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ADMINISTRATIVE COUNTY OF ESSEX.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH


FOR THE YEAR 1923.

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

COUNTY MEDICAL OFFICER OF HEALTH.

Chelmsford :

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- Part I. Vital Statistics and General Matters.
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 Part IV. Maternity and Child Welfare.
 Part V. Statistical Tables.

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 Fifth Annual Report for the Administrative County for the year 1923. This is the 34th Report which has been issued and at the request of the Ministry of Health it is devoted, in the main, to summing up of the year's work for which the County Council is primarily responsible. As in former years the report is divided into five parts as follows :—

- Part I. Vital Statistics and General matters.
- Part II. Combined Medical Service.
- Part III. Tuberculosis.
- Part IV. Maternity and Child Welfare.
- Part V. Statistical Tables.

Essex is to be congratulated upon its death-rate of 9·8 per 1,000 which is the lowest ever recorded, and which is 1·8 lower than the rate for England and Wales. Thirty-three years ago the Essex death-rate was 15·7, which when compared with 9·8 shows that the County is now saving lives at the rate of 5,500 per annum. Essex is, undoubtedly, a healthy County.

As regards the birth-rate (18·5), this is only 0·1 lower than the previous year. The outstanding feature, however, is the extremely low Infantile Mortality rate of 69 (England and Wales 69), whereas in the year 1890 it was 127, and in 1900 it reached the high figure of 143. One hesitates to attribute this enormous saving of infant lives to any particular branch of the public health service, but it is significant that with the improvement of the child welfare service there has been contemporaneous a rapid fall in the number of deaths of infants under one year of age. Child Welfare Centres, voluntary workers, doctors and health visitors must consequently feel well repaid for the excellent work which they are carrying out throughout the County.

Part III. of the Report records the activities in connection with the County Scheme for the diagnosis and treatment of Tuberculosis. The urgent need for the establishment of Care Associations is felt at Walthamstow, Grays, Tilbury, Braintree, Rochford and Tendring, where cases are constantly arising in which the practical sympathy of such an Association would be of inestimable value. No County Scheme is adequate unless it is supported by a network of these voluntary associations which are already performing such splendid work in seven centres in the County.

As regards the general health services in Essex, there has been an appreciable improvement in the sanitary environment, and the greatest need is that every individual shall so live in accordance with hygienic principles that he or she can take full advantage of the progress of sanitary science. The Elementary Schools are the

obvious means to this knowledge, and it is hoped that physiology, botany, hygiene, and kindred subjects will become normal parts of our school curriculum and not regarded as a kind of exotic stunt. In the meantime, voluntary agencies of various kinds, the press, doctors and health visitors, all carry on the good work of bringing light to them that sit in dark places.

I desire, again, to record my high appreciation of the co-operation and counsel of yourself and members of the Committee during my fifth year of office. My thanks are also due to my predecessor, Dr. John C. Thresh, who has continued to assist as Honorary Consultant in County Public Health matters. I am also indebted to the Medical Officers of Health and other officials of Local Sanitary Authorities for their co-operation, and to the medical, dental, nursing and clerical staffs for their loyal services.

I am especially indebted to my Chief Assistant (Dr. T. P. Puddicombe) and to my Chief Clerk and Sanitary Inspector (Mr. A. Marsh) for their loyalty and help.

W. A. BULLOUGH,

County Medical Officer.

PUBLIC HEALTH DEPARTMENT,
PRUDENTIAL BUILDINGS,
DUKE STREET,
CHELMSFORD.

15th September, 1924.

PART I.

TABLE I.

GIVING RECORD OF RECEIPT OF ANNUAL REPORT FOR 1923 FROM EACH
LOCAL MEDICAL OFFICER OF HEALTH.

| Sanitary Districts. | Medical Officer of Health. | Date Annual Report received. |
|---------------------|----------------------------|------------------------------|
| <i>Urban—</i> | | |
| Barking ... | ... Kerr Simpson | ... 2nd August, 1924 |
| Braintree... | ... P. J. Gaffikin | ... —* |
| Brentwood | ... †S. Frazer ... | ... —* |
| Brightlingsea | ... †E. P. Dicken | ... 23rd May, 1924 |
| Buckhurst Hill | ... †C. R. Dykes | ... 26th April, 1924 |
| Burnham-on-Crouch | ... †T. D. White | ... 27th April, 1924 |
| Chelmsford B. | ... R. H. Vercoe | ... 20th August, 1924 |
| Chingford ... | ... †E. Hardenburg | ... 2nd May, 1924 |
| Clacton-on-Sea | ... W. A. Milne | ... 15th April, 1924 |
| Colchester B. | ... W. F. Corfield | ... 14th June, 1924 |
| „ Port | ... †E. H. Heaton | ... 28th January, 1924 |
| Epping ... | ... †H. A. Watney | ... 9th August, 1924 |
| Frinton-on-Sea | ... †G. Craigie Bell | ... —* |
| Grays ... | ... W. B. Wood | ... 11th July, 1924 |
| Halstead ... | ... J. S. Ranson | ... —* |
| Harwich B. | ... †G. Ford Porter | ... 2nd July, 1924 |
| „ Port | ... „ | ... 26th May, 1924 |
| Ilford ... | ... A. H. G. Burton | ... 29th May, 1924 |
| Leyton ... | ... J. F. Taylor... | ... 17th May, 1924 |
| Loughton ... | ... †A. Butler Harris | ... 13th June, 1924 |

*These reports had not been received when Annual Report printed in October, 1924.

†Part-time Medical Officer of Health.

| Sanitary Districts. | Medical Officer of Health. | Date Annual Report received. |
|-------------------------|----------------------------|------------------------------|
| <i>Urban—continued.</i> | | |
| Maldon B. | ... †H. Reynolds Brown | ... 10th July, 1924 |
| Romford ... | ... A. Ball ... | ... 29th April, 1924 |
| Saffron Walden B. | ... S. R. Richardson | ... 1st August, 1924 |
| Shoeburyness | ... †E. D. Fountain | ... 10th April, 1924 |
| Tilbury ... | ... W. B. Wood | ... 25th June, 1924 |
| Waltham Holy Cross | ... †P. Streatfield | ... —* |
| Walthamstow | ... J. J. Clarke | ... 22nd May, 1924 |
| Walton-on-the-Naze | ... †J. C. Brockwell | ... 3rd June, 1924 |
| Wanstead | ... †P. Macgregor | ... 14th June, 1924 |
| Witham ... | ... †E. C. Gimson | ... 8th May, 1924 |
| Wivenhoe... | ... †G. T. Kevern | ... 16th April, 1924 |
| Woodford | ... †R. Vere Hodge | ... 31st May, 1924 |

Rural—

| | | |
|---------------------|-----------------------|-----------------------|
| Belchamp... | ... J. S. Ranson | ... —* |
| Billericay ... | ... †J. Douglas Wells | ... —* |
| Braintree ... | ... P. J. Gaffikin | ... —* |
| Bumpstead | ... A. Morgan... | ... 16th May, 1924 |
| Chelmsford | ... J. Macdonald | ... 7th May, 1924 |
| Dunmow ... | ... P. J. Gaffikin | ... —* |
| Epping ... | ... †W. F. Erskine | ... 23rd June, 1924 |
| Halstead ... | ... J. S. Ranson | ... 29th August, 1924 |
| Lexden and Winstree | ... W. H. Alderton | ... 29th April, 1924 |
| Maldon ... | ... J. Macdonald | ... 21st May, 1924 |
| Ongar ... | ... †A. S. David | ... —* |
| Orsett ... | ... †W. Allingham | ... —* |
| Rochford ... | ... J. Macdonald | ... 3rd June, 1924 |
| Romford ... | ... A. Ball ... | ... 29th April, 1924 |
| Saffron Walden | ... S. R. Richardson | ... 1st August, 1924 |
| Stansted ... | ... R. F. Dunn | ... 13th June, 1924 |
| Tendring ... | ... J. Ramsbottom | ... 5th August, 1924 |

*These reports had not been received when Annual Report printed in October, 1924.

†Part-time Medical Officer of Health.

STAFF.**(1) Medical.**

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

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

(b) *Chief Assistant County Medical Officer—*

T. P. Puddicombe, D.S.O., M.B., B.S., D.P.H.

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

| Name. | Qualifications. | Centre. |
|---------------------|---|---------------------|
| W. H. Alderton .. | M.C., M.R.C.S., L.R.C.P., D.P.H. | Lexden and Winstree |
| P. J. Gaffikin.. | M.C., M.D., B.Ch., B.A.O., D.P.H. | Braintree |
| W. A. Milne .. | M.B., Ch.B., D.P.H. .. | Clacton |
| J. Ramsbottom .. | M.B., Ch.B., D.P.H. .. | Tendring |
| J. S. Ranson .. | M.R.C.S., L.R.C.P., D.P.H. .. | Halstead |
| S. R. Richardson .. | B.A., M.D., B.Ch., B.A.O., D.P.H. | Saffron Walden |
| R. H. Vercoe.. | B.A., M.R.C.S., L.R.C.P., D.P.H. | Chelmsford |
| W. B. Wood .. | M.A., M.D., B.Ch., M.R.C.P., .. D.P.H. | Tilbury |

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

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

(e) *Tuberculosis Officers—*

(i) *Consulting Surgeon in Surgical Tuberculosis.*

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

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

| | | |
|---------------------------|---------------------------|---|
| Charlotte H. Brown (Mrs.) | L.R.C.P., L.R.C.S. .. | Epping (also acts as School Medical Inspector) |
| A. H. Jacob .. | L.R.C.P., L.R.C.S. .. | Romford (also acts as School Medical Inspector) |
| J. Sorley .. | M.A., M.D., D.P.H., LL.B. | Leyton and Walthamstow |

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

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

(See also c).

(2) Nursing.

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

| Centre. | Name. | Qualifications. | Whole or part time. | Duties undertaken. | | |
|--------------------------------------|-------------------|---------------------------------------|------------------------|--------------------|------|------|
| | | | | T.B. | S.N. | C.W. |
| Stansted | Chittenden, A. E. | Gen. Training & Cert. Midwife | Whole | Yes | Yes | Yes |
| Braintree | Skey, A. F. | Gen. Training & Cert. Mid. | " | " | " | " |
| Brentwood | White, G. M. | " " | " | " | " | " |
| Billericay | A. M. Crisp | " " | " | " | " | " |
| Tendring | Wallace, A. C. | " " | " | " | " | " |
| " | Steele, M. | Gen. Training | " | " | " | " |
| Dunmow | Crocker, J. E. | " and Cert. Mid. | " | " | " | " |
| Epping | Macpherson, L. | " " | " | " | " | " |
| Halstead | Jossaume, J. | " " | " | " | " | " |
| Maldon | Philpott, A. | " " | " | " | " | " |
| Maldon R. and Burnham | Burnett, B. | Gen. Training | " | " | " | " |
| Ongar | Mann, R. L. | Sanatorium Training | " | " | " | " |
| Saffron Walden | Southall, B. | Gen. Training, Cert. Mid. & R.S.I. | " | " | " | " |
| Belchamp | Butler, M. | Gen. Training & Cert. Midwife | " | " | " | " |
| Witham | Watson, H. J. | " " | " | " | " | " |
| Rochford | Waterhouse, M. | King's Coll. Training | " | " | " | " |
| Waltham Abbey | Bowes, E. M. | Gen. Training & Cert. Mid. | " | " | " | " |
| Buckhurst Hill | Davie, M. A. R. | King's Coll. Training | " | " | " | No |
| Chelmsford | Wood, A. M. | " " | " | " | " | " |
| Woodford | Carnall, E. F. | Gen. Training | " | " | " | " |
| Tilbury | Walton, W. | H.V's Cert., Cert. Mid. & R.S.I. | " | " | " | " |
| Grays | Wall, A. D. | Gen. Training | " | " | " | " |
| " | Moorman, E. H. | " | " | " | " | " |
| Romford | Newby, A. E. | " | " | " | " | " |
| " | Glover, E. | " & Cert. Mid. | " | " | " | " |
| Ilford | Martin, M. | " | " | " | No | " |
| Leyton | Whitton, K. | " | " | " | " | " |
| " | Harris, T. | King's Coll. Training | " | " | " | " |
| Walthamstow | Harrison, J. | " " | " | " | " | " |
| " | Brightman, A. | Gen. Training | " | " | " | " |
| Walton-on-the- Naze | Sollars, A. | Cert. Mid. | Part | Yes | Yes | Yes |
| Lexden & Winstree and Wivenhoe | Ling, L. E. | Gen. Training & Cert. Mid. | " | " | " | " |
| Clacton | Hawes, A. F. | " " | " | " | " | No |
| Colchester | Sasse, A. W. | — | " | " | No | " |
| Harwich | Cookin, E. J. | Gen. Training, Cert. Mid. & R.S.I. | " | " | " | " |

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

Population.

