant ..	22	21	17	58	8	20	16	194	10	12	42	14	91	42	467
Grant from County Council ..	£120*	£115*	£85	£200*	£50	£110*	£80	£480*	£80*	£70*	£220*	£80*	£465*	£220*	£2455
Cases treated during year:—															
Scarlet Fever ..	52	34	18	324	10	113	34	122	24	76	117	7	302	44	1277
Diphtheria ..	18	19	1	49	2	143	5	62	12	50	60	6	199	25	651
Typhoid ..	..	9	3	4	1	4	1	2	1	..	2	..	..	4	31
Other Diseases ..	1	4	5	113†	..	23	1	42†	3	12	1	..	38†	1	244
Total number of cases treated ..	71	66	27	490	13	283	41	228	40	138	180	13	539	74	2205
Medical Staff ..	7	8	3	26	2	13	3	25	4	3	15	2	27	4	142
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 ..	148 12 1	217 7 2	150 19 4	127 17 0	13 9 9	1316 0 8	64 0 0	1982 9 11	237 0 5	144 0 0	792 1 6	108 0 0	1570 0 10	456 13 4	7328 12 0
Interest on Loan ..	140 11 11	114 4 7	34 15 11	168 3 2	4 9 3	849 5 2	72 15 6	1371 10 1	62 0 7	28 0 11	225 5 8	83 6 5	249 13 4	133 11 2	3537 13 8
Structural Repairs ..	414 7 8	324 11 11	40 19 6	588 4 3	10 8 10	123 19 8	61 12 0	986 1 1	258 3 0	90 4 1	691 16 3	26 2 3	647 0 10	..	4263 11 4
Food (Patients and Staff) ..	1858 3 4	436 12 2	227 2 1	1945 17 2	114 15 8	1611 0 9	252 10 6	2641 10 1	428 15 6	508 13 3	1200 19 2	171 12 7	8694 5 3	386 18 0	15478 15 6
Estab. and Pats. Expenses ..	247 11 7	1139 5 10	729 11 3	5363 17 9	1072 9 3	1854 9 1	1133 18 10	4249 17 5	1111 16 0	1001 19 11	3003 1 2	445 13 6	8654 8 4	2424 17 10	32432 17 9
	£ 2809 6 7	2232 1 8	1183 8 1	8193 19 4	1215 12 9	5764 15 4	1584 16 10	11231 8 7	2097 15 6	1772 18 2	5913 3 9	834 14 9	14815 8 7	3402 0 4	63041 10 3
Cost per case treated, 1925-26 ..	39 11 4	33 16 5	43 16 7	16 14 5	93 10 2	20 6 8	38 13 1	49 5 3	52 8 10	12 16 11	32 17 0	64 4 3	27 9 9	45 19 5	28 12 4
.. .. year 1924-25 ..	29 14 6	17 11 9	54 12 1	17 3 9	119 19 7	31 9 3	41 0 3	64 6 8	48 3 5	19 12 10	30 10 5	29 12 11	34 13 3	27 18 5	32 0 3

*Includes Grant of £10 towards cost of maintenance of Motor Ambulance.

†Includes Tuberculous cases treated under the County Council scheme.

‡Includes the equivalent of 22 beds for the financial year ended 31st March, 1926.

TABLE VIII.

SHOWING BEDS OCCUPIED AT ISOLATION HOSPITALS BY INFECTIOUS CASES ON DATES GIVEN.

SHOWING BEDS OCCUPIED BY THE																																	
	No. of Beds for Grant.	1923.		1924.												1925.												1926.					
		Oct. 24	Nov. 22	Jan. 1	Feb. 6	Mar. 10	May 8	June 6	July 5	Aug. 6	Sept. 6	Oct. 6	Nov. 11	Dec. 6	Jan. 8	Feb. 7	Mar. 9	April 7	May 7	June 6	July 5	Aug. 5	Sept. 8	Oct. 6	Nov. 7	Dec. 2	Jan. 2	Feb. 2	Mar. 1	April 1	May 1	June 1	
N.W. AREA.																																	
Braintree	8	13	13	3	3	2	5	2	0	1	0	0	6	12	6	2	1	3	0	1	0	5	13	16	19	14	10	13	14	10	9	6	
Dunmow	8	1	1	3	3	1	0	0	0	4	4	2	1	1	0	0	1	2	2	0	0	1	2	3	1	4	1	0	0	0	0	1	
Halstead	16	0	2	3	5	0	3	12	22	2	9	8	3	1	5	2	2	2	0	0	1	5	6	4	3	1	2	9	11	16	18	15	
Saffron Walden ..	14	2	3	0	0	2	4	4	3	1	3	3	4	3	4	1	2	2	1	0	2	2	3	1	0	1	0	2	3	0	0	1	
N.E. AREA.																																	
Clacton	17	9	5	1	1	2	0	0	2	0	1	1	2	1	0	4	4	1	2	5	3	4	2	2	3	3	2	1	1	4	2	1	
Colchester	58	20	22	37	18	21	28	11	30	19	17	30	77	98	79	79	50	43	48	54	32	50	50	49	63	61	48	40	24	29	14	9	
CENTRAL AREA.																																	
Billerica	22	9	6	10	7	5	3	16	18	7	8	10	7	2	6	2	5	4	13	5	7	11	14	11	9	11	10	12	6	9	13	18	
Chelmsford	21	2	3	3	18	28	16	18	11	9	10	9	6	10	11	7	1	3	5	3	3	2	5	11	7	2	1	2	6	9	8	11	
Maldon	10	5	9	4	5	5	1	1	1	3	5	6	9	7	8	5	6	10	8	1	1	2	2	1	5	4	9	6	3	5	3	8	
S.E. AREA.																																	
Orsett	20	13	11	10	13	12	14	11	13	14	19	24	38	35	28	35	29	16	16	20	24	31	40	53	76	58	34	45	50	55	65	38	
Rochford	12	10	4	5	4	3	1	2	1	12	8	3	18	14	14	10	8	13	18	15	10	4	5	16	29	27	20	9	15	5	4	7	
S.W. AREA.																																	
Ilford	72	24	34	0	0	22	30	26	32	24	14	22	19	30	42	28	16	0	0	17	19	24	23	32	39	36	31	36	35	43	47	40	
Romford	42	13	20	19	13	10	12	19	12	16	15	14	20	39	33	18	19	20	17	11	13	13	10	19	21	23	23	38	29	33	40	40	
Walthamstow	91	79	88	63	48	69	46	44	46	46	43	43	66	63	82	67	57	72	66	50	56	37	51	52	65	71	48	57	59	63	61	62	
Waltham Joint ..	42	4	4	7	13	6	5	5	8	7	12	7	21	15	9	0	12	8	2	7	6	5	13	8	7	10	7	15	12	17	20	19	

portion of the County. In this way administration would be simplified, cross-infection would be avoided, more skilled nursing provided, while possibly useful research work could be carried out.

Dr. C. Gordon Roberts (Halstead) includes in his report the following paragraph which describes a difficulty which arises at small hospitals, and is another argument in favour of larger hospitals serving wider areas :—

“Increasing difficulty is found in obtaining satisfactory nurses on the permanent staff. There are fewer wishful to take up infectious work on account of its many restrictions, and those engaged prefer larger towns with greater attractions for off duty time.

“The work also is irregular—sometimes not enough to do—and at others with a rush of work it is difficult to arrange regular outings beforehand, and they resent having arrangements upset, *e.g.*, to go and fetch in a new case. With only a matron and two nurses, it is impossible to avoid this, and it would appear worth while for the County to arrange for a training centre of their own for nurses for this work, as a full curriculum is unnecessary for other than staff nurses.

“The large proportion of cases being children, it is a great desideratum that they should be really fond of children and willing to encourage play and games during convalescence.”

VENEREAL DISEASES.

Present Scheme.

Changes during the past five years in the arrangements for the diagnosis and treatment of Venereal Disease have been in the direction of providing increased facilities. Essex continues to participate in the London and Home Counties Scheme which utilises clinics at the principal London Hospitals. Under this scheme the hospitals undertake to provide (*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 clinical assistants at approved rates of remuneration, and (*h*) women doctors in clinics for women.

Essex patients can also obtain advice and treatment at the Colchester, Chelmsford, Southend-on-Sea, Ipswich and Gravesend Hospitals.

A summary of the treatment centres available for patients from the Administrative County of Essex, together with details as to the days and times of clinics, &c., which have appeared in previous reports, can be had on application to the County Medical Officer, Duke Street, Chelmsford.

Repeated efforts have been made during the year to provide a clinic for the Leyton and Walthamstow area as some patients are prevented by their occupations from attending the London Hospitals. A further endeavour is to be made to secure the service at a Local Hospital.

Propaganda.

The Ilford Venereal Disease Propaganda Committee, to whom the County Council have made an annual grant during the past six years, have continued their excellent work, particulars of which are given in the following report from Dr. A. G. H. Burton, Medical Officer of Health, Ilford, who acts as Hon. Treasurer :—

“ I beg to present in brief an account of the activities of my Committee for the year ending 31st May, 1926. Illustrated lectures were arranged during the year as follows :—

“ On October 14th, the films ‘ The Public Health Twins at Work ’ and ‘ Memories ’ were exhibited to women only, and in the evening the same films, together with the film ‘ A Peep into the Human Body ’ was shown to a mixed audience.

“ On November 10th, a lecture to women only, entitled ‘ The prevention of Disease by Domestic Hygiene,’ was given at the Institute, Becontree. In the evening of the same day the film ‘ Damaged Goods ’ was shown to a mixed audience. On December 9th a lecture at the Barkingside United Methodist Church was given, entitled ‘ The Social Evil—Temptation.’

“ On January 28th, 1926, a well attended lecture was given by Professor J. A. Thompson, Professor of Biology at the University of Aberdeen, at the Ilford Town Hall, on ‘ The Control of Life.’ These lectures were arranged in all parts of Ilford and were well attended by mixed audiences.

“ During the year numerous attempts have been made to enlist the co-operation of local employers of labour, but so far my Committee has been unsuccessful in arranging for propaganda meetings and lectures. Efforts have also been made for lectures to be given to the teaching profession in the district, but these also have so far proved unsuccessful.

“ Representation has been made to the Board of Guardians on matters affecting children under the control of the Board of Guardians, to members of Parliament and others on similar matters, also to various hospitals on the methods of following up in Venereal Disease clinics and hospitals.

"On the 14th May, 1926, a meeting of the Committee was held, addressed by a representative from the British Social Hygiene Council. Representatives from various public bodies were invited and attended, the subject being future propaganda work."

During the past five years the County Council, in co-operation with the British Social Hygiene Council, provided lectures and film displays in the following districts :—

1921.	1922.	1923.	1924.	1925.
Brightlingsea	Leyton	Barking (2)	Chelmsford	Leyton (2)
Clacton	Walthamstow	Grays (2)	Colchester	Walthamstow
Colchester		Walthamstow	Leyton	Epping R.
Grays			Romford	
Shoeburyness				
Wivenhoe				
Chelmsford R.				
Tendring R.				

Approved Practitioners.

Thirty-six Medical Practitioners in the County have been approved as qualified to administer arseno-benzol compounds. Eighty-eight doses were supplied from the County Public Health Department to three Medical Practitioners.

Number of Patients.

Table IX. sets out the number of patients treated for the first time during the year 1925, also the total number of attendances made by all patients. It will be noticed that the number of new patients was less than the previous year, but the total number of attendances was higher.

Payment of Fares.

During the year 1925, fares amounting to £14 17s. 4d. were refunded to necessitous patients when attending the Treatment Centres.

International Agreement for the treatment of Seamen suffering from Venereal Disease.

The Ministry of Health, by Circular 634, dated 17th November, 1925, refer to an International Agreement for the treatment of Venereal Diseases amongst seamen recently ratified. Under this agreement the contracting parties undertake that facilities shall be available at each chief sea and river port for the gratuitous treatment of merchant seamen without distinction of nationality.

Circular 635, dated 17th November, 1925, to Port and Riparian Sanitary Authorities, requires Port Sanitary Officers on the occasion of their first visit on board a ship to furnish a supply of notices for the crew stating the address of the Treatment Centres and the hours of the clinics. The provision of these notices is to be arranged by the Port Sanitary Authority with the County Council.

TABLE IX.

TREATMENT OF VENEREAL DISEASE, YEAR 1925.

Treatment Centre.	Patients from all Areas. Total No. treated for first time.	ESSEX PATIENTS.										
		Total Number treated for first time suffering from						Total Attendance of Essex Patients.	In-patient Days.	Doses of Arseno-Benzol Compounds.		Hostels.
		Syphilis.	Soft Chancres.	Gonorrhoea.	Not V.D.	Total.	Out-Patients			In-Patients	Total.	
London Hospitals	26,182	216	8	336	339	899	15143	2819	—	—	1738	1767
St.Bartholomew's, London	402	3	—	1	—	4	8	—	1	—	1	—
Chelmsford	21	7	1	6	7	21	145	35	—	—	79	—
Colchester	75	29	1	23	21	74	2013	—	317	—	317	—
Ipswich	197	3	—	4	4	11	153	83	25	—	25	—
Southend	261	4	—	11	25	40	382	—	46	—	46	—
Gravesend	158	10	—	8	1	19	272	—	75	—	75	—
Total for 1925...	27,296	272	10	389	397	1068	18116	2937	464	—	2281	1767
Total for 1924...	26,519	318	11	469	371	1169	17262	3140	574	—	2011	1990
„ 1923	26,665	290	13	413	259	975	15063	2983	—	—	2026	—
„ 1922	24,895	323	11	416	238	988	14145	3192	—	—	2420	2260
„ 1921	26,892	394	13	426	278	1111	14546	3197	—	—	3044	197

TABLE X.

SHEWING NUMBER AND TYPE OF SPECIMENS EXAMINED BY THE COUNTY
BACTERIOLOGIST—YEAR 1925.

SANITARY DISTRICTS.	Diph- theria.	Sputa.	Typhoid	Ring- worm.	Malaria.	Cerebro- Spinal Fluid.	Miscel- laneous.	Total.
URBAN—								
Barking ...	442	226	6	10	...	...	15	699
Braintree ...	66	64	6	20	...	...	5	161
Brentwood ...	121	76	4	2	...	...	4	207
Brightlingsea ...	11	14	2	...	...	...	2	29
Buckhurst Hill ...	2	5	2	...	...	...	...	9
Burnham-on-Crouch ...	...	10	2	...	...	...	2	14
Chelmsford B. ...	238	159	25	34	1	2	18	477
Chingford ...	23	32	...	...	...	...	29	84
Clacton-on-Sea ...	46	54	14	9	...	...	...	123
Colchester B. ...	5	117	1	32	...	...	...	155
Epping ...	82	54	...	24	...	...	...	160
Frinton-on-Sea ...	1	2	...	...	...	...	...	3
Grays ...	1,252	188	16	15	...	...	4	1475
Halstead ...	24	45	6	7	...	...	1	83
Harwich B. ...	39	59	14	4	...	1	2	119
Ilford ...	29	465	59	...	...	3	14	570
Leyton ...	2,638	806	10	39	...	...	9	3502
Loughton ...	1	9	...	1	...	...	...	11
Maldon B. ...	30	55	8	4	...	...	2	99
Romford ...	225	118	12	11	...	3	3	372
Saffron Walden ...	43	28	3	...	1	...	2	77
Shoburyness ...	34	25	6	7	...	...	2	74
Tilbury ...	52	16	...	2	...	...	...	70
Waltham Holy Cross ...	108	17	...	2	...	...	3	130
Walthamstow ...	127	1,014	40	2	1	...	27	1211
Walton-on-the-Naze ...	4	...	...	...	...	...	...	4
Wanstead ...	...	74	...	...	...	...	6	80
Witham ...	33	21	2	2	...	...	...	58
Wivenhoe ...	2	8	...	4	...	...	...	14
Woodford ...	78	63	13	24	...	...	6	184
RURAL—								
Belchamp ...	6	7	...	...	...	...	...	13
Billericay ...	98	76	6	1	...	...	11	192
Braintree ...	252	20	2	...	...	1	4	279
Bumpstead ...	...	9	...	...	...	...	...	9
Chelmsford ...	95	43	6	1	...	...	79	224
Dunmow ...	48	27	2	1	...	...	...	78
Epping ...	21	28	...	2	1	...	3	55
Halstead ...	156	33	6	2	...	...	1	198
Lexden & Winstree ...	26	23	2	2	...	...	8	61
Maldon ...	108	14	7	1	...	...	9	139
Ongar ...	22	6	...	4	...	...	3	35
Orsett ...	67	52	4	1	1	...	8	133
Rochford ...	158	62	...	4	...	...	...	224
Romford ...	87	41	2	1	...	...	8	139
Saffron Walden ...	11	24	...	...	...	...	2	37
Stansted ...	4	20	...	...	...	...	...	24
Tendring ...	28	38	4	10	...	...	1	81
Totals—								
Rural ...	1,187	523	41	30	2	1	137	1921
Urban ...	5,756	3,824	251	255	3	9	156	10254
Adminis. County ...	6,943	4,347	292	285	5	10	293	12175

EXAMINATION OF BACTERIOLOGICAL SPECIMENS.

Particulars of the specimens examined during the year 1925 by the County Bacteriologist, Dr. J. F. Beale, at 91, Queen Victoria Street, London, E.C.4 (Telephone: City 7116) are given in Table X. on page 36A. The total number was 12,175, or an increase of 2,223 over the previous year.

The following Table shows the number of specimens dealt with during the past five years :—

Year.					Total No. of specimens examined-
1921	...	...	...	...	7,949
1922	...	...	...	...	7,392
1923	...	...	...	...	7,605
1924	...	...	...	...	9,952
1925	...	...	...	...	12,175

A few local Sanitary Authorities have made their own arrangements for certain of the laboratory tests supplementary to the arrangements made by the County Council for the whole of the Administrative County.

In last year's report was published the augmented list of examinations approved by the County Council, and this is still in operation. No provision is made in that list for verifying microscopical examinations of milk for tubercle bacilli by guinea pig inoculations. This omission was represented to the County Council during 1925, when the County Medical Officer was authorised to sanction on application an inoculation of a guinea pig at the cost of the County Council, where in spite of a negative microscopical examination, considerable suspicion of the presence of tubercle in the milk supply still exists. The number of such inoculations was limited to 15 for the financial year ending 31st March, 1927.

There is no question that this County laboratory service is efficient, economical and entails the least possible delay in giving information to the practitioner.

HOUSING.

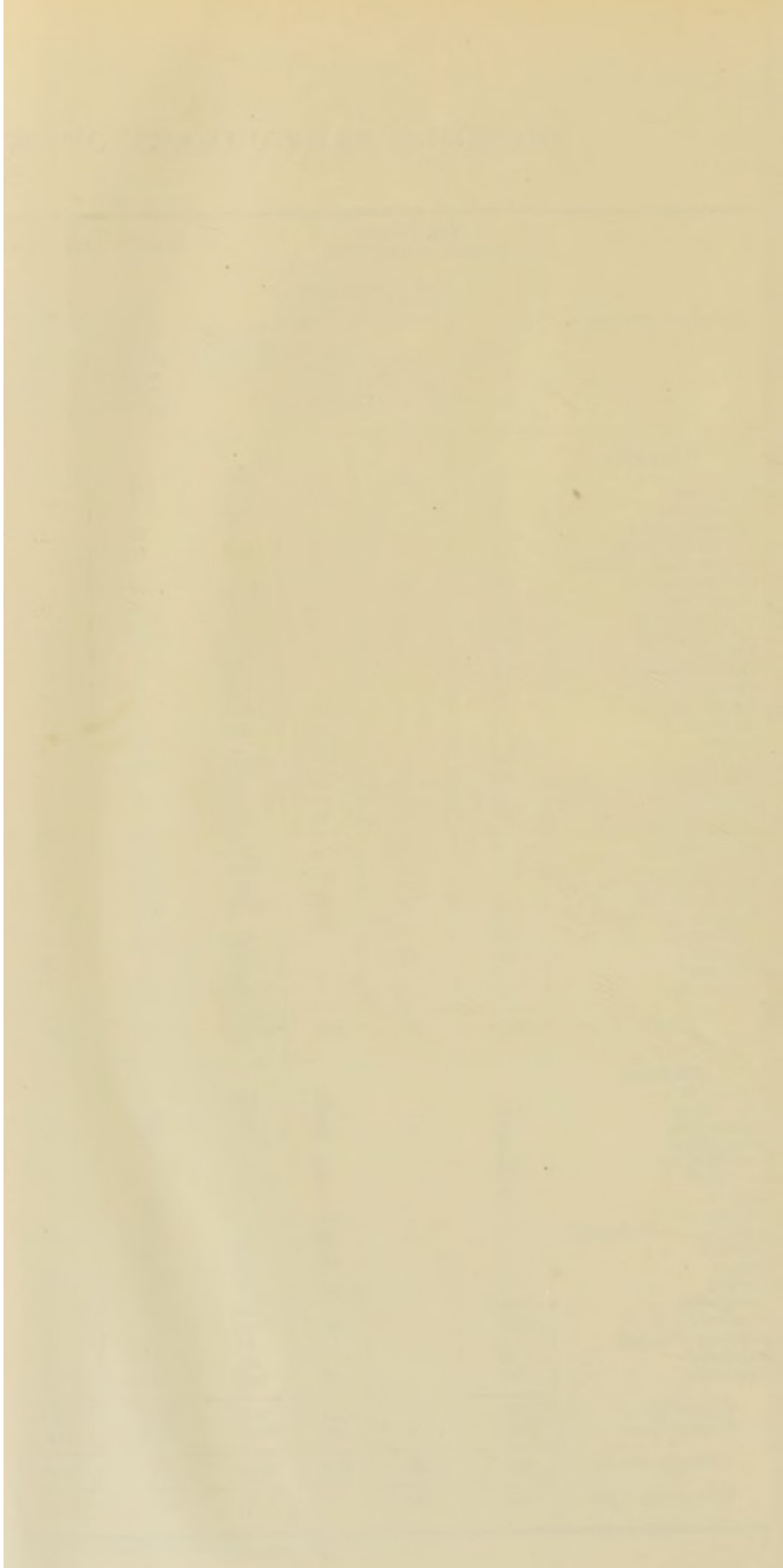
Table XI. sets out particulars of the work carried out by Local Sanitary Authorities under the Housing Acts during the year 1924. It is impossible to furnish this information for the year 1925, as, at the time of writing, reports for that year have not been received from all the Medical Officers of Health.

The period under review will rank as an outstanding year in housing matters owing to the placing on the statute book of the Housing Act, 1925, which consolidated the enactments relating to the Housing of the Working Classes in England and Wales. For 13 years, from 1890, the expression "Working Classes" was kept in the titles of the Acts, but since 1903 the tendency has been to drop this unfortunate expression which has always been misleading, not only to health officials, but to the

TABLE XI.
SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE
HOUSING ACTS DURING THE YEAR 1924.

SANITARY DISTRICTS.	NEW HOUSES ERECTED DURING 1924.			UNFIT DWELLING HOUSES				Houses rendered fit in consequence of informal action by Local Authority.	ACTION UNDER STATUTORY POWERS.				PROCEEDINGS UNDER PUBLIC HEALTH ACTS.			PROCEEDINGS UNDER SECTIONS 17 & 18 OF HOUSING TOWN PLANNING, ETC., ACT, 1909.					
	Total.	With State assistance under Housing Acts, 1907, 1923 or 1924 by	Other Bodies or Persons.	Total No. inspected for Housing Defects.	No. inspected and recorded under Housing Regs. 1910.	No. found so danger- ous or injurious to health as to be unfit for human habitation.	No. found not in all respects reasonably fit for human habitation.		Houses in respect of which Notices were served requiring repairs.	No. Dwelling Houses rendered fit by Owners.	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 by Owners.	Local Authority in default of Owners.	No. representa- tions made with view to making Closing Orders.	No. of Dwelling Houses in respect of which Closing Orders were made.	No. of Houses Closing Orders determined Dwelling Houses being rendered fit.	No. of Houses Demolition Orders made.	No. of Houses demolished in pursuance of Demolition Orders.	No. of Houses demolished voluntarily.
URBAN.																					
BARKING	173	92	81	2367	837	9	1700	1305	28	25	3	9	367	367	...	...	...	...	...	...	
BRAINTREE	57	...	54	321	207	...	134	130	...	...	...	...	21	1	...	...	...	...	...	...	
BRENTWOOD	13	...	...	135	...	...	...	14	1	75	...	...	...	...	...	...	...	...	...	...	
BRIGHTLINGSEA	6	...	...	56	56	...	...	3	...	...	...	...	...	...	...	...	...	...	...	2	
BUCKHURST HILL	40	...	23	162	69	...	21	90	...	1	...	...	7	7	...	...	...	...	...	...	
BURNHAM-ON-CROUCH	13	...	11	...	...	...	...	18	...	6	...	...	...	...	...	...	...	...	...	...	
CHELMSFORD B.	146	50	...	1634	72	1	15	14	...	...	...	...	845	741	...	...	...	...	...	...	
CHINGFORD	200	...	...	145	...	...	87	82	2	...	2	...	1	1	...	...	...	...	...	...	
CLACTON-ON-SEA	223	26	52	350	100	...	33	64	33	26	1	...	2	9	...	...	...	...	...	...	
COLCHESTER B.	143	...	...	2264	1064	27	194	77	...	...	...	...	273	260	13	3	3	...	2	2	
EPING	21	6	6	58	...	...	41	41	...	...	...	...	...	...	...	...	...	...	...	...	
FRINTON-ON-SEA	26	...	...	9	...	...	8	1	...	...	...	...	...	...	...	...	...	...	...	...	
GRAYS	71	...	...	772	...	1	260	260	...	260	...	...	68	68	...	...	...	...	...	...	
HALSTEAD	28	8	20	386	...	...	386	276	110	71	39	...	68	406	10	...	...	...	...	...	
HARWICH B.	36	...	14	264	81	...	...	29	31	17	...	...	68	86	...	...	...	1	1	...	
ILFORD	496	...	496	53	2	562	533	14	2	...	...	...	14	14	...	...	...	...	...	...	
LEYTON	40	...	...	3604	830	...	2047	2413	...	...	...	...	73	63	...	...	...	...	...	...	
LOUGHTON	96	...	36	22	3	...	10	26	3	3	...	...	...	...	...	...	...	...	...	...	
MALDON B.	24	16	...	92	45	1	40	217	40	40	...	...	47	47	...	1	1	...	...	...	
ROCHFORD	125	...	21	399	2	230	...	89	20	20	...	...	69	69	...	...	...	...	...	2	
SAFFRON WALDEN B.	14	...	5	79	30	60	...	126	...	...	...	...	247	238	...	...	...	...	...	...	
SHOREHAMNESS	18	...	1	989	989	...	...	128	30	29	...	...	7	2	...	...	5	...	...	...	
TILBURY	1	...	...	227	48	...	173	172	...	...	...	...	...	...	...	...	...	...	...	...	
WALTHAM HOLY CROSS	9	...	...	287	223	...	191	172	...	...	...	...	7	...	...	...	1	...	...	...	
WALTHAMSTOW	112	16	10	9451	660	...	437	2254	66	49	6	...	10	6	4	...	...	...	...	...	
WALTON-ON-THAMES	33	...	25	3	...	1	29	29	1	1	...	...	34	33	...	1	1	1	...	...	
WANSTEAD	150	...	...	263	60	1	59	169	...	...	...	...	10	10	...	1	1	...	...	...	
WITCHAM	53	41	...	20	...	4	2	2	1	1	...	...	...	...	...	...	...	...	...	...	
WIVENHOE	4	...	4	50	...	3	5	6	...	...	...	...	...	...	...	...	...	...	2	...	
WOODFORD	55	...	...	1084	278	...	122	124	122	124	...	...	158	151	...	...	...	...	...	...	
URBAN TOTAL	2427	249	859	23348	5790	112	6804	8614	509	750	51	9	2362	2613	36	6	6	7	3	5	4
RURAL.																					
BELCHAMP	2	...	2	193	19	8	18	45	17	16	...	...	31	28	...	...	...	...	...	...	
BILLERICAT	662	...	106	389	279	19	148	32	27	25	...	3	106	61	...	6	3	...	2	...	
BRAINTREE	62	32	23	187	139	14	125	112	23	19	...	13	...	...	...	14	14	1	...	...	
BUMPSTEAD	2	...	...	26	11	...	11	11	...	11	...	...	39	39	...	...	...	...	...	...	
CHELMSFORD	117	...	1	121	...	6	21	103	...	...	...	...	133	160	...	6	6	...	...	...	
DUNMOW	43	...	3	40	2	1	39	33	2	1	...	...	5	1	...	1	1	...	...	1	
EPING	78	...	...	153	104	...	99	78	55	39	...	...	49	39	...	...	...	...	...	...	
HALSTEAD	31	...	20	543	543	...	63	15	...	...	...	...	66	78	...	...	...	...	...	...	
LEXDEN AND WINSTREE	145	30	68	1034	331	19	301	211	5	4	...	...	24	18	...	9	9	1	...	...	
MALDON	54	...	14	474	30	4	24	36	...	...	...	...	86	56	...	5	2	3	...	...	
ONGAR	41	...	...	1607	1607	156	159	11	...	...	...	...	...	...	...	2	2	1	...	...	
ORSETT	112	72	40	186	186	3	86	176	...	...	1	...	176	176	...	2	2	1	...	...	
ROCHFORD	434	...	...	429	112	8	163	92	163	51	...	2	111	65	...	8	8	1	3	2	
ROCHFORD	1536	...	1299	698	432	2	356	33	225	200	...	2	92	86	...	1	1	1	...	2	
SAFFRON WALDEN	4	...	...	51	18	...	3	11	...	...	...	...	...	...	...	...	...	...	...	...	
STANSTED	22	...	...	221	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	...	
TEDDING	102	...	38	267	176	8	239	82	...	...	...	...	3	2	...	1	2	1	1	1	
RURAL TOTAL	3447	134	1614	6618	3889	248	1849	1084	520	361	21	9	921	820	1	54	48	7	7	1	
URBAN TOTAL	2427	249	859	23348	5790	112	6804	8614	509	750	51	9	2362	2613	36	6	6	7	3	5	
GRAND TOTAL	5874	383	2473	31966	9779	360	8653	9698	1029	1111	51	30	3283	3433	37	60	54	14	10	12	
TOTALS FOR 1923	3885	807	*	31171	8940	386	4479	7369	1022	1250	50	3	4128	3778	48	56	51	28	7	6	

*No comparative information available.



eral public. The present consolidated Act gives, for the first time for many years, a comprehensive basis for housing activities, and is therefore welcomed by everyone concerned.

There are many districts in the Administrative County where, despite the progress of housing schemes, overcrowding seems an almost insurmountable problem. It is probable that each Local Sanitary Authority could give particulars of such distressing cases, and the County Tuberculosis Officers repeatedly find conditions which are far from satisfactory. Illustrative reports on three houses received during 1925 were as follows:—

Walthamstow. E.L.C. Tuberculosis Officer reports—

“This is one of those cases where father, mother and 3 children all sleep in one bed.”

Dagenham. Mrs. B. Tuberculosis Officer reports—

“The family has grown now to such an extent that Mrs. B. states that five of them occupy one bed and that she herself has to sleep upright in a chair in the kitchen, taking turns with a daughter in this arrangement.”

Maldon Borough. E.C.—

“There are 15 persons in 4 rooms and E., who is 13, sleeps in a room with her brother of 19.”

No report on this subject would be complete without some reference to the exemplary endeavours of the Tilbury Urban District Council to provide for the ever increasing housing needs of the area which are twofold:—(1) Reducing overcrowding, and (2) re-housing the inhabitants of existing unrepairable property.

The following extracts from the report of the Medical Officer of Health (Dr. W. T. G. Boul) for 1925 reviews the present position in this rapidly growing dockside area:—

“GENERAL HOUSING CONDITIONS IN THE AREA.

I. (a) The housing conditions are slowly improving as more houses are built and occupied, but the need for very many more houses is still apparent; some 60 per cent. of the older ones are still occupied by two or more families.

(b) A further number of cottages should be ready for occupation in the near future, and many more during the year.

II. OVERCROWDING.

(a) It is difficult to estimate the extent of overcrowding, as numbers of fresh families are continually coming into the district, attracted by the prospects of work on the proposed dock extension and new jetty.

(b) Measures taken or contemplated with regard to overcrowding.

A large housing scheme of 1,520 cottages is nearing completion, over 1,000 are now occupied, and others are in course of erection.

Provision has been made for a spacious recreation ground and park.

The district has now some 11 miles of concrete carriageways and a new surface water scheme, and it is noteworthy that not one case of street flooding was reported during the recent heavy rains.

III. FITNESS OF HOUSES.

(1) (a) Most of the older houses in the district, built about the time the docks were opened, are, generally speaking, more or less damp, having been built on marsh land without proper foundations, little or no damp-proof courses, etc., but fairly good progress has been made during the last five years to get this property into a reasonable state of repair, as will be shown by the figures in last year's survey of some of the property.

The result of an inspection of a large number of these houses by the Medical Officer of Health and the Sanitary Inspector shows the following percentages :—

Grade I.—i.e. Structurally sound and free from damp, 5 per cent.

Grade II.—Houses in tolerable condition, but in need of minor repairs, or with damp walls, defective roofs or guttering, 80 per cent.

Grade III.—Houses the condition of which is very unsatisfactory, and the defects of which demand immediate remedy, 11 per cent.

Grade IV.—Houses whose condition is such that Closing Orders should be applied provided that alternative accommodation can be found for the tenants, 4 per cent.

(b) General character of defects found in unfit houses. Dampness, defective roofs and guttering, yard paving, defective stoves, defective floors and absence of damp-proof courses.

(c) How far defects are due to the lack of proper management and supervision by owners, or to acts of waste or neglect by tenants.

It is difficult to apportion the blame. Bad management has had a lot to account for in the past ; overcrowding has been a big factor in the case, and carelessness and neglect on the part of some of the tenants has had its effects. The root cause of much trouble in the town is dampness, the blame for which must be apportioned to the owners of the past in failure to provide adequate damp-proof protection."

The South Essex Joint Advisory Town Planning Committee, which was formed on the invitation of the Ministry of Health in June, 1922, has continued to function. As stated in the Annual Report for 1922, the duty of this Committee was 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 Western centres of population at East and West Ham. Financial considerations, however, compelled the Committee to turn their attention to a smaller scheme to be produced by the Local Surveyors, and for this purpose a Technical Sub-Committee was appointed consisting of Local Surveyors and representatives from the Ministry of Health, Ministry of Agriculture, Port of London Authority and from the commercial and industrial interests in the region.

