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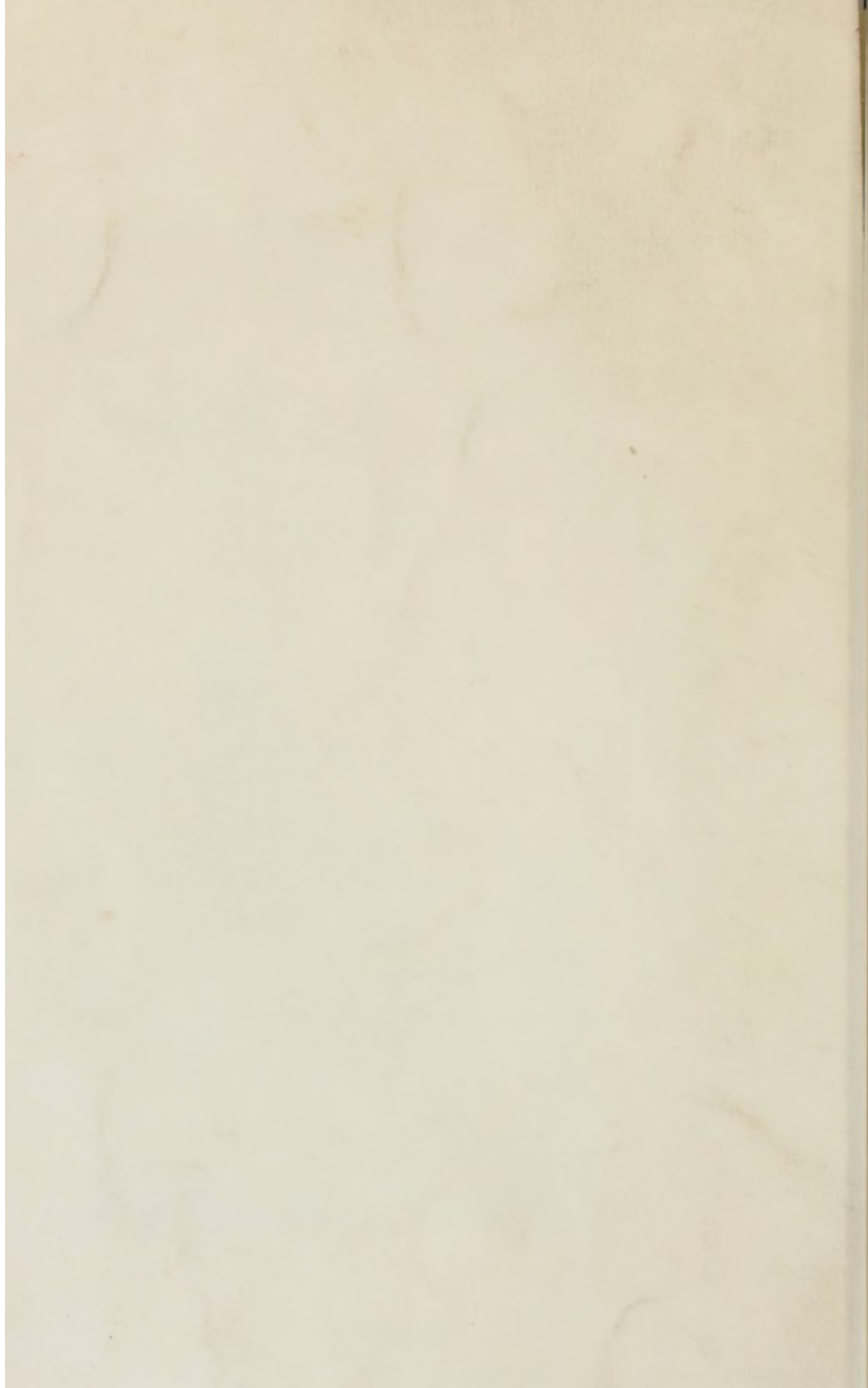
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ADMINISTRATIVE COUNTY OF ESSEX.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

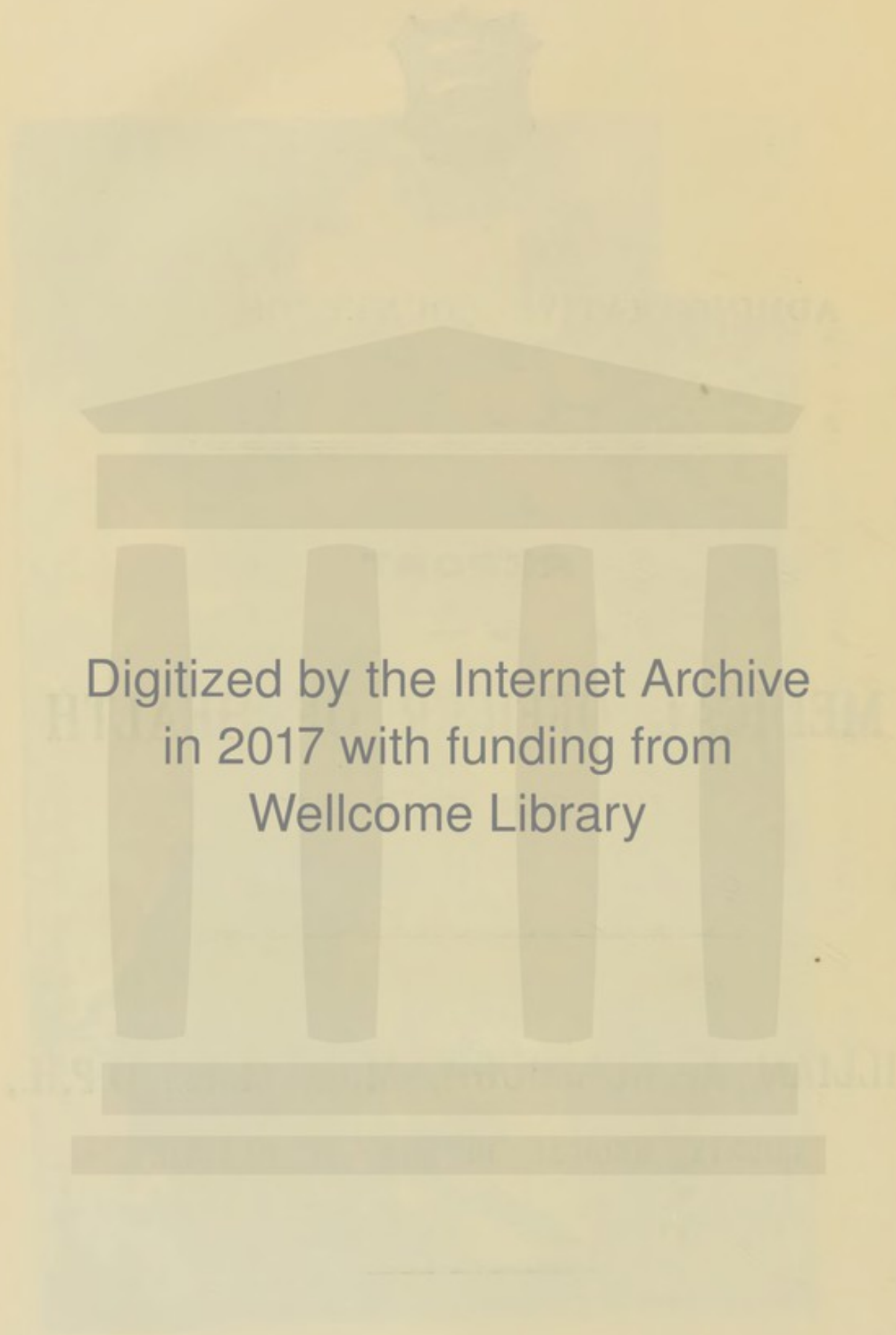
FOR THE YEAR 1927.

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

COUNTY MEDICAL OFFICER OF HEALTH.

Chelmsford :

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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 Ninth Annual Report for the Administrative County of Essex for the year 1927. This is the 38th Report which has been issued, and, at the request of the Ministry of Health, it is devoted in the main to a summing up of the year's work for which the County Council is primarily responsible. For the convenience of the general reader I have endeavoured in this preface to summarise some of the most noteworthy facts and incidents.

The health of the County during the year 1927 remained good as in previous years, the Death-rate being 10·8 and the rate of Infant Mortality 51 as compared with 12·3 and 69 respectively for England and Wales.

The Birth-rate has further declined to 16·2 but this drop is almost balanced by the fall in the Death-rate, so that the natural increase in population remains satisfactory. Owing to the immigration from London to Becontree and the adjoining districts the estimated population for the County in the middle of 1927 was 1,029,300, indicating an increase of about 3 per cent. per annum.

Of the 11,068 deaths, 5,257, or nearly half, took place at the age of 65 and upwards.

The County was again entirely free from small-pox but scarlet fever and diphtheria were more prevalent than in preceding years.

The notifications of persons suffering from tuberculosis were slightly less in number but unfortunately the number of deaths from tuberculosis was slightly greater than in 1926. There are 10,009 names of persons notified as suffering from tuberculosis on the registers of local Medical Officers of Health whilst 5,413 persons have applied for treatment at the 21 dispensaries, at which 38 sessions are held weekly with an average weekly attendance of 450. 1,130 persons were admitted for sanatorium treatment during the year 1927.

Ignorance and unfounded fear appear to be the chief reasons why persons do not apply for treatment in the early stages of the disease when something effective might be achieved. The duty of the local authority is to perfect its machinery for detecting and treating the disease, and in Essex a notable advance was recorded during the year when permission was granted by the Ministry of Health to proceed with the long deferred scheme of building a central institution of 150 beds for women and children at Black Notley, near Braintree. The Chairman, Alderman S. W. Robinson, deserves to be heartily congratulated on this consummation of a great deal of hard work and perseverance.

The campaign against venereal disease was well maintained during the year and it does appear that the policy of attraction and persuasion rather than compulsion in dealing with our people has scored another success.

The Child Welfare Schemes are developing satisfactorily but there are still opportunities for further safeguarding the health and lives of our mothers and children. It is hoped that in a few years every parish in the County will be served by a trained Midwife. In the meantime the co-operation between the County Council and the County Nursing Association continues as close as ever and to the advantage of both. In a few districts Maternity Hospitals might serve a most useful purpose but our main efforts should be to ensure a safe confinement in the home. This entails a good deal of team work which is being secured with greater frequency.

Ante-Natal care is gradually being recognised as the normal and proper procedure and not an indication of impending calamity, just as in the early days of Baby Clinics some mothers objected to baby weighing because they associated such practice with malnutrition and wasting. Some method is needed to secure the assistance of an obstetric specialist not merely for puerperal fever and puerperal pyrexia, but for the other complications and accidents of pregnancy and confinement.

The most urgent step that should be taken at the present time is to secure more effective supervision of children from two to five years of age. The existing 52 Welfare Centres look after the mothers and their babies very well up to about 18 months after the birth of the child. It is not sufficiently realised that from that time up to the commencement of school age is the most vital period of a child's life. It is during the second, third and fourth years of life that those defects are developing which are recorded at the first School Medical Inspection. Obviously the best time for prevention and treatment is during those years and not at 5 years as is so often the case at present.

To carry out this most desirable reform the further co-operation of the Voluntary Committees of centres will be necessary and in addition some increase in the staff of Medical Officers and Health Visitors.

The compulsory registration of Maternity Homes will tend to ensure that each Maternity Home will be staffed and maintained in an efficient manner.

The great aim of the sanitary service is cleanliness: clean air, clean water, clean food, clean homes, clean persons, clean towns and villages.

Clean water is available for most parts of the County and in fact its existence is now generally assumed as a matter of course, but constant vigilance is necessary in safeguarding this prime source of health and well-being.

Clean rivers have a more direct bearing on public water supplies now that Southend, Chelmsford, and South Essex are going to the rivers for their water supplies.

Clean food is essential for proper nutrition and health and in this respect meat and milk are leading the way which will be followed by others. It would seem an

easy problem to ensure a clean milk supply but so far it has defied the united efforts of farmers, dairymen, veterinary inspectors, sanitary inspectors, medical officers, the staff of Agricultural Institutes, pathologists, bottle makers and many others.

It is to be hoped that the success so far gained will encourage us to go forward and not to be side tracked into the short cut of pasteurization, sterilization and clarification.

Rapid strides have been made by the dairy industry in modern methods of milk production and the influence of milk competitions and demonstrations held in this County is being reflected in the improving hygienic quality of the milk supply.

Much confusion exists in the mind of the consumer caused by the many titles under which milk is sold or offered for sale, *e.g.*, new milk, pure milk, fresh milk, nursery milk, diploma milk, homogenised milk, sterilised milk. It cannot be too clearly understood that none of these words has any significance whatever. Even the official designations sanctioned by the Milk (Special Designations) Order, 1923, namely, Certified Milk, Grade "A" (tuberculin tested) Milk, Grade "A" Milk, Grade "A" (pasteurised) Milk and Pasteurised milk, which are placed in order of quality, are somewhat confusing and misleading. Grade "A" Milk is often taken to be the best quality of milk available, and until these designations are simplified it is unlikely that the sale of these special milks will increase as rapidly as is desirable.

After 5 years' experience of the working of this Order only 40 herds, containing about 2,000 dairy cows and approximately 4 per cent. of the County's dairy cows, are licensed to produce Grade A milk.

Each year sees increasing attention being paid to the housing problem both in respect to the erection of new houses and the improving of existing houses. Essex has experienced a phenomenal growth of houses since the year 1920 and particularly during the year 1926 which is the latest year for which the information is available. 45,314 houses were erected during the seven years, 1920 to 1926, and taking the usual average of four persons per house, accommodation has therefore been provided for over 180,000 people.

Whilst this forward movement is welcomed, one cannot but deplore the mushroom-like growth of so-called houses and bungalows in parts of the Rural Districts of Billericay, Orsett and Rochford, often in fields remote from passable roads, and sometimes in so-called private streets which during the winter are seas of mud and full of pot-holes. Coal and other heavy material can only be taken to some of these houses in flat-bottomed boats. More powers should be given to rural councils to control such scattered house building, both as regards the sites and kind of building to be erected. Scattered building of this nature is not in the long run conducive to economy when such services as water supply, sewage disposal, refuse disposal and lighting are required.

In the populous centres rural councils should persist in their endeavours to find some way of making sanitary and passable the so-called private streets.

The outstanding building development in this County has taken place in the Urban District of Dagenham, which prior to 1st April, 1926, was a parish in the

Rural District of Romford. The estate, which is also known as Becontree, is situated about 12 miles from Charing Cross, between Chadwell Heath on the north and Ripple Road on the south, and comprises about 2,770 acres. Since the war, 15,000 houses have been built by the London County Council, and when the houses already commenced are completed, the number will be increased to 17,000. As the local Medical Officer of Health has estimated that in Dagenham each house accommodates on an average five persons, the population will, therefore, soon be about 85,000. The estate is capable of being developed to the extent of a total of about 26,000 houses and flats, with a total population of about 130,000. During the past seven years, the London County Council have therefore created a town which is larger than any other town in Essex excluding those in the extra-metropolitan area and Southend. They have transferred to this town an unmixed working class population from many parts of London, having kept a special watch upon the methods of selection of tenants.

The scheme as a whole, consisting of broad avenues, well paved streets, open spaces, good houses and gardens, has much to be said in its favour—it has been an honest endeavour to provide healthy houses in good sanitary surroundings, the streets having been planned so that the houses may get as much fresh air and sunlight as possible. Whilst appreciating the urgent need for houses in this post-war period, it was a mistake to develop an estate so rapidly—it had no time to consolidate and settle down, and whilst excellent sites were reserved for industry, none has yet been commenced. Dagenham may therefore be said to be a dormitory town of low rateable value for London workers. This type of town planning has very little to commend itself.

Previous housing developments of this kind have been in or around old towns where communal life was firmly established, where there was an experienced nucleus of the machinery of local government and where there were industries and a mixed population which are so useful in finding occupation for the working classes.

Every credit is due to the Members of the Urban District Council who, with the inevitable disadvantages attendant upon such a unique town, have organised and developed an efficient public health service.

The surrounding district, and the proximity of the Thames dock areas and the new super-power station at Barking, make the region suitable for industrial development, and if industry could be attracted to the area the prosperity of the neighbourhood would be assured.

Fortunately, the London County Council have now decided to postpone further building operations and it would be a good thing if an extensive belt of land could be reserved as an open space around the town.

One of the chief drawbacks to this estate is the lack of adequate travelling facilities to and from East London. The London and Home Counties Traffic Advisory Committee have enquired into the matter and have expressed the opinion that the transport requirements of the present and prospective residents on the Becontree Estate should be further investigated. Representations have been made by the London County Council to the London Midland and Scottish Railway Company as to the

urgent need for improving the travelling facilities on the Southend and Tilbury lines from Barking. The Railway Company have admitted that the requirements were not satisfactorily met by the existing service and have given an undertaking that within two years they will put forward proposals for its improvement.

Industrialism, which for so long has been associated with the midlands and north of England, is tending more and more to take root and expand in what has hitherto been regarded as the rural south. It should be remembered that during the industrial revolution a century ago, owing to lack of knowledge and experience, the natural amenities of extensive country districts were in many cases blasted, and people were housed in confined areas, and compelled to eke out an existence in an atmosphere heavily polluted with grime and smoke. In this southward spread of industrialism, where motor transport and electricity are the governing factors, every effort should be made to avoid those catastrophic mistakes by preserving the natural beauties as far as possible, by applying carefully and wisely the principles of town planning, and by adopting modern methods of smoke prevention.

Speaking generally, there are many grounds for satisfaction in regard to the progress of sanitation in the County during the year 1927. This happy state is due to many contributory factors. I have very great pleasure in recording my great appreciation of the confidence and support given to me by the Chairman and Members of the Public Health Committee. To all the Medical Officers of Health and other officials of the local Sanitary Authorities, to the medical, dental, nursing and clerical staffs, my best thanks are due for their efficient services. I am especially indebted to my Chief Assistant Medical Officer, Dr. T. P. Puddicombe, for his unwavering loyalty and support; also to Mr. A. Marsh, the County Health Inspector as he is now designated, and to my Chief Clerk, Mr. J. Colman, for their unremitting perseverance and attention to duty during a very arduous and difficult year.

W. A. BULLOUGH,

County Medical Officer.

PUBLIC HEALTH DEPARTMENT,
DUKE STREET,
CHELMSFORD.

27th July, 1928.

PUBLIC HEALTH AND HOUSING COMMITTEE.

Chairman—Alderman S. W. Robinson.

Vice-Chairman—Councillor A. M. Mathews.

ALDERMEN—

J. H. Burrows
W. S. Chisenhale-Marsh
Sir Christopher G. Musgrave
E. W. Tanner

COUNCILLORS—

P. Astins
F. P. Brindley
A. W. Bristow
A. Brooks
Lieut.-Col. E. N. Buxton
C. W. Daines
C. Eves
A. G. Giller
H. Compton Guy
W. A. Hurry
J. Parish
W. T. Potts
C. S. Richardson
F. D. Smith
J. Tabor (Junr.)
D. Ward
Miss F. Wilde
H. E. Wood
E. G. Wright
E. J. Wythes

MEDICAL AND NURSING SERVICES JOINT SUB-COMMITTEE.

ALDERMEN—

J. H. Burrows (*Chairman*)
S. W. Robinson
W. S. Chisenhale-Marsh
Sir Christopher C. Musgrave

COUNCILLORS—

A. Brooks
Lieut.-Col. E. N. Buxton
E. A. Hibbs
A. M. Mathews
F. D. Smith
Mrs. B. W. Williams
E. J. Wythes

Miss U. B. Chisenhale-Marsh.

TABLE I.

SHOWING RECORD OF RECEIPT OF ANNUAL REPORT FOR 1927 FROM EACH
LOCAL MEDICAL OFFICER OF HEALTH.

Sanitary District.	Medical Officer of Health.	Date Annual Report received.
<i>Urban—</i>		
Barking ...	... C. L. Williams	... 28th July, 1928
Braintree ...	... P. J. Gaffikin	... 17th July, 1928
Brentwood ...	... *S. Frazer ...	... 17th August, 1928
Brightlingsea ...	... *E. P. Dicken	... 14th July, 1928
Buckhurst Hill ...	... *C. R. Dykes	... 4th June, 1928
Burnham-on-Crouch ...	... *T. D. White	... 2nd July, 1928
Canvey Island ...	... *J. N. Wheatley	...
Chelmsford B. ...	... R. H. Vercoe	... 10th August, 1928
Chingford ...	... M. Barker ...	... 25th May 1928
Clacton-on-Sea ...	... W. A. Milne	... 23rd May, 1928
Colchester B. ...	... W. F. Corfield	... 9th June, 1928
„ Port ...	... *T. C. Brentnall	... 1st February, 1928
Dagenham ...	... E. W. C. Thomas	...
Epping ...	... *H. A. Watney	... 4th August, 1928
Frinton-on-Sea ...	... *G. Craigie Bell	... 25th April, 1928
Grays ...	... W. T. G. Boul	... 21st August, 1928
Halstead ...	... J. S. Ranson	...
Harwich B. ...	... *G. Ford Porter	...
„ Port ...	... * „	... 27th March, 1928
Hornchurch ...	... A. Ball ...	...
Ilford B. ...	... A. H. G. Burton	... 3rd April, 1928
Leyton B. ...	... J. F. Taylor	... 28th April, 1928
Loughton ...	... *A. Butler Harris	... 2nd June, 1928
Maldon B. ...	... *H. Reynolds Brown	... 5th September, 1928
„ Port ...	... „	... 5th September, 1928
Romford ...	... A. Ball ...	... 6th July, 1928
Saffron Walden B. ...	... S. R. Richardson	... 27th June, 1928
Shoeburyness ...	... N. S. R. Lorraine	... 17th August, 1928
Tilbury ...	... W. T. G. Boul	... 16th June, 1928
Waltham Holy Cross ...	... *P. Streatfield	... 25th May, 1928
Walthamstow ...	... J. J. Clarke...	... 21st July, 1928
Walton-on-the-Naze ...	... *J. C. Brockwell	... 14th May, 1928
Wanstead ...	... *P. Macgregor	... 22nd June, 1928
West Mersea ...	... W. H. Alderton	... 4th May, 1928
Witham ...	... J. S. Bradshaw	... 11th May, 1928
Wivenhoe ...	... *G. T. Kevern	... 28th March, 1928
Woodford ...	... *R. Vere Hodge	... 3rd May, 1928

* Part-time Medical Officer of Health.

Rural—

Belchamp	...	J. S. Ranson	...
Billericay	...	*J. Douglas Wells	...
Braintree	...	P. J. Gaffikin	...
Bumpstead	..	A. Morgan	...
Chelmsford	...	J. Macdonald	... 8th May, 1928
Dunmow	...	P. J. Gaffikin	...
Epping	...	*W. F. Erskine	... 28th July, 1928
Halstead	...	J. S. Ranson	... 29th May, 1928
Lexden and Winstree	...	W. H. Alderton	... 10th May, 1928
Maldon...	...	J. Macdonald	... 8th May, 1928
Ongar	...	*A. S. David...	...
Orsett	...	*W. Allingham	... 5th September, 1928
Rochford	...	J. Macdonald	... 21st June, 1928
Romford	...	A. Ball	...
Saffron Walden	...	S. R. Richardson	... 25th July, 1928
Stansted	...	R. F. Dunn	... 27th June, 1928
Tendring	...	J. Ramsbottom	... 4th July, 1928

*Part-time Medical Officer of Health.

STAFF.

A detailed list of the Medical and Health Visiting Staff was set out on pages 9—11 of the Report for the year 1926.

The following alterations and additions were made during 1927 :—

(1) Medical Staff.

Officer.	Date Commenced.	District and Duties.
<i>(a) Alterations—</i>		
Dr. N. E. Chadwick ..	19th January, 1927 ..	To replace the late Dr. A. G. Wilkins as Medical Officer, Harold Court Sanatorium & Tuberculosis Officer, Romford.
Dr. C. L. Williams ..	26th September, 1927 ..	To replace Dr. K. Simpson resigned as Medical Officer of Health and Tuberculosis Officer, Barking.
<i>(b) Additions—</i>		
Dr. E. W. C. Thomas ..	4th April, 1927 ..	Medical Officer of Health for new Urban District of Dagenham, School Medical Inspector in that area for County Council.
Dr. J. S. Bradshaw ..	20th May, 1927 ..	Combined Medical Officer, Witham Urban District, Medical Officer, Black Notley Sanatorium, Tuberculosis Officer, Chelmsford & Maldon Districts.

(2) Health Visiting Staff.

<i>(a) Alterations—</i>		
I. Ferguson ..	14th February, 1927 ..	To replace C. R. Clapson resigned as Health Visitor, School and Tuberculosis Nurse, Maldon District.
M. E. O. Dilcock ..	2nd May, 1927 ..	To replace B. M. Tansley in Maldon District as Health Visitor, Tuberculosis Nurse and School Nurse.
K. Waterhouse ..	1st October, 1927 ..	To replace E. G. Prior, Tuberculosis Nurse, Leyton.
E. M. Marshall ..	November, 1927 ..	Appointed by Tilbury Urban District Council to replace E. V. Page, resigned. Acts as School Nurse and Tuberculosis Nurse for County Council.
E. Stott ..	November, 1927 ..	Appointed by Clacton District Nursing Association to replace B. V. Webb. Acts as School Nurse and Tuberculosis Nurse for County Council.
<i>(b) Additions—</i>		
E. H. Fawcett ..	1st January, 1927 ..	Taken over by County Council from Local Councils when Notification of Births Act powers transferred. Health Visitor, School Nurse and Tuberculosis Nurse, Hornchurch Urban and Romford Rural District.
A. L. Hinton ..	.. ..	From 1st October, 1927, transferred from Billericay area to fill new appointment approved for Dagenham area. Undertakes School Nursing only and Miss E. F. Richards acts as Tuberculosis Nurse only.

PART I.

ACREAGE AND POPULATION.

There were no changes in the area of the Administrative County during the year 1927, the acreage being 964,443.

The Registrar-General's estimate of the population at mid-year was as follows :—

- | | | | | | |
|-----|---|-----|-----|-----|-----------|
| (1) | For calculating birth-rate, the figure which includes civilian and military population is | ... | ... | ... | 1,029,300 |
| (2) | For calculating the death-rate, the figure which includes only civilian population is | ... | ... | ... | 1,024,700 |

Similar estimated populations were submitted for each of the Sanitary Districts containing a considerable non-civilian population, viz., Colchester Borough, Harwich Borough, Shoeburyness Urban District, and Billericay Rural District.

From the following table it will be seen that the population of the Administrative County at the Census of 1921, viz., 920,141, is estimated to have increased to 1,029,300, equivalent to 11·9 per cent.

TABLE II.

	Area in Acres, 1921.	Population.			Persons per acre.	Acres per person.
		Census 1921.	Estimated Population, 1927.			
			For Birth- rate.	For Death- rate.	(Calculated on Census figures).	
Municipal Boroughs (7) ...	37,606	303,296	333,409	329,409	8·06	0·12
Urban Districts (27) ...	85,400	366,752	417,391	416,991	4·29	0·23
Rural ,, (17) ...	841,437	250,093	278,500	278,300	0·30	3·36
	964,443	920,141	1,029,300	1,024,700	0·95	1·05

Table III shows the sex distribution, population in private families, &c., as ascertained at the last Census in 1921.

TABLE III.

ADMINISTRATIVE COUNTY OF ESSEX—CENSUS 1921.

	Persons.	Males.	Females.	Persons per acre.	PRIVATE FAMILIES AND DWELLINGS.				
					No. of private families.	Population in private families.	Structurally separate dwellings occupied.	Rooms occupied.	Rooms per person.
Boroughs ...	303296	142436	160860	8·06	71164	285565	61271	339826	1·19
Urban Districts	366752	175309	191444	4·29	81911	348689	71940	388519	1·11
Rural Districts	250093	124°35	126058	0·30	60525	239192	58918	806191	1·28
	920141	441780	478362	0·95	213600	873446	192129	1034536	1·18

VITAL STATISTICS.

Birth-rate.

The number of births registered in the Administrative County of Essex was 16,661, which is equivalent to a birth-rate of 16·2 per thousand population. Of the 16,661 births, 8,507 were males and 8,154 females. The number of illegitimate births registered was 529, of which 285 were males and 244 females.

The following table compares the birth-rate of England and Wales with that of the Administrative County of Essex during the past five years :—

Year.	Administrative County.		England and Wales.	
1923	...	18·6	...	19·7
1924	...	17·0	...	18·8
1925	...	17·1	...	18·3
1926	...	16·8	...	17·8
1927	...	16·2	...	16·7

The following table shows the steady diminution which has taken place in the birth-rate during the past 25 years :—

Year.	Mean Population.	Mean Annual No. of Births.	Mean Annual Birth-rate.
1908—1912	1,060,324	24,201	22·8
1913—1917	*963,361	19,230	19·8
1918—1922	896,228	16,967	18·9
1923—1927	975,460	16,694	17·1

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

Table XXXI in Part IV of the report shows the following highest and lowest birth-rates among the various Sanitary Districts :—

Highest.			Lowest.		
*Dagenham U.	...	32'3	*Frinton-on-Sea U.	...	6'1
*Shoeburyness U.	...	26'2	Wanstead U.	...	9'4
*Tilbury U.	...	22'4	*Canvey Island U.	...	9'6
*Romford R.	...	21'7	Brightlingsea U.	...	11'2
Chingford U.	...	19'8	Burnham-on-Crouch U.	...	11'6
Orsett R.	...	18'9	Bumpstead R.	...	11'6

Similar remarks in regard to those districts marked with an asterisk were made in the report for 1926.

Death-rate.

The total number of deaths registered in the Administrative County for 1927 from all causes was 11,068, of which 5,655 were males and 5,413 females. Due allowance has been made by the Registrar-General for the outward and inward transferable deaths, the slips for these being distributed to the district medical officers of health through the County Public Health Department. The total death-rate for 1927 is therefore 10'8 per thousand population.

Comparative figures for the past five years between the Administrative County and England and Wales are given below :—

Year.	Administrative County.		England and Wales.	
1923	...	9'8	...	11'6
1924	...	10'7	...	12'2
1925	...	10'3	...	12'2
1926	...	9'9	...	11'6
1927	...	10'8	...	12'3

The death-rate in the Administrative County for the year 1927 is nearly one per 1,000 population higher than that for 1926, and 0'5 per 1,000 population above the average death-rate during the past five years. The following comparison of the chief causes of death during 1927 with those for 1926 indicate that the increased mortality is mainly due to respiratory diseases, influenza, and heart disease, etc. :—

	No. of deaths.	
	1927.	1926.
Heart Disease, Cerebral Hæmorrhage and Arterio-Sclerosis	2,798	2,407
Diseases of the Respiratory System	1,494	1,293
Cancer, Malignant Disease	1,448	1,363
Tuberculous Diseases	823	757
Influenza	515	147
Congenital Diseases	404	386

Table XXXI of Part IV of this report shows the highest and lowest death-rates occurring among the Sanitary Districts in the Administrative County during 1927 :—

Highest.			Lowest.		
*Bumpstead R.	...	16'5	*Canvey Island U.	...	4'3
Brightlingsea U.	...	16'3	*Frinton-on-Sea U.	...	6'6
Belchamp R.	...	15'6	Loughton U.	...	7'9
Saffron Walden R.	...	15'6	Tilbury U.	...	8'5
Saffron Walden B.	...	14'7	Wanstead U.	...	8'6
Maldon B.	...	14'4	Brentwood U.	...	9'2

Similar remarks in regard to those districts marked with an asterisk were made in the Report for 1926.

Infant Mortality.

The total number of deaths of children under one year of age recorded during 1927 was 851, of which number 507 were males and 344 females. Of the 75 illegitimate deaths, 45 were males and 30 females. The infant mortality rate per thousand births is 51, which is again very satisfactory. The infant mortality rate per thousand births among illegitimate children is 142.

The following table compares the infant mortality rate in the County with that for England and Wales during the past ten years :—

TABLE IV.

Year.	Administrative County.			England and Wales.
	Births.	Deaths under 1 year of age.	Rate per 1,000 Births.	Rate per 1,000 Births.
1918	13543	958	70	97
1919	14736	969	66	89
1920	21082	1242	59	80
1921	18298	1089	59	83
1922	17179	954	55	77
1923	17330	794	46	69
1924	16218	846	52	75
1925	16516	859	52	75
1926	16743	877	52	70
1927	16661	851	51	69

The number of deaths from diarrhoea under two years of age was 70 in 1927 as against 138 in 1926.