The population of the Administrative County at the Census in 1921 was 920,141 and no change in the boundaries of Sanitary Districts has occurred since that date. The Registrar-General has again furnished separate figures in connection with the estimated population for the year ended 31st December, 1923, namely :—

- | | | | | |
|--|-----|-----|-----|---------|
| (1) For calculating birth-rates, the figure which includes civilian and military population is | ... | ... | ... | 932,700 |
| (2) For calculating the death-rate, the figure which includes only civilian population is... | ... | ... | ... | 930,360 |

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

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

TABLE II.

| | Area in Acres, 1921. | Population. | | | Persons per acre. | Acres per person. |
|----------------------------|----------------------------|-----------------|--------------------------------|------------------------|------------------------------------|----------------------|
| | | Census 1921. | Estimated Population, 1923. | | | |
| | | | For Birth- rate. | For Death- rate. | (Calculated on Census figures). | |
| Municipal Boroughs (5) ... | 26,516 | 89,672 | 90,382 | 88,502 | 3·3 | 0·29 |
| Urban Districts (25) ... | 75,566 | 556,655 | 562,718 | 562,258 | 7·3 | 0·13 |
| Rural „ (17) ... | 862,361 | 273,814 | 279,600 | 279,600 | 0·3 | 3·15 |
| | 964,443 | 920,141 | 932,700 | 930,360 | 0·9 | 1·05 |

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE DISTRICT.

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

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

Birth-rate.

The birth-rate for the Administrative County was 18·58 for 1923, as compared to 18·6 for 1922; the rate for England and Wales for the year 1923 being 19·7.

Table XXII. in Part V. gives the following highest and lowest rates:—

| Highest. | | Lowest. | |
|----------------|----------|-------------------------|----------|
| *Romford Rural | ... 28·1 | Burnham-on-Crouch Urban | 10·9 |
| *Tilbury Urban | ... 26·6 | Wivenhoe Urban | ... 12·4 |
| *Barking Urban | ... 23·1 | Walton-on-Naze Urban | ... 13·6 |
| *Ongar Rural | ... 21·0 | *Clacton-on-Sea Urban | ... 13·8 |
| Rochford Rural | ... 20·9 | | |
| *Grays Urban | ... 20·3 | | |

Similar remarks in regard to those districts marked with an asterisk were made in the Report for 1922.

Death-rate.

The death-rate from all causes in the Administrative County for 1923 was 9·8 as against 11·6 for England and Wales and 11·1 for the County last year.

On page 79 Table XXII. is given, showing the rates for the various Sanitary Districts from which the following highest and lowest rates are quoted:—

| Highest. | | Lowest. | |
|-------------------------|----------|----------------------|---------|
| Bumpstead Rural | ... 17·2 | Frinton-on-Sea Urban | ... 6·5 |
| Braintree Rural | ... 15·4 | Shoeburyness Urban | ... 7·0 |
| Burnham-on-Crouch Urban | 15·0 | Walton-on-Naze Urban | ... 7·6 |
| Saffron Walden Rural | ... 13·6 | Orsett Rural | ... 7·8 |
| Dunmow Rural | ... 13·1 | Chingford Urban | ... 7·8 |
| | | Braintree Urban | ... 7·9 |

Transferable Deaths.

The Public Health Department again acted as the distributing channel for Transferable Deaths. During the year the Registrar-General supplied returns in respect of 2,041 inward deaths and 2,918 outward deaths, and these returns were forwarded to the various Medical Officers of Health. In several instances, exceptions were taken to the transfers, more particularly to the inward transfers, but after further enquiries in almost every case the deaths were accepted.

TABLE III.

DEATH-RATE PER 1,000 POPULATION. DEATHS OF INFANTS PER 1,000 BORN.

| SANITARY DISTRICTS. | Birth-rate. | | Death-rate. | | Infantile Mortality. | | | |
|-------------------------|-------------|-----------------------|-------------|-----------------------|----------------------|------------------|--------------------|-----------------------|
| | 1923. | 1913-22 (Average). | 1923. | 1913-22 (Average). | 1923. | | | 1913-22 (Average). |
| | | | | | 1923. | Legiti- mate. | Illegiti- mate. | |
| URBAN— | | | | | | | | |
| Barking ... | 23.1 | 25.7 | 8.5 | 13.0 | 43.9 | 45.3 | 200 | 89 |
| Braintree ... | 16.6 | 18.5 | 7.9 | 12.8 | 25.4 | 25.8 | — | 63 |
| Brentwood ... | 15.6 | 17.8 | 9.9 | 11.8 | 82.6 | 86.5 | — | 61 |
| Brightlingsea ... | 18.9 | 18.0 | 10.4 | 13.3 | 23.8 | 12.5 | 250 | 70 |
| Buckhurst Hill ... | 16.3 | 19.3 | 10.0 | 11.8 | 61.7 | 64.1 | — | 73 |
| Burnham-on-Crouch ... | 10.9 | 17.0 | 15.0 | 13.0 | 162.1 | 167.0 | — | 55 |
| Chelmsford B. ... | 17.4 | 19.5 | 9.6 | 11.4 | 54.2 | 51.0 | 12.5 | 62 |
| Chingford ... | 17.6 | 18.8 | 7.8 | 10.7 | 47.1 | 49.1 | — | 76 |
| Clacton-on-Sea ... | 13.8 | 15.5 | 10.4 | 12.6 | 30.5 | 25.0 | 250 | 66 |
| Colchester B. ... | 18.6 | 19.2 | 9.7 | 12.6 | 41.1 | 41.7 | 27.7 | 69 |
| Epping ... | 16.5 | 16.5 | 12.7 | 12.9 | 86.9 | 93.7 | — | 60 |
| Frinton-on-Sea ... | 14.0 | 12.9 | 6.5 | 7.8 | 71.4 | 35.9 | * | 41 |
| Grays ... | 20.3 | 22.5 | 9.9 | 12.0 | 35.7 | 36.4 | — | 80 |
| Halstead ... | 19.7 | 16.5 | 11.2 | 14.3 | 50.8 | 53.6 | — | 52 |
| Harwich B. ... | 19.7 | 25.7 | 9.7 | 12.2 | 40.0 | 37.0 | 142.9 | 83 |
| Ilford ... | 18.0 | 16.9 | 9.0 | 9.7 | 41.2 | 37.7 | 170.7 | 62 |
| Leyton ... | 17.5 | 19.6 | 9.2 | 11.5 | 45.5 | 42.6 | 160.7 | 76 |
| Loughton ... | 14.7 | 16.7 | 8.5 | 10.6 | — | — | — | 58 |
| Maldon B. ... | 17.8 | 17.5 | 11.2 | 13.5 | 35.4 | 37.4 | — | 60 |
| Romford ... | 19.7 | 19.4 | 9.5 | 12.0 | 43.3 | 34.3 | 266.6 | 71 |
| Saffron Walden B. ... | 14.9 | 15.0 | 11.2 | 14.6 | 23.2 | 25.0 | — | 59 |
| Shoeburyness ... | 18.0 | 25.0 | 7.0 | 10.8 | 25.8 | 26.1 | — | 62 |
| Tilbury ... | 26.6 | 27.5 | 9.7 | 14.1 | 71.9 | 67.6 | 181.8 | 71 |
| Waltham Holy Cross ... | 16.6 | 18.8 | 10.4 | 11.8 | 52.1 | 45.0 | 250 | 67 |
| Walthamstow ... | 19.5 | 20.6 | 8.9 | 11.0 | 45.9 | 45.1 | 85.1 | 72 |
| Walton-on-the-Naze ... | 13.6 | 17.1 | 7.6 | 10.7 | 29.4 | 31.2 | — | 69 |
| Wanstead ... | 14.5 | 14.0 | 9.5 | 10.0 | 31.7 | 27.5 | 333.3 | 45 |
| Witham ... | 17.1 | 18.9 | 12.5 | 14.2 | 63.5 | 51.7 | 200 | 80 |
| Wivenhoe ... | 12.4 | 18.1 | 12.9 | 14.8 | 34.5 | 35.6 | — | 94 |
| Woodford ... | 15.8 | 17.2 | 8.1 | 10.5 | 14.7 | 15.1 | — | 55 |
| RURAL— | | | | | | | | |
| Belchamp ... | 16.7 | 16.5 | 11.4 | 15.8 | 42.9 | 45.5 | — | 59 |
| Billericay ... | 15.8 | 17.4 | 10.3 | 12.3 | 42.7 | 36.1 | 300 | 56 |
| Braintree ... | 16.0 | 16.8 | 15.4 | 14.0 | 59.6 | 55.9 | 125 | 67 |
| Bumpstead ... | 18.0 | 19.5 | 17.2 | 14.1 | — | — | — | 58 |
| Chelmsford ... | 18.6 | 19.4 | 12.3 | 12.7 | 66.6 | 66.1 | 83.3 | 57 |
| Dunmow ... | 15.2 | 17.7 | 13.1 | 14.0 | 77.6 | 64.9 | 250 | 61 |
| Epping ... | 18.4 | 17.5 | 12.3 | 11.9 | 44.3 | 41.9 | 111.1 | 59 |
| Halstead ... | 15.6 | 16.2 | 11.4 | 13.7 | 52.3 | 41.4 | 250 | 55 |
| Lexden and Winstree ... | 17.3 | 16.9 | 11.4 | 13.1 | 41.9 | 41.2 | 52.6 | 65 |
| Malton ... | 18.0 | 18.1 | 11.4 | 13.0 | 61.0 | 62.7 | — | 53 |
| Ongar ... | 21.0 | 20.3 | 11.2 | 14.0 | 56.4 | 55.5 | 66.6 | 66 |
| Orsett ... | 18.7 | 21.8 | 7.8 | 11.5 | 42.0 | 37.4 | 181.8 | 71 |
| Rochford ... | 20.9 | 18.7 | 11.4 | 12.8 | 46.0 | 41.6 | 142.8 | 60 |
| Romford ... | 28.1 | 20.0 | 9.2 | 10.5 | 49.6 | 48.7 | 80 | 62 |
| Saffron Walden ... | 18.0 | 17.2 | 13.6 | 13.7 | 44.4 | 40.4 | 142.8 | 67 |
| Stansted ... | 14.6 | 17.7 | 11.9 | 13.5 | 40.0 | 41.6 | — | 65 |
| Tendring... | 19.4 | 20.0 | 9.1 | 13.1 | 32.8 | 26.7 | 187.5 | 68 |
| Totals— | | | | | | | | |
| Rural ... | 19.0 | 18.6 | 11.2 | 12.7 | 49.3 | 46.2 | 128.1 | 62 |
| Urban ... | 18.4 | 19.6 | 9.3 | 11.4 | 44.2 | 42.0 | 120.2 | 71 |
| Adminis. County ... | 18.5 | 19.3 | 9.8 | 11.8 | 45.8 | 43.5 | 123.1 | 68 |

*In this district one illegitimate child born in 1922, died within one year of its birth.

TABLE IV.