Anyone who has travelled from Tilbury, through Little Thurrock, Grays, West Thurrock and Purfleet will readily appreciate the need for such a comprehensive town planning scheme. In the past cottages have been erected and crowded together on the unsuitable low lying parts, in close proximity to the many and varied factories, the idea being to place the worker as near as possible to his labour without consideration being given to the effect of the home environment on the health of the breadwinner and his family.

On 21st October, 1925, the South Essex Joint Advisory Town Planning Committee received and adopted a preliminary report from the Technical Sub-Committee, and decided that a copy of the report should be sent to each Local Authority and to the Ministry of Health and that emphasis be laid on the importance of early reservation of land for public open spaces, agricultural and other public purposes before further developments increase their values.

The above-mentioned report dealt with preliminary investigations into the problem of preparing a Regional Plan. If the plan is to be effective it must be placed on a definite policy. The considerations that it is suggested should guide an effective policy of required development are set out below and were submitted for the consideration of the Joint Committee, so that in their approved form they may broadly indicate the lines on which the Joint Committee desire the plan to be prepared :—

- “ 1. The object of the plan may be said to be to direct development into lines that shall result in the best use being made of the resources and natural advantages of the region, in the interests of economy, efficiency, health, comfort and welfare.
- “ 2. Congestion of traffic in London is producing discomfort and inefficiency. The only fundamental cure can be by process of redistribution and decentralisation, so that things may be in their right place and transport of people and goods may be reduced to a minimum. To allow London to spread indefinitely over this region would, there-

fore, be detrimental both to London and to the region. The more self-contained and the less physically dependent on London, the region can be, the better for both.

- "3. If this aim of self-sufficiency is to be realised, the component parts of an effective self-supporting community must be planned for, with public services designed to meet their needs economically and efficiently, and linked together by an adequate system of transport.

"Broadly, such parts may be classified as follows:—

- (a) Industry.
- (b) Commercial.
- (c) Residential.
- (d) Recreation.
- (e) Community.
- (f) Agricultural.
- (g) Transport and public services.

"With regard to commercial and cultural needs, probably the region should remain to a considerable extent satellite to London, but regional development in these respects is also desirable.

"In most regions these functions are planned to be grouped round a number of distinct centres, defined by intervening belts of agricultural land. In this case, some definite separation from London by open land seems essential, but otherwise the region is peculiar in that industry is mainly tied to the River Thames, which for some 49 miles forms the south boundary of the region."

The report then outlines in detail, under headings (a) to (g), suggestions for the guidance of Local Authorities and others in the preparation of local town planning schemes.

It would be a prudent safeguard against future repetition of past failures if similar schemes were adopted throughout the whole county. A most vital need for a healthy nation is better and sufficient homes. At the same time educational, and when necessary, compulsory measures should be fully utilised in the maintenance of a minimum standard of cleanliness inside the home. Gas and electricity must be utilised more and more for the triple purpose of labour saving, cleanliness and economy.

TABLE XII.

SHOWING NUMBER OF HOUSES ERECTED IN THE VARIOUS SANITARY DISTRICTS
IN THE ADMINISTRATIVE COUNTY DURING THE YEARS 1920 TO 1924.

	No. of houses erected under municipal schemes and by private enterprise during						Houses said to be required during 3 years 1920 to 1922.
	1920.	1921.	1922.	1923.	1924.	Total.	
URBAN—							
Barking ...	6	134	202	137	173	652	1000
Braintree ...	54	40	9	14	57	174	*
Brentwood ...	10	18	17	10	13	68	100
Brightlingsea ...	...	1	1	1	6	9	*
Buckhurst Hill ...	2	24	4	8	40	78	30
Burnham-on-Crouch ...	20	12	20	18	13	83	50
Chelmsford B. ...	22	82	205	65	146	520	*
Chingford ...	77	121	66	92	200	556	200
Clacton-on-Sea ...	13	17	54	105	223	412	*
Colchester B. ...	78	75	51	91	143	438	600
Epping ...	8	9	8	8	21	39	25
Frinton-on-Sea ...	16	10	7	30	26	89	*
Grays ...	5	104	117	67	71	364	600
Halstead ...	2	8	...	7	28	45	*
Harwich B. ...	6	18	26	20	36	106	190
Ilford ...	119	533	1660	489	496	3297	600
Leyton ...	53	45	106	15	40	259	500
Loughton ...	...	37	26	33	96	192	50
Maldon B. ...	...	43	27	7	24	101	100
Romford ...	...	85	107	76	123	391	250
Saffron Walden ...	...	10	25	7	14	56	88
Shoeburyness ...	10	17	17	11	18	73	60
Tilbury ...	...	38	555	54	1	648	2000
Waltham Holy Cross ...	1	21	2	5	9	38	200
Walthamstow ...	35	161	324	96	112	728	1500
Walton-on-the-Naze ...	31	34	26	39	33	163	*
Wanstead ...	10	43	88	100	150	391	50
Witham... ..	3	3	1	9	53	69	*
Wivenhoe ...	16	17	2	0	4	39	59
Woodford ...	...	83	114	73	58	328	481
RURAL—							
Belchamp ...	4	1	9	3	2	19	*
Billericay ...	183	321	313	664	662	2143	340
Braintree ...	96	70	49	46	62	323	*
Bumpstead ...	...	14	12	1	2	29	80
Chelmsford ...	40	205	162	158	117	682	832
Dunmow ...	8	22	38	32	43	143	300
Epping ..	67	169	107	54	78	475	230
Halstead ...	13	11	47	20	31	122	224
Lexden and Winstree ...	21	146	60	83	145	455	201
Maldon ...	16	54	94	46	54	264	653
Ongar ...	42	48	48	41	41	220	250
Orsett ...	49	126	111	79	112	477	900
Rochford ...	379	550	331	331	434	2025	248
Romford ...	97	608	1267	617	1536	4125	931
Saffron Walden ...	27	25	37	8	4	101	188
Stansted ...	58	48	20	13	22	161	76
Tendring ...	30	153	136	37	102	458	302
Total Rural ...	1130	2571	2841	2233	3447	12222	6000
Total Urban ...	597	1843	3867	1687	2427	10406	9650
Grand total ...	1727	4414	6708	3920	5874	22628	15650

*Information not available.

DANGEROUS AND INSANITARY HOUSES. Table XI. on page 38 shows the number of houses in each sanitary district which, during 1924, were deemed to be in a state so dangerous or injurious to health as to be unfit for human habitation. According to Section 25 of the Housing Act, 1925 (previously Section 45 of the Housing of the Working Classes Act, 1890) each Rural Council is required to send to the County Council a copy of any representation or Closing Order made in respect to such property. It is noteworthy that only 5 of the 17 Rural Councils carried out their duty in this respect, the figures for the four years 1921-24 being as shown in the following Table:—

	1921.	1922.	1923.	1924.	Total.
No. of representations made in Rural Areas with a view to making of Closing Orders ...	72	99	46	54	271
No. of houses in respect of which Closing Orders were made in Rural Districts ...	56	78	40	48	222
No. of copies of representations of Closing Orders received by County Council ...	13	36	13	11	73

PROVISION OF HOUSES. In 1919 the Ministry of Health required each Local Sanitary Authority to complete a form of survey of the housing needs of their area and to furnish an estimate of the number of houses required during the next three years. The information which reached the County Public Health Department is not quite complete in this respect, so that it is impossible to show the estimated figure for each district. In Table XII. on page 43, however, an attempt has been made to compare the actual number of houses erected during the five years 1920-24, with the number of houses which it was estimated would be required during the three years 1920, 1921 and 1922.

It should be noted that Ilford Urban and Romford Rural Districts are unusually affected by the rapid growth of the Becontree Estate, where 5,069 houses had been erected and occupied up to 31st December, 1925.

TRADE, HOUSE AND OTHER REFUSE.

For many years the low-lying land in the south-east of the County has been a dumping ground for house refuse and manurial matter from London, amounting to thousands of tons per annum. Enquiries proved that these waste matters consisted of house refuse, road scrapings, gully sludge, market garbage, trade refuse from fish and greengrocers' shops, restaurants, &c., manure, builders' waste, &c. Obviously the transporting and tipping of such a mixture of organic and inorganic matter must give rise to complaints, and each year complainants communicate with the County Health

partment (after failing to obtain satisfaction from the Local Sanitary Authorities). The following is typical of the complaints which are received :—

“The occupants of these houses about two months ago had cause to complain to the Sanitary Inspector concerning an abominable stench created by a dump of refuse consisting of decomposed fish, chickens’ remains, rotten vegetables, &c., comprising sweepings from the London markets. He promised to have this remedied, and for a time the nuisance ceased. Now it has started again, and things are much worse than they were previously. Approximately there are about 30 tons being shot every other day, and as this is being dumped about 50 yards away from our houses, you will appreciate what a nuisance and disgusting thing it really is. There is nothing being done to clear any of it away, and with the hot weather coming and the inevitable advent of flies, mosquitoes, and other pests, there is no knowing what mischief may be caused.”

Investigations have been made in co-operation with the local health officials, and for a period the tipping contractors pay closer attention to the dumps. To assist in this direction, the Ministry of Health issued in 1922 for the guidance of Local Sanitary Authorities a list of precautionary measures for abating and preventing nuisances arising from refuse tips, and they laid emphasis on the following points :—

(1) That to prevent nuisances from fire, rats, flies or smells, the refuse shall be deposited in shallow layers, and each layer shall be promptly covered with earth or other suitable material.

(2) That each Council, in disposing of refuse, whether directly or by contractor, should take immediate steps to secure that the precautions now recommended are strictly observed, and that for this purpose they should—

(a) Where the refuse is disposed of directly, give instructions to their servants for the observance of these precautions.

(b) Where the refuse is disposed of by contract, secure that the terms of the contract clearly provide that their contractor must observe the precautions.

(c) Both as regards their own tips and those of contractors, make sure, by periodical visits of a competent officer (say once a week), that the precautions are fulfilled.

The precautions suggested by the Ministry of Health for abating and preventing nuisances arising from refuse tips are as follows :—

1. Every person who forms a deposit of filth, dust, ashes or rubbish of such a nature as is likely to give rise to nuisance, exceeding *cubic yards must, in addition to the observance of any other requirements which are applicable, comply with the following rules :—

* Appropriate figures should be inserted here, after full consideration of the local conditions. The Ministry will be glad to advise on this point and, in any event, to be informed of the figures adopted.

- (1) The deposit to be made in layers ;
- (2) No layer to exceed $\frac{1}{2}$ feet in depth ;
- (3) Each layer to be covered on all surfaces exposed to the air, with at least nine inches of earth or other suitable substance ; provided that during the formation of any layer not more than *square yards may be left uncovered at any one time ;
- (4) No refuse to be left uncovered for more than 72 hours from the the time of deposit ;**
- (5) Sufficient screens or other suitable apparatus to be provided where necessary, to prevent any paper or other debris from being blown by the wind away from the place of deposit.

2. Every person who deposits any filth, dust, ashes, or rubbish likely to cause a nuisance if deposited in any water must, so far as practicable, avoid its being deposited in water.

3. Every person who deposits any filth, dust, ashes, or rubbish, must take all reasonable precautions to prevent the breaking out of fires and the breeding of flies and vermin on or in such deposit.

4. If the material deposited at any one time consists entirely or mainly of fish, animal or other organic refuse, the person making such deposit must forthwith cover it with earth or other equally suitable substance at least two feet in depth.

5. Every person who deposits any filth, dust, ashes, or rubbish, must take all practicable steps to secure that tins or other vessels or loose debris likely to give rise to nuisance are not deposited in an exposed condition on or about the place of deposit.

6. Sufficient and competent labour must be provided in connection with the deposit to enable the necessary measures to be taken for the prevention of nuisance.

7. So far as practicable each layer of refuse which has been laid and covered with soil must be allowed to settle before the next layer is added.

8. Wherever practicable, the person making the deposit must avoid raising the surface of the tip above the general level of the adjoining ground.

9. All refuse must be disposed of with such dispatch, and be so protected during transit as to avoid risk of nuisance.

‡ Unless the circumstances are very exceptional, the depth of the layer should not exceed six feet.

** The object of this is to provide that even the surface which is allowed to remain exposed under the proviso to (3) shall be covered up after 72 hours.

In April, 1922, special enquiries were made to ascertain what areas were affected by this intolerable recurring nuisance, and the following information was supplied by the three rural districts affected :—

Sanitary District.	Sent from.	Refuse.		Location of Tip
		Nature.	Estimated amount per day.	
			Tons.	
Billericay R. ...	St. Pancras Borough Name not furnished	House "	Not given ?	Pitsea Bowers Gifford, Buttsbury and Wickford
Ersett R. ...	Kensington Borough Greenwich " Bermondsey "	House " "	160 65	Little Thurrock East Tilbury
Romford R. ...	Westminster " City Corporation Unknown	" " "	200 150 to 175 150	South Hornchurch " " " "

It is appreciated that London must remove its house and trade refuse expeditiously, but it is high time that some better means were devised to prevent London, particularly its wealthy boroughs, dumping refuse in another Authority's area. Conferences of representatives from the various London Authorities have been held from time to time but the nuisance continues, and is a disgrace to our modern civilisation. It is somewhat lamentable that the largest city in the world is still unable to set an example to the nation by disposing of its refuse in such a manner as not to be a nuisance to anyone.

RIVERS, STREAMS AND SEWAGE WORKS.

The valleys which require to be kept under supervision are the Blackwater, Cam, Chelmer, Colne, Crouch, Stour, Lea and Thames and tributaries (including Roding, Rom and Ingrebourne).

In the Lea Valley, which practically forms the western boundary of the County, all the supervisory work is undertaken by the Lea Conservancy Board under the powers granted by the Lea Conservancy Act. These powers are necessitated by the fact that the River Lea forms one of the sources of water supply of the Metropolitan Water Board.

Supervision of the River Thames (which forms the southern boundary of the County) and the tidal portion of the tributaries is carried out by the Port of London Sanitary Authority or the appropriate Sewers Commissioners.

The non-tidal portions of the remaining rivers in the County are kept under observation, visits being paid by the County Sanitary Inspector to the various sewage works, when samples of the effluents discharging into those rivers are taken. A summary of these is given in Table XIII., page 50.

(1) BLACKWATER VALLEY. (a) *Braintree Rural District*. The chief sources of pollution are at Bocking, Coggeshall and Kelvedon, and for some time past efforts have been made to prevent a continuance of the pollution. A special report (see copy below) was presented at the end of the year, when it was decided to ask the Local Sanitary Authority for their observations thereon :—

“ By report, dated 19th February, 1923, I gave full particulars of the sources of pollution of the River Blackwater in the Parishes of Bocking, Coggeshall and Kelvedon. After prolonged negotiations a conference of representatives of the Essex County Council and of the Braintree Rural District Council was held at River Plate House, Finsbury Circus, London, on 13th December, 1923. The representatives of the Braintree Rural Council on being informed that the County Council were determined to carry out the duties placed upon them by the Rivers Pollution (Prevention) Act, promised that the matter would receive consideration at their next meeting on 16th January, 1924, the result of which would be communicated to the County Council.

“ By letter, dated 24th January, 1924, the Clerk to the Braintree Rural District Council stated that in accordance with the assurance given at the recent conference, every effort will be made as rapidly as circumstances permit to remedy the alleged pollution of the River Blackwater.

“ At a meeting of the Housing and General Purposes Sub-Committee on 28th May, 1925, it was suggested that in view of the continued pollution of the river (at Bocking, Coggeshall and Kelvedon), enquiries might be made from the Braintree Rural District Council as to the present position of the schemes for providing more adequate means for the disposal of sewage from these parishes. I was instructed to take further samples of the sewage effluents in these parishes, and as a result I submit below a detailed report regarding each parish.”

(I) BOCKING PARISH. According to the 1921 Census this parish has a population of 3,784, the acreage being 4,639. There is a public water supply provided by the Rural Council. For the purpose of this report I have divided the parish into three sections, namely :—(a) Bradford Street, (b) Church Street, and (c) Church Lane.

(a) *Bradford Street*. This section, which appears to be the most populous, adjoins the Braintree Urban District on the north side. Apparently there is an old sewer, with catchpits at various points, which conveys sewage from a large number

houses and discharges it into the River Blackwater. There are no sewage disposal works for this portion, and the examinations of the samples of effluent entering the river give the following impurity figures as compared to the *County standard of 10'0 for a passable effluent and 7'0 for a good effluent, calculated in grains per gallon.

Date of Sample.			Impurity Figure.
12th January, 1923	...	...	41'3
23rd " "	...	...	28'0
5th December, "	...	...	28'4
19th November, 1925	...	...	40'7

(b) *Church Street* lies to the north of the parish at the end of Church Lane leading from Bradford Street. Practically untreated sewage (there being no disposal works) discharges from a pipe which is submerged in the River Blackwater. Samples taken gave the following impurity figures :—

Date of Sample.			Impurity figure.
23rd January, 1923	...	...	35'0
19th November, 1925	...	...	26'4

In this portion of the parish there is a factory where dyeing is carried out on a large scale. The firm reconstructed at great expense their private sewage disposal works in 1923, and are endeavouring to produce a trade effluent up to the County standard of 10'0. The following results of examinations of trade effluents were transmitted to them at the respective times :—

Date of Sample.			Impurity figure.
27th April, 1925	...	...	23'0
19th November, 1925	...	...	14'8

(c) *Church Lane.* The Council's housing site (estimated population 150) which is mid-way between the above-mentioned sections is drained to small sewage disposal works (installed December, 1921) on the southern bank of the River Blackwater. Samples taken have yielded the following impurity figures :—

Date of Sample.			Impurity figure.
23rd January, 1923	...	...	32'0
25th February, 1924	...	...	26'5
30th June, 1924	...	...	33'4
19th November, 1925	...	...	18'4

*It should be noted that this County standard is a purely arbitrary figure obtained as follows :—

Organic ammonia figure is multiplied by	...	...	100
Oxygen absorbed figure is multiplied by	...	...	10

The arithmetical mean is then taken.

Experience shows that it is a fair and reliable standard.

TABLE XIII.

SHOWING SEWAGE WORKS, NUMBER OF VISITS AND NUMBER OF SAMPLES TAKEN
DURING THE YEAR 1925.

River receiving Effluent.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken.		
				No. satisfac- tory.	No. un- satisfac- tory.	Total.
Blackwater...	Braintree ...	Braintree U. ...	2	...	1	1
	Bocking, Church Lane	Braintree R. ..	1	...	1	1
	Kelvedon Housing Site	Braintree R. ...	1	...	1	1
Chelmer ...	Chelmsford ...	Chelmsford B. ...	1	...	2	2
	Dunmow ...	Dunmow R. ...	1	1	...	1
	Felstead ...	Dunmow R. ...	2	1	2	3
Colne ...	Halstead ...	Halstead U. ...	1	...	1	1
Crouch ...	Wickford ...	Billericay R. ...	1	..	2	2
Ingrebourne	Brook Street, South Weald	Billericay R. ...	3	2	4	6
	Upminster ...	Romford R. ...	3	5	...	5
	Brentwood ...	Brentwood U. ...	2	2	...	2
	Harold Wood ...	Romford R. ...	4	6	4	10
	Great Warley ...	Romford R. ...	2	2	...	2
Roding ...	Buckhurst Hill ...	Buckhurst H. U.	2	2	...	2
	Chigwell ...	Epping R. ...	3	3	...	3
	Chigwell Row ...	Epping R. ...	5	3	2	5
	Loughton ...	Loughton U. ...	2	2	2	4
	Ongar ...	Ongar R. ...	2	...	...	...
	Wanstead ...	Wanstead U. ...	2	4	...	4
	Woodford ...	Woodford U. ...	2	2	2	4
	North Weald ...	Ongar R. ...	2	1	...	1
	Thornwood ...	Epping R. ...	2	...	1	1
	Theydon Bois ...	Epping R. ...	1	2	...	2
Rom ...	Hornchurch ...	Romford R. ...	2	1	1	2
Wid ...	Billericay ...	Billericay R. ...	2	2	1	3
	Writtle ...	Chelmsford R. ...	...	...	...	...
	Shenfield ...	Billericay R. ...	4	4	...	4
	Blackmore ...	Ongar R. ...	1	...	...	...
Total...			56	45	27	72
Samples from pipes and streams at Bocking, Coggeshall and Kelvedon in Braintree Rural District ...			2	2	12	14
Trade effluents at Bocking and Braintree ...			4	1	3	4
			62	48	42	90

(d) *Conclusion.* According to information received from the local Surveyor, it would appear that, after consulting the Ministry of Health, the Braintree Rural Council have instructed their Surveyor to prepare plans and estimates for dealing with the three chief sources of pollution mentioned above, as apparently the cost of a comprehensive scheme is prohibitive on present rateable values. Endeavours should be made to produce a better effluent at the Church Lane Sewage Works.

(II) GREAT COGGESHALL. This parish, which had in 1921 a population of 2,300, and acreage 2,632, lies to the extreme east of the Braintree Rural District. A public water supply has been provided by the Rural Council. There are no sewage works, the whole of the sewage finding its way either into Robins Brook or the back ditch, which is practically an open sewer, and thence to the River Blackwater. Samples were therefore taken from these two streams at the following points with the results indicated, the standards which are calculated as shown on page 49 being:—

(a) River water which may be used after filtration for drinking purposes	...	...	...	...	...	2'5
(b) River water not to be so used	...	...	...	...	...	3'5

(i) *Robins Brook.*

	Impurity figures.	
	19th Nov., 1925.	19th Jan., 1923.
(a) At the ford before entering populous part of parish	...	...
	2'15	2'4
(b) Immediately before entering back ditch	...	...
	3'75	3'0
(c) Drain entering Robins Brook in West Street between points (a) and (b)	...	...
	69'95	No sample taken.
	(Really a trade effluent).	

(ii) *Back ditch.*

(a) Before being joined by Robins Brook and before entering populous part of parish	...	...
	2'9	2'3
(b) Abbey Lane Bridge after passing through populous part of the parish	...	...
	4'0	5'5

Conclusion. From the information obtained in the course of this inspection, it does not appear that any steps are being taken by the Rural Council to provide a sewage disposal system for this parish.

(III) KELVEDON. This parish is situated in the south-eastern corner of the Braintree Rural District, the bulk of the population being on the Colchester main road. In 1921 the population was 1,547 and the acreage 3,212. There is a public water supply provided by the Rural Council. The Rural Council's Housing Site (estimated population 140), which is separated by the railway from the populous part of the parish, is drained to small sewage disposal works which were installed in

December, 1921. Sewage from the remaining houses is carried by sewers either direct to the River Blackwater at various points or to the back ditch, which is practically an open sewer, and thence to the river. Owing to complaints from householders on the Colchester main road, the Rural Council have been compelled to continue the 12-inch pipe a further 50 yards down the back ditch, since when no further complaints have been received.

Samples were taken from the following outfalls with the results indicated :—

Outfall.	Impurity figure, 19th Nov., 1925.		Remarks.	Impurity figure, 19th Jan., 1923.	
Back ditch ...	...	42·3	...	Contains something besides sewage	5·0
Housing Site Works ...	...	11·9	...	—	56·0
Colchester Road Bridge ...	...	66·0	...	—	No sample taken.
Swan Street...	...	40·9	...	Contains waste liquor. Impurity figure is therefore misleading.	„
Grays Mill ...	...	25·1	...	—	„
Gas Works Outfall	...	257·5	...	Bad in extreme. Contains “devil liquor” from Gas Works.	„

Conclusion. From the information obtained in the course of this inspection it does not appear that any steps are being taken by the Rural Council to provide a sewage disposal system for this parish.

(IV) GENERAL CONCLUSION. Under the Southend Waterworks Act, 1924, the Southend Waterworks Company have power to augment their existing supplies by abstracting and treating water for domestic purposes from the River Blackwater at Langford which is about eight miles below Kelvedon. The same Act also gives them certain powers in regard to rivers pollution which the Company may exercise if the pollutions referred to in this report are not dealt with adequately.

(b) *Braintree Urban District.* The Braintree Sewage Works discharge into the River Brain, which is a tributary of the River Blackwater.

The work of taking down and washing the eight filter beds at these sewage works was found to be completed when the County Sanitary Inspector visited the works on 25th November, 1925. Samples have been taken with the following results :—

Date of Sample.	Impurity figure.	
25th November, 1925 ...	...	14·1
16th February, 1926 ...	...	20·1

On 22nd December, 1925, the County Sanitary Inspector saw the Local Surveyor who stated that the works were now overloaded as they were originally designed for a population of 6,000, but were now dealing with an approximate population of 8,000. In his opinion the only solution to the difficulty was to add another primary and another secondary filter bed.

The Local Medical Officer of Health in his Annual Report for 1924 states that "with the increased amount of sewage to be dealt with it is obvious that the extension of the sewage works is necessary and cannot much longer be delayed."

In the above circumstances the County Council have decided to take proceedings under the Rivers Pollution Prevention Acts.

(2) CHELMER VALLEY. (a) *Chelmsford Borough*. Extensive improvements to the sewerage and sewage disposal scheme at an estimated cost of £52,000 are still in progress, and under the Southend Waterworks Act, 1924, power has been obtained by the Water Company to pipe the effluent from these works to a point below their proposed intake at Rushes Lock.

(b) *Chelmsford Rural*. A satisfactory solution of the sewage disposal of the Parishes of Broomfield and Writtle, which are situated immediately above Chelmsford, has been arrived at by agreement between the Chelmsford Rural and Borough Councils. As a result, both these parishes are to be linked up with the Chelmsford Borough's sewerage and sewage disposal system, the estimated costs to the Rural Council being :—

- (i) Broomfield—providing valley sewer and subsidiary sewers—£13,118 10s., of which £2,778 14s. would be chargeable to the Borough Council.
- (ii) Writtle—providing valley sewer, &c.—£4,891 10s., of which £1,147 10s. would be chargeable to the Borough Council.

(c) *Dunmow Rural*. New works have been provided for the Parish of Felstead at a cost of £1,200.

(3) COLNE VALLEY. The River Colne has a length of 23 miles from its source at Birdbrook to the Borough of Colchester. It passes through the Villages of Yeldham, Castle Hedingham, Sible Hedingham and Earls Colne and the town of Halstead, the last-named being the only centre provided with modern sewage disposal works which were re-modelled in January, 1922.

Earls Colne, with a population of 1,806 in 1921, discharges crude sewage into the river at two points at the bridge on the Lexden Road. This matter has been under consideration for several years, and endeavours were made in 1923 and 1924 by conferences with the Rural Council and Ministry of Health to secure an effective solution at the least possible cost to the Parish. As no steps had been taken to stop the pollution the County Council decided on 18th May, 1926, to take proceedings under the Rivers Pollution Prevention Acts.

A scheme for providing a sewerage and sewage disposal scheme for the Parish of Sible Hedingham is now before the Rural and Parish Councils.

(4) **CROUCH VALLEY.** The largest centre of population draining into the River Crouch is at Wickford, which has been and is developing fairly rapidly. Effluents from the sewage works continue unsatisfactory, and for some time schemes for installing new and larger works further down the river have been under consideration by the Parish and Rural Councils. It is understood that a scheme has now been agreed upon.

(5) **INGREBOURNE VALLEY.** This river is a tributary of the River Thames, and receives sewage effluents from the works shown in Table XIII. on page 50. The only works calling for comment are those at Harold Wood and South Weald.

(a) *Harold Wood.* These works seem no longer able to deal satisfactorily with the increasing volume of sewage. The Rural Council have referred the proposed improvement scheme to the newly constituted Urban District of Hornchurch. Meanwhile the works are being kept under observation.

(b) *South Weald.* Improvements were carried out during the year, resulting in a much better effluent being discharged.

(6) **RODING VALLEY.** This river, which is also a tributary of the River Thames, has more sewage works on its banks than any other river in the County. It rises in the Dunmow District, flowing successively through Ongar, Loughton, Buckhurst Hill, Woodford, Wanstead, Ilford and Barking to its point of discharge at Creeksmouth. Of the 26 samples of effluent obtained during the year, only seven failed to comply with the County standard, and the works discharging these were:—

(a) *Chigwell Row.* Improvements were commenced early in 1926.

(b) *Loughton.* " " "

(c) *Woodford.* Improvements to sewage works, &c., at a cost of £12,000 were completed during 1925. There are now six circular sprinklers and 18 contact beds capable of dealing with a flow of 600,000 gallons daily.

(d) *Thornwood.* Improvements have been carried out.

(7) **ROM VALLEY.** Another tributary of the River Thames which calls for no special remarks, as on the banks of the non-tidal portion there is only one sewage works serving Hornchurch discharging an effluent. These are fairly modern works and usually the effluent is satisfactory.

(8) **WID VALLEY.** This river joins the Cann, a short distance above Chelmsford, which in turn enters the River Chelmer, just below the centre of Chelmsford.

There are sewage works at Billericay, Blackmore, Shenfield and Writtle, the last-named being the only one from which unsatisfactory effluents have been obtained continuously. The Writtle works are to be re-arranged—see report on the Chelmer Valley.

SUMMARY OF IMPROVEMENTS TO SEWAGE WORKS. The following table summarises the improvements carried out at various works since the year 1922:—

TABLE XIV.

SHOWING IMPROVEMENTS OBTAINED OR PENDING UNDER THE RIVERS POLLUTION (PREVENTION) ACTS IN CONNECTION WITH SEWAGE DISPOSAL.

District.	Statutory Notice Served.	Improvements.
Halstead Urban	—	Jan., 1922. New works costing £18,000 opened.
Great Burstead, Billericay Rural ...	—	Jan., 1923. Four sprinkler beds re-washed at an estimated cost of £500.
		1924. Humus tanks installed.
Ongar Rural	—	Sept., 1923. Ministry of Health held Inquiry for loan of £1,000 to extend and improve sewage works.
		1925. New works nearing completion.
Witham Urban	9/2/23	Sept., 1923. Ministry of Health Inquiry held for loan of £7,000 for new sewage works.
		Nov., 1924. New works, including sedimentation tanks and sprinklers, opened.
Writtle	2/11/23	Oct., 1925. Schemes for linking up Writtle and Broomfield with Chelmsford Borough Sewers approved; schemes for other Parishes under consideration.
Great Waltham		
Broomfield		
Little Waltham		
Felsted	27/4/23	Jan., 1924. Ministry of Health Inquiry held for loan of £1,200 to provide sewage works at Felsted.
Thaxted		Mar., 1925. Works in operation.
		Jan., 1924. Ministry of Health Inquiry for loan of £6,800 for works of sewerage and sewage disposal at Thaxted.
Dunmow		July, 1926. Scheme nearing completion.
		Jan., 1924. Minor improvements carried out at Dunmow.
Chelmsford Borough	13/11/23	Dec., 1923. Improvements scheme, sewerage and sewage disposal, costing £52,000, in hand, necessitated by water supply scheme.
Woodford Urban	1/11/23	June, 1924. Ministry of Health held Inquiry for loan of £14,080 for improvements to sewage works, &c.
		1925. Improvements completed at a cost of £12,000.
Braintree Urban	—	Oct., 1925. Washing of sprinkler beds completed.
Braintree Rural	—	See special report.
Great Warley, Romford Rural ...	—	Nov., 1923. Filter beds renewed.
Thornwood, Epping Rural ...	17/1/24	Feb., 1924. Filter beds renewed.
Wickford, Billericay Rural ...	.../9/24	Mar., 1926. Engineer instructed to prepare plans for new works.
Earls Colne, Halstead Rural ...	1/11/23	Dec., 1923. Conference at Ministry of Health agreeing to smaller scheme of sewage disposal. (See special report.)
		May, 1926. Further statutory notice served.
Upminster, Romford Rural ...	1/11/23	Feb., 1924. Improvements carried out.
Brentwood Joint	2/11/23	Feb., 1924. Effluent improved.
West Mersea, Lexden & Winstree Rural	—	1925. Complete sewerage and sewage disposal scheme installed.
South Weald, Billericay Rural ...	—	1925. Land dug over and two filter beds recharged.
Chigwell Row, Epping Rural ...	—	April, 1924. Minor improvements carried out.
Harold Wood, Romford Rural ...	—	Nov., 1925. Council considering remodelling or abolishing works.
Loughton Urban	—	Feb., 1926. Humus tanks improved.

METEOROLOGY.

The County Meteorological Station at Chelmsford has again kindly supplied the data set out in Table XV. below. July had the heaviest rainfall of 4.1 inches, whilst February had the highest number (17) of rainy days.

During the year 1925 rain fell on 149 days, producing a total rainfall of 23.5 inches, which is the lowest recorded since the exceptionally dry year of 1921, when 11.98 inches of rain were recorded.

TABLE XV.

OBSERVATIONS FROM THE COUNTY METEOROLOGICAL STATION AT CHELMSFORD.

1925.	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 ...	40.0	39.0	46.1	34.6	55	2nd	24	11th, 12th	11	1.4
February ...	41.1	39.5	47.1	35.1	55	10th	25	22nd	17	2.2
March ...	40.4	38.09	47.2	34.0	54	16th	25	13th	11	1.0
April ...	47.7	45.3	54.6	37.1	62	8th and 12th	27	4th & 22nd	11	1.2
May ...	56.3	53.4	63.7	44.8	79	16th	32	2nd	15	2.1
June ...	61.06	58.4	70.2	47.5	85	11th	35	29th	2	0.3
July ...	64.4	61.2	73.2	52.08	86	22nd	45	8th	14	4.1
August ...	62.2	60.9	69.6	51.2	80	17th	41	26th	12	2.9
September ...	54.9	54.0	61.3	43.9	67	1st, 10th 30th	34	15th	15	2.2
October ...	52.2	51.4	59.7	42.9	71	6th	32	10th, 11th, 14th, 15th	15	2.6
November ...	40.2	39.3	45.3	34.0	60	2nd, 3rd	24	27th	12	1.4
December ...	36.4	35.6	43.1	31.7	57	26th, 29th	19	16th	14	2.1
TOTALS—										
Year 1925 ...	—	—	—	—	—	—	—	—	149	23.5
„ 1924 ...	—	—	—	—	—	—	—	—	175	30.29
„ 1923 ...	—	—	—	—	—	—	—	—	176	23.77
„ 1922 ...	—	—	—	—	—	—	—	—	178	24.37
„ 1921 ...	—	—	—	—	—	—	—	—	109	11.98

MOSQUITOES.

Much discomfort is still experienced from mosquito bites in the summer time in parts of the County, causing acute suffering in some instances, whilst in some areas it is impossible at certain times to enjoy a peaceful night's rest without a mosquito

net. The nuisance was such on the east coast as to cause complaint that holiday makers having once experienced it will not re-visit the same resort.