TABLE V.

SHOWING THE BIRTH-RATE, DEATH-RATE AND INFANT MORTALITY FOR
THE YEAR 1927 AND THE AVERAGE FOR THE 5 YEARS 1922-26.

SANITARY DISTRICTS.	Birth rate.		Death-rate.		Infantile Mortality.			
	1927.	1922-26.	1927.	1922-26.	1927.	1927.		1922-26 (Average).
						Legiti- mate.	Illegiti- mate.	
URBAN—								
Barking ...	17.8	22.4	10.2	9.6	66	61	238	66
Braintree... ..	15.9	16.4	13.7	11.6	25	26	...	32
Brentwood ...	12.4	14.8	9.2	9.9	22	23	...	53
Brightlingsea ...	11.2	17.8	16.3	11.8	21	21	...	38
Buckhurst Hill ...	14.6	16.3	12.4	9.9	76	53	666	51
Burnham-on-Crouch ...	11.6	13.7	12.5	13.0	24	27	...	53
†Canvey Island ...	9.6	...	4.3	...	72	61	333	...
Chelmsford B. ...	15.5	15.3	11.4	10.0	49	48	77	45
Chingford ...	19.8	18.6	9.6	9.0	47	40	250	45
Clacton-on-Sea ...	12.5	12.5	11.2	10.3	74	77	...	39
Colchester B. ...	15.6	17.2	11.2	10.5	46	47	28	52
†Dagenham ...	32.3	...	9.3	...	62	61	107	...
Epping ...	13.5	14.8	12.1	12.2	46	46	...	61
Writton-on-Sea ...	6.1	11.2	6.6	6.8	77	83	...	47
Grays ...	17.4	19.8	9.9	9.8	48	49	...	50
Halstead ...	14.5	15.7	13.1	13.0	12	12	...	54
Harwich B. ...	17.3	20.4	10.2	10.5	47	48	...	57
†Hornchurch ...	16.4	...	9.4	...	70	68	144	...
Ilford B. ...	15.3	16.3	9.3	9.1	45	40	205	47
Leyton B. ...	14.2	16.6	10.3	9.9	44	42	98	56
Loughton ...	12.9	16.2	7.9	8.9	59	47	100	15
Maldon B. ...	13.0	15.5	14.4	11.9	99	65	750	44
Romford ...	17.0	17.4	12.7	11.2	66	66	62	49
Saffron Walden B. ...	13.4	13.8	14.7	13.7	82	84	...	60
Shoeburyness ...	26.2	20.9	11.3	9.7	40	42	...	55
Tilbury ...	22.4	24.9	8.5	9.4	71	69	143	63
Waltham Holy Cross ...	14.5	15.8	10.4	9.9	61	65	...	51
Walthamstow ...	16.3	18.4	10.6	9.8	53	49	222	53
Walton-on-the-Naze ...	11.9	13.8	11.5	10.9	60	62	...	57
Wanstead ...	9.4	13.3	8.6	9.8	57	39	1500*	33
†West Mersea ...	13.7	...	13.2	...	161	107	666	...
Witham ...	16.8	15.5	11.2	12.2	44	44	...	60
Wivenhoe ...	12.2	14.1	13.1	13.9	...	...	...	49
Woodford ...	13.4	15.5	10.5	9.3	34	35	...	33
Total—								
Urban ...	16.3	16.6	10.3	10.6	52	49	142	52
RURAL								
Belchamp ...	14.9	17.6	15.6	13.7	49	54	...	47
Billericay ...	15.9	16.8	11.9	10.4	74	61	500	48
Braintree... ..	16.6	14.5	12.8	13.3	46	47	...	39
Bumpstead ...	11.6	18.2	16.5	15.3	77	87	...	51
Chelmsford ...	14.7	17.7	9.8	11.3	25	23	67	48
Dunmow ...	14.1	15.2	13.8	12.7	48	40	182	47
Epping ...	13.0	16.8	13.3	10.9	62	59	143	46
Halstead ...	12.7	14.2	13.2	12.1	49	43	167	46
Lexden and Winstree ...	15.5	16.0	12.6	11.6	47	45	77	44
Maldon ...	14.4	15.8	13.6	11.7	50	39	375	48
Ongar ...	17.4	20.3	11.8	11.4	56	53	111	48
Orsett ...	18.9	18.4	9.4	9.1	39	36	143	47
Rochford ...	18.1	19.7	11.7	11.3	45	45	55	55
Romford ...	21.7	25.4	9.4	10.2	49	51	...	60
Saffron Walden ...	13.1	16.4	15.6	13.7	87	75	286	60
Stansted ...	15.0	15.8	13.2	11.6	48	50	...	26
Tendring ...	15.7	18.2	11.8	10.9	25	21	91	45
Totals—								
Rural ...	16.0	17.5	12.0	11.8	48	44	140	49
Urban ...	16.3	16.6	10.3	10.6	52	49	142	52
Adminis. County ...	16.2	17.0	10.8	11.2	51	48	142	51

*In this district a child born in 1926 died within a year of its birth.

†These Districts were constituted Urban Districts in April, 1926.

Cancer.

The following table which was published in my Annual Report for the year 1925 has been brought up to date, and shows that the number of deaths registered as being due to cancer, malignant disease, continues to increase:—

TABLE VI.

Year.	Administrative County.		England and Wales.	
	Deaths.	Rate per 1,000 population.	Deaths.	Rate per 1,000 population.
1923 	1208	1·30	48668	1·26
1924 	1197	1·26	50389	1·30
1925 	1301	1·35	51939	1·33
1926 	1363	1·37	53220	1·36
1927 	1448	1·41	Not available.	Not available.

Despite the large amount of research work which has been undertaken very little further information has been obtained in regard to the causation of cancer, and it must be again admitted that the safest course at the present time is for persons suffering from the disease or who suspect that they are so suffering to seek medical advice in order that an early diagnosis may be obtained, leading to suitable treatment. Unfortunately, very many patients do not present themselves for diagnosis and treatment until the disease is too far advanced for cure. The difficulty is that cancer in its early stages is painless and it is therefore strongly advised that all persons over the age of 40 who discover a lump, hard patch, obstinate ulcer or discharge of blood or matter from any of the orifices of the body, persistent indigestion, constipation, &c., should at once consult a doctor.

One clear inference can be drawn from the research work already undertaken, which, although negative, yet is very important, viz., there is a duty to refute statements made on untenable statistics. For some time a campaign has been going on amongst the medical profession that certain forms of food produce cancer. There is nothing whatever in statistics to support this. The statement that cancer of the intestine is unknown in India has been entirely refuted. It is an easy thing to say that cancer is unknown among natives, but as a matter of fact, the statistical data have not been obtained.

It is also known that the infrequency of cancer amongst Jews is not due to racial characteristics, but owing to the observance of Mosaic ritual laws. Their main provisions are the prohibition of coitus at certain times and the imposition of frequent ritual baths. The practice of these laws produces a high degree of sexual cleanliness and restricts co-habitation at times when rest is probably beneficial.

A set of pamphlets entitled "What should be known about Cancer; its Prevention and Treatment" can be obtained by request from the County Public Health Department, Duke Street, Chelmsford.

NOTIFICATIONS OF INFECTIOUS DISEASES.

In Table XXXIII of Part IV. is given a summary of the notifications of infectious diseases received in the various sanitary districts during the year, together with the attack rates per 1,000 population. From this Table it will be seen that excluding tuberculosis notifications, there were 6,804 cases of infectious diseases notified during 1927, the attack rate being 6.6 per 1,000 population. The corresponding figures for 1926 were 6,134 and 6.2 respectively.

Both Scarlet Fever and Diphtheria were more prevalent than during 1926, and in several districts the attack rates from these diseases were more than double those for the County generally. Fortunately the number of deaths registered from Scarlet Fever was small, amounting to only 21, but there were 90 deaths from Diphtheria, equivalent to a case mortality rate per cent. of 5.2.

Though 108 notifications of Enteric Fever were received, only 9 deaths from Enteric Fever were recorded, the whole of which took place in the urban districts in the County. The districts chiefly affected were Barking Urban and Ilford Borough, but according to the reports of the district medical officers of health, the source of infection could not be traced.

Fifteen cases of Acute Anterior Poliomyelitis were notified during 1927, compared with 89 in 1926.

The number of notifications of Puerperal Pyrexia received during 1927 was 99. This is the first complete year of the operation of the Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926. There were 43 cases of Puerperal Fever notified, whilst deaths registered from this cause were 24.

Small-pox.

No case of Small-pox was reported from the Administrative County during the year, and it is now seven years since a case was notified. The disease continues to be prevalent in various parts of the country, particularly in the north, but a considerable number of cases have been notified from London and the neighbouring Boroughs. Arrangements for the prompt circulation of information to district medical officers of health, regarding cases and contacts affecting their areas, have been continued.

The London County Council again kindly continued the arrangements for the services of Dr. W. McConnell Wanklyn to be loaned to any medical officer of health in the Administrative County of Essex, on application to me (Tel. No. Chelmsford 120),

or in case of emergency by communicating direct with Dr. Wanklyn at :—

Office : Hop 5000.

Private : Riverside 2678.

This arrangement is greatly valued and appreciated.

During the year the Borough of Leyton, which had not previously made any provision for the isolation and treatment of Small-pox, entered into an agreement with the West Ham Corporation for the reception of cases into their Small-pox Hospital.

Diphtheria.

The number of notifications and deaths from Diphtheria during the past five years, together with the case mortality per cent. is shown in the following table :—

Year.	Notifications.		Deaths.		Case mortality per cent.	
1923	...	869	...	39	...	4'5
1924	...	959	...	42	...	4'4
1925	...	1,082	...	50	...	4'6
1926	...	1,362	...	59	...	4'3
1927	...	1,737	...	90	...	5'2

The number of cases notified has steadily increased, though the case mortality has remained about the same, with the exception of 1927.

Reference was made in my Annual Report for 1926 in regard to the value of the Schick Test for determining the susceptibility of individuals to diphtheria, followed by immunisation of those proved to be susceptible. Local Authorities controlling infectious disease hospitals are especially urged to protect their Nursing Staffs by this means.

In his Annual Report for 1926, Sir George Newman, the Chief Medical Officer of the Ministry of Health, states : " Experience during the year has confirmed the opinion previously expressed, that, on experimental grounds, it is reasonable, and that our epidemiological experience is consistent with the conclusion that active immunisation provides a safe, practicable, and effective method of prevention."

Increasing use has been made of the virulence test provided under the laboratory scheme for patients who give positive swabs, but do not show any of the ordinary signs of diphtheria and for chronic carriers. In this connection the attention of medical officers of health is called to the Ministry of Health Report No. 10 entitled " Diphtheria," published in 1921.

From Table XXXIII, Part IV., it will be observed that the highest diphtheria attack-rates per 1,000 population were in the Dagenham, Grays, and Tilbury Urban Districts and in the Orsett Rural District.

In most parts of the Administrative County, supplies of diphtheria anti-toxin can now be obtained free, from the local sanitary authority.

Encephalitis Lethargica.

Until the last five years the present generation has known little of this disease of the central nervous system or of the serious after effects and interference with the nervous functions resulting from an attack of the disease. The number of cases notified has been causing considerable anxiety, and the following table shows the number of cases notified in Essex during the past five years, together with the attack rate per 1,000 population compared with similar information for England and Wales :—

TABLE VII.

ESSEX.				ENGLAND AND WALES.	
Year.	Number of cases notified	Attack Rate.	Deaths.	Number of cases notified.	Attack Rate.
1923	14	0·01	11	1025	0·02
1924	78	0·08	23	5039	0·13
1925	45	0·05	31	2635	0·07
1926	41	0·04	22	2267	0·06
1927	23	0·02	24	Not available.	

A feature of encephalitis lethargica is that it frequently attacks adolescents between the ages of 10 and 20 years. From the information already available, it is clear that encephalitis lethargica is an acute epidemic and presumably infectious disease which terminates fatally in about half of the cases, while the other half suffers seriously from "after-effects" which are usually of long duration, but whether these symptoms are "after-effects," or are a continuation of the acute disease in chronic form, is at present uncertain.

Previously considerable administrative difficulty has been experienced in dealing with those patients who had been left in a state of mental defection. Owing to the wording of Section 1 of the Mental Deficiency Act, 1913, it was required that the mental defectiveness must be shown to have existed from birth or an early age. Under the Mental Deficiency Act of 1927, however, the definition is now amended so as to include all cases in which mental defectiveness becomes manifest before the age of 18 years "whether arising from inherent causes or induced by disease or injuries."

The whole subject is now being carefully investigated by the Ministry of Health, and it is anticipated that a full report on the information at present available, and the knowledge accumulated in connection with the disease, will shortly be published.

School Closure.

Advantage was taken of Article 53b of the Board of Education Code permitting exclusion of actual cases and contacts of infectious diseases, so as to prevent as far as possible the spread of disease. Careful co-operation between the head

teachers, school medical inspectors and the district medical officers of health has continued throughout the year whilst every effort has been made by the school nurses to follow up children excluded or absent. The idea of closing schools in order to prevent the dissemination of infection has been proved to be unnecessary particularly in urban districts, and the facilities under Circular 1337 permitting of a certificate being issued that the reduction of attendance is due to infectious disease is a sound policy. In fact, with the increased medical and other supervision now being carried on throughout the schools, a child is better protected from infection whilst at school than if he were running about.

Experience seems to indicate that the chief method of spreading infection is by personal contact, *i.e.*, by "droplet infection," in coughing, sneezing, &c., whereas the amount of infection conveyed by the furniture or in the air of the school classroom, is negligible, provided proper air space, ventilation and cleanliness are maintained. If this is done satisfactorily there is no necessity for the use of disinfectants in classrooms, as they are apt merely to cloak instead of remove the infectious material.

ISOLATION HOSPITALS.

The Scheme of Grants paid by the County Council in aid of Isolation Hospitals in respect to (a) beds provided in buildings erected out of loan (£5 per bed per annum), (b) beds provided in buildings erected out of revenue (£2 10s. 0d. per bed per annum), (c) provision of motor ambulance (£10 per annum), and (d) special grants towards exceptional expenses, has been continued subject to the conditions enumerated in my Annual Report for 1925.

All the isolation hospitals applying for grant during 1927 were inspected and found generally satisfactory. Minor improvements and renovations suggested were carried out. It was noted that the increase in the population in the Dagenham and Becontree areas was throwing a considerable strain on the accommodation available at the Ilford and Romford Isolation Hospitals and extensions to both hospitals are contemplated. Owing to pressure on the accommodation at the Orsett Isolation Hospital extra accommodation for Diphtheria cases is being provided.

In Table VIII on page 22a information obtained from the Isolation Hospital Authorities receiving grants for beds provided out of loan from the County Council for the year ended 31st March, 1927, is summarised. In addition to comparing the cost per case treated during the year 1926-27, the cost per patient per week is shown (i) including expenditure on loans and (ii) excluding this expenditure. The table again illustrates the high cost of treating patients in hospitals not fully utilised and where the number of beds is small.

During the year ended 31st March, 1927, grants for beds provided out of revenue were made to the following hospital authorities:—

Colchester (40 beds), Halstead (4 beds), Orsett (4 beds).

TABLE VIII.

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, 1927.

	Billericay.	Chelmsford.	Clacton.	Colchester.	Dunmow.	Grays and Orsett.	Halstead.	Ilford.	Maldon.	Rochford.	Romford.	Saffron Walden.	Walthamstow.	Waltham Joint.	TOTAL.
Number for purpose of Grant	22	21	17	58	8	20	16	98	10	12	42	14	91	42	471
Grant from County Council	£120	£115	£85	£300	50	110	80	500	60	70	220	80	465	220	2475
Cases treated during year :—															
Scarlet Fever	74	81	12	99	21	158	88	155	65	65	324	35	434	153	1744
Diphtheria	34	21	2	19	6	134	5	130	20	23	89	...	222	80	785
Typhoid	1	1	...	6	...	...	1	4	2	...	1	1	...	1	18
Other Diseases	17	5	4	123*	3	67	1	63*	2	2	11	1	6	...	305
Total number of cases treated	126	108	18	247	30	359	95	352	89	90	425	37	662	214	2852
Bed-Days	4851	3773	659	12753	430	14902	4669	21455	1921	4023	17703	1479	28207	7227	124032
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...	153 17 0	224 19 1	151 2 3	133 15 8	13 19 6	1316 17 8	64 0 0	1997 8 4	244 16 10	144 0 0	983 2 1	108 0 0	1176 0 0	456 13 4	7078 11 9
Interest on loan	135 7 0	106 0 8	29 19 9	83 1 4	3 19 6	782 1 0	67 19 4	1325 5 10	54 4 2	23 6 4	557 10 9	79 0 0	202 0 0	116 18 8	3566 14 4
Total	£ 289 4 0	330 19 9	181 2 0	216 17 0	17 19 0	2098 18 8	131 19 4	3232 14 2	299 1 0	167 6 4	1540 12 10	187 0 0	1378 0 0	573 12 0	10645 6 1
Structural Repairs	430 7 3	516 9 8	40 17 11	69 3 3	45 12 11	374 13 8	237 11 8	1218 16 6	90 9 7	53 14 8	941 8 6	45 6 9	614 0 0	15 15 0	4694 7 4
Food (Patients and Staff)	1128 14 10	283 2 8½	206 5 1	1560 5 0	134 0 4	1654 8 3½	465 14 1	3424 12 10	558 8 9	522 5 3	1822 10 6	260 4 0	4030 0 0	490 11 2	16541 5 10
Estab. and Patients' Expenses	998 14 4	1428 12 8½	644 15 3	5137 0 4	634 16 0	3170 15 1	1445 0 9	10709 11 5	1426 0 10	1169 6 10	4345 0 10	549 19 10	10332 0 0	2367 5 6	44378 19 8
Maintenance...	2557 16 5	2228 5 1	891 18 3	6766 8 7	811 9 3	5199 17 0½	2148 6 6	15353 0 9	2074 19 2	1745 6 9	7108 19 10	855 10 7	14996 0 0	2873 14 8	65614 12 10
Overhead Charges	289 4 0	330 19 9	181 2 0	216 17 0	17 19 0	2098 18 8	131 19 4	3232 14 2	299 1 0	167 6 4	1540 12 10	187 0 0	1378 0 0	573 12 0	10645 6 1
Total	£ 2847 0 5	2559 4 10	1073 0 3	6983 5 7	832 8 3	7298 15 8½	2280 5 10	18585 11 11	2374 0 2	1912 13 1	8649 12 8	1042 10 7	16374 0 0	3447 6 8	76259 13 11
Cost per case treated, 1926-27	22 11 11	23 14 0	59 12 3	28 5 5	27 15 0	20 6 7	24 0 1	52 16 0	26 13 5	21 5 1	20 7 1	28 3 6	24 14 8	16 2 2	26 14 9
" " year 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
Cost per patient per week	4 2 2	4 15 0	11 15 1	3 16 7	13 11 0	3 8 7	3 9 5	6 1 3	8 13 0	3 6 7	3 8 4	4 18 8	4 1 3	3 6 9	4 6 1
" " Food, Struct. and Estab. Ex.	3 14 0	4 2 8	9 15 5	3 14 3	13 5 2	2 8 10	3 4 5	5 0 2	7 11 2	3 0 9	2 16 2	4 1 0	3 14 5	2 15 8	3 14 1

* Includes Tuberculosis cases treated under the County Council scheme.

1870-1871

1871-1872

1872-1873

1873-1874

1874-1875

1875-1876

1876-1877

1877-1878

1878-1879

1879-1880

1880-1881

1881-1882

1882-1883

1883-1884

VENEREAL DISEASES.

Scheme.

The London and Home Counties Scheme whereby patients from the County of Essex can attend the Venereal Diseases Clinics established at, or in connection with, the principal London Hospitals, has again proved extremely valuable during the year 1927. Full details of the Scheme were given in my Annual Report for the year 1925. There was very little alteration in the arrangements as compared with 1926. At a meeting of the participating authorities held at the County Hall, London, a decrease in new cases and increase of attendances were reported. It was also stated that there was an increase in the number of cases presenting themselves for examination who were found not to be infected. The Charing Cross Hospital and the Elizabeth Garrett Anderson Hospital had ceased to participate in the Scheme. Particulars of the number of Essex patients receiving treatment are set out in Table X on page 25.

The County Council continued the arrangements with the Essex County Hospital, Colchester, and the Chelmsford and Essex Hospital, Chelmsford, in connection with the Venereal Diseases Clinics established there; facilities for advice and treatment are also available for Essex patients at the Southend Borough Sanatorium, and the East Suffolk Hospital, Ipswich. In addition, a number of patients suffering from Venereal Disease in the Grays and Tilbury Urban Districts have found it convenient to attend an *ad hoc* clinic established at Gravesend by the Kent County Council. Particulars of the number of patients who attended at these Clinics are also given in Table X on page 25.

It is to be regretted that the further efforts made to try and secure suitable accommodation in Leyton or Walthamstow for a Venereal Disease Treatment Centre have so far proved unsuccessful.

The Venereal Diseases Scheme works silently but effectively. It is the common opinion that there has been a diminution in the number of primary cases of syphilis and that the initial symptoms of the disease are not nearly so severe as formerly. Whilst this may be a source of satisfaction, there is the possible danger that patients may not treat their complaint seriously and fail to persevere in the full course of treatment necessary to avoid fatal sequelæ in later years.

In spite of the wonderful manner in which the arsenic compounds clear up the early symptoms of the disease, it is necessary to insist that treatment must be continued for three or more years and supervision for a much longer period.

The increased attendance for gonorrhœa is distinctly encouraging, as it is obvious that a great number of patients are now seeking the attention which is necessary. In respect to its effect on the incidence of ophthalmia neonatorum, in spite of efforts on the part of medical practitioners and midwives to provide preventive treatment in the

ante-natal period, there are still a regrettably large number of babies whose eyes suffer, but fortunately there are not nearly so many as formerly whose eyesight is permanently affected.

TABLE IX.

CASES OF OPHTHALMIA NEONATORUM NOTIFIED. YEARS 1923—27.

Year.			Total Births.	Number of Cases notified of Ophthalmia Neonatorum.	No. of Cases per 1000 Births.
1923	...	...	17330	59	3.4
1924	...	...	16218	42	2.6
1925	...	...	16516	61	3.7
1926	...	...	16743	72	4.3
1927	...	...	16661	84	5.0

During the year the County Council expended the sum of £18 13s. 5d. in travelling expenses to necessitous patients to and from treatment centres. In each case, full enquiries were made into the financial circumstances of the patients before the expenses were paid.

BACTERIOLOGICAL EXAMINATIONS.

The number of specimens examined under the arrangement made by the County Council with Dr. J. F. Beale, Bacteriologist for Essex (91, Queen Victoria Street, London, E.C.4.; telephone, City 7116) are given in Table XI on page 26.

The total number of examinations increased from 13,366 in 1926 to 16,801 in 1927. The chief increase is in the number of Diphtheria swabs examined, which rose from 7,642 in 1926 to 10,293 in 1927 and this was due to the greater prevalence of Diphtheria.

During the year under review the County Council gave the County Medical Officer sanction to authorise Dr. Beale to carry out not exceeding 25 virulence tests on specimens from patients who, though not exhibiting any clinical symptoms of Diphtheria, persistently yielded positive swabs. Twenty-five tests were carried out, the result being as following :—

Virulent	...	...	18
Non-virulent	...	...	7
Total			25

TABLE X.

TREATMENT OF VENEREAL DISEASE, YEAR 1927.

Treatment Centre.	Patients from all Areas. Total No. treated for first time.	ESSEX PATIENTS.							Doses of Arseno-Benzol Compounds.			Hostels.
		Total Number treated for first time suffering from					Total Attendants of Essex Patients.	In-patient Days.	Total.	In-patient days.		
		Syphilis.	Soft Chancere.	Gonorrhoea.	Not V.D.	Total.						
London Hospitals	28,965	194	4	428	417	1043	17227	3589	2009	2009	2579	
St. Bartholomew's, London	425	—	—	3	2	5	129	—	—	—	—	
Chelmsford	16	6	—	8	2	16	159	12	80	2	82	
Colchester	77	33	—	31	11	75	2127	105	396	—	396	
Ipswich	224	6	—	4	1	11	138	33	64	—	64	
Southend	319	16	1	18	37	72	819	—	167	—	167	
Gravesend	440	21	1	58	18	98	1157	—	63	—	63	
Total for 1927...	30,466	276	6	550	488	1320	21756	3739	—	—	2781	2579
Total for 1926...	28,119	237	10	497	408	1152	18373	2841	485	3	2181	1403
" 1925	27,296	272	10	389	397	1068	18116	2937	464	—	2281	1767
" 1924	26,519	318	11	469	371	1169	17262	3140	574	—	2011	1990
" 1923	26,665	290	13	413	259	975	15063	2983	—	—	2026	—

TABLE XI.

SHEWING NUMBER AND TYPE OF SPECIMENS EXAMINED BY THE COUNTY
BACTERIOLOGIST--YEAR 1927.

SANITARY DISTRICTS.	Diph- theria.	Sputa.	Typhoid	Ring- worm.	Miscel- laneous.	Total Specimens examined.
URBAN—						
Barking	669	222	24	13	8	936
Braintree	53	58	4	6	3	124
Brentwood	149	46	4	14	4	217
Brightlingsea	55	5	...	...	1	61
Buckhurst Hill	4	2	1	...	...	7
Burnham-on-Crouch	6	5	...	...	...	11
Canvey Island	16	3	...	2	...	21
Chelmsford B.	239	115	23	15	9	401
Chingford	77	64	3	9	33	186
Clacton-on-Sea	32	44	9	8	1	94
Colchester B.	19	186	11	2	3	222
Dagenham	334	104	...	3	2	443
Epping	94	54	...	4	...	152
Frinton-on-Sea	...	2	...	...	...	2
Grays	2444	125	13	10	7	2599
Halstead	63	27	...	2	...	92
Harwich B.	20	55	7	3	...	85
Hornchurch	6	4	...	...	...	10
Ilford B.	291	689	41	4	42	1067
Leyton B.	2682	794	8	28	25	3537
Loughton	2	...	2	...	2	6
Maldon B.	85	42	18	4	4	153
Romford	724	88	1	11	2	826
Saffron Walden B.	27	9	2	...	...	38
Shoeburyness	15	26	4	2	1	48
Tilbury	60	25	...	3	...	88
Waltham Holy Cross	219	14	...	1	9	243
Walthamstow	155	815	10	9	18	1007
Walton-on-the-Naze	3	1	1	...	...	5
Wanstead	4	56	1	...	1	61
West Mersea	5	...	...	...	...	5
Witham	16	17	...	5	...	38
Wivenhoe	5	3	...	...	...	8
Woodford	212	57	9	2	5	285
Total	8785	3756	196	161	180	13078
RURAL—						
Belchamp	3	5	...	...	...	8
Billericay	205	189	10	3	3	410
Braintree	233	939	2	46	7	1227
Bumpstead	...	10	...	...	...	10
Chelmsford	54	38	3	11	14	120
Dunmow	140	30	3	1	...	174
Epping	105	18	1	6	2	132
Halstead	135	34	...	1	...	170
Lexden & Winatree	27	21	1	6	3	58
Maldon	93	14	6	11	...	124
Ongar	72	11	10	14	...	107
Orsett	192	28	2	6	3	231
Rochford	178	52	4	2	9	245
Romford	44	578	2	2	1	627
Saffron Walden	13	7	...	...	...	20
Stansted	5	3	...	...	...	8
Tendring	9	24	...	15	4	52
Totals—						
Rural	1508	2001	44	124	46	3723
Urban	8785	3756	196	161	180	13078
Adminis. County	10293	5757	240	285	226	16801

HOUSING.

The particulars recorded in Table XII on page 28a for each Sanitary District relate to the year 1926 as the information for the year 1927 is not yet available.

NEW DWELLING-HOUSES ERECTED. There was a great increase in the number of dwelling-houses erected, as will be seen from the following comparative figures :—

Erected by	1926.	1925.
Local Authorities with State assistance ...	1587	1150
Other bodies or persons with State assistance ...	8704	5595
Private enterprise	2731	2919
Totals ...	13022	9664

The largest number of dwelling-houses were erected in Dagenham U. (2,894), Ilford B. (2,870), Billericay R. (748), Rochford R. (730), and there was only one district (Bumpstead R.) where no houses were built during the year.

INSPECTIONS. 31,700 dwelling-houses were inspected for defects under the Public Health and Housing Acts, and 10,218 or 32·2 per cent. were found not to be in all respects reasonably fit for human habitation; whilst 420 or 1·3 per cent. were found to be in a state so dangerous or injurious to health as to be unfit for human habitation.

10,762 dwelling-houses were rendered fit as the result of informal action by the Local Sanitary Authorities or their officers.

ACTION UNDER STATUTORY POWERS. In five Urban Districts and one Rural District it was not necessary to serve any statutory notices. In the remaining areas, such notices were issued with the results indicated below :—

Number of dwelling-houses regarding which notices were served requiring repairs	3297
Number of dwelling-houses rendered fit by owners after service of formal notices	2794
Number of dwelling-houses rendered fit by Local Authorities in default of owners after service of formal notices ...	95
Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	43

UNFIT DWELLING-HOUSES. Inspections resulted in the responsible officers making 187 representations to their respective Local Sanitary Authorities in respect to dwelling-houses which appeared "to be in a state so dangerous or injurious to health as to be unfit for human habitation." Only 65 of these representations were made in the 34 Urban Districts as compared to 122 in the 17 Rural Districts.

Under Section 25 of the Housing Act, 1925, Rural Councils are required to send to the County Council copies of any representations or Closing Orders made in respect to such property, but only six out of 12 Rural Councils furnished such information, the figures for 1926 being as follows :—

Number of Rural Districts in which representations or Closing Orders were made	...	...	...	...	12
Number of representations made in Rural Districts with a view to making Closing Orders (see Table XII)	...	...	...	...	122
Number of houses in respect of which Rural Councils made Closing Orders (see Table XII)	...	...	...	...	124
Number of Rural Councils which sent copies of representations or Closing Orders to County Council	...	...	...	...	6
Number of houses regarding which copies of representations or Closing Orders were received by County Council	...	...	...	...	71

Where the Local Sanitary Authorities approve of such representations, they are required by Section 11 of the Housing Act, 1925, to make a Closing Order prohibiting the use of the houses for human habitation until, in their judgment, the houses are rendered fit for that purpose. In this connection the records for 1926 are as follows :—

Number of representations made with a view to the making of Closing Orders	...	...	...	...	187
Number of dwelling-houses in respect of which Closing Orders were made	...	...	...	...	186
Number of such dwelling-houses rendered fit and Closing Orders determined	...	...	...	...	21
Number of dwelling-houses in respect of which Demolition Orders were made	...	...	...	...	28
Number of dwelling-houses demolished in pursuance of Demolition Orders	...	...	...	...	27

HOUSING (RURAL WORKERS) ACT, 1926. The administration of this Act has been delegated by the County Council to the Agricultural Committee, and the duties thereunder are being carried out by the County Land Agent.

The object of this Act is to secure a contribution to the improvement of housing conditions for agricultural labourers and other country workers by facilitating the re-conditioning of old houses in such a way as to bring them up to modern standards of comfort and sanitation, and by the conversion into dwellings of buildings not previously used for that purpose.

To this end the Act provides for assistance both by grants (towards which Exchequer contributions are available) and by loans by Local Authorities to owners who are willing to carry out approved works. The Local Authority for the purpose

TABLE XII.

SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE PUBLIC HEALTH AND HOUSING ACTS DURING THE YEAR 1926.