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, 1924.

| | Billerica. | Braintree. | Chelmsford. | Clacton. | Colchester. | Dunmow. | Grays and Orsett. | Halstead. | Ilford. | Maldon. | Rochford. | Romford. | Saffron Walden. | Walthamstow. | Waltham Joint. |
|-------------------------------------|------------|------------|-------------|-----------|-------------|-----------|-------------------|-----------|-----------|----------|-----------|-----------|-----------------|--------------|----------------|
| Total number of Beds in Hospital .. | 22 | 8 | 43 | 17 | 257 | 22 | 87 | 16 | 85 | 10 | 24 | 70 | 21 | 100 | 40 |
| Number for purpose of Grant .. | 22 | 8 | 21 | 17 | 58 | 20 | 20 | 16 | 72 | 10 | 12 | 42 | 14 | 91 | 42 |
| Grant from County Council .. | £120 | £40 | £115 | £85 | £300 | £40 | £110 | £80 | £370 | £60 | £70 | £220 | £70 | £465 | £220 |
| Cases treated during year:— | | | | | | | | | | | | | | | |
| Scarlet Fever .. | 61 | 19 | 95 | 11 | 59 | 20 | 30 | 25 | 120 | 8 | 35 | 58 | 3 | 231 | 38 |
| Diphtheria .. | 5 | 11 | | 11 | 44 | | 34 | 3 | 97 | 25 | 31 | 61 | 2 | 152 | 13 |
| Typhoid .. | 1 | 2 | | 4 | 17 | | 1 | 2 | 3 | .. | .. | 3 | .. | .. | 4 |
| Other Diseases .. | 2 | .. | | 5 | 96 | .. | 7 | .. | 75 | 2 | .. | 8 | 3 | 66 | 1 |
| Total number of cases treated .. | 69 | 32 | 95 | 31 | 216 | 20 | 72 | 30 | 295 | 35 | 66 | 130 | 8 | 449 | 56 |
| Nursing Staff .. | 5 | 2 | 7 | 3 | 15—21 | 2 | 12 | 2 | 23 | 4 | 3 | 12 | 1 | 25 | 5 |
| 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 .. | 176 13 9 | 134 2 2 | 222 15 7 | 150 13 10 | 634 7 2 | 262 11 3 | 1235 8 11 | 64 0 0 | 1097 0 0 | 243 7 10 | 144 0 0 | 585 18 6 | 200 4 3 | 1926 16 0 | 456 13 4 |
| Interest on Loan .. | 151 4 6 | 6 7 10 | 116 1 8 | 44 19 4 | 186 19 0 | 20 14 0 | 977 17 9 | 64 12 5 | 321 0 0 | 77 10 10 | 37 10 1 | 182 13 3 | 97 2 7 | 337 0 10 | 166 16 0 |
| Structural Repairs .. | 396 9 10 | 91 3 7 | 366 14 1 | 78 0 11 | 647 15 6 | 33 0 11 | 458 4 7 | 108 9 7 | 645 0 0 | 130 18 2 | 25 2 3 | .. | .. | 503 3 2 | 223 4 0 |
| Food (Patients and Staff) .. | 739 17 5 | 269 18 4 | 597 19 10 | 207 12 1 | 1312 6 8 | 151 14 11 | 1316 3 2 | 226 1 0 | 2106 0 0 | 357 3 5 | 307 8 0 | 1006 3 4 | 619 7 7 | 3788 19 11 | 360 10 5 |
| Estab. and Pats. Expenses .. | 1162 17 5 | 1167 5 4 | 1430 14 9 | 648 4 7 | 4179 18 1 | 594 0 2 | 2530 3 10 | 950 8 1 | 7530 0 0 | 999 0 10 | 1279 6 0 | 3335 3 1 | .. | 9304 1 2 | 2184 0 4 |
| £ | 2627 2 11 | 1668 17 3 | 2734 5 11 | 1129 11 6 | 6961 6 5 | 1062 1 3 | 6517 18 3 | 1413 11 2 | 11699 0 0 | 1808 1 1 | 1793 6 4 | 5109 18 2 | 916 14 5 | 15880 1 1 | 3391 4 1 |
| Cost per bed .. | 119 8 4 | 208 12 2 | 63 11 8 | 66 8 11 | 27 1 8 | 44 5 1 | 74 18 4 | 88 6 11 | 137 12 8 | 180 16 2 | 74 14 5 | 73 0 0 | 43 13 1 | 153 16 1 | 84 15 7 |
| Cost per case treated, 1923-24 .. | 38 1 6 | 52 3 1 | 28 15 8 | 36 8 9 | 32 4 6 | 53 2 1 | 90 10 6 | 47 2 4 | 39 13 2 | 51 13 2 | 27 3 5 | 39 6 2 | 114 11 10 | 35 7 4 | 60 11 2 |
| .. year 1922-23 .. | 29 16 5 | 49 7 9 | 27 6 6 | 33 19 9 | 31 9 9 | 38 10 8 | 29 10 2 | 30 18 4 | 32 0 8 | 45 14 2 | 20 16 4 | 26 0 3 | 17 15 1 | 29 18 1 | 29 5 9 |

Infant Mortality.

It is gratifying to record that the deaths of infants for the Administrative County during the year 1923 again show a reduction, the infantile mortality rate being 45·8, which is 9·7 lower than that of the previous year (55·5), although the latter figure was then the lowest ever recorded in Essex. The rate for England and Wales for 1923 is 69.

In two districts (Loughton Urban and Bumpstead Rural) no deaths of infants under one year of age occurred, whilst the following districts also record the low rates indicated :—

| | | | |
|---------------------------|-----|-----|------|
| Woodford Urban | ... | ... | 14·7 |
| Saffron Walden Borough... | ... | ... | 23·2 |
| Braintree Urban | ... | ... | 25·4 |
| Shoeburyness Urban | ... | ... | 25·8 |

In Table III. on page 12 are given comparative rates for each Sanitary District in regard to Births, Deaths, and Infant Mortality.

NOTIFICATIONS OF INFECTIOUS DISEASES.

In Table XXIV. of Part V. is given a summary of notifications of Infectious Diseases received in the various Sanitary Districts during the year.

ISOLATION HOSPITALS.

In the Report for Year 1921 is set out the authority for the payment of grants by the County Council to certain Hospital Boards in the County. The usual annual inspection of the following hospitals (see Table IV. on page 12a) was made in the early part of the year, and the full annual grant was allowed when improvements, recommended by the County Medical Officer at certain hospitals, had been carried out.

SMALL-POX.

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

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

Office : Hop 5000. Private : Hammersmith 2678.

Despite the alarming increase in the cases of Small-pox reported in various parts of the Country, and the occurrence of cases in the adjoining County of London and County Borough of West Ham, it is satisfactory to again record that not a single case occurred during 1923 in the Administrative County of Essex. The usual notifications were received and circulated regarding three persons who had been in contact with cases occurring outside the County and who were entering the County.

In September, 1923, advice was received from the Surrey County Council of a case of Small-pox occurring at a boarding school in that County. A list of the scholars with their home addresses was circulated, two of these being in the Administrative County and two in the County Borough of Southend. No further cases, however, developed.

The warning of previous years must be repeated, namely, that all those concerned with the prevention and treatment of this once dreaded disease should have all their plans in readiness for isolating infected cases and contacts, and for the vaccination of persons who are not sufficiently protected from the disease. Adequate protection can only be obtained by vaccination in infancy, and by re-vaccination at least once after a period of 10 years.

TETANUS.

For some reason or other, Essex seems to possess a bad reputation in regard to Tetanus. A London coroner, in August, stated that about one dozen deaths from lockjaw which had been brought to his notice within the last two years had all come from Essex. Naturally, this gave rise to a good deal of discussion in the County, especially amongst medical practitioners who came into direct contact with these cases.

It is a fact, of course, that Tetanus Bacilli grow in soil, especially when it is heavily manured. They are much more likely, therefore, to be present where there are a large number of market gardens, and these abound around Barkin, Romford, etc., where most of the cases of Tetanus come from.

In order to verify the statement made by the London coroner, the following information in relation to deaths from Tetanus in Essex, as compared with England and Wales, was collected and furnished to the Press:—

| Year. | No. of Deaths. | | No. of Deaths. | |
|--------|--------------------|-----|----------------|----|
| | England and Wales. | | Essex. | |
| 1918 | ... | 156 | ... | 4 |
| 1919 | ... | 155 | ... | 7 |
| 1920 | ... | 149 | ... | 6 |
| 1921 | ... | 165 | ... | 6 |
| Totals | ... | 625 | ... | 23 |

It will be seen that the deaths in the geographical County from this disease for the four years 1918-21, represented 3·7 per cent. of the total occurring throughout England and Wales, whereas the population of Essex is 2·4 per cent. of England and Wales. This cannot be regarded to be so excessive as to justify the above-mentioned reputation.

A prophylactic serum can be supplied to any medical practitioner upon application to the Public Health Department, Prudential Buildings, Duke Street, Chelmsford, and during 1923 three doctors obtained supplies of this serum.

Typhoid Fever.

During the year, 71 cases of Enteric Fever were notified, and there were 10 deaths from this disease. Twenty years ago, the figures were 589 and 101 respectively. The cases were fairly widely distributed throughout the County with the following exceptions:—Colchester B. (11), Walthamstow U. (7), Tendring R. (7), Saffron Walden B. (5).

(a) *Saffron Walden Borough.* In regard to the outbreak at Saffron Walden, this was thoroughly investigated by the Local Medical Officer of Health, Dr. S. R. Richardson, who submitted the following report to the Ministry of Health:—

“The first case came under my observation on November 1st. The patient was a girl aged 15. When seen, she showed definite clinical evidence of Enteric Fever, and a history of about a week's previous illness was obtained. A sister, aged 10, had also been feeling ill for a few days, the symptoms in her case also suggesting Enteric Fever. The family were in good circumstances, and the two children were separately isolated at home.

“Full enquiries were made for the purpose of discovering the source of infection, but nothing was found to indicate infection from food used by the family, or by a carrier. The children attended a private school (as day pupils) where no other children had been absent or had any recent illness. Local medical men were asked to report any suspects that came to their notice, and on November 2nd two girls (aged 16 and 9 years) in another family, were seen in consultation with their private doctor. In these cases the symptoms were mild and indefinite, but an agglutination test of the blood gave a positive result to Paratyphoid B. These two children were also isolated at home.

“Enquiries made did not elicit any information pointing to a common source of infection of the four children, food, milk and other supplies being obtained from different tradesmen. The two families were on terms of intimacy, however, and the children admitted that they occasionally

bought cakes, etc., in the markets without the knowledge of their parents. It was difficult to trace such food stuffs, but some samples were examined by the County Bacteriologist with negative results.

"The fifth case was also a girl, aged 16, who lived within three miles of the town. In her case, the onset was stated to be about October 30th. This family was not of the same social standing as the others and was not acquainted or associated with them in any way, nor was there anything common as regards supplies of food, milk, etc. The child was admitted to the Isolation Hospital.

"From the history and general features of these five cases it seemed probable that a carrier was the cause of infection. Local doctors were therefore, asked to supply any information that might lead to the discovery of such. In several cases, samples of blood have been sent for bacteriological examination, but up to the present all results have been negative.

"Whilst making investigations relating to the above cases, it was found that a large number of van dwellers had been encamped in the town during the period of their visit, namely, the last two weeks of October, coinciding with the outbreak of Enteric Fever in the neighbourhood. One of the sites where these had pitched was found to be in a very insanitary condition. A number of children had attended their entertainments, and had purchased sweetmeats from these people. These travelling shows had already moved away before the discovery of the Enteric cases. The matter was, however, brought to the notice of the Borough Council, who authorised the immediate calling of a Special Committee should the conditions recur."

As no further cases occurred, the conclusion arrived at by Dr. Richardson would appear to be the correct one.

(b) *Tendring Rural District.* Five of the seven Tendring cases were first notified as cerebro-spinal meningitis, and the undermentioned details of the cases were reported by Dr. J. Ramsbottom, the Medical Officer of Health for the Rural District:

"On the receipt of the notification of these cases as Cerebro-spinal Fever, they were at once removed to Colchester Isolation Hospital. The Practitioner connected with the cases had taken a Widal test from the first case, "A.N.W.," prior to notifying. The blood was reported as negative, for B. Typhosis and Paratyphoid B. in dilutions of 1 in 50. Since admission to Hospital the cases have been further investigated by Dr. Corfield, Medical Superintendent of Colchester Isolation Hospital, and he reports as follows:—

'There is no doubt in my mind that all these persons are suffering from Enteric Fever, and I enclose a notification accordingly. "Mrs. W.," for the past three or four days, has suffered from Intestinal Hæmorrhage.'

"I am of opinion that the boy "A" was infected about the 2nd or 3rd week in July, and the rest of the affected members of the family contracted the disease from him before its infectious character was recognised.

"On investigation there is no evidence to show the disease was conveyed through milk, drinking water, or food. I obtained the information from the father that on or about Saturday, 21st July, "A" was bathing in the Stour, and becoming submerged, swallowed a considerable quantity of water. On reaching home the boy informed both parents of the facts. At Manningtree the Stour water is undoubtedly unsafe to drink. I consider that this is most probably the origin of the present outbreak."

DIPHTHERIA.

During 1923 there was a considerable decline in the prevalence of Diphtheria throughout England and Wales. In the Administrative County of Essex only 869 cases were notified, whilst the number of deaths from this disease fell to the low figure of 39. These figures are compared in the following table with those for the years 1893, 1903 and 1913 ;—

| Year. | No. of cases notified. | | No. of deaths. | |
|-------|------------------------|------|----------------|-----|
| 1893 | ... | 1920 | ... | 416 |
| 1903 | ... | 1640 | ... | 148 |
| 1913 | ... | 1548 | ... | 97 |
| 1923 | ... | 869 | ... | 39 |

It is the routine practice to swab all children on admission to the County institutions for Tuberculosis. In spite of this, small outbreaks of Diphtheria occurred at two of the County sanatoria, namely, the Children's Hospital for Surgical Tuberculosis at High Beech and the Women's Sanatorium at Black Notley, the disease being introduced by "carriers," one of whom was a transfer from one of the London General hospitals, and in consequence escaped detection for several days. With the adoption of the usual precautionary measures, the outbreak was limited to four cases and three cases respectively.