The problem cannot be solved without considerable expenditure and the active assistance of the inhabitants of the affected localities. There must also be co-operative effort, not only on the part of individuals, but of contiguous sanitary authorities. An attempt in this direction was made on the east coast in 1924 by a conference of representatives from the Ministry of Health, Essex County Council, Frinton Urban, Walton-on-Naze Urban and Tendring Rural Councils. Unfortunately it did not result in united action on the part of the last three mentioned Councils, but as mentioned in the report for 1924 the Frinton Urban Council took active steps to abate the nuisance in their own area. The successful results encouraged them to pursue the same course in 1925 and 1926, upon which the local Medical Officer of Health reports as follows :—

“ During the early months of the summer, attempts were made to allay the mosquito nuisance that had been so much in evidence by poisoning the sea wall ponds with Lawes' disinfectant and corrosive sublimate.

“ No larvæ were found in these ponds during the year, although repeated attempts were made to discover them, and the number of mosquitoes in the town very greatly diminished, in fact, I have never seen so few during the 28 years that I have been connected with Frinton. I have again this March treated the ponds with corrosive sublimate, and I hope there will be the same absence of the pest during the coming season.”

Walton-on-Naze Council have also undertaken the spraying of ditches and ponds and stagnant waters with petroleum “ every week for about six months each year, and this was found to be very effective in the destruction of mosquitoes.”

No information is available regarding other affected areas, and it is presumed that the inhabitants are content to endure the annoyance year after year.

WATER SUPPLIES.

As mentioned in the Reports for 1923 and 1924, the County Council have been led by various factors to consider carefully the future supply of water for the whole of the County. In October, 1924, the Parliamentary Committee of the County Council considered the following preliminary report by the County Medical Officer :—

“ Schedule I. gives the population of the geographical County of Essex for the last 40 years. This is more useful than the figure for the Administrative County only, as the supply of water does not always take note of Local Government boundaries, and moreover, two important parts

of the County, namely, Southend-on-Sea and East Ham have become County Boroughs in the last 20 years. It should be noted that the chief increases in population have been in Extra-Metropolitan Essex and in the vicinity of Southend-on-Sea.

“ **PRESENT WATER SUPPLIES.** It may be deemed on the whole that Essex is better supplied with water than most Counties. Perhaps the very difficulty of its water problem from geological and other considerations has provided the necessary stimulus to solving the problem. However that may be the present supplies can be classified as follows:—

- (a) Water Companies.
- (b) Local Authorities.
- (c) Private or local sources of supply.

“ Schedule II. attached gives a general idea of the area and population supplied with water by Water Companies and Local Sanitary Authorities.

“ If we exclude the area served by the Metropolitan Water Board it may be said that the present supplies on a large scale are chiefly from deep wells. Most of the deep wells in Essex will only provide a limited supply per day but in the last few years some very plentiful supplies have been tapped in the Thames Valley. Nevertheless, it is agreed by most engineers that we are rapidly approaching the limits of the available quantities from this source as witnessed by the steady dropping of levels of deep wells during the last decade. It is for that reason that Chelmsford have recently resorted to the River Chelmer, and now the Southend Waterworks Company have been successful in obtaining power to take the waters of the Blackwater. Most rural parts of the County are supplied by shallow wells, many of which are apt to fail in times of drought, as in 1921. Any means by which these parts can be provided with a more constant supply would be a great boon to the health and prosperity of these districts.

“ **FUTURE NEEDS.** In estimating the future needs of the County one has to consider the probable growth of population in its various parts. Many authorities consider, from a review of the falling birth-rate and the natural increase of population, that in England and Wales generally the population will become stationary in about 30 years' time. Nevertheless, in certain parts of the country, for example, the rapidly developing industrial areas, large increases of population are to be expected for an indefinite period. It would appear that the southern part of Essex will prove to be one of these exceptions to the general rule. It is anticipated also that the dormitory area of London will continue to spread further and further into Essex, whilst

along the whole of the north shore of the Thames industrial developments will bring with them a large increase of population. Reference should also be made to the exceptional development at Becontree where the London County Council have embarked on a scheme for providing 30,000 houses which it is calculated will accommodate about 150,000 inhabitants.

"I do not anticipate that the remainder of the County will differ from the general experience of England and Wales and on that assumption we can take it that the remainder of the County will arrive at a stationary population by about 1960. As a very rough estimate it may be expected that there will be, during the next 40 years, an increase of the present population of Essex to the extent of 300,000.

"Another matter for consideration is the daily average supply per head of population. In the urbanised districts the amount usually allowed is about 30 gallons per head, but of course in the lesser provided areas it comes a good deal below that, sometimes ten gallons, sometimes five gallons per head. With the more general provision of water-carriage system and the provision of baths, etc., it may be estimated that the average consumption per head during the next 40 years will be much greater than what it is to-day, that is, we may assume 30 gallons per head per day for the domestic supply. In addition, particularly along the north shore of the Thames, we have to consider trade requirements, and a very modest estimate of these may be stated as ten gallons per head of population. This means that provision should be made at the rate of 40 gallons per head per day.

"That being so, we have not only to provide for the natural increase of population but to take into consideration this increased average consumption. It is obvious, therefore, that a very considerable amount of additional water would be required during the next few decades and from previous experience there is every reason to believe that the existing supplies cannot be extended sufficiently to meet this demand.

"The estimated additional population of 300,000 at 40 gallons per head per day will need an extra 12,000,000 gallons. Probably half of this will be provided by the Metropolitan Water Board, leaving 6,000,000 gallons to be found from other sources.

"FUTURE SUPPLIES. We must therefore consider what fresh available sources can be tapped. There are no considerable uplands within reasonable distance of Essex. It may be that some day London will revert to its original Welsh scheme and incidentally supply the dormitory area in Essex, but this is a contingency for which we cannot make provision. The Broads of Norfolk are hardly a practical proposition, even if the water were of a

satisfactory nature. The 1921 drought showed that the Crouch is without value. The Chelmer and Blackwater are already largely monopolised. In respect to the River Colne, we should have to go above Castle Hedingham to get a water of suitable quality and at that point the volume of water is almost negligible. The River Cam might offer some possibilities, but within the County of Essex its volume is not large and of course several interested counties would combat any attempt on the part of Essex to monopolise the waters of that river. The River Stort, a tributary of the River Lea, which rises in the County of Essex, passes through or by 13 parishes which, according to 1921 Census, have a total population of 11,019. I have no records regarding the average daily flow of this river and further, there would be great difficulty in securing supplies from this source in view of the existing powers in respect to the River Lea vested in the Metropolitan Water Board and the Lea Conservancy Board.

"The only practical source that we can look to for Essex is the River Stour. The Stour is not solely an Essex river as it belongs equally to Suffolk, and therefore the Suffolk authorities would have to be consulted at an early stage of the negotiations. I have no definite figures as these can only be got out by an engineer, but there is evidence to show that in normal times there are something like 20 million gallons per day in the Stour, although in the exceptional drought year 1921 it was much less than this amount. If we were allowed to take half, this would provide 10 million gallons per day which would go a long way to providing for the anticipated increase of population and demand.

"It is advisable that no time should be lost in securing some of the Stour water for Essex as it is quite possible that the Metropolitan Water Board or the South Essex Company may endeavour to obtain powers to abstract water from that river for the dormitory area of Essex in view of the development of Becontree.

"CONCLUSION. I would therefore put before the Committee the following suggestions :—

- (1) To confer with the East and West Suffolk County Councils and the adjacent Local Authorities on the question of conserving and utilising the waters of the Stour.
- (2) To instruct an engineer to estimate the yield from the Stour and any other Essex river or potential source of water and to show how they can be best utilised for the County."

SCHEDULE I.

SHOWING THE ESTIMATED POPULATION FOR THE GEOGRAPHICAL COUNTY
OF ESSEX FOR THE 40 YEARS, 1884-1923.

Year.	Estimated Population.	Year.	Estimated Population.
1884	593,306	1904	1,163,714
1885	606,448	1905	1,195,203
1886	619,841	1906	1,226,888
1887	633,485	1907	1,258,778
1888	647,415	1908	1,290,880
1889	661,552	1909	1,323,200
1890	744,137	1910	1,329,466
1891	766,903	1911	1,357,913
1892	790,106	1912	1,386,223
1893	817,470	1913	1,414,828
1894	843,712	1914	1,417,944
1895	870,747	1915	1,374,055
1896	898,584	1916	1,456,332
1897	927,249	1917	1,415,665
1898	956,764	1918	1,386,398
1899	987,151	1919	1,424,773
1900	1,037,727	1920	1,440,260
1901	1,070,356	1921	1,455,605
1902	1,101,298	1922	1,467,184
1903	1,132,415	1923	1,486,390

SCHEDULE II.

SHOWING NUMBER OF PARISHES AND HOUSES PROVIDED WITH WATER BY
WATERWORKS COMPANIES AND LOCAL SANITARY AUTHORITIES IN THE
ADMINISTRATIVE COUNTY OF ESSEX.

Company or Authority.	Parishes supplied.		Population, 1921.	No. of Houses.		Remarks.
	No.	Acreage.		Total Census, 1921.	No. now supplied from piped service.	
Herts & Essex Water Co., Ltd.	24	61,561	22,071	5,187	4,109	—
Metropolitan Water Board.	14	40,254	340,093	68,420	—	
South Essex Water- works Co., Ltd.	32	94,125	234,926	46,303	52,115	Bulk supply to Romford R.D.
Stansted Water Co.	3	7,411	3,568	875	306	

Company or Authority.	Parishes supplied.			No. of Houses.		Remarks.
	No.	Acreage.	Population, 1921.	Total Census, 1921.	No. now supplied from piped service.	
Southend Waterworks Co.	41	87,913	37,292	8,409	6,518	
Tendring Hundred Water Co.	16	39,571	33,178	6,451	5,567	
Braintree U.D. ...	1	2,224	6,970	1,733	1,717	
„ R.D. ...	5	14,707	8,790	2,297	2,173	
Brightlingsea U.D. ...	1	2,867	4,500	1,202	1,245	
Burnham-on-Crouch	2	5,383	3,518	867	878	
Chelmsford B. ...	1	3,112	20,769	4,621	5,216	Plus 131 supplies by meter.
„ R.D. ...	12	41,115	14,811	3,428	2,393	and bulk supplies to Chelmsford B.
Clacton U.D. ...	2	7,305	18,144	2,632	2,924	Supplies at 2 points at Great Bentley.
Colchester B. ...	1	11,333	43,303	9,053	9,204	
Dunmow R.D. ...	2	13,221	4,595	1,072	472	
Halstead U.D. ...	1	647	5,923	1,594	1,500	7 houses in R.D. also supplied.
„ R.D. ...	1	2,965	1,806	466	399	Figure given is where water rate is chargeable.
NO. OF HOUSES WITH PIPED SUPPLY UNKNOWN.						
Lexden & Winstree R.	2	4,704	2,731	714	481	
Maldon B. ...	1	3,028	6,590	1,456	1,456	
„ R. ...	18	48,976	11,128	2,748	2,024	
Saffron Walden B.	1	7,502	5,874	1,514	1,418	
„ R.	4	10,168	1,490	380	380	Piped service means stand-pipes from which occupiers fetch their supply.
Shoeburyness U.D.	1	1,036	6,413	933	1,004	
Witham U.D. ...	1	3,713	3,717	873	891	
Wivenhoe U.D. ...	2	5,275	3,136	847	635	
Terling Parish Council (Braintree R.D.)	1	3,142	796	179	125	

The first attempt to deal with the sources of water supply to the County was made in 1901, when Dr. Thresh, the Medical Officer of Health, prepared for the use of the Council a report "On the Water Supply of the County of Essex" which has long been out of print. After referring to the future requirements of the County he

dealt with the various sources from which water could be obtained under the headings of (1) Land surface, (2) Rivers, (3) the Sub-soil, (4) Deep wells. A map showing the area of the river basins was included. In respect to the portion referring to the rivers which has become increasingly important owing to the possibility of river water having to be used for the supply of the County, he urged the County Council to make every possible effort to keep the rivers as clean as possible. He also pointed out the necessity for gauging the streams, and concluded "the whole of the streams require investigating to ascertain their character, volume, &c." Certain geological features pertaining to the water supplies were referred to and details were given of many of the sources of supply then being utilised, such as depth of wells, yield of water, water levels, and details of the different characters of the water from various sources. Finally, the public supplies were described in some detail and analyses of all the waters in use tabulated.

Doubtless this work would have been brought up to date had not the Geological Survey arranged that Dr. Thresh should co-operate with the late eminent geologist, Mr. W. Whitaker, F.R.S., in preparing the special Memoir on Essex. This official Government publication must remain for long the authoritative report on the Water supply for Essex. Sir A. Strahan, the Director of the Geological Survey, in his introduction to the report says "This Memoir exceeds in size any previous volume of the series" and that "Dr. Thresh, through a prolonged study of the chemistry of the Essex waters, has been able to contribute an account of the subject that is not only more detailed as regards the County than any work of the kind hitherto published, but is of great interest." This volume gives details which are of the utmost value to engineers, well sinkers, and others interested in the County Water Supply.

Last year, the Essex County Council deemed it desirable to have a report from a competent water engineer as the requirements of the County were so rapidly increasing, and it was, therefore, necessary to know something from the engineer's point of view with reference to the appropriation of the remaining sources of supply. Mr. J. Mackworth Wood, late Engineer in charge of the Metropolitan Water Board's works in the Lea Valley, was engaged to survey the County and submit a report. This has just been issued and taken with the report of the Geological Survey furnishes more information about the County than can be found with reference to any other County. Mr. Wood concludes, as Dr. Thresh had done, that in Central and South-Eastern Essex there is no hope of obtaining additional water from deep wells, and that the only available source of obtaining water in any quantity is from the River Stour.

The Corporation of Chelmsford and the Southend Waterworks Company have appropriated the water available from the Rivers Chelmer and Blackwater, the only large watersheds in the County. Unfortunately, only a small portion of the watershed of the Stour is in Essex, the larger portion lying in Suffolk. However, the supply available from this river is estimated to be larger than that available from the Chelmer and Blackwater. It is a river receiving pollution chiefly on the Suffolk side, and both Suffolk and Essex are concerned in preventing its pollution. Mr. Wood

stresses the necessity for a series of gaugings at selected points. Certainly one gauging should be above the junction with the Brett and another below. This river flows through a chalk area just at and below Sudbury and it is quite possible that in wet seasons it is fed by the chalk and that in dry seasons the chalk water level is maintained from the river. It is possible, therefore, that the minimum flow available lower down may be much less in very dry seasons than has been surmised. It may be urged that if the river does flow into the chalk it could be obtained therefrom in that area and it is well known that water is abundant there.

Mr. Mackworth Wood makes no allusions to the quality of the water obtainable from different sources, but it is fairly evident from Dr. Thresh's analyses that the Essex river water and the chalk water in the north of the County are excessively hard, much harder than the water in the Hertfordshire chalk and probably in all cases would require softening to make it suitable for public supplies.

The Colne Valley is also referred to as a possible source of water supply. This may be permitted for use in the same valley, since when the water returns to the river as sewage it can be purified and returned to the river lower down, but if the water is taken for use further south it would be lost to the Colne below Colchester, and it should be remembered that the success of the Colne Oyster Fisheries depends upon the suitable admixture of river water with tidal water and to reduce the flow of the river might have a serious effect upon the quality and possibly the quantity of oysters capable of being produced in the estuary.

The upper reaches of the River Roding have been considered as a source of water, and it is known that there is a suitable point for damming up the river, but a very large reservoir would have to be constructed to maintain a supply in the summer for waterworks purposes and for compensation water, since a large amount of water would be required to be passed down to supply certain mills and to dilute the numerous sewage effluents discharged into that river. It was evident that in very dry seasons such as 1921 the water in the river below Loughton consists of little but sewage effluent, so that the conditions could not be worse if the water of the upper reaches were impounded, but it is quite certain that Parliament would not allow the whole to be diverted. Everything depends upon the amount of water available and this can only be done by gauging the flow systematically over a lengthy period.

Gaugings should be instituted on the Stour, the Colne and the Roding. This is the first matter which requires attention.

The Local Sanitary Authorities in the Stour Watershed are naturally concerned as to the likelihood of more active measures being necessary to preserve the purity of the river from contamination by sewage. This indicates to some extent a knowledge that there have been breaches of the provisions of the Rivers Pollution Prevention Acts and it is hoped that timely measures will be undertaken by those concerned to put an end to an unnecessary and inexcusable pollution of this beautiful river.

MENTAL DEFICIENCY.

The Royal Commission upon the care and control of the feeble-minded was appointed in 1904 to consider the then existing methods of dealing with Idiots and Epileptics, Imbeciles, and the Feeble-minded or defective persons not certified under the Lunacy Laws, and report as to the amendments in the law or other methods which should be adopted for the further safeguarding, training and control of such persons.

In 1906 the Royal Commission was authorised to enquire into the working of the Lunacy Authorities in England and Wales, and the desirability for amending the same by adopting some other system of supervising the care of Lunatics and Mental Defectives, and to report on any amendments in the law which in their opinion should be adopted. Their report showed the grave need for further legislation in order to provide more efficient control, training, etc. of these afflicted persons. They divided the mentally afflicted into two main classes, viz.:—

- (1) Those who from disorder of the mind or through mental infirmity arising from age, or from the decay of their faculties, had lost the power of managing themselves or their affairs, *i.e.* the Dements, or those generally known as Lunatics.
- (2) Those in whom the brain was in some degree undeveloped and would remain undeveloped as compared to the normal throughout life, *i.e.* the Imbeciles or Mentally Defectives.

It is with the latter that I have to deal in this report.

The Report of the Royal Commission went very fully into the matter and set forth their considered views together with their reason for the necessity of adopting some changes in the legislation. Although previous to this the mentally defective child under the Mentally Defective and Epileptic Children's Act of 1899 could be dealt with educationally and by control up to the age of 16, there were no statutory obligations or facilities for similar control after that age, so that although much money would be and was spent in educating such children, at the age of 16 they were let loose in the majority of cases either to prey upon Society or for unscrupulous persons to take advantage of their inability to control themselves or their affairs.

Four years after the Royal Commission's Report on the Care and Control of the Feeble-minded was issued, a Bill was introduced into Parliament with the object of carrying out its proposals. Finally, the Mental Deficiency Act received the Royal Assent in August, 1913. The Local Authorities for the purposes of the Act are the Councils of Counties and County Boroughs, and the Act came into operation on the 1st April, 1914. This Act, owing to the Great War, was for several years more or less a dead letter, except that certain voluntary agencies who had previously been in existence, and others who were formed owing to the passing of the Act, continued

their efforts of ascertainment, voluntary supervision, &c., thereby providing ample material to commence work on, when the affairs of the State became more settled.

In 1920 the Statutory Committees of the Councils became really operative, to find that much of their zeal was curbed owing to post-war financial stringency, and even now there are many defectives still at large who should be in Institutions, due to insufficient accommodation as a direct result of financial stringency.

The accommodation required for all defectives presents a grave problem. If the low estimate of one per thousand of population is taken as the number of defectives requiring institutional care, Essex alone would require a minimum of 1,000 beds. The total number of defectives is, unfortunately, much higher than this, and is probably nearer ten per thousand, although many investigators would estimate the figure as even much higher than this.

Luckily, it is not necessary to provide institutional care for all. Control and care outside institutional life are quite sufficient for the safeguarding of many. Institutional care is necessary for some cases throughout life, in others only for a short period of what may be considered a period of educative control in order to foster self-control in the defective.

Those who specially need institutional care are:—

- (1) Certain high and medium grade cases with ante-social tendencies; these are of unstable character and cannot tread the ordinary beaten track, in the open world, and continually get into trouble, either under the criminal law or by sexual offences, being a nuisance to themselves and to everyone else, as well as probably propagating their species. Early segregation of such cases is most desirable.
- (2) Certain low grade cases who are either most objectionable in their habits, difficult to control, or a grave danger to others, together with certain paralytics who cannot get efficient care at home.

It is often too difficult to persuade relations and even magistrates that institutional care is the greatest kindness which can be rendered to the afflicted, and especially is this so in some high grade cases who are totally unsuited for the outside world.

It is true there is a certain control of freedom of action, which is exactly what is required. This is, however, quite outbalanced by the loss of hand-to-mouth existence these people lead outside, together with the feeling of social inferiority experienced in the open world as compared with being one of a community and partaking in a useful and healthy occupation amongst those of similar mental capacity, combined with a regularised life, including occupation and recreation such as is provided in a well organized institution.

Recently facilities of institutional care have been in some cases extended by means of the hostel system. Under this system certain cases are allowed to do daily duty outside the institution or at a special home attached. This would appear to be

particularly helpful, as it can be made a kind of probationary period to ascertain if any particular case is suitable to return to the outside world.

Other methods of providing care and control are :—

- (1) *Guardianship.* Placing the defective under the care of some responsible person, and in this method a grant for the keep of the patient can be made, the expense to the County Council being thus less than when institutional care is given.
- (2) *Supervision.* The defective is placed under the supervision of some responsible person residing in the locality who undertakes to report periodically, and as occasion requires on the suitability of the circumstances and control under which the defective is living.
- (3) *Sterilization.* Recently there have been writings and discussions by both medical practitioners and laymen on the wisdom or not of trying to decrease the number of degenerates by instituting sterilization for the certified mentally defective, and thereby preventing these defectives from propagating their species. There is, I think, much to be said for voluntary sterilization by stabilised doses of X-rays, thus avoiding the general objections of those who dislike operations. Sterilization is permissible for mental defectives in some American States, but is not largely practised, probably because the law was passed before public opinion was ready for it. It is essential in the first place to create a public opinion and desire for an innovation of this character before passing an enactment that it shall be carried out. There are some advantages of sterilization both to the State, and in many cases to the afflicted, but there are undoubtedly serious disadvantages which cannot be ignored. Hence sterilization should only be carried out on a definitely voluntary basis.

The arrangements for ascertainment, certification and control of defectives in Essex during 1925 has continued as in previous years. The services of the Voluntary Association have been of great service in the preliminary enquiries. Dr. T. P. Puddicombe, Chief Assistant County Medical Officer, appointed in 1920, has continued to act as Medical Officer to the County Committee, and as consultative Medical Officer for cases referred for examination by the Justices.

One hundred and seventy-eight cases medically examined and reported upon to the County Committee for the care of mentally defectives were classed as follows :—

			Males.	Females.	Totals.
Feeble-minded ...	...	...	45	53	(a) 98
Imbeciles (Mongols 8)	...	...	21	21	42
Idiots (Mongols 5)	...	...	13	9	22
Moral Imbecile ...	...	...	1	—	1
Not classified under the Act...	...	...	10	5	(b) 15

(a) Includes 12, and (b) 7 cases referred by the Police.

It may be well here to review the position in Essex with regard to the care and control of ascertained defectives. Essex is fortunate in having an excellent institution in the Royal Eastern Counties Institution, Colchester, which was built and supported voluntarily long before the 1913 Act came into force, although additions have been made since that date. The Essex County Council, with other Local Authorities, have an arrangement with the governing body whereby when accommodation is available cases are admitted and every opportunity is taken of making full use of this as vacancies occur.

According to the Institution's Annual Report, 1925, accommodation is provided for 1,070 patients. At present, plans have been placed before the Board of Control under the three counties extension scheme to increase the accommodation by 444 beds, and of these Essex will have a call on a large percentage.

Accommodation has been arranged for adult female patients with the following Poor Law Institutions, the number in each institution in December, 1925, being shown :—

			Number.	
Saffron Walden	...	...	8	} Of these 14 were admitted in 1925.
Bishops Stortford	...	...	7	
Lexden & Winstree	...	...	14	
West Ham	...	...	3	
			—	
			32	
			—	

The following figures, as supplied by Dr. Douglas Turner, Medical Superintendent of the Royal Eastern Counties Institution, and the Clerk of the County Council in regard to numbers in institution, under guardianship and supervision, show the present position as compared with that of 1920.

The number of Essex cases in the Institution are given under three headings, viz. :—

- (a) County Council cases.
- (b) Cases arranged for by the Guardians.
- (c) Cases elected and thus voluntarily supported.

(a) *Under County Council—*

		Under 16 years.		Over 16 years.		Total.
		Males.	Females.	Males.	Females.	
December, 1920	...	60	75	27	20	182
„ 1925	...	169	142	34	16	361
Admitted 1925	...	20	14	8	6	48

(b) *Guardians—*

December, 1920	...	27	3	14	4	48
„ 1925	...	31	15	11	7	64
Admitted 1925	...	—	1	1	1	3

(c) *Elected—*

December, 1920 (Numbers not available)				—	—	—
„ 1925	...	35	14	3	5	57
Admitted 1925	...	1	1	—	2	4

The above figures show that on 31st December, 1925, there were in the institution 482 Essex cases, and of these 55 were admitted during the year.

In addition, the Institution had on that date 29 Essex private cases, making a total of 511. These, with the 32 previously mentioned as being catered for at Poor Law Institutions, make a total of 543 receiving institutional care as compared to an estimated total (taking the private and election cases to have been the same number) in 1920 of 316, showing an increase of 227, not a rapid progress in segregation, although it probably compares favourably with other areas. Six cases are under Guardianship (males 1, females 5), and 411 cases (males 216 and females 195), under statutory supervision, 46 of these having been placed under supervision during 1925.

BLIND PERSONS.

The Blind Persons Act of 1920 made it the duty of the Council of every County and County Borough to make arrangements to the satisfaction of the Ministry of Health for promoting the welfare of blind persons ordinarily resident within their area.

The Essex County Council delegated this work to the Education Committee. Later, a scheme was formulated and arrangements made whereby the work of preparing and the keeping of a register for the blind was delegated to the Essex Voluntary Association for the Care of the Blind, which body reports from time to time to the Education Committee.

When the Voluntary Association took over the register in January, 1924, there were 851 blind persons on the register. This register was completely revised in March, 1925, and showed the number to be 860 (males 440, females 420). Numbers registered on December 31st, 1925, were 905 (males 462, females 443).

In March of this year the Ministry of Health issued Circular 681 on the Welfare, etc., of the Blind. In this circular the Ministry gives the definition of a blind person as "one who is too blind to perform work for which eyesight is essential," this definition being substantially the same as that contained in the Blind Persons Act, 1920. In the circular the Ministry, in the interpretation of this definition, however, states that "it is the practice of the Ministry to regard persons where vision is greater than 6/60 as tested by Snellens types, after correction of refraction errors, as not being blind unless there are other special conditions; further, that only visual defects should be taken into account."

In short, under this interpretation a person with vision in one eye only above 6/60 would not come under the definition. This is very important and will lead to many incapacitated by poor vision being denied further training after 16 years of age and a consequent reduction of numbers registered as blind persons.

SALE OF FOOD AND DRUGS ACTS.

As in previous years, the supervision of the duties under these Acts was not undertaken by the County Medical Officer. Dr. Bernard J. Dyer, the County Analyst, receives samples direct from the Food and Drugs Inspectors, and he has kindly furnished the following particulars of the work done during the period 1st December, 1924, to 30th November, 1925. Included in the Table set out below are samples which have been submitted by the County Inspectors and Local Sanitary Authorities. Other Local Sanitary Authorities should avail themselves of the powers given in Section 13 of the Sale of Food and Drugs Act, 1875, under which they may authorise the Medical Officer of Health or Sanitary Inspector to purchase samples at the cost of the Local Sanitary Authority, and submit same for examination to the County Analyst. Much good work could undoubtedly be accomplished by an extension of this supplementary inspectorial service.

During the year the services of the Food and Drugs Inspectors were again requisitioned in connection with obtaining samples from milk vendors who supply the County Sanatoria and also certain tuberculosis patients to whom extra nourishment had been granted by the County Council. By this means the County Medical Officer satisfied himself that the milk supplied was genuine.

From the figures given below it will be seen that the County Food and Drugs Inspectors have during the past five years more than maintained the rate of sampling throughout their districts, and that for the year 1925 there is only a slight increase in the number of unsatisfactory samples obtained.

Year.	Samples analysed.	Rate for 1,000 population.	Samples unsatisfactory.	Percentage of adulteration.
1921 ...	2,837	3'1	90	3'2
1922 ...	2,978	3'2	80	2'7
1923 ...	3,035	3'2	105	3'3
1924 ...	2,962	3'2	102	3'4
1925 ...	3,278	3'4	111	3'4

Of the 3,278 samples submitted for analysis during 1925, four kinds of food (Butter 728, Lard 310, Margarine 268, Milk 1,491) accounted for no less than 2,797, of which 93 were found to be unsatisfactory.

ANNUAL SUMMARY.

December 1st, 1924, to November 30th, 1925.

	Samples analysed.	Samples unsatisfactory.	Percentage of adulteration.
Northern District of the County ...	920	29	3'2
Southern District of the County ...	862	31	3'6
Metropolitan District of the County ...	1335	43	3'2
Burnham-on-Crouch Urban District Council ...	2	1	} 5'0
Chingford Urban District Council ...	16	1	
Walthamstow Urban District Council ...	89	4	
Wanstead Urban District Council ...	46	2	
Woodford Urban District Council ...	8	—	
	<u>3278</u>	<u>111</u>	<u>3'4</u>

	Samples analysed.		Samples analysed.
Apples	1 (1)	Fat, Edible ("Nusu") ...	1
Baking Powder	63	Flour	1
Butter	728 (8)	Ginger Cake Flour	1
Cake	1	Green Peas	1
Cakeoma	2	Ground Rice	4
Cheese	8 (1)	Ham and Tongue	1
Chilli Vinegar	1	Jam	9
Cocoa	21	Lard	310 (2)
Cocoa, Plasmon	1	Lemon Cheese	2 (1)
Coffee	6	Lemon Curd	4
Condensed Milk	42	Lobster Paste	1
Cornflour	4	Lobster Sandwich	1
Crab and Lobster Paste	1	Margarine	268 (1)
Cream	26 (10)	Marmalade	1
Cream, Preserved	38	Milk	1491 (82)
Cream Custard	4	Milk, Skimmed	3
Custard Powder	2	Milk Cocoa	1
Drugs :—		Mincemeat	2
Ammoniated Tincture of Quinine	6	Mustard Compound	2
Aspirin Tablets	1	Non-Alcoholic Wine	1
Balsam of Aniseed	4	Olive Oil	1
Black Currant, Honey and Aniseed Bal- sam	1	Pepper	40
Camphorated Oil	11 (1)	Potted Meat	2
Castor Oil	1	Preserved Ginger	1
Citrate of Iron and Quinine	2	Salmon and Shrimp Paste	1
Compound Bismuth Tablets	1	Sauce	2 (1)
Compound Liquorice Powder	1	Shredded Beef Suet	1
Eucalyptus Oil	1	Sponge Cakes	55
Orange and Quinine Wine	2	Sponge Mixture	
Paregoric Elixir	4	Sugar	26
Quinine Tablets	1	Tea	2
Quinine and Phosphorus Tablets	3	Sweetmeat	1
Dried Eggs	2	Whisky	19 (3)
Egg Powder Substitute	29	Total	3278 (111)
Ex-Ox Fluid Beef	1		

The figures in brackets indicate the number found unsatisfactory.

PARTICULARS RELATING TO SAMPLES REPORTED ON DURING THE WHOLE YEAR AS ADULTERATED OR UNSATISFACTORY.

It will be seen that out of 3,278 samples reported on during the twelve months, 111 were reported as unsatisfactory, being slightly less than $3\frac{1}{2}$ per cent. of the total. The details as to all the unsatisfactory samples have been already given in the quarterly reports, but may be briefly summarised as follows :—

APPLES. One sample of imported apples was found to be externally contaminated with arsenic to the extent of $\frac{1}{16}$ of a grain per pound, due to the adherence of insecticidal spray.

BUTTER. Eight samples of butter consisted of mixtures of butter with ordinary margarine, the proportions of margarine being 20 to 40 per cent.

CREAM CHEESE. One sample sold as "cream cheese" consisted of whole milk cheese.

CREAM. Ten samples of cream were found to contain boracic preservative, of which the necessary declaration was not made by the vendor at the time of sale.

CAMPHORATED OIL. One sample of camphorated oil showed a small shortage in camphor.

LARD. Two samples of lard were found to have had their consistency "strengthened" by the addition of hard fat.

LEMON CHEESE. One sample of lemon cheese contained salicylic acid in proportion greater than has been hitherto generally regarded as permissible.

MARGARINE. One sample of margarine contained 2·4 per cent. of water in excess of the legally authorised limit of 16 per cent.

MILK. Thirty-seven samples of milk showed added water in proportions varying from 3 to 44 per cent. Forty-four samples of milk were found to be deficient in fat in proportions varying from 5 to 35 per cent. of the minimum normal quantity proper to genuine milk. One sample of milk was found to be coloured with annatto.

SAUCE. One sample of sauce contained $2\frac{1}{2}$ grains of salicylic acid per pint which is in excess of the quantity hitherto regarded as permissible.

WHISKY. Three samples of whisky were found to be legally deficient in alcoholic strength.

GRADE "A" MILK.

LICENCES GRANTED. On the recommendation of the County Medical Officer the following licences to produce and sell Grade "A" milk, in accordance with the Milk (Special Designations) Order, 1923, have been granted by the County Council:—

8 during the year 1923.

11 " " 1924.

27 " " 1925.

In respect to the year 1925, eight applications for licences were carried over from the previous year and 13 new applications were received during the year. Each farm was inspected by the County Sanitary Inspector with the following results:—

Licences issued	...	...	...	16
Licences withheld pending improvements	...	...	...	3
Applications withdrawn	...	...	...	2

Of the 16 licences issued it was evident that most of the farmers had anticipated the need for careful cleanliness throughout the work of milk production and they welcomed the suggestions made to them by the Inspector. If the one exceptionally unsatisfactory sample of milk with a bacteria count of 5,100,000 is excluded, the average number of bacteria per cubic centimetre in the primary samples taken during the year was 53,055. The second sample taken from the farm which had the high bacteria count and which uses a milking machine contained 32,000 bacteria per cubic centimetre.

In respect to the three licences which were withheld pending improvements, the farmers were aware of the unsatisfactory conditions in respect to water supply, cow-sheds, dairies, drainage, farmyards and milking methods, and readily undertook to carry out the necessary improvements. In each case the primary sample of milk obtained did not comply with the standard laid down in the Order for 1923, the results of the examinations being :—

Farm.	No. of Bacteria per c.c.	B. Coli found in.
A ...	2,000,000 ...	1/100th c.c.
B ...	176,000 ...	1/1000th c.c.
C ...	274,000 ...	1/1000th c.c.

(milking machine used).

The Order requires that the number of bacteria shall not at any time before delivery to the customer exceed 200,000 per cubic centimetre and bacillus coli must not be present in 1/100th of a cubic centimetre.

VISITS TO FARMS. During the year the County Sanitary Inspector paid 115 visits to farms which were licensed or which had applied for licences to produce and sell Grade "A" milk. One hundred and one samples of milk were taken, and a brief summary of the results of the examinations, including the tuberculosis test in 63 cases, which was carried out at the request of the Committee, is given below :—

Highest bacteria count in one sample	... 5,100,000 per c.c.
Lowest	... 420 "
Average	... 55,716 "
Tuberculosis test—60 negative, 3 positive.	