SANITARY DISTRICTS.	NEW HOUSES ERECTED DURING 1926.			UNFIT DWELLING HOUSES.				Houses rendered fit in consequence of informal action by Local Authority or their Officers.	ACTION UNDER SECTION 3 HOUSING ACT, 1925.			UNDER STATUTORY PUBLIC HEALTH ACTS.		POWERS.						
	Total.	With State assistance under Housing Acts, by		Total No. inspected for Housing Defects under Public Health or Housing Acts.	No. inspec- ted and recorded under Housing Consolidat- ed Regs., 1925.	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.		No. of Dwelling Houses in respect of which Notices were served requiring repairs.	No. Dwelling Houses rendered fit after formal Notices. By Owners.	By Local Authority in default of Owners.	No. of Dwelling Houses Closing Orders became operative.	No. of Dwelling Houses Notices served requiring repairs to be remedied.	No. Dwelling Houses in which defects were remedied after formal Notice. By Owners.	By Local Authority in default of Owners.	No. of representa- tions made with view to making of Closing Orders.	No. of Dwelling Houses Closing Orders determined Houses being rendered fit.	No. of Dwelling Houses Demolition Orders made.	No. of Dwelling Houses demolished in pursuance of Demolition Orders.	
		Local Authority.	Other Bodies or Persons.																	
URBAN.																				
BARKING	289	47	219	3896	771	3	2080	1409	197	194	3	...	474	460	14	3	2	1	...	...
BRAINTREE	117	60	55	172	75	21	52	44	...	...	...	...	42	36	...	17	17	1	...	...
BRENTWOOD	46	16	8	43	16	1	15	28	...	...	...	...	15	15	...	1	1	...	1	1
BRIGHTLINGSEA	17	...	15	33	11	4	35	31	2	1	...	4	2	2	...	4	4	...	5	4
BECKHURST HILL	44	...	...	140	32	...	50	49	1	1	...	...	...	...	...	...	...	...	...	...
BURNHAM-ON-CROUCH	24	21	3	215	217	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...
CANVEY ISLAND	87	...	...	18	...	7	8	31	...	...	...	...	...	...	...	...	...	...	...	...
CHELMSFORD B.	265	88	177	1311	40	13	33	31	...	...	...	...	463	424	...	13	13	1	...	...
CHINGFORD	404	1	...	157	157	...	17	16	...	...	...	...	1	...	...	...	...	...	...	...
CLACTON-ON-SEA	261	51	71	267	120	1	95	69	95	64	18	7	39	22	17	...	...	...	...	...
COLCHESTER B.	270	98	168	1474	467	8	89	812	6	4	...	...	126	106	...	8	8	...	...	...
DAGENHAM	2894	...	2833	583	583	5	247	39	...	...	...	...	199	147	...	2	2	...	...	...
EPING	40	...	39	71	...	...	22	18	...	...	...	...	...	...	...	...	...	...	...	...
FRINTON-ON-SEA	7	...	2	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAYS	96	67	29	682	434	...	391	391	...	...	...	...	...	...	...	...	...	...	...	...
HALSTED	26	8	5	313	313	...	313	204	121	106	3	...	...	...	...	...	...	...	...	...
HARWICH B.	45	8	30	41	37	1	2	...	...	...	...	...	58	32	...	1	1	...	3	...
HORNCHURCH	169	...	121	378	313	...	183	189	17	17	...	...	24	23	...	...	...	...	...	...
ILFORD B.	2870	...	2870	950	348	...	577	429	208	175	...	...	48	41	...	...	...	...	...	...
LETON B.	260	44	59	3461	984	2	2058	2169	14	10	4	...	27	31	...	2	...	...	...	...
LOUGHTON	46	...	9	127	2	...	19	...	2	2	...	...	...	...	...	...	...	...	...	...
MALDON B.	22	16	4	352	26	7	23	...	23	17	...	7	26	26	...	...	...	...	1	...
ROMFORD	379	...	275	434	...	...	201	185	...	...	...	...	8	8	...	...	...	...	...	...
SAFFRON WALDEN B.	21	...	20	48	66	...	98	6	38	98	...	...	...	...	...	...	...	...	...	...
SHOEBURYNESSE	25	...	9	141	...	...	...	201	35	30	...	5	26	24	...	...	...	1	6	5
TILBURY	351	351	3	427	134	9	283	201	...	...	...	...	121	113	...	...	...	...	...	...
WALTHAM HOLY CROSS	7	...	3	244	159	...	102	103	...	...	...	...	10	18	...	...	...	...	...	...
WALTHAMSTOW	196	50	32	5328	735	...	437	2372	93	72	5	...	10	9	1	...	...	...	...	...
WALTON-ON-TRE-NAZE	63	10	31	28	...	7	23	23	...	...	...	...	7	...	7	7	7	7	7	7
WANSTEAD	179	...	...	240	30	...	30	116	...	...	...	...	...	...	...	...	...	...	...	...
WEST MERSEA	13	...	6	80	48	...	8	8	...	...	...	...	...	...	...	...	...	...	...	...
WITHAM	32	26	...	48	...	...	18	...	18	16	...	...	...	...	...	...	...	...	...	...
WYVENHOPE	5	...	5	106	106	...	20	20	...	...	...	...	...	...	...	...	...	...	...	...
WOODFORD	107	...	9	2898	454	...	340	298	...	...	...	...	4	4	...	...	...	...	...	...
URBAN TOTAL	9619	961	7110	24724	6778	89	7869	9247	885	815	33	23	1730	1541	39	65	62	5	22	18
RURAL.																				
BELCHAMP	3	...	1	235	27	22	42	37	22	21	...	...	20	14	20	...	...	...	...	...
BILBERYAT	748	...	371	665	219	16	157	42	44	35	...	...	69	60	...	5	4	...	...	...
BRAINTREE	158	72	83	202	154	12	142	140	2	1	11	...	26	26	...	12	12	1	2	...
BUMPSTEAD	...	...	...	48	22	...	19	19	...	19	...	...	30	10	...	11	11	...	...	...
CHELMSFORD	242	88	91	610	63	11	59	134	...	...	...	...	9	9	...	3	3	...	...	...
DUNMOW	51	22	15	127	26	3	84	69	...	...	...	...	48	47	1	3	4	...	...	...
EPING	151	36	59	345	...	...	230	205	5	...	3	...	2	2	...	9	9	2	...	...
HALSTED	24	...	22	219	109	9	103	71	1	...	...	1	39	26	...	8	8	...	...	...
LEXDEN AND WINSTREE	163	76	59	649	245	32	225	150	33	22	...	...	10	8	...	19	19	1	2	...
MALDON	91	46	23	440	156	19	106	66	3	1	...	...	25	25	...	27	27	3	...	...
ONGAR	50	18	24	1607	1607	150	109	6	...	...	...	...	98	39	1	21	23	1	3	...
ORSETT	471	186	213	299	148	27	121	96	...	...	...	...	...	...	...	...	...	...	...	...
ROCHFORD	730	58	220	312	63	13	357	61	156	39	2	98	39	1	...	...	...	...	...	...
ROMFORD	296	...	239	367	255	...	263	203	16	10	...	...	17	17	...	...	...	...	...	...
SAFFRON WALDEN	4	...	4	17	17	1	3	3	3	3	...	...	...	...	...	...	...	...	...	...
STANSTED	32	...	18	525	525	...	64	60	...	...	...	...	...	...	...	3	3	...	1	1
TENDRING	179	18	161	309	168	3	208	153	...	...	...	...	...	...	...	...	...	...	...	...
RURAL TOTAL	3403	626	1594	6976	3779	331	2349	1515	291	155	1	20	393	283	22	122	124	16	6	9
BORO' & URBAN TOTAL	9619	961	7110	24724	6778	89	7869	9247	885	815	33	23	1730	1541	39	65	62	5	22	18
TOTAL FOR ADMINIS- TRATIVE COUNTY	13022	1587	8704	31700	10557	420	10218	10762	1174	970	34	43	2123	1824	61	187	186	21	28	27

of the Act is in Counties the Council of the County, and in County Boroughs the Council of the County Borough. Provision is made by which a Local Sanitary Authority may be made the Authority under the Act for their district instead of the County Council, in which case the expenses of the Local Sanitary Authority shall form part of the expenses of the latter Authority in the execution of the Public Health Acts.

Under Section 1 of the Act the County Council formulated a scheme which was approved by the Ministry of Health and which includes the following:—

Financial grants in approved cases for the re-construction and repair of workers' dwellings.

Each grant to be two-thirds of the estimated cost of the alterations but not exceeding £100 for any one house.

No grant will be made where the estimated cost of the re-construction and repairs is less than £50.

"Repairs" for the purpose of this scheme include (a) structural alterations and repairs (b) additions to premises (c) water supplies and drainage (d) sanitary conveniences and (e) other like works.

"Repairs" for the purpose of this scheme do not include ordinary repair and upkeep.

When the landlord accepts a financial grant, the following conditions will apply, viz:—

1. The estimated value of the dwelling on completion must not exceed £400.
2. The dwelling when completed must be fit for habitation.
3. For 20 years the tenants must be agricultural workers or persons receiving similar wages.
4. For 20 years the maximum rent will be the "normal agricultural rent," as determined by the County Council, increased by 3 per cent. on the owner's share in the estimated expenditure on the works.

Forms of application and any further particulars may be obtained from Mr. J. H. Goold, Clerk of the Essex County Council, Shire Hall, Chelmsford.

The County Land Agent has kindly supplied the following report upon the work done under this Act during the period May to December, 1927:—

The number of applications received for Forms of Application for assistance under the Act was fifty-five. Twenty forms have been returned. The districts in which the cottages are situate are as follows :—

District.	No. of Applications.	No. of Cottages.
Chelmsford R.D.C. ...	5	18
Dunmow " ...	7	16
Halstead " ...	1	1
Maldon " ...	2	2
Tendring " ...	1	2
Braintree " ...	1	1
Belchamp " ...	1	2
Ongar " ...	1	1
Lexden & Winstree R.D.C. ...	1	1
	—	—
	20	44
	—	—

Of these 20 applications, seven respecting 14 cottages have been approved, the total grants amounting to £895; two applications were not approved and 11 were still under consideration at the end of the year.

South Essex Joint Advisory Town Planning Committee. This Committee, which was formed at the invitation of the Ministry of Health in June, 1922, continues to function. The aims and objects of the Committee are to prepare a town planning scheme and statement for the area on the northern bank of the Thames from Shoeburyness in the east to the large centres of population at East and West Ham on the west side of the administrative county.

The undermentioned Authorities have agreed to contribute $\frac{1}{80}$ d. rate for a period of two years towards the expenses of the preparation and publication of the regional report and plan :—West Ham County Borough, Barking Urban, Canvey Island Urban, Dagenham Urban, Grays Urban, Hornchurch Urban, Tilbury Urban, Billericay Rural, Orsett Rural, Rochford Rural and Romford Rural.

Mr. S. D. Adshead, Professor of Town Planning, London University, has been appointed as a consultant and is now engaged upon the preparation of a regional report and plan for the South Essex region.

SEWAGE WORKS AND RIVER POLLUTION.

Table XIII records the number of visits paid by the County Sanitary Inspector to sewage works and the number of samples obtained. Where continuous unsatisfactory samples were procured, improvements have been carried out, or schemes to make the sewage works more efficient are under consideration.

TABLE XIII.

SHOWING SEWAGE WORKS, NUMBER OF VISITS, AND NUMBER OF SAMPLES TAKEN
DURING THE YEAR 1927.

River receiving Effluent.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken.		
				No. satisfac- tory or on bor- der line.	No. unsatisfac- tory.	Total.
Blackwater...	Braintree	Braintree U.	1	..	1	1
Cam	Saffron Walden	Saffron Walden B.	1	1	..	1
Chelmer	Chelmsford	Chelmsford B.	2	2	..	2
	Dunmow	Dunmow R.	2	..	2	2
	Felstead	Dunmow R.	3	1	3	4
	Great Waltham	Chelmsford R.	1	..	1	1
Colne	Halstead	Halstead U.	2	..	2	2
Ingrebourne	Brook Street, South Weald	Billericay R.	4	6	4	10
	Upminster	Romford R.	1	2	..	2
	Brentwood	Brentwood U.	2	1	1	2
	Harold Wood	Romford R.	1	1	1	2
	Great Warley	Romford R.	1	1	..	1
Roding	Abridge	Ongar R.	2	..	1	1
	Buckhurst Hill	Buckhurst H. U.	3	3	2	5
	Chigwell	Epping R.	1	..	..	..
	Chigwell Row	Epping R.	1	1	..	1
	Loughton	Loughton U.	2	3	1	4
	Ongar	Ongar R.	8	1	5	6
	Wanstead	Wanstead U.	2	5	..	5
	Woodford	Woodford U.	2	1	1	2
	North Weald	Epping R.	1	1	..	1
	Thornwood	Epping R.	4	..	..	..
	Theydon Bois	Epping R.	1	..	1	1
	Moreton	Ongar R.	3	..	1	1
Rom	Epping	Epping U.	1	1	..	1
	Hornchurch	Romford R.	2	2	..	2
Wid	Billericay	Billericay R.	5	2	3	5
	Sherfield	Billericay R.	1	1	..	1
Total			60	36	30	66
Samples from rivers, streams, ditches, etc....			24	32	29	61
Trade effluents			6	..	6	6
			90	68	65	133

The pollutions of the River Blackwater at Bocking, Coggeshall and Kelvedon referred to in detail on pages 48-52 of the Annual Report for 1926 still continue. Schemes for sewerage and sewage disposal in the Parishes of Bocking and Coggeshall have, however, been submitted to the Ministry of Health by the Braintree Rural District Council. These formed the subject of public inquiries at Bocking on 2nd March, 1928, and Coggeshall on 3rd May, 1928, the loans applied for being £36,800 and £23,000 respectively. It is understood that the Braintree Rural District Council have under consideration a sewerage and sewage disposal scheme for the Parish of Kelvedon.

In the Colne Valley, the Parish of Earls Colne, with a population of 1,806 at the Census of 1921, continues to discharge crude sewage into the river at the bridge on the main road. As no definite steps had been taken by the Halstead Rural District Council, in spite of conferences and many representations from the County Council, legal proceedings were taken on 5th May, 1927, when an Order was obtained from the County Court, Colchester, requiring the Halstead Rural District Council to abstain from committing an offence under the Rivers Pollution Prevention Act, 1876, the operation of the Order being suspended for six months with leave to apply for a further suspension if the District Council made some definite steps to cease pollution during the six months.

On the application of the Rural District Council of Halstead, on the 30th November, 1927, the Colchester County Court further suspended the above-mentioned Order until the 31st December, 1928.

On 24th April, 1928, representatives of the County Council received a deputation from the Halstead Rural District Council, who intimated that they had considered a scheme for dealing with the larger part of the sewage of the parish which could be carried out at a much smaller cost than the original scheme of £8,600, which would add from 2s. to 2s. 6d. to the already heavy rates. The deputation were informed that the County Council could not advise the District Council, but were pleased to learn that some attempt was being made to deal with the position.

The circumstances in the above-mentioned parishes are typical of the needs of many parishes. Schemes for sewerage and sewage disposal, as well as water supplies, are required in many other parishes, but in view of Section 229 of the Public Health Act, 1875, which states that the cost of providing these services must be borne by each parish, it is impossible to provide the services on financial grounds. As stated by the Minister of Health in his Memorandum of Evidence submitted to the Royal Commission on Local Government, "it is desirable to encourage the design and execution on a sufficiently large scale of schemes for water supplies and sewage and the recognition of a common interest in the provision of such services." The Minister is, therefore, of opinion that the above-mentioned Section 229 should now be repealed and be "replaced by a statutory provision to the effect that these charges should be general expenses—that is, should fall upon the rural district as a whole."

In this connection also, it remains to be seen whether the Minister will consider it necessary to review the whole question of the borrowing powers of Local Sanitary Authorities. Section 234 (2) of the Public Health Act, 1875, provides that "the sum borrowed shall not at any time exceed, with the balances of all the outstanding loans contracted by the Local Authority under the Sanitary Acts and this Act, in the whole the assessable value for two years of the premises assessable within the district in respect of which such money may be borrowed."

Money values have changed considerably since 1875, and particularly since the Great War. The re-valuation of property which is now proceeding under the Rating and Valuation Act may, however, do something, but not a great deal, to increase the amounts which may be borrowed.

CHELMER VALLEY. During the year 1926, a Beet Sugar Factory was erected at Felstead, and on 27th October, 1926, this factory commenced manufacturing sugar. The factory required about two million gallons of water per day for cleaning the sugar beet, and for other processes. This water was abstracted from the Stebbing Brook and the River Chelmer. The factory intended manufacturing sugar for about 3½ months from October to January each season. Their trade effluent which discharges into the Stebbing Brook is estimated at 2 million gallons per day. All the trade effluent was discharging into artificial ponds, where it was allowed to settle for a brief period, and was then discharged into the Stebbing Brook, giving off an unpleasant smell. Samples of trade effluent and of river water showed that the Stebbing Brook and River Chelmer were being grossly polluted. Subsequently, the factory installed a screening and dredging plant, but this did not bring the trade effluent within the County standard.

In January, 1927, the Council approved of the action of the Public Health and Housing Committee in applying to the Ministry of Health for sanction to institute proceedings under Part III. of the Rivers Pollution Prevention Act, 1876, against the proprietors of the Felstead Beet Sugar Factory, and authorised the Committee to institute such proceedings, and to take, in the name of the Council, all necessary steps in connection therewith with a view to stopping the pollution of the Stebbing Brook.

On the 8th February, 1927, the Ministry of Health held a Local Inquiry into the Council's application, and on the 24th June, 1927, the Minister intimated that as no offence was then being committed he would defer his decision upon the application of the Council, but that should pollution recur when operations at the factory were resumed, it appeared to him that, upon being satisfied as to the pollution, he would have no alternative but to issue his formal consent to the taking of legal proceedings.

Upon the factory resuming operations in the autumn, samples of the effluent and of the river were taken, and the results of the analyses which were unsatisfactory were forwarded to the Minister. On the 23rd November, 1927, the consent of the

MENTAL DEFICIENCY ACT, 1927.

The services of Dr. T. P. Puddicombe, Chief Assistant County Medical Officer, have again been available for the examination and report on all cases to the County Committee for the Care of Mentally Defectives and as Consultative Medical Officer for cases referred by the Justices and Boards of Guardians.

One hundred and seventy-two persons were examined and reports submitted during 1927. These cases were classified as follows :—

		Males.		Females.		Total.
Feeble Minded	...	47	...	46	...	(a) 93
Imbeciles (Mongols, 18)	...	29	...	19	...	48
Idiots (Cretin, 1)	...	9	...	6	...	15
Not classified under the Act	...	9	...	7	...	(b) 16

(a) Includes 16 and (b) 8 referred by the Justices.

During the year 43 cases were placed in Institutions, 7 under guardianship and 71 under statutory supervision.

The Mental Deficiency Act, 1927, which received the Royal Assent on December 22nd, 1927, is a small Act of only 11 Sections and amends the Act of 1913 in some important particulars. The following are the more important changes :—

(1) A new wording in the definitions of defectives. These amendments should make the task of dealing with adult defectives somewhat easier.

Mental Defectiveness, being defined "as a condition of arrested or incomplete development of mind existing before the age of 18 years, whether arising from inherent causes or induced by disease or injury," will thus include many cases the after result of Encephalitis Lethargica.

The old and indefinite term "Moral Imbecile" has been replaced by "Moral Defective" and the definition of this class now reads :—

"That is to say, persons in whose case there exists mental defectiveness coupled with strongly vicious or criminal propensities and who require care, supervision and control for the protection of others."

(2) Amendments to Section 2 of the principal Act enables children leaving special schools to be dealt with by being placed under supervision as well as being placed under guardianship or sent to an Institution. In recent years in the Administrative County of Essex, this practice has already been followed. Further, an amendment provides that a defective even if over 21 years of age "with respect to whom representation has been made to the Local Authority by his parent or guardian that he is in need of care or training which cannot be provided in his home," can be dealt with thereby avoiding the necessity to show neglect, etc., in such cases.

(3) Amendments to Section 30 of the principal Act (which relates to the general powers and duties of Local Authorities) makes it obligatory on the part of these Authorities "to provide suitable training or occupation for defectives who are under supervision or guardianship or have been sent to certified institutions." This is mainly of importance in that it will necessitate the provision of training and occupation in the case of defectives under supervision or guardianship, in some cases admittedly difficult to arrange.

(4) Section 9 of the new Act gives a ruling when an order is made by a Judicial Authority in respect of a person already in an Institution or Home, etc., as to the place of residence being his place of residence immediately before he was received into the Institution or Home. This is of importance in Essex where there are many such Institutions or Homes.

The provisions of this Act are of importance to all Local Authorities, and the medical men who may be called upon to deal with persons suffering from mental defect, *i.e.*, persons showing an incapacity for efficient social adaptation of such kind and degree as to necessitate their care, supervision and control by others.

SALE OF FOOD AND DRUGS ACTS.

In Essex the Weights and Measures Inspectors act as Food and Drugs Inspectors and carry out the duties under the above Act, which are not supervised by the County Medical Officer. Samples are submitted direct by the Inspectors to the County Analyst, Dr. Bernard J. Dyer, who has again kindly supplied the following information :—

Of the total number of samples submitted for analysis, namely, 4,118, 146 were found unsatisfactory, equivalent to 3.5 per cent. as compared with 4 per cent. in 1926.

MILK. Of the 1,438 samples of milk taken for analysis, 64 were found unsatisfactory. Of this number 22 showed added water in quantities varying from 4 per cent. to 33 per cent. whilst 42 were deficient in milk fat in quantities varying from 5 per cent. to 58 per cent. of the minimum quantity of fat proper to normal milk.

BUTTER. Some 756 samples of butter were examined, but only 2 were found unsatisfactory. One consisted of butter adulterated with 30 per cent. margarine, and the other contained boric acid slightly, but not seriously in excess of the quantity regarded as legitimate before the new regulations with regard to butter came into force.

CHEESE. Out of 19 samples of cheese, 3 which were sold under the name of "cream cheese" were unsatisfactory, as they did not consist of cream cheese, but of cheese made from whole milk. Confusion appears to arise sometimes by reason of

the fact that in the "Dutch cheese" trade, cheese made from whole milk appears to be sometimes technically described as full "cream cheese," meaning that it is made from whole milk and not from skimmed or partially skimmed milk; but the term "cream cheese" in England implies a soft cheese, made from cream.

SAUSAGES. Out of 167 samples of sausages, 14 contained as a preservative sulphur dioxide (only) in varying quantities, but in no case in excess of the limit that would have been allowable had they been declared to be preserved. 29 samples were found to contain the forbidden preservative boric acid in small quantities only, except in one case in which there was nearly one per cent. Two of these samples also contained small quantities of sulphur dioxide.

Out of 16 samples of sausages, the vendors of which declared the presence of preservatives, two contained sulphur dioxide in excess of the prescribed limit.

BAKING POWDER. One sample of baking powder was found to be unsatisfactory by reason of an excess of arsenical contamination.

ANNUAL SUMMARY.

December 1st, 1926, to November 30th, 1927.

	Samples analysed.	Samples unsatisfactory.	Percentage of unsatisfactory samples.
Northern District of the County ...	1311	67	5.1
Southern District of the County ...	1276	43	3.4
Metropolitan District of the County ...	1386	31	2.2
Chingford Urban District Council ...	10	—	3.4
Walthamstow Urban District Council ...	73	4	
Wanstead Urban District Council ...	50	1	
Woodford Urban District Council ...	12	—	
	4118	146	3.5

PUBLIC HEALTH (PRESERVATIVES, ETC., IN FOOD) REGULATIONS, 1925.

The above Regulations, though issued in August, 1925, did not for the most part come into operation until the 1st January, 1927. They constitute one of the most important steps forward in public health progress during recent years. The chief effect of the Regulations is to require that staple food stuffs, *e.g.*, milk, bacon, ham, butter, margarine, eggs and cream, shall be free from preservatives. For the purposes of the Regulations a "preservative" is defined as any substance capable of inhibiting, retarding or arresting the process of fermentation, acidification or other decomposition of food or the masking of any of the evidences of putrefaction.

In the case of certain specified food materials the addition of a limited amount of benzoic acids or sulphur dioxide are permitted and these food materials include wines, fruit pulp, dried fruit, pickles, coffee extract, gelatine, sausages, etc.

A portion of the Regulations relating to butter and cream came into force on the 1st January, 1928, and revoked the Public Health Milk and Cream Regulations, 1912-17. Another portion dealing with the prohibition of the sale of an article of food containing any preservative which is necessarily introduced by the use in its preparation of preserved bacon, ham, margarine or butter did not come into operation until the 1st July, 1927, in the case of bacon, ham or margarine, and on the 1st July, 1928, in the case of butter. It will be seen that ample time has been allowed to the manufacturers and others concerned in order that they may adapt their methods to the new order.

It was obvious from the report of the Departmental Committee on the Use of Preservatives and Colouring Matters in Food that the increasing amounts of preservatives added to certain foodstuffs has injuriously affected the public health. Moreover, experiments seem to show that in some cases the addition of a preservative was quite unnecessary, an example of this being the experiment made by the New Zealand Government in 1925 on the keeping qualities of butter. Samples of butter were treated with preservative and compared with samples which were untreated. The conclusion was that the presence or absence of preservative made very little practical difference one way or other to the keeping quality of the butter.

Only brief references are made to these Regulations in the Annual Reports of the district medical officers of health, but probably after a little further experience more detailed references will be made.

PUBLIC HEALTH MILK AND CREAM REGULATIONS, 1912-1917.

The County Analyst has furnished the following information in regard to the action taken under the above Regulations during the period December 1st, 1926, to November 30th, 1927 :—

(1) MILK AND CREAM NOT SOLD AS PRESERVED CREAM. In 1438 samples of milk no preservatives were found, while in 40 samples of cream five contained the following percentages of boric acid—0.25, 0.30, 0.35, 0.25 and 0.20.

In each case the vendor was cautioned.

(2) CREAM SOLD AS PRESERVED CREAM. Of the 24 samples taken, the statement thereon was correct, the percentage of boric acid actually found in the samples being—0.10 (1), 0.15 (2), 0.20 (4), 0.25 (6), 0.30 (7), 0.35 (2), 0.40 (2).

In each of the 24 samples, a determination of milk fat in the cream sold as preserved cream showed that this was more than 35 per cent.

The above Regulations are revoked by the Public Health (Preservatives, etc., in Food) Regulations, 1925, which came into force so far as they relate to cream on the 1st January, 1928, from which date the sale of cream containing any preservative is illegal.

MILK SUPPLY.

GRADE "A" MILK. The following licences to produce and sell Grade "A" milk have been granted by the County Council since the Milk (Special Designations) Order, 1923, came into force :—

8 during the year 1923		
11	„	1924
27	„	1925
35	„	1926
40	„	1927

During the year the County Sanitary Inspector paid 231 visits to farms which were licensed, or for which applications had been made for a licence, to produce and sell Grade "A" milk, and 97 advisory visits to other farms chiefly as a Judge under the Essex Agricultural Society's Clean Milk Competition. During these visits 210 samples of milk were taken and submitted to the prescribed test to ascertain whether they complied with the Grade "A" standard. In addition, 134 samples were obtained and examined microscopically, when ten were found to contain bacilli indistinguishable microscopically from the tubercle bacilli. Appropriate action was taken in each of these 10 cases under the Milk & Dairies Order, 1926, or the Tuberculosis Order, 1925.

CLEAN MILK COMPETITION. For the seventh consecutive year a County Clean Milk Competition was inaugurated by the Essex Agricultural Society and conducted by the East Anglian Institute of Agriculture in association with the County Public Health Department. Contemporaneously the first Inter-County Clean Milk Competition was held under the auspices of the British Dairy Farmers' Association with the object of encouraging improved methods of milk production in the Counties of England and Wales. The Association offered the Stapleton Cup as a trophy to be held for a year by the County making the greatest progress, in accordance with a prescribed method, in clean milk production. In addition, they offered a silver medal for the second winning County and a bronze medal for the third winning County.

The scale on which awards were made included points for the total number of herds competing, and the total number of attendances of *bona-fide* farmers at clean milking demonstrations. Sixty-one milk producers entered the competition in Essex and 16 practical demonstrations in modern methods of milk production were held at selected farms in various parts of the Administrative County, at which addresses were given by Captain A. Skelton, M.B.E., Chairman of the Agricultural Education Sub-Committee, the County Sanitary Inspector, and members of the staff of the East Anglian Institute of Agriculture. The total number attending these demonstrations was 865, the attendances being greatest during May and June when the time of starting was 6 p.m., the highest being at Clacton-on-Sea with a total of 126.

Every effort was made to secure the Cup for Essex, and in consequence the results of the competition compared favourably with previous years. The awards in the Inter-County Competition were made as follows :—

Winning County	...	...	...	Cornwall.
Second	"	...	...	Essex.
Third	"	...	...	Berkshire.

The following information regarding the points scored by these Counties has been abstracted from the Journal of the Ministry of Agriculture for December, 1927 :—

	CORNWALL.	ESSEX.	BERKSHIRE.
	No. of points scored.	No. of points scored.	No. of points scored.
Each competing herd in excess of 50 ...	—	22	—
Each herd competing for the first time...	55	215	35
Herds gaining not less than 75 per cent. of possible marks for inspection, bacteriological count, bacillus coli, keeping quality, fat, and absence of sediment ...	2103	1395	1467
Attendances at demonstrations ...	74	473	134
Milkers' competitions ...	1420	65	215
Licensed producers of graded milks ...	75	232	175
Total number of points scored	3727	2402	2026

COURSE OF INSTRUCTION FOR SANITARY INSPECTORS. By a memorandum, dated 22nd December, 1925, the Ministry of Agriculture and Fisheries intimated that as a result of communications with the Ministry of Health and Sanitary Inspectors Association, "it has been generally agreed that Sanitary Inspectors should be given "the opportunity of obtaining in a practical form the results of recent research and "practice in the production of clean milk."

In Circular No. 757, dated 20th January, 1927, the Minister of Health made special reference to Clean Milk Courses for Sanitary Inspectors, and pointed out that "in view of the progress which has been made during the past few years in the "knowledge of the conditions governing the production and handling of clean milk, "the Minister thinks that Courses of this character may often be useful in enabling "Sanitary Inspectors to appreciate the relative importance of the various provisions "of the Milk and Dairies Order, 1926, and he is of opinion that a Sanitary Authority "may legally incur the reasonable expenditure involved by the attendance of an "Inspector at such a Course."

In November, 1926, the Ministry of Agriculture and Fisheries intimated that Chelmsford would form a suitable centre at which such a Course could be held. Accordingly the East Anglian Institute of Agriculture, in association with the County Public Health Department, arranged the following programme of lectures and visits to dairies and farms :—

Date.	Time.	Speaker or Lecturer.	Subject.
March 29th 1927.	...11 am.	ALDERMAN S. W. ROBINSON, J.P., Chairman of the County Public Health Committee.	Opening Ceremony.
		CAPT. A. SKELTON, M.B.E., J.P., C.C., Chairman of the Agricultural Education Sub- Committee.	
		MR. D. B. JOHNSTONE-WALLACE, M.Sc., N.D.D., Principal of the East Anglian Institute of Agriculture.	
		DR. W. A. BULLOUGH, M.Sc., D.P.H., County Medical Officer.	
	12 noon	MISS M. I. FLETCHER, N.D.D., Chief Instructress in Dairying and MISS M. WOODS, N.D.D., B.D.F.D., Assistant Instructress in Dairying, East Anglian In- stitute of Agriculture.	Demonstration in the Dairy at the East Anglian Institute of Agriculture.
	2 p.m.	CAPT. A. SKELTON, M.B.E., J.P., C.C. ; and others.	Demonstration on the Pro- duction of Grade A Milk at Rosewarne Farm, Woodham Ferrers.
March 30th	...10 a.m.	MR. C. HAROLD CARTER, Deputy Clerk to the Essex County Council.	Milk Legislation.
	11 a.m.	MR. A. HORSNELL, County Food and Drugs Inspector.	Adulteration and Sampling.
	12 noon	MR. J. B. GILL, Secretary, Essex County Farmers' Union.	The attitude of Farmers to- wards the new Milk and Dairies Order.
	2 p.m.	MR. ALEXANDER HAY, N.D.A., N.D.D., Senior Lecturer in Agriculture at the East Anglian Institute of Agriculture; and others.	Demonstration on the Pro- duction of Certified and Grade A (T.T.) Milk on Lord Rayleigh's Farm, Hatfield Peverel.
March 31st	...10 a.m.	MR. R. ROBSON, M.Sc., F.Z.S., Lecturer in Agricultural Biology at the East Anglian Institute of Agriculture.	The Keeping Quality of Milk.
	11 a.m.	MISS E. W. JAMESON, N.D.H., Assistant Lecturer in Agricultural Biology at the East Anglian Institute of Agriculture.	Bacteria in Milk.