These circumstances presented an excellent opportunity for the application of the Schick test. The Ministry of Health were consulted and readily offered the assistance of two Medical Officers (Dr. Copeman and Dr. Scott), who subsequently carried out the test at the children's hospital after the parents' permission was obtained. The parents of two children refused permission to carry out the test. Five medical practitioners were present by invitation. The test was applied to the children and staff with the following results :—

| | Staff. | Patients. |
|---|--------|-----------|
| Number giving reaction to Schick test ... | 8 | 11 |
| „ „ no reaction ... | 5 | 16 |
| „ not tested ... | 2 | 4 |
| | — | — |
| Totals ... | 15 | 31 |
| | — | — |

It is of interest to record that the Matron, Staff Nurse and the whole of the Kitchen Staff were found to react to this test. All the positive cases were subsequently immunised by the Medical Superintendent, with satisfactory results.

As regards the Women's Sanatorium, to which are admitted a few adolescents, Dr. W. M. Scott, of the Ministry of Health, assisted by the County Medical Officer and Medical Superintendent, carried out the Schick test, with the following results—

| | | Staff. | Patients. |
|-------------------------|-----|--------|-----------|
| Number giving re-action | ... | 9 | 17 |
| „ „ no re-action | ... | 2 | 11 |
| „ not tested | ... | — | 17 |
| | | — | — |
| Totals | ... | 11 | 45 |
| | | — | — |

Unfortunately, the immunisation of the positive cases carried out later proved unsatisfactory owing to the unsuitability of the material for adult patients.

In reference to the Schick test, the Chief Medical Officer of the Ministry of Health in his Annual Report for the year 1923, writes as follows:—

“As there appears to be some misunderstanding with regard to the nature of the Schick test and its use in the prevention and control of diphtheria, it may be well briefly to indicate the scientific basis underlying the test and the evidence of its utility.

“In every community it is found that persons exhibit varying degrees of susceptibility to diphtheria depending on the amount or concentration of protective substances in the blood derived from the mother or developed as a result of a clinical attack of the disease, or of a sub-infective dose of the causative organism. A measure of this protection is the amount of antitoxin in the blood, and it has been ascertained as a result of observation and actual determination, that persons whose blood contains at least $\frac{1}{30}$ th of a unit of antitoxin per cubic centimetre are on the average immune, and that those whose blood contains less than this amount are liable to contract the disease if exposed to infection. This line of demarcation is admittedly an arbitrary one. It may happen that a person with more than this amount of antitoxin in the blood will, if exposed to a very virulent and massive infection, contract the disease, but experience has shown that such attacks are rare, and if they do occur are almost always of a mild character.

“The direct estimation of antitoxin in the blood involves complex technique and the merit of the Schick test is that it enables the same result to be achieved in a very simple way. The test consists in injecting into the skin of the arm a minute dose of diphtheria toxin of such amount that it is neutralised by an antitoxin content per cubic centimetre of blood of $\frac{1}{30}$ of a unit. If the antitoxin content is less than this amount, a faint bluish change (positive reaction) appears at the site of inoculation; if it is greater than this change occurs and the reaction is negative.

"Even this knowledge—this ability to separate the relatively susceptible from the relatively insusceptible persons—is of great assistance in controlling an epidemic, by allowing attention to be concentrated on those who most require protection. But as a result of further investigation, a means of immunising the susceptible persons has now been found by the injection of a mixture of toxin and antitoxin. This mixture must be carefully prepared and standardised, so that the toxin is almost but not quite neutralised. The Schick test thus becomes not only a test of susceptibility, but a means of protecting against infection those who are susceptible to it."

As public opinion is educated in respect to the aim and object of this test, and subsequent immunisation against Diphtheria, there will be considerable grounds for the realisation of diminishing the incidence of this troublesome and often fatal disease. Certainly in all fever hospitals the staff should be protected, and inmates of children's institutions should be offered this additional safeguard. It will be a matter for subsequent consideration whether this test should not become a routine practice at Child Welfare Centres, and at day schools where Diphtheria is prevalent.

CANCER.

Reference to Table XXIII., Part V. of the Appendix, will show that there is again an increase in the number of deaths from cancer, the death-rate being 1·29 as against 1·24 the previous year.

The Ministry of Health have appointed a Sub-Committee to investigate this scourge, and Institutions, notably the Middlesex Hospital and the Cancer Hospital, Kensington, and innumerable research workers in this and other countries are endeavouring to find some means of combating the disease. Already the Ministry of Health have issued four memoranda which present in an up-to-date form the facts as at present understood.

With these as a basis, useful educational work can be carried out by Medical Officers and others. During the year the County Medical Officer gave a lecture at Clacton-on-Sea entitled, "The Captains of Death," and it is noteworthy that he was informed after the meeting that many of the people present had been more scared than comforted by what had been said.

The Public Health Department, during this year, undertook some research work into the possibility of any relationship between the amount of silica present in water and the incidence of Cancer. This involved a good deal of research, and enquiries eventually produced the following conclusions:—

- (1) The amount of silica present in drinking water varies considerably, being least in surface waters, highest in hard well waters and medium in mixtures (rivers, etc.), of the other two.
- (2) The Cancer death-rate varies considerably in each group of towns classified according to the silica content of their drinking waters.

- (3) No definite relationship has been established between the amount of silica in drinking water and the Cancer death-rate.
- (4) The statistics do not show that silica acts either as a prophylactic or as a cause of cancer.
- (5) The statistics do not demonstrate any objection which might be made to the proposal to add silica to drinking water where it is considered advisable on other grounds. In such cases it is not likely that the total silica content after the addition of silica will be as great as that which naturally occurs in many public water supplies.
- (6) If there is any relationship between the two, it is dwarfed and masked by many other influences, such as age, social position, racial and economic factors, etc.
- (7) Deaths from all causes and from specified causes do not show any relationship to the amount of silica present in drinking waters.

VENEREAL DISEASES.

For the year 1923-24, provision was made in the estimates for the diagnosis and treatment of Venereal Disease as follows:—

| | | | | | £ |
|----------------------------|-----|-----|-----|-----|--------------------|
| Hospitals and Laboratories | ... | ... | ... | ... | 4,380 |
| Drugs, etc. | ... | ... | ... | ... | 150 |
| Propaganda | ... | ... | ... | ... | 50 |
| Salaries (proportion) | ... | ... | ... | ... | 50 |
| Contingencies | ... | ... | ... | ... | 60 |
| | | | | | <hr/> £4,690 <hr/> |

By letter, dated 29th March, 1923, the London County Council referred to the arrangements for the financial year 1st April, 1923—31st March, 1924, in respect of the existing scheme for the London and Home Counties. The total cost for these was limited to £112,060, of which the amount chargeable to Essex was estimated at £3,500, three-fourths of which would rank for Government grant.

The agreements in force with the Chelmsford and Colchester Hospitals were renewed for the year 1923.

On page 23 Table V. shows the total number of Essex patients treated for the first time during the year. It will be seen that this number again shows a decline on the previous year (975 compared with 988) but the aggregate attendances are steadily growing, indicating that a larger percentage of the patients continue with the treatment when the apparent signs of the disease may have disappeared.

Propaganda.

Owing to the continued call for economy very little active propaganda was undertaken during the year. Meetings were held in February and March at Grays, and during March and November at Barking. A meeting was also held at Walthamstow on March 5th.

The grant allowed to the Ilford Propaganda Committee towards their expenses was increased to £20 for the financial year 1923-24. Dr. Burton presents the following brief summary of the work of the Committee during the year 1923:—

- “ On the 4th March a meeting for men was held at St. Thomas' Church, Becontree, when I addressed the meeting, the subject being “The Hidden Plague.”
- “ On the afternoon of 13th March the film “Social Hygiene for Women” was exhibited to women only at Cranbrook Hall, Cranbrook Road. An address was given by Dr. Elizabeth Sloan Chesser.
- “ In the evening of the same day the film “Damaged Goods” was exhibited to a mixed audience, and an address was given by Dr. A. J. Cokkinis.
- “ The Ilford Branch of the Alliance of Honour co-operated with the Ilford Venereal Disease Propaganda Committee, and a meeting for women only was held at the Town Hall, Ilford, on 15th October, when the film “The Shadow” was exhibited, and an address given by Dr. Winifred Cullis.
- “ The above bodies also arranged a meeting for men only at the Town Hall, Ilford, on the 17th October, when the film “Whatsoever a man Soweth” was exhibited, an address being given by Dr. A. J. Cokkinis.”

General.

Experience has shown that female patients infected with these diseases are very reluctant to attend clinics or even consult their medical attendants. This reluctance is so manifest that many doctors in Essex have expressed the opinion that there is no venereal disease in the rural districts. On the other hand, from reports by midwives and others, it would appear that the disease is by no means absent. Treatment in the home has, therefore, been resorted to and in that respect women doctors have given useful and practical service; for example, in Essex two women medical officers on the County Staff have in turn carried out the treatment of several infected mothers and children at their homes with great success.

Undoubtedly, the services of women medical officers would be more widely utilised in combating venereal disease if it were known amongst the general practitioners and midwives that such services were available throughout the County.

It is hoped that the medical service of the County will be extended so as to provide peripatetic lady doctors to carry out treatment in the patients' homes.

The outstanding event for the year is the report by the Committee presided over by Lord Trevethin which was appointed "to consider and report upon the medical measures for preventing venereal disease in the civil community, having regard to administrative practicability, including cost."

The report of the Committee was published in August 1923, and the chief features were as follows :—

- (1) That an extension of knowledge as to the nature and consequences of venereal disease is of the first importance.
- (2) That money spent on a general system of providing facilities for self-disinfection would certainly be less profitable than money spent either on treatment of disease or on measures of education and improvement of social conditions.
- (3) That from the point of view of public health the defaulting in connection with attendance at clinics until free from infection is not so serious as the statistics make it appear. It remains, nevertheless, an important factor in the spread of venereal disease.
- (4) That any system of general compulsory notification of venereal disease would tend to concealment and would prove a backward step.
- (5) That the present system of clinics should be improved and extended.
- (6) That instruction on venereal diseases should be included in the general training of midwives and nurses.
- (7) That in rural areas or districts where clinics are not easily available a panel of medical practitioners should be constituted through whom treatment could be provided. This might be done by a development of the present system, under which a free issue of Salvarsan Substitute is made to certain approved practitioners.
- (8) That it is necessary to organize more thoroughly the methods which obtain at the present moment in Poor Law Infirmaries for the treatment of venereal disease.
- (9) That Local Authorities should be allowed, by way of experiment, to adopt in certain areas special measures for the prevention of venereal disease, such as dealing with defaulters, or in a large seaport town setting up ablution centres in the neighbourhood of docks.
- (10) That so far as conclusions can be drawn from the available figures of attendances at clinics venereal disease is once more, as it was before the war, substantially declining.

Payment of Fares.

During the year ended 31st March, 1924, fares amounting to £17 1s. 6d. were refunded to necessitous patients attending the Hospital Clinics. In each case enquiries were made into the financial position of the patient.

TREATMENT OF VENEREAL DISEASE, YEAR 1923.

| Treatment Centre. | Patients from all Areas. Total No. treated for first time. | ESSEX PATIENTS. | | | | | | | | | | |
|------------------------------|---|--|---------------|-------------|----------|-----------------------|-----------------------------------|------------------|-----------------------------------|-------------|----------|--------|
| | | Total Number treated for first time suffering from | | | | | Total Attendance of all Patients. | In-patient Days. | Doses of Arseno-Benzol Compounds. | | Hostels. | |
| | | Syphilis. | Soft Chancre. | Gonorrhoea. | Not V.D. | Total. | | | Out-Patients | In-Patients | | Total. |
| | | | | | | | | | | | | |
| London Hospitals | 25,650 | 232 | 11 | 356 | 226 | 825 3·2 per cent. | 12228 0·02 per cent. 39 | 2890 | — | — | 1545 | 1676 |
| St. Bartholomew's, London | 505 | 5 | — | 10 | 1 | 16 3·1 per cent. | 0·26 per cent. 120 | 6 | 25 | — | 25 | — |
| Chelmsford | 11 | 5 | — | 2 | 4 | 11 | 120 | — | 58 | — | 58 | — |
| Colchester | 68 | 35 | — | 24 | 8 | 67 | 1777 | 6 | 239 | — | 239 | — |
| Ipswich | 180 | 6 | — | 3 | 2 | 11 6·1 per cent. | 154 4·1 per cent. 745 | 81 | 75 | 2 | 77 | — |
| Southend | 251 | 7 | 2 | 18 | 18 | 45 7·2 per cent. | 10 per cent. | — | 82 | — | 82 | — |
| Total for 1923... | 26,665 | 290 | 13 | 413 | 259 | 975 3·6 per cent. | 15063 | 2983 | — | — | 2026 | — |
| Total for 1922... | 24,895 | 323 | 11 | 416 | 238 | 985 3·9 per cent. | 14145 | 3192 | — | — | 2420 | 2260 |
| " 1921 | 26,892 | 394 | 13 | 426 | 278 | 1111 4·1 per cent. | 14546 | 3197 | — | — | 3044 | 197 |
| " 1920 | 31,897 | 517 | 28 | 510 | 282 | 1337 4·2 per cent. | 14267 | 3537 | — | — | 2993 | — |
| " 1919 | 28,983 | 467 | 22 | 546 | 234 | 1269 4·4 per cent. | 11428 | 3571 | — | — | 2027 | — |
| " 1918 | 16,372 | 320 | 10 | 267 | 113 | 710 4·3 per cent. | 6435 | 2432 | — | — | 1360 | — |
| " 1917 | 17,637 | 308 | 7 | 141 | 55 | 511 2·9 per cent. | 3353 | 3057 | — | — | 839 | — |

COUNTY LABORATORY.