In calculating the average of 55,716, two outstanding unsatisfactory samples with counts of 5,100,000 and 2,000,000 were ignored.

CO-OPERATION WITH ESSEX AGRICULTURAL SOCIETY. The Chairman of the Public Health and Housing Committee, the County Medical Officer and County Sanitary Inspector attended meetings of the Clean Milk Competition Committee during the year, and the last-named has again acted as a Judge under the Competition. As a result of this co-operation, the following paragraph has been included in the Regulations governing the Competition for 1926 :—

" *Grade A Licence.* Provided that farm buildings comply with local bye-laws, the County Council will be able to favourably consider an application for a Grade A licence from any successful competitor.

" If successful competitors do not already possess licences to produce and sell Grade A milk, they are advised to apply for such licences to the County Council, and their applications will be supported by the Essex Agricultural Society."

REPORT BY COUNTY SANITARY INSPECTOR. The production of Grade "A" milk may now be regarded as an essential part of the dairy industry, and the experience gained during the past three years by many visits to farms of all kinds, including the most up-to-date, as well as the older type with thatched roofs and wooden walls, convinces me that no farmer need have any difficulty in producing a clean milk. Once cleanly methods are established, clean milk production operates automatically, and should an unsatisfactory sample arise, it is usually the outcome of a change in cowmen; this has been markedly so in two instances where the head cowman was changed.

When inspecting cowsheds, it has to be borne in mind that a cow in its unnatural habitation is a dirty animal and that dirt cannot easily be dissociated from cowsheds.

In these circumstances the main object to be aimed at by every farmer is to see that the dirt is kept in its proper place. This has been no easy task during the past wet season and every credit is due to those farmers who in spite of adverse circumstances have maintained a fairly good standard of cleanliness.

During the year I have given special attention to certain farms where the farmers were anxious to produce Grade "A" milk but where difficulty was experienced in maintaining the standard required. One example will serve to illustrate the difficulties met with, namely, a farm with a herd of 48 cows. At the primary inspection on 5th December, 1924, the following points required attention:—

- (a) Cows were not marked or named and were not groomed regularly.
- (b) Cowsheds, which are built of brick with thatched roofs, were defective in respect to lighting, ventilation, drainage and cleanliness.
- (c) Milkers (five in number) had no overalls, did not wash hands before milking each cow, and all except the farmer were wet milkers.
- (d) Washing accommodation was inadequate.
- (e) Cooler and milking stools were not clean, and open pails were used for milking and for carrying milk to dairy about 50 yards distant.

Verbal and written advice was given to the farmer who promptly applied himself to the work of remedying the above defects. Re-inspections were made and samples taken with the following results:—

Date of Sample.	No. of Bacteria per c.c.	Bacillus Coli found in.
3rd Dec., 1924 ...	21,500 ...	1/1000th c.c.
27th Jan., 1925 ...	250,000 ...	1/1000th c.c.
9th Feb., 1925 ...	20,500 ...	1/10th c.c.
Feb., 1925 (first licence granted).		
6th Nov., 1925 ...	174,000 ...	1/1000th c.c.
3rd Dec., 1925 ...	280,000 ...	1/1000th c.c.
30th Dec., 1925 (from cooler)	364,000 ...	1/100th c.c.
(from churn)	577,000 ...	1/100th c.c.
1st Jan., 1926, licence not renewed.		
27th Jan., 1926 ...	17,300 ...	1 c.c.
8th Feb., 1926 ...	124,000 ...	1/100th c.c.
22nd Feb., 1926 ...	57,600 ...	1/1000th c.c.
23rd Feb., 1926 ...	11,500 ...	1/10th c.c.
9th Mar., 1926 ...	1,130 ...	Not found in 1 c.c.
March, 1926 (second licence granted).		

In December, 1925, I consulted Mr. R. Robson, M.Sc., of the East Anglian Institute of Agriculture, and explained to him the position now reached at this farm, when he kindly undertook the following investigations:—

27th January, 1926. Mr. Robson and Miss Jameson, N.D.H., paid a surprise visit to the farm and carefully observed the methods of milking. Samples of milk were obtained from various sources, sterilised outfits, including pipettes, being used. These samples gave the results indicated below:—

Cowman.	Cow.	No. of Bacteria per c.c.	Bacillus Coli in 1/10th c.c.
1 ...	1 ...	3,300	Not found
1 ...	2 ...	3,600	"
2 ...	3 ...	23,900	"
2 ...	4 ...	9,000	"
3 ...	5 ...	5,500	"
3 ...	6 ...	5,400	"
4 ...	7 ...	5,400	"
4 ...	8 ...	3,300	"

Farmer, who is a "dry" milker,
milked cow No. 9 into an open
pail, all others using semi-
covered pails ...

Milk from churn ... 260 ...
17,300 ... B. Coli in 1 c.c.

Water from churn obtained by
placing sterile water in churn
swilling it round and pouring it
into a sterilised bottle ... Plates uncountable.

Farmer was advised to pay closer attention to the cleansing of cows, milkers' hands and utensils, particularly cooler, pails and churns, dipping the last three mentioned into boiling water after cleansing.

23rd February, 1926. Mr. Robson, Miss Jameson and I re-visited the farm without previous notification, when, amongst other points, we noted the following :—

- (a) Cowman No. 3 had left and had been replaced by a woman, and two cowmen were still "wet" milking.
- (b) Only one pail of water was used for cleansing the udders of 26 cows which were partially groomed *after* udders had been cleansed.
- (c) A new cooler without brass beadings had been installed.

In these circumstances, samples were obtained with the results indicated below :—

Cowman.	Cow.	Udder washed.	No. of Bacteria per c.c.	Bacillus Coli in 1/10th c.c.
1	7	Once	9,900	Not found
1	8	Twice	5,600	"
2	1	Once	3,600	"
2	2	Twice	4,200	"
3 (woman)	3	Once	4,480	"
4	4	Once	5,200	"
4	5	Twice	11,860	"
Farmer who is a "dry" milker, milked Cow No. 6 into an open pail.			Not washed	1,440
Sample taken from churn using pipette			6,250	
" " " farmer's dipper			11,500	

It is, perhaps, premature to draw deductions from the results of the two special investigations outlined above, but the outstanding features would appear to be as follows :—

- (1) Only Cowman No. 2 showed any improvement.
- (2) Only in one instance (cows Nos. 7 and 8) did the second washing of the udder result in a lower bacteria count.
- (3) "Wet" milking may be largely to blame for the high bacteria counts, the farmer himself demonstrating the effectiveness of "dry" milking, as when using open pails and without washing udders he secured bacteria counts of 260 and 1,440 respectively.
- (4) Churns had not been cleansed properly before being returned to the farm, and the dipper which was used in taking the last sample on 23rd February, 1926, had not been cleansed properly.

I take this opportunity of recording my appreciation of the assistance afforded me at the inspections and in the formulation of these deductions by Miss Jameson and Mr. Robson.

I paid a further surprise visit to the farm on 9th March, 1926, and obtained a sample of milk which, upon examination, proved to be the cleanest produced by this farm. It was apparent that the farmer had secured the co-operation of his men, his own keenness and example having had the desired effect. As in many other industries the personal factor is of importance. So many cowmen are steeped in the obsolete methods of their forefathers, and one is often meeting the excuse that what has been good enough in the past should satisfy the present and future. Another problem is the existing shortage of farm hands, resulting in an independent spirit amongst such workers, and as a result, farmers have to exercise the greatest amount of tact and patience when aiming at cleaner methods. The farmer referred to in the special investigation previously outlined succeeded in leading his men after many weeks of guidance, but since the last sample was taken, one cowman resigned, as he was "tired of the fuss and bother over Grade 'A' milk." Another cowman was appointed, but soon gave up the work for the same reason.

I have for some time observed the existence of two schools of cowmen, namely, those who readily acquire clean milk habits and those who appear to have a deep-rooted objection to any change. When helping farmers to work up to a Grade "A" standard, there is not much difficulty where the cowmen fall into the former category, but where those in the latter school are employed, it is an uphill journey, and I know of two cases where farmers have practically given up hope of ever being able to produce Grade "A" milk. They prefer to keep the cowmen known to them rather than run the risk of obtaining more unsatisfactory men from a depleted labour market. In these days of extensive road improvements, the best type of cowman is attracted from his work by the higher wages and shorter hours given to road labourers; he therefore gladly leaves the role of cowman with its seven-day week and little (if any) holidays. Some farmers have counteracted this migration by increasing wages, and it is surprising how such a practical inducement has resulted in a keenness to produce and maintain a high standard of clean milk, more particularly where farmers have established the rule of "better pay for clean milk" and "ordinary pay for ordinary milk."

Clean milk competitions in Essex have been and are of inestimable value in raising the standard of the milk supply. In my capacity as Judge I have observed the keen competitive spirit amongst the entrants, particularly the new entrants. The result is readily seen in the succeeding year's competition, when second year entrants appear to have no difficulty in producing continuously milk with low bacteria counts. In this way producers are educating one another in clean methods, and the next step is to secure the co-operation of the retailer, so as to ensure that the consumer will reap the benefit of all the extra care taken by the producer. In turn the housewife must play her part in protecting milk from contamination in the home by using clean

vessels and keeping out flies and dust. Everyone is agreed that milk must be kept clean at the farm, during transit, and in the home, and this can only be achieved by everyone who handles milk, observing strict cleanliness and taking care of this valuable portion of the nation's food supply.

TUBERCULOSIS ORDER OF 1925. This Order came into force on the 1st September, 1925, that being the date on which the Milk and Dairies (Consolidation) Act, 1915, in England and Wales, and the Milk and Dairies Act, 1914, in Scotland, took effect. Both these Acts prohibit the use, for the production of milk, of any cow which is giving tuberculous milk or is suffering from tuberculosis of the udder or tuberculous emaciation. The Order compels the slaughter of all such cows and any other bovine animal which may be suffering from tuberculous emaciation or from a chronic cough and showing definite clinical signs of the disease.

The owner is required to report to the police any case of a cow suffering from indurated udder or other chronic disease of the udder, as well as any bovine animals suffering from the other above-mentioned forms of tuberculosis. Veterinary practitioners who find such cases amongst animals which they visit in the ordinary course of their practice are also required to report the fact to the local authority. Animals found affected, after full veterinary inquiry, will be slaughtered and compensation paid at the rate of three-quarters of the market value if found to be suffering from non-advanced tuberculosis, and one-quarter if affected in an advanced form, subject to a minimum payment of 45s.

An important provision in the Order is to prohibit the landing of any bovine animals from Ireland, Canada or elsewhere which are affected with tuberculosis. Any such animals landed in contravention of the Order will be slaughtered in the landing places without compensation. The expenses of carrying out the Order will fall upon the local rates, but the Ministry will refund out of the Exchequer three-quarters of the amount paid by Local Authorities in compensation for slaughtered animals.

The Clerk of the Council has kindly furnished the following information on the working of this Order by his Department during the year 1925:—

No. of animals examined by Veterinary Inspectors	...	6,320
„ „ slaughtered under the Order	...	230
No. of such animals found on <i>post mortem</i> to be—		
(a) Not tuberculous	...	1
(b) Tuberculous but not advanced	...	81
(c) In an advanced stage of tuberculosis	...	148
Total amount of compensation paid by Local Authority, £1,331 3s. 0d.		

MILK AND DAIRIES (CONSOLIDATION) ACT, 1915. The operation of this Act was deferred owing to the War, but under Section 1 of the Milk and Dairies (Amendment) Act, 1922, the 1915 Act became operative on 1st September, 1925.

Section 3 enacts that if the Medical Officer of Health of a County or County Borough is of opinion that Tuberculosis is caused or likely to be caused by the consumption of milk supplied from any dairy in which cows are kept within such County or County Borough, the Council of the County or Borough may make orders prohibiting the dairyman from supplying for human consumption or using or supplying for use in the manufacture of products for human consumption any milk from the dairy or any cows therein until the order is withdrawn.

Regulations are laid down for the making and withdrawing of Orders, and provision is made for compensating the dairyman for damage or loss sustained by the making or unreasonable neglect or refusal to withdraw such Order, and all Orders are subject to right of appeal to Petty Sessions.

*Section 4 casts a duty upon the Medical Officer of Health of any local authority where he suspects Tuberculosis is caused or likely to be caused by the consumption of any milk exposed for sale within the area of the local authority to ascertain the source of supply and notify the Medical Officer of Health of the County or County Borough from which the milk is supplied, who shall cause the cattle to be inspected, and report the result and action taken to the Medical Officer of Health, giving the notice.

Section 5 makes the sale of tuberculous milk an offence, and by Section 18 (5) the duty of taking proceedings for its enforcement rests on the County Council or County Borough Council without prejudice to the power of a sanitary authority in a County to take such proceedings.

This Section in a limited form is contained in Section 5 of the Milk and Dairies (Amendment) Act, 1922, and the sole authority to prosecute for offence under that Section is the sanitary authority.

Any inspections of cattle under this Act shall be carried out by a Veterinary Inspector, and power is given to local authorities to appoint or combine with another local authority in appointing Veterinary Inspectors for the purposes of this Act or Veterinary Inspectors appointed under the Diseases of Animals Act, 1894, may be employed.

Arrangements may be made (subject to the approval of the Ministry) for facilities for bacteriological and other examinations of milk.

Local authorities may delegate their powers under the Act to a Committee.

In order to assist in carrying out the duties under this and other Acts, the County Council extended their arrangement with the County Bacteriologist (Dr. John F. Beale), and since 1st January, 1925, samples of milk may be submitted from any area in the Administrative County for any of the following examinations :—

- (i) Cultural examination for *Bacillus Typhosus*, *Diphtheria Bacilli*, *Paratyphoid A and B*.

* "Local Authority" includes Sanitary Authorities and County Councils.

- (ii) Examination for Manurial Contamination.
- (iii) Microscopical examination for Blood, Streptococci, Tubercle Bacilli, &c.

On 17th November, 1925, the County Council decided to extend this arrangement by making provision for not exceeding fifteen guinea pig inoculations during the year 1926. Where in spite of negative microscopical results there are still grounds for suspecting that a cow is giving tuberculous milk, the Local Medical Officer of Health should communicate with the County Medical Officer for the necessary authority to submit to the County Bacteriologist samples of milk for the guinea pig inoculation test.

During the year 1925, the County Bacteriologist examined 168 samples of milk with the following results :—

	Tubercle Bacilli.		Total.
	Present.	Absent.	
Essex County Council (from Grade A farms)...	3	60	63
Chelmsford Rural	3	54	57
Chingford Urban	—	39	39
Lexden & Winstree Rural	—	3	3
Maldon Rural	...	7	7
	6	163	169

In those cases where tubercle bacilli were found in the milk, steps were taken to find the affected cows which were subsequently excluded from the herds.

Several Local Sanitary Authorities have appointed veterinary surgeons to inspect and report upon the dairy herds in their areas. Much useful work has been done as will be seen from the following extracts from reports already received upon inspections made in 1925 :—

Braintree Rural. Mr. John Bishop Young, F.R.C.V.S., M.R., San. I., "found considerable improvement, both in health and condition. With but few exceptions all the herds, as well as sheds, were reasonably clean. The exceptions have since acted upon my advice and have cleaned up all round and can now be placed on the passed list."

Mr. Young's report is well worth perusal, and the example of the Braintree Rural Authority is recommended to other Authorities.

Chingford Urban. The following is an extract from the Annual Report of the Medical Officer of Health for the year 1925 :—

"*Milk.* Approximately less than one-third of the milk required is produced in the district.

"No case of infectious disease has been traced to the milk supply during the year.

"All milking cows were again examined by Mr. P. S. Howard, F.R.C.V.S., for the purpose of detecting tuberculous affections of the udder and securing a pure local milk supply. The microscopic examination of samples of milk from suspicious udders was undertaken by the County Bacteriologist. Mr. Howard reported as follows, viz. :—

"I beg to report that in company with the Sanitary Inspector, I have visited during the period from May 18th to June 30th last, the respective cowsheds in the district administered by your Council and have examined 194 cows, especially in reference to the condition of the udders.

"Samples of milk, totalling 39 in all, were taken and submitted to the County Bacteriologist for microscopic examination.

"Twenty-three of these samples were taken from individual cows on account of abnormality of the udder or other suspicious symptoms, and the remaining 16 samples were of a collective character, being taken from the mixed milk of the cows in the respective cowsheds, where such course appeared to be indicated as an additional check on the inspection in detail.

"In relation to the above-mentioned samples, the Bacteriologist reported an excess of pus cells in the milk from nine different cows and an excess of pus cells in the collective samples from two distinct premises, also stating that three of the former and one of the latter were unfit for food.

"The result of the inspection has been that of those reported upon adversely by the Bacteriologist, five cows have been disposed of and in the other cases the use of the milk for human use has been discontinued.

"In the case of the collective sample that was found to be unfit for food, further collective samples were taken until a satisfactory report was received from the Bacteriologist.

"The general health and condition of the cows, except those already referred to, were found to be good, and it is satisfactory to note that no tubercle bacilli were reported in any of the samples examined."

Dunmow Rural. Mr. N. A. Young, F.R.C.V.S., examined 1,141 cows and 80 per cent. were healthy. He had taken 36 samples of milk, and in one or two instances only was the tubercle bacillus found. The number of cowsheds inspected was 124; 97 were in fairly good condition, 23 fair, and 4 bad. Some owners were not acquainted with the beneficial effects of cleanliness and proper lighting and ventilation. All appreciated the value of milk, but he was afraid too little attention was paid to the animal from which it was obtained, and in some instances the cow was treated as if it were a machine. Most of the dairies and sheds were kept fairly clean. The cowmen appeared to be industrious, and to carry out their duties to the best of their ability.

Wivenhoe Urban. The Medical Officer of Health reports :—

“The milk produced within or brought into the area is invariably good and the supply is ample.

“No milk has been found to be tuberculous.”

Woodford Urban. The Medical Officer of Health reports :—

“The wholesomeness of the milk supply, of which only a small proportion is produced within the area is good, as shown by the results of analyses of samples which are taken from time to time. Of the milk produced within the district, no instance of tuberculosis in cattle or milk was discovered or suspected.”

COMBINED MEDICAL SERVICE.

The Combined Medical Service is no longer a small experimental scheme in one or two districts, but has, since 1920, become an essential factor in public health administration in a large part of the Administrative County as indicated in Table XVII. given on page 91.

Opportunity is now taken of reviewing the scheme generally since its inception in August, 1919, when it was described in a report to the County Committees concerned.

The aim and object of the scheme is to secure by an agreement between local Sanitary Authorities and the County Council that a Medical Officer shall, in each district, act in the following dual capacity :—

- (a) Local Medical Officer of Health, being directly responsible to the local Sanitary Authority for all duties carried out under such appointment ;
- (b) Assistant County Medical Officer, for duties of Tuberculosis Officer, School Medical Inspector, Child Welfare Officer, Inspector of Midwives, Venereal Disease Officer, &c.

Overlapping amongst Authorities and their Officers in health matters with resulting friction and lack of efficiency, particularly in rural areas, may be ascribed to :—

- (1) The geographical units responsible for public health administration were designed or adapted to meet requirements far less complex than those now confronting a local authority, notably the personal or social services.
- (2) There has followed a division and overlapping of function between various authorities.
- (3) Rapid transport by motor car has revolutionised the problem of local government.

- (4) Although some co-operation has been gained, it has been fortuitous and spasmodic.
- (5) Future possibilities must be borne in mind, for example, changes in the Poor Law system, extension of National Health Insurance system, &c.
- (6) It must be remembered that public health is only one of a number of aspects of local government. Many Royal Commissions have considered this matter, but do not seem to have brought a solution any nearer.

Some of the above anomalies and obstacles can only be remedied by legislation, and therefore it remained to be seen how the others could be overcome by powers already vested in County Councils and local Sanitary Authorities, bearing in mind that whatever proposal was adopted, it should be such as would not further complicate the problem and make the final solution more difficult.

On 1st April, 1919, 17 out of the 47 local Sanitary Authorities in Essex had combined into five groups under Section 286 of the Public Health Act, 1875, and each group had appointed a Medical Officer of Health who devoted his whole time exclusively to the duties appertaining to that office. These appointments are summarised in the following Table:—

TABLE XVI.

Area No.	Medical Officer of Health.	Estimated Population, 1919.	Acreage.	Sanitary districts served.
1	J. F. Macdonald	58,404	220,773	Chelmsford R., Maldon R., Rochford R.
2	E. Bertram Smith	59,064	181,147	Braintree U., Braintree R., Dunmow R., Halstead U., Halstead R., Witham U.
3	J. W. Cook	47,350	146,685	Clacton U., Tendring R., Lexden & Winstree R.
4	W. Armistead	17,877	79,351	Saffron Walden B., Saffron Walden R., Bumpstead R.
5	A. Wright	47,438	35,350	Romford U., Romford R. (also M.O. of Isolation Hospital).

Whilst the above arrangement had many satisfactory features, its chief drawback was the large area which had to be created, particularly in areas 1, 2 and 3, in order that the Local Sanitary Authorities could meet the cost of a whole-time Medical Officer. Further, it did not solve the problem of unification of medical services, leaving the Tuberculosis Officer and the School Medical Inspector travelling over the same ground, each on his respective duties.

Inception of Scheme in Essex.

The Report of August, 1919, was not well received at a conference of Local Authorities, and the only alternative was to select an area where the scheme might be given a trial. Attention was therefore directed to Area No. 3 in the preceding Table, where Dr. J. W. Cook, the Medical Officer of Health, had reached 84 years of age and was still endeavouring to carry out the ever-increasing duties. Preliminary informal

conferences were held with members of the three Sanitary Authorities concerned when it became apparent that the question of a retiring allowance for the Medical Officer of Health had to be settled before any definite step could be taken to formulate a Combined Medical Service Scheme. After consulting the Chief Medical Officer at the Ministry of Health, it was ascertained that the difficulty could be overcome by appointing Dr. Cook as Consulting Medical Officer.

The gratifying feature of further conferences with the three Local Sanitary Authorities was the keenness with which they welcomed the proposal that there should be one whole-time Medical Officer in each area to undertake all the health duties required by themselves and the County Council. In this way Areas No. 1, 2 and 3 in Table XVII. showing present schemes were created, and the Combined Medical Service started in Essex on 1st April, 1920. Since then resignations of other Medical Officers of Health have afforded opportunities for extending the scheme, and in this respect the Ministry of Health have been helpful in asking the Local Authority concerned to consult the County Council before making a new appointment. It is not necessary to record in detail the steps taken to launch the scheme in other parts of the County, particulars of which are given in Table XVII. on page 91, which shows how the combined service has extended during the past five years.

The remaining part of this review may be placed conveniently under four headings, namely :—(a) Local Sanitary Authority (b) County Council (c) Local Committees and (d) Combined Medical Officer.

(a) LOCAL SANITARY AUTHORITY. A Local Authority objects to any arrangement which prevents their continuing to act independently in the appointment of their officers. This objection has been avoided by the method of joint appointment which ensures the final choice being left to the Local Authority.

The appointment is made by a joint Committee of the Local Sanitary Authority and County Council who, after an advertisement over the joint names of the respective clerks of the Authorities, interview the selected candidates and recommend to their respective authorities the chosen applicant. The County Council representatives indicate to the Local Authority's representatives that of the six applicants interviewed say Nos. 2, 3 and 5 would suit them, and leave it to the Local Authority's representatives to choose any one of these three. This method was appreciated by all the Authorities who have adopted the Combined Scheme.

There is also the alleged clashing of interests and the statement that a doctor cannot serve two masters. On the contrary each Authority realises that when approaching the Medical Officer on any health matter the latter will be in a position to deal with it from all the phases of his combined duties. The one possible difficulty is in respect to river pollution, and this has been overcome by the County Medical Officer or County Sanitary Inspector making all necessary inspections and reports.

(b) COUNTY COUNCIL. This phase of the scheme falls under three headings (i) District (ii) Central Office at Chelmsford and (iii) Committee.

(i) *District.* From the County Council's standpoint, the scheme concentrates upon one Medical Officer all the duties of Tuberculosis Officer, School Medical Inspector and Child Welfare Officer, and thus avoids overlapping, waste of time and trouble which were so prominent in the Rural Areas when each Officer served in a watertight department. For example, a Tuberculosis Officer in a rural district had an area of nearly 200,000 acres, and it was therefore quite impossible for him to keep in touch with the homes of his patients. Travelling over the same ground was a School Medical Inspector and a Child Welfare Officer in addition to one or more Local Medical Officers of Health.

One of the main criticisms of the Combined Scheme was to the effect that the various medical services are in reality specialists' services and no one medical man can be an omnibus expert.

With regard to tuberculosis, Essex has been fortunate in having the services of Sir Henry Gauvain as consulting surgeon for surgical tuberculosis, and I really do not see how we could have accomplished this difficult side of our work without his help or its equivalent. In respect to pulmonary tuberculosis, it is very helpful to have the services of a clinical consultant, and Essex has recently appointed such an officer.

It is advisable to have a similar consulting officer for (1) orthopædics (2) maternity and child welfare, particularly ante-natal care, and (3) infectious diseases, more particularly small-pox, encephalitis lethargica and cerebro-spinal fever.

By this means there is at the disposal of the whole county a local routine medical service with the assistance of a county specialist service for particular instances.

Smaller counties might by co-operation arrange for a joint service of the above kind.

A whole time Tuberculosis Officer is advisable for urban populations of more than 30,000.

(ii.) *Central Office at Chelmsford.* From the central administration standpoint, the combined scheme is more intricate and difficult, but not sufficiently so to be a serious matter. Routine work is still sectionalised, passing through a central section where matters affecting appointments, resignations, agreements with authorities, areas of service, &c., are dealt with. This section is vital to the scheme as a close watch must be kept on the many and varied ramifications. The importance of this will be realised when it is remembered that the same principles of combination operate in the nursing and clinic services throughout the Administrative County.

The greatest benefit accruing to the Central Office is the fact that only one Medical Officer has to be considered in each area. Any work arising, *e.g.*, complaints of insanitary conditions and examination of bursars, tuberculosis patients and physical defectives, is readily referred by the appropriate section to the one Medical Officer, whereas formerly care had to be taken to see that the delegating of work to a particular officer did not overlap the duties of another officer.

(iii.) *Committee.* An objection has at times been raised by members of the Public Health Committee and Education Committee that they have not quite the same direct touch with their officers as they had when each service was a "water-tight" department. To a certain extent this is unavoidable, as for obvious reasons the Combined Scheme must work through a Joint Committee, which has been named the Medical and Nursing Services Joint Sub-Committee composed of the Chairman and Vice-Chairman of County Council, six members of the Public Health and Housing Committee and four members of the Education Committee. The terms of reference are as follows :—

- (a) To negotiate with Local Authorities arrangements in connection with combined medical and nursing services.
- (b) To submit recommendations to the Public Health and Housing and Education Committees regarding the appointment of doctors and to appoint nurses so far as such appointments are required for combined medical and nursing services.
- (c) To consider all questions relating to the salaries and allowances to be paid to doctors and nurses appointed by or on the recommendation of the Public Health and Housing or Education Committees and to make recommendations to the said Committees thereon, provided that questions of policy, the preparation and recommendation of estimates and proposals leading to increases of unprovided for expenditure be reserved for the respective Main Committees.
- (d) To investigate complaints concerning doctors and to submit recommendations to the Public Health and Housing and Education Committees thereon ; to investigate complaints against nurses with power of dismissal.
- (e) To negotiate for the acquisition of premises required to be utilised for combined services and to manage such premises when required.
- (f) To consider, and if so authorised by the appointing Committees, to deal with such other matters as may be specially referred to the Sub-Committee by the Public Health and Housing and Education Committees.

Despite this lack of personal touch, members of the various Committees have appreciated the improvement in the efficiency of the medical service and the results obtained. This has been markedly so in regard to medical inspection of school children as will be seen from the following numbers of examinations during the past five years compared with pre-war years.

Year.		Total No. of Examinations.		Equivalent No. of School Medical Staff.
1913	...	26,799	...	4½
1914	...	26,991	...	5½
1921	...	19,355	...	3
1922	...	23,066	...	4
1923	...	34,885	...	5
1924	...	37,107	...	5
1925	...	49,067	...	6

(c) LOCAL COMMITTEES. In the report of August, 1919, special reference was made to the desirability of having Local Committees to supervise locally the work performed by the Medical Officers and Nurses at the schools, clinics, centres and homes. It was suggested that to avoid creating new Committees, the existing District Education Sub-Committees should be utilised for this purpose. This valuable phase of the scheme did not mature, but gradually became overshadowed by the desire to encourage and extend the existing Care of Children Committees, to establish separate Tuberculosis Care Associations and Child Welfare Committees wherever possible, to and concentrate mainly on the care and after care of infants, school children and tuberculosis patients.

In the Preface to the School Medical Officer's Report for 1924, reference was made to this matter as follows:—

“In recent years the establishment of Women's Institutes, Child Welfare Centres, &c., has tended to attract voluntary workers from the Care of Children Committees with the consequent loss of enthusiasm. This is to be regretted, as much of the work undertaken is common to all voluntary agencies.

“It is a great pity that efforts of this kind are not consolidated into a Guild of Social Service for each parish. This would result in a saving of time, fewer appeals for assistance, greater enthusiasm, avoidance of overlapping and confusion, and would ensure continued interest in the general welfare of the community.”

At the time of writing there is only one Local Committee, namely, Halstead, which, owing to the keenness of the Chairman and Clerk, took up the combined duties in connection with School Children, Child Welfare and Tuberculosis patients, and which is still functioning successfully. Efforts have been and are still being made in other areas in the hope that Halstead's example will be followed. With a combined Medical and Nursing Service working in conjunction with a Combined Committee, the continuity of supervision and treatment of child and adult life and a common public health policy are maintained throughout the area.

Dr. J. Ranson (Area No. 7) reports:—

“I was delighted on taking up my appointment to find such a body as the Halstead Welfare Committee in my district. The work of this

“ Committee ensures that nothing is left undone that could be done as far
 “ as School and Child Welfare work is concerned. The same Committee
 “ has recently taken over the care of patients suffering from Tuberculosis,
 “ and no doubt will carry on the duties in the same efficient manner.”

(d) COMBINED MEDICAL OFFICER. Experience shows that a population of about 30,000 in an area of not exceeding 70,000 to 80,000 acres, is a unit of a suitable size. There is much to recommend a larger unit of, say, 50,000 population in an area of 120,000 acres, or thereabouts, where there is a senior and junior medical officer serving the area.

The present salaries of the Combined Medical Officers in Essex are shown in Table XVII. on page 91, and it is anticipated that these will eventually rise to the scale approved by the Ministry of Health. There is no doubt that the Combined Medical Officers should receive the same salaries as are paid to Medical Officers of Combined Districts.

In respect to travelling expenses, these are shared between the authorities in the same proportion as the salary ; sometimes by means of a block grant and in other cases on a mileage basis. Experience shows that the former method is highly preferable, provided a fair and reasonable amount can be secured for the officer.

These appointments have been appreciated by many doctors in the public health service as is shown by the large number of excellently qualified men who have applied whenever there has been a vacancy, and the Combined Medical Officers now at work in Essex exhibit a high standard of professional excellence. Further, they are saved from the blind alley posts, they are the pivotal Medical Officers of the districts, and they are fitting themselves for the combined posts already established in the larger centres of population.

In respect to their duties on behalf of the County Council, the Combined Medical Officers have not that degree of independence as appertains to their duties as Medical Officers of Health. Also the title of Assistant County Medical Officer may be unwelcome to many officers. The title of District Medical Inspector might get over the latter objection, whilst the former depends almost entirely on the personal relations between the County and Local Officers.

The following are frank expressions of opinion given by the Medical Officers regarding their areas :—

Dr. W. H. Alderton (Lexden and Winstree).

“ I daresay you may have noticed the frequent reports on various
 “ matters you receive from the Guardians of the Maldon Rural District and
 “ persons of standing in that district, and also how infrequent are the
 “ reports you receive from similar persons in the Lexden and Winstree Rural
 “ District. I have no doubt that were there a Combined Medical Officer
 “ for Maldon Rural District, these reports would cease, owing to personal

"contact and the opportunity for discussion which would occur. An Assistant County Medical Officer cannot get the mental atmosphere of the Council in whose area he is working as he can when he is also their Medical Officer; and this, I am sure, is just what makes the difference between the two districts."

Dr. P. J. Gaffikin (Braintree and Dunmow Area).

"In this area the difficulty has been the extent of the district and the size of the area to be supervised by one Medical Officer. My own opinion is that the scheme has proved advantageous to the County Council and has much to commend it in the case of the smaller Local Authorities, but that unless the remuneration and conditions of service are improved, it is not one which will, if adopted generally in the country, attract good men into the Public Health Service."

Dr. J. Ramsbottom (Tendring).

"It is liable to be overlooked that the rural area per head of population is more difficult to work than is a town. In the Tendring Rural District there is a population of over 22,000 (about the same as Chelmsford), but spread over 114 square miles. Clinics, to a very great extent, must be replaced by personal visits to the homes. In the country this latter method is the chief means of health propaganda in the same way as the Clinic is in the town. The scattered area and the travelling necessary make the work slow and the amount of work done by an official who works entirely in the country is very disappointing and non-spectacular, since there are no congested areas where much can be done in a short time. Co-ordination of the various services (Tuberculosis, Child Welfare, School Medical and Public Health Services) is more important in the country than in the town."

Dr. W. B. Wood (Grays and Tilbury Area).

"In the Grays and Tilbury Area the Combined Medical Officer is in charge of two important Urban Districts and a large County Area. In the Urban Districts he is responsible for administration and maternity and child welfare work, and in the County Area for school and tuberculosis work. Under such circumstances it is not easy for him to share his time and interest impartially between the claims, to some extent conflicting, of three public bodies. The impossibility of serving two masters is admitted. The difficulty of serving three is no less. I am inclined to think that the Combined Officer in the Grays Area should be relieved of school medical inspection work to enable him to devote more of his time to the claims of the two urban districts. The rapid growth of Tilbury and the increasing importance of Grays as an industrial centre, make it imperative that adequate time should be available for administrative and sanitary work."

"In my opinion the best scheme for this area would entail such a combination of districts, at present controlled by separate authorities, as would permit of the appointment of an administrator whose staff would include a whole-time clinician in charge of Tuberculosis, School and Welfare work."

Dr. J. S. Ranson (Halstead and Belchamp Area).