Date	Time.	Speaker or Lecturer.	Subject.
March 31st	...12 noon	MR. R. ROBSON, M.Sc., F.Z.S., and MISS E. W. JAMESON, N.D.H.	Demonstration in the Bacteriological Laboratory.
March 31st	...2 p.m.	MR. J. DYSON, N.D.D., B.D.F.D., Dairy Manager to the Essex Dairy Farmers' League.	Visit to the Essex Dairy Farmers' League Milk Depot Writtle.
		MR. A. MARSH, M.R.SAN.I., County Sanitary Inspector; and others.	Demonstration on the Pro- duction of Grade A Milk on the farm of Mr. R. McGowan, Bearman's, Margaretting.
April 4th	...10 a.m.	MR. F. KNOWLES, Chemical Department, East Anglian In- stitute of Agriculture.	Composition of Milk and Milk Analysis.
	11 a.m.	MR. F. KNOWLES.	Demonstration in the Chemical Laboratory.
	11.30 a.m.	MR. P. B. TUSTIN, United Dairies, Ltd.	The Milk Industry.
	2 p.m.	MR. ALEC STEEL, O.B.E., J.P. MR. H. G. HOWARD, MR. A. CLEMENTS, and others.	Visit to Howard's Dairies, Leigh-on-Sea, and Demon- stration on the Production of Grade A Milk on Temple Farm, Prittlewell, Southend.
April 5th	...10 a.m.	MR. A. MARSH, M.R.SAN.I., County Sanitary Inspector.	Graded Milk.
	11 a.m.	MR. J. HOLMES, B.Sc., N.D.D., Dairy Branch of the Ministry of Agriculture.	The Handling of Milk.
	12 noon	MR. H. E. BYWATER, M.R.C.V.S. Veterinary Inspector, West Ham County Borough.	Diseases of Cattle and the Tuberculin Test.
	2 p.m.	MR. D. B. JOHNSTONE-WALLACE, M.Sc., N.D.D., Principal of the East Anglian Institute of Agriculture; and others.	Demonstration on the Pro- duction of Certified Milk at Sir T. Fowell Buxton's Farm, Woodredon, Waltham Abbey, and on the Production of Clean Milk, at Mr. E. J. Wythes' Farm, Copped Hall, Epping.
April 6th	...10 a.m.	MR. D. B. JOHNSTONE-WALLACE, M.Sc., N.D.D., Principal of the East Anglian Institute of Agri- culture.	The Feeding and Manage- ment of Dairy Cows.
April 6th	...11 a.m.	MR. A. HAY, N.D.A., N.D.D., Senior Lecturer in Agriculture, at the East Anglian Institute of Agriculture.	The Transport and Storage of Milk.
	12 noon	DR. W. A. BULLOUGH, M.Sc., D.P.H., County Medical Officer.	Milk as a Food.
	2 p.m.	GENERAL DISCUSSION.	

Every Local Sanitary Authority in the geographical County of Essex was invited to send a Sanitary Inspector to the Course, the inclusive fee being 30s. per Inspector. Twenty-three Inspectors attended from the following districts :—

Urban : Barking, Braintree, Canvey Island, Chelmsford B., Chingford, Clacton-on-Sea, Colchester B., Hornchurch, Ilford B., Romford, Waltham Holy Cross, Wanstead.

Rural : Braintree, Chelmsford, Epping (2), Halstead, Lexden & Winstree, Maldon, Orsett, Rochford, Stansted, Tendring.

During the general discussion at the concluding session, it was evident that the Inspectors had benefited from the theoretical and practical instruction. Some Inspectors stated that the Course had given them a good insight into dairy farming, which would enable them to appreciate more fully the farmer's and dairyman's points of view in the future. Other Inspectors offered helpful suggestions for improving the Course, and many of these were incorporated in the Second Course held in the Spring of 1928.

To encourage the Inspectors, the Secretary of the Essex County Farmers' Union kindly offered three prizes for the best essays giving an account of the Course, and showing how its principles could be best applied by a Sanitary Inspector in his area. The three prize-winners showed literary ability, and succeeded in outlining practical and reasonable systems for the administration of the Milk & Dairies Order, 1926, some of which are already reflected in the areas of the Inspectors concerned.

The Course achieved a threefold purpose, namely, (1) it extended the knowledge of the Sanitary Inspectors in the modern methods of milk production and the importance of milk as a food : (2) it made the Inspectors acquainted with the advisory facilities which are available at the East Anglian Institute of Agriculture, free of charge, for any farmer or dairyman in the Administrative County of Essex : and (3) it enabled the Inspectors to realise the part which they can play in the efforts which are being made to secure the general adoption by farmers of the modern methods of milk production.

LECTURES ON MILK HYGIENE. At the request of the Agricultural Committee, the County Sanitary Inspector gave 10 Lectures on Milk Hygiene to the students at the East Anglian Institute of Agriculture, Chelmsford, during the Spring Term of 1927. The subjects dealt with were sanitary conditions, air space and ventilation, water supplies, methods of milking and handling of milk, transportation, prevention of contamination, pasteurisation, sterilisation, legislation affecting milk production, and milk in relation to public health.

MILK & DAIRIES ORDER, 1926. In accordance with the arrangement outlined in last year's Annual Report, 268 samples of mixed milk were obtained by the Food and Drugs Inspectors in various parts of the Administrative County during the period

12th September, 1927, to 13th March, 1928. These samples were examined microscopically at the East Anglian Institute of Agriculture, and 13 were found to contain acid fast bacilli indistinguishable microscopically from the tubercle bacillus.

A systematic veterinary inspection of all the cows in the Ongar and Tendring Rural Districts was undertaken; 4,932 cows were examined, and 30 which were found to be suffering from tuberculosis, were slaughtered under the Tuberculosis Order, 1925.

The Public Health and Housing Committee carefully considered the above-named results, and decided that before any further systematic examinations of cows were undertaken, as advised by the County Medical Officer, 100 samples of mixed milk should be obtained during a period of three months in various parts of the County, and submitted to biological examination. When the results of these examinations are received, further consideration will be given to the whole question with a view to outlining future policy.

The Local Sanitary Authorities, who have also definite sampling powers under Section 8 of the Milk & Dairies (Consolidation) Act, 1915, have been asked to co-operate with the County Council in their efforts to eliminate infected milk supplies.

TUBERCULOSIS ORDER, 1925. The Agricultural Committee are responsible for the administration of this Order, and have taken active steps to eliminate and slaughter tuberculous cows, as will be seen from the following figures which have been kindly furnished by the Clerk of the County Council:—

	1925. (part)	1926.	1927.	Total.
No. of animals examined by veterinary surgeons	6320	20608	31903	58831
No. of animals slaughtered under the Order	230	676	1011	1917
No. of such animals found on post mortem to be—				
(a) Not tuberculous	1	2	3	6
(b) Tuberculous—not advanced	81	318	521	920
(c) Tuberculous—advanced	148	356	487	991
Compensation paid by County Council	£1331	£4017	£5468	£10816
Salvage	£284	£701	£971	£1956

On 18th July, 1928, the Minister of Agriculture stated that the number of cows (including heifers) slaughtered in England and Wales under the provisions of the Tuberculosis Order, 1925, during the years 1926 and 1927 were 16,522 and 16,708 respectively.

WATER SUPPLIES.

The existing sources of water supplies in Essex may be summarised as follows :—

- (a) Sub-soil water which is obtainable from the numerous beds of sand and gravel.
- (b) Deep well water which is obtainable everywhere but often in limited quantities or of unsuitable quality for drinking purposes.
- (c) River Chelmer under the Chelmsford Corporation Act, 1923.
- (d) Rivers Blackwater, Chelmer and Ter, under the Southend Waterworks Act, 1924.

It was pointed out in last year's annual report that the only remaining practical source of future supplies for Essex was the River Stour. During the Parliamentary Session, 1928, the South Essex Waterworks Company are promoting a Bill to obtain Parliamentary sanction to augment their existing supplies by abstracting water from the River Stour at Langham Mill in the Lexden and Winstree Rural District.

In respect to (c) above named, the Chelmsford Corporation's new waterworks are nearing completion and there is a welcome prospect that this additional supply of water will be in use before the end of 1928.

Part of the supply referred to in (d) namely, that from the Rivers Chelmer and Ter, was brought into use at 6 p.m. on 29th August, 1927, by the Southend Waterworks Company, whose statutory area includes many parishes in the Administrative County. The following statement regarding this new source of supply has been kindly supplied by the Southend Waterworks Company :—

“ Authority was obtained by the Southend Waterworks Company under their Act of 1924 to abstract water by separate intakes from the Rivers Chelmer, Ter and Blackwater, and to utilise such water for supply after purification by excess lime.

“ The works are designed to provide a daily supply of 7,000,000 gallons.

“ The rivers flow through sparsely populated agricultural districts. The gathering ground of the Chelmer and Ter above the points of intake amounts to some 240 square miles, while that of the Blackwater is about 130 square miles.

“ The water of the Ter is diverted to the point of intake on the Chelmer about 2½ miles above the tidal estuary ; the Blackwater intake is at Langford Mill close by the confluence of the two rivers at Beeleigh which is just above the estuary. In the angle formed between the two rivers, the reservoir, treatment plant, and pumping station have been constructed.

“ The towns of Chelmsford and Witham, situate above the intakes on the Chelmer and Blackwater, have populations of 25,000 and 3,000 respectively and are provided with sewage treatment works from which the effluents are discharged into the rivers. Before abstracting water from the rivers for supply these effluents were diverted to points below the intakes.

“ Storage reservoirs with a total capacity of 60,000,000 gallons are provided which afford about nine days preliminary sedimentation, and into these the supply from the Chelmer, which is canalised, gravitates through a pipeline about 2½ miles in length. The supply from the Blackwater will be pumped to the reservoirs.

" Water is delivered from the storage reservoir by pumps in the pumping station to the treatment plant. After treatment, the water gravitates back through an equalising reservoir of 500,000 gallons capacity to the pumping station and thence pumped to the Oakwood service reservoir, some 14 miles from Langford, for distribution.

" The excess lime process of purification, which in one operation softens and practically sterilises the raw water, following the suggestions of Sir Alexander Houston in his 10th Research Report, was adopted only after a long series of tests conducted by Drs. Thresh & Beale at an experimental plant treating raw water from the Rivers Chelmer and Blackwater. Although the raw river waters, which were the subject of experiment, contained the sewage effluents from Chelmsford and Witham, it was clearly and amply demonstrated that the adoption of the excess lime process of treatment would yield a perfectly pure and wholesome water.

Details of the excess lime process may be outlined as follows :—

The raw water after preliminary sedimentation and storage in the reservoir is received at the treatment plant and measured in passing over a weir which divides it into two variable portions in the approximate ratio of 1 to 6. The smaller portion is mixed with lime to produce sufficient lime water to give an excess of two grains of lime per gallon when mixed with the larger portion. The lime water is prepared by adding cream of lime in mixing tanks where it is continuously agitated, and it is then passed forward into a second set of tanks where it is mixed with the bulk of the supply which has already been treated with alumina. The water undergoes agitation in these tanks for about 20 minutes, the result being the formation of a very heavy precipitate which settles out rapidly in the primary settling tanks into which the water then flows, the supernatant water overflowing into a collecting channel. This partially clarified water enters contact tanks of long rectangular shape, each having a capacity equal to 24 hours flow. Leaving the contact tanks the water passes through the carbonating chamber where CO_2 is forced through the water precipitating the excess lime and partially re-dissolving it. Final purification is effected by filtration through a battery of Paterson rapid quartz sand filters fourteen in number, each measuring 24 ft. by 14 ft. These filters are cleansed by agitation with compressed air followed by a reverse flow of wash water to remove the collected matter loosened by the air scouring process.

The used wash water which has been softened and is not loaded with bacteria is collected in a reservoir, and after allowing 12 hours for sedimentation is returned to the mixing tanks where it mixes with the water undergoing treatment.

The first section of the scheme which takes water from the River Chelmer was brought into operation on the 29th August, 1927, and has since been in continuous use dealing with about three million gallons daily.

The operation of the treatment plant is under the supervision of a fully qualified resident chemist and bacteriologist who, amongst other tests, makes a daily examination of the treated water. Examinations of the purified water as made by the resident chemist and verified at frequent intervals at the laboratories of Drs. Thresh, Beale & Suckling have shown uniformly excellent results, and in no examination has the B. Coli been found in 100 c.c. of the treated water, whilst the total hardness has always been below the maximum limit of 15 parts per 100,000, as prescribed by the Southend Waterworks Act of 1924, the temporary hardness being almost completely removed.

Appended is a comparative analysis of the raw and treated water.

CHELMER AND BLACKWATER SUPPLIES.

Samples taken on 5th March, 1928.

CHEMICAL RESULTS.

in parts per 100,000.

			Raw water.	Fully treated water.
Turbidity	... ..	Very faint opalescence	traces	Clear and bright
		of deposit		
Colour	... ..	22	...	Normal
Odour	... ..	Slightly earthy	...	None
Reaction Ph.	... ..	8.0	...	Neutral 7.6
Electric conductivity at				
20° C.	... ..	—	...	330
Total solids 180° C.	... ..	51.5	...	23.5
Chlorine in chlorides	... ..	2.95	...	2.9
Nitrogen in nitrates	... ..	0.46	...	0.25
Nitrites	... ..	Nil	...	Very minute trace
Hardness :				
Permanent	... ..	9.4	...	9.0
Temporary	... ..	23.6	...	1.0
Total	... ..	33.0	...	10.0
Metals	... ..	—	...	Absent
Free ammonia...	... ..	0.0128	...	0.0032
Albuminoid ammonia	... ..	0.0245	...	0.0041
Oxygen absorbed in 3 hours				
at 37° C.	... ..	0.235	...	0.060

BACTERIOLOGICAL RESULTS.

No. of bacteria per c.c. :

On Gelatine in 3 days			
at 20° C.	... ..	Liquified 0.1	30
On Agar in 24 hours	... ..	195	2
The Bacillus Coli	... ..	Present in 1 c.c.	Absent in 100 c.c.
Bacillus Welchii	... ..	—	Absent in 100 c.c.

(B. Enteritidis Sporogenes)

I have on several occasions visited the Company's works at Langford, and am satisfied that the Company have taken all possible steps to construct the works and purification processes in accordance with the requirements of their Act of 1924. I entirely agree with Dr. C. Grant Pugh, Medical Officer of Health, Southend-on-Sea County Borough, that "the new water supply is pure and wholesome, that the works are admirably conducted and designed to be as fool-proof as possible, and that should there be a failure of the human element on which the purification processes depend, such failure would inevitably be detected long before the water reached the consumer."

On 24th May, 1928, a sample of deep well water was taken as supplied from the Company's mains at Wickford. This was examined by the Bacteriologist for Essex, and it is of interest to compare the following results with the river water supply :—

Turbidity	...	...	...	Clear and bright
Colour	...	...	...	Normal
Odour...	...	...	...	None
Reaction	...	...	...	Neutral 7.8
Electric Conductivity at 20° C.	...	...	...	606
Total Solids, 180° C.	...	...	...	40
Chlorine in Chlorides	...	...	...	5.7
Nitrogen in Nitrates	...	...	...	0.25
Nitrites or Free Chlorine	...	...	...	Absent
Hardness : Permanent	...	...	...	0.5
Temporary	...	...	...	7.5
Total ...	...	...	...	8.0
Lead, Copper, Zinc, Iron	...	...	...	Absent
Free Ammonia	...	...	...	0.0028
Albuminoid Ammonia	...	...	...	0.0032
Oxygen absorbed in 3 hours at 37° C.	...	...	...	0.030
The Bacillus Coli ...	...	...	...	Absent in 100 c.c.

REPORT.—This water is clear and bright, moderately soft, and of a high degree of organic and bacterial purity. It is, therefore, a pure and wholesome water suitable for drinking and domestic purposes.

OFFENSIVE SMELLS—SOUTH-EAST ESSEX.

For many years past, firms and residents in the neighbourhood of Purfleet have periodically complained of objectionable smells which it was alleged emanated from the West Kent Main Sewage Works. In the year 1924, residents at Purfleet stated that the smells were unbearable, whilst at times men employed at some of the Purfleet wharves had to cease work owing to sickness caused by these smells. In the same year, a firm at Purfleet stated that they had been "complaining for probably 20 years and during the period of south-westerly winds, the smells have blown across and are just as offensive as they have ever been."

It was ascertained that the West Kent Main Sewerage Board had experienced difficulties in re-modelling their works which had seriously impeded the progress of the improvements. No complaints of offensive smells were received during the year 1925, and the Board officially opened their new works on 3rd July, 1926. These works, which serve a population of 240,000 and have a dry weather flow of 14 to 16 million gallons per day, are situated at Long Reach, Dartford, Kent, on the southern bank of the River Thames opposite Purfleet, on the northern bank of that river, at which point the river is half a mile wide and sixty feet deep at high water.

In April, May, June, 1926, further complaints which were received, were referred to the County Medical Officer of Health for Kent, who on the 30th June, 1926, stated

that he had recently visited the works of the West Kent Main Sewerage Board, and came to the conclusion that the "Board are doing all within their power to mitigate any nuisance."

Further complaints being received in April, 1927, it was deemed desirable that the Vice-Chairman of the Housing and General Purposes Sub-Committee and County Sanitary Inspector should inspect the West Kent Main Sewage Works on 28th July, 1927. Their report to the Sub-Committee on 1st September, 1927, included the following:—

"The sewage, which includes a fair amount of trade waste, is screened
"and passed through precipitation tanks and thence to the River Thames,
"and it is understood that the effluent satisfies the requirements of the
"Port of London Sanitary Authority. Solid matter, in the form of sewage
"sludge from the precipitation tanks, is pumped to lagoons to dry and is
"disposed of to neighbouring farmers. There are thirty-six lagoons with a
"total area of 57,000 square yards. A marked unpleasant smell arose from
"the lagoons, and in this connection it is important to note that Mr. G.
"Bertram Kershaw, M.Inst.C.E., Engineer to the Royal Commission of
"Sewage Disposal, has stated that the lagoon system is only suitable for
"disposal works which are placed well away from dwelling houses since it
"is difficult to avoid considerable smell at certain times of the year.

"Originally sludge was run into these lagoons to a depth of 9 inches,
"but this had recently been reduced to 6 inches to hasten the drying pro-
"cesses, and minimise the possibility of smells.

"On visiting Purfleet later in the day, we readily detected the un-
"pleasant smell from the above mentioned sludge lagoons, as there was a
"fairly strong S.S.W. wind blowing.

"Our attention was called to the small new sewage works in the Stone
"Rural District about $1\frac{1}{4}$ miles east of the Dartford Works, where sewage
"sludge is treated on the same principle, but we had no authority to visit
"these works.

"*Conclusions.* As a result of this inspection, we came to the following
"conclusions:—

"(1) That the West Kent Main Sewage Board have improved matters by
"providing extensive modern sewage works which apparently
"produce an effluent to the satisfaction of the Port of London
"Sanitary Authority.

"(2) That the sludge lagoons give rise to unpleasant smells which were
"readily detected at Purfleet on the northern bank of the River
"Thames."

In view of the fact that no further complaints were received consideration of this report was adjourned.

At the time of writing (July, 1928) several verbal and written complaints have been made to the County Medical Officer of Health, who is in communication with the Medical Officer of Health for the Orsett Rural District thereon.

TRADE, HOUSE AND OTHER REFUSE.

In June, 1927, the Medical Officer of Health of the London County Council intimated that his Council had for some years past "been concerned at the large " refuse deposits made in the neighbourhood of its housing estate at Becontree and " as to the possible effect of these deposits on the health of the tenants." At his request a joint inspection was made of the refuse dumps in the Hornchurch Urban District by the County Medical Officer of Health and the local Medical Officers of Health concerned. As a result, the following report, dated 16th July, 1927, was presented to the Public Health and Housing Committee in September, 1927 :—

In February, 1911, my predecessor, Dr. John C. Thresh, drew attention in a special report to the importation of house and other refuse from London into Essex. Such refuse consisted of house refuse, road scrapings, gully sludge, market garbage, trade refuse from markets, fish shops, greengrocers' shops, restaurants, builders' yards, stables, etc. It was estimated at that time that London had to dispose of 1,280,000 tons of refuse per year, about one-third of which was burnt in destructors, leaving about 800,000 tons to be removed to tips. Most of the latter was being dumped on the Essex marshes along the northern bank of the Thames causing nuisances to arise from various causes, namely :—unloading of barges into trucks, tipping of trucks on embankments, effluvium from fermenting refuse, smoke from burning tips, plague of flies in summer, rat infestation, dirty paper scattered by winds, pollution of marsh ditches, etc.

Complaints continued to arise at intervals, and in 1919 when the County Council were promoting a Private Bill for other purposes I suggested that the opportunity might be taken to obtain further powers in accordance with the following clause which was submitted to the Clerk of the County Council for consideration and which aimed at placing such tipping on as hygienic a basis as possible :—

" No Local Sanitary Authority (or contractors thereof) within or outside the
" Administrative County of Essex shall at any time hereafter dump trade, house or
" any other refuse in any part of the Administrative County of Essex without the
" special permission of the Local Sanitary Authority in whose area the refuse is to
" be deposited and the County Council of Essex, and unless such Local Sanitary
" Authority and the Essex County Council are satisfied regarding the quantity and
" nature of refuse to be deposited, mode of conveyance, and that no nuisance is
" likely to be created within the meaning of Section 91 of the Public Health Act,
" 1875, either in course of transit or at the dump itself. The County Council and
" Local Sanitary Authority shall have power to make any necessary bye-laws."

On 29th June, 1922, a conference of representatives of the London County Council, the City of London Corporation and the Metropolitan Borough Councils was held with representatives of the Ministry of Health to consider questions relating to the disposal of London refuse. At this conference it was pointed out that complaints were becoming more and

more insistent, and the Ministry had found from investigations that the complaints were not without foundation. Of the four methods of dealing with the refuse, namely:—separation, pulverisation, the refuse destructor and tipping, the last-mentioned was open to great objection but, having regard to the need for economy, it must continue yet a long time. Other points were raised, namely:—

(1) The difficulties which Local Authorities encountered because of high railway rates, the railway companies refusing to allow pulverised refuse, sold as manure, to be conveyed at the lower rate charged for manure.

(2) The need of bringing to the notice of the farmers the value of pulverised refuse as manure. (It was suggested that the Ministry of Agriculture and Fisheries might give great assistance in this direction).

(3) In the opinion of some, the need of a comprehensive scheme of refuse disposal for the whole of London.

A Committee of nine was thereupon appointed to confer with the Ministry of Health, and as a result, on the 26th July, 1922, the Ministry issued a list of precautionary measures for abating and preventing nuisances arising from refuse tips throughout the country. These precautionary measures aimed chiefly at securing the covering of each layer of refuse with at least nine inches of earth or other suitable substance. Whilst this might obtain excellent results on small tips, it has not been found practicable to adopt the suggestion at tips of such huge dimensions as those to be found on the northern bank of the Thames.

In July, 1924, Dr. J. A. Glover, of the Ministry of Health, made a prolonged and detailed inspection of the various dumps in the Barking Urban, and Billericay, Orsett, and Romford Rural Districts, as the result of representations made by the London County Council chiefly in regard to the extensive refuse heaps near to the rapidly developing Becontree Estate. He was assisted by the County and Local Health staffs, and was supplied with particulars of the previous investigations which had been carried out.

On 8th February, 1926, the Commissioners of Sewers for Rainham and other Levels wrote to the Clerk of the County Council with reference to nuisances arising from refuse deposits within their area, and suggesting the advisability of a conference between themselves, the Council, the Port of London Authority, the Local Authorities and, if possible, the Members of Parliament for the district, with the object of making strong representations upon the matter to the appropriate Official Authority for securing a remedy.

On 11th March, 1926, the Public Health and Housing Committee decided to inform the Commissioners that they were willing to appoint two representatives to attend the conference, together with the appropriate officers. No further communication was received from the Commissioners of Sewers with regard to the proposed conference.

On 4th June, 1927, the Medical Officer to the London County Council stated that for some years past his Council had been concerned at the large refuse deposits made in the neighbourhood of its housing estate at Becontree and as to the possible effect of these deposits on the health of the tenants. As a result, on 22nd June, 1927, the Medical Officers of Health and Sanitary Inspectors from the Essex County Council, Hornchurch Urban and Dagenham Urban Councils met a Medical Officer and Inspector from the London County Council at the refuse dumps in the Hornchurch Urban District. These are situated about 12 miles east of Charing Cross and about 1 to 1½ miles to the south of the new housing estate at Becontree. The tips are in separate occupation as follows:—

(a) Western portion (about one-fifth of a square mile in 1923) is the property of the Corporation of the City of London but is worked by Messrs. William Cory & Son, Ltd., who have a licence from the Corporation to deposit refuse other than that obtained from the City, *e.g.*, they receive refuse from the West Ham County Borough. It is estimated that about 400 tons are received and dumped each day, and the dump rises from the river side to a height of from 40 to 50 feet.

(b) Centre portion (about one-third of a square mile in 1923) is in the occupation of Messrs. Flower & Everett, Ltd., of 7, Grosvenor Road, S.W., who, it is estimated, receive about 200 to 300 tons of refuse per day from the City of Westminster. The dump rises from the river side to a height of about 40 feet.

(c) Eastern portion (about one-sixteenth of a square mile in 1923) is owned by Messrs. William Cory & Son, Ltd., and consists of—

(i) A disused tip extending for nearly half-a-mile on the western side of Manor Way, and rising from the river side to a height of from 50 to 60 feet, most of which is rapidly becoming overgrown with weeds.

(ii) A new tip has been started on the eastern side of Manor Way where it is estimated from 500 to 600 tons per day are received from various London Boroughs.

We found again that the likely nuisances from these dumps were offensive smells, dust, flies, rats and pollution of ditches and water courses. Refuse of a repulsive nature is arriving daily by barges, is lifted into trucks by mechanical appliances and then hauled by steam engines to the dumping surface of the tip. The faces of the tips are being constantly raked over by rag pickers salvaging such articles as rags, bones, bottles and small coke. All the "active parts" are smouldering and at times emit dense volumes of smoke. The whole process is generally unsightly and insanitary.

On 7th July, 1927, Dr. William Butler (London County Council), Dr. W. A. Bullough (Essex County Council), Dr. Alfred Ball (Hornchurch Urban Council) and Dr. E. W. C. Thomas (Dagenham Urban Council) met again at River Plate House, Finsbury Circus, and agreed as follows:—

1. It is agreed that the present system of dumping London refuse on the north bank of the River Thames at Hornchurch is a menace to the health of the growing population in that neighbourhood.
2. It is further agreed that the problem of dealing with this refuse is a difficult and complicated one and, having regard to all the circumstances, we are of the opinion that the most satisfactory solution would be arrived at by the Ministry of Health holding a public enquiry.
3. Consequently it is agreed to report accordingly to our respective authorities.

When considering the above report in September, 1927, the Committee also had before them the following resolution from the London County Council passed on 26th July, 1927:—

"That the Council considers the present system of dumping London refuse on the north bank of the River Thames at Hornchurch is a menace to the health of the growing population of the neighbourhood; and that the Minister of Health be asked to hold a public inquiry for the purpose of arriving at the most satisfactory solution of the problem of dealing with this refuse."

The Public Health and Housing Committee resolved "that the Minister of Health be informed that this County Council endorse the opinion expressed in the resolution of the London County Council and ask the Ministry to hold a public inquiry."

By letter, dated 19th October, 1927, the Minister of Health stated that "while he fully appreciates the importance of this matter, he doubts whether a public inquiry, at any rate at the present time, would contribute towards a solution or whether it would serve any useful purpose; that the subject is part of the larger problem of the disposal of refuse from London generally which, as the Council are probably aware, is now being investigated by the Public Cleansing Inspector of the Department."

Further consideration of this matter has, therefore, been adjourned pending the report of the Cleansing Inspector of the Ministry of Health.

PUBLIC HEALTH (SMOKE ABATEMENT) ACT, 1926.

This Act which amends the law relating to smoke nuisances came into operation on 1st July, 1927. Its principal provisions are:—power to take proceedings in respect of a nuisance from smoke which is not black; extension of "smoke" to include soot, ash, grit and gritty particles; increase of penalties; power to make bye-laws prescribing standards as to the emission of smoke; power to make bye-laws respecting cooking and heating arrangements in new buildings other than private dwelling houses; power to the Minister to authorise the County Council to carry out duties with regard to smoke abatement on default of the Sanitary Authority; and power to the Minister to extend the operation of the Alkali Act.

By Circular 759, dated 17th February, 1927, the Minister of Health pointed out that the new Act would give Local Authorities useful additional powers, and that by careful administration and close co-operation it was clear that much more can be done to reduce the emission of smoke. It would, therefore, be an advantage if the officials responsible for the abatement of smoke nuisances were specially qualified.

Reference was also made in the same circular to the advantages which could be gained from the appointment of Regional Committees, either in an advisory capacity or with executive functions. Such a Committee can do much towards uniformity of administration.

In respect to private dwelling houses, the Minister stated in the same circular that "the Government did not consider it right at the present time to propose legislation as to the emission of smoke from private dwelling houses. As regards new houses, much is now being done by Local Authorities and private builders to instal such methods of heating and cooking as will reduce the emission of smoke, and it is desirable that this process should be encouraged. Even in old dwellings much can

be done with care to reduce the needless emission of smoke, and it will be well to take advantage of any opportunity which occurs to impress this fact upon householders."

Section 4 of the Act gives the Minister of Health power to extend the list of noxious or offensive gases mentioned in Section 27 of the Alkali, &c., Works Regulation Act, 1906. This power will be useful to the Minister in dealing with offensive smells from oil refineries, which in 1922 gave rise to many complaints in the south-eastern portion of the Administrative County of Essex.

By letter, dated 27th June, 1927, the Clerk of the London County Council asked for the views of the Essex County Council upon the following suggestions in connection with the formation of bye-laws:—

- (1) That the emission of black smoke for two minutes in the aggregate within any continuous period of thirty minutes should be deemed to be an offence.
- (2) That a permanent Committee of representatives of the London County Council, the City Corporation, the Metropolitan Borough Councils, neighbouring Authorities within the area of Greater London, and important industrial associations intimately connected with smoke consumption, should be set up to act in an advisory capacity.

On 4th October, 1927, the Essex County Council decided that the London County Council be informed that this Council are in agreement with the above suggestions, and that in the event of a Joint Committee being set up for the Greater London area, the Essex County Council would be prepared to appoint a representative to serve on such Committee.

On 3rd November, 1927, the Coal Smoke Abatement Society held a Smoke Abatement Conference of London and Greater London Authorities at the Guildhall, London. Representatives were present from the Ministry of Health, Federation of British Industries, four County Councils and 56 Local Sanitary Authorities. It was agreed unanimously as follows:—

- (1) That steps should be taken to secure a reasonable measure of uniformity in bye-laws and administration in regard to smoke abatement.
- (2) That a Joint Committee (consisting of 25 members, including one from Essex County Council) be appointed to consider and report generally and in particular upon standardisation of procedure, bye-laws, permissible smoke emission periods, smoke inspectors and general administrative methods.

The Vice-Chairman of the Housing and General Purposes Sub-Committee was appointed to represent the Essex County Council on the Greater London Joint Smoke Abatement Committee.

MOSQUITOES.

The exceptional rainfall beginning in the month of July once again brought to the notice of the general public the mosquito nuisance. This is an ever-recurring problem which cannot be solved without considerable expenditure, and the active co-operation of local authorities, with practical assistance from the householders in the affected localities. Palliative measures were again adopted on the east coast with a fair amount of success.

According to the report from Dr. G. Craigie Bell, Medical Officer of Health for Frinton-on-Sea Urban District, "there was a bad plague of mosquitoes, fortunately of a very harmless but irritating species, the *Culex Pipiens*. I was very pleased to note that the variety called *Ochlerotatus Detritus* was absent for the third year in succession, so that I think I may claim that we have been able in the past, and shall be able in the future, to eliminate this much more virulent animal from our midst. It breeds in the sea wall ponds over which we have control; the *Culex Pipiens* breeds in places over which the Council have no control. It has been thought advisable to send out a circular to all the inhabitants, pointing out where the animal breeds, and how they can help in its extermination."

Dr. J. C. Brockwell, Medical Officer of Health, Walton-on-the Naze Urban District, furnished by request, the following report upon the scheme adopted by his Council for treating suspected places to prevent the breeding of mosquitoes:—

"In this district for a number of years now we have dealt with the domestic type of mosquito by paraffin spray at the public cost.

"This year, with the advice and help of Mr. Shute, of the Ministry of Health, we are not only continuing to deal with the domestic type, but also with the salt water type. The scheme for the latter has been to organise careful search for breeding places along the marshes, all of which are privately owned. When the larvæ have been found, the water has been treated with White Cross Fluid at a dilution of 1—30,000. A week later the breeding grounds were again systematically examined, and for the most part only, dead larvæ found. When living larvæ were found, a second treatment was carried out. At present the whole cost is being borne by the District Council (with the exception of land owned by the Golf Club, which is a small one), but the Council will consider the question of trying to make the landowners free their property of the nuisance.