From the particulars of the number of specimens submitted for examination (Table VI. below), it will be seen that the work performed at the County Laboratory continues to be appreciated by the Medical Practitioners and Medical Officers of Health throughout the Administrative County. The work is carried out at 91, Queen Victoria Street, London, E.C.4, (Telephone City, 7116) under the supervision of the County Bacteriologist, Dr. J. F. Beale.

TABLE VI.

SHEWING NUMBER AND TYPE OF SPECIMENS EXAMINED AT THE
COUNTY LABORATORY, YEAR 1923.

| | | Diph- theria. | Sputa. | Typhoid. | Ring- worm. | Malaria. | Cerebro- Spinal Fluid. | Miscel- laneous. | Total |
|-----------------------|-----|------------------|--------|----------|----------------|----------|------------------------------|---------------------|-------|
| <i>Urban—</i> | | | | | | | | | |
| Barking ... | ... | 171 | 172 | 2 | 7 | — | — | 2 | 352 |
| Braintree ... | ... | 24 | 92 | 2 | 4 | — | — | 7 | 129 |
| Brentwood... | ... | 57 | 68 | 4 | 66 | — | 1 | 1 | 197 |
| Brightlingsea | ... | 3 | 9 | 1 | — | — | — | — | 13 |
| Buckhurst Hill | ... | 3 | 4 | — | 1 | — | — | — | 8 |
| Burnham ... | ... | 5 | 12 | 4 | — | — | — | — | 21 |
| Chelmsford B. | ... | 121 | 136 | 19 | 5 | — | 1 | — | 282 |
| Chingford ... | ... | 23 | 30 | 13 | 3 | — | — | 4 | 73 |
| Clacton ... | ... | 234 | 55 | 4 | 45 | — | — | 2 | 340 |
| Colchester ... | ... | 2 | 143 | — | 89 | — | 1 | — | 235 |
| Epping ... | ... | 31 | 48 | — | 5 | — | — | — | 84 |
| Frinton ... | ... | — | 11 | — | — | — | — | — | 11 |
| Grays ... | ... | 532 | 277 | 2 | 55 | — | — | 2 | 868 |
| Halstead ... | ... | 16 | 64 | 7 | 58 | 2 | — | 1 | 148 |
| Harwich ... | ... | 141 | 52 | 5 | 5 | 1 | — | — | 204 |
| Ilford ... | ... | 24 | 347 | 16 | — | 1 | 2 | 8 | 398 |
| Leyton ... | ... | 484 | 638 | 1 | 97 | 1 | — | 5 | 1226 |
| Loughton ... | ... | 24 | 1 | — | 9 | — | — | 8 | 42 |
| Maldon ... | ... | 48 | 55 | 2 | 1 | — | — | 2 | 108 |
| Romford .. | ... | 265 | 143 | 6 | 39 | — | 1 | 5 | 459 |
| Saffron Walden | ... | 33 | 17 | 1 | — | — | — | 1 | 52 |
| Shoeburyness | ... | 72 | 17 | — | — | — | — | — | 89 |
| Tilbury ... | ... | 24 | 7 | 1 | — | — | — | — | 42 |
| Waltham Holy Cross | ... | 28 | 25 | 2 | — | — | — | — | 55 |
| Walthamstow | ... | 27 | 753 | 5 | 3 | — | — | 8 | 789 |
| Walton-on-Naze | ... | 7 | 1 | — | — | — | — | — | 8 |
| Wanstead ... | ... | 1 | 39 | — | — | — | — | — | 40 |
| Witham ... | ... | 31 | 14 | — | 4 | — | — | 1 | 50 |
| Wivenhoe ... | ... | 6 | 4 | — | — | — | — | — | 10 |
| Woodford .. | ... | 56 | 45 | — | — | — | — | 3 | 104 |
| Total Urban Districts | | 2493 | 3279 | 97 | 496 | 5 | 6 | 60 | 6433 |

| | | Diph- theria. | Sputa. | Typhoid. | Ring- worm. | Malaria. | Cerebro- Spinal Fluid. | Miscel- laneous. | Totals. |
|-----------------------|-----|------------------|--------|----------|----------------|----------|------------------------------|---------------------|---------|
| <i>Rural—</i> | | | | | | | | | |
| Belchamp ... | ... | — | 9 | — | — | — | — | — | 9 |
| Billericay ... | ... | 95 | 55 | — | — | — | — | — | 150 |
| Braintree ... | ... | 27 | 18 | 2 | 1 | — | — | — | 48 |
| Bumpstead ... | ... | — | 3 | — | — | — | — | — | 3 |
| Chelmsford ... | ... | 38 | 35 | 5 | — | — | — | 3 | 81 |
| Dunmow ... | ... | 44 | 22 | 3 | — | — | — | — | 69 |
| Epping ... | ... | 61 | 16 | 1 | 3 | — | — | 1 | 82 |
| Halstead ... | ... | 134 | 12 | 1 | — | — | — | — | 147 |
| Lexden & Winstree ... | ... | 33 | 21 | 2 | — | — | — | — | 56 |
| Maldon ... | ... | 83 | 14 | — | — | — | — | — | 97 |
| Ongar ... | ... | 43 | 8 | — | 21 | — | — | — | 72 |
| Orsett ... | ... | 31 | 46 | 1 | — | 7 | — | — | 85 |
| Rochford ... | ... | 115 | 40 | 3 | 3 | — | — | 3 | 164 |
| Romford ... | ... | 21 | 13 | — | 7 | — | — | — | 41 |
| Saffron Walden ... | ... | 2 | 11 | — | — | — | — | — | 13 |
| Stansted ... | ... | 1 | — | — | 1 | — | — | — | 2 |
| Tendring ... | ... | 13 | 33 | 4 | — | — | — | — | 50 |
| Total Rural Districts | | 741 | 356 | 22 | 36 | 7 | — | 7 | 1169 |
| Total Urban Districts | | 2493 | 3279 | 97 | 496 | 5 | 6 | 60 | 6436 |
| Grand total ... | | 3234 | 3635 | 119 | 532 | 12 | 6 | 67 | 7605 |

Total for year 1922 ... 7392

„ 1921 ... 7949

CLEAN MILK.

The milk industry is one of the oldest known to mankind. The old idea was to provide “family cows for family needs,” but the growth of civilisation naturally resulted in a commensurate increase in dairy farming. The spread of the consumption of tea, coffee and cocoa as popular beverages, the increased use of cows' milk for feeding infants, and the need of light and easily assimilated foods on the part of urban populations have all contributed to the expansion and progress of the milk industry.

Milk needs protection from pollution and careful handling in order that it may be delivered to the consumer as little changed as possible. Milk as drawn from the normal udder of a healthy cow contains a negligible number of harmless bacteria, but the primitive, careless methods adopted by many producers and retailers allow this negligible quantity to reach alarming proportions in some instances, *e.g.*, a

sample of milk delivered to a London hospital in 1918 was found to contain no less than 250,000,000 bacteria per cubic centimetre. In one instance during the year under review, a sample of milk taken by the County Sanitary Inspector was found to contain millions of bacteria per c.c. (see Table VII. on page 28). Fortunately, rapid strides have been taken to raise the standard of the conditions under which milk is produced in this country.

During the last forty years the general consumption of fresh milk has almost doubled. Viewed from the standpoint of dietetic values, milk is not only an essential food but also one of the cheapest foodstuffs, and it is in the public interest that its consumption should be greatly increased. At present the consumption per person per day is on an average less than one-third of a pint. Efforts should be made to educate the general public on the value of milk as a food, and to encourage an increasing consumption so that each child under six years of age will receive one quart daily and the remaining population one pint each daily.

The undermentioned figures published by the Ministry of Agriculture and Fisheries in 1923 will give some idea of the extent of the dairy trade in this country, it being computed that in the year 1921 no less than 1,220 million gallons of milk (excluding milk used for calf rearing) were produced in England and Wales (84 per cent.) and Scotland (16 per cent.) and disposed of as follows:—

| | Million galls. |
|--|-------------------|
| Consumed as liquid milk | 600 |
| Manufactured into butter and cheese | 494 |
| " " condensed milk | 35 |
| Used for cream and miscellaneous manufacturing purposes | 61 |
| Allowance for wastage, spillage, etc. | 30 |
| | <hr/> 1,220 <hr/> |

As regards the quality of the milk supplied to the consumer, this is safeguarded by the Sale of Food and Drugs Acts, 1875, and Sale of Milk Regulations, 1901 and 1912, which lay down the standard that milk is not genuine until the contrary is proved unless it contains 3 per cent. milk fat, or 8·5 per cent. milk solids other than milk fat. In a few instances, however, proof has been afforded that milk below such a standard has been obtained direct from the cows.

In respect to the keeping quality of the milk, this is dependent upon two factors, namely, the bacterial content of the milk and the conditions under which it is produced, handled and stored. These conditions have undoubtedly accounted for serious financial loss both to the producer and consumer. It is estimated that about 1 per cent. of the total milk available for consumption is lost by souring each year. One farmer complained to the County Sanitary Inspector that despite the most scrupulous care in the cowshed and dairy, milk became sour when stored in the pantry for

household use. Enquiries elicited the fact that the maid was not over careful in the cleansing of the milk basins. It must be remembered that milk from a healthy cow is practically free from harmful bacteria, and there is no reason why it should not keep sweet for days if cleanly methods are observed throughout production, delivery and storage. To achieve this, there must be close co-operation between the producer, retailer and consumer.

"Grade A" Milk.

As outlined in the Annual Report for 1923, the Milk (Special Designations) Order, 1923, enumerates the terms and conditions subject to which licences may be granted for the sale of milk as "Certified," "Grade A (Tuberculin tested)," "Grade A" or "Pasteurised" by the following Authorities:—

| Licensers. | Licensees. | Kind of Milk. |
|---------------------------------------|---------------------|---|
| Ministry of Health... | ... Producers ... | Certified and Grade A (Tuberculin tested). |
| County and County Borough Councils | Producers ... | Grade A. |
| Local Sanitary Authorities | ... Distributors... | All kinds set out above. |

N.B.—In certain circumstances the Ministry of Health may authorise Local Sanitary Authorities to grant licences to producers.

A Producer who is also a Distributor only needs one licence from County or County Borough Councils.

As the County Council is responsible for issuing licences for the production of "Grade A" milk, further remarks will be confined to this aspect of the problem. Before a licence can be granted, each applicant must satisfy the County Council that his arrangements for the production, storage, treatment and distribution of the milk are such as to comply with the conditions laid down. The standard for "Grade A" milk as laid down in the above-mentioned Order is as follows:—

(1) The milk shall be produced and treated under such conditions that on a sample being taken at any time before delivery to the consumer the milk shall be found not to contain—

- (a) More than 200,000 bacteria per cubic centimetre, nor
- (b) Any bacillus coli in one-hundredth of a cubic centimetre.

(2) The milk shall not at any stage be treated by heat unless a licence to sell such milk as "Pasteurised" has been granted under this Order, and where such a licence has been granted the term "Pasteurised" shall be added after the designation "Grade A Milk" wherever such designation is used in connection with the sale of such milk or the labelling or marking of receptacles containing such milk.

During the year 1923, applications for licences to produce "Grade A" milk were received from 16 farmers, and a detailed inspection of each farm was carried out by the County Sanitary Inspector in order to ascertain the arrangements for production, storage, treatment and distribution. The results of these inspections may be summarised briefly as follows :—

TABLE VII.