"Personally I should wish the Combined Service extended to include the Sanitary Inspectors and Nurses. At present these Officers are scattered throughout a large district, and I find it almost impossible to keep in very close touch with them and their work. In these days of motor vehicles they could all work from a central office. With regard to the work in my district as distinct perhaps from other Combined Areas the proportion of the work set by the County Council is greater than the two-thirds of my time to which they are supposed to be entitled. This means either working overtime or appropriating part of the other third or both of these. The clerical and office work takes a considerable time and there is no clerk. Reports such as this become long overdue and then must be written at night. The clerical work grows steadily and it seems that the day is not far off when the whole six days of the week will be insufficient for the County's work. At present if I was relieved of the Bumpstead District and attendance at the Sible Hedingham Sanatorium my time would still be fully occupied. The question of remuneration I feel must shortly come under consideration. The worst that would happen to these Combined Areas would be frequent changes of Medical Officers. They are undoubtedly good posts; why should the salary be not made such as to tempt us to settle down in them for longer periods."

Dr. N. S. R. Lorraine (Shoeburyness Area):--

"The unification of the service in the district of a Local Authority undoubtedly creates efficiency, eliminating overlapping of duties and the creation of watertight departments. The supervision of mothers and infants at Welfare Centres, and the School Children of the district enables the vigilance to be continuous from the time of the birth of a child until such time as he or she may leave school. The information gained from these consultations and inspections assists in the broad principles of Preventive Medicine rendering one's knowledge of the District and people more intimate, more interesting and more instinctive. It gives one an opportunity of becoming known in the District, and the variety of duties eliminates monotony, adding constant fresh stimuli to fatuous local factors which may act detrimentally to the wide issue."

GENERAL CONCLUSION. Various Medical Officers from the Ministry of Health have during the last five years in the course of their ordinary inspections made investigations of the way the scheme was influencing the work of their own particular

Area No.	Sanitary District.	Population, 1921.	Acreage.	Date Scheme commenced.	Name of Officer.	Duties.†	Salary payable by			amount payable by L.S.A.'s per 10,000 pop.
							L.S.A.	C.C.	Total.	
							£ s. d.	£	£	£
1	Lexden & Winstree R. a Wivenhoe U.	19475 2330	69485 1564	1st April, 1920	W. H. Alderton *	M.O.H. and Assist. C.M.O. Assistant C.M.O. only	300 0 0	*400	*700	154
2	Clacton-on-Sea U. a Brightlingsea U. Walton-on-Naze U. Frinton-on-Sea U.	21805 17049 4495 3666 3937	71049 4069 2867 2046 422	1st June, 1920	W. A. Milne	M.O.H. and Assist. C.M.O. Assist. C.M.O. only " " " "	350 0 0	350	700	200
3	Lending R. Harwich Borough a, b	28247 21720 13036	9404 73131 1541	11th Sept., 1920	J. Ramsbottom	M.O.H. and Assist. C.M.O. Assist. C.M.O. only (T.O.)	350 0 0	350	700	165
4	Grays U. a Tilbury U. a Orsett R. a	34756 17364 9582 22904	74672 1359 1855 38084	1st August, 1922	W. B. Wood	M.O.H. and Assist. C.M.O. Assist. C.M.O. only " "	200 0 0 200 0 0	400	800	115 208
5	Chelmsford Borough a, b Chelmsford R.D. a	49850 20761 24618	41298 3112 83045	1st Jan., 1923	R. H. Vercoe	M.O.H. S.M.I. only	600 0 0	100	700	289
6	Saffron Walden Borough Saffron Walden R. Stansted R.	45379 5876 10091 6830	86157 7502 59975 22954	1st Jan., 1923...	S. R. Richardson	M.O.H. and Assist. C.M.O. Assist. C.M.O. only " "	93 6 8 186 13 4 £20 as Med. Sup. Saffron Walden Isolat'n Hospital	400	700	159 187
7	Halstead U. Halstead R. Belchamp R. Bumpstead R.	22797 5916 9739 4219 26500 2876	90431 647 38712 26500 11874	1st Sept., 1923	J. S. Ranson	M.O.H. and Assist. C.M.O. " " Assist. C.M.O. only	46 1 0 120 7 0 66 12 0	467	700	77 123 156
8	Braintree U. Braintree R. Dunmow R. Witham U.	22250 6980 18777 15356 3719	77733 2224 62348 73503 3713	1st Oct., 1923...	P. J. Gaffikin	M.O.H. and Assist. C.M.O. " " Assist. C.M.O. only	31 16 8 103 0 0 98 3 4	467	700	45 54 63
9	Barking U. a, b	44322 35523	141788 3805	1st April, 1920	K. Simpson	M.O.H. and Assist. C.M.O.	650 0 0	175	825	182
10	Colchester Borough a, b	43393	11333	13th July, 1921	W. F. Corfield	M.O.H. and T.O.	?	150	?	
11	Shoeburyness U. Rochford R. Billericay R. Brentwood U.	6413 22863 24211 6853	1036 55003 49394 460	1st Feb., 1925...	N. S. R. Lorraine	M.O.H. and Assist. C.M.O. Assist. C.M.O.	92 1 8	537/18/4	650 rising to £700	142
12	Chingford U. Woodford U. a Wanstead U. a	60340 9482 21296 15298	105893 2808 2461 1679	19th Oct., 1925	M. Barker	M.O.H. and Assist. C.M.O. T.O. only " "	150 0 0	625	775	158

* Dr. Alderton also acts as Assist. C.M.O. in Maldon Union and is paid an additional amount of £50 per annum for this 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.

department, but early in 1926 Dr. Pearse has made a searching and thorough enquiry of all the various aspects of the scheme. His report is eagerly looked forward to both by the County Council and the Sanitary Authorities. My own views are changed only to the extent that surmise and anticipation have become a conviction that the scheme offers the best and most efficient method of carrying out the many public health duties under the existing law, more particularly in rural districts.

COMBINED TREATMENT CENTRES.

In special reports issued during 1919, reference was made to the desirability of using the same set of premises for School Clinics, Child Welfare Centres and Tuberculosis Dispensaries. The first Combined Treatment Centre to serve these three services was opened at Skelmersdale Road, Clacton-on-Sea, in January, 1921, the Urban District Council being the Notification of Births Authority for that area. The premises consist of assembly room, consulting room and office, nursing, dental and refraction room, and shed for perambulators. The Essex County Council contribute to the Urban Council £78 per annum for the use of the premises for School Clinic and Tuberculosis Dispensary. The Tuberculosis Dispensary Session was specially arranged on Fridays at 11 a.m., after which the rooms are cleansed and thoroughly flushed with fresh air during the week end.

Further Combined Treatment Centres have been opened as follows :—

Centre.	Purpose.	Date opened.
(a) Shoeburyness Council Offices	School Clinic and Child Welfare Centre	August, 1921.
(b) Braintree Co-operative Buildings	School Clinic and Tuberculosis Dispensary	January, 1923.
(c) Epping—Epping Gas & Electricity Co.'s Showrooms	„ „ „	March, 1923.
(d) Saffron Walden — Adult School	„ „ „	April, 1923.
(e) Halstead—Cottage Hospital	„ „ „	November, 1923.
(f) Brightlingsea—New Church Schools	„ „ „ and Child Welfare Centre	September, 1924.
(g) Romford—29, Eastern Road	School Clinic and Tuberculosis Dispensary	School Clinic transferred to these premises in July, 1925.

In February, 1920, representations were made to the Public Health and Housing Committee regarding unsatisfactory Clinic premises in some areas and the need for Clinics in other places. It was suggested that each year the sum of £3,000 (£1,500 from the Public Health and Housing Committee and £1,500 from the Education

(Committee), should be provided in the estimates for the erection of two or three Combined Treatment Centres in appropriate areas. Provision in this respect was first made in 1924-25, and since then several plans and schemes have been considered by the Medical and Nursing Services Joint Sub-Committee. Sites for the first two centres have been secured at Brentwood and Maldon.

Plans for a Combined Treatment Centre providing central assembly hall, child welfare room, school clinic, consulting rooms, tuberculosis dispensary (with separate entrance) and kitchen, have been approved and submitted to the Ministry of Health.

The ideal plan would be to accommodate all these Clinics and Centres at the local hospital, but this is often impossible by reason of the premises being unsuitable. There is also in some places a prejudice against holding a Tuberculosis Dispensary in common with other services, but this objection is unjustifiable if ordinary precautions are taken.

PUBLIC HEALTH PROPAGANDA.

Section 67 of the Public Health Act, 1925, authorises any Local Authority or County Council to arrange for the publication within their area of information on questions relating to health or disease and for the delivery of lectures and the display of pictures in which such questions are dealt with, and also authorises such authorities to defray the whole or portion of expenses incurred for any of the purposes of the section.

A Special Sub-Committee was appointed by the Public Health and Housing Committee and reported that they conceived the objects of health propaganda to be:—

- (a) Health lectures and instruction.
- (b) The co-ordination and mutual exchange of informed opinion among public services and voluntary organisations engaged in health work.
- (c) The creation of a public opinion with a sound health standard.

Steps towards the attainment of these objects have already been taken, the County Medical, Nursing and Teaching Staffs having given health talks in Schools, Child Welfare Centres, Dispensaries, &c., and voluntary organisations having provided lectures and courses. It was felt, however, that this work has been sporadic and should be further simplified, unified and co-ordinated. A Standing Sub-Committee has therefore been appointed to organise the work of health propaganda, with leave to confer with the Essex Education Committee and the Essex Insurance Committee and such other organisations as may be deemed advisable and to submit a scheme for the consideration of the Public Health and Housing Committee.

PART II.

TUBERCULOSIS.

Notifications.

A summary of the notifications made in the Administrative County of Essex during the period 4th January, 1925, to the 2nd January, 1926, is given below :—

TABLE XVIII.

Age Periods ...		Notifications on Form A.												Total Notifica- tions on Form A.
		Primary Notifications.												
		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	Total Primary Notifications	
Pulmonary, Males ...	—	12	22	23	66	87	166	143	69	40	8	636	671	
„ Females ...	1	13	22	34	80	92	143	100	48	19	10	562	583	
Non-Pulmonary, Males	4	57	50	38	12	13	14	10	7	3	—	208	219	
„ Females	6	51	35	25	26	19	22	14	3	5	1	207	208	
Totals, 1925 ...	11	133	129	120	184	211	345	267	127	67	19	1613	1681	
„ 1924 ...	20	87	128	105	164	178	311	190	137	62	22	1404	1511	
„ 1923 ...	13	64	116	100	170	219	320	215	155	66	20	1458	1554	
„ 1922 ...	7	44	59	72	148	140	184	169	110	54	22	1009	1073	
„ 1921 ...	18	55	75	84	160	177	225	203	114	72	21	1204	1281	

	Notifications on Form B.					Notifications on Form C.	
	Primary Notifications.				Total Notifica- tions on Form B.	Poor Law Institutions.	Sanatoria.
	Age Periods.			Total Primary Notifications			
	Under 5	5 to 10	10 to 15				
Pulmonary, Males ...	—	1	—	1	1	28	491
„ Females ...	2	—	—	2	2	27	307
Non-Pulmonary, Males ...	—	—	1	1	1	10	61
„ Females	—	1	—	1	1	6	51
Total, 1925 ...	2	2	1	5	5	71	910
„ 1924 ...	3	9	5	17	22	49	636
„ 1923 ...	—	19	2	21	21	67	598
„ 1922 ...	2	8	15	25	25	31	473
„ 1921 ...	1	13	9	23	23	9	385

TOTALS.

	1925.	1924.	1923.	1922.	1921.
Form A. (Medical Practitioners) ...	1,681	1,511	1,554	1,073	1,281
„ B. (School Medical Inspectors) ...	5	22	21	25	23
„ C. (Poor Law Institutions) ...	71	49	67	31	9
„ „ (Sanatoria) ...	910	636	598	473	385
	2,667	2,218	2,240	1,602	1,698

TABLE XIX.

SHOWING SUPPLEMENTAL RETURN IN REGARD TO CASES NOT NOTIFIED UNDER THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS.

	Age periods.											Total cases.	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.	1925.	1924.
Pulmonary, Males	—	1	14	5	9	11	31	23	8	3	—	105	161
„ Females	—	4	10	7	10	15	20	9	4	1	2	82	146
Non-pulmonary, Males	1	6	7	5	3	—	1	2	2	—	1	28	44
„ Females	2	3	4	3	4	1	2	—	—	—	—	19	41

The total number of primary cases notified has increased from 1,281 in 1921 to 1,681 in 1925 (Table XVIII.), and the death-rate per 1,000 population for all forms of tuberculosis (Table XXI.), shows a decline from 1·19 in 1916-20 to '87 in 1921 since when the figure has remained stationary.

TABLE XX.

SHOWING NUMBER OF CASES OF TUBERCULOSIS REMAINING ON THE REGISTERS OF NOTIFICATIONS KEPT BY THE DISTRICT MEDICAL OFFICERS OF HEALTH ON THE 31ST DECEMBER, 1925.

Pulmonary.			Non-Pulmonary.			Total Cases.
Males.	Females.	Total.	Males.	Females.	Total.	
3321	2886	6207	1226	1221	2447	8654

TABLE XXI.

SHOWING AVERAGE ANNUAL NUMBER OF NOTIFICATIONS AS COMPARED WITH THE AVERAGE NUMBER OF DEATHS DURING THE PAST TEN YEARS.

Year.	Pulmonary Tuberculosis.				Non-Pulmonary Tuberculosis.				Tuberculosis (All Forms).			
	Notifi- cations.	Rate per 1,000 pop'l'n.	Deaths.	Rate per 1,000 pop'l'n.	Notifi- cations.	Rate per 1,000 pop'l'n.	Deaths.	Rate per 1,000 pop'l'n.	Notifi- cations.	Rate per 1,000 pop'l'n.	Deaths.	Rate per 1,000 p'p'l'n.
1916-20	1231	1.38	771	0.93	380	0.43	214	0.26	1611	1.81	986	1.19
1921-25	1131	1.21	666	0.71	307	0.32	153	0.16	1439	1.54	818	0.87
1925	1257	1.30	690	0.72	429	0.44	149	0.15	1686	1.74	839	0.87

Attention has been directed in previous reports to the unsatisfactory state of affairs arising from delay in the notification of cases of Tuberculosis until a stage of the disease when treatment can be of little avail.

Of 734 deaths from Tuberculosis during 1925, shewn in Table XXIII., no information was available in 278 cases. Of the 456 remaining, no less than 78 were not notified until after death, and in 209 cases notification was delayed until within three to six months of death.

Undoubtedly, notification is deferred in some cases because patients fear the consequences in connection with employment, lodgings, &c., whilst many refrain from seeking medical advice until their condition compels them to do so, but allowing for these causes there would appear to be a discrepancy which can only be accounted for by the failure of some Medical Practitioners to carry out their obligations under the Public Health (Tuberculosis) Regulations.

Whatever the cause, failure to notify cases at the earliest possible moment is to be deplored, as in the first place it encourages dissemination of the disease by open cases who, though ambulant, should be under treatment or supervision in Sanatoria and elsewhere, and secondly, renders negligible the economic and remedial value of such treatment when undertaken in the later stages.

An important factor is the systematic examination of "contacts," and every encouragement should be given to this preventive side of the work, which is only possible by co-operation on the part of the "contacts" of every infected person. The work involved is considerable. On a basis of an average of three contacts per notified case, some 5,000 examinations ought to have been made by the Tuberculosis Officers in connection with the 1,681 primary cases notified during 1925, whereas the total of such examinations was only 2,764.

The remedy would seem to rest chiefly with the people themselves, and until a general interest can be aroused in the Anti-Tuberculosis Campaign, the problem of

discovering the early case will remain unsolved. Hence the need for efficient propaganda to educate the people as to the causes and consequences of the disease, methods of prevention and facilities available for advice, diagnosis and treatment.

It is to be feared that failure to make propaganda the main objective of the campaign is akin to putting the cart before the horse, and has been the cause of much expenditure of money and effort without obtaining the results which were anticipated.

Deaths.

Table XXII. gives the number of deaths at all ages from Pulmonary and Non-Pulmonary Tuberculosis in the Administrative County of Essex as compared with England and Wales since the inception of Sanatorium benefit in 1911.

TABLE XXII.

NUMBER OF DEATHS FROM TUBERCULOSIS IN ESSEX AND ENGLAND AND WALES DURING THE YEARS 1911-25.

Year.	Pulmonary.		Non-Pulmonary.		Total.	
	Essex.	England and Wales.	Essex.	England and Wales.	Essex.	England and Wales.
1911	939	39,232	332	13,888	1,271	53,120
1912	922	38,083	288	11,908	1,210	50,051
1913	900	37,055	323	12,421	1,223	49,476
1914	870	38,637	233	11,661	1,103	50,298
1915	802	41,050	266	12,512	1,068	53,562
1916	762	40,747	237	12,151	999	52,898
1917	888	42,152	224	12,609	1,112	54,761
1918	920	44,971	231	11,733	1,151	56,704
1919	715	36,662	205	9,650	920	46,312
1920	573	33,469	174	9,076	747	42,545
1921	664	33,505	163	9,173	827	42,678
1922	668	33,919	142	8,858	810	42,777
1923	620	32,097	151	8,691	771	40,788
1924	687	32,690	159	8,413	846	41,103
1925	690	32,382	149	8,005	839	40,387

(a) PULMONARY. During the period 1911 to 1920 the decrease in the number of deaths in the Administrative County of Essex was remarkable, being about 39 per cent. For the five years 1921 to 1925, however, the figures have remained almost stationary, and it is difficult to explain this unless it be that the mortality from Pulmonary Tuberculosis is tending to stabilise, which is doubtful. A more probable cause is that as a result of a gradually increasing interest amongst Medical Practitioners and the people themselves, more cases are now diagnosed as suffering from the disease who would previously have been classified as Bronchitis, &c. Another factor is the reduction of real wages owing to economic conditions resulting in a lowering of general nutrition and a consequent lack of resistance to the disease. The best remedy against consumption is a raising of the social and economic position of the community.

(b) NON-PULMONARY. Although the decrease of over 50 per cent. in the number of deaths occurring between the years 1911 and 1921 has not been maintained,

TABLE XXIII.

SHOWING DEATHS FROM TUBERCULOSIS REGISTERED WITH LOCAL REGISTRARS OF BIRTHS AND DEATHS IN THE ADMINISTRATIVE COUNTY DURING 1925, 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 ...	31	1	7	2	1	5	2	...	13
Braintree ...	7	...	2	...	1	1	...	...	3
Brentwood ...	9	2	2	...	1	...	1	...	3
Brightlingsea ...	3	...	...	1	...	...	...	...	2
Buckhurst Hill ...	1	...	...	...	...	...	...	...	1
Burnham-on-Crouch ...	1	...	...	...	...	...	...	...	1
Chelmsford B. ...	20	2	2	...	1	1	2	...	12
Chingford ...	1	...	1	...	...	...	...	...	...
Clacton-on-Sea ...	10	...	1	1	4	1	1	...	2
Colchester B. ...	47	5	10	5	5	4	1	3	14
Epping ...	6	...	3	...	...	1	...	...	2
Frinton-on-Sea ...	1	...	...	...	...	...	...	...	1
Grays ...	21	3	4	1	...	1	...	...	12
Halstead ...	4	...	...	1	...	...	...	...	3
Harwich B. ...	3	...	...	...	...	...	...	...	3
Ilford ...	76	11	17	6	3	9	1	...	29
Leyton ...	82	10	21	3	10	18	...	...	20
Loughton ...	2	...	1	...	...	...	...	...	1
Maldon B. ...	5	...	2	...	2	...	...	...	1
Romford ...	27	7	11	1	1	4	...	...	3
Saffron Walden B. ...	5	...	...	...	...	1	...	...	4
Shoeburyness ...	1	...	...	...	...	...	...	...	1
Tilbury ...	6	...	2	...	...	2	...	1	1
Waltham Holy Cross ...	7	...	1	1	1	1	...	...	3
Walthamstow ...	119	18	20	7	14	15	9	...	36
Walton-on-the-Naze ...	...	...	...	...	...	...	...	...	...
Wanstead ...	7	...	3	1	...	1	1	...	1
Witham ...	4	...	1	1	...	...	...	...	2
Wivenhoe ...	2	1	...	...	...	...	...	...	1
Woodford ...	8	2	...	...	1	1	...	...	4
Totals ...	516	62	111	31	45	66	18	4	179
Rural.									
Belchamp ...	1	...	...	...	...	...	...	...	1
Billericay ...	15	1	5	...	1	1	...	...	7
Braintree ...	9	...	5	1	...	...	...	...	3
Bumpstead ...	...	...	...	...	...	...	...	...	...
Chelmsford ...	3	...	...	...	1	...	...	...	2
Dunmow ...	8	...	2	...	1	2	...	...	3
Epping ...	14	1	1	2	1	...	2	...	7
Halstead ...	10	...	3	1	...	...	...	...	6
Lexden and Winstree ...	12	1	6	...	...	...	...	...	5
Maldon ...	6	...	...	1	1	2	...	...	2
Ongar ...	7	...	...	...	1	...	...	...	6
Orsett ...	12	...	2	1	1	...	...	...	8
Rochford ...	34	1	6	2	3	2	3	...	17
Romford ...	56	11	15	6	5	4	1	1	13
Saffron Walden ...	3	1	...	...	...	...	...	...	2
Stansted ...	3	...	...	1	...	...	1	...	1
Tendring ...	25	...	5	2	1	1	...	...	16
Totals ...	218	16	50	17	16	12	7	1	99
URBAN DISTRICTS ...	516	62	111	31	45	66	18	4	179
RURAL DISTRICTS ...	218	16	50	17	16	12	7	1	99
TOTALS ...	734	78	161	48	61	78	25	5	278

There has been a further appreciable decrease between 1921 and 1925, approximating 8.6 per cent. This is distinctly encouraging and can now be said to prove that the provisions which have been made for diagnosis and treatment are giving definite and lasting results.

Medical and Nursing Service.

(a) TUBERCULOSIS OFFICERS. The principle of Combined Medical Service has been adopted as far as possible, and a complete list of the Medical Staff is given on page 12.

Experience of the combined scheme fails to show that the principle has been detrimental to the Tuberculosis service, whilst the advantages are many, leading to co-operation between the County Council and the Local Sanitary Authority and enabling more active measures being taken in the prevention and control of the disease, as pointed out by Dr. W. A. Milne, of Clacton, in my 1921 Report.

Conferences of the Medical Staff have been held from time to time at which useful discussions have taken place, particularly in connection with the Tuberculosis problem, resulting in a greater measure of co-ordination and uniformity of method, both from the Local and County points of view, in those areas where the Combined scheme is operating.

With a view to securing a maximum degree of efficiency on the clinical side, the County Council decided towards the end of 1925 to appoint a Senior Clinical (Part-time) Tuberculosis Officer to act generally in the capacity of a Consultant for Pulmonary Tuberculosis, especially in assisting in the diagnosis of doubtful cases.

Dr. W. Burton Wood was appointed to the position to commence duty on 15th February, 1926. He also holds an appointment as Honorary Physician on the staff of the City of London Hospital for Diseases of the Chest, Victoria Park. By means of this dual office it is hoped that the official and voluntary agencies will mutually assist one another in the fight against Tuberculosis. In respect to Surgical Tuberculosis, the County has been greatly assisted by the services of Sir Henry Gauvain, and under his guidance this branch of the work has maintained its high level of efficiency.

(b) TUBERCULOSIS NURSES. A list of the Health Visitors who undertook Tuberculosis work is set out on page 13. These were assisted by 137 District Nurse-Midwives under the agreement which the County Council have with the Essex County Nursing Association, and the arrangements have worked very satisfactory during the past five years.

TABLE XXIV.

DISPENSARIES AND VISITING STATIONS AT 31ST DECEMBER, 1925.

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.	Kerr Simpson, M.D., D.P.H., M.R.C.P.
2 BRAINTREE— Co-operative Buildings	Wednesdays, 11.30 a.m. to 1 p.m.	P. J. Gaffikin, M.C., M.D., B.Ch., B.A.O., D.P.H.
3 BRIGHTLINGSEA— New Church Schools	Wednesdays, 1st and 3rd in each month, 2 to 3 p.m.	W. A. Milne, M.B., Ch.B.
4 CHELMSFORD— General Hospital, London Road	Fridays, 2 to 4 p.m.	M. Barker, M.R.C.S., L.R.C.P., D.P.H.
5 CLACTON— Skelmersdale Road	Fridays, 11 a.m. to 12 noon	W. A. Milne, M.B., Ch.B.
6 COLCHESTER— 12, Trinity Street	Tuesdays, 10.30 a.m. to 12.30 p.m. Thursdays, 10.30 a.m. to 12.30 p.m.	W. F. Corfield, M.D., D.P.H. W. H. Alderton, M.C., M.R.C.S.
7 DUNMOW— 18, Mount Pleasant Ter- race, The Causeway	Tuesdays, 1st and 3rd in each month, 10.30 to 11.30 a.m.	P. J. Gaffikin, M.C., M.D., B.Ch., B.A.O., D.P.H.
8 EPPING— c/o Gas and Electricity Co. Office, High Street	Thursdays, 11.30 a.m. to 1 p.m.	L. S. Fry, M.B., Ch.B., M.R.C.S., L.R.C.D., D.P.H.
9 GRAYS— Hilldrop House, 59, London Road	Mondays, 4 to 6 p.m. Thursdays, 4 to 6 p.m.	W. B. Wood, M.A., M.D., B.Ch., M.R.C.P., D.P.H.
10 HALSTEAD— Cut-Patients' Dept., Cottage Hospital	Wednesdays, 2nd and 4th in each month, 11.30 a.m. to 1.30 p.m.	J. S. Ranson, M.R.C.S., L.R.C.P., D.P.H.
11 HARWICH— c/o Mr. Woodward, Corner Chemist, 1, Church Street	Tuesdays, 11 a.m. to 12 noon	J. Ramsbottom, M.B., Ch.B., D.P.H.
12 ILFORD— 38, Oakfield Road	Tuesdays, 3 to 5 p.m. Fridays, 4 to 6 p.m.	R. A. C. Macnair, M.B., Ch.B.
13 LEYTON— 180, High Road	Mondays, 2 to 4 p.m., and 6 to 8 p.m. Thursdays, 10 a.m. to 12 noon, and 2 to 4 p.m.	J. Sorley, M.A., M.D., D.P.H., LL.B. M. Barker, M.R.C.S., L.R.C.P., D.P.H.
14 MALDON— 114, High Street	Tuesdays, 2nd and 4th in each month, 10.30 to 11.30 a.m.	W. H. Alderton, M.C., M.R.C.S., L.R.C.P., D.P.H.
15 ROMFORD— 29, Eastern Road	Tuesdays and Fridays, 9.30 a.m. to 12.30 p.m.	R. A. C. Macnair, M.B., Ch.B.
16 SAFFRON WALDEN— Adult Schoolroom, High Street	Tuesdays, 1st and 3rd in each month 2 to 4 p.m.	S. R. Richardson, B.A., M.D., B.Ch., B.A.O., D.P.H.
*17 SOUTHEND— 30, Clarence Street	Mondays, Thursdays and Saturdays, 2.30 to 4.30 p.m. (Men 2.30; Women, 3.15) Tuesdays, 6.30 to 8.30 p.m. (Men only) Fridays, 6.30 to 8.30 p.m. (Women only)	G. N. Meachen, M.D., M.R.C.S., M.R.C.P.
18 WALTHAMSTOW— 334, Hoe Street	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	J. Sorley, M.A., M.D., D.P.H., LL.B. M. Barker, M.R.C.S., L.R.C.P., D.P.H.

*For cases from Rochford Rural District and Shoeburyness Urban District by arrangement with the County Borough of Southend.

The County Scheme.

Particulars of the County Tuberculosis Scheme are given below, shewing the extent of the work undertaken from 1921-25.

TABLE XXV.

CASES REGISTERED WITH ATTENDANCES, VISITS AND EXAMINATIONS.

Year.	New Cases Registered.	Dispensary Attendances.	Contacts and suspects examined.	Patients examined at request of Medical Practitioners or the Ministry of Pensions.	Domiciliary Visits.	
					By Tuberculosis Officers	By Tuberculosis Nurses.
1921	1054	21618	3444	1976	1877	11891
1922	816	16452	1970	1828	1944	13500
1923	902	17737	1802	1769	1605	13014
1924	1039	19449	2149	1840	1579	14874
1925	1204	21965	2764	1995	2013	14561

During the five years under review one new Dispensary has been opened at Brightlingsea, and the Dispensaries at Colchester, Epping and Halstead have been removed to more suitable premises.

Table XXV. shows that the volume of work at the Dispensaries has remained more or less stationary. There has, however, been a gradual increase in the number of visits to patients' homes by the Tuberculosis Officers and Nurses. This side of the work is being developed as far as possible so as to carry the campaign into the homes of the people by the judicious distribution of advice and help in improving the hygienic conditions of patients and their families.

The policy of utilising the Dispensaries as far as possible as Consultation Centres commenced in 1919, and embodied later in Ministry of Health Circular 257 of the 3rd November, 1921, has been developed progressively. Whereas there were 2,524 patients attending the Dispensaries for symptomatic treatment in 1921 and only 463 patients on Domiciliary Treatment under Medical Practitioners, the figures were 591 and 3,172 respectively at the end of 1924, since when records of routine recommendations not involving special expenditure have not been kept.

Practically all patients have been gradually transferred to the care of their own Doctors, and after seven years' experience of the system it may be said without doubt that the change has in no way reacted against the interests of the patients. On the other hand there are indications, particularly in the thickly populated districts, that the change has improved the general efficiency of the County Scheme by increasing the interest of the Medical Practitioners and securing a greater measure of their co-operation.

Expenditure on Cod Liver Oil, Oil and Malt, Cough Mixture, &c., has been reduced as far as possible, but a certain quantity of these medicaments is issued from the Dispensaries at cost price, or free of charge in necessitous cases, who are not eligible for such assistance through other sources.

As time goes on the Dispensary service is becoming more and more appreciated, and probably far greater use would be made of the facilities provided but for a fear amongst the people that once they attend a Tuberculosis Dispensary they are labelled "consumptive." For this reason there is much to be said in favour of eliminating the word Tuberculosis if possible, though the best solution is to incorporate the Tuberculosis Dispensary as part of a General Health Centre or Clinic, or, where practicable, to arrange for it at a General Hospital as has been done in Essex—at Chelmsford and Halstead—where no difficulties arise and patients can attend with greater freedom.

SANATORIUM TREATMENT. (1) Beds. Table XXVIII. shews the number of beds provided and the number of patients treated during the years 1921 and 1925.

TABLE XXVI.

RETURN SHOWING THE EXTENT OF INSTITUTIONAL TREATMENT
DURING THE YEAR 1925.

			In Institu- tions on 1st Jan., 1925.	Admitted during the year.	Discharged during the year.	Died in the Institutions	In Institutions on 31st Dec., 1925.
Number of Patients ...	Adults.	M.	98	536	434	51	149
		F.	96	399	390	17	88
	Children.	M.	67	145	144	—	68
		F.	46	117	112	2	49
Totals ...		...	307	1,197	1,080	70	354

TABLE XXVII.

PATIENTS SENT TO OUTSIDE INSTITUTIONS.

PULMONARY CASES.

	Males.	Females.	Children.	Total.
Brompton Hospital and Frimley Sanatorium ...	5	4	—	9
East Anglian Sanatorium, Nayland ...	—	—	44	44
Maltings Farm Sanatorium, Nayland ...	26	12	—	38
National Children's Home, Harpenden ...	—	—	8	8
Church Army Sanatorium, Farnham ...	—	—	33	33
The Royal National Sanatorium, Ventnor ...	12	7	—	19
Metropolitan Convalescent Home, Broadstairs ...	—	—	1	1
Oakbank Open-air School, Sevenoaks ...	—	—	15	15
Eversfield Chest Hospital, St. Leonards ...	12	5	—	17
The Royal National Sanatorium, Bournemouth ...	21	5	—	26
Papworth Training Colony, Cambridge ...	5	—	—	5
City of London Hospital, Victoria Park ...	14	8	—	22
St. Catherine's Home, Ventnor ...	—	—	3	3
Preston Hall Training Colony, Aylesford, Kent ...	7	—	—	7
St. Mary's Hospital, Paddington ...	1	—	—	1
King Edward VII. Sanatorium, Midhurst ...	2	1	—	3
Fairlight Sanatorium, Hastings ...	1	1	—	2
Royal Chest Hospital, City Road, London ...	1	—	—	1
Children's Hospital, Newbury, Berks ...	—	—	1	1
St. Joseph's Hospice, Hackney ...	27	18	—	45
Holy Cross Sanatorium, Haslemere ...	—	1	—	1
King George's Sanatorium, Liphook, Hants ...	6	—	—	6
Daneswood Sanatorium, Woburn Sands ...	—	1	—	1
National Sanatorium, Benenden ...	—	1	—	1
Atkinson Morley's Hospital, Wimbledon ...	—	1	—	1
Mildmay Mission Hospital, Bethnal Green ...	1	—	—	1
Kelling Sanatorium, Holt, Norfolk ...	1	—	—	1
University College Hospital, London ...	1	—	—	1
Hermitage Sanatorium, Isle of Wight ...	57	—	—	57
Totals ...	200	65	105	370

NON-PULMONARY CASES.

Lord Mayor Treloar's Cripple Home and Orphanage, Alton, Hants ...	—	—	8	8
Alexandra Children's Hospital, Swanley, Kent ...	—	—	1	1
Victoria Home, Margate... ..	—	—	11	11
East Suffolk & Ipswich Hospital, Ipswich ...	2	1	4	7
Saffron Walden General Hospital ...	11	8	6	25

	Males.	Females.	Children.	Total.
The London Hospital	5	2	5	12
Hospital for Sick Children, Great Ormond Street, London	—	—	4	4
Royal Sea-Bathing Hospital, Margate ...	3	1	—	4
St. Anthony's Hospital, Cheam	6	13	—	19
Chelmsford General Hospital	1	1	1	3
Heatherwood Hospital, Ascot	—	—	6	6
St. Bartholomew's Hospital, London ...	—	2	—	2
St. Luke's Hospital, Lowestoft	1	—	—	1
East London Hospital for Children ...	—	—	1	1
Brookfield Orthopædic Hospital, Walthamstow ...	—	—	6	6
Royal National Orthopædic Hospital, London ...	—	—	5	5
All Saints Convalescent Home, Eastbourne ...	2	3	2	7
"Herman de Stern" Convalescent Home, Felixstowe	1	—	—	1
Convalescent Home, Saunderton	—	2	—	2
Totals	32	33	60	125

SUMMARY.

PULMONARY CASES	200	65	105	370
NON-PULMONARY CASES	32	33	60	125
TOTALS	232	98	165	495

SUMMARY OF BEDS PROVIDED.