"This may be a doubtful and expensive proceeding, and will require very careful consideration."

At Harwich the Borough Surveyor has treated possible breeding places for mosquitoes with Larvæcide, which has "shown good results."

It is somewhat remarkable that, in view of the undue prevalence of mosquitoes in Epping Forest, few complaints arise either from the residents in that area, or from those who visit this large tract of healthy woodland.

BLIND PERSONS ACT, 1920.

Under this Act the Essex County Council delegated its powers to the Education Committee, and the actual work of visiting, preparation of registers, &c., has been conducted by the Essex Voluntary Association for the care of mental defectives, a body already in existence at the time of the passing of the Act. This Association for the past four years has been responsible to the Education Committee for its duties under the Act, and has received certain monetary grants to cover expenses from the Committee. No doubt the Association has done useful work in the completion of the Blind Persons Register in home visits and in initiating some teaching at Centres as well as in the homes.

In the autumn of 1927, with the assent of the Ministry of Health, it was considered advisable to definitely separate the work of the Care of the Blind from that of the Care of the Mentally Defective persons, and it was finally decided that this change should take place on the 1st April, 1928.

From this date the work is to be more closely associated with the Director of Education as Administrator for the Education Committee. This would appear to be in many ways more satisfactory, seeing that proposals for education of these afflicted persons when institutional care is given are dealt with by the Education Committee. In pursuance of this policy, a scheme has been drawn up for the formation of a County Association to carry out duties in connection with the registration and welfare of all blind persons in the Administrative County.

On the 31st December, 1927, there were 982 blind persons on the Register, including those in Homes, Poor Law Institutions, Mental Hospitals, &c., and, of these, 602 are reported as incapable of earning.

PUBLIC HEALTH PROPAGANDA.

The Propaganda Sub-Committee held four meetings during the year on 24th January, 25th April, 25th July, and 24th October. In addition, the Chairman and Vice-Chairman paid visits to the offices of several Voluntary Organisations in London, in order to ascertain the nature and extent of the propaganda facilities which were available. Particulars of these facilities have been filed at the County Public Health Department, where endeavours are being made to establish and keep up-to-date a Central Bureau of information.

Careful consideration has been given to the various methods of propaganda and to the ways in which the County Council can assist Local Authorities in health weeks, health exhibitions and public lectures.

In the Child Welfare Section of this Report (see page 97) reference is made to the assistance which was given by the County Council at the health exhibitions arranged by the Halstead and Brentwood and Warley Child Welfare Centres.

The County Council also made a grant to the Chingford Urban District Council towards the expenditure incurred in connection with a visit of the travelling exhibition of the Central Council for Infant Welfare to North Chingford on 8th November, 1927, and South Chingford on 10th November, 1927. In addition, the display consisted of local public health matters. In each area, lectures were given to school children in the morning, talks to mothers in the afternoon, and public lectures were given in the evening. The Chairman of the County Propaganda Sub-Committee gave an address at one of the evening meetings on the importance of Health Week. The local Medical Officer of Health reported that "many associated with Health Week expressed the opinion that they considered from what they knew of the district that, as a beginning, the interest shown was sufficient to warrant greater success in the future."

A grant was also made to the Harwich Borough Council towards the cost of the Health Week held in the Drill Hall, Harwich, from 25th to 29th October, 1927. The programme included exhibits on health matters, cooking demonstrations, public lantern lectures on health, teeth, and clean milk, demonstrations on mosquito control, organised visits of school children, health films in local cinemas. The local Medical Officer of Health reported :—"Our Health Week was a wonderful success. All our lectures were crowded and about 500 to 600 people visited the exhibit every day. One result has come to hand already—a farmer at Ramsey is prepared to produce and sell Grade A milk."

Members of the County Health Staff continued to give lectures at Women's Institutes, Women's Guilds, Brotherhoods, &c., throughout the year. 27 such lectures were given on home nursing, health, refuse disposal, food, milk, &c.

The progress made appears to be satisfactory, but to create an abiding influence on the habits and customs of our people, the person above all others who can achieve this desired result is the elementary school teacher.

COMBINED MEDICAL SERVICE.

In the Report for the year 1925, a review of the Combined Medical Service Scheme in Essex with the principal features, the observations of the officers concerned and particulars of schemes in operation were given.

Table XV shows the schemes in operation at the end of the year 1927, and Areas Nos. 13 and 14 indicate additions to the scheme during the year.

Reference was made in the last report to Dr. Pearse's comments on the Essex Combined Medical Service Scheme. In the Ministry of Health Publication No. 45, dated October, 1927, Dr. Pearse has reviewed in detail the results of his investigation into the same service in the Counties of Essex, Hampshire, Gloucester and West Sussex.

Dr. Pearse's final conclusion has been noted with considerable satisfaction. He says "the definite advantages of the system are such as to merit its continued encouragement, and the taking of such steps as may be necessary to prepare for its further and more uniform development."

The report has been widely discussed, and it would appear that the Combined Medical Service is becoming favourably looked upon throughout the country.

In his evidence on behalf of the Ministry of Health given before the Royal Commission on Local Government, Sir Arthur Robinson states that the view of the Minister is that for the effective discharge of the large and increasing part of the functions of Local Authorities which is concerned with public health an accelerated rate of progress towards the appointment of Medical Officers of Health engaged for the whole of their time on public duties is indispensable. Accordingly, it is suggested "that statutory provision should be made to the effect that on the occurrence of a vacancy in any post held by a Medical Officer of Health who is also engaged in private practice, it should be the duty of the County Council, after consultation with every County District Council affected, to make suitable arrangements for the appointment of a Medical Officer of Health by the County District Council in whose area the vacancy has occurred either solely or jointly with the County Council or other Local Authorities; and that these arrangements should preclude the Medical Officer of Health from engaging in private practice unless on consideration of the special circumstances of a particular County District as represented to him by the County Council, after consultation with the County District Council concerned, the Minister is satisfied that it would, for the time being, be unreasonable to attach this condition to the appointment."

The chief criticism of the combined medical service inside the medical profession is from a group of whole-time Tuberculosis Officers who are concerned that their professional interests are in peril and also that it will reduce the efficiency of the tuberculosis service. These medical men consider that the duties of a Tuberculosis Officer require much higher technical skill than the duties of, say a School Medical Inspector, forgetting that a School Medical Inspector must not only know how to examine a chest and bones and joints but a good many other things as well. But putting this unhappy comparison aside, the facts briefly are (1) that there is no typical area for which a cut and dried scheme can be applied. Each County and County Borough is unique and requires its own special considerations. (2) No matter how skilled a Tuberculosis Officer may be in his own special branch of medicine, he has to be brought into personal touch with all the suspected and actual sufferers from tuberculosis before he can do them any good. The essential factors in securing this contact are (a) Accessibility—it is not much use one man attempting to cover a rural area of 2—300,000 acres in which there may be only few centres of population of five or more thousand. 100,000 acres is a sufficiently large area when the time in travelling only is taken into account. (b) Approachability—a Tuberculosis Officer must be well known and personally liked by medical practitioners and the other

TABLE XV.—SHOWING COMBINED MEDICAL SERVICE SCHEMES IN OPERATION, 1927.

Area No.	Sanitary District.	Est. Pop. 1927, for Birth rate.	Acreage.	Date Scheme commenced.	Name of Officer.	Duties.†
*1	Lexden & Winstree R. <i>a</i> ... West Mersea U. ... Wivenhoe U. ...	17820 } 2269 } 2219 } 22308	69485 1564 71049	1st April, 1920	W. H. Alderton ..	M.O.H. and Assist. C.M.O. " Assistant C.M.O. only
2	Clacton-on-Sea U. <i>a</i> ... Brightlingsea U. ... Walton-on-Naze U. ... Frinton-on-Sea U. ...	14060 4294 2857 2125 23236	4069 2867 2046 422 9404	1st June, 1920	W. A. Milne ...	M.O.H. and Assist. C.M.O. Assist. C.M.O. only " " " "
3	Tendring R. ... Harwich Borough <i>a, b</i> ...	22890 12270 35160	73131 1541 74672	11th Sept., 1920	J. Ramsbottom ...	M.O.H. and Assist. C.M.O. Assist. C.M.O. only
†4	Grays U. <i>a</i> ... Tilbury U. <i>a</i> ... Orsett R. <i>a</i> ...	18010 16390 25750 60150	1359 1855 38084 41298	1st August, 1922	W. T. G. Boul ..	M.O.H. and Assist. C.M.O. Assist. C.M.O. only
5	Chelmsford Borough <i>a, b</i> ... Chelmsford R. <i>a</i> ...	23450 27500 50950	3112 83045 86157	1st Jan., 1923	R. H. Vercoe ..	M.O.H. S.M.I. only
6	Saffron Walden Borough ... Saffron Walden R. ... Stansted R. ...	5456 9661 6906 22023	7502 59975 22954 90431	1st Jan., 1923...	S. R. Richardson ..	M.O.H. and Assist. C.M.O. Assist. C.M.O. only
7	Halstead U. ... Halstead R. ... Belchamp R. ... Bumpstead R. ...	5795 9571 4092 2240 21698	647 38712 26500 11874 77733	1st Sept., 1923	J. S. Ranson ...	M.O.H. and Assist. C.M.O. " " " " Assist. C.M.O. only
§8	Braintree U. ... Braintree R. ... Dunmow R. ...	7600 19590 14940 42130	2224 62348 73503 138075	1st Oct., 1923...	P. J. Gaffikin ...	M.O.H. and Assist. C.M.O. " " " "
9	Barking U. <i>a, b</i> ...	39900	3805	1st April, 1920	C. L. Williams ...	M.O.H. and T.O.
10	Colchester Borough <i>a, b</i> ...	48770	11333	13th July, 1921	W. F. Corfield ...	M.O.H. and T.O.
11	Shoeburyness U. ... Rochford R. ... Canvey Island U. ...	5688 29350 7200 42238	1036 50603 4400 56039	1st Feb., 1925...	N. S. R. Lorraine	M.O.H. and Assist. C.M.O. Assist. C.M.O. only " "
12	Chingford U. ... Woodford U. <i>a</i> ... Wanstead U. <i>a</i> ...	12920 22100 16770 51790	2808 2161 1679 6648	19th Oct., 1925	M. Barker ...	M.O.H. and Assist. C.M.O. T.O. only "
13	Witham U. ... Chelmsford B. <i>a, b</i> ... Chelmsford R. <i>a</i> ... Maldon B. ... Maldon R. ... Burnham-on-Crouch U. ...	4111 23450 27500 6233 16620 3524 81438	3713 3112 83045 3028 82342 4517 179757	20th May, 1927	J. S. Bradshaw ...	M.O.H. and Assist. C.M.O. T.O. only " " " "
§14	Dagenham U. <i>a</i> ...	37500	6556	4th April, 1927	E. W. C. Thomas ...	M.O.H. and S.M.I.

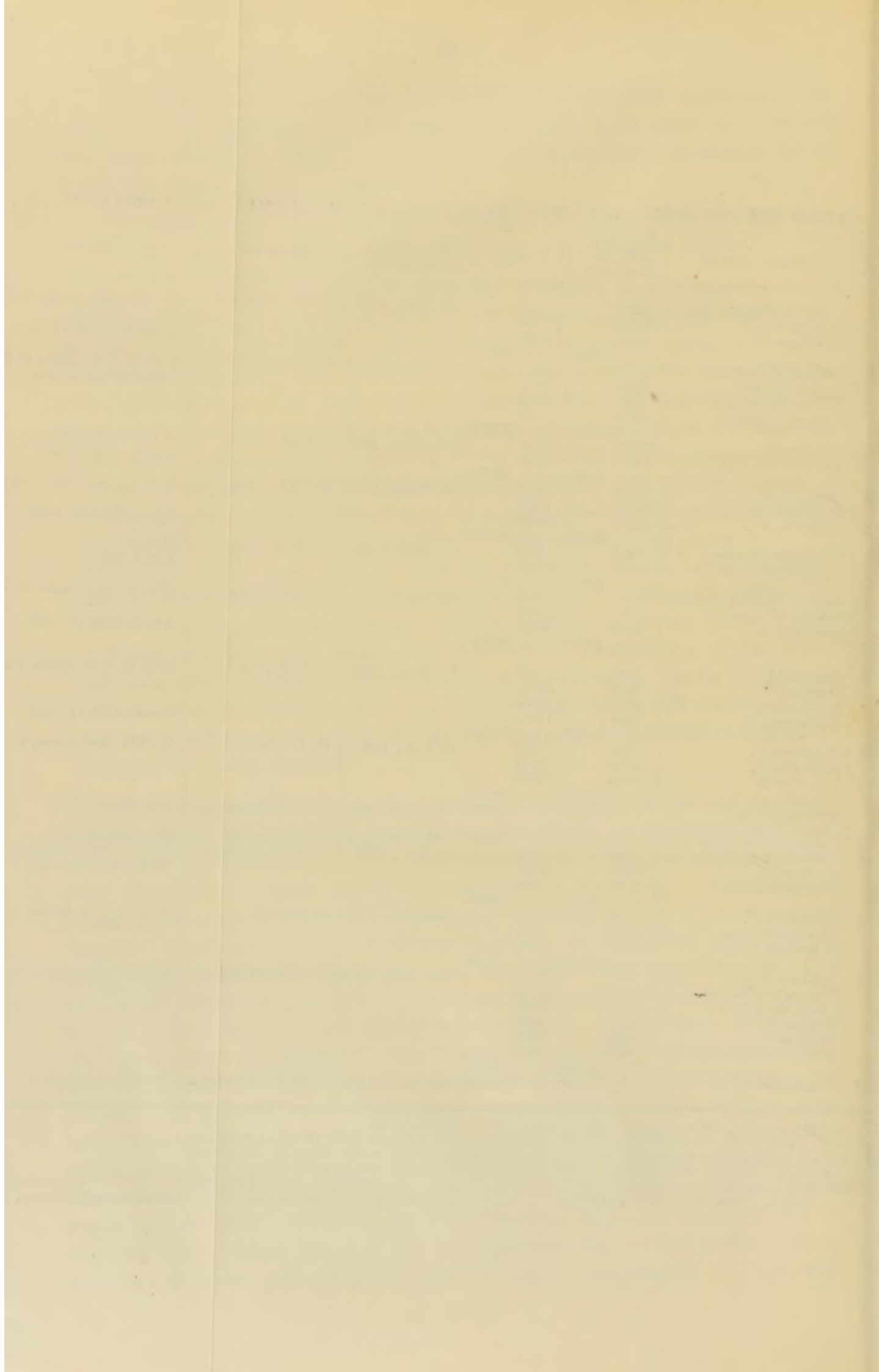
* Dr. Alderton also acts as Assist. C.M.O. in part of the Maldon area.

† Dr. W. T. G. Boul was assisted by Dr. Maud Bennett in School and Child Welfare work.

§ Dr. P. J. Gaffikin was assisted in School and Child Welfare work by Dr. Mary D. Rankine.

§ Dr. E. W. C. Thomas was assisted by Dr. Charlotte R. Brown in School 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.



persons who are instrumental in bringing him into contact with the sufferers. The combined medical service secures the former almost inevitably. (c) Advantage—There must be reasonable prospect of some good accruing to the patient after being seen by the Tuberculosis Officer. This postulates an efficient scheme of diagnosis, treatment in sanatoria, hospitals, and after-care. The best propaganda is an efficient service. There is no question that it is exceedingly important that Tuberculosis Officers should have special skill and knowledge, but it must be remembered also that they are only one of the many factors which go to make a successful anti-tuberculosis service. Considering the Tuberculosis Officer only, it may be surmised that what may hypothetically be partially lost in one direction may be more than balanced by advantages in other directions which the combined medical officer secures by virtue of duties as Medical Officer of Health, School Medical Inspector, Child Welfare Officer, &c. Moreover, this hypothetical disadvantage is corrected and made good in Essex by the availability of the services of Consulting Tuberculosis Officers for the whole County, viz., one for pulmonary tuberculosis and one for surgical tuberculosis.

The main difference in Essex from other Counties in respect to the staff of Tuberculosis Officers is that in the essentially rural districts such duties are combined with those of School Medical Inspector, Child Welfare Officer, and as often as possible, Medical Officer of Health. It should be emphasised again that in the populous portions of the County, *i.e.*, in urban districts of 30,000 population and over, the work is carried out by Tuberculosis Officers devoting their whole time to this particular disease. In view of certain comments made in the medical journals, it would be helpful and advantageous if persons who feel they must put in writing their opinions of the scheme in Essex would take an opportunity of first visiting the County, and thus making themselves acquainted on the spot with what is being done.

COMBINED TREATMENT CENTRES.

A list of Combined Treatment Centres under the County Council was given in the previous year's report. Alterations and developments are referred to below.

In June, 1927, the Clinic at Saffron Walden was transferred from the Adult School to the Saffron Walden General Hospital.

By arrangement with the Essex Education Committee, rooms at "The Shrubbery," Woodford, were adapted for use as a Tuberculosis Dispensary, which commenced in March, 1927.

PART II.

TUBERCULOSIS.

The County Tuberculosis Scheme has again functioned satisfactorily and only minor improvements have been effected to the broad principles laid down in previous reports.

Notifications.

A summary of the notifications made on Form A in the Administrative County of Essex under the Public Health (Tuberculosis) Regulations, 1912, during the period from 2nd January, 1927, to 31st December, 1927, is given below:—

TABLE XVI.

	Notifications on Form A.												Total Primary Notifications	Total Notifica- tions on Form A.
	Primary Notifications.													
	Age Periods.													
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards			
Pulmonary, Males ...	—	4	26	24	67	84	156	138	84	42	10	635	728	
„ Females ...	2	10	19	31	77	94	150	85	32	31	12	543	625	
Non-Pulmonary, Males	5	50	51	16	19	9	13	6	4	2	1	176	194	
„ Females	10	33	42	20	15	13	19	9	7	3	—	171	187	

There were 1,525 primary notifications (Form A) received during the year, as against 1,595 in 1926 and 1,613 in 1925. The total notifications on Form A numbered 1,734.

The Table shows that there was a considerable amount of duplicate notification but a comparison with the deaths from tuberculosis indicates that there is still room for improvement in the primary notification of cases of tuberculosis in accordance with the regulations.

	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 ...	—	—	—	—	—	40	436	
„ Females ...	—	—	—	—	—	43	267	
Non-Pulmonary, Males ...	—	2	—	2	2	4	58	
„ Females	—	2	—	2	2	7	71	

The number of primary notifications received on Form B is given above, and this number is again remarkably small. The explanation is that in the County of Essex many of the School Medical Officers are also Tuberculosis Officers who, on examining a school child suspected to be suffering from tuberculosis, consult with the medical practitioner concerned. As a rule, when a definite diagnosis is arrived at the case is notified by the local practitioner or by the School Medical Inspector in his capacity as Tuberculosis Officer on Form A and not on Form B.

TABLE XVII.

SHOWING SUPPLEMENTAL RETURN IN REGARD TO CASES NOT NOTIFIED UNDER
THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912,
DURING THE YEAR 1927.

	Age periods.											Total cases.
	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and upwards.	
Pulmonary, Males	—	—	2	2	10	14	30	32	12	11	3	116
„ Females	1	1	5	1	10	10	34	14	16	6	11	109
Non-pulmonary, Males	2	4	10	9	3	5	2	3	4	2	2	46
„ Females	6	15	13	8	1	1	7	3	5	1	1	61

The supplementary table given above shows that the number of cases of tuberculosis coming to the notice of the medical officers of health and the Chief Tuberculosis Officer otherwise than by formal notification under the regulations is 332 as against 476 in the previous year, and 234 in 1925. Table XVIII on page 63 also shows the need for prompt notification of patients suffering from tuberculosis as required by the Public Health (Tuberculosis) Regulations, 1912, both from the standpoint of the patient and the remainder of the family. The attention of the district medical officers of health is therefore drawn to the following extract from the Ministry of Health Circular 549, dated 22nd December, 1924 :—

“The Minister desires to take this opportunity of impressing upon Local Authorities the responsibility which attaches to them for seeing that the requirements of the Regulations are fully observed in their districts, and I am to state that where (as in the case of a death certified as due to

tuberculosis of a person who had not previously been notified under the Regulations) there is *prima facie* evidence of neglect to notify on the part of the medical attendant, immediate steps should be taken by the Local Authority to obtain an explanation from the medical attendant as to the circumstances under which formal notification under the Regulations was not made. If the explanation is not satisfactory, it should be borne in mind that the Local Authority have power to institute proceedings for the recovery of a penalty under Section 1 (3) of the Public Health Act, 1896, in cases of wilful neglect or refusal to carry out the Regulations, and it appears to the Minister that it may even be desirable to proceed to a prosecution in one or two cases of the kind where the circumstances warrant such action in order to secure the objects of the Regulations."

With reference to the figures shown in the column "No Information" in Table XVIII on page 63 communications have been addressed to the medical officers of health concerned and a considerable number of replies have been received. In no single instance can it be said that any of these cases had been notified under the Public Health (Tuberculosis) Regulations. The chief causes of non-notification would appear to be the following in the order given:—

- (1) Not diagnosed until a few days before death or after a post-mortem examination.
- (2) Removed from another district where it was erroneously thought that the case had already been notified.
- (3) Patient had removed from another area where the case had been notified but notification not transferred to the patient's new district.
- (4) Patient had changed doctor who was under the impression that the case had already been notified by the previous doctor.
- (5) Died in another district and death transferred to home address.

It will be seen that out of a total number of 692 deaths from Tuberculosis registered with Local Registrars during 1927, 348 cases were either not notified at all or were notified within three months of death. It should be noted that a notification made after death is not regarded by the Ministry of Health as a notification under the Public Health (Tuberculosis) Regulations.

It is hoped that a steady improvement in the notification of cases of tuberculosis will be one of the results of the greater co-operation now taking place between the general practitioners and tuberculosis officers in the County, on the lines laid down in Ministry of Health Memorandum 286.

TABLE XVIII.

SHOWING DEATHS FROM TUBERCULOSIS REGISTERED WITH LOCAL REGISTRARS OF BIRTHS AND DEATHS IN THE ADMINISTRATIVE COUNTY DURING 1927, 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	46	6	9	4	5	9	3	2	8	
Braintree	6	...	...	...	2	...	1	...	3	
Brentwood	3	1	1	...	...	...	...	...	1	
Brightlingsea	6	1	...	...	...	3	...	1	1	
Buckhurst Hill	3	...	1	...	1	...	...	...	1	
Burnham-on-Crouch	5	...	1	...	...	1	...	...	1	
Canvey Island	1	...	...	...	...	...	...	...	1	
Chelmsford B.	15	1	1	1	...	3	5	1	3	
Chingford	6	...	3	...	...	...	1	1	1	
Clacton-on-Sea	12	1	...	1	2	...	...	...	8	
Colchester B.	38	3	6	2	3	6	3	3	12	
Dagenham	28	2	2	1	1	13	...	1	8	
Epping	1	...	...	...	1	...	...	...	...	
Frinton-on-Sea	1	...	...	...	...	1	...	...	...	
Grays	17	...	3	1	...	4	5	...	4	
Halstead	5	...	1	...	...	...	...	...	2	
Harwich B.	10	1	2	1	3	2	...	...	1	
Hornchurch	4	...	1	1	2	...	...	...	...	
Ilford	44	5	5	5	2	8	5	3	11	
Leyton	93	7	20	8	12	14	11	9	12	
Loughton	2	...	...	...	...	...	...	...	2	
Maldon B.	3	...	3	...	...	...	...	...	...	
Romford	17	2	2	...	2	4	2	...	5	
Saffron Walden B.	4	...	...	1	...	...	2	...	1	
Shoeburyness	2	...	...	...	...	...	...	...	2	
Tilbury	21	1	4	1	6	4	1	...	4	
Waltham Holy Cross	4	...	...	...	...	...	1	1	2	
Walthamstow	93	7	12	9	7	14	13	7	24	
Walton-on-the-Naze	1	...	1	...	...	...	...	...	...	
Wanstead	7	...	1	1	1	...	2	...	2	
West Mersea	...	...	...	...	...	...	...	...	...	
Witham	2	...	...	1	...	1	...	...	...	
Wivenhoe	...	...	...	...	...	...	...	...	...	
Woodford	15	3	4	2	1	...	3	...	2	
Totals	511	41	83	40	51	87	58	29	122	
Rural.										
Belchamp	6	...	...	1	...	1	1	...	3	
Billericay	27	5	4	1	4	6	1	1	5	
Braintree	20	4	3	2	...	1	3	2	5	
Bumpstead	2	1	...	...	...	...	...	...	1	
Chelmsford	3	...	...	...	...	...	...	...	3	
Dunmow	5	...	...	1	...	...	2	...	2	
Epping	9	1	...	1	1	2	...	...	4	
Halstead	3	...	2	...	2	1	1	...	2	
Lexden and Winstree	15	1	3	...	1	2	1	1	6	
Maldon	14	...	1	...	3	1	5	1	3	
Ongar	3	...	...	...	...	1	...	...	2	
Orsett	13	1	...	...	1	1	1	...	9	
Rochford	23	...	6	1	1	5	3	2	5	
Romford	5	...	1	1	...	...	1	...	2	
Saffron Walden	8	...	4	...	...	1	1	1	1	
Stansted	5	...	...	...	...	1	...	...	4	
Tendring	15	1	3	2	2	1	1	1	4	
Totals	181	14	27	10	15	24	21	9	61	
URBAN DISTRICTS	511	41	83	40	51	87	58	29	122	
RURAL DISTRICTS	181	14	27	10	15	24	21	9	61	
TOTALS	692	55	110	50	66	111	79	38	183	

TABLE XIX.

SHOWING NUMBER OF CASES OF TUBERCULOSIS REMAINING ON THE REGISTERS OF NOTIFICATIONS KEPT BY THE DISTRICT MEDICAL OFFICERS OF HEALTH ON THE 31ST DECEMBER, 1927.

Pulmonary.			Non-Pulmonary.			Total Cases.
Males.	Females.	Total.	Males.	Females.	Total.	
3861	3357	7218	1398	1393	2791	10,009

According to the above table, 10,009 cases of tuberculosis were shown on the notification registers of the district medical officers of health at the end of 1927, compared with 9,341 in 1926 and 8,654 in 1925. From Table XXI however, it will be noted that the total number of cases of tuberculosis on the dispensary registers at the end of 1927 was 5,413, equivalent to only 54·0 per cent. of the notified cases.

It is difficult to understand why such a small percentage of notified patients have applied for treatment under the County Scheme and it is possible that the notification registers of the district medical officers of health still contain names of patients which should have been removed. It is therefore exceedingly important that medical officers of health should periodically revise their registers of notified cases of tuberculosis as required by the Public Health (Tuberculosis) Regulations, 1924, and erase therefrom all cases who have died, removed from the area, been notified in error, or reported as "cured."

TABLE XX.

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

YEAR.	Pulmonary Tuberculosis.				Non-Pulmonary Tuberculosis.				Tuberculosis (All Forms).			
	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.
1912-16	Not		851	0·86	Not		269	0·27	Not		1120	1·13
1917-21	avail		752	0·89	avail		199	0·24	avail		951	1·13
1922-26	1110	1·16	656	0·69	320	0·34	148	0·15	1430	1·50	804	0·84
1926	1240	1·25	616	0·62	359	0·36	141	0·14	1599	1·61	757	0·76
1927	1178	1·14	677	0·66	351	0·34	146	0·14	1529	1·48	823	0·80

From the above table it will be observed that the attack-rate per 1,000 population during 1927 is well below the rate for the previous year and slightly below the average attack-rate during the past five years. The decline over the latter period is especially satisfactory in view of the industrial troubles of the last few years, which have resulted in so much unemployment with a consequent lowering of the resistance of the people.

The total death-rate per 1,000 population from all forms of tuberculosis during 1927 is slightly above that for 1926, but below the average for the five years 1922-26. The decline in the death-rate from this disease is general throughout the country, and has been remarkably rapid during the last 20 years.

Table XXI shows the work done in connection with the tuberculosis dispensaries in the County during the year 1927. It will be seen that the number of new cases examined during the year was 2,130, as compared with 2,258 in 1926. Of these new cases, 1,009 were diagnosed as definitely tuberculous, 1,020 as doubtfully tuberculous, and 101 as non-tuberculous.

The number of contacts examined during the year was 534, which was an increase of 179 over the number examined during 1926.

The total number of persons on the dispensary registers at the end of 1926 was 5,095, as compared with 5,413 on the register at the end of 1927.

The number of attendances of patients at the dispensaries during the year increased from 20,080 in 1926 to 23,454 in 1927.

Increased advantage was taken of the facilities for the examination of sputa, etc. and X-ray examinations, the number of the former in 1926 being 4,895, as compared to 5,757 in 1927, and the number of the latter being 381 in 1926, as compared with 408 in 1927. In regard to the examinations of sputa, etc., approximately 75 per cent. were examined in connection with dispensary work.

It is gratifying to note that there has been an increase in the number of Forms G.P. 36 completed by general practitioners, the numbers being 142 for 1926, as compared with 416 for 1927. This indicates that the requirements of the Ministry of Health Memorandum 286 respecting the co-operation between general practitioners and Tuberculosis Officers are developing satisfactorily.

Increased visits have been paid by Health Visitors and Nurses to the homes of patients during 1927. In 1926 the number of such visits was 16,053, whilst in 1927 the number was 19,038.

A further figure of comparative interest in this table is that relating to the number of observation cases in which the period of observation exceeded two months. This number has decreased satisfactorily—during 1926 the number of such cases being 440, whilst in 1927 the number was 231.

TABLE XXII.

RESIDENTIAL INSTITUTIONS.

(a) Showing the average Number of Beds available for Patients during the year 1927.

	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.		Total.
	Observation.	Sanatorium Beds.	Hospital Beds.	Disease of Bones & Joints.	Other Conditions.	
Adult Males	11	108	37	15	5	176
Adult Females	6	79	20	14	4	123
Children under 15	10	55	3	49	25	142
Total	27	242	60	78	34	441

Table (a) above indicates that an average number of 441 beds were occupied by Essex patients during 1927. This number was found insufficient to cope with the demand for institutional treatment and resulted in a lengthy waiting list. Approval is accordingly being obtained from the Public Health Committee for an increased number of beds for 1928.

Table (b) below shows that the number of patients treated in Institutions during the year increased from 1,019 in 1926 to 1,058 in 1927, the number of patients in Institutions at the end of the year being 390 as compared with 386 in 1926. During 1927, there were 68 deaths in Institutions, while in 1926 there were 72.

(b) Showing the extent of Residential Treatment during the year 1927.

			In Institutions on Jan. 1st	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31st.	
Number of Patients	...	Adults.	M.	171	434	402	49	154
		F.	110	310	306	15	99	
	...	Children.	M.	68	75	81	—	62
		F.	25	123	94	3	51	
Number of Observation Cases	...	Adults.	M.	6	34	34	1	5
		F.	2	43	43	—	2	
	...	Children.	M.	1	68	60	—	9
		F.	3	43	38	—	8	
Total			...	386	1139	1058	68	390

The table below shows the results of the treatment afforded to patients in Institutions during the year; also the results of observation of special cases in Institutions during the year. Of the pulmonary patients 53.4 per cent. stayed less than three months, 32.5 per cent. stayed between three and six months, and 14 per cent. stayed for six months.

TABLE XXIII.

SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS AND OF OBSERVATION OF DOUBTFUL CASES DISCHARGED FROM RESIDENTIAL INSTITUTIONS DURING THE YEAR 1927.