SHOWING RESULTS OF FIRST INSPECTIONS OF FARMS WHERE IT WAS
DESIRED TO PRODUCE "GRADE A" MILK.

| Farm No. | Date of inspection. | Water Supply. | MILK SAMPLE. | | General condition. |
|----------|---------------------|-------------------------|--------------------------|-------------------------------|---------------------------------|
| | | | No. of bacteria per c.c. | Bacillus coli present in c.c. | |
| 1923. | | | | | |
| 1 ... | March 14th | ...Satisfactory... | 10,880 | 2.5 | ... Minor improvements required |
| 2 ... | „ 14th | ... „ | 42,000 | 1.0 | ... „ |
| 3 ... | May 23rd | ... „ | 1,020 | 2.5 | ... „ |
| 4 ... | April 25th | ... „ | No sample available | | ... Major improvements required |
| 5 ... | June 11th | ... „ | 3,640 | 2.5 | ... Improvements required |
| 6 ... | „ 11th | ... Unfit | No sample available | | ... „ |
| 7 ... | „ 26th | ...Satisfactory... | 120,000 | $\frac{1}{1000}$ | ... Generally unsatisfactory |
| 8 ... | July 6th | ... „ | 20,880 | $\frac{1}{10}$ | ... Improvements required |
| 9 ... | „ 16th | ... Unfit | ...Millions... | $\frac{1}{1000}$ | ... Generally unsatisfactory |
| 10 ... | Sept. 19th | ... Fairly satisfactory | 5,260 | Absent in 2.5 | ... Minor improvements required |
| 11 ... | „ 19th | ...Satisfactory... | 9,300 | $\frac{1}{10}$ | ... „ |
| 12 ... | „ 20th | ... „ | 34,000 | $\frac{1}{100}$ | ... Generally unsatisfactory |
| 13 ... | Oct. 23rd | ... „ | 14,960 | $\frac{1}{20}$ | ... Improvements required |
| 14 ... | „ 23rd | ... „ | 12,540 | $\frac{1}{10}$ | ... „ |
| 15 ... | Nov. 12th | ... „ | 8,590 | $\frac{1}{400}$ | ... Generally unsatisfactory |
| 16 ... | „ 12th | ... „ | 3,760 | $\frac{1}{20}$ | ... „ |

Subsequently, licences to produce and sell "Grade A" milk were granted to Nos. 1, 2, 3, 4, 5, 10, 11, 13, 14, as all improvements had been carried out, but the remaining seven farmers did not proceed with the application for a licence.

In no case have the County Council insisted upon extensive alterations to buildings, the unsatisfactory conditions being chiefly in connection with methods of production, *i.e.*, the personal element of the dairy worker. Many improvements were carried out voluntarily, and one farmer stated he was determined to let nothing stand in the way of bringing his methods up to the highest standard of efficiency.

Several farmers have expressed a desire that the County Council should publish a standard set of regulations under which licences can be granted to produce "Grade A" milk. This is more difficult than would appear at first sight, as conditions vary so much at each farm. Moreover, the County Council are not empowered to lay down hard and fast regulations, but generally speaking, however, in addition to the following statutory requirements, the conditions set out in Section (b) below may be taken as a guide by farmers desiring to produce "Grade A" milk:—

(a) *Statutory Requirements.*

CONDITIONS UNDER WHICH LICENCE FOR "GRADE A" MILK MAY BE GRANTED:

A.—The following conditions apply to producers only:—

(1) The producer shall cause every animal of the herd to be examined once in every three months and shall produce to the licensing authority the veterinary surgeon's certificate within seven days after the date of the certificate.

(2) Where any animal is certified as showing evidence of any disease which is likely to affect the milk injuriously, it shall forthwith be removed from the herd and the producers shall inform the licensing authority how it has been disposed of; and if at any time it is shewn to the satisfaction of the licensing authority that tubercle bacillus is contained in the milk the producer shall take all necessary steps to ascertain which animals are diseased and to remove them from the herd, and shall inform the licensing authority how such animals have been disposed of.

(3) A suitable system shall be adopted for the marking for the purposes of identification of the animals of the herd, and a complete register of such animals shall be kept.

(4) The herd shall be kept separate from all other cattle.

(5) Except where the milk is bottled by the producer in accordance with the procedure for bottling hereinafter specified, the milk shall be consigned from the dairy where it is produced in an unventilated sealed container, which shall be labelled or marked in a suitable manner with the address of the dairy, the day of production (with the word "morning" or "evening" according to the time of milking) and the words "Grade A Milk."

B.—The following conditions apply to persons other than producers :—

(1) Except where the milk is delivered to the consumer in the original containers in which it is received, the seals being unbroken, it shall be delivered either in bottles or in other suitable containers of not less capacity than two gallons.

(2) Every bottle containing the milk shall be closed with a suitable tightly fitting disc and covered with a suitable outer cap overlapping the top of the bottle and so fastened as to form a complete seal. The cap shall bear the name of the dealer by whom the milk was bottled and the address of the licensed bottling establishment, the words "Grade A Milk" and the day of production, and shall, except with the consent of the licensing authority, bear no other words. Where containers other than bottles are used every such container shall be closed with a tightly fitting cover and shall be suitably sealed and labelled.

C.—The following conditions apply to all holders of licences to sell milk "Grade A" :—

(1) The milk shall be produced and treated under such conditions that on a sample being taken at any time before delivery to the consumer the milk shall be found not to contain—

(a) More than 200,000 bacteria per cubic centimetre, nor

(b) Any bacillus coli in one-hundredth of a cubic centimetre.

(2) The milk shall not at any stage be treated by heat unless a licence to sell such milk as "Pasteurised" has been granted under this Order, and where such a licence has been granted the term "Pasteurised" shall be added after the designation "Grade A Milk" wherever such designation is used in connection with the sale of such milk or the labelling or marking of receptacles containing such milk.

(b) *County Council's Conditions (not statutory).*

- (1) Cowsheds and dairy must be sanitary, clean, well lighted and ventilated, and have water laid on or easily accessible. Floors should be of impervious material and swilled down prior to each milking.
- (2) Surroundings of cowsheds must be kept as clean as possible and all manure stored at a good distance from the cowsheds and dairy.
- (3) Dust must not be created immediately prior to and during milking times.
- (4) Milking stool must be kept clean; the type with a handle projecting from seat is preferable.
- (5) Milkers must be clean in habits, wear clean linen overalls and cap, and wash their hands before milking each cow, for which purpose a properly trapped wash-basin with water supply, soap, nail brush and roller towel should be provided in a conspicuous position.
- (6) Cows must be healthy, carefully groomed, and all udders and teats washed and wiped with clean, damp cloths before each milking. Such cloths must be washed and sterilised after each milking. Tails and udders should be clipped when necessary.
- (7) Milk pails must be of the semi-covered type. Special pails can be obtained for cows with low udders.
- (8) First stream of milk from each teat should be rejected, and the practice of dry-handed milking should be adopted.
- (9) Milk should be conveyed to dairy as promptly as possible in semi-covered or covered pails and then strained with cotton wool discs and cooled to 50° F. or as low a temperature as possible, and kept cool in closed vessels during storage and transit.
- (10) Milk utensils, including cooler, must be rinsed with cold water immediately after use, then thoroughly washed with hot water and soda, rinsed in clean water and sterilised by steam.
- (11) Water supply must be pure and wholesome.

It is useless for any farmer to undertake clean milk production unless he is prepared to exercise continuous and close personal supervision, as his success or otherwise depends so much upon the human factor. Negligence, carelessness or indifference on the part of one cowman will nullify all other efforts to produce pure milk; other unsatisfactory features are ungroomed cows, unwashed udders, unwashed hands, open pails, dried milk accumulating under brass beadings and in tap of cooler, dirty towel, dirty overalls, etc. Great care should be taken of churns and pails which have

been sterilised. In one instance the Inspector saw a cowman use one of the sterilised pails when swilling the cowshed floors and then use it as a milking pail. At another farm the cowman always carefully rinsed with cold water each sterilised churn before placing it under the cooler, a practice which should not be allowed even where the water supply is satisfactory as it leaves the churns in a wet state.

It is a great pleasure to record the earnest endeavour of many producers of milk in Essex to supply the public with a safe milk, and it remains for health Authorities to assist in educating public opinion as to the value of milk as an essential and cheap food for infants, children and adults. When the people realise that milk is safe and satisfying they will insist on being supplied with only one kind, namely—the best.

The consumer can control his milk supply by his demands, and the trade has shown that it can meet his demands; the Local Sanitary Authority in every area should see that they do it.

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, and wells sunk therein, or springs at their borders, supply a considerable portion of the Rural population and a few Urban Districts (wholly or in part).
- (b) Deep well water, which is obtainable everywhere, but often in limited quantities or of unsuitable quality for drinking purposes. Half-a-million gallons per day cannot be obtained from any well save in the south-east of the County.

To these must now be added the River Chelmer, from which the Chelmsford Corporation by their Act of 1923, have power to abstract at Sandford Mill on the average 1,000,000 gallons of water per day. Full particulars of this proposal were given in the Annual Report for the year 1922.

Another additional source has been secured by the Southend Waterworks Company who, at the time of writing, have obtained Parliamentary sanction to augment existing supplies by abstracting and treating water for domestic purposes from the River Chelmer, at Rushes Lock, and from the River Blackwater, at Langford Cum. Included in the scheme are the following proposals:—

- (a) To divert the bulk of the water in the River Ter to a point above Rushes Lock.
- (b) To pipe the sewage effluent from the Chelmsford Joint Works to a point below the proposed intake at Rushes Lock.

- (c) To pipe the sewage effluent from the Witham Works to a point below the proposed intake at Langford Cut.

The courses of these rivers were described in the Annual Report for the year 1922.

Several local Sanitary Authorities, the Southend County Borough and the Essex County Council, wished to secure certain safeguards, and therefore opposed the Bill, but the Water Company successfully piloted the Bill through the House of Lords. Subsequently many concessions were made to various affected Authorities and persons, with the result that in the House of Commons opposition was made only by the Southend County Borough and the Essex County Council, but the Bill was passed.

These proposals emphasised the need for some provision being made for the protection and distribution of the water supplies of the County. With this object in view the Public Health Committee, at their meeting on 29th May, 1924, resolved that the following recommendation should be transmitted to the Parliamentary Committee:—

“That the Parliamentary Committee be asked to consider the
“advisability of a Water Board being formed for that portion of the County
“outside the area of the Metropolitan Water Board, or for that portion of
“the County and Suffolk.”

On 1st July, 1924, the Parliamentary Committee reported to the County Council that the problem of the shortage of water in the southern part of the geographical County is of serious importance and calls for early and careful consideration by the County Council as the supervising Authority in relation to the public health and water supply of the County. They have therefore appointed a Sub-Committee to carefully investigate the question of the water supplies in the County and are now authorised by the County Council to expend a sum not exceeding £250 in obtaining such expert assistance as may be necessary to enable them to prepare and submit a report on the position of the water supplies in the County.

SEWAGE WORKS AND RIVER POLLUTION.

In Table VIII. particulars are given of the various sewage works in the Administrative County, showing that 74 visits were made in 1923 as compared to 53 in the previous year. Proportionately, there was an increase in the number of unsatisfactory samples of sewage effluent, communications regarding which were addressed to the appropriate Surveyors, resulting in most instances in improved effluents at subsequent visits. It was necessary, however, to serve upon eight Local Authorities the statutory notice under the Rivers Pollution (Prevention) Acts, with the results indicated in Table IX. which describes all improvements obtained since the year 1922.

TABLE VIII.