	1921.	1925.
County Council Institutions	150	164
Isolation Hospitals under Agreement ...	70	53
Other Institutions as required (daily average approximate)	25	125
Totals	245	342

Table XXVIII. gives details concerning the four County Institutions, together with Isolation Hospitals in the County where definite arrangements have been made for the treatment of Tuberculosis.

In the absence of a central County Sanatorium and the insufficiency of the accommodation available within the County to meet a growing demand for institutional treatment, a considerable number of beds have been taken at outside Institutions, as

required, increasing the total accommodation from 245 beds in 1921 to 342 at the end of 1925. The majority of the beds outside the County have been for early cases of Pulmonary Tuberculosis: a considerable number of patients having been sent to Bournemouth and the Isle of Wight, where climatic conditions are more favourable for this type of case.

The increase in the demand for beds points again to a growing appreciation of the provisions which the County Council have made. Sanatorium treatment remains the best remedy for Tuberculosis from which any benefit may be anticipated, but to be of real and permanent value it must be undertaken in the earliest stage of the disease and be prolonged for a considerable period, followed by favourable conditions of home and employment. As patients must be in exceptionally favoured circumstances, especially if the breadwinner of a family, to carry out the long course of treatment necessary, the results obtained under public schemes are often at their best only temporary. At the same time much useful work is undertaken by the admission of chronic cases for short periods for (a) purposes of rest to enable them to return to their work and (b) educational purposes.

The problem of the advanced case remains acute, and will not be solved until the many excellent Poor Law Institutions are embodied in a general scheme and made available for the treatment of such cases within easy distance of their homes. In the meantime provision has been made for eight advanced cases at Colchester Isolation Hospital to serve the north-east part of the County, and at Chingford Isolation Hospital and at St. Joseph's Hospice, Hackney, as beds are required, for the southern half. This area includes the extra-metropolitan districts of Leyton, Walthamstow, Ilford, Romford and Barking, where the authorities of the Whipps Cross and Romford Poor Law Hospitals have rendered valuable assistance in connection with advanced cases.

By Circulars 607 and 607a, dated 21st July, 1925, the Ministry of Health suggested close co-operation between the Authorities of Poor Law Institutions and Authorities undertaking schemes for the institutional treatment of Tuberculosis, including the appointment of Tuberculosis Officers as consultants for Tuberculosis to the Poor Law Hospitals in their respective areas. Unfortunately no such appointments have yet been made in the Administrative County of Essex.

Public Health Act, 1925. Powers are vested in the local Sanitary Authorities and the County Council under the Public Health Act, 1925, with regard to Tuberculosis, Section 62 of which provides that where it is proved to the satisfaction of a Court of Summary Jurisdiction:—

- (a) That any person suffering from pulmonary tuberculosis is in an infectious state; and
- (b) That the lodging or accommodation provided for that person is such that proper precautions to prevent the spread of infection cannot be taken, or that such precautions are not being taken; and

TABLE XXVIII.
SHEWING NUMBER OF BEDS PROVIDED AND NUMBER OF PATIENTS ACCOMMODATED DURING THE YEARS 1921 AND 1925.

Institution.	Postal Address.	Telephone Number.	Nearest Railway Station.	Kind of Patient Treated.	Average number of Beds at end of		No. of Patients treated during		Name of Medical Superintendent.
					1921	1925	1921	1925	
County Council Institutions.	Harold Court...	Romford 426	Harold Wood	Males, Pulmonary	49	56	186	355	Dr. A. G. Wilkins (Resident).
	Black Notley...	Braintree 69	Cressing	Females, Pulmonary	35	45	178	275	Dr. P. J. Gaffikin.
	†High Beech ...	Loughton 228	Loughton	Children, Non-pulmonary	31	32	61	60	Dr. L. S. Fry.
	Sible Hedingham...	Sible Hedingham 7	Sible Hedingham	Children, Pulmonary	35	31	104	158	Dr. J. S. Ranson.
Isolation and other Hospitals under Agreement.	Orsett ...	—	—	Males, Pulmonary	14	—	67	—	These beds were given up on 1.1.23.
	†Ilford ...	Ilford 0767	Chadwell Heath	Males, Pulmon., 7 Non-pulmon., 12	19	19	81	45	Dr. A. H. G. Burton. Dr. A. G. Wilkins (Visiting).
	Colchester ...	Colchester 24	Colchester	Males and Females, Pulmonary	12	20	57	66	Dr. W. F. Corfield.
	‡Chingford ...	Chingford 86	Chingford	Females, Pulmon. & non-pulmon.	16	14	69	50	Dr. J. J. Clarke Dr. M. Barker (Visiting).
	Halstead ...	—	—	Females, Pulmonary	9	—	40	—	These beds were given up on 31.3.22.
	Nayland ...	—	—	Children, Pulmonary	19	—	34	—	Agreement terminated in 1922 since when beds are taken as and when required — see Table XXVII.
Other Institutions.	+	—	—	Males, Females and Children, Pulmon. & non-pulmon.	25	125	310	495	—
Totals					264	342	1187	1504	

† Institutions at monthly intervals to supervise the treatment of surgical cases. ‡ For list of Institutions and beds utilised, Table XXVII.

(c) That serious risk of infection is thereby caused to other persons ; and

(d) That a suitable hospital or institution exists for the reception and accommodation of that person ;

The court, upon the application of the County Council or of the local authority may, with the consent of the superintending body of the hospital or institution, make an order for the removal of that person to that hospital or institution and for his detention and maintenance therein for such period not exceeding three months as the court think fit.

So far no case has arisen in the Administrative County in which it has been necessary for the County Council to take action, and this is not anticipated, except in cases of extreme urgency. The problem is primarily one of housing, and the initial steps should be taken by the local Sanitary Authority, but the provisions would be useful should the necessity arise.

(2) COUNTY COUNCIL INSTITUTIONS. Table XXIX. (page 116), shows the average cost per patient per week at each of the four County Institutions, the information being kindly supplied by the County Accountant.

The work at the County Institutions has proceeded satisfactorily along orthodox lines, though the Staffs have been handicapped by the structural difficulties inseparable from the adaptation as Sanatoria of premises which were not built for the purpose.

Harold Court. Further improvements and renovations have been carried out at this Institution and the County Council have purchased a nursery adjoining, increasing the total acreage to 29.3. The acquisition of the nursery has been a distinct advantage, the orchard allowing a considerable increase in the number of poultry kept and providing useful employment for the ambulant cases. The house purchased with the orchard has been adapted for use as a residence for the Medical Superintendent.

The scheme of employment, with remuneration for the patients carried out during 1921 was later discontinued principally on account of a change in the type of case sent to the Institution, which is now reserved more or less for intermediate and advanced cases. To improve the mental outlook of this type of case, a scheme of handicraft has been commenced and the men are given instruction in leather work, basket making, raffia work, &c. An Instructress attends at the Institution by arrangement with the Essex Voluntary Association. The men are keen and the standard of their work very satisfactory, and it is possible that some arrangements may be made for them to continue in their own homes after discharge from Harold Court under the auspices of the various Tuberculosis Care Associations.

Dr. Malcolm Barker relinquished duty as Non-resident Medical Superintendent on the 19th October, 1925, and was succeeded by Dr. A. G. Wilkins as Resident Medical Superintendent.

Black Notley. Various extensions and improvements have been carried out, including the provision of an improved water supply, electric lighting system and dining and recreation rooms. Plans for the further extension of the Institution to provide accommodation for 100 pulmonary and 50 surgical beds for women and children are now in preparation.

Sible Hedingham. This Institution continues to be used for pulmonary cases of children pending the extension of Black Notley, when it will be vacated. In the meantime it serves a very useful purpose, and the results have been extremely satisfactory.

Surgical Tuberculosis. The arrangement whereby the County Council retain the services of Sir Henry J. Gauvain as Consulting Surgeon for Tuberculosis has continued and is of the greatest value. He has regularly visited the adult cases at the Ilford and Chingford Isolation Hospitals in addition to the children at High Beech, for the purpose of giving advice as to treatment, and has also seen other patients at the Farringdon Dispensary, Holborn, and visited various Institutions as required.

His advice and assistance have been particularly useful in connection with special apparatus (splints, jackets, &c.), which are supplied by the County Council on his recommendation, and when possible the patients or their parents contribute towards the expense.

High Beech. All attempts by the County Council to purchase the premises or obtain security of tenure having proved unsuccessful, plans for alternative accommodation at Black Notley have been prepared.

In the meantime, the treatment of children suffering from various forms of Non-Pulmonary Tuberculosis has continued under the supervision of Sir Henry Gauvain, and the results have been extremely encouraging, as shown by the following Report received from Dr. L. S. Fry, Medical Superintendent:—

“ I took over the charge of the hospital from Dr. Brown on February 2nd 1925.

Of the 32 patients then in hospital only 13 now remain, and in the majority of those discharged the disease appeared to be arrested.

The credit for the treatment of these cases is of course due to Dr. Brown.

Thirty-five new cases were admitted during the year and of these :—

13	were suffering from disease of the hip.
4	“ “ spine.
23	“ “ other sites.

Of the 13 hip cases it is encouraging to note that eight were admitted in a comparatively early stage without abscess formation and three turned out not to be tuberculous.

Only four cases of infectious disease have occurred during the year, two of Diphtheria, one of Erysipelas and one of Chicken Pox.

That there was no second case of any of these diseases points I think to careful nursing.

Sir Henry Gauvain has visited the hospital regularly and has been of great assistance to me both as regards the diagnosis of doubtful cases and in advising as to treatment.

Patients. The children are I think happy and contented, and here a word of praise is due to Miss Hutchin who has visited the hospital once or twice a week throughout the year as Captain of the Girl Guides and done useful work in maintaining a cheerful atmosphere in the place."

(c) **LIGHT TREATMENT.** Consideration has been given to the various forms of Light Treatment and an apparatus was provided at the Ilford Isolation Hospital in October, 1925, which has been used in selected cases.

It is too early to express a definite opinion on the results of the treatment, which is still more or less in the experimental stage. At the same time a word of warning is needed against the general use of artificial light for curative purposes, especially when not given under expert medical supervision, as the indiscriminate use of the treatment is not without grave dangers, particularly in pulmonary affections.

The following is a Report by Dr. A. H. G. Burton on the Light Treatment carried out at the Ilford Sanatorium from 29th October to 31st December, 1925:—

"(1) *Medical Officers in charge of Light Treatment.* A. H. G. Burton, M.D., D.P.H., Medical Superintendent, V. F. Soothill, M.D., D.P.H., and M. A. Hadden, M.B., B.C., Assistant Medical Officers. Natural heliotherapy has been practised for two years at the Ilford Council Sanatorium. Dr. Soothill took a course of instruction in artificial light therapy under Sir Henry Gauvain at Alton, Hants.

The treatment is carried out on the general instructions of Sir Henry Gauvain, who visits the Institution once a month.

(2) *Nursing Staff.* 1. Sister-in-Charge: Miss R. Robinson, who is in charge of the Tuberculosis Sanatorium at the Ilford Isolation Hospital. She has had experience in natural sunlight treatment and has been instructed by the Medical Officers in artificial light therapy. 2. The Staff Nurse. 3. Three Probationers.

(3) *Types of Lamps and Amperage.* (a) Hall's Tungsten Arc, 5 amperes.

(b) Jesionek Air Cooled Mercury Vapour. The current required at starting is 10-15 amperes, but this drops in about four minutes to a consumption of four amperes.

(c) "Alpine Sun" Lamp by Messrs. John Bell & Croydon, Ltd. An open arc of carbon impregnated with Tungsten. The working consumption is 15 amperes.

(4) *Type of Current and Voltage.* A direct current is obtained by the town supply at a voltage of 230.

(5) *Diseases treated.* All the cases treated have been of tuberculosis, with one exception. The majority are cases of tuberculosis of bones and joints, but there have been a few cases of tuberculous glands of the neck and abdomen, and one case of chronic discharge from a tuberculous empyema received a few doses. One case of surgical tuberculosis has also psoriasis, probably tuberculous in origin, and this has improved markedly with Light Treatment and Ung. Chrysarobini. One has tuberculous ulceration in an old scar near the knee. The one exception was a case sent in with the diagnosis of bony tuberculosis, but the condition was eventually diagnosed as septic. He improved markedly under Light Treatment.

Number of Bone and Joint Tuberculosis Cases, 10; Number of Glandular, &c., Tuberculosis Cases, 2; Intercurrent Cases of Tuberculosis of Skin, 2; Chronic Septic Osteomyelitis, 1; Tuberculous Empyema, 1.

(6) *The Routine Course of Dosage.* (a) The Tungsten Arc. This is used for local treatment on alternate days, usually in conjunction with the general light baths. The starting dose is $\frac{1}{2}$ -1 mins., increasing $\frac{1}{4}$ - $\frac{1}{2}$ min. per treatment to a maximum of 5 mins., according to the reaction. There is no departure from this routine. The distance is kept constant at twelve inches.

(b) The Jesionek Lamp. This is used for a general light bath on alternate days, often in conjunction with the Tungsten Arc. The starting dose is estimated by trial on small areas, the dose producing a faint erythema being selected. As a rule the starting dose is one min., at a distance of approximately 12 inches increasing by $\frac{1}{2}$ a min., per treatment to a maximum of ten mins. front and 10 mins. back. There is no departure from this routine, except if a reaction is produced, when a rest is given and a reduced dose is used for recommencement with smaller increases.

(c) The "Alpine Sun" Lamp. This is used as a general light bath on alternate days, often in conjunction with the Tungsten Arc. The distance is kept constant at approximately 18 inches. The initial dose is 5-10

mins. front and back each, increasing by five mins. per treatment to a maximum of 30 mins. back and front each. The sole departure from this routine was in the case of Tuberculous empyema, when an initial dose of five mins. was used with an increase at first of two mins. per treatment to present dose of 10 mins. When the lamp was first installed an initial dose of three mins. was given to a few patients instead of five mins. as a precautionary step.

(7) *Average duration of Treatment.* The average duration of treatment for all cases in 1925 was 35.8 days but the lamps were only installed late in the year, so full courses have not been completed. The light treatment was discontinued in one case after 18 days.

(8) *Temperature and Pulse Rate.* These are taken night and morning in the ordinary routine but not immediately before or after treatment. The majority of the patients treated have not been subject to a temperature above 98.4 deg. F., but a few have had slight pyrexia below 100° F.

(9) *The Date.* The date on which the first treatment was given was 29th October, 1925.

(10) *The Total Number.* The total number of patients treated up to 31st December, 1925, inclusive, is 14.

(11) *The Weights and Heights.* The weights and heights of patients as a rule cannot be taken as most of them are bed cases, many in splints or extensions owing to the nature of their diseases. The height has not been taken in any case, the cases being all adolescents or adults. Six cases have been weighed but all for short periods, the maximum gain was 1½ lbs. in three weeks. One patient lost ¼ lb. in five weeks. The average gain was 5.2 ounces per week per patient but the period under report is too short for the figures to be of any value.

(12) *Photographic Records.* Photographic Records of Patients are not kept. X-ray photographs are taken when indicated for diagnostic treatment purposes, but in the short period under report repeated X-ray photographs have not been taken.

(13) *Brightness and Alertness.* The patients are certainly improved in general condition and cheerfulness by heliotherapy, natural or artificial.

(14) *Observations on Skin.* Erythema and desquamation are easily produced by "Jesioneck" and "Tungsten Arc" lamps. There is not the same rapidity of action with the "Alpine Sun" (carbon impregnated with Tungsten); the case of Tuberculous Psoriasis has improved markedly. Previously this condition had remained obstinately stationary for many years according to the history given by the patient.

(15) *Effect of Light on Local Lesions.* A decidedly healing effect is found generally. A discharging sinus may increase its discharge temporarily but this gradually becomes less purulent and more serous and finally dries so that the sinus heals.

(16) *Particular Cases.* The case of psoriasis previously mentioned who also had acute tuberculosis of the knee has done very well. Abdominal tuberculosis (glandular and peritoneal) has shewn a remarkable healing tendency, but the other environmental conditions have probably assisted in that direction.

(17) *Average cost of Current per hour.* The cost per hour to run these lamps is as follows :—

Alpine Sun	...	...	1s. 0'6d.
Tungsten ...	...	...	0s. 4½d.
Mercury Vapour	...	...	0s. 4½d.

(18) *Average cost per patient.* This varies considerably according to the length of time the different patients are under exposure."

OTHER HOSPITALS. Cases of Lupus recommended for Finsen Light Treatment have been sent to the Special Department for this treatment at the London Hospital; a total of 806 attendances being made in the year 1925, and the results have been generally beneficial.

In three cases the County Council undertook financial responsibility for boarding-out the patients to ensure regular attendance and uninterrupted treatment at the Hospital, and in several other cases travelling expenses were paid.

The course of treatment must be prolonged for a considerable period if permanently beneficial results are to be attained, and is therefore expensive. Where successful, however, the expense is fully justified, as the patients suffer a minimum of disfigurement, and if other organs, *e.g.*, Lungs, are not involved, are able to resume normal conditions of life and employment.

The following are examples of the cases dealt with :—

B.E.F., Female, age 29.

Recommended by Tuberculosis Officer for Finsen Light Treatment 24th August, 1924, for lupus of face, shoulder, wrists and pharynx. After careful consideration the Authorities at the London Hospital declined to undertake the treatment in this case as in two or three cases of lupus of the larynx, the patients have died rapidly following general light baths.

Sir Henry Gauvain saw the patient and recommended admission to a special residential institution where light treatment might be undertaken, but no such institution was available.

Patient subsequently admitted to Sanatorium and received six months' treatment, her general health on discharge being much improved, but the facial condition remaining unchanged, with two patches of the disease on her body.

The patient has expressed her intention of trying to obtain light treatment elsewhere, but it is doubtful whether this will be given in view of her throat condition.

L.H., Female, age 23.

Received prolonged courses of Sanatorium treatment from 1907 to 1919 for tuberculous glands. Developed lupus of right cheek in 1922, since when she has attended the London Hospital for light treatment. Is still attending, and her railway fares have been paid by the County Council. Last report—"Wide scar over the right cheek, in which there are two recognisable tubercles. Owing to the depth of the scarred tissue, the re-action to her weekly Finsen Treatment is poor, and I expect she will need 12 further treatments."

H.B., Male, age 15.

Lupus of right chin. Has attended London Hospital since 1922. Last report states—"Patch on chin appears to be quite well." Still attending.

C.H., Female, age 17.

Lupus of nose. Has attended London Hospital since 1921. Doing very well and still attending.

(d) ARTIFICIAL PNEUMO-THORAX TREATMENT. During the year 17 Essex patients were admitted to the Victoria Park Hospital under the County Scheme. Four of these were admitted for hæmorrhage. Two patients received artificial pneumo-thorax treatment.

(e) X-RAY FACILITIES. The value of X-ray skiagrams as an aid in the diagnosis of tuberculosis is generally acknowledged, and some effort has been made to provide facilities for this in various parts of the County. Cases from Leyton, Walthamstow, Wanstead, Woodford and Chingford districts and Harold Court Sanatorium have been dealt with at Whipps Cross Hospital, Leytonstone, those in the Epping area at the Epping Cottage Hospital, and those in the Grays and Tilbury area at the Tilbury Hospital.

These arrangements have been greatly appreciated by the Tuberculosis Officers concerned, and also by the Medical Practitioners in the respective districts, as the result of which consideration is now being given to a comprehensive scheme to provide X-ray facilities for the whole of the Administrative County.

The following is an extract from a report on X-ray facilities in the County of Essex by Dr. W. Burton Wood, the Senior Clinical Part-time Tuberculosis Officer :

"The application of X-ray work to the examination of diseased conditions of chest organs is of comparatively recent origin and though now beyond the experimental stage, the interpretation of the results of skiagrams of the chest offers in the present stage of our knowledge more difficulty than that of skiagrams of bony structures. Thus while the interpretation of X-ray pictures of tuberculous disease of the bones is a comparatively easy matter, greater skill and experience are required for that of diseased conditions of the lungs.

A skiagram at best is only a shadow picture. The X-rays easily penetrate the soft tissues of the chest wall and the spongy tissues of a healthy lung. They are partially or completely obstructed by the ribs, heart, large blood vessels and the lung roots which consist of a bundle of air tubes, blood vessels and lymphatic glands. The lung roots in health produce a fan shaped shadow due to the radiation of the bronchial tubes outwards into the lung, while the handle of the fan is represented by the shadow cast by a mass of important glands which act as filters of the lung tissues and catch up particles of dirt and disease germs which have found their way into the lungs.

In diseased conditions of the tubes or glands the "fan" presents a thicker and darker appearance on a skiagram. In old tuberculous lesions, glands which have been inflamed become calcified, *i.e.*, converted into bone, and these will appear as small shadows of characteristic density on the X-ray plate.

In many diseases of the lung as the result of inflammation, portions of the spongy lung tissue become more or less solid and such areas will cast shadows of proportional density. In comparatively early stages of tuberculosis, for example, faint mottling of lung areas that should be clear may indicate spots of disease. In advanced tuberculosis where large areas of the lung have been converted into dense masses of diseased tissue a correspondingly large and denser area will show on the skiagram film. In such shadows clearer rounded areas may show the situation of cavities. Pleural effusions, *i.e.*, fluid on the lungs are very clearly shown.

It will be obvious from the above that though a good skiagram will show changes in lung structure, it tells little of the cause of the morbid appearance. The idea prevalent in the lay mind, and unfortunately supported by the too vivid imagination of enthusiastic radiologists, that a skiagram enables a clear-cut diagnosis of tuberculosis to be made is not justified.

The shadows revealed by the skiagram may be due to tuberculous inflammation, but similar shadows are produced by inflammation due to many other causes. In the present state of our knowledge the interpretation of the picture is often a matter of great difficulty, and the evidence

the skiagram must be correlated with that from the clinical and bacteriological examination of the patient.

In addition to skiagrams the examination of the patient by a fluorescent screen is often necessary. This shows the movements of the diaphragm which are apt to become altered when the lungs are diseased. Screen examinations, however, do not afford much evidence of the condition of the lung tissues, the shadows cast being much fainter than those shown on the plates. In fact, anyone entering the radiologist's dark room from daylight can at first see nothing at all on the illuminated screen until the eye has become accustomed to the altered conditions. The value of screen examinations is thus limited, nor can they replace skiagrams.

The use of X-rays in chest therapy may be summarised as follows:—

1. In treatment involving operative procedure, *e.g.*, artificial pneumothorax, *i.e.*, compression of the lung by air, a form of "splinting" of the lungs which at times gives excellent results; the use of X-rays is essential.
2. For the diagnosis of fluid, solid tumours, lung cavities, dense scarring of the lung; X-rays afford clear and reliable evidence.
3. Skiagrams are useful for examining the condition of the lung roots. The evidence afforded is occasionally valuable, but more often equivocal.
4. In the earliest stages of tuberculosis skiagrams are of little value as the first deposit of tubercle is not sufficiently dense to cast a shadow. In somewhat later stages evidence suggesting tuberculous disease and its extent is afforded by skiagrams if these are of the best quality and interpreted by a trained observer.
5. Certain special forms of pulmonary tuberculosis, *e.g.*, miliary tuberculosis may be differentiated from less fatal forms by the aid of X-rays.
6. Radiograms are sometimes of great help in the diagnosis of cancer of the lung and similar conditions, the signs of which on a clinical examination closely simulate those of chronic forms of consumption.

Radiography as applied to chest work is a difficult art and skiagrams are useless unless they are of the best quality, to obtain this a thoroughly trained radiologist or radiographer must be employed to take the films and he must be supplied with the best equipment obtainable. A poor skiagram is worse than no skiagram."

TABLE XXIX.

STATEMENT SHOWING AVERAGE COST PER PATIENT PER WEEK FOR THE TREATMENT OF TUBERCULOUS PATIENTS
IN COUNTY SANATORIA DURING THE YEAR ENDED 31ST MARCH, 1926.
(kindly supplied by the County Accountant).

Item of Expenditure.	BLACK NOTLEY. (Average No. of Patients 43·93).		HAROLD COURT. (Average No. of Patients 53·65).		HIGH BEECH. (Average No. of Patients 32·58).		SIBLE HEDDINGHAM. (Average No. of Patients (b) 29·85).	
	Amount.	Average cost per Patient per week.	Amount.	Average cost per Patient per week.	Amount.	Average cost per Patient per week.	Amount.	Average cost per Patient per week.
Salaries ...	£ 992	d. 103·93	£ 2071	d. 177·65	£ 1751	d. 247·41	£ 581	d. 89·63
Provisions ...	1013	106·13	2862	245·50	573	80·96	536	82·69
Drugs and Medical Appliances ...	51	5·34	156	13·38	157	22·18	17	2·62
Fuel, Light and Water ...	199	20·85	427	36·63	181	25·57	108	16·66
Domestic Renewals, Repairs, &c. ...	167	17·50	437	37·49	141	19·92	61	9·41
Laundry ...	170	17·81	450	38·60	102	14·41	74	11·42
Structural Renewals, Repairs, &c. ...	157	16·45	1292	110·83	244	34·48	113	17·43
Garden ...	14	1·47	...	...	27	3·81	43	6·63
Travelling Expenses of Patients and Staff ...	174	18·23	251	21·53	(a) 355	50·16	90	13·84
Printing, Stationery, &c. ...	44	4·61	70	6·00	22	3·11	26	4·01
Rates, Taxes, Insurance ...	34	3·56	90	7·72	97	13·71	51	7·87
Rent and Loan Charges ...	193	20·22	769	65·96	71	10·03	120	13·51
Capital defrayed from Revenue ...	...	...	29	1·72	179	25·29	14	2·16
Miscellaneous ...	24	2·51	65	5·58	21	2·97	11	1·70
Gross Total ...	3222	338·61	8960	768·59	3921	554·01	1845	284·62
Profit on Farm Account ...	...	...	195	16·73	...	...	...	...
Other Receipts ...	2	·21	99	8·49	8	1·13	35	5·40
Nett Total ...	3230	338·40	8956	743·37	3913	552·88	1810	279·22
31st March, 1926 ...	...	(£1. 8s. 2d.)	...	(£3. 1s. 11d.)	...	(£2. 6s. 1d.)	...	(£1. 3s. 3d.)
31st " 1922 ...	...	(£1. 10s. 9d.)	...	(£2. 10s. 6d.)	...	(£1. 17s. 1d.)	...	(£0. 18s. 11d.)

(a) The cost per patient per week is increased by 2s. 5d. on account of the expenditure for the new car of £203.
(b) 2 Beds only occupied from 8th to 12th July, and all beds unoccupied from 13th to 19th July.

(f) TRAVELLING EXPENSES OF PATIENTS. The arrangements made in 1921 with the Railway Companies serving the Administrative County of Essex under which printed railway vouchers are issued direct from the Public Health Department to necessitous patients travelling to or from Sanatoria, and for other forms of special treatment involving travelling have been continued.

The extent of this work for the past five years is shown below :—

Year.	Total number of Vouchers issued.		Cost.		
			£	s.	d.
1921	...	Not available	...	Not available	
1922	...	do.	...	do.	
1923	...	452	...	139	9 0
1924	...	568	...	138	16 0
1925	...	569	...	190	18 4

(g) EXTRA NOURISHMENT. As previously reported, extra nourishment has been granted in cases falling within the following categories as advised by the Ministry of Health :—

- (i) Patients who have received an adequate course of Sanatorium treatment, and whose medical condition is such that, with the grant of extra nourishment, they may be expected to maintain or recover full working capacity, and
- (ii) Patients in whose cases ultimate arrest of the disease may reasonably be anticipated, and who are waiting for admission to a Sanatorium.

Grants have been very carefully made, and expenditure in this connection has been kept as low as possible, the following being the figures for the past five years :—

Year.	Estimated amount for for year ended 31st March.		Actual amount expended for year ended 31st December.		
	£		£	s.	d.
1921-22	...	1,100	...	890	16 11
1922-23	...	355	...	270	18 5*
1923-24	...	300	...	109	16 11
1924-25	...	300	...	139	8 7
1925-26	...	300	...	269	9 3

In order to comply with the suggestions of the Ministry of Health, and to avoid overlapping, it has been necessary to refer cases not falling within the above categories to Boards of Guardians and Tuberculosis Care Associations, but no case of hardship has come to the notice of the Public Health Department owing to the restrictions.

*The reason for the decrease is given on page 54 of my Annual Report for 1921.

Efforts have been made to ensure that only genuine milk was supplied, and in certain places samples have been taken by the Foods and Drugs Inspectors for special examination, the results being generally satisfactory. Whenever possible, Grade "A" milk has been supplied.

(h) DENTAL TREATMENT. The provision of dental treatment has been continued under the County Scheme and undoubtedly plays a very important part in the treatment for Tuberculosis, which is in many cases primarily a disease of malnutrition.

Comparative figures are given for the past five years as follows :—

Year.	Extractions.	Fillings.	Scalings.	Total Cases treated.
1921	327	48	14	77
1922	332	61	26	74
1923	235	24	21	55
1924	256	51	22	83
1925	292	62	40	122

It will be seen that the demand for this work has been fairly consistent. The provision of Dentures is not included in the Scheme, and for this reason a number of patients who were ineligible for a dental grant from Approved Societies or other similar organisations have refused to have their teeth extracted, but this difficulty has been overcome in those districts where there is a Tuberculosis Care Association.

As far as possible dental treatment should be undertaken before patients are admitted to Sanatoria so that they may derive the maximum amount of benefit from their treatment there, but where this course is not possible the dental treatment is carried out whilst the patients are at Sanatoria.

(i) SHELTERS. Seventy shelters have been provided for patients at their homes and are continually in use; they are much appreciated, particularly where it is not possible for a patient to have a separate bedroom.

This provision of domiciliary shelters by the County Council is useful and economical provided the site and home circumstances are favourable.

The shelters are inspected by Tuberculosis Officers and Nurses, at least once every three months. Necessary repairs and the removal of shelters, when required, are arranged by the County Architect.

(j) CONTRIBUTIONS BY PATIENTS. Since 1st April, 1922, a comprehensive Scheme has been in operation under which patients, or in the case of children their parents, are required to contribute towards the cost of institutional treatment, &c., except in necessitous cases. The contributions are made in accordance with a scale based upon their weekly income. Ex-Service men are not required to contribute and in

assessing the contributions to be made by insured persons, no account is taken of the amount of Sickness benefit they receive under the National Insurance Acts, but only of their income from other sources.

The arrangements have generally worked smoothly, and careful enquiries have been made continuously to ensure that the demand for a contribution has in no way been the reason for refusing Sanatorium treatment when offered.

As far as possible the services of School Attendance Officers are utilised for the collection of contributions for which they receive a commission of $7\frac{1}{2}$ per cent. for the additional work involved.

The amounts received under this Scheme for the period 1922 to 1925 are shown below :—

			£	s.	d.
1922	...	...	...	828	2 1
1923	...	...	...	1,738	13 10
1924	...	...	...	1,916	18 11
1925	...	...	...	1,724	13 1

(k) TUBERCULOSIS CARE ASSOCIATIONS. Tuberculosis Care Associations have been established at Barking, Chelmsford, Colchester, Halstead, Ilford, Leyton, Romford and Saffron Walden.

Subject to compliance with certain simple conditions, the County Council undertake to make a grant not exceeding £20 per annum to each Association for definite care work, in addition to a further sum not exceeding £20 per annum for printing, stationery, postages, &c.

Table XXX. gives some particulars regarding these Associations, and the work which they have carried out and developed in the respective districts has been of great assistance. Many difficulties are encountered in raising and maintaining sufficient funds, and great credit is due to the Associations for the work which has been accomplished. Particular mention should be made of the efforts of those Associations who have sent children from families with a history of Tuberculosis to Convalescent Homes with a view to increasing the children's powers of resistance against infection.

In all cases the Tuberculosis Officer acts as Hon. Medical Adviser to the Association, and grants are made on his recommendation.

Conferences have been held at which useful discussions have taken place, especially from the point of view of propaganda, and the Associations have formed a Provisional County Committee with the object of co-ordinating their efforts.

As Tuberculosis Care Work on voluntary lines plays an important part in the efficiency of a Tuberculosis Scheme, efforts will be made to establish Care Associations for the remaining areas of the Administrative County as soon as possible.

TABLE XXX.

TUBERCULOSIS CARE ASSOCIATIONS IN ESSEX.

Name of Association.	Day and Time of Meetings.	Year ended.	Income including Balance in hand.	Expenditure.		Total No. of Cases assisted.	Nature of Assistance Provided.
				Cases assisted.	Other Items.		
BARKING ...	Every Third Tuesday in the month	31/3/26	£ s. d. 217 2 0	£ s. d. 104 13 8	£ s. d. 13 7 10	51	Extra nourishment Clothing Cash grants.
CHELMSFORD ...	Fourth Monday in each month at 7 p.m.	31/3/26	257 4 11	134 4 8	29 3 9	29	Extra nourishment Domestic help Provision of meals Cash grants Convalescent holidays
COLCHESTER ...	Last Friday in each month	31/3/26	10 5 0	5 19 11	...	12	Extra nourishment Loan of spinal chair Clothing
HALSTEAD ...	This Association commenced in that	was only formed at the end of 1925,	year.	and its			activities did not com-
ILFORD ...	First Thursday in each month at 7.30 p.m.	31/3/26	379 5 5	255 5 11	11 14 4	46	Extra nourishment Clothing Dentures Railway Fares Surgical appliances
LEYTON ...	Second Friday in each month at 7 p.m.	31/3/26	353 9 7	183 14 7	29 1 6	114	Convalescent accommodation for children Extra nourishment Clothing Dentures Travelling expenses Removal ..
ROMFORD ...	Second Friday in each month at 8 p.m.	31/3/26	244 10 7	174 17 3	23 5 11	45	Extra nourishment Dentures Clothing Employment
SAFFRON WALDEN	Fourth Tuesday in each month.	30/4/26	48 15 7	33 5 7	3 3 7	15	Extra nourishment Convalescent treatment for children Travelling expenses Clothing Cash grants

(l) COST OF THE COUNTY TUBERCULOSIS SCHEME. Table XXXI. gives details estimates and expenditure on Tuberculosis in the Administrative County for the five years under review :—

TABLE XXXI.

Year.	Estimated Expenditure.	Actual Expenditure.
	£	£
1921-22 ...	50,230	48,423
1922-23 ...	40,565	39,559
1923-24 ...	41,045	43,933
1924-25 ...	43,383	43,702
1925-26 ...	53,395	53,112

In the estimates for the financial year 1925-26 provision was made for the diagnosis and treatment of the Tuberculosis as follows :—

Nature of Services.				Amount.
				£
Tuberculosis Officers	...	...	...	6,870
Nurses	...	...	...	3,475
Dispensaries	...	...	...	2,895
County Council Sanatoria	...	...	...	17,940
Other Sanatoria	...	...	...	20,440
Shelters	...	...	...	500
Dental Treatment	...	...	...	75
Extra Nourishment	...	...	...	250
After-Care and Propaganda	...	...	...	100
Laboratory	...	...	...	350
Sundries	...	...	...	500
				<u>£53,395</u>

PART III.