Classification on admission to the Institution.	Condition at time of discharge.	Duration of Residential Treatment in the Institution.												TOTAL	
		Under 3 months.			3-6 months.			6-12 months.			More than 12 months.				
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.		
PULMONARY TUBERCULOSIS.	Class T. B. minus.	Quiescent	17	33	6	13	22	9	4	4	5	...	...	3	116
	Improved	46	24	6	20	17	15	7	4	7	1	1	1	149	
	No material improvement	5	3	2	2	4	1	1	3	1	...	...	...	27	
	Died in Institution	4	...	...	...	2	...	...	...	...	...	...	...	6	
	Class T. B. plus, Group 1.	Quiescent	6	6	...	9	4	...	2	4	...	...	...	...	31
	Improved	28	11	...	13	7	...	8	4	1	1	...	...	...	73
	No material improvement	4	6	1	1	2	...	2	...	...	...	...	...	...	16
	Died in Institution	5	...	...	...	...	...	...	1	...	...	...	...	...	6
	Class T. B. plus, Group 2.	Quiescent	11	9	...	6	6	1	2	3	...	...	1	...	39
	Improved	50	23	1	33	25	...	10	6	...	7	1	...	156	
	No material improvement	28	13	...	9	11	...	1	6	...	1	...	...	69	
	Died in Institution	20	5	1	4	...	1	2	...	...	...	...	...	33	
	Class T. B. plus, Group 3.	Quiescent	3	...	...	...	...	...	1	...	...	...	...	...	4
	Improved	7	3	...	8	2	...	1	...	...	...	...	...	21	
	No material improvement	5	2	...	2	3	...	...	1	...	1	...	...	14	
	Died in Institution	11	6	1	2	...	...	1	...	...	...	...	...	21	
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested	...	4	7	1	...	8	4	2	13	3	2	11	55
	Improved	4	...	2	2	4	1	1	1	2	...	...	3	20	
	No material improvement	1	4	5	...	...	...	...	2	...	...	...	1	13	
	Died in Institution	...	...	...	...	1	...	...	...	...	...	...	...	1	
	Abdominal.	Quiescent or Arrested	...	...	4	...	...	4	...	...	...	...	...	...	8
	Improved	...	1	1	1	2	...	...	1	1	...	...	...	...	7
	No material improvement	2	...	...	...	...	...	...	...	...	...	...	...	...	2
	Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Organs.	Quiescent or Arrested	...	1	...	...	...	1	...	...	...	...	...	...	2
	Improved	3	...	...	...	...	...	...	1	...	...	...	...	...	4
	No material improvement	1	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Peri-pheral Glands.	Quiescent or Arrested	...	...	9	...	...	9	...	...	5	...	...	1	24
	Improved	3	1	16	...	...	7	...	...	1	...	...	1	29	
	No material improvement	...	1	1	...	...	...	...	...	...	...	...	1	3	
	Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Observation for purpose of diagnosis.		Under 1 week.			1-2 weeks.			2-4 weeks.			More than 4 weeks.				
	Tuberculous	1	...	...	1	1	...	4	4	1	10	10	8	40	
	Non-tuberculous	...	...	...	...	3	...	1	1	...	10	8	51	74	
	Doubtful	...	1	1	...	...	...	2	1	1	5	14	36	61	
	*Death	...	...	...	...	...	...	...	...	...	1	...	...	1	

*Cause of Death—Carcinoma of Right Bronchus.

TABLE XXV.

(b) NON-PULMONARY.

Table showing in summary form the condition of all patients whose case records are in the possession of the Dispensaries at the end of 1927, arranged according to the years in which the patients first came under public medical treatment for Non-Pulmonary Tuberculosis and their classification as shown on Form A.

Condition at the time of the last record made during the year to which the Return relates.			Previous to 1926.						1926.						1927.					
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	TOTAL.			
ALIVE.	Discharged as cured.	Adults.	M.	3	2	1	1	7	...	...	...	...	...	...	...	...	...			
		F.	8	1	...	4	13	...	...	...	...	...	...	...	...	...				
	Child-ren.	M.	10	2	2	16	30	...	...	...	...	...	...	...	...	...	...			
		F.	4	2	3	20	29	...	...	...	...	...	...	...	...	...	...			
Disease arrested.	Adults.	M.	25	2	7	6	40	...	...	...	...	...	...	...	...	...	...			
		F.	25	4	6	8	43	...	...	...	...	...	...	...	...	...	...			
	Child-ren.	M.	48	11	6	41	106	...	...	...	...	...	...	...	...	...	...			
		F.	34	8	5	22	69	...	...	...	...	...	...	...	...	...	...	...		
Disease not arrested.	Adults.	M.	37	6	13	6	62	18	2	6	4	30	18	5	6	6	35			
		F.	26	5	13	18	62	16	8	9	18	51	22	6	6	14	48			
	Child-ren.	M.	60	7	4	42	113	22	6	3	42	73	31	8	5	39	83			
		F.	42	10	5	44	101	20	5	2	35	62	27	9	...	37	73			
Transferred to Pulmonary			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Condition not ascertained during the year...			11	5	1	14	31	...	2	1	1	4	...	...	...	...	...			
Lost sight of or otherwise removed from Dispensary Register			112	73	55	79	319	22	8	8	23	61	3	...	1	5	9			
DEAD.	Adults.	M.	10	2	1	1	14	...	1	...	...	1	...	1	...	...	2			
		F.	3	1	1	2	7	2	1	...	1	4	3	1	1	...	5			
	Child-ren.	M.	4	2	2	1	9	3	...	...	...	3	...	1	...	...	1			
		F.	1	2	...	...	3	1	1	...	...	2	...	...	...	...	...			
TOTALS			463	145	125	325	1058	104	34	29	124	291	104	31	20	101	256			

ALIVE.

Table XXV. The information given in this table shows the condition of patients at the end of 1927, classified according to the years during which they applied for public medical treatment. The information provided is extremely valuable, and although the completion of the table is not compulsorily required by the Ministry of Health in Memorandum 37/T, it has been supplied to the Ministry from Essex during the past two years. It will be noted that the columns in this table relating to cases "Cured" and "Disease Arrested" in 1926 and 1927 are blank, and that the numbers appearing in the "Previous to 1926" column are not very high. This is accounted for by reason of the fact that the Ministry of Health have given instructions that cases cannot be regarded as cured until the disease has been quiescent for two years and arrested for three years in pulmonary cases, and arrested for three years in non-pulmonary cases. It will also be observed that the number of cases shown as "Lost sight of or otherwise removed from Dispensary Register" is rather high in the "Previous to 1926" column. This is due to the removal from dispensary registers at the end of 1926 of the names of a number of patients who had not been accounted for during previous years and whose names had previously been retained on the registers from year to year. The inauguration of the system of records required by Ministry of Health Memorandum 37/T made it unnecessary to keep these names on the dispensary registers.

During the year the Ministry of Health issued Memorandum 131/T, which gave an analysis of work done during 1926 under the schemes of Local Authorities for the treatment of Tuberculosis as shown by the returns furnished in accordance with Memorandum 37/T.

In order to provide a basis of comparison, the figures given in the Memorandum were classified or were reduced to a common standard, being expressed either as percentages or in proportion to some common factor of particular significance, *e.g.*, the number of deaths from tuberculosis in each area during the year.

Whilst the returns for 1926 were experimental, it is interesting to compare some of the figures for Essex for 1926 with 1927, and the following are useful comparisons:—

	ESSEX.	
	1926.	1927.
Total number of new cases of tuberculosis recorded during the year per 100 tuberculosis deaths ...	274	226
Percentage of all new cases of tuberculosis which were notified on Forms A and B ...	77.0	82.2
Total number of cases of tuberculosis on Register on 31st December for each new case of tuberculosis recorded during year ...	4.5	5.4
Number of cases of tuberculosis on Dispensary Register on 31st December per 100 on Notification Register ...	45	54

	ESSEX.	
	1926.	1927.
Number of "Contacts" examined by the Tuberculosis Officers during the year:—		
Per 100 deaths from tuberculosis ...	47	65
Per 100 new cases of tuberculosis entered on the Notification Register during the year...	17	29
Percentage of contacts examined who were adults ...	32'9	40'6
Number of sputum examinations per 100 "new cases" and "contacts" examined ...	187	216
Number of X-ray examinations per 100 "new cases" and contacts examined ...	15	15
Number of consultations (at homes or otherwise) per 100 deaths from tuberculosis ...	241	318

Medical and Nursing Service.

(a) TUBERCULOSIS OFFICERS. The changes in the medical staff are shown on page 12, and a complete list of the medical staff was given in my Annual Report for 1926.

(b) CONSULTANTS. The County has again had the benefit of the valuable services of Sir Henry J. Gauvain in connection with the diagnosis and treatment of surgical tuberculosis. In addition to seeing patients at his London dispensary Sir Henry has made a convenient arrangement for visiting the Leyton and Walthamstow Tuberculosis Dispensaries periodically to see patients there. He also continues to pay visits to the institutions to which cases suffering from non-pulmonary tuberculosis are sent under the Essex Scheme.

As anticipated, the benefit of having Dr. W. Burton Wood available as County Consultant in cases of pulmonary tuberculosis has been manifest in many ways and fresh improvements in the details of the Tuberculosis Scheme were made during the year. One important result of Dr. Wood's appointment has been the possibility of arriving at an early diagnosis in a number of difficult chest cases, thus enabling the early removal from the County Register of those patients who are not actually suffering from tuberculosis.

(c) TUBERCULOSIS NURSES. Changes in the Tuberculosis Nursing Staff are also shown on page 12. Increased efforts have been made by nurses to visit the homes of patients particularly with a view to encouraging "contacts" to attend the dispensary for examination. Reference has already been made to the increased number of contacts examined during the year, as shown in Table XXI. The equivalent number of whole-time Tuberculosis Nurses was 16½.

Laryngologist.

By arrangement with the authorities at the Victoria Park Hospital, the services of a laryngologist have been placed at the disposal of the Essex County Council.

Patients suffering from laryngeal disease are referred, in the first instance, to Dr. W. Burton Wood at the Victoria Park Hospital, and when necessary he refers suitable cases to Mr. Howarth, the Laryngologist at the Hospital, for special report.

The County Scheme.

Table XXVI shews the Dispensaries and Visiting Stations established in the County as at the end of 1927.

In the Saffron Walden District a Combined Treatment Centre was opened at the Saffron Walden General Hospital. The rooms which had previously been used in the district as a Visiting Station for tuberculosis patients were given up.

At Woodford arrangements have been made for the use of separate rooms in premises used by the Essex Education Committee as a School Clinic for the purposes of a Tuberculosis Dispensary.

CONTACTS. The importance of keeping in touch with the "contacts" of open cases of tuberculosis was mentioned in my last Annual Report. The following scheme has been devised and should be in operation early in 1928 :—

All records relating to contacts will be stamped with the letter "C" and the following steps will be taken to secure a watch over the subsequent career of those who have been exposed to the risk of close contact with the disease :—

(a) *Infants.* When an infant "contact" has been examined and found free from signs of Tuberculosis, the nurse will enter the child's name, age, and address on a special pink card and send this to the local Welfare Centre. The mother will be invited to take the child to see the Child Welfare Officer at the Centre, where the child will be kept under observation until school age is reached. The Child Welfare Officer will make any necessary notes on the pink card. If a mother does not wish her child to attend a Welfare Centre she should be instructed to keep in touch with her own doctor, who should be informed by the Tuberculosis Officer that the child is a "contact."

(b) *School Children.* The same procedure as above will be followed if seen for the first time. When an infant who has been attending the Child Welfare Centre commences school, the pink card will be sent by the Child Welfare Officer to the School Medical Inspector so that it may be attached to the child's school record card.

TABLE XXVI.

DISPENSARIES AND VISITING STATIONS AT 31ST DECEMBER, 1927.

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.	C. Leonard Williams, B.Sc. L.R.C.P., M.R.C.S., D.P.H.
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., D.P.H.
4 CHELMSFORD— General Hospital, London Road	Fridays, 2 to 4 p.m.	J. S. Bradshaw, M.B., Ch.B., D.P.H.
5 CLACTON— Skelmersdale Road	Fridays, 11 a.m. to 12 noon	W. A. Milne, M.B., Ch.B., D.P.H.
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., L.R.C.P., D.P.H.
7 DAGENHAM— 3, Finlymore Road	Thursdays, 10 a.m. to 12 noon and 2 to 4 p.m.	W. L. Yell, M.B., Ch.B., D.P.H.
8 DUNMOW— 47, Stortford Road	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.
9 EPPING— c/o Gas and Electricity Co. Office, High Street	Thursdays, 11.30 a.m. to 1 p.m.	L. S. Fry, B.A., M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.
10 GRAYS— Hilldrop House, 59, London Road	Mondays, 4 to 6 p.m. Thursdays, 2 to 4 p.m.	W. T. G. Boul, M.D., Ch.B., D.P.H.
11 HALSTEAD— 'Out-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.
12 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.
13 ILFORD— 38, Oakfield Road	Mondays, 7.30 to 8.30 p.m. Tuesdays, 3 to 5 p.m. Wednesdays, 10 a.m. to 12 noon. Fridays, 4 to 6 p.m.	W. L. Yell, M.B., Ch.B., D.P.H.
14 LEYTON— 180, High Road	Mondays, 2 to 4 p.m., and 6 to 8 p.m. Tuesdays, 10 a.m. to 12 noon. Thursdays, 10 a.m. to 12 noon, and 2 to 4 p.m. Fridays, 2 to 4 p.m.	P. L. T. Bennett, M.C., M.R.C.S., L.R.C.P., T.D.D., D.P.H.
15 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.
16 ROMFORD— 29, Eastern Road	Tuesdays and Fridays, 9.30 a.m. to 12.30 p.m.	N. E. Chadwick, B.A., M.B., B.Ch., M.R.C.S., L.R.C.P., D.P.H.
17 SAFFRON WALDEN— General Hospital	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.
*18 SOUTHEND— 30, Clarence Street	Wednesdays, 2.15 (Men) 3.15 (Women)	N. S. R. Lorraine, M.D., Ch.B., D.P.H., F.R.S. (Edin.)
19 WALTHAMSTOW— 334, Hoe Street	Mondays, 2 to 4 p.m. Tuesdays, 2 to 4 p.m. Wednesdays, 10 a.m. to 12 noon, and 6 to 8 p.m. Thursdays, 2 to 4 p.m. Fridays, 10 a.m. to 12 noon Saturdays, 10 a.m. to 1 p.m.	J. Sorley, M.A., M.D., D.P.H., L.L.B. M. Barker, M.R.C.S., L.R.C.P., D.P.H.
20 WEELEY— Tendring R.D.C. Offices	Wednesdays, 3.30 to 4.30 p.m.	J. Ramsbottom, M.B., Ch.B., D.P.H.
21 WOODFORD— The Shrubby, High Rd.	Thursdays, 6 to 7 p.m.	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.

At each visit to the school the School Medical Inspector will see all contacts as special cases. At such times the School Medical Inspector will make any notes that are necessary on the pink card.

When considered necessary, information from the Elementary School Medical Inspections could be sent to the Medical Officer inspecting the secondary school to which the child proceeds.

(c) *Adolescents.* When a child leaves school the pink card will be sent back to the Tuberculosis Dispensary. On receipt of such card the Tuberculosis Officer will invite the school leaver to visit the Dispensary for examination. Although the name of the child will not be formally entered on the Dispensary Register the case should be kept under observation until the child commences work.

Many young persons will later have a panel doctor to whom the Tuberculosis Officer might send a note to the effect that the person has been under observation as a tuberculosis contact.

(d) *Adults.* Adult contacts should be asked to revisit the Dispensary at any time should symptoms develop suggesting the possibility of early tuberculosis, *e.g.*, cough, lassitude, loss of weight, etc.

Autonomous Areas. Where the County Council is not the School or Child Welfare Authority, co-operation and consultation with the Officers of the Local Authority will be necessary.

LIGHT TREATMENT. It will be observed from Table XXI on page 66 that during the year 1,079 attendances were made at the Light Departments of London Hospitals. The facilities for the boarding-out of certain patients unable to make the journey daily to London were continued with the approval of the Ministry of Health. Light treatment is also provided for special cases at the Ilford Sanatorium. The treatment, however, is only provided for in-patients at Ilford.

X-RAY FACILITIES. Continued use has been made of the X-ray plants established at various hospitals throughout the County, and special use has been made of the X-ray plant at the Victoria Park Hospital.

DENTAL TREATMENT. The number of patients receiving dental treatment under the County scheme still continues rather low, but as explained in my last Annual Report, this is undoubtedly accounted for by the fact that most approved societies now include the provision of dental treatment amongst their benefits. In addition to the number of patients shown in Table XXI on page 66 as having had dental treatment, there were 39 patients who were found to require dental treatment whilst in institutions, and arrangements were made for this treatment to be given.

The provision of dentures is still a hindrance to some patients accepting dental treatment, but advantage is being taken of the help given to insured patients by Approved Societies. In the case of uninsured patients, these are referred to the Tuberculosis Care Associations and other voluntary bodies.

SHELTERS. During the year there was an average number of 79 domiciliary shelters occupied by patients at their homes.

EXTRA NOURISHMENT. The provision of extra nourishment during the year has been continued and every effort made to ensure that the patients granted extra nourishment came within the classification laid down by the Ministry of Health. An enquiry is also made into the financial circumstances of each patient before any assistance is given under the County Scheme. The amount expended on extra nourishment during the year 1927 was £109 17s. 5d.

TRAVELLING FACILITIES FOR PATIENTS. Necessitous cases have been supplied with free travelling vouchers to enable them to travel to and from sanatoria, etc., and the cost of such vouchers issued during the year 1927 was £118 5s. 4d.

CONTRIBUTIONS BY PATIENTS TOWARDS COST OF TREATMENT. The following scale is used in connection with the assessment of the amount of contribution to be paid by patients or patients' parents towards the cost of institutional treatment:—

Parents' weekly income after deducting 5/- in respect of each parent and each depend- ant member of the household.				Contribution per week.	
Under £1	...	...	...	...	Nil
Exceeding £1 and not exceeding £1 10s.				...	2/-
„ £1 10s.	„	£2	...	...	3/-
„ £2	„	£2 10s.		...	4/-
„ £2 10s.	„	£3	...	...	5/-
„ £3	„	£3 10s.		...	6/-
„ £3 10s.	„	£4	...	...	7/-
„ £4	„	£4 10s.		...	8/6
„ £4 10s.	„	£5	...	...	9/6

The amount received from such sources during the year 1927 was £2,257 12s. 4d.

No contributions are asked from ex-service patients, necessitous cases, and patients who are only in receipt of National Health Insurance Benefits.

CARE ASSOCIATIONS. Table XXVII shows the Care Associations established in the County at the end of 1927, and the help afforded by these Associations throughout the year has been of great value to the County Scheme.

There is urgent need for the formation of such a Tuberculosis Care Association to serve the new London County Council Estate at Dagenham. The district was previously served by the Romford Tuberculosis Care Association, but that Association now finds it impossible to cope with the great increase in the population of the Dagenham area.

TABLE XXVII.

TUBERCULOSIS CARE ASSOCIATIONS IN ESSEX.

(The information given in this Table is in respect to the year ended 31st March, 1928).

Name of Association.	Day and Time of Meetings.	Income including Balance in hand.	Expenditure.		Total No. of Cases assisted.	Nature of Assistance Provided.
			Cases assisted.	Other Items.		
BARKING	Third Tuesday in each month at 8 p.m.	£ s. d. 268 5 10	£ s. d. 151 9 5	£ s. d. 10 15 8	43	Extra nourishment Clothing
CHELMSFORD	Fourth Monday in each month at 7 p.m. (August and December excluded)	355 6 4	260 18 0	51 19 10	53	Extra nourishment Convalescent treatment Rail expenses Employment Loan of appliances
COLCHESTER	Quarterly (no fixed dates)	14 0 8	7 5 0	—	5	Extra nourishment Dentures Clothing
HALSTEAD	Second Tuesday in each month at 2.45 p.m. (Drawn from Central Fund of Halstead Care of Children Committee).	29 11 8	29 8 2	3 6	12	Extra nourishment Dentures
ILFORD	First Thursday in each month at 7.30 p.m.	573 13 6	270 6 2	29 5 4	55	Extra nourishment Clothing, &c. Travelling expenses Air ring
LEYTON	Third Friday in each month at 6.15 p.m.	636 9 9	401 9 8	53 11 8	127	Extra nourishment Convalescent treatment Clothing, &c. Dentures Training in handicrafts Advisory
ROMFORD	Third Friday in each month at 8 p.m.	293 18 6	241 12 5	26 18 7	49	Extra nourishment Convalescent treatment Clothing, &c. Dentures Employment
SAFFRON WALDEN	Fourth Tuesday in each month at 2.30 p.m.	107 18 4	80 9 11	5 9 2	31	Extra nourishment Convalescent treatment Dentures Hire of chair
WALTHAMSTOW	First Friday in each month at 7 p.m.	219 2 1	68 9 9	52 2 4	44	Extra nourishment Convalescent treatment Clothing, &c. Dentures Advisory

I am indebted to Dr. W. Burton Wood for the following report on—

INSTITUTIONAL TREATMENT.

The Ministry of Health divide cases of Pulmonary Tuberculosis which may be recommended for institutional treatment into the following categories:—

Group I. Those in whom there is a reasonable prospect of securing complete arrest of the disease as the result of residential treatment.

Group II. Those with extensive or rapidly progressing disease in whom no material improvement of the condition can be anticipated. These patients may require institutional treatment for purposes of isolation and also to provide them with adequate nursing and medical attention which they cannot obtain at home.

Group III. Cases requiring special observation with a view to the establishment of a definite diagnosis.

Group IV. The large intermediate group of cases which does not fall within either of the first two groups.

Group I. The importance of providing adequate treatment for early cases cannot be over estimated. Pulmonary Tuberculosis is a chronic disease and when once established only prolonged treatment is of any avail. When the home circumstances are favourable a comparatively short period of sanatorium treatment followed by prolonged home treatment may be all that is required, but unfortunately the home circumstances are seldom favourable and therefore prolonged sanatorium treatment is essential. This group includes a large number of adolescent or young adult patients.

(i) In Essex as in the country generally the disease is specially prevalent among young women. Most of the patients admitted to the Black Notley Sanatorium belong to this group and a special effort has been made to secure adequate treatment for these.

Treatment may be considered under two headings (a) General Sanatorium Treatment (b) Special Forms of Treatment. The former is provided at the Black Notley Sanatorium and is supplemented by further periods of sanatorium treatment at institutions on the south coast, including the Eversfield Chest Hospital, the Royal National Sanatorium, Bournemouth, and the Royal National Sanatorium, Ventnor. With reference to the latter, the only striking successes obtained during recent years have been those due to treatment by artificial pneumothorax. Experience obtained all over the world has shown that in suitably selected cases this form of treatment is of the utmost value both in saving and prolonging life. Increasing experience has only added to our knowledge of its efficacy. The absence of adequate X-ray facilities, which are essential for the carrying out of this form of treatment, has led to its neglect in the past and only recently it has been possible

to carry it out at the Black Notley Sanatorium. Since the last report, the X-ray work carried out by Dr. J. Ord Pender Smith, D.M.B.E., at Colchester has been of great value. Under the present arrangements patients recommended for artificial pneumothorax treatment are sent to Colchester for preliminary skiagrams and for such further skiagrams as are required, whilst complicated cases or those presenting special difficulties are transferred to the Victoria Park Hospital and returned to the sanatorium when their condition permits for continuance of artificial pneumothorax treatment. At a later stage such patients are sent to the South coast to complete the treatment there. The provision of an X-ray plant in the new sanatorium at Black Notley will remove the difficulties which at present embarrass this work, but meanwhile, the present arrangements have brought the great advantages of collapse therapy to patients who would otherwise have been debarred from any hope of cure. An analysis of the results of this treatment will be given in a future report, as obviously no final estimate is at present available. A few Essex patients have received Sanocrysin treatment at the Victoria Park Hospital for Diseases of Heart and Lungs.

(ii) The treatment of pulmonary tuberculosis in young adult males presents special difficulties. The long discipline required by sanatorium treatment is apt to be resented and the need for prolonged care misunderstood. Young adult males in this group are admitted to the Harold Court Sanatorium in the first instance, and, after a preliminary period of treatment there, transfer to the Hermitage Sanatorium, Isle of Wight, has been the rule. When the acute stage of the disease is passed, it is essential that suitable occupational therapy should be provided for this class of patient, otherwise the depressing circumstances inevitable to sanatorium life, and the absence of mental stimulus, lead to habits of introspection and deterioration of morale. Occupations designed simply to "fill in time," or to test the patient's resistance, obviously lack interest. Work should be of a nature to provide its own stimulus, and work of this kind can only be obtained at a special institution. Such conditions are provided at the Burrow Hill Colony, and an attempt was made to secure beds at this institution, which combines the advantage of sanatorium treatment with treatment and training in carpentry, gardening, farm work, &c. Unfortunately, the number of young men willing to undergo a course of treatment and training is small. Few patients realise the imperative need for treatment of this kind, and while willing to submit to short periods of sanatorium treatment, are unwilling to undergo the further training which is necessary to fit them for a return to work. Artificial pneumothorax treatment for patients at the Harold Court Sanatorium has been carried out in the first instance at the Victoria Park Hospital, the patients returning to the Harold Court Sanatorium to complete their treatment. The absence of an X-ray plant at Harold Court Sanatorium, or in the immediate vicinity, is the cause of this arrangement.

The extended course of treatment, which is now being given to patients in this group, has been a source of some difficulty. If treatment is to be prolonged, the number of vacancies occurring will correspondingly diminish, and this will necessitate

a long waiting list. The time between notification and admission to sanatoria will not, however, be wasted if the patients remain at complete rest at home. When a separate bedroom is available at home for the patient, the Tuberculosis Officer should insist that the period of waiting should be spent in bed under the care of the private practitioner. When this period of rest is strictly observed, a shorter period of absolute rest will be required after admission to the sanatorium. This will not only diminish the tedium of the rest period for the patient after admission, but will also shorten their actual period of sanatorium treatment—thus relieving the waiting list.

Group II. Male patients suffering from advanced disease have been admitted to the Liverpool Road Hospital, and an average number of 21 beds has been maintained for Essex patients during the year. The Essex County Council is under a great obligation to the Committee of Management and the Medical Superintendent of this Institution for providing excellent accommodation and every possible care for these unfortunate sufferers. Patients are admitted to Liverpool Road Hospital not only in their own interests, but in that of their families, and in very many instances a most dangerous source of infection has been removed from an overcrowded household by this means.

Provision for a similar class of sufferers among women is at present most inadequate, a few beds at the Chingford and Colchester Sanatoria being all that are available. The authorities at St. Columba's Hospital, Swiss Cottage, London, have very kindly set aside six beds at the disposal of Essex women patients, but these are limited to the use of patients who are unlikely to survive for more than a few months. Further provision for female sufferers from advanced disease is urgently required.

Group III. The importance of securing an early and accurate diagnosis of all doubtful cases is obvious. The stigma of tuberculosis should never be attached to any patient without conclusive evidence. Observation beds have been set apart for men at the Harold Court Sanatorium and for women at the Black Notley Sanatorium, while cases presenting special difficulties have usually been sent to my out-patient department at the Victoria Park Hospital, or upon my advice have been admitted to the beds at that Institution. In this connection, also, I have paid several visits to the various Dispensaries in the County to consult with the Tuberculosis Officers.

Group IV. The treatment of patients included in this group is a source of difficulty. The disease, which reveals itself in the middle aged, is frequently characterised by an insidious approach and a prolonged course. Where social conditions are not unfavourable, even advanced pulmonary tuberculosis of this type is compatible with many years of tolerable health and activity. Very few patients of this type could be cured by sanatorium treatment. The most that can be hoped for is a temporary improvement in the general condition, which is almost inevitably followed by a relapse after discharge from the sanatorium. Further in some cases sanatorium treatment seems to remove the last desire of the patient to help himself. It must be admitted, however, that most patients suffering from the disease are incapable of any

except the lightest forms of work, and at a time of trade depression it is impossible for them to find employment. Some of the patients in this group are capable of work provided that the hours of labour are limited, the work light, and the conditions under which it is carried on ideal. The Village Settlements of Papworth Hall and Preston Hall have proved how much may be accomplished under these circumstances. A few Essex patients who had given proof of a suitable mentality have been admitted to these institutions during the year and the latter institution has provided treatment for a number of ex-service men.

The policy carried out under the Essex scheme is to provide a short educational course of sanatorium treatment for patients in this group. During the summer months such a course is not without benefit but the prevalence of fogs in the neighbourhood of Romford during the autumn and winter months limits the usefulness of the Harold Court Sanatorium for a great part of the year for this type of case. The provision of shelters has proved helpful in some cases, whilst the provision of extra nourishment and the philanthropic efforts of the Tuberculosis Care Associations have helped to mitigate suffering patients. It must be admitted, however, that the problem associated with the treatment of the intermediate type of case has not yet been solved. One most important point is the protection of the families concerned. In most cases the danger that threatens the patient himself is less grave than that which threatens his family. So long as the infectious case of pulmonary tuberculosis is allowed to reside at home the danger to the younger generation will remain, and the same problem which baffles the social workers today will remain to trouble their successors.

CHILDREN. In the Annual Report for 1926, attention was drawn to some points in connection with tuberculous infection in childhood and, in particular, to the frequency of infection and to the rarity of overt pulmonary tuberculosis. During the past year a special investigation was commenced with the object of securing more accurate diagnosis of tuberculosis in childhood. Under this scheme children suspected of suffering from pulmonary tuberculosis, but in whom the signs of the disease are equivocal and who remain in poor health despite sanatorium and dispensary treatment, are admitted to the Victoria Park Hospital where a special research is being carried out. This includes the application of all modern forms of diagnosis, clinical, bacteriological and pathological. The results of this investigation which should prove of special interest will be reported at a later date. Meanwhile, full use is being made of the accommodation at the Sible Hedingham Sanatorium and at outside institutions for children suffering from tuberculosis. Special mention should be made of the Church Army Sanatorium, Farnham, to which Essex boys between the ages of 10 and 16 years were admitted during the year. The Medical Superintendent, Dr. Vaile, has shown himself most anxious to co-operate with the County Authorities in providing treatment for these boys. Children suffering from surgical tuberculosis have been sent to the High Beech Hospital and outside institutions as occasion required.

PART III.

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

(1) COUNTY AREA. During the year 1927 the County Council were responsible for administering the above Acts in the following 31 Sanitary Districts:—

Sanitary Districts.	Acreage	Popula- tion, 1921.	No. of Births notified by		No. of Births Unnoti- fied.	Deaths of Infants under 1 year.	Deaths of Mothers	No. of Notifi- cations of	
			Mid- wives.	Doctors and Parents.				Puer- peral Fever.	Oph- thalmia Neona- torum.
Malden B. ...	3,028	6,590	25	63	2	8	...	...	...
Saffron Walden B. ...	7,502	5,874	24	30	...	6	...	1	...
Braintree U. ...	2,224	6,970	94	24	...	3	...	...	...
Brentwood U. ...	460	6,853	71	46	...	2	...	...	1
Brightlingsea U. ...	2,867	4,500	...	47	...	1	...	...	1
Burnham-on-Crouch U. ...	4,517	3,434	11	28	...	1	...	...	...
Canvey Island U. ...	4,400	1,795	32	32	...	5	...	...	...
Chingford U. ...	2,808	9,482	62	120	29	12	1	1	...
Epping U. ...	1,420	4,196	21	47	2	3	...	...	...
Frinton-on-Sea U. ...	422	3,032	...	7	...	1	...	...	...
Halstead U. ...	647	5,923	28	50	...	1	...	...	...
Hornchurch U. ...	6,783	10,891	81	121	22	16	1	...	...
Shoeburyness U. ...	1,036	6,413	108	33	...	6	...	...	1
Walton-on-the-Naze U. ...	2,046	3,664	...	42	...	2	...	...	...
West Mersea U. ...	3,185	1,908	5	31	1	5	...	...	...
Witham U. ...	3,713	3,717	63	18	...	3	...	...	...
Wivenhoe U. ...	1,564	2,329	17	15	...	...	...	...	...
Belchamp R. ...	26,500	4,219	30	18	...	3	1	...	...
Billericay R. ...	49,394	24,211	301	189	13	39	3	1	2
Braintree R. ...	62,349	18,779	185	127	1	15	1	1	...
Bumpstead R. ...	11,874	2,376	15	12	...	2	...	...	2
Dunmow R. ...	73,503	15,352	127	84	12	10	...	...	1
Epping R. ...	59,055	14,625	123	61	12	13	1	...	...
Halstead R. ...	38,712	9,743	30	59	...	6	...	...	...
Malden R. ...	82,342	16,479	109	119	...	12	2	1	4
Ongar R. ...	47,236	10,054	67	107	...	10	...	...	...
Rochford R. ...	56,603	21,068	258	323	18	24	1	...	...
Romford R. ...	16,381	9,467	116	118	5	13	2	2	1
Saffron Walden R. ...	59,975	10,087	65	22	...	11	...	...	...
Stansted R. ...	22,954	6,828	47	35	5	5	1	2	...
Tendring R. ...	73,131	21,721	191	193	2	9	...	1	1
Totals ...	702,631	272,580	2,306	2,227	124	247	14	10	14

The Ministry of Health issued an Order, dated 8th December, 1926, making the County Council the Authority under the Notification of Births Acts in the Hornchurch and West Mersea Urban Districts and the Romford Rural District, to take effect from 1st January, 1927.