SHOWING SEWAGE WORKS, NUMBER OF VISITS AND NUMBER OF SAMPLES TAKEN DURING THE YEAR 1923.

| River receiving Effluent. | Sewage Works. | Sanitary District. | No. of Visits. | Samples taken. | | |
|---------------------------|---------------------------|--------------------|----------------|-------------------|---------------------|-------|
| | | | | No. satisfactory. | No. unsatisfactory. | Total |
| Roding | Buckhurst Hill | Buckhurst H. U. | 4 | 3 | 1 | 4 |
| | Chigwell | Epping R. | 4 | 3 | 1 | 4 |
| | Chigwell Row | Epping R. | 4 | 2 | 2 | 4 |
| | Loughton | Loughton U. | 2 | 2 | ... | 2 |
| | Ongar | Ongar R. | 3 | ... | ... | ... |
| | Wanstead | Wanstead U. | 3 | 3 | 1 | 4 |
| | Woodford | Woodford U. | 3 | ... | 6 | 6 |
| | North Weald | Ongar R. | 3 | 1 | 1 | 2 |
| | Thornwood | Epping R. | 2 | ... | 2 | 2 |
| | Moreton | Ongar R. | 2 | ... | 1 | 1 |
| | Abridge... | Ongar R. | 2 | ... | ... | ... |
| | Theydon Bois | Epping R. | 1 | 1 | ... | 1 |
| Rom | Hornchurch | Romford R. | 1 | 1 | ... | 1 |
| Ingrebourne | Brook Street, South Weald | Billericay R. | 2 | 2 | ... | 2 |
| | Upminster | Romford R. | 2 | 3 | 1 | 4 |
| | Brentwood | Brentwood U. | 2 | 1 | 1 | 2 |
| | Harold Wood | Romford R. | 2 | 1 | 2 | 3 |
| | Great Warley | Romford R. | 2 | ... | 2 | 2 |
| Mardyke | Bury Farm, Great Warley | Romford R. | 1 | 1 | ... | 1 |
| Crouch | Wickford | Billericay R. | 3 | 1 | 3 | 4 |
| Wid | Billericay | Billericay R. | 4 | 2 | 2 | 4 |
| | Writtle | Chelmsford R. | 3 | ... | 5 | 3 |
| | Shenfield | Billericay R. | 2 | ... | 2 | 2 |
| Chelmer | Chelmsford | Chelmsford B. | 1 | ... | 1 | 1 |
| | Great Waltham | Chelmsford R. | 2 | ... | 1 | 2 |
| | Dunmow | Dunmow R. | 3 | 2 | 1 | 4 |
| | Felstead | Dunmow R. | 1 | ... | 1 | 1 |
| Blackwater... | Braintree | Braintree U. | 3 | ... | 4 | 3 |
| | Witham | Witham U. | 1 | ... | 1 | 1 |
| | Latchingdon | Maldon R. | 1 | ... | ... | ... |
| | Bocking | Braintree R. | 2 | ... | 2 | 2 |
| Colne | Halstead | Halstead U. | 3 | ... | 1 | 3 |
| | | | 74 | 29 | 45 | 74 |

TABLE IX.

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

| District. | Statutory Notice Served. | Improvements. |
|--|---------------------------|--|
| Halstead Urban. | — | Jan., 1922. New works costing £18,000 opened. |
| Billericay Rural. | — | Jan., 1923. Four sprinkler beds re-washed at an estimated cost of £500. |
| | | Mar., 1924. Humus tanks being installed. |
| Ongar Rural. | — | Sept., 1923. Ministry of Health held Inquiry for loan of £1,000 to extend and improve sewage works. |
| | | July, 1924. Ministry of Health insist on revised scheme by Expert Engineer, who is now appointed. |
| Witham Urban. | 9/2/23 | Sept., 1923. Ministry of Health Inquiry held for loan of £7,000 for new sewage works. |
| | | June, 1924. New works, including sedimentation tanks and sprinklers, nearing completion. |
| Writtle Great Waltham Broomfield Little Waltham | Chelmsford Rural. 2/11/23 | Jan., 1924. Rural District Council have appointed Special Sub-Committee to explore possibility of linking up with Chelmsford Borough sewers. |
| Felsted | | Jan., 1924. Ministry of Health Inquiry held for loan of £1,200 to provide sewage works at Felsted. |
| Thaxted | Dunmow Rural. 27/4/23 | June, 1924. Work commenced. |
| Dunmow | | Jan., 1924. Ministry of Health Inquiry for loan of £6,800 for works of sewerage and sewage disposal at Thaxted. |
| | | Jan., 1924. Minor improvements carried out at Dunmow. |
| Chelmsford Borough. | 13/11/23 | Dec., 1923. Improvements scheme, sewerage and sewage disposal, costing £52,000, in hand, necessitated by water supply scheme. |
| Woodford Urban. | 1/11/23 | June, 1924. Ministry of Health held Inquiry for loan of £14,080 for improvements to sewage works, &c. |
| Braintree Urban. | — | Aug., 1924. Re-washing of sprinkler beds in progress. |
| Braintree Rural. | — | Jan., 1924. Schemes for Bocking, Coggeshall and Kelvedon being prepared. |
| Great Warley, Romford Rural. | — | Nov., 1923. Filter beds renewed. |
| Thornwood, Epping Rural. | 17/1/24 | Feb., 1924. Filter beds renewed. |
| Wickford, Billericay Rural. | — | Dec., 1923. Engineer instructed to prepare a scheme for new works. |
| Earls Colne, Halstead Rural. | 1/11/23 | Dec., 1923. Conference at Ministry of Health agreeing to smaller scheme of sewage disposal. |
| Upminster, Romford Rural. | 1/11/23 | Feb., 1924. Improvements carried out. |
| Brentwood Joint. | 2/11/23 | Feb., 1924. Effluent improved. |
| West Mersea, Lexden and Winstree Rural. | — | July, 1924. Complete sewerage and sewage disposal scheme nearing completion. |

OFFENSIVE SMELLS.

(1) *Shell Haven and Thames Haven.* In the Annual Report for 1922, details were given of the action taken in regard to complaints of offensive smells arising from Oil Refineries in the southern portion of the Orsett Rural District. Such smells were described by all the complainants as very offensive and benzine-like with garlicky flavour.

A Conference of representatives and officials from the County Council, Southend-on-Sea County Borough, Port of London Sanitary Authority, and Rochford, Orsett, and Billericay Rural District Councils, was held on 14th June, 1923, when it was unanimously decided as follows:—

(i) That the Essex County Council be asked to direct the attention of the Port of London Authorities to Section 228 of their Act of 1920, under which the Port of London Authorities can take action if they find there is a nuisance within that Section.

(ii) That a deputation consisting of one member from each of the Authorities represented shall wait upon the Ministry of Health to lay the position before them, and to urge that the law on this subject be strengthened at the earliest possible moment.

As regards (i), on 5th July, 1923, the Port of London Authority stated that the subject of the complaint had been thoroughly investigated, and reported upon as follows:—

“The refuse water from the oil washing at the works is loaded in barges and taken out to sea where it is discharged outside the specified limit. During the inspection, however, a case of a bad discharge into the river was discovered, and the matter has been taken up strongly with the Company concerned.

“I may state for your information that the Port Authority's Inspectors exercise the greatest supervision over all factories, wharves, etc., on the banks of the Thames within their jurisdiction with a view to detecting any offensive discharge passing into the river, and should any such pollution be observed the matter is immediately taken up with the offenders. I regret, however, that as regards ‘offensive smells’ this does not come within the jurisdiction of the Port Authority, their powers being for the prevention of pollution of the river—clauses 226-242 of the Port of London (Consolidation) Act, 1920. It would therefore appear to be a matter for the local authorities, but whilst writing to the Company respecting the discharge referred to above, I have called their attention to the offensive smells of which you complain and no doubt they will do what is possible to abate the nuisance.

In respect to (ii), replies were received from the Ministry of Health, dated 20th June and 17th August, 1923, to the effect that the Ministry had no power to take any effective action in the matter at present, and that the Smoke Abatement Bill under which, when passed into law, the Minister would be able to take action, had not yet become law.

In October, 1923, the smell was again noticed in Hadleigh (Rochford Rural District), and one complainant stated that "it woke us up at 3.30 a.m.; we felt quite sick with it and for two hours it was almost unbearable." At Southend-on-Sea in the same month, three complaints were made in a few days. One referred to the "most disagreeable and irritating smells which we have been getting almost every night and sometimes in the day-time during the prevalence of westerly winds." Another complainant mentioned "garlicy fumes being perceptible in a greater or less degree (mostly the latter) almost every night (for about a month), commencing about midnight and lasting off and on till the early morning."

A copy of the complaint from Hadleigh was forwarded to the two firms concerned, and one replied that they had taken definite measures to prevent any nuisance arising in the locality as the result of operations carried out in their works, and they were quite sure that the trouble complained of had no connection with their installation.

Fortunately, no further complaints were received during 1923, as until further legislation is enacted it is difficult to see what other steps can be taken to prevent a recurrence of these offensive smells.

(2) *Purfleet*. In February, 1923, the Medical Officer of Health of the Orsett Rural District reported that the owners of the Oil Refinery, at Purfleet, "were dealing very effectively with the smells, and I think we shall not have any more complaints there." On 21st July, 1924, a further letter was received complaining of the "awful smells we have to endure day and night from the Oil Refinery when the wind is south or south-west. We have to close our windows at night and clean our teeth to get the taste out of our mouths." A further investigation was made by the Local Medical Officer of Health, who was satisfied that despite any improvements which may have been carried out by the firm concerned, the Refinery was causing a very offensive nuisance, and he was therefore recommending his Council to take appropriate action.

(3) *Grays Urban District*. Attention was again directed to the "obnoxious smells" emanating from the Dye Works. The County Medical Officer visited the Works on 8th May, 1924, and found that several processes were carried on. It was evident, however, that the complaint arose only from the process of the purification of crude anthracene by solution in pyridine and in the subsequent recovery of the pyridine. Anthracene is practically odourless, but pyridine, according to the *Encyclopædia Britannica*, has a "distinctly unpleasant penetrating odour."

Consultations were held with Medical Officers at the Ministry of Health and with the Medical Officers of Health of the Grays Urban District and Orsett Rural

District. Certain suggestions were made in regard to providing apparatus for extracting and consuming the pyridine fumes, but these have proved impracticable. The firm are now being given an opportunity of testing a new solvent which they hope to be able to employ in place of pyridine. If this fails, the Grays Council will be compelled to take legal proceedings.

HOUSING.

From a perusal of the Table X. given on page 38a, it will be seen that according to the information available, a total of 6,591 houses were erected during the year 1922 as compared with 4,407 for the previous year; 2,645 houses of these were erected in the Ilford Urban and Romford Rural Districts by the London County Council and other Municipal Authorities; the houses erected by private enterprise being 1,891 during 1922, as compared with 1,823 during 1921. In reviewing these figures it should be borne in mind that a complete return is not available as was the case for the year 1921.

The houses rendered fit in consequence of informal action by Local Authorities number 7,477; this figure shows a marked decrease on the previous years (10,218) and it is reasonable to infer that owners are gradually placing their property into a more satisfactory condition.

The whole housing question centres around the rent-paying capacity of the ordinary working class family. In this connection the following extract from the report by Dr. W. B. Wood, of the Grays U.D., is of interest:—

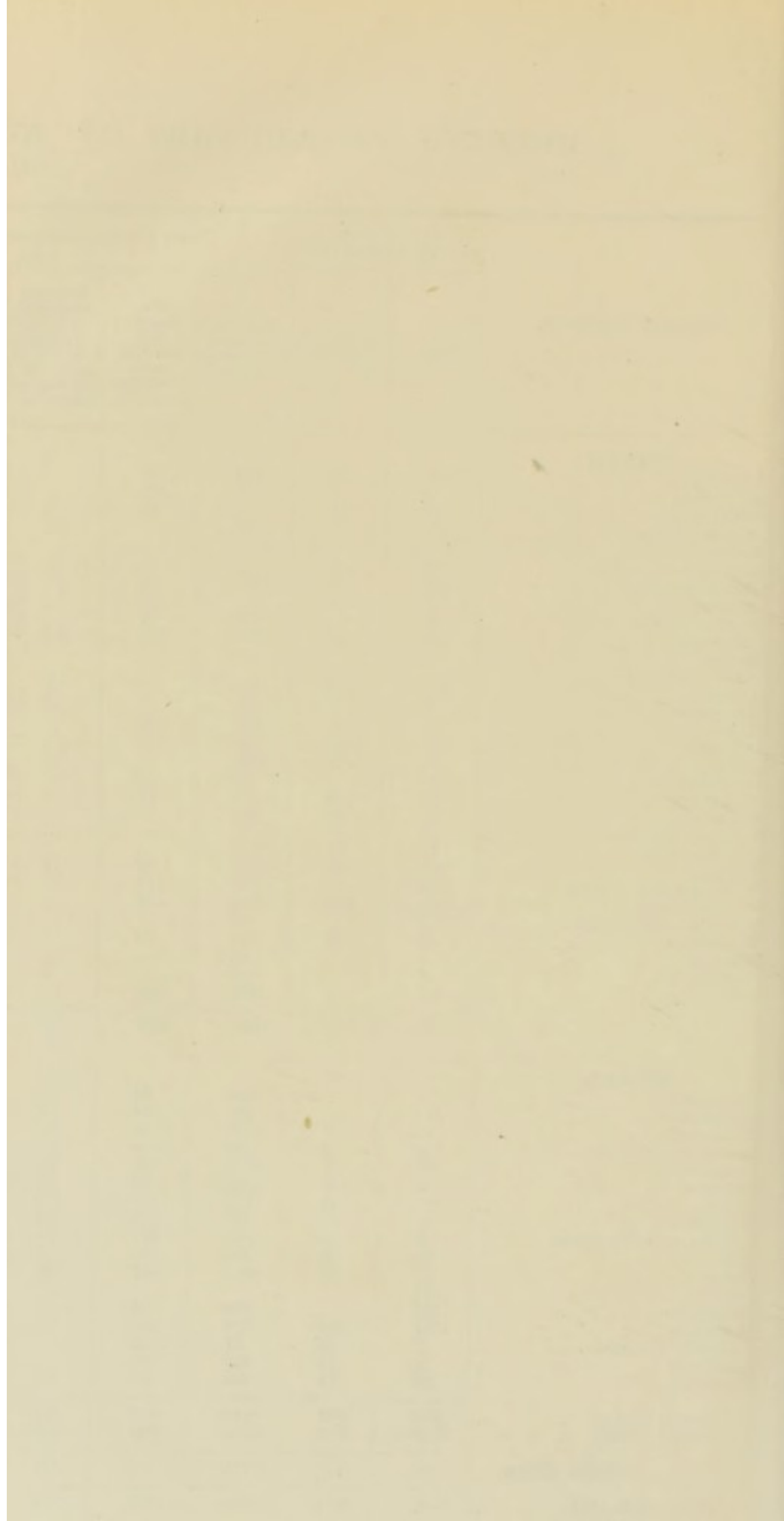
“There are streets and terraces, the insanitary conditions of which call for demolition, but which cannot be dealt with because the present occupiers, if called upon to leave their present houses, would look in vain for accommodation elsewhere. Houses like those to be found in Bon Street, East Street, Alma Place and Trafalgar Square, do not admit of improvement. They should be closed and demolished. The houses are old, the walls are damp, the rooms are small, the ceilings are low, the provision for sculleries, for food storage and for water supply are wholly inadequate. Many of the houses in the Argent Street district are on sites unsuitable for building and should be avoided in any town planning scheme.