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

(1) COUNTY AREA. During the year 1925 the County Council were responsible for administering the above Acts in the following 26 Sanitary Districts :—

Sanitary Districts.	Acreage.	Population, 1921.	No. of Births notified by		No. of Births Unnoti- fied.	Deaths of Infants under 1 year.	Deaths of Mothers.
			Midwives.	Doctors & Parents.			
Maldon B. ...	3,028	6,590	42	66	1	2	...
Saffron Walden B. ...	7,502	5,874	28	30	...	6	...
Braintree U. ...	2,224	6,970	88	16	...	4	...
Brentwood U. ...	460	6,853	69	49	2	4	1
Brightlingsea U. ...	2,867	4,500	...	53	...	1	...
Burnham-on-Crouch U. ...	4,517	3,434	...	45	...	...	...
Chingford U. ...	2,808	9,482	46	117	12	8	...
Epping U. ...	1,420	4,196	21	51	1	2	...
Frinton-on-Sea U. ...	422	3,032	...	21	...	3	...
Halstead U. ...	647	5,923	35	50	...	6	1
Shoeburyness U. ...	1,036	6,413	115	10	6	7	1
Walton-on-the Naze U. ...	2,046	3,664	2	30	...	2	...
Witham U. ...	3,713	3,717	37	36	...	1	1
Wivenhoe U. ...	1,564	2,329	12	22	1	...	...
Belchamp R. ...	26,500	4,219	24	34	1	4	...
Billericay R. ...	49,394	24,211	316	184	27	20	1
Braintree R. ...	62,349	18,779	108	137	2	5	...
Bumpstead R. ...	11,874	2,376	20	14	...	3	...
Dunmow R. ...	73,503	15,352	93	105	21	11	1
Epping R. ...	39,055	14,625	142	57	18	10	1
Halstead R. ...	38,712	9,743	25	83	6	7	1
Ongar R. ...	47,236	10,054	63	125	8	12	1
Rochford R. ...	55,003	22,863	259	313	30	30	2
Saffron Walden R. ...	59,975	10,087	77	27	...	10	...
Stansted R. ...	22,954	6,828	54	30	8	4	1
Tendring R. ...	73,131	21,721	154	247	...	22	...
Totals ...	593,940	233,835	1,830	1,952	144	184	12

Under the Maternity and Child Welfare Act, 1918, the Ministry of Health are prepared to approve and pay grants for the following schemes :—

- (a) Provision of Midwifery Service (now includes training of Midwives).
- (b) Health Visitors.
- (c) Child Welfare Centres.
- (d) Provision of Milk and Food for Mothers and Infants.
- (e) Hospital Provision—Maternity Cases.
- (f) „ „ —Children.
- (g) Home Helps.
- (h) Crèches.
- (i) Convalescent Homes.
- (j) Homes for Children.
- (k) Dental Treatment.
- (l) Hygiene Instruction.
- (m) Experimental Work.

The County Council have spent a considerable amount of money during the last few years in an endeavour to improve the Midwifery Service throughout the County. In the early days this provision was confined to the Rural Districts, but recently the more populous parts have been assisted also. This provision is carried out in two ways—(1) Through the medium of the Essex County Nursing Association by making grants to affiliated Associations employing District Nurse-midwives who carry out midwifery and maternity duties. (2) Where there is not a District Nurse-midwife, subsidies are paid to midwives in areas where it is not possible for an independent midwife to earn a livelihood without assistance.

The Local Authorities of Barking, Clacton, Colchester, Ilford and Woodford help to provide a midwifery service from public funds in their own districts.

As shown on page 122, the County Council is the authority under the Notification of Births Acts in 26 Sanitary Districts only. In the remaining 21 Sanitary Districts of the Administrative County, the local Councils appoint their own Health Visitors, and in most cases provide or assist Child Welfare Centres. Very few of these Local Authorities provide any of the items other than (b), (c) and (d) above.

It is apparent that there is a good deal of overlapping and confusion in respect to Child Welfare in the County of Essex. The best plan would have been for the County Council to be the sole authority for all rural districts, and those urban districts which are not autonomous Education Authorities. This would then have enabled continuity of supervision without any break through the period of infancy and school life. Moreover, it is obvious that some of the smaller urban and rural authorities cannot easily make provision for certain of the above services, more especially Maternity Hospital accommodation, Orthopædic Hospitals, &c. There has been a prevailing impression that County Councils and District Councils have concurrent powers under the Maternity and Child Welfare Act, but there is no reference to such powers in the Act itself, whereas the explanatory memorandum issued by the Local Government Board in August, 1918, appears to suggest this. In order to clear up the matter, a question was asked in Parliament, when Sir Kingsley Wood answered as follows on 27th April, 1926 :—

Question.

Mr. Briant asked the Minister of Health if he is aware that there is much uncertainty among County Authorities as to the powers of a County Authority in connection with Maternity and Child Welfare when the Local Sanitary Authority is responsible for the administration of the Notification of Births Act; whether he will cause a statement to be issued which will make the position clear: and whether he will also give an official interpretation of concurrent powers mentioned in page 3 of Circular M. and C.W.4, of 1918, issued by his Department?

Answer.

Sir K. Wood: "The answer to the first part of the question is in the negative. I would point out that the exercise of powers by Local Authorities under the Maternity and Child Welfare Act is subject to the sanction of my Department, which is consequently in a position to delimit the functions of any authorities with concurrent powers. As at present advised, therefore, my Right Hon. Friend does not think it necessary to issue an explanatory statement on the subject, but if the Hon. Member will furnish particulars of any case in which difficulty has arisen, my Right Hon. Friend will be pleased to consider them."

For the present the County Council are confining their attention for the main part to the 26 districts in the Administrative County, for which they are the Authority under the Notification of Births Acts. It is hoped, however, in respect to certain of these services that a County Scheme will be established either on the sole financial responsibility of the County Council, or alternatively, whereby any autonomous Local Authority can take advantage by contributing a fair share of the cost.

(2) MEDICAL SERVICE. During the year under review the medical staff was augmented by the appointment of two additional Assistant County Medical Officers, Dr. Lorraine in the Rochford Area and Dr. Fry in the Epping Area.

At the time of writing the Public Health and Housing and Education Committees are submitting recommendations to the County Council for the appointment of an Orthopædic Surgeon to attend sessions at Orthopædic Clinics to be arranged in connection with the proposed scheme for the treatment of Orthopædics.

The question of the appointment of a Consulting Obstetrician who would be at the service of general practitioners and hospitals was discussed at a Branch meeting in Chelmsford of the British Medical Association, and as a result the Maternity and Child Welfare Sub-Committee are considering the advisability of making such provision.

In this connection Dame Janet Campbell makes the following statement:—

"It has often been pointed out that obstetrical operations are no less difficult and require no less careful attention to details of antisepsis than the operations commonly performed in a surgical theatre, and that although even simple operations are understood to call for the services of the expert surgeon, the general practitioner, who does not necessarily possess any special experience of major obstetrics, is still expected to tackle any case of difficult midwifery, often unaided, in dirty surroundings, and with little or no preparation. It is equally well recognised that his efforts to deliver the patient in such circumstances not infrequently end in catastrophe.

"The practitioner faced with a situation of this kind is in a most difficult position. Even if he does not fully appreciate the potential dangers of the case, he understands perfectly well that if his judgment be at fault, and that if his decision to wait, or to refer the patient to an institution, or to intervene at once himself, is the wrong one, a heavy burden of responsibility will rest upon him. Or again, the patient has been delivered with difficulty, but her condition is unsatisfactory, and the doctor is uncertain whether septic infection has occurred, and if so, what line of treatment he should adopt. In any difficulty of this kind the advice of a specialist would be invaluable."

The heavy loss of life sustained by mothers at the time of, or in connection with, childbearing, has received a great deal of attention recently in medical circles. It is hoped that a solution will be discovered and remedial measures adopted.

The following Table shows the maternal mortality in the Sanitary Districts:—

TABLE XXXII.

DEATHS OF MOTHERS DURING YEARS 1921-25.

SANITARY DISTRICTS.			SANITARY DISTRICTS.		
Deaths of Mothers. Rate per 1,000 Number. births.			Deaths of Mothers. Rate per 1,000 Number. births.		
<i>Urban—</i>			<i>Rural—</i>		
Barking	... 12	2'7	Belchamp	... Nil.	Nil.
Braintree	... 1	1'6	Billericay	... 3	1'4
Brentwood	... 1	1'8	Braintree	... 4	2'7
Brightlingsea	... Nil.	Nil.	Bumpstead	... 1	4'7
Buckhurst Hill	... 2	4'5	Chelmsford	... 3	1'3
Burnham-on-Crouch	Nil.	Nil.	Dunmow	... 4	3'3
Chelmsford B.	... 14	7'7	Epping ...	... 3	2'3
Chingford	... Nil.	Nil.	Halstead	... 3	4'0
Clacton-on-Sea	... 1	1'3	Lexden & Winstree	... 7	4'4
Colchester B.	... 13	3'2	Maldon ...	... 5	3'6
Epping ...	... Nil	Nil.	Ongar ...	... 3	2'9
Frinton-on-Sea	... Nil.	Nil.	Orsett ...	... 7	3'1
Grays ...	... 2	1'1	Rochford	... 8	3'3
Halstead	... 3	5'8	Romford	... 13	3'0
Harwich B.	... 5	3'7	Saffron Walden	... 4	4'6
Ilford ...	... 19	2'5	Stansted	... 2	3'4
Leyton ...	... 36	3'1	Tendring	... 4	1'9
Loughton	... Nil.	Nil.			
Maldon B.	... 1	1'9	Total Rural Districts	74	2'8
Romford	... 8	4'4	„ Boro' and Urban		
Saffron Walden	... 3	7'2	Districts	... 190	3'2
Shoeburyness	... 5	7'6			
Tilbury ...	... 7	5'1	Total Administrative		
Waltham Holy Cross	2	3'4	County	... 264	3'1
Walthamstow	... 42	3'4			
Walton-on-the-Naze	2	1'1			
Wanstead	... 1	1'0			
Witham...	... 1	3'2			
Wivenhoe	... 1	5'5			
Woodford	... 8	4'6			

(3) NURSING SERVICE. On 31st December, 1925, the Health Visiting Staff consisted of the following:—

	Whole-time.	Part-time.*
(a) Nurses undertaking Child Welfare, School and Tuberculosis work	19	2
(b) Nurses undertaking School and Tuberculosis work only	6	6
(c) Nurses undertaking Tuberculosis work only	5	2
Total	30	10

*With two exceptions these hold appointments under the Local Sanitary Authorities.

The General Instructions to Health Visitors and District Nurse-midwives were revised and consolidated during the year. Steady progress was made during the year in educating and assisting expectant and nursing mothers.

A summary of work carried out by the nurses during the 12 months ended 31st December, 1925, is given in Table XXXIII.

TABLE XXXIII.

SHEWING SUMMARY OF WORK CARRIED OUT BY EACH HEALTH VISITOR AND DISTRICT NURSE-MIDWIFE IN THE CHILD WELFARE AREA.

Nursing Area. Districts.	Notifications received.		H.Vs. No. of Visits		D.N.Ms. No. of Visits.		Total Visits.	
	Live Births.	Still Births.	Pre- Natal.	Post- Natal.	Pre- Natal.	Post- Natal.	Pre- Natal.	Post- Natal.
Saffron Walden B. & R.	.. 160	2 ..	—	11 ..	502	1326 ..	502	1337
Bumpstead & North Halstead & Belchamp R.	.. 116	2 ..	31	1476 ..	518	849 ..	549	2325
Halstead U. & South Halstead & Belchamp R.	.. 169	7 ..	10	648 ..	194	357 ..	204	1005
Wivenhoe	.. 34	— ..	29	179 ..	134	288 ..	163	467
Tendring West & Brightlingsea	.. 229	7 ..	60	808 ..	679	1791 ..	739	2599
Tendring East & Frinton	.. 234	5 ..	39	964 ..	329	445 ..	368	1409
Walton-on-Naze (part-time H.V.)	.. 30	2 ..	88	714 ..	—	— ..	88	714
Stansted & Dunmow (S.W.)	.. 114	4 ..	13	189 ..	423	1009 ..	436	1198
Dunmow (part) ..	.. 156	8 ..	10	284 ..	600	1113 ..	610	1397
Braintree U. & R. (North)	.. 174	5 ..	23	434 ..	483	1197 ..	506	1631
Braintree R. (South) & Witham	.. 239	4 ..	19	789 ..	410	954 ..	429	1743
Epping U. & R. (part) ..	.. 246	7 ..	—	571 ..	948	1206 ..	948	1777
Ongar Rural.. ..	.. 180	8 ..	61	467 ..	123	306 ..	184	773
Burnham U.. ..	.. 41	4 ..	—	219 ..	60	226 ..	60	445
Maldon B.	.. 105	3 ..	1	614 ..	—	— ..	1	614
Chingford U.	.. 156	7 ..	15	720 ..	—	— ..	15	720
Chigwell Parish ..	.. 18	— ..	11	297 ..	60	54 ..	71	351
Brentwood U. & part Billericay R...	218	6 ..	29	401 ..	300	285 ..	329	686
Billericay R. (part) ..	.. 308	11 ..	2	1213 ..	342	383 ..	344	1596
Rochford R. & Shoeburyness U.	.. 402	7 ..	50	1034 ..	555	575 ..	605	1609
Rochford R. and Billericay (part)	355	8 ..	26	585 ..	165	250 ..	191	835
Totals	3675	107 ..	517	12617 ..	6825	12614 ..	7342	25231

Concerning the nursing services generally, Miss Landon, the Chief Health Nurse, has made certain observations in her report given on pages 139—141.

(4) CHILD WELFARE CENTRES. The following Table shows the Child Welfare Centres receiving grants from the County Council under the "Objects and Conditions" laid down by the County Council and adopted by the Local Voluntary Committees in charge of the Centres:—

TABLE XXXIV.

Centre.	Approximate population served.	Sessions.	Total attendances of infants and children in 1925.	Medical Officer.
Bridge	1,244	2nd and 4th Thursday	444	E. U. Vawdrey.
Crook Street (South Weald)	2,000	1st and 3rd Tuesday	169	M. Bennett.
Ellericay	4,000	2nd and 4th Tuesday	569	N. S. R. Lorraine.
Locking	2,000	2nd and 4th Thursday	429	M. D. Rankine.
Braintree	6,970	Tuesdays	1,369	M. D. Rankine.
Brentwood	6,853	Alternate Fridays	1,173	M. Bennett.
Brightlingsea	4,500	1st and 3rd Wednesday	262	W. A. Milne.
Canvey Island	4,000	3rd Wednesday	30	N. S. R. Lorraine.
(Opened Nov., 1925).				
Chingford	9,482	Tuesdays	501	E. Billing.
Chelmsford	1,214	4th Wednesday	260	S. R. Richardson.
Chelms Colne	2,732	1st and 3rd Wednesday	199	J. S. Ranson.
Chipping	4,196	Tuesdays	1,203	A. Watney.
Chisleigh	2,246	1st and 3rd Tuesday	590	N. S. R. Lorraine.
Chalstead	5,923	2nd and 4th Thursday	592	J. S. Ranson.
Chelmslow	3,200	2nd Friday	106	M. Gazdar.
Chalfont Heath	1,564	4th Friday	161	M. Gazdar.
Chalfont Peverel	1,600	1st and 3rd Thursday	359	M. D. Rankine.
Chendon	3,000	3rd Thursday	76	M. Bennett.
(Opened Oct., 1925).				
Chaldon	6,590	Fridays	1,009	M. D. Rankine.
Chatching Tye	500	3rd Friday	97	M. Gazdar.
Ramsden Heath	1,342	1st Thursday	141	M. Bennett.
(Opened Jan., 1925).				
Rochford	5,076	2nd and 4th Monday	503	N. S. R. Lorraine.
(Opened March, 1925).				
Thurston Walden	5,874	Fridays	1,250	S. R. Richardson.
Thurston	778	1st Friday	97	M. Gazdar.
Thurston	6,413	1st and 3rd Thursday	420	N. S. R. Lorraine.
Thurston	2,723	1st and 3rd Tuesday	330	J. S. Ranson.
Thurston	3,184	1st and 3rd Wednesday	628	S. R. Richardson.
Thurston	1,784	1st and 3rd Wednesday	231	J. S. Ranson.
Thurston	1,267	Fridays	330	W. F. Erskine.
Thurston	1,972	1st and 3rd Friday	292	N. S. R. Lorraine.
(Opened Feb., 1925).				
Thurston Wakering	2,584	2nd and 4th Thursday	362	N. S. R. Lorraine.
Thurston	5,974	Alternate Fridays	821	M. Bennett.
Thurston	2,030	Last Monday in month	215	M. Bennett.
(Opened Jan., 1925).				

As indicated in the above Table, new Centres were opened at Canvey Island, Chendon, Ramsden Heath, Rochford, Thurston and Wickford during the year. The question of establishing new Combined Treatment Centres at Brentwood, Maldon and Braintree, referred to in last year's report, received a good deal of attention during the year. At Brentwood it is proposed to erect brick premises on land adjoining the Manual Instruction Centre, New Road, Brentwood, for use as a Child Welfare Centre and also School Clinic, &c., and at Maldon the County Council propose erecting similar premises in Wantz Road.

Premises have been taken at 47, Stortford Road, Dunmow, at a rental of £30 per annum for the purpose of holding a Combined Treatment Centre.

A Combined Treatment Centre is also being established at Weeley in the offices, recently built, of the Tendring Rural District Council.

New Combined Treatment Centres are urgently required at Ongar, Dagenham and Epping.

The proposal to adapt the old County Court, Braintree, has fallen through, and negotiations are now being made with the Rural Council to take over their offices in Rayne Road when they move into the new Council offices.

The delay in getting these Combined Treatment Centres completed has been rather disappointing, but it is hoped that when they are erected they will not only be useful and convenient, but will be in themselves an object lesson of health, hygiene and cleanliness to the people frequenting them. In the past, Centres have been held in quite unsatisfactory premises adapted for the purpose, and it is possible that as much harm has been done by their effect on the minds of those attending as by the physical good received.

(5) **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 was continued during the year.

(a) *Districts served by Child Welfare Centres.* It is not necessary to give details of the amounts paid to each Centre throughout the year. The total amount paid by the County Council was £292 11s. 10d., representing assistance to 165 families.

(b) *Districts not served by Centres.* Under this scheme 135 mothers and 84 infants were granted supplies of cows' milk and dried milk for varying periods, free of charge, at a total cost of approximately £360.

Dried milk was also supplied, at cost price, to Child Welfare Centres, and cases recommended by the Health Visitor.

(6) **DENTAL SCHEME.** The sum of £200 was provided in the Estimates for an experimental scheme to be established during the year 1926. At the time of writing the County Council propose adopting a scheme on the following lines :—

1. The County Council will assist in providing dental treatment in necessitous cases for expectant and nursing mothers and for infants and children under 5 years of age.
2. Dental treatment will consist of extractions, fillings and scalings. Dentures must be provided at the patient's expense or from voluntary sources.
3. The County Council will only recognise dental treatment for those persons who have been recommended by the Medical Officer of an approved Child Welfare Centre, and carried out by a registered dentist.

4. If general anæsthesia is required, the County Council will endeavour to arrange for the administration by one of their medical staff.
5. The existing scale of fees by dentists for the treatment of Tuberculosis patients will be approved.
6. Voluntary Child Welfare Committees, on application to the County Council, will be assisted in carrying out a scheme on the above lines by a grant of not exceeding £10 per annum, which should be supplemented by local funds.

Whilst the above experimental scheme may achieve a certain amount of useful work, considerable fear is entertained by some of the Child Welfare Medical Officers that the great need of the majority of the expectant and nursing mothers is that their mouths should be cleared of defective teeth and new dentures supplied. As public funds are not available for dentures, it is felt that many of the mothers will refuse to have their mouths cleared and thus auto-intoxication will continue. It is, however, hoped that voluntary funds will come to the rescue, and that in any case private funds will be sufficient to make an advance to pay for the dentures to recipients making repayments on a weekly or monthly basis.

(7) HOME HELPS. The provision of home helps is referred to in the County Council's "Objects and Conditions" for Local Child Welfare Committees, and the following remarks were recently addressed to these Committees:—

"In many cases where hospital treatment for confinement is essential, the mother is unwilling to leave her home owing to the difficulty of making satisfactory arrangements for the care of the home and children during her stay in hospital.

"It is generally, but not always, convenient for a relative or neighbour to carry out these duties in a voluntary capacity. Where this exception is the case, it might be possible to arrange for a suitable person, at an appropriate remuneration, to look after the house and undertake the ordinary domestic duties usually carried out by the mother, such as cleaning, cooking, washing, care of children, mending and marketing.

"Even when the mother is being confined in her own home, such arrangements are desirable and sometimes essential.

"I do not know whether your Committee have considered this question of home helps, and whether there is need in your district for such provision. The greatest difficulty is, of course, to secure the right type of woman.

"Perhaps you would let me know whether you consider there is any need in your district for paid home helps, and if so, how many suitable persons are available in your area, the duties they would undertake, and what would be an equitable rate of payment."

The replies received indicated that nine Centres did not consider there was real need in their districts, four Centres knew of one or two suitable women who might undertake the work at anything from 12s. to 25s. per week, plus board, and two Centres indicated they were badly needed, but suitable women were difficult to find.

The County Council therefore decided :—" That during the year ending 31st March, 1927, the Committee be authorised to consider representations made to them by the Voluntary Committees of the Brightlingsea, Chingford, Harlow, Laindon, Sheering and Witham Child Welfare Centres that the provision of home helps within the districts of such Centres is necessary, and to make grants of not exceeding £5 to each Centre towards the payment of a moiety of the cost of the provision of home helps employed in necessitous cases with the approval of the Committee."

(8) ANTE-NATAL SUPERVISION. In spite of efforts to ensure adequate ante-natal supervision by urging midwives to co-operate as much as possible with the Ante-Natal Clinics and Child Welfare Centres in their areas, it is to be regretted that very little ante-natal work is carried out at the Child Welfare Centres in the area for which the County Council is the Authority.

The lack of suitable accommodation at most of the Centres for proper medical examinations of expectant mothers and the continued reluctance of the patients themselves to attend for this purpose may be partial reasons.

In December, 1925, the following reference was made to ante-natal work in a letter addressed to all practising midwives in the Administrative County :—

" Ante-Natal Clinics and Child Welfare Centres. A list of the various Ante-Natal Clinics and Child Welfare Centres in the whole of the Administrative County of Essex has been furnished to each practising midwife. You should do all in your power to co-operate with the Child Welfare Centres in your district, encouraging your patients to attend, and, in the case of expectant mothers, attend with them if at all possible, in order to note the advice given, &c."

" Ante-Natal Care. Too much stress cannot be laid on the importance of this branch of a midwife's work (see my circular letter, dated September, 1924). I should, therefore, be glad if you would give every attention to ante-natal supervision, advising and assisting your patients and seeing that proper medical advice is secured, where necessary, during the ante-natal period. Form C.W.26, supplied by the Local Supervising Authority, should be completed, and it is necessary that the form should be kept as an ante-natal record of each of your patients."

It may be that some of the practising midwives do not look too favourably upon some of the activities of the Ante-Natal Centres. Quite a number have complained that after sending their patients to the Centre they do not receive information, advice or instructions from the Medical Officer, and in some cases they appear to have lost their patients. This is very unfortunate and undesirable, and an endeavour has been made to arrange for a complete interchange of opinion between Midwives and Medical Officers of Ante-Natal Centres.

Another difficulty is that many expectant mothers object to examinations and enquiries. If the midwife does not show every tact in advising that such examinations be made, she finds herself forsaken by her patients and often learns to her grief that a handy woman has been called in.

(9) HOSPITAL TREATMENT. (a) *Maternity Patients.* The arrangements for hospital treatment of maternity patients referred to in the previous year's report were continued, but only three patients were so treated during the year 1925.

On 29th October, 1925, a conference was held between representatives of the County Council and representatives of the Leyton, Walthamstow, Wanstead and Woodford Urban Districts, to discuss the question of improving the midwifery service and the provision of maternity beds, more especially for the populous Centres included in the Extra-Metropolitan Area. Various opinions were expressed, and it was finally resolved that the County Council be asked to prepare a scheme for submission to the various Local Authorities.

A Special Sub-Committee considered this matter, and after receiving a report of the Clerk of the Council, it was decided that no further action need be taken.

It may be mentioned that should the administrative proposals of the Ministry of Health in regard to Poor Law Reform be made law and the powers of Boards of Guardians be transferred to the County Councils, the latter will be the supervising and controlling authorities for all health purposes throughout the Administrative Counties. In such circumstances it is probable that greater facilities will be available for securing maternity beds, &c., by means of the existing Poor Law Institutions.

(b) *Infants and Children under 5 years of age.* A commencement has been made in this County to provide orthopaedic treatment for infants and children not attending school. This provision has been made in conjunction with that provided by the Education Committee, whereby Mr. Whitchurch Howell, F.R.C.S., attends Centres in different parts of the County and gives appropriate advice. As a result the following children have been given hospital treatment:—

Patient.	Hospital.		Name of Hospital.	Disease.
	From.	To.		
R.C. ...	4/11/24	17/8/26...	Brookfield Orthopaedic Hospital...	Infantile Paralysis.
P.C. ...	5/12/24	5/9/25...	" "	Curvature of Spine.
L.S. ...	12/2/25	3/11/25...	" "	Infantile Paralysis.
J.C. ...	27/5/25	17/8/26...	" "	"
D.M....	5/9/25	7/4/26...	" "	"
S.O. ...	31/10/25	17/8/26	" "	Severe A.P.M.
R.P. ...	16/11/25	20/1/26	" "	Infantile Paralysis.
W.H....	23/12/25	31/1/26	Queen's Hospital for Children	Inguinal Hernia.

The results have been extremely encouraging, and it is hoped during the present year to make a further advance in this important work of discovering and treating orthopaedic patients at the earliest possible time after the crippling condition

commences. It cannot be too well understood that in such diseases as Encephalitis Lethargica and Acute Anterior Poliomyelitis, orthopædic treatment should commence almost from the very first day of illness. This has not been so in the past, and the remedial measures have only been commenced months and years after the onset of the acute illness causing paralysis, thereby seriously prejudicing the ultimate recovery.

Ultimately a Central County Institution will be required with Clinics and After-care Committees scattered about in various parts of the County where the specialist and the trained nurse can visit at appropriate intervals. General hospitals cannot give very much help, as their beds are required for other purposes, and also in most cases there would be difficulty in arranging for the specialist surgeon to have access to the hospital.

(10) GENERAL. Members of the County Child Welfare Medical Staff have furnished the following replies to the questions (1), (2), (3) and (4):—

“(1) *Child Welfare Centres.* The usefulness and place of voluntary workers in a Child Welfare Scheme. Is the influence of each Centre reaching *all* the mothers in the area? What arrangements exist for dental treatment for expectant mothers? Particulars of ante-natal work done at the Centres. Notes on any improvements carried out since inauguration and on any developments needed.”

Dr. Maud Bennett (Brentwood and Billericay Area).

“The Centres influence chiefly the respectable manual labourer class and to a small extent only the wives of smaller shopkeepers, shop assistants, asylum attendants, clerks, occasional gipsies. The home visits of Health Visitors and District Nurses and the example of welfare mothers extend the influence of the Centres beyond those who attend.”

Dr. L. S. Fry (Epping and Ongar Area).

“I am of the opinion that the actual work of running the Centres is best done by voluntary workers, and that the Health Visitors are more usefully employed in home visiting rather than in actual attendance at the Centres, except for occasional visits. It is questionable whether the Centres are attended by those mothers most in need of advice, the tendency being for the more careful and successful mothers to come regularly, and for the attendances of the careless and ignorant to be few and far between. So far as I am aware, no arrangements are made for ante-natal or dental work at any of the Centres, though the need for the latter has been commented upon by most of the Health Visitors and District Nurse-midwives.”

Dr. J. S. Ranson (Halstead, Belchamp and Bumpstead Areas).

“The usefulness of the voluntary workers is most marked. Many of them are also members of the Halstead Welfare Committee, which controls the work

" of all Centres in the district. No arrangement for dental treatment exists.
 " There is very little ante-natal work done at the Centres. For unknown reasons
 " this work is not popular."

Dr. M. D. Rankine (Braintree and Maldon).

" Under the present system of conducting the Welfare Centres, voluntary
 " workers are indispensable; their work is extremely helpful and valuable, and
 " many devote a great deal of time and energy to their particular Centres. As to
 " the influence of the Centres reaching *all* the mothers in the areas, every
 " encouragement is given to them to attend. It is not possible, of course, to
 " compel mothers to attend. Some who live just at the door will not come, and
 " on the other hand we have those who will walk three miles each way to our
 " Centres. I believe, however, that more and more are coming to appreciate the
 " work that is carried on in the Clinics. At present there are no arrangements
 " for dental treatment at any of the Centres, though this is most urgently
 " required, both for mothers and some toddlers. It is quite the exception to find
 " an absolutely healthy mouth in the class of mothers who attend our Centres.
 " There was no systematic ante-natal work carried on at our Centres during 1925.
 " I saw, of course, all ante-natal cases that presented themselves, but would not
 " carry out a proper examination owing to the want of suitable equipment and
 " rooms."

(2) "*Orthopædics*. Notes of any treatment (with results) provided privately or
 through the County Council's Schemes. Have the Clinics attended by Mr. Whitechurch
 Howell served a useful purpose? If there is need for an extension of those Clinics,
 state suitable Centres."

Dr. Maud Bennett (Brentwood and Billericay Area).

" Orthopædic treatment under County Scheme has been obtained for two
 " infants—one for Cleft Palate and one for Rickets; advice has been given for a
 " third infant. The Welfares have assisted a few other cases to obtain treatment
 " at hospitals. The County Orthopædic Scheme is valuable and will increase in
 " value. An additional Clinic at Billericay would be useful. One or two cases of
 " school age have had to come from long distances for Orthopædic advice. I
 " think regular six monthly Clinics would be useful."

Dr. L. S. Fry (Epping and Ongar Area).

" One Orthopædic Clinic has been held at Epping, at which about 15 cases
 " were seen by Mr. Whitechurch Howell. There is a very distinct need, I think,
 " for the establishment of an Orthopædic Clinic in this district, where massage
 " and remedial exercises can be given regularly."

Dr. M. D. Rankine (Braintree and Maldon).

" The Orthopædic Clinics have been extremely valuable, the only drawback
 " being the length of time which elapses before the child can be admitted into
 " hospital for the necessary treatment."

"(3) *Infectious Diseases.* Notes on any undue prevalence of infectious disease amongst parturient women and amongst infants, particularly Puerperal Fever, Ophthalmia Neonatorum and Venereal Disease."

Dr. M. D. Rankine (Braintree and Maldon).

"Whooping Cough was prevalent at Maldon during the summer of 1925, and the Clinic was closed for some weeks owing to this cause. This was done on the advice of Dr. Brown, Medical Officer of Health. There was no undue prevalence of any other disease, either amongst women or infants. At Hatfield Peverel we had a considerable number of whooping cough cases, also some of measles. At the other Clinics we were comparatively free from any infectious diseases, and it was not necessary to close them for this reason. No special investigation for venereal disease was carried out at any of my Centres."

The prevalence of infectious disease has only in the above instance caused the sessions of a Child Welfare Centre to be temporarily discontinued. I am of the opinion that it is generally unnecessary to close down centres during epidemics of measles, whooping cough, &c., but in any case the Medical Officer of Health should advise the County Medical Officer of the desirability of closing a Centre when the Medical Officer of Health is not the Medical Officer of the Centre. Section 18 of the revised memorandum on closure and exclusion from school should be followed in the case of Child Welfare Centres as for schools.

"(4) *General.* Observations on developments and improvements during the past five years and on any improvements or extensions now needed."

Dr. N. S. R. Lorraine (Rochford Area).

"The use of a lantern and slides, or cinematographs would add a fresh stimulus in some of these Centres, particularly in Rural Districts, where the interest may occasionally flag. As an extension, one might suggest facilities for dental treatment of expectant mothers and children with caries of primary teeth, even part subsidization might overcome apathetic interest."

Dr. J. S. Ranson (Halstead, Belchamp and Bumpstead Areas).

"There has been no marked development or improvement during these years; were any such needed and possible, I feel sure the Halstead Welfare Committee would do their utmost to effect the same."

Dr. M. D. Rankine (Braintree and Maldon).

"At Braintree, Maldon, Hatfield Peverel and Bocking, the attendances during the past five years (or the years during which they have been in existence), have considerably increased. Five years ago the Braintree Clinic had hardly started, and during the last year the returns showed a total attendance of nearly 2,600 mothers and children. At none of these Centres is the accommodation ideal. I have frequently before reported on the want of suitable rooms. If these were available, and we had more time, we might

"have Ante-Natal Clinics. It is necessary, however, to hold these at a different hour to the ordinary Welfare Clinic, because although I am in attendance at the Centres from 2 p.m. many of the mothers do not arrive before 2.30—3 p.m. Most are anxious to get away by 4.30 p.m. at the latest, and during that time I am always fully occupied seeing ordinary cases and talking to the mothers. Many of our mothers and babies would benefit by a change to the seaside, if Convalescent Homes were available. Unfortunately, there do not appear to be any. At all the Centres, except Maldon, we have stalls with garments for babies and toddlers, and these are sold in fairly large quantity. We have also at each Centre, dried milk, cod liver oil and malt and also Virol; these are sold at a reduced rate. In Braintree, during the summer of 1925, we had a cinema exhibition showing films in connection with Child Welfare Work and General Health. This was much appreciated and we had a large attendance. We also had a Welfare Exhibition in the Co-operative Rooms for Baby Week, and this was also attended by large numbers. We intend to hold more exhibitions of this kind, both in Braintree and also at our other Centres. Taking everything into consideration, I feel that we have reason to be satisfied with the progress made at the Clinics during the year 1925."

MIDWIVES ACTS, 1902 and 1918.

(a) PRACTISING MIDWIVES. During the year under review 332 midwives notified their intention to practise in the Administrative County. Of these, 282 were actually in practice at the end of the year 1925. These midwives are classified as follows:—

Total No. of Midwives in practice at end of year.		Dependent.	Trained. Independent.		<i>Bona-fide</i> , including untrained and L.O.S. Certificated.	
282	...	145	...	102	...	35

The total number of births which occurred during the year 1925 in the Administrative County was 16,516, and of these, 7,040 (42·6 per cent.) were attended by midwives in the capacity of a midwife, and 2,412 (14·6 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 1925, and it was found that 102 trained and 12 *bona-fide* midwives attended 10 or less cases each; 62 trained and 3 *bona-fide* attended 11—20 cases each; 35 trained and 8 *bona-fide* attended 21—40 cases each; 9 trained and 2 *bona-fide*, 41—60 cases each; 11 trained and 5 *bona-fide*, 61—100 cases each, and 6 trained and 5 *bona-fide* midwives attended over 100 cases each.