(2) MEDICAL STAFF. Alterations in the Medical Staff are shown on page 12. In November, 1927, Dr. Bradshaw, who is the Combined Medical Officer in the Witham Urban District, relieved Dr. M. D. Rankine of the duties of Medical Officer of the Heybridge Child Welfare Centre.

The arrangements for the attendance of an Orthopædic Surgeon (Mr. B. Whitechurch Howell, F.R.C.S.), at Clinics, at a fee of £3 3s. per session plus travelling expenses, were continued for a further period ending 31st March, 1929.

(3) **NURSING STAFF.** When the County Council were made the Authority under the Notification of Births Acts in the Hornchurch Urban and Romford Rural Districts on 1st January, 1927, Mrs. Fawcett, the Health Visitor, previously employed by the local Councils, was transferred to the County Staff.

The Nursing Service in Braintree and Dunmow was considered during the year, and authority was given for the appointment of an additional Health Visitor from 1st January, 1928.

On 31st December, 1927, the Health Visitors carrying out Child Welfare work for the County Council numbered as follows :—

Whole-time (also undertaking School and Tuberculosis duties)	22	} Equivalent whole-time H.V. for C.W. = $8\frac{1}{2}$.
Whole-time (part time C.C. and part time L.A.) ...	1	
Part-time (ex District Nurse)... ..	1	

During the year the County Council and the Essex County Nursing Association agreed that an Assistant Chief Health Nurse and Assistant County Superintendent should be appointed. Miss Ethel A. Davieson, who commenced duty on 2nd January, 1928, was appointed to the post.

The District Nurse-Midwives continued to assist the Health Visitors as far as possible, particularly in connection with the remedial side of the public health work. It counts for a great deal in preventive medicine when the district nurse is on the side of the Health Authority. The small sum paid to the Nursing Association for assisting in public health duties is abundantly justified.

A summary of the work undertaken during the twelve months ended 31st December, 1927, is given in Table XXVIII.

(4) **CHILD WELFARE CENTRES.** Table XXIX shows the Child Welfare Centres under the County Council's Scheme. It will be seen that ten new Centres were established and four others included in the Scheme. The Scheme of establishing Child Welfare Centres by the formation of Local Voluntary Committees has worked very well on the whole. The financial arrangements seem to be quite satisfactory, as most of the Centres record an increased working balance at the end of 1927.

For particulars regarding Combined Treatment Centres see page 59 of this Report.

In the following parishes having a population of more than 2,000, a Child Welfare Centre has not yet been established :—

District.	Population.	District.	Population.
Frinton ...	... 3,032	Great Dunmow	... 2,506
Walton ...	... 3,664	Felsted ...	... 2,089
Wivenhoe...	... 2,329	Chigwell ...	... 2,943
Great Coggeshall	... 2,300	Shenfield ...	... 2,604

At all the above, with the exception of Frinton and possibly Walton, it is likely that Child Welfare Centres will be required within the next two years. In addition, such places as the following may possibly reach a population shortly which would justify their having a Centre:—Kelvedon (1,547), Thaxted (1,596), North Weald (1,239) and Eastwood (1,822).

TABLE XXVIII.

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

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. ..	133	8	—	156	526	1933	526	2089
Bumpstead & North Halstead & Belchamp R. ..	85	4	99	1086	438	1364	537	2450
Halstead U. & South Halstead & Belchamp R. ..	148	5	36	1074	325	820	361	1894
Wivenhoe U. and West Mersea U. ..	63	5	40	603	303	445	343	1048
Tendring West & Brightlingsea U. ..	214	9	68	845	846	2203	914	3048
Tendring East & Frinton U. ..	213	2	37	889	307	417	344	1306
Walton-on-Naze U. (part-time H.V.)	38	4	48	553	—	—	48	553
Stansted & Dunmow (S.W.) ..	117	1	6	400	552	1048	558	1448
Dunmow (part) ..	165	10	—	219	789	1503	789	1722
Braintree U. & R. (North) ..	201	7	69	900	373	962	442	1862
Braintree R. (South) & Witham U. ...	294	9	7	1217	728	1126	735	2343
Epping U. & R. (part) ..	224	4	—	414	846	1564	846	1978
Ongar Rural ..	169	5	104	954	309	472	413	1426
Burnham U. & Maldon R. (South) ..	98	1	20	876	431	846	451	1722
Maldon B. & Maldon R. (S.W.) ..	125	7	—	1179	—	381	—	1560
Maldon R. (North) ..	121	3	39	846	305	454	344	1300
Chingford U. ..	181	1	15	656	—	—	15	656
Chigwell Parish ..	24	—	4	85	69	162	73	247
Romford R. (part) ..	100	8	7	448	59	141	66	589
Hornchurch U. & Romford R. (part)	289	7	19	1641	—	—	19	1641
Brentwood U. part Billericay R. and Romford R. (part) ..	233	5	4	535	760	928	764	1463
*Billericay R. (part) ..	309	13	7	838	381	530	388	1368
Rochford R. (part) & Shoeburyness U.	462	12	102	2191	543	617	645	2808
Rochford R., Canvey Island U. and Billericay (part) ..	388	9	38	1055	207	435	245	1496
Totals ..	4394	139	769	19660	9097	18351	9866	38011

*This portion of the Billericay Rural District was without a Health Visitor for practically the whole of the last three months of the year.

TABLE XXIX.

Name and Address of Centre.	Approximate population served.	Sessions.	Total attendances of infants and children in 1927.	Medical Officer.	Annual Maintenance Grant.
Abridge, Parish Room ...	1244	Alternate Wednesdays	323	E. U. Vawdrey	£ s. d. 7 10 0
Belchamp St. Paul, Gages Farm (opened 12th May, 1927)	607	2nd and 4th Thursdays	120	J. S. Ranson	3 0 0
Billericay, Women's Institute Hall	4000	2nd and 4th Tuesdays	799	W. Harvey	20 0 0
Bocking, Village Hall...	2000	2nd and 4th Thursdays	352	M. D. Rankine	10 0 0
Braintree, Congregational Chapel, London Road	6970	Tuesdays ...	1490	M. D. Rankine	30 0 0
Brentwood, Congregational Sunday Schools, South Street	6853	Alternate Fridays ..	1138	W. Harvey	20 0 0
Brightlingsea, New Church Schools	4500	1st and 3rd Wednesdays	534	W. A. Milne	20 0 0
Burnham-on-Crouch, The Institute (opened 21st Feb., 1927)	5900	1st and 3rd Mondays ...	328	Florence Harvey	20 0 0
Canvey Island, Whitter Hall ..	4000	3rd Wednesdays ...	352	N. S. R. Lorraine	20 0 0
Chingford (South) Hampton Road Congregational Church Rooms	6000	Tuesdays ...	1196	M. Barker.	30 0 0
Chingford (North). 6, King's Road	6000	Thursdays ...	1355	M. Barker.	20 0 0
Debden, Memorial Hall ..	1214	4th Wednesdays ...	219	S. R. Richardson	5 0 0
Earls Colne, Village Hall ...	2732	1st and 3rd Wednesdays	142	J. S. Ranson	15 0 0
Epping, Women's Institute Hall, St. John's Road	4196	Tuesdays ...	1520	A. Watney	20 0 0
Hadleigh, Church School ...	2246	1st and 3rd Tuesdays...	833	N. S. R. Lorraine	10 0 0
Halstead, Technical School ...	5923	2nd and 4th Thursdays	917	J. S. Ranson	20 0 0
Harlow, Women's Institute Club...	3200	2nd Fridays ...	125	M. Gazdar	5 0 0
Hatfield Heath, Men's Institute ...	1564	4th Fridays ...	161	M. Gazdar	5 0 0
Hatfield Peverel, Village Hall ...	1600	1st and 3rd Thursdays	715	M. D. Rankine	7 10 0
Heybridge, Waring Hall ...	2200	1st Tuesdays ...	214	J. S. Bradshaw	10 0 0
Hornchurch, Church Hall, Park Lane (taken over by County Council, 1st January, 1927)	9727	Alternate Mondays ...	798	C. R. Brown	C.C. Centre
Laindon, Manor Hall ...	3000	2nd and 4th Wednesdays	353	W. Harvey	15 0 0
Maldon, Progressive Club ...	6590	Fridays ...	1001	M. D. Rankine	20 0 0
Matching Tye, Women's Institute Hall	500	3rd Fridays ...	130	M. Gazdar	5 0 0
Ongar, Council Schools, Chipping Ongar (opened 28th April, 1927)	5631	2nd and 4th Thursdays	266	W. Harvey	20 0 0
Parkeston, Wesleyan Schoolroom, Garland Road	2000	Alternate Tuesdays ...	231	J. Ramsbottom	10 0 0
Pitsea, St. Michael's Hall, Rectory Road (opened 4th April, 1927)	7000	2nd and 4th Mondays	389	W. Harvey.	20 0 0

TABLE XXIX—continued.

Name and Address of Centre.	Approximate population served.	Sessions.	Total attendances of infants and children in 1927.	Medical Officer.	Annual Maintenance Grant.
Radwinter (opened 11th May, 1927)	600	2nd Wednesdays	102	S. R. Richardson	5 0 0
Rainham, Social Hall (taken over by County Council 1st Jan., 1927)	2196	Alternate Thursdays	575	C. R. Brown	C.C. Centre
Ramsden Heath, Club Room, Leslie Cottage, Downham	1342	1st Thursdays	123	W. Harvey	7 10 0
Rayleigh, Memorial Hall (opened 8th November, 1927)	4000	2nd and 4th Tuesdays	57	N. S. R. Lorraine	20 0 0
Rivenhall, Church Hall, (opened 7th November, 1927) and at The Canteen, Silver End	1200	1st and 3rd Mondays	44	M. D. Rankine	7 10 0
Rochford, Congregational Rooms	5076	2nd and 4th Mondays	800	N. S. R. Lorraine	20 0 0
Saffron Walden, Central Hall, High Street	5874	Fridays	1302	S. R. Richardson	20 0 0
Sheering, Parish Room	778	1st Fridays	100	M. Gazdar	5 0 0
Shoeburyness, Council Offices	6413	1st and 3rd Thursdays	833	N. S. R. Lorraine	20 0 0
Heddinghams Assembly Hall, Sible Heddingham & Women's Institute, Castle Heddingham	2723	1st Tuesdays and 3rd Tuesdays	452	J. S. Ranson	15 0 0
South Benfleet, Baptist Church (opened 4th April, 1927)	5000	1st and 3rd Mondays	184	N. S. R. Lorraine	20 0 0
Stansted, Central Hall	3184	1st and 3rd Wednesdays	595	S. R. Richardson	15 0 0
Steeple Bumpstead, Lecture Hall	1784	1st and 3rd Wednesdays	205	J. S. Ranson	10 0 0
Terling, Red Triangle Hut (opened 5th October, 1927)	1250	1st and 3rd Wednesdays	65	M. D. Rankine	7 10 0
Theydon Bois, Sorrell Room	1267	Fridays	454	W. F. Erskine	5 0 0
Thundersley, Church Schools	1972	1st and 3rd Fridays	477	N. S. R. Lorraine	10 0 0
Tollesbury, Parish Room	1721	2nd Mondays	228	M. D. Rankine	10 0 0
Upminster, St. Lawrence Hall (taken over by County Council 1st January, 1927)	3559	Alternate Fridays	719	C. R. Brown	C.C. Centre
Great Wakering, Village Hall	2584	2nd and 4th Thursdays	400	N. S. R. Lorraine	12 10 0
Warley, Parochial Hall, Brentwood	5974	Alternate Fridays	885	W. Harvey	12 10 0
Weeley, Public Health Offices	4000	1st and 3rd Fridays	94	J. Ramsbottom	C.C. Centre
West Mersea, Church Hall (under County Council Scheme from 1st January, 1927)	1696	2nd Wednesdays	215	W. H. Alderton	10 0 0
Wickford, Mission Hall	2030	Last Monday in month	296	W. Harvey	10 0 0
Witham, Church House, Collingwood Road	3717	2nd & 4th Wednesdays	408	M. D. Rankine	20 0 0
Great Yeldham, Reading Room (opened 17th March, 1927)	1000	1st and 3rd Thursdays	50	J. S. Ranson	5 0 0

Those areas with populations of less than 2,000 not already served by Child Welfare Centres will have to adduce special circumstances, *e.g.*, rapidly growing population, to justify any claim to have a Centre. In this connection it should be remembered that the chief expenditure on Centres from the County Council's standpoint is the cost of the medical and nursing staff, as it usually means taking the whole of an afternoon session. Wherever possible, other work, such as school inspection, is arranged during the earlier part of the day, but this is only possible to a limited extent. The suggestion that the doctor need only attend once a month, and the Health Visitor at the intervening sessions is not satisfactory since, as far as possible, the doctor should be present at each session.

(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 were slightly amended and brought up to date during the year.

(a) *Districts served by Child Welfare Centres.* The total amount claimed from the County Council by Child Welfare Centres was £272 19s., representing assistance to 176 families.

(b) *Districts not served by Centres.* Under this scheme 185 mothers and 75 infants were granted supplies of cows' milk and dried milk for varying periods, free of charge, at a total cost of approximately £360 13s. 9d.

Dried milk was also supplied at cost price to Child Welfare Centres and persons recommended by the Health Visitor.

Careful enquiries are made into the financial circumstances of each family, and every effort made to check the means from the employers. Every endeavour is made to avoid overlapping with the Board of Guardians and Voluntary Bodies.

The Ministry of Health have deducted a considerable sum from the amount set aside for the provision of milk during the coming financial year 1928-29, and have made the following observations in this connection :—

“ In order that the net expenditure for this purpose may be kept within that amount, the Minister is of opinion that the Council should reconsider the procedure adopted in dealing with applications for milk with a view to securing strict observance of the following conditions ” :—

- (i) Milk should be supplied by the Council at less than cost price *solely on medical grounds*, and should not be supplied to applicants who are already in receipt of Poor Law relief. Applicants whose circumstances are such that they can only be dealt with adequately through the machinery of the Poor Law should be referred to the Guardians.
- (ii) Every applicant for milk should be seen in the first instance by the Medical Officer of Health or the Medical Officer of a Centre, and no application for milk should be considered by the Council or the

appropriate Committee of the Council, unless the Medical Officer furnishes a certificate that a supply is essential on grounds of health. Such a certificate should be given only in those cases in which the Medical Officer is satisfied that the health of the mother or child will suffer unless a supply of milk is provided by the Council. (iii) The scale of income adopted by the Council for the supply of milk at less than cost price should be revised in order to bring it into accord with the fall in the index figure of the cost of living since the scale was framed. (iv) The Council should satisfy themselves that they are obtaining their supplies of milk, whether liquid or dried, at prices which bear adequate relations to the quantities of milk distributed by them."

(6) DENTAL SCHEME. The Scheme outlined in the Report for the year 1925 was continued. It is to be regretted that more use was not made of the facilities for dental treatment, but education of the mothers will eventually overcome many of the objections at present put forward when dental treatment is recommended.

A recommendation is at present being made to the County Council that they should contribute to Voluntary Committees of Child Welfare Centres 75 per cent. of their expenditure on provision of dental treatment instead of 50 per cent. as hitherto.

The County Medical Officer has been asked to discuss with the Ministry of Health the question of removing the restriction in regard to Nursing Mothers with children under one year of age, so that mothers in the child bearing period who have children up to about three years of age can receive treatment under the Scheme.

(7) HOME HELPS. Only one Child Welfare Centre (Brightlingsea), made application for assistance in regard to the provision of a home help in a necessitous case.

(8) PUBLIC HEALTH (NOTIFICATION OF PUERPERAL FEVER AND PUERPERAL PYREXIA) REGULATIONS, 1926. Reference was made in last year's Report to the appointment of an Obstetric Specialist, and for an experimental period (twelve months ending 31st March, 1928), arrangements were made with Frances Mabel Huxley, M.D., Ch.B., B.Sc., Surgeon, South London Hospital for Women, &c., of 4, Harley Street, W1. (Phone No. Langham 2033), on the the following terms:—

(a) *Consultations.* £3 3s. per case, plus £2 2s. for time occupied in travelling, together with travelling expenses at the rate of 1s. per mile for cases outside a radius of ten miles from Charing Cross.

					£	s.	d.
(b) <i>Operations.</i>	Minor operations	...	...	...	2	2	0
	Major	..	...	...	*5	5	0

*The Ministry of Health have not approved the fee of £5 5s., but are willing to consider each case as it arises.

During the year 1927, an Obstetric Specialist was called in on three occasions in respect of the following patients:—

- (a) *Mrs. H., Chingford*, notified as suffering from Puerperal Pyrexia. Obstetric Specialist suggested intra uterine injections, &c., which proved successful.

There was a history of profuse vaginal discharge and a culture from uterus showed the presence of Staphylococci only. The patient recovered.

- (b) *Mrs. B., South Weald*, notified as suffering from Puerperal Pyrexia. Removed to local hospital. Obstetric Specialist operated on Mrs. B., drained the abdomen, taking a specimen of the free fluid for pathological examination. It was a generalised septic peritonitis—uterus well involuted. The prognosis was very bad. Patient subsequently died.

- (c) *Mrs. W., Coggeshall*, notified as suffering from Puerperal Pyrexia. Very difficult to diagnose and Obstetric Specialist did not think it was an ordinary case of Puerperal Sepsis.

Arrangements have been made with the following hospitals for the admission of patients suffering from Puerperal Fever and Puerperal Pyrexia:—

Hospital.		Per patient per week.
Chelmsford and Essex	...	£3 3s.
Romford Isolation	...	£2 5s., plus ambulances, 1s. 6d. per mile.
M.A.B. Hospitals (including Margaret's)	St.	10s. 6d. per day, per patient, plus out-of-pocket expenses incurred by the Board.
Addenbrooke's Hospital, Cambridge	...	7s. per day.

One patient was admitted during the year under these regulations, the County Council paying the whole of the cost, amounting to £2 6s. 8d.

Arrangements have been made with the Essex County Nursing Association for the provision of skilled nursing in the homes of patients when the circumstances render the removal of the patient to hospital difficult or impossible.

During the year ended 31st December, 1927, copies of notifications made by medical practitioners were received from Medical Officers of Health in the Administrative County as follows:—

Puerperal Fever	...	45
Puerperal Pyrexia	...	88

(9) PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS, 1926. As foreshadowed in my report for 1926, arrangements were made by the County Council with the Essex County Nursing Association for the provision of skilled nursing in the homes of patients in accordance with the above Regulations when the circumstances render the removal of the patient to hospital difficult or impossible.

Further negotiations took place in regard to the provision of suitable hospital accommodation for such patients, and at the end of the year the position was as follows:—

Hospital.	Per patient per week.
Chelmsford & Essex ...	£1 1s.
Romford Isolation ...	£2 5s. plus ambulance, 1s. 6d. per mile.
M.A.B. Hospitals (including ... St. Margaret's).	10s. per day per patient, plus out-of-pocket expenses incurred by the Board. Mothers to be charged for in addition at the same rate, i.e., 10s. per day, &c.

During the year ended 31st December, 1927, the notifications of Ophthalmia Neonatorum made by medical practitioners received from Medical Officers of Health in the Administrative County numbered 78.

(10) HOSPITAL TREATMENT FOR MATERNITY PATIENTS. The arrangements with certain hospitals for the admission of the following types of maternity patients were continued:—

- (a) Complicated or difficult cases of confinement where hospital treatment is essential.
- (b) Cases of confinement where, in the opinion of the Medical Attendant, the patient cannot with safety be confined in her own home.

The following Table shows the hospitals taking part in this scheme, and the weekly maintenance cost. Of this amount the patients are asked to contribute according to their means. The County Medical Officer is also authorised, where necessary, to engage an ambulance to convey the patient to the hospital. During the year five patients were admitted under this scheme at a cost of £35 4s., the amount recovered being £6 4s.:—

Hospital.	Charge per patient.
Essex County Hospital, Colchester...	£2 15s. per week and £2 2s. Surgeon's fee per patient.
Queen Mary's Hospital, Stratford ...	7s. per day. Hospital recover maternity benefit.
Chelmsford & Essex Hospital ...	£1 1s. per week.
Witham Maternity Ward ...	5s. per day. £1 1s. Midwifery fee.
Addenbrooke's Hospital, Cambridge	7s. per day.

(11) **TREATMENT OF ORTHOPÆDIC PATIENTS.** As indicated in the Report for 1926, the Public Health and Education Committees have instructed the Medical and Nursing Services Joint Sub-Committee to carry out a scheme for the treatment of orthopædic patients of school age in the County Education area, and of children under five years of age where the County Council is the Authority under the Notification of Births Acts.

Reference is made on page 82 to the arrangement with an Orthopædic Surgeon, and from July, 1927, a definite arrangement was also made with Miss M. Kirby, Orthopædic Sister, for attendance at Ascertainment Clinics.

Early in 1927 the following scheme was approved for the financial year 1927-28:—

“The Committee have recommended that arrangements be made for a period of twelve months for the attendance of Mr. B. Whitchurch Howell, F.R.C.S., at sessions arranged for the treatment of children suffering from orthopædic conditions at a fee of not exceeding £3 3s. per session, plus suitable travelling expenses.”

“(i) *Register.* A card is being prepared for each patient so that the County Register can be commenced. The card will show whether the child comes under the heading of ‘Child Welfare’ or ‘Education Committee.’”

“(ii) *Ascertainment and Inspection Clinics* will be held as often as may be found necessary at the following Centres, and others as required:—

Braintree	Halstead
Brentwood	Harwich District
Chelmsford District	Maldon
Clacton	Rochford District
Colchester District	Romford
Dagenham	Saffron Walden
Epping	Stansted
Grays	Woodford ”

“(iii) *Institutional Treatment.* Arrangements with the Committees of the Brookfield, Heatherwood and Cheyne Hospitals, and also with the Queen’s Hospital for Children, Bethnal Green, will be continued. On the present estimates an average of 9 beds can be kept occupied.”

“(iv) *Appliances.* These will only be sanctioned when recommended by the Orthopædic Surgeon and approved by County Medical Officer. As far as possible the appliances will be paid for by the patients or through other voluntary sources.”

“(v) *Treatment Centres.* Patients who have attended a Hospital for a course of treatment will attend at the Clinics mentioned in paragraph (ii) for further treatment. Adequately equipped Treatment Centres will be

necessary, commencing in the larger centres of population, such as Grays and Woodford. The Assistant County Medical Officer for the district will generally supervise at these Centres."

"An efficient and qualified Orthopædic Sister or Masseur will be necessary to carry out the Surgeon's advice and treatment at such Centres."

"The assistance of a voluntary clerk and the Health Visitor will also be necessary."

"At Grays and Woodford the Treatment Centres would be open as required, whilst in other less populous areas, two or three times a week would be sufficient."

"On the application of autonomous Child Welfare or Education Authorities, arrangements may be made for the attendance at County Council Ascertainment and Treatment Centres of children from such areas, subject to suitable terms being arranged with the approval of this Sub-Committee."

"Arrangements for X-ray examinations will be made. It is desirable, in order to avoid delay, that the Committee should permit the County Medical Officer to arrange for patients to have X-ray examinations when required, provided the estimates are not exceeded and the cost per examination is not above £1 1s."

"The County Committee will consider the making of an annual grant to approved Centres conducted under voluntary auspices."

(vi) *Estimate of Expenditure.*

	£
Fees, &c., of Orthopædic Surgeon ...	200
„ Masseur or Orthopædic Sister ...	170
Treatment, including Institutional, X-ray, Clinics and Centres, Expenses of Patients, Grants, &c.	1,000
Appliances and repairs	100
Equipping two Treatment Centres, at say £65 each	130
	£1,600 "

NOTE.—The existing arrangements for the treatment of tuberculous patients holds good (see page 72), although at some future date they will be more closely linked with the non-tuberculous orthopædic patients.

Orthopædic After-Treatment Centres. In October, 1927, the Committee approved generally of the following scheme, and instructed the County Medical Officer to submit specific proposals:—

“(i) *Treatment Centres.* Negotiations are already in progress with the British Red Cross Society for the establishment of centres at Epping and Woodford, and in addition it is recommended that Centres be established at the following:—

Proposed Centre.	Approximate Number of Cases on Registration in Locality.			Suggested Premises.
Grays ...	...	40	...	Quarry Hill School, Grays.
Romford ...	...	50	...	29, Eastern Road, Romford.
Chelmsford...	...	40	...	Chelmsford School Clinic.
Colchester ...	...	60	...	Borough Clinic, Colchester.”

“This is by no means a complete list, and further Centres will be recommended at a later date.”

“It is difficult to lay down at this stage a definite number of weekly sessions at each Centre. The average number of sessions per week at each Centre will be three, lasting from 1—2 hours each.”

“The rate of payment suggested for the Orthopædic Masseuses (part-time) is 3s. per half-hour.”

“(ii) *Premises.* The premises used will be the rooms already in use at School Clinics or Child Welfare Centres. Little adaptation will be required, but certain equipment will be necessary. It is estimated that the minimum amount of equipment will cost approximately £35.”

“Most of the qualified Masseuses in the County have private rooms and equipment, but it would not be satisfactory to send patients to their private rooms as a routine practice.”

“(iii) *Staff.* The Centre would be run under the general supervision of the Assistant County Medical Officer, who will be responsible for following up the advice of the Orthopædic Surgeon respecting massage and remedial treatment.”

“[NOTE. It will be understood that the Assistant County Medical Officer does both School and Child Welfare work in most instances].”

“Miss Kirby, the Orthopædic Sister, will visit each Centre in order to co-ordinate the work in addition to accompanying Mr. Whitchurch Howell as at present.”

“(iv) *Local Voluntary Assistance.* Full use will be made of any Voluntary Bodies available, e.g., local branches of the British Red Cross Society, Care of Children Committees, &c.”

"(v) After the first examination by the Orthopædic Surgeon on discharge from hospital, patients will be placed under the care of the Assistant County Medical Officer who will be responsible for the visits by the Health Visitors, and supervision of massage and other necessary treatment."

"(vi) A record card in respect of each child will be kept at the Treatment Centres. On this card will be entered details of each follow-up visit carried out by the Assistant County Medical Officer or Health Visitor."

"(vii) The Health Visitor will follow the instructions of the Assistant County Medical Officer giving special attention to the appropriate care of apparatus supplied (*e.g.*, boots, &c.)."

"(viii) A report on each child will be transmitted to the County Medical Officer at least once every six months for submission to the Committee."

Arising out of the adoption of the foregoing proposals, the County Medical Officer was authorised to arrange for Masseuses to act at After-treatment Centres at a cost of not exceeding 3s. per half-hour, assisted by voluntary helpers.

At the time of writing, After-Care Clinics have been established at Grays (in conjunction with the Urban District Councils of Grays and Tilbury), Woodford (in conjunction with the local branch of the British Red Cross Society) and at Romford. Similar Clinics will be established at Chelmsford and Colchester in the near future.

The following Table indicates the number of examinations of County Council patients made at Orthopædic Clinics during the year 1927, the number recommended for hospital treatment during the year, and the waiting list at the end of 1927:—

TABLE XXX.

No. of Cripples examined.		No. who received Hospital Treatment, 1927, under County Council Scheme.		No. recommended for Hospital Treatment at the end of 1927.	
School.	C.W.	School.	C.W.	School.	C.W.
291	41	27	5	52	2

(12) GENERAL. I am indebted to Dr. Mary D. Rankine for the following report on the general aspect of the Maternity and Child Welfare work in the County area during the year under review:—

In making a general survey of the Child Welfare work in this County during the past year, there are various points to be considered.

In the first place it is essential that there should be a sufficient number of well trained midwives, and as I have inspected all those who are in my areas during the year, I have been satisfied that, in most cases, they have been carefully trained, and that they are doing extremely good work. It seems to me, however, that in some cases they might do more to urge attendances at our Welfare Centres and Ante-Natal Clinics. The midwife usually gets the first chance, and a great deal depends on her as to whether or not the mother will attend the Welfare Centre after the midwife leaves off attending her. In the same way, it is one of the midwife's important duties to try and persuade the expectant mother to attend an ante-natal clinic: it is for her to explain the object of this, and to overcome gradually any objections.

There are still some areas in which there is no resident midwife. This ought to be remedied as soon as possible as the disadvantages are obvious.

It would be a good thing, too, if arrangements could be made for the provision of home helps; in some cases these are an absolute necessity. It is difficult to obtain such help locally, and equally difficult in many cases for the women to pay for such. In such cases a woman not only has the strain of her confinement, but the worry and direction of household matters as well, and she often gets up out of bed too soon out of sheer necessity.

In this connection many women, on account of poverty or low wages, have difficulty in providing the necessary outfit for the confinement. It would be a great help, and also it would relieve the anxiety of the midwife or doctor as to cleanliness, etc., if the provision could be made by the Authorities in necessitous cases.

It would be desirable that this class of patient should be confined in a Maternity Home, but sufficient beds are not available and, in any case, it is often inconvenient for the woman to leave her home, so it is necessary that as far as possible things should be made easy for her there.

During the last year several new Centres have been opened and more are still necessary, especially in the remote rural areas, where distance from a doctor, and often inability to pay for medical advice, result in great disadvantages to the health of the mother and growing child.

The Ante-Natal Clinics should, as a rule, be held at a different session hour from the ordinary Child Welfare Clinic. There is very little time in the larger Centres to combine the two, and there is also a difficulty to persuade expectant mothers to mix with others at a Welfare Centre. A proper routine examination of the expectant mother is an absolute necessity, and in those cases

where any abnormality is discovered, the opinion of a Specialist is desirable. As it is difficult to get this actually at a Clinic, it would probably be necessary for the woman, if possible, to attend at an Obstetric Hospital, help being given to pay the fare, and also that of the Midwife, who in most cases would accompany her.

The Welfare Centres are being much more appreciated, though of course there are still many who do not attend. I find that the attendances increase in proportion to the amount of home visits carried out by the Health Visitors and Midwives. Some of our Health Visitors have so many other duties to perform, that they cannot give as much time to this part of the work as I would like.

Talks are given either by the Health Visitor or myself at all my Centres, and I think these are appreciated by the mothers.

The provision of milk has also been a great help to nursing and expectant mothers. Careful investigation into the family circumstances has been made in each case before granting this. I think it would be an advantage if we could continue the milk at least up to the age of eighteen months, as in many cases the toddlers do not get sufficient milk.

Convalescent Homes for mothers and children are also needed, and I am sure would be taken advantage of, especially in the summer months.

The dental treatment at the Clinics has also been appreciated, although it is still hard work in some cases to persuade the mothers to have this. During last year a number of cases were treated, and in every case there was an improvement in the health of the mother or child. One woman who had been ailing in health gained fourteen pounds in weight within twelve months after she had dental treatment. It is desirable that this treatment should be extended to all mothers who attend the Centres, if they are in need of such: at present the scheme is only for nursing and expectant mothers.

We have, however, had some of the others treated at the special reduced rates charged for Clinic mothers, they themselves paying the fees.

In addition to the routine inspection of midwives, all cases of discharging eyes, rise of temperature, deaths of mothers or infants have been investigated and reported on. It is a great help to the doctor, and benefit to the patient, that all cases of puerperal fever can now have the chance of an Obstetric Specialist's advice.

During the last sixteen months, I have been inspecting Maternity Homes in various parts of the County, with a view to registration. The class of Home must necessarily vary with the district in which it is situated, but I have paid special attention to the sanitation, cleanliness, size of the room or rooms, and satisfactory equipment.

I do not think that any Home should be registered, unless there is a trained midwife in charge. The Homes should be re-inspected every three or four months, even though it takes a considerable amount of time. It is important that a high standard should be maintained.

The Maternity and Child Welfare Service in the County is undoubtedly making progress, although more remains to be done.

(Signed) M. D. RANKINE.

(13) **HEALTH EXHIBITIONS.** Great importance is attached to the value of educational work in connection with Maternity and Child Welfare, and one of the best means of arousing the interest of the people in health education appears to be the holding of Health Exhibitions in the various districts.

The Central Council for Infant and Child Welfare have an excellent travelling Exhibition, consisting of Illustrated Lectures, Exhibits, Plays, &c., and the following Child Welfare Centres arranged to have this Exhibition, the County Council making a grant towards the payment of any deficit :—

- (a) *Halstead.* 14th and 15th June, 1927. About one hundred people attended at the opening. There were several sections, *i.e.*, Ante-Natal, Dental, Post-Natal, Special Garments for Babies, Diet, Clean Milk, Sunshine, &c.
- (b) *Brentwood and Warley.* 15th and 16th June, 1927. This was a great success, and the Hon. Secretary stated—"We have already seen some of the practical results, and it has brought new members."
- (c) *Braintree.* 1st December, 1926. The County Medical Officer attended and formed a very high opinion of the Exhibition. It was a great success and the mothers were exceedingly interested.