These figures do not include cases attended in maternity homes at Leytonstone, Ilford, Walthamstow and Barking.

In 11 instances reports were received regarding cases of confinement attended by women, who were not certified, acting as midwives without being under the direct supervision of a doctor. Letters of warning were sent to such women acting as midwives and they were kept under observation.

Legal proceedings were taken against a woman at Ilford who was fined £2 and warned in regard to attending cases as a midwife.

(b) 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:—

	1921.	1922.	1923.	1924.	1925.
Records of Medical Aid ...	1083	1030	1025	1144	1309
Records of Still-birth ...	122	108	109	100	124
Deaths of Mothers ...	4	3	1	*10	*6
Deaths of Infants ...	17	11	5	*33	*47
Artificial Feeding ...	39	35	43	54	75
Liability to be a Source of Infection	46	41	37	58	49
Laying-out for Burial ...	102	129	181	180	229
Ophthalmia Neonatorum or Discharging Eyes ...	99	84	71	62	89

*In accordance with the revised Rule E. 22 (1) (b) a certified midwife when acting as a midwife must, on and after 1st January, 1924, notify the death of a patient whether a doctor is in attendance at the time of death or not. Hence the increased number of notifications in 1924 and 1925, as compared with previous years.

The 1309 cases (18·5 per cent.) where midwives sought the assistance of doctors, were for various reasons, namely:—

Albuminuria...	17 cases.	Placenta Adherent	55 cases.
Dangerous Feebleness of Infant ...	60 „	Placenta Prævia	10 „
Eclampsia ...	5 „	Premature Birth	52 „
Hæmorrhage:—		Prolonged Labour	197 „
Ante-partum	28 „	Presentation (abnormal)	89 „
Post-partum	22 „	Pyrexia (High Temp.)	58 „
Instrumental Assistance...	5 „	Rigid Os.	2 „
Malformation of Child ...	7 „	Ruptured Perineum	248 „
Miscarriage, Abortion ...	49 „	Spina Bifida ...	7 „
Miscellaneous Causes ...	270 „	Still-birth ...	7 „
Ophthalmia Neonatorum		Uterine Inertia	27 „
or Discharging Eyes	89 „	Pemphigus Neonatorum	5 „

Puerperal Fever 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 1925, in three cases of High Temperature and seven cases of Discharging Eyes, the midwives concerned had not properly carried out the rules of the Central Midwives Board. In four cases

the midwives were interviewed by the Chairman and Members of the Maternity and Child Welfare Sub-Committee, and of these, a District Nurse-midwife was recalled to the Nurses' Home and the other three midwives were reprimanded. In one other instance, the midwife was interviewed by the County Medical Officer and cautioned. Letters of caution were sent to the remainder.

Pemphigus Neonatorum.

In May, 1925, the Ministry of Health published a Memorandum on Pemphigus Neonatorum. This describes the disease, its mode of infection, prevention, &c. A copy was sent to each registered medical practitioner in the County and to the certified midwives. The Central Midwives Board also drew up a leaflet entitled "Pemphigus in the newly-born Child" for the information of midwives, &c.

Whenever there is a suspected case of Pemphigus in a midwife's practice a thorough investigation is made by the Inspector of Midwives for the district, and all precautions are taken to prevent a spread of the disease.

Inspection Visits.

Nine hundred and one (901) routine visits were made to midwives during the year, and of these 512 were undertaken by Assistant County Medical Officers and 389 by the Chief Health Nurse.

It is pleasing to record that in no case was there necessity to report a midwife's conduct to the Central Midwives Board during 1925.

Written cautions were sent to a few midwives for minor infringements of the Rules.

Doctors' Fees.

In accordance with the Midwives Act, 1918, during the year ended 31st December, 1925, the County Council paid the sum of £1,031 15s. 6d. as fees to medical practitioners and recovered from patients during the year the sum of £293 4s. 8d.

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 increasing :—

Year.	No. of Medical Aid Notices received from Midwives.			Percentage of Confinements.			No. of Medical Aid Notices for which Doctors' claims have been received.			Total amounts of claims.			Amounts re- covered from parents.		
										£	s.	d.	£	s.	d.
1921	...	1,083	...	15'2	...	412	...	811	7	6	...	174	16	0	
1922	...	1,030	...	17'0	...	463	...	769	4	6	...	195	18	0	
1923	...	1,025	...	14'6	...	585	...	829	19	3	...	196	18	10	
1924	...	1,144	...	17'8	...	592	...	999	2	9	...	204	18	5	
1925	...	1,309	...	18'5	...	665	...	1,031	15	6	...	293	4	8	

Lectures to Midwives.

An excellent syllabus of lectures was again arranged under the auspices of the Essex Midwives Association, of which the County Medical Officer is President, the midwives being invited to the following Centres, at each of which six lectures were given during the winter months:—Chelmsford, Romford, Colchester, Leytonstone, Saffron Walden and Southend-on-Sea.

The County Council made a grant of £2 2s. to this Association for the year 1925.

Essex County Nursing Association.

(a) GENERAL. For the four quarters of the year 1925, the following grants were paid by the County Council to the County Nursing Association in accordance with the Agreement:—

	£	s.	d.
(a) Cost of training District Nurse-midwives ...	1,100	0	0
(b) Maintenance of two Emergency Nurses ...	162	10	0
(c) Grants to affiliated District Nursing Associations ...	4,819	18	1
(d) Equipping District Nurse-midwives for new areas ...	105	0	0
(e) Clerical and organising expenses ...	220	0	0
	<u>£6,407</u>	<u>8</u>	<u>1</u>

As stated in last year's Annual Report, the Agreement between the Essex County Association and the County Council was revised, and the new Agreement operated as and from 1st April, 1925, for a period of one year, and thereafter determinable by three calendar months' notice on either side on 31st March in any year.

The revision increased the following grants paid by the County Council:—

- (a) Training of midwives increased from £40 to £60 per nurse.
- (b) Emergency nurses increased from two to three and the grant from £50 to £200 per annum.

During the year negotiations took place between the County Council and the County Nursing Association, and also the Ministry of Health, with a view to plans being approved for necessary alterations to the Nurses' Training Home, Leytonstone, in order that more adequate accommodation could be secured for the pupil midwives and greater facilities provided for the extended training course laid down by the Central Midwives Board. These negotiations are not yet complete, and further reference will be made to this matter in next year's report.

In October, 1925, Miss A. M. Tilbury, the County Superintendent of the Essex County Nursing Association, resigned her appointment after 25 years excellent service. She terminated duty on 31st March, 1926. She has exerted a splendid influence on the 700 pupils who have passed through her hands.

It was decided that for a period of 12 months from 1st April, 1926, the Chief Health Nurse, Miss Landon, should succeed Miss Tilbury as County Superintendent for the Association.

(b) DISTRICT NURSING ASSOCIATIONS. At the end of 1925 the number of District Nursing Associations in the Administrative County which were affiliated to the County Nursing Association and which employed 149 Nurses, was as follows :—

No. of affiliated D.N. Associations.	No. undertaking Midwifery and District Nursing.	No. performing District Nursing duties only.
138	124	14

A summary of the visits made by the District Nurses belonging to affiliated Associations during the past five years is given below :—

	1921.	1922.	1923.	1924.	1925.
Midwifery	... 21,961	... 22,165	... 24,729	... 23,742	... 28,468
Maternity	... 25,486	... 25,181	... 27,181	... 26,433	... 26,932
District General	... 123,027	... 167,782	... 161,492	... 164,607	... 179,412
„ Tuberculosis	3,081	2,647	3,009	4,232	4,374
Health Visiting	... 4,762	... 8,907	... 12,230	... 13,967	{ 12,704 Pre-natal 15,631 Post-natal
Home Visits (School Children)	... 1,991	... 3,494	... 4,839	... 5,970	... 7,830
Total number of visits	180,308	230,176	233,480	238,951	275,351

Of the 138 affiliated Associations, 126 participate in the County Council's Combined Nursing Scheme.

(c) PARISHES SERVED :—

Number in the County (excluding Extra-Metropolitan Area)	... 377
Number served by affiliated District Nursing Associations	... 287

In some Counties District Nurses are purposely excluded from participation in any Public Health duties under the Child Welfare, School Nursing or Tuberculosis Scheme. In other Counties District Nurses are utilised as Health Visitors without any more supervision than a County Superintendent can give. The plan adopted in Essex is the happy mean. District Nurse-midwives do not act as Health Visitors, but they do render ever-increasing valuable assistance to the whole-time Health Visitors, more particularly in respect to the remedial aspect. Lectures on the Public Health aspect of their work are now given at the Training Home by the County Sanitary Inspector. Dame Janet Campbell, at the last annual meeting of the Essex County Nursing Association, said : "Public Health work is becoming more personal and District Nurses were the best disseminators of knowledge. District Nurses have the confidence of their patients and know how best to convey information, so that the impression shall be clear and lasting."

The Chief Health Nurse (Miss D. M. Landon) has furnished the following report in connection with her duties during 1925 under the following headings :—

- (i) Inspection of Midwives.
- (ii) District Nursing Associations and the Combined Nursing Scheme.
- (iii) Health Visiting, &c.
- (iv) Lectures.

"In many cases I have been able to fulfil a two-fold object in one visit, *i.e.*, inspection as midwife and District Nurse-midwife.

"(i) INSPECTION OF MIDWIVES. Number of Routine Inspections, 389, and Special Investigations, 40.

"Only two of the special cases were sufficiently serious to be brought to the Committee, but in several instances letters of caution were sent chiefly owing to delay in sending for medical aid.

"The attitude of the midwives towards the Local Supervising Authority is satisfactory, and they generally realise that inspection may be a time for discussion of difficulties and obtaining advice, and that the Local Supervising Authority is not existing merely for the purpose of finding fault.

"Nearly all the midwives I inspected have the welfare of their mothers and babies at heart.

"The ante-natal work still leaves much to be desired. Comparatively few had adequate ante-natal teaching during their time of training, but almost all are improving in this respect.

"The ante-natal record forms issued by the County Medical Officer have been a great help and are much appreciated. Unfortunately there still appears to be in some places resentment on the part of the less educated mothers against ante-natal work, and in a few instances this has induced them to engage a "handy woman" in preference to a midwife.

"I gave three lectures in various parts of the County to branches of the Essex Midwives Association on the keeping of these notes. The lectures organised by this Association are very helpful to many of our midwives. I acted as Secretary to the Romford Branch, and noticed that unfortunately the regular attendances were by those least in need of the lectures. I am afraid this is the case in many branches.

"(ii) DISTRICT NURSE-MIDWIVES. Visits paid, 301.

"The remarks regarding the midwives apply to the District Nurse-midwives in regard to midwifery duties.

"On the whole the standard of midwifery and general nursing has been well maintained, and the younger midwives are coming from the training homes anxious to do adequate ante-natal work.

There has been little or no friction on the subject of Public Health duties, and in many cases the Secretaries and Committees are showing interest and willingness that their District Nurses should perform these duties properly. This is a great improvement, as in the past a good many Secretaries were a little resentful of these duties being given to their nurses. There is, however, much room for improvement in this matter, and in many instances they are not utilised as much as they should be.

" (iii) HEALTH VISITORS. Visits paid, 82.

" The work of the Health Visitors has been well maintained during the year, and I think the County is fortunate in almost all the nurses they employ. There have been few changes, and in consequence the work has progressed far more steadily.

" The question of transport is still a serious problem in the scattered rural districts where trains and buses are of little assistance and the distances to cover very large. At present the only satisfactory solution seems to be in those districts where the Health Visitor possesses a motor cycle, but the initial cost makes it impossible for all to provide themselves with a motor cycle.

" The week's holiday given at Christmas was much appreciated, and was a factor in reducing the number of resignations on the score of health.

" (iv) LECTURES.

" During the past year I have given 21 lectures at Women's Institutes and Nursing Meetings, and two or three small addresses at Infant Welfare Centres. There appears to be a growing interest in Public Health matters, and the audiences generally took an intelligent interest in matters relating to health."

TABLE XXXV.

BIRTHS, DEATHS, ANNUAL RATES, &c., 1925.

Sanitary District.	Area (Acres).	Population.		Registrar-General's figures.		Deaths at Various Ages.						Annual Rates per 1,000 of Estimated Population.					
		Estimated 1925 for		Deaths at all ages.		(Figures supplied by Medical Officers of Health.)											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
URBAN.		Birth-rate.		Death-rate.		Under 1 year.											
		(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
		Birth-rate.		Death-rate.		Under 1 year.											
		(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
		Birth-rate.		Death-rate.		Under 1 year.											
		(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)
		Birth-rate.		Death-rate.		Under 1 year.											
		(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)	(76)	(77)	(78)	(79)	(80)
		Birth-rate.		Death-rate.		Under 1 year.											
		(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)
		Birth-rate.		Death-rate.		Under 1 year.											
		(97)	(98)	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)	(112)
		Birth-rate.		Death-rate.		Under 1 year.											
		(113)	(114)	(115)	(116)	(117)	(118)	(119)	(120)	(121)	(122)	(123)	(124)	(125)	(126)	(127)	(128)
		Birth-rate.		Death-rate.		Under 1 year.											
		(129)	(130)	(131)	(132)	(133)	(134)	(135)	(136)	(137)	(138)	(139)	(140)	(141)	(142)	(143)	(144)
		Birth-rate.		Death-rate.		Under 1 year.											
		(145)	(146)	(147)	(148)	(149)	(150)	(151)	(152)	(153)	(154)	(155)	(156)	(157)	(158)	(159)	(160)
		Birth-rate.		Death-rate.		Under 1 year.											
		(161)	(162)	(163)	(164)	(165)	(166)	(167)	(168)	(169)	(170)	(171)	(172)	(173)	(174)	(175)	(176)
		Birth-rate.		Death-rate.		Under 1 year.											
		(177)	(178)	(179)	(180)	(181)	(182)	(183)	(184)	(185)	(186)	(187)	(188)	(189)	(190)	(191)	(192)
		Birth-rate.		Death-rate.		Under 1 year.											
		(193)	(194)	(195)	(196)	(197)	(198)	(199)	(200)	(201)	(202)	(203)	(204)	(205)	(206)	(207)	(208)
		Birth-rate.		Death-rate.		Under 1 year.											
		(209)	(210)	(211)	(212)	(213)	(214)	(215)	(216)	(217)	(218)	(219)	(220)	(221)	(222)	(223)	(224)
		Birth-rate.		Death-rate.		Under 1 year.											
		(225)	(226)	(227)	(228)	(229)	(230)	(231)	(232)	(233)	(234)	(235)	(236)	(237)	(238)	(239)	(240)
		Birth-rate.		Death-rate.		Under 1 year.											
		(241)	(242)	(243)	(244)	(245)	(246)	(247)	(248)	(249)	(250)	(251)	(252)	(253)	(254)	(255)	(256)
		Birth-rate.		Death-rate.		Under 1 year.											
		(257)	(258)	(259)	(260)	(261)	(262)	(263)	(264)	(265)	(266)	(267)	(268)	(269)	(270)	(271)	(272)
		Birth-rate.		Death-rate.		Under 1 year.											
		(273)	(274)	(275)	(276)	(277)	(278)	(279)	(280)	(281)	(282)	(283)	(284)	(285)	(286)	(287)	(288)
		Birth-rate.		Death-rate.		Under 1 year.											
		(289)	(290)	(291)	(292)	(293)	(294)	(295)	(296)	(297)	(298)	(299)	(300)	(301)	(302)	(303)	(304)
		Birth-rate.		Death-rate.		Under 1 year.											
		(305)	(306)	(307)	(308)	(309)	(310)	(311)	(312)	(313)	(314)	(315)	(316)	(317)	(318)	(319)	(320)
		Birth-rate.		Death-rate.		Under 1 year.											
		(321)	(322)	(323)	(324)	(325)	(326)	(327)	(328)	(329)	(330)	(331)	(332)	(333)	(334)	(335)	(336)
		Birth-rate.		Death-rate.		Under 1 year.											
		(337)	(338)	(339)	(340)	(341)	(342)	(343)	(344)	(345)	(346)	(347)	(348)	(349)	(350)	(351)	(352)
		Birth-rate.		Death-rate.		Under 1 year.											
		(353)	(354)	(355)	(356)	(357)	(358)	(359)	(360)	(361)	(362)	(363)	(364)	(365)	(366)	(367)	(368)
		Birth-rate.		Death-rate.		Under 1 year.											
		(369)	(370)	(371)	(372)	(373)	(374)	(375)	(376)	(377)	(378)	(379)	(380)	(381)	(382)	(383)	(384)
		Birth-rate.		Death-rate.		Under 1 year.											
		(385)	(386)	(387)	(388)	(389)	(390)	(391)	(392)	(393)	(394)	(395)	(396)	(397)	(398)	(399)	(400)
		Birth-rate.		Death-rate.		Under 1 year.											
		(401)	(402)	(403)	(404)	(405)	(406)	(407)	(408)	(409)	(410)	(411)	(412)	(413)	(414)	(415)	(416)
		Birth-rate.		Death-rate.		Under 1 year.											
		(417)	(418)	(419)	(420)	(421)	(422)	(423)	(424)	(425)	(426)	(427)	(428)	(429)	(430)	(431)	(432)
		Birth-rate.		Death-rate.		Under 1 year.											
		(433)	(434)	(435)	(436)	(437)	(438)	(439)	(440)	(441)	(442)	(443)	(444)	(445)	(446)	(447)	(448)
		Birth-rate.		Death-rate.		Under 1 year.											
		(449)	(450)	(451)	(452)	(453)	(454)	(455)	(456)	(457)	(458)	(459)	(460)	(461)	(462)	(463)	(464)
		Birth-rate.		Death-rate.		Under 1 year.											
		(465)	(466)	(467)	(468)	(469)	(470)	(471)	(472)	(473)	(474)	(475)	(476)	(477)	(478)	(479)	(480)
		Birth-rate.		Death-rate.		Under 1 year.											
		(481)	(482)	(483)	(484)	(485)	(486)	(487)	(488)	(489)	(490)	(491)	(492)	(493)	(494)	(495)	(496)
		Birth-rate.		Death-rate.		Under 1 year.											
		(497)	(498)	(499)	(500)	(501)	(502)	(503)	(504)	(505)	(506)	(507)	(508)	(509)	(510)	(511)	(512)
		Birth-rate.		Death-rate.		Under 1 year.											
		(513)	(514)	(515)	(516)	(517)	(518)	(519)	(520)	(521)	(522)	(523)	(524)	(525)	(526)	(527)	(528)
		Birth-rate.		Death-rate.		Under 1 year.											
		(529)	(530)	(531)	(532)	(533)	(534)	(535)	(536)	(537)	(538)	(539)	(540)	(541)	(542)	(543)	(544)
		Birth-rate.		Death-rate.		Under 1 year.											
		(545)	(546)	(547)	(548)	(549)	(550)	(551)	(552)	(553)	(554)	(555)	(556)	(557)	(558)	(559)	(560)
		Birth-rate.		Death-rate.		Under 1 year.											
		(561)	(562)	(563)	(564)	(565)	(566)	(567)	(568)	(569)	(570)	(571)	(572)	(573)	(574)	(575)	(576)
		Birth-rate.		Death-rate.		Under 1 year.											
		(577)	(578)	(579)	(580)	(581)	(582)	(583)	(584)	(585)	(586)	(587)	(588)	(589)	(590)	(591)	(592)
		Birth-rate.		Death-rate.		Under 1 year.											
		(593)	(594)	(595)	(596)	(597)	(598)	(599)	(600)	(601)	(602)	(603)	(604)	(605)	(606)	(607)	(608)
		Birth-rate.		Death-rate.		Under 1 year.											
		(609)	(610)	(611)	(612)	(613)	(614)	(615)	(616)	(617)	(618)	(619)	(620)	(621)	(622)	(623)	(624)
		Birth-rate.		Death-rate.		Under 1 year.											
		(625)	(626)	(627)	(628)	(629)	(630)	(631)	(632)	(633)	(634)	(635)	(636)	(637)	(638)	(639)	(640)
		Birth-rate.		Death-rate.		Under 1 year.											
		(641)	(642)	(643)	(644)	(645)	(646)	(647)	(648)	(649)	(650)	(651)	(652)	(653)	(654)	(655)	(656)
		Birth-rate.		Death-rate.		Under 1 year.											
		(657)	(658)	(659)	(660)	(661)	(662)	(663)	(664)	(665)	(666)	(667)	(668)	(669)	(670)	(671)	(672)
		Birth-rate.		Death-rate.		Under 1 year.											
		(673)	(674)	(675)	(676)	(677)	(678)	(679)	(680)	(681)	(682)	(683)	(684)	(685)	(686)	(687)	(688)
		Birth-rate.		Death-rate.		Under 1 year.											
		(689)	(690)	(691)	(692)	(693)	(694)	(695)	(696)	(697)	(698)	(699)	(700)	(701)	(702)	(703)	(704)
		Birth-rate.		Death-rate.		Under 1 year.											
		(705)	(706)	(707)	(708)	(709)	(710)	(711)	(712)	(713)	(714)	(715)	(716)	(717)	(718)	(719)	(720)
		Birth-rate.		Death-rate.		Under 1 year.											
		(721)	(722)	(723)	(724)	(725)	(726)	(727)	(728)	(729)	(730)	(731)	(732)	(733)	(734)	(735)	(736)
		Birth-rate.		Death-rate.		Under 1 year.											
		(737)	(738)	(739)	(740)	(741)	(742)	(743)	(744)	(745)	(746)	(747)	(748)	(749)	(750)	(751)	(752)
		Birth-rate.		Death-rate.		Under 1 year.											
		(753)	(754)	(755)	(756)	(757)	(758)	(759)	(760)	(761)	(762)	(763)	(764)	(765)	(766)	(767)	(768)
		Birth-rate.		Death-rate.		Under 1 year.											
		(769)	(770)	(771)	(772)	(773)	(774)	(775)	(776)	(777)	(778)	(779)	(780)	(781)	(782)	(783)	(784)
		Birth-rate.		Death-rate.		Under 1 year.											
		(785)	(786)	(787)	(788)	(789)	(790)	(791)	(792)	(793)	(794)	(795)	(796)	(797)	(798)	(799)	(800)
		Birth-rate.		Death-rate.		Under 1 year.											
		(801)	(802)	(803)	(804)	(805)	(806)	(807)	(808)	(809)	(810)	(811)	(812)	(813)	(814)	(815)	(816)
		Birth-rate.		Death-rate.		Under 1 year.											
		(817)	(818)	(819)	(820)	(821)	(822)	(823)	(824)	(825)	(826)	(827)	(828)	(829)	(830)	(831)	(832)
		Birth-rate.		Death-rate.		Under 1 year.											
		(833)	(834)	(835)	(836)	(837)	(838)	(839)	(840)	(841)	(842)	(843)	(844)	(845)	(846)	(847)	(848)
		Birth-rate.		Death-rate.		Under 1 year.											
		(849)	(850)	(851)	(852)	(853)	(854)	(855)	(856)	(857)	(858)	(859)	(860)	(861)	(862)	(863)	(864)
		Birth-rate.		Death-rate.		Under 1 year.											
		(865)	(866)	(867)	(868)	(869)	(870)	(871)	(872)	(873)	(874)	(875)	(876)	(877)	(878)	(879)	(880)
		Birth-rate.		Death-rate.		Under 1 year.											
		(881)	(882)	(883)	(884)	(885)	(886)	(887)	(888)	(889)	(890)	(891)	(892)	(893)	(894)	(895)	(896)
		Birth-rate.		Death-rate.		Under 1 year.											
		(897)	(898)	(899)	(900)	(901)	(902)	(903)	(904)	(905)	(906)	(907)	(908)	(909)	(910)	(911)	(912)
		Birth-rate.		Death-rate.		Under 1 year.											
		(913)	(914)	(915)	(916)	(917)	(918)	(919)	(920)	(921)	(922)	(923)	(924)	(925)	(926)	(927)	(928)
		Birth-rate.		Death-rate.		Under 1 year.											
		(929)	(930)	(931)	(932)	(933)	(934)	(935)	(936)	(937)	(938)	(939)	(940)	(941)	(942)	(943)	(944)
		Birth-rate.		Death-rate.		Under 1 year.											
		(945)	(946)	(947)	(948)	(949)	(950)	(951)	(952)	(953)	(954)	(955)	(956)	(957)	(958)	(959)	(960)
		Birth-rate.		Death-rate.		Under 1 year.											
		(961)	(962)	(963)	(964)	(965)	(966)	(967)	(968)	(969)	(970)	(971)	(972)	(973)	(974)	(975)	(976)
		Birth-rate.		Death-rate.		Under 1 year.											
		(977)	(978)	(979)	(980)	(981)	(982)	(983)	(984)	(985)	(986)	(987)	(988)	(989)	(990)	(991)	(992)
		Birth-rate.		Death-rate.		Under 1 year.											
		(993)	(994)	(995)	(996)	(997)	(998)	(999)	(1000)	(1001)	(1002)	(1003)	(1004)	(1005)	(1006)	(1007)	(1008)
		Birth-rate.		Death-rate.		Under 1 year.											
		(1009)	(1010)	(1011)	(1012)	(1013)	(1014)	(1015)	(1016)	(1017)	(1018)	(1019)	(1020)	(1021)	(1022)	(1023)	(1024)
		Birth-rate.		Death-rate.		Under 1 year.											
		(1025)	(1026)	(1027)	(1028)	(1029)	(1030)	(1031)	(1032)	(1033)	(1034)	(1035)	(1036)	(1037)	(1038)	(1039)	(1040)
		Birth-rate.		Death-rate.		Under 1 year.											
		(1041)	(1042)	(1043													

TABLE XXXVI.
CAUSES OF DEATH—YEAR 1925
(Figures supplied by the Registrar-General.)

SANITARY DISTRICT.		Enteric Fever.	Small-pox.	Malaria.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Eosinophilia Lethargica.	Measles.	Tuberculosis of Respiratory System.	Other Tuberculosis Diseases.	Cancer.	Malignant Disease.	Rheumatic Fever.	Diabetes.	Genital Hemorrhage, &c.	Heart Disease.	Arterio-Sclerosis.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases.	Ulcer of Stomach or Duodenum.	Dyspepsia, &c. (under 2 years).	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Acute and Chronic Nephritis.	Puerperal Septicæ.	Other Accidents and Diseases of Pregnancy.	Constitutional Debility and Malnutrition.	Premature Birth.	Stillbirth.	Other Deaths from Violence.	Other Defined Diseases.	Causes ill-defined or unknown.	TOTAL.
URBAN.		1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386						
BARKING	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
BRAINTREE	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
BRENTWOOD	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
BRIGHTLINGHAGE	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
BUCKHURST HILL	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
BURNHAM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHELMSFORD B.	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHINGFORD	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CLACTON	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
COLCHESTER B.	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11	50	386							
CHIPPINGHOLM	1	1	13	2	19	2	36	6	47	3	5	24	41	8	38	25	6	1	3	9	5	4	6	1	18	2	11									

TABLE XXXVII.

NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK RATES, 1925.

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(Figures obtained from the Weekly Notification Returns.)

SANITARY DISTRICTS.	Estimated Population (Death-rate) 1925.	SCARLET FEVER.		DIPHTHERIA.		ENTERIC FEVER.	PUER- PERAL FEVER.	ERY- SIPELAS.	OPHTHAL- MIA NEO- NATORUM.	TUBERCULOSIS, PULMONARY.		OTHER TUBERCULAR DISEASES.		PNEU- MONIA.	ENCEPHA- LITIS LE- THARGICA.	CEREBRO- SPINAL FEVER.	ACUTE- POLIO- MYELITIS.
		No.	Per 1,000.	No.	Per 1,000.	No.	No.	No.	No.	No.	Per 1,000.	No.	Per 1,000.	No.	No.	No.	No.
URBAN.																	
BARKING	38450	56	1.5	73	1.9	...	4	17	11	61	1.6	24	0.6	59	1	2	1
BRAINTREE	7098	14	2.0	4	0.6	1	...	2	...	23	3.2	3	0.4	8	1	1	...
BRENTWOOD	7072	36	5.1	32	4.5	...	...	1	1	6	0.8	4	0.6	...	...	...	...
BRIGHTLINGSEA	4314	10	2.3	1	0.2	2	...	1	...	2	0.5	1	0.2	6	...	...	...
BUCKHURST HILL	5094	3	0.6	1	0.2	3	...	...	...	4	0.8	2	0.4	2	...	...	...
BURNHAM-ON-CROUCH	3429	1	0.3	...	...	1	...	1	...	1	0.3	1	0.3	...	...	1	1
CHELMSFORD B.	21900	7	0.3	3	0.1	2	...	1	1	13	0.6	7	0.3	1	1	...	...
CHINGFORD	10310	18	1.7	5	0.5	...	...	6	1	8	0.8	3	0.3	6	...	...	...
CLACTON-ON-SEA	12480	19	1.5	2	0.2	2	...	3	1	13	1.0	1	0.1	1	...	...	...
COLCHESTER B.	44200	310	7.0	27	0.6	8	3	20	2	52	1.2	18	0.4	40	2	...	1
EPPING	4414	...	...	8	1.8	2	...	...	...	5	1.1	...	...	4	...	...	...
FRINTON-ON-SEA	2093	10	4.8	...	...	...	...	...	...	...	...	1	0.5	1	...	...	1
GRAYS	18320	53	2.9	74	4.0	...	...	2	1	19	1.0	9	0.5	7	...	...	2
HALSTEAD	5320	...	...	1	0.2	1	...	1	...	6	1.0	6	1.0	11	...	...	...
HARWICH B.	12250	48	3.9	7	0.6	1	...	1	...	5	0.4	7	0.6	1	1	...	1
ILFORD	93590	151	1.6	58	0.6	10	2	28	3	107	1.1	38	0.4	107	5	1	1
LEYTON	132700	202	1.5	292	2.2	3	5	38	8	184	1.4	50	0.4	72	7	1	1
LOUGHTON	6013	5	0.8	4	0.7	...	...	1	...	3	0.5	...	...	1	2	1	...
MALDON B.	6296	7	1.1	5	0.8	1	...	...	...	16	2.5	8	1.3	1	2	...	...
ROMFORD	20670	25	1.2	16	0.8	2	2	4	2	32	1.5	12	0.6	1	1	2	1
SAFFRON WALDEN B.	5574	11	2.0	2	0.4	...	...	...	...	8	1.4	1	0.2	...	...	...	...
SHOEBURYNESSE	5166	19	3.7	10	1.9	...	1	...	...	7	1.4	2	0.1	11	...	...	...
TILBURY	12400	9	0.7	27	2.2	...	...	4	...	12	1.0	3	0.2	2	...	...	...
WALTHAM HOLY CROSS	6976	7	1.0	9	1.3	...	...	1	...	4	0.6	2	0.3	2	...	...	...
WALTHAMSTOW	130800	352	2.7	201	1.5	2	3	49	13	217	1.7	55	0.4	102	3	...	1
WALTON-ON-THE-NAZE	2591	...	...	1	0.4	...	...	...	...	...	...	...	...	2	...	...	...
WANSTEAD	15880	17	1.1	46	2.9	...	...	3	...	11	0.7	3	0.5	12	2	1	1
WITHAM	3785	...	...	2	0.5	...	...	3	...	3	0.8	1	0.3	5	...	...	...
WIVENHOE	2315	8	3.5	...	...	...	...	...	...	3	1.3	2	0.9	...	...	...	...
WOODFORD	21860	33	1.5	12	0.5	3	2	5	1	30	1.4	18	0.8	29	...	...	...
	663900	1432	2.2	923	1.4	44	22	192	45	855	1.3	287	0.4	494	28	10	12
RURAL.																	
BELCHAMP	4155	2	0.5	1	0.2	...	...	1	...	9	2.2	2	0.5	...	1	...	...
BILLERICAY	27610	39	1.4	13	0.5	5	...	3	...	48	1.7	16	0.6	4	...	...	...
BRAINTREE	19010	36	1.9	8	0.4	1	...	1	...	17	0.9	3	0.2	16	...	...	...
BUMPSTEAD	2345	...	...	...	...	...	...	...	...	2	1.3	...	...	3	...	...	...
CHELMSFORD	26000	17	0.6	12	0.5	3	1	4	...	23	0.9	10	0.4	3	2	...	...
DUNMOW	15110	12	0.8	5	0.3	1	...	3	...	18	1.2	5	0.3	4	...	...	...
EPPING	15190	31	2.0	6	0.4	...	...	4	...	6	0.4	2	0.1	6	1	...	...
HALSTEAD	9636	12	1.2	2	0.2	...	...	...	...	11	1.1	1	0.1	1	...	...	...
LEXDEN AND WINSTREE	19540	53	2.7	3	0.1	...	1	3	2	23	1.2	7	0.4	7	...	1	...
MALDON	16590	29	1.7	5	0.3	1	...	3	2	16	1.0	3	0.2	5	1	...	...
ONGAR	10320	11	1.1	2	0.2	...	1	...	2	6	0.6	2	0.2	5	...	...	...
ORSAY	23900	49	2.0	25	1.0	...	...	6	1	12	0.5	...	...	...	...	...	...
ROCHFORD	27530	62	2.3	23	0.8	...	2	6	4	60	2.2	22	0.8	16	3	...	1
ROMFORD	38680	59	1.5	33	0.8	1	4	9	5	104	2.7	24	0.6	19	7	...	...
SAFFRON WALDEN	9950	1	0.1	1	0.1	...	...	2	...	6	0.6	3	0.3	...	1	...	...
STANSTED	6914	6	0.9	...	...	...	1	...	...	4	0.6	1	0.1	3	...	...	...
TENDRING	22310	50	2.2	20	0.9	2	1	4	...	18	0.8	3	0.1	5	1	...	...
	294800	469	1.6	159	0.5	14	11	49	16	385	1.3	105	0.4	97	17	1	1
TOT. BORO'S & URBAN DISTRICTS	663900	1432	2.2	923	1.4	44	22	192	45	855	1.3	287	0.4	494	28	10	12
TOTAL RURAL DISTRICTS	294800	469	1.6	159	0.5	14	11	49	16	385	1.3	105	0.4	97	17	1	1
TOTAL FOR ADMIN. COUNTY	958700	1901	2.0	1082	1.1	58	33	241	61	1240	1.3	392	0.4	591	45	11	13

No case of Small-pox and only one of Malaria (in the Billericay Rural District) was reported during the year.