The Braintree and Bocking Child Welfare Centres also arranged a Film Exhibition on the 30th November. Mothers attended from the surrounding Centres at Hatfield Peverel, Terling and Witham, and the Picture Palace was full. The County Council gave a grant towards the deficit.

(14) **REPORT OF CHIEF HEALTH NURSE.** The Chief Health Nurse (Miss D. M. Landon), has furnished the following report in connection with her duties during 1927 :—

Health Visiting.

The position of the Health Visitors compared with the teachers is so unsatisfactory that until some fairer standard of salary, superannuation and holidays is set for the whole country, on the lines of the Burnham scale, it is useless to expect sufficient qualified women of the right type to take up the work of health visiting. A very large proportion of the general

public still quite fail to realise what a long and arduous training the Health Visitor has to undergo before she is qualified for her post, or that her value to the community is quite as great as that of the school teacher. Considering these disadvantages, I think we are fortunate in our Health Visitors in Essex as all are conscientious and some show marked ability.

The work in the rural areas, owing to the difficulty of transport, is often very arduous, and so little visible result and encouragement are obtained. In the past, my time has been so limited that I have not been nearly as useful to the Health Visitors as I should like to have been, but now with Miss Davieson's able assistance I hope that the standard of the Health Visitors will steadily improve.

Teaching at Infant Welfare Centres is nearly always a great difficulty, chiefly owing to lack of accommodation and facilities. An exhibition at Headquarters from which sections and posters could be sent out to assist in the teaching at various Centres would be helpful.

The Post-Graduate Courses which two Health Visitors have attended annually have been much appreciated by those seniors who have had the privilege to attend. If possible, an annual course at Chelmsford might be held, at which a larger number could attend; this would also stimulate interest and would be of practical value to the Health Visitors.

The Health Visitors' Annual Conference is always very much appreciated, and this stimulates enthusiasm and makes isolated workers feel that their difficulties are not unique and are shared and understood by the County Medical Officer and a large body of fellow workers.

Midwives.

Number of inspections	...	...	...	164
Number of special investigations	...	...	...	68

The interesting and instructive course of four midwifery lectures given by Dr. M. Blair, the cost of which was generously paid for by the County Council was generally appreciated, and between 60 and 70 midwives attended each lecture.

The standard of midwifery appears to be well maintained, and with the longer training of the younger midwives, the ante-natal work should increasingly improve. Of the special investigations, I am glad to say none were of a sufficiently serious nature to be reported to the Central Midwives Board, and in the greater number the midwives were in no way to blame.

District Nursing.

The work of the Training Home has been carried out efficiently and economically under Miss Rose Clark, the Matron.

During the year 1927 the Essex County Nursing Association opened a new wing to the Training Home to provide better accommodation for the District Nurses and an up-to-date ante-natal department.

This is facilitating the ante-natal teaching at the Home, which I think is now quite thorough and up to date.

Miss Ford, the Midwifery Sister, has proved herself an excellent teacher, and every nurse who entered for the 1927 C.M.B. examination passed.

With a few exceptions, the work in the districts appears to have been carried on in a very satisfactory manner, but I regret that I have been able to do so little routine inspection of the practical work owing to lack of time. With Miss Davieson's appointment, this will be in a very large measure remedied. It is a most important branch of the work, and no examination of outfits and records can take the place of actually seeing the midwives carrying out their duties.

(Signed) D. M. LANDON.

(15) BIRTHS AND DEATHS REGISTRATION ACT, 1926. This Act came into force on the 1st July, 1927, and requires registration of all still-births by Registrars of Births and Deaths. A still-birth is defined as follows:—

“ ‘ Still-born ’ and ‘ still-birth ’ shall apply to any child which has issued forth from its mother after the twenty-eighth week of pregnancy and which did not at any time after being completely expelled from its mother, breathe or show any other signs of life.”

Section 7 of the Act requires the relatives or other persons when registering the still-birth to deliver to the registrar a certificate signed by the registered medical practitioner or a certified midwife who was in attendance at the birth or had examined the body, that the child was not born alive. If no such certificate can be produced a statutory declaration must be made that no registered medical practitioner or certified midwife was present and that the child was not born alive. In such cases it is recommended that enquiries should be made in order to ascertain whether there are any suspicious circumstances attaching to the case. Such enquiries could very well be made by the Health Visitor employed by the Child Welfare Authority in the area concerned.

As and from the date above-mentioned the bodies of still-born children must not be buried in a burial ground until the certificate of the registration of the still-birth has been obtained from the registrar.

By Circular 802b, dated August, 1927, the Minister of Health gives a definite warning that the bodies of still-born children born in maternity homes and other

institutions must not be cremated by burning in the hospital furnace or incinerator, a practice which has developed in certain institutions. The Minister draws the attention of those concerned to the effect of Section 8 of the Cremation Act, 1902, and to Regulation 3 of the Cremation Regulations providing that no cremation of human remains shall take place except in a crematorium of the opening of which notice has been given to the Secretary of State.

MATERNAL MORTALITY.

In 1924 the Ministry of Health issued a report by Dame Janet Campbell dealing with the problem of maternal mortality and the means to be taken to bring about a reduction in this mortality. The report showed that out of approximately 700,000 mothers in England and Wales giving birth to children each year, approximately 3,000 per annum died in childbirth, in addition to which a very much greater number were permanently injured or invalided in the process. It was also shown that maternal mortality had not declined proportionately in the same degree as the death rates from all other causes of women of reproductive ages. Dame Janet suggested that the chief means to bring about an improvement in the position were (a) more exact knowledge of the causation of puerperal fever, earlier notification of its occurrence, and careful inquiry into every fatal case, (b) an improved medical and midwifery service, (c) provision of ante-natal and post-natal supervision, (d) more maternity beds to be available in homes, hospitals, etc., and (e) the education of the public.

A further report by Dame Janet Campbell, entitled "The Protection of Motherhood," dated October, 1927, has been received, and it is disappointing to read that "there is no reduction to report in the mortality rate in childbirth, and no evidence of decreased invalidity subsequently." The number of mothers who die in childbirth continues to be approximately 3,000 per annum (*i.e.*, one in every 250 mothers in childbirth), while the stillbirth rate remains at about 3 per cent. of registered live births. Since 1924 considerable improvement has been effected in the environment and personal habits of the people, the training of medical students and midwives, the provision of hospital beds, and the ante-natal and post-natal supervision of mothers. Despite this, the failure to bring about any improvement in maternal mortality shows that the problem is an obscure and perplexing one. It would seem that we must continue to concentrate our efforts in the following directions, *viz.* :—(a) bacteriological research into the cause of puerperal fever, (b) carrying out of the Public Health (Puerperal Fever and Puerperal Pyrexia) Regulations, 1926, including the provision of the services of an Obstetric Specialist, skilled nursing, &c., (c) increased attention to the ante-natal and post-natal hygiene, (d) increasing the number of maternity beds available in hospitals, homes, &c., and (e) an efficient and sufficient midwifery service.

It should be the aim of a complete maternity service to secure to every woman such assistance as is needed to ensure her a safe journey through pregnancy, a well conducted labour with a minimum of danger to herself and her child, and careful nursing and post-natal supervision.

On the 28th February, 1928, a National Conference was held in London of representatives from various Women's Organisations and Health Societies. Sir George Newman, Chief Medical Officer of the Ministry of Health, and Dame Janet Campbell, one of the Senior Medical Officers at the Ministry were present, when resolutions were passed, including the following :—

(a) "That steps should be taken to obtain a medical enquiry into every maternal death due to childbirth."

(b) "That action should be taken in every area to induce all Local Authorities to make their maternity services adequate."

(a) The mere mention of a medical enquiry into every maternal death at childbirth has been construed by many people as an indictment of the medical profession. It ought not to be necessary to give this suggestion a complete denial, but it has caused so much uneasiness that in Circular 888 the Minister has felt it incumbent on him to explain that the real object of this medical enquiry is to obtain a mass of information hitherto not available as to the cause of death in a large number of cases of maternal mortality. It is obvious that only a medical officer of experience and not engaged in private practice could carry out these difficult and delicate enquiries, and then only will it be possible with the utmost goodwill and assistance of all parties. There is already some evidence to show that one effect of this publicity in respect to maternal mortality is that allegations as to carelessness and incompetence on the part of doctors and midwives will be made and have to be met. This may have the unfortunate result of making maternity work still less popular on the part of doctors and midwives.

(b) *Adequate Maternity Service.* The gracious message from Her Majesty the Queen at the above-mentioned meeting went to the heart of the question. Her Majesty advised that our policy should be to educate all mothers, particularly in the ante-natal period, further research into the cause of maternal mortality and provision of a better service of doctors and midwives.

Dr. Fairbairn held that the midwife is the basis of the edifice for combating maternal mortality. He thought that apart from the question of improved training of midwives, the most important factors are (1) payment, (2) pension, and (3) promotion.

The public and the profession are apt to look on the midwife as they did twenty years ago, but the situation is now altogether altered, and if midwives of the right type are to be attracted and retained in the work, there is no question that the three P's. above will have to be fully and carefully considered and met.

Amongst other bodies the British Medical Association have considered this matter in detail and full resolutions are being put forward at their next annual meeting.

The following Table shows the number of maternal deaths in the Administrative County of Essex each year since 1920 :—

	1927.	1926.	1925.	1924.	1923.	1922.	1921.	1920.
CAUSES OF MATERNAL DEATHS—								
<i>Urban—</i>								
Puerperal Sepsis	20	14	6	16	15	11	19	27
Other accidents of pregnancy and parturition ...	23	22	22	22	28	23	28	27
<i>Rural—</i>								
Puerperal Sepsis	4	4	6	5	1	7	—	7
Other accidents of pregnancy and parturition ...	9	10	15	8	12	15	5	19

MIDWIVES AND MATERNITY HOMES ACTS, 1902-1926.

(a) MIDWIVES AND MATERNITY HOMES ACT, 1926. Details were given last year of the provisions of this Act. The County Council delegated their powers under this Act to the Public Health Committee and adopted bye-laws on the lines of the model bye-laws issued by the Ministry of Health. At the end of December, 1927, thirty-five Maternity Homes were registered under Part II. of the Act, the premises, staff, &c., of each Home having been inspected by a member of the County Council's medical staff and found satisfactory.

Acting on advice the Public Health Committee declined to register any premises as a Maternity Home where a medical practitioner or a certified midwife was not available to attend every confinement, and insisted on there being a certified midwife to carry out the subsequent nursing of the patient. In several instances applicants whose staffing arrangements were not considered satisfactory in this respect have made arrangements with a local certified midwife and on giving the County Council an undertaking to continue such arrangements the premises have been registered.

The inspections of the premises for which applications for registrations were made were carried out chiefly by Dr. Mary D. Rankine, whose conclusions are given on pages 96 and 97.

(b) PRACTISING MIDWIVES. During the year under review 334 midwives notified their intention to practise in the Administrative County. Of these, 300 were actually in practice at the end of the year 1927. 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.
300	...	158	...	115	...	27

The total number of births which occurred during the year 1927 in the Administrative County was 16,661, and of these, 7,346 (44.09 per cent.) were attended by midwives in the capacity of a midwife, and 2,288 (13.73 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 1927, and it was found that 119 trained and 9 *bona-fide* midwives attended 10 or less cases each; 65 trained and 4 *bona-fide* attended 11—20 cases each; 31 trained and 5 *bona-fide* attended 21—40 cases each; 15 trained and 3 *bona-fide* 41—60 cases each; 12 trained and 4 *bona-fide* 61—100 cases each, and 10 trained and 2 *bona-fide* midwives attended over 100 cases each. These figures do not include cases attended by 21 midwives in maternity homes at Leytonstone, Ilford, Walthamstow and Barking.

(c) HANDYWOMEN. Chiefly through the medium of the Health Visitors and local Registrars information is obtained in regard to births attended by uncertified women. Whenever sufficient evidence is forthcoming the whole of the facts are placed before the Committee with a view to proceedings being taken. During the year 1927 reports were received regarding 15 cases of confinement attended by seven women who were not certified and who acted as midwives without being under the direction and personal supervision of the doctor. Particulars were subsequently forwarded to the Clerk of the County Council and in respect to two of these women legal proceedings were taken, one being fined £2 10s. or 14 days' imprisonment and the other was bound over in the sum of £10 for 12 months in each of the two offences. It is not always possible to obtain the necessary information in regard to the attendance of a handywoman, and there is considerable difficulty in getting sworn statements from the patients and other persons.

The reproach is often made against the Public Health Service by lay persons and sometimes by medical practitioners that effective steps are not taken to prevent the employment of handywomen. Unfortunately the legal position renders it exceedingly difficult to do so as a matter of practice. The most effective method of stopping the handywoman is by general practitioners discouraging or even refusing to attend patients unless a certified midwife or trained nurse is employed to do the actual nursing.

(d) NOTIFICATIONS. The following list shows the number of notifications received from certified midwives in accordance with the rules of the Central Midwives Board during the year as compared with the previous four years:—

	1923.	1924.	1925.	1926.	1927.
Records of Medical Aid ...	1025	1144	1309	1492	1592
Records of Still-birth ...	109	100	124	127	122
Deaths of Mothers ...	1	*10	*6	*2	*6
Deaths of Infants ...	5	*33	*47	*54	*39
Artificial Feeding ...	43	54	75	62	51
Liability to be a source of Infection	37	58	49	86	†165
Laying-out for Burial...	181	180	229	256	261
Ophthalmia Neonatorum or Dis-					
charging Eyes ...	71	62	89	112	142

†This figure includes all cases of high temperature.

*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 mother or child, whether a doctor is in attendance at the time of death or not. Hence the increased number of notifications since 1924, as compared with the year 1923.

The 1592 cases (21·6 per cent.) where midwives sought the assistance of doctors, were for various reasons, namely:—

Albuminuria...	24 cases.	Phimosis ...	28 cases.
Contracted Pelvis ...	8 „	Phlebitis ...	3 „
Dangerous Feebleness of		Placenta Adherent ...	70 „
Infant ...	34 „	Placenta Prævia ...	8 „
Eclampsia ...	2 „	Premature Birth ...	44 „
Hæmorrhage:—		Prolonged Labour ...	250 „
Ante-partum ...	45 „	Presentation (abnormal) ...	124 „
Post-partum ...	38 „	Pyrexia (High Temp.) ...	79 „
Hydramnios ...	7 „	Ruptured Perineum ..	307 „
Instrumental Assistance	3 „	Spina Bifida ...	4 „
Malformation of Child ...	14 „	Thrombosis ...	1 „
Miscarriage, Abortion ...	83 „	Uterine Inertia ...	36 „
Miscellaneous Causes ...	226 „	Pemphigus Neonatorum or	
Ophthalmia Neonatorum or		Spots on Infant ...	11 „
Discharging eyes ...	143 „		

RULES OF THE CENTRAL MIDWIVES BOARD. The Central Midwives Board revised the rules, to take effect from 1st January, 1927. The most important revision was in Rule E. 1, which made it compulsory for a midwife to keep notes of her antenatal visits on the Form approved by the Board.

This Ante-natal Record Form is somewhat complicated, and the general opinion seems to be that without post-graduate training in an institution few of the older midwives will be able to complete the whole of the Form correctly, particularly in connection with abdominal measurements and examinations.

Apart from making ante-natal records of visits compulsory, Rule E. 1 does not clearly indicate that the midwife shall conduct adequate ante-natal supervision, and therefore it is extremely difficult to make abdominal examinations compulsory.

Probably the best way of meeting the difficulties is the establishment of ante-natal clinics to which midwives could refer their cases for medical examination.

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 1927, in six cases of discharging eyes, the rules of the Central Midwives Board were not properly carried out. Two of the midwives were interviewed by the Chairman of the Maternity and Child Welfare Sub-Committee and cautioned. Warning letters were sent to the remainder. In one case of high temperature a letter of caution was sent to the midwife for not observing the rules.

Pemphigus Neonatorum.

All suspected cases of Pemphigus occurring in a midwife's practice are investigated with a view to seeing that every possible precaution is taken to prevent a spread of the disease.

Enquiries were made into 20 cases, of which 13 were considered to be Pemphigus, *i.e.*, Barking 1, Dagenham 1, Ilford 3, Maldon R.D. 2, Tilbury 2, Walthamstow 4.

One midwife was interviewed by the Chairman of the Maternity and Child Welfare Sub-Committee and cautioned in respect to a patient where she had not called in medical assistance for a condition which subsequently proved to be Pemphigus Neonatorum.

Inspection Visits.

Eight hundred and four (804) routine visits were made to midwives during the year, and of these 572 were undertaken by Assistant County Medical Officers and 232 by the Chief Health Nurse.

Written cautions were sent to 11 midwives for minor infringements of the rules other than those referred to in the paragraph relating to Puerperal Fever and ophthalmia neonatorum. No midwives were reported to the Central Midwives Board during the year.

Doctors' Fees.

In accordance with the Midwives Acts, during the year ended 31st December, 1927, the County Council paid the sum of £1,545 5s. as fees to medical practitioners and recovered from patients during the year the sum of £397 5s. 6d.

The following comparative Table is of interest, shewing (a) the number of medical aid notices received from midwives during the past five years, and (b) the corresponding number of doctors' claims made against the County Council in respect of such notices. This Table shows that the numbers are steadily increasing:—

Year.	No. of Medical Aid Notices received from Midwives.			Percentage of Confinements attended by Midwives.		No. of Medical Aid Notices for which Doctors' claim have been received.		Total amounts of claims.			Amounts recovered from parents.		
								£	s.	d.	£	s.	d.
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
1926	...	1,492	...	20'5	...	789	...	1,323	2	3	...	346	16 9
1927	...	1,592	...	21'6	...	1056	...	1,545	5	0	...	397	5 6

Lectures to Midwives.

In addition to the syllabus of lectures arranged at the usual Centres in the County by the Essex Midwives Association, a special course of lectures in Chelmsford was held in April, 1927. Dr. Mary Blair gave the lectures as follows, which were greatly appreciated by the 60 to 70 midwives who attended each lecture:—

- i. Ante-natal care—Diseases arising during pregnancy, viz. : Toxæmia, etc.
- ii. Ante-natal care—Conditions discoverable during pregnancy and affecting labour.
- iii. Emergencies of labour.
- iv. Feeding of the new-born infant.

This course was so successful that it has been decided to hold a similar course in 1928.

The Hon. Secretary reported that "the lectures were exceedingly good and most eagerly enjoyed by the midwives."

Essex County Nursing Association.

(a) GENERAL. For the four quarters of the year 1927, 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	...	1,810	0	0
(b) Maintenance of two Emergency Nurses	...	200	0	0
(c) Grants to affiliated District Nursing Associations†	...	5,314	9	0
(d) Equipping District Nurse-midwives for new areas	...	135	0	0
(e) Clerical and organising expenses	...	220	0	0
		£7,679	9	0

†This includes £2 paid for each Association and which is retained by the County Nursing Association under the revised agreement referred to in my previous report.

During the year the County Council also paid the sum of £265 9s. 11d. in respect of the Association's deficit for the year ended 31st March, 1927.

(b) DISTRICT NURSING ASSOCIATIONS. At the end of 1927 the number of District Nursing Associations in the Administrative County which were affiliated to the County Nursing Association and which employed 162 Nurses, was as follows:—

No. of affiliated D.N. Associations.	No. undertaking Midwifery and District Nursing.	No. performing District Nursing duties only.
147	133	14

A summary of the visits made by the District Nurses belonging to affiliated Associations during the past five years is given below:—

	1923.	1924.	1925.	1926.	1927.
Midwifery	... 24,729	... 23,742	... 28,468	... 25,721	... 29,089
Maternity	... 27,181	... 26,433	... 26,932	... 28,355	... 27,445
District General	...161,492	...164,607	...179,412	...185,296	...184,577
„ Tuberculosis	3,009	4,232	4,374	4,526	4,674
Health Visiting	... 12,230	... 13,967	12,704	13,813	13,937 pre-natal
			15,631	19,465	22,008 post-natal
Home Visits (School Children)	... 4,839	... 5,970	... 7,830	... 7,525	... 8,879
Total No. of visits	...233,480	...238,951	...275,351	...284,701	...290,609

Of the 147 affiliated Associations, 138 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	... 315

TABLE XXXI.

BIRTHS, DEATHS, ANNUAL RATES, &c., 1927.

SANTIAL DISTRICT	Population.				Registrar-General's figures.		Deaths at Various Ages (Figures supplied by Medical Officers of Health.)										ANNUAL RATES PER 1,000 OF ESTIMATED POPULATION.																																																																																																																																																																																																																																																																																																																													
	Area (sq. m.)	Estimated 1927 for		Deaths at all ages	Deaths under 15 years	Deaths under 5 years	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and under 15	15 and 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The figures in Cols. 9-12 are given by the Registrar-General. The figures in Cols. 13-17 are given by the Registrar-General. The figures in Cols. 18-21 are given by the Registrar-General. The figures in Cols. 22-25 are given by the Registrar-General.

TABLE XXXI.

NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK RATES, 1928.

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(Figures obtained from the Weekly Notification Returns.)

SANITARY DISTRICTS.	Estimated Population 1928.	SCARLET FEVER.		DIPHTHERIA.		ENTERIC FEVER.		PUERPERAL FEVER.		PUERPERAL PYREXIA.		ERYSIPELAS.		OPHTHALMIA NEONATORUM.		TUBERCULOSIS, RESPIRATORY.		OTHER TUBERCULAR DISEASES.		PNEUMONIA.		ENCEPHALITIS LEPTORRHOIC.		ACUTE POLIO-MYELITIS.		SMALL-POX.		VARI- OUS.		TOTAL.	
		No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	No.	No.	No.	No.	No.				
URBAN.																															
BARKING	40870	246	6.02	104	2.54	4	0.09	2	0.05	6	0.15	26	0.64	15	0.37	67	1.64	25	0.61	74	1.81	...	...	...	...	...	...	...	...	...	
BRAINTREE	8298	14	1.69	2	0.24	...	...	...	...	...	...	4	0.48	...	...	15	1.81	4	0.48	4	0.48	...	...	...	...	...	...	...	...	575	
BRIGHTLINGSEA	7629	30	3.93	17	2.23	2	0.26	1	0.13	1	0.13	4	0.52	...	...	5	0.66	3	0.39	3	0.39	...	...	...	...	...	...	...	...	43	
BUCKHURST HILL	5496	16	2.91	9	1.64	...	...	...	...	...	...	1	0.23	...	...	8	1.86	3	0.70	16	3.71	...	...	...	...	...	...	...	...	65	
BURNHAM ON-CROUCH	3619	8	2.21	5	1.38	...	...	...	...	...	...	1	0.18	4	0.73	...	...	1	0.18	2	0.36	...	...	...	...	...	...	...	...	35	
CANVEY ISLAND	6509	9	1.38	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0.28	...	...	...	...	...	...	...	...	...	...	...	
CHELMSFORD B.	23689	55	2.32	48	2.03	7	0.29	4	0.17	5	0.21	4	0.17	...	...	1	0.15	...	...	10	1.54	...	...	...	...	...	...	...	...	23	
CHINGFORD	17170	73	4.26	7	0.47	2	0.14	...	...	...	...	...	...	...	...	19	0.80	6	0.25	14	0.59	...	...	...	...	...	...	...	...	23	
CLACTON-ON-SEA	13289	26	1.70	6	0.39	2	0.13	1	0.06	6	0.39	12	0.78	...	...	10	0.68	3	0.20	7	0.47	...	...	...	...	...	...	...	...	164	
COLCHESTER B.	48630	48	0.99	10	0.21	88	1.81	2	0.04	5	0.10	29	0.60	...	...	11	0.72	5	0.33	12	0.78	...	...	...	...	...	...	...	...	116	
DAGENHAM	67500	340	5.04	213	3.16	2	0.03	12	0.18	10	0.15	15	0.22	...	...	38	0.78	16	0.33	66	1.36	...	...	...	...	...	...	...	...	396	
EPFING	1370	22	4.10	12	2.23	...	...	...	...	...	...	...	...	...	...	61	0.90	50	0.74	144	2.13	...	...	...	...	...	...	...	...	873	
FRINTON-ON-SEA	2165	6	2.77	...	...	...	...	...	...	...	...	...	...	...	...	12	2.23	2	0.57	34	6.33	...	...	...	...	...	...	...	...	...	
GRAYS	18070	41	2.27	109	6.03	1	0.05	...	...	...	...	...	...	...	...	22	0.92	1	0.46	...	...	...	...	...	...	...	...	...	...	...	
HALESTAD	5874	18	3.06	4	0.68	...	...	...	...	...	...	...	...	...	...	22	1.22	4	0.22	11	0.61	...	...	...	...	...	...	...	...	...	
HARWICH B.	11830	11	0.93	11	0.93	1	0.08	3	0.25	1	0.08	2	0.17	...	...	6	1.02	6	1.02	8	1.36	...	...	...	...	...	...	...	...	...	
HORNCHURCH	15799	41	2.60	17	1.08	1	0.06	1	0.06	2	0.13	5	0.32	...	...	7	0.39	5	0.42	3	0.25	...	...	...	...	...	...	...	...	...	
ILFORD B.	113700	499	4.40	259	2.28	30	0.26	7	0.06	10	0.09	31	0.27	...	...	7	0.44	4	0.25	4	0.25	...	...	...	...	...	...	...	...	...	
LEYTON B.	130200	381	4.45	339	2.59	5	0.04	8	0.06	12	0.09	47	0.36	...	...	120	1.06	35	0.31	90	0.79	...	...	...	...	...	...	...	...	1091	
LOUGHTON	6787	9	1.33	1	0.15	...	...	...	...	...	...	...	...	...	...	141	1.08	32	0.24	88	0.67	...	...	...	...	...	...	...	...	...	
MALDON B.	6662	43	6.46	5	0.75	1	0.15	...	...	...	...	...	...	...	...	5	0.75	5	0.75	7	1.05	...	...	...	...	...	...	...	...	...	
ROMFORD	26580	67	2.51	37	1.39	2	0.07	5	0.18	2	0.07	8	0.30	...	...	26	0.97	12	0.45	10	0.37	...	...	...	...	...	...	...	...	...	
SAFFRON WALDEN B.	5561	29	5.23	15	2.71	...	...	...	...	...	...	...	...	...	...	2	0.35	...	...	...	...	...	...	...	...	...	...	...	...	...	
SHOREHAM	6255	6	0.96	14	2.24	...	...	...	...	...	...	...	...	...	...	7	1.12	2	0.32	10	1.50	...	...	...	...	...	...	...	...	...	
TILBURY	18100	39	2.15	112	6.19	1	0.22	2	0.11	2	0.11	7	0.39	...	...	1	0.16	...	...	...	...	...	...	...	...	...	...	...	...	...	
WALTHAM HOLY CROSS	7084	20	2.82	4	0.56	...	...	...	...	...	...	...	...	...	...	25	1.38	6	0.33	13	0.72	...	...	...	...	...	...	...	...	...	
WALTHAMSTOW	122400	750	6.13	275	2.25	1	0.01	5	0.04	7	0.06	45	0.37	...	...	6	0.85	5	0.70	8	1.13	...	...	...	...	...	...	...	...	...	
WALTON-ON-THAMES	3040	9	2.96	...	...	...	...	...	...	...	...	...	...	...	...	133	1.09	34	0.28	153	1.25	...	...	...	...	...	...	...	...	...	
WANSTEAD	17410	65	3.73	9	0.52	1	0.06	1	0.06	1	0.06	8	0.46	...	...	3	0.99	...	...	1	0.33	...	...	...	...	...	...	...	...	...	
WEST MERSEA	2216	1	0.45	...	...	...	...	...	...	...	...	...	...	...	...	9	0.52	2	0.11	10	1.09	...	...	...	...	...	...	...	...	...	
WIDMERE	4342	9	2.07	6	1.38	...	...	...	...	...	...	...	...	...	...	2	0.50	...	...	...	...	...	...	...	...	...	...	...	...	...	
WIVENHOE	2282	4	1.75	...	...	...	...	...	...	...	...	...	...	...	...	3	0.69	...	...	...	...	...	...	...	...	...	...	...	...	...	
WOODFORD	22100	64	2.90	36	1.63	1	0.04	1	0.04	2	0.09	4	0.18	...	...	21	0.95	5	0.23	46	2.08	...	...	...	...	...	...	...	...	...	
	809140	3194	3.99	1691	2.11	155	0.19	57	0.07	86	0.11	292	0.36	68	0.08	798	1.00	280	0.35	869	1.09	12	11	16	27	7556	9.29	1743	2.11	155	
RURAL.																															
BELCHAMP	4158	2	0.48	...	...	...	...	...	...	...	...	...	...	...	...	6	1.44	2	0.48	1	0.24	...	...	...	...	...	...	...	...	...	...
BILLCAMP	35929	82	2.28	18	0.50	3	0.08	2	0.06	3	0.08	7	0.19	...	...	38	1.06	16	0.44	12	0.33	...	...	...	...	...	...	...	...	...	...
BRAINTREE	20150	87	4.32	5	0.25	...	...	...	...	...	...	...	...	...	...	21	1.04	7	0.35	23	1.14	...	...	...	...	...	...	...	...	...	...
BUMPSTEAD	2384	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0.44	4	1.76	1	0.44	...	...	...	...	...	...	...	...	...	...
CHELMSFORD	28140	56	1.59	47	1.67	1	0.03	1	0.03	1	0.03	4	0.4	...	...	20	0.71	3	0.11	9	0.32	...	...	...	...	...	...	...	...	...	...
DUNFORD	15370	45	2.93	1	0.06	1	0.06	...	...	...	...	...	...	...	...	9	0.59	1	0.06	19	1.24	...	...	...	...	...	...	...	...	...	...
EPFING	16850	43	2.55	27	1.60	3	0.18	...	...	...	...	...	...	...	...	6	0.36	8	0.48	21	1.25	...	...	...	...	...	...	...	...	...	...
HALESTAD	9910	40	4.04	12	1.21	...	...	...	...	...	...	...	...	...	...	10	1.01	4	0.40	...	...	...	...	...	...	...	...	...	...	...	...
LEXDEN AND WINSTREE	18250	22	1.20	5	0.33	1	0.05	1	0.05	2	0.11	4	0.22	...	...	8	0.44	2	0.11	8	0.44	...	...	...	...	...	...	...	...	...	...
MALDON	16610	32	1.93	5	0.30	4	0.24	1	0.06	...	...	...	...	...	...	15	0.90	6	0.36	8	0.48	...	...	...	...	...	...	...	...	...	...
ONGAL	19360	43	4.16	14	1.55	...	...	...	...	...	...	...	...	...	...	2	0.19	2	0.19	13	1.26	...	...	...	...	...	...	...	...	...	...
ORSETT	26720	59	2.58	118	4.42	4	0.15	...	...	...	...	...	...	...	...	15	0.96	2	0.07	4	0.15	...	...	...	...	...	...	...	...	...	...
ROCHFORD	31200	52	1.67	19	0.61	11	0.35	3	0.10	2	0.06	5	0.19	...	...	21	0.67	14	0.45	31	0.95	...	...	...	...	...	...	...	...	...	...
ROMFORD	13680	66	4.82	51	3.73	4	0.29	1	0.07	2	0.15	...	...	...	...	12	0.88	2	0.15	5	0.22	...	...	...	...	...	...	...	...	...	...
SAFFRON WALDEN	9610	20	2.08	7	0.73	...	...	...	...	...	...	...	...	...	...	8	0.83	2	0.23	...	...	...	...	...	...	...	...	...	...	...	...
STANSTED	6838	29	4.24	8	1.17	...	...	...	...	...	...	...	...	...	...	6	0.88	2	0.29	...	...	...	...	...	...	...	...	...	...	...	...
TENDRING	23470	47	2.00	5	0.21	2	0.08	...	...	...	...	...	...	...	...	15	0.64	8	0.34	15	0.64	...	...	...	...	...	...	...	...	...	...
	289490	740	2.56	343	1.18	35	0.12	10	0.03	16	0.05	65	0.22	11	0.04	213	0.74	85	0.29	168	0.58	6	2	1	48	1743	2.11	155	0.19	57	
TOT. RURAL & URBAN DISTRICTS	809140	3194	3.99	1691	2.11	155	0.19	57	0.07	86	0.11	292	0.36	68	0.08	798	1.00	280	0.35	869	1.09	12	11	16	27	7556	9.29				

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