“The victims of the present conditions are mainly to be found among members of the working classes, who, if engaged in regular employment could not afford to pay a larger inclusive rent than 12s. a week, and even this sum is beyond the means of many whose need is greatest.”

The housing problem is only secondary to the food problem in its share in the sanitary environment of the people. The present industrial centres of population should be kept constantly in our minds as awful examples of one generation failing

TABLE X.
SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE HOUSING ACTS DURING THE YEAR 1922.

| SANITARY DISTRICTS. | NEW HOUSES ERECTED DURING 1922. | | UNFIT DWELLING HOUSES. | | | | Houses rendered fit in consequence of informal action by Local Authority. | ACTION UNDER STATUTORY POWERS. | | | PROCEEDINGS UNDER PUBLIC HEALTH ACTS. | | PROCEEDINGS UNDER SECTIONS 17 & 18 OF HOUSING TOWN PLANNING, ETC., ACT, 1909. | | | | | | |
|---------------------------|------------------------------------|------------------------------------|---|--|---|--|--|---|---|--|---|--|---|--|---|--|---|--|--|
| | Total. | As part of Municipal Scheme. | Total No. inspected for Housing Defects. | No. inspected and recorded under Housing Regs. 1910. | No. found so danger- ous or injurious to health as to be unfit for human habitation. | No. found not in all respects reasonably fit for human habitation. | | Houses in respect of which Notices were served requiring repairs. | No. Dwelling Houses rendered fit by Owners. | Local Authority in default of Owners. | No. of Dwelling Houses Closing Orders became operative. | No. of Dwelling Houses in which defects were remedied by Notices served requiring defects to be remedied. | No. Dwelling Houses in which defects were remedied by Local Authority in default of Owners. | No. representa- tions made with view to making Closing Orders. | No. of Dwelling Houses in respect of which Closing Orders were made. | No. of Houses Closing Orders determined by Local Authority being rendered fit. | No. of Houses Demolition Orders made. | No. of Houses demolished in pursuance of Demolition Orders. | No. of Houses demolished voluntarily. |
| URBAN. | | | | | | | | | | | | | | | | | | | |
| BARKING | 202 | 185 | 3439 | 458 | 3 | 204 | 1334 | 204 | 180 | 1 | ... | 320 | 294 | ... | 3 | 3 | 1 | ... | ... |
| BRAINTREE | 9 | ... | 102 | 102 | ... | 22 | 16 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| BRENTWOOD | 17 | 15 | 181 | 25 | 3 | 22 | 22 | 29 | 303 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| BRIGHTLINGSEA | 1 | ... | 65 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| BUCKHURST HILL | ... | ... | ... | ... | ... | ... | No | Return | Compiled. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| BURNHAM-ON-CROUCH | 20 | 4 | ... | ... | ... | 10 | 4 | 14 | 14 | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... |
| CHELMSFORD B. | 205 | 176 | 1231 | 86 | 3 | 62 | 58 | 1 | 1 | ... | ... | 921 | 749 | ... | ... | ... | ... | ... | ... |
| CHELMSFORD | 66 | 32 | ... | 239 | ... | 156 | 155 | ... | ... | ... | ... | 20 | 20 | ... | ... | ... | ... | ... | ... |
| CLACTON-ON-SEA | 54 | ... | 328 | 89 | ... | 52 | 127 | 52 | 63 | ... | ... | 25 | 10 | 15 | ... | ... | ... | ... | ... |
| COLCHESTER B. | 51 | 30 | 2509 | 699 | 82 | 57 | 48 | 1 | ... | 2 | ... | 286 | 281 | 5 | 2 | ... | 1 | 1 | ... |
| EPFING | ... | ... | ... | ... | ... | ... | No | Return | Compiled. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| FRINTON-ON-SEA | ... | ... | ... | ... | ... | ... | No | Return | Compiled. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAYS | 117 | 97 | 1075 | ... | 1 | ... | 340 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... |
| HALESTAD | 8 | 6 | 235 | ... | 3 | 232 | 135 | 117 | 72 | 25 | ... | ... | ... | ... | 3 | 3 | 2 | ... | ... |
| HARWICH B. | 25 | 18 | 227 | 103 | ... | ... | 12 | 27 | ... | ... | ... | 52 | 78 | ... | ... | ... | ... | ... | ... |
| ILFORD | 1660 | 1460 | 102 | 13 | ... | 77 | 123 | 11 | 11 | ... | ... | 552 | 510 | ... | ... | ... | ... | ... | ... |
| LETON | ? | ? | 1452 | ... | 3 | ... | 846 | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... |
| LIGHTINGTON | 26 | 16 | 40 | 3 | ... | 37 | 36 | 4 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| MALDON B. | 37 | 23 | 230 | 17 | 5 | ... | 12 | ... | ... | ... | ... | 30 | 30 | ... | 5 | 5 | 1 | ... | ... |
| ROMFORD | 107 | 32 | 320 | ... | ... | 175 | 142 | ... | ... | ... | ... | 35 | 35 | ... | ... | ... | ... | ... | ... |
| SAFFRON WALDEN B. | 25 | 25 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| SHOEBURYNES | 17 | 16 | 972 | ... | ... | ... | 156 | ... | ... | ... | ... | 285 | 285 | ... | ... | ... | ... | ... | ... |
| TILBURY | 555 | 552 | 189 | 90 | 15 | 154 | 53 | 20 | 14 | ... | ... | 81 | 57 | ... | 15 | 15 | 7 | ... | ... |
| WALTHAM HOLY CROSS | 2 | ... | 229 | 110 | 1 | 117 | 168 | ... | ... | ... | ... | 29 | 18 | ... | 1 | 1 | ... | ... | ... |
| WALTHAMSTOW | 324 | 309 | 6448 | 468 | ... | 335 | 2407 | 26 | 18 | 1 | ... | 6 | 6 | ... | 2 | ... | ... | ... | ... |
| WALTON-ON-THE-NAZE | 26 | ... | 25 | ... | ... | 25 | 6 | 4 | 3 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| WANSTEAD | 88 | 32 | 220 | 70 | 1 | 48 | 129 | ... | ... | ... | ... | 11 | 11 | ... | ... | ... | ... | ... | ... |
| WITHAM | 1 | ... | 40 | ... | 4 | 5 | 5 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| WYVENHOE | 2 | ... | 105 | ... | 2 | 15 | 14 | ... | ... | ... | ... | 1 | 1 | ... | 2 | 2 | 2 | 2 | ... |
| WOOLFORD | 114 | 82 | 1226 | 295 | ... | 98 | 95 | 98 | 87 | ... | ... | 149 | 143 | ... | ... | ... | ... | ... | ... |
| | 3750 | 3089 | 20990 | 2867 | 126 | 1915 | 6431 | 621 | 786 | 28 | 2 | 2794 | 2529 | 20 | 37 | 32 | 11 | 3 | 7 |
| RURAL. | | | | | | | | | | | | | | | | | | | |
| BELCHAMP | 9 | ... | 309 | 23 | 8 | 62 | 48 | 4 | 4 | ... | ... | 32 | 58 | ... | 7 | ... | 7 | ... | ... |
| BILLERIGAY | 313 | ... | 287 | 28 | 6 | 115 | 55 | 30 | 25 | ... | ... | 1 | 28 | 20 | 4 | 2 | 1 | ... | ... |
| BRAINTREE | 49 | 27 | 88 | 88 | 5 | 83 | 62 | ... | ... | ... | ... | 5 | 5 | ... | 5 | 1 | ... | ... | 3 |
| BUMPSTEAD | 12 | 12 | 36 | 16 | ... | 16 | 16 | ... | 16 | ... | ... | 44 | 44 | ... | ... | ... | ... | ... | ... |
| CHELMSFORD | 162 | 72 | 1035 | 167 | 26 | 86 | 170 | 28 | 26 | ... | ... | 64 | 47 | ... | 22 | 22 | 2 | 5 | 3 |
| DUNMOW | 38 | 15 | 60 | 40 | 2 | 58 | 32 | 2 | 2 | ... | ... | 18 | 12 | ... | 2 | 1 | 1 | ... | ... |
| EPFING | 107 | 29 | 172 | 143 | 2 | 75 | 50 | 114 | 63 | ... | ... | 29 | 22 | ... | ... | ... | ... | ... | ... |
| HALESTAD | 47 | 40 | 149 | 149 | 18 | 127 | 111 | 4 | ... | ... | ... | 4 | 34 | ... | 18 | 4 | 1 | 1 | ... |
| LEIDEN AND WINSTARE | 60 | 8 | 794 | 264 | 46 | 249 | 176 | 22 | 19 | ... | ... | 40 | 34 | ... | 17 | 14 | 1 | 1 | ... |
| MALDON | 94 | 69 | 353 | 89 | 8 | 29 | 56 | ... | ... | ... | ... | 81 | 67 | ... | 8 | 7 | 1 | ... | 2 |
| ONGAR | 48 | 16 | 1607 | 1607 | 188 | 140 | 22 | ... | ... | ... | ... | 2 | 1 | ... | ... | ... | ... | ... | ... |
| ORSETT | 111 | ... | ... | ... | ... | ... | No | Return | Compiled. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| ROCHFORD | 331 | ... | 200 | 81 | 6 | 75 | ... | ... | ... | ... | ... | 101 | 80 | ... | 6 | 6 | 1 | 1 | 1 |
| ROMFORD | 1267 | 1185 | 719 | 500 | 6 | 470 | 115 | 253 | 253 | ... | ... | 3 | 101 | 84 | ... | 5 | 5 | 3 | ... |
| SAFFRON WALDEN | 37 | 34 | 31 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| STANDISH | 20 | 14 | 615 | 567 | ... | 318 | 48 | ... | ... | ... | ... | 166 | 329 | ... | ... | ... | 1 | 1 | ... |
| TENDRING | 136 | 110 | 494 | 349 | 23 | 219 | 85 | ... | ... | ... | ... | 1 | ... | ... | 5 | 2 | ... | ... | ... |
| RURAL TOTAL | 2841 | 1631 | 6759 | 4322 | 344 | 2122 | 1046 | 538 | 458 | 9 | ... | 916 | 803 | ... | 99 | 78 | 21 | 8 | 6 |
| URBAN TOTAL | 3750 | 3089 | 20990 | 2867 | 126 | 1915 | 6431 | 621 | 786 | 28 | 2 | 2794 | 2529 | 20 | 37 | 32 | 11 | 3 | 7 |
| GRAND TOTAL | 6591 | 4720 | 27749 | 7189 | 470 | 4037 | 7477 | 1159 | 1244 | 28 | 11 | 3710 | 3332 | 20 | 136 | 110 | 32 | 11 | 13 |
| TOTALS FOR 1921 | 4407 | 2584 | 30496 | 7753 | 519 | 5621 | 10218 | 1068 | 1255 | 54 | 20 | 5333 | 4432 | 88 | 85 | 70 | 17 | 17 | 23 |



know and do its duty. There are in Essex thousands of houses still inhabited which are grossly unfit for human beings, and unless the housing question is not to be regarded as a political shuttlecock, but as a grim and real test of statesmanship, the condition of affairs will persist for many more generations. As a purely business proposition, we cannot afford to perpetuate these hovels, and if the nation has to pay 50 or even 100 millions a year for decent houses for the people to live in, the money will be saved again and again.

Generally speaking, houses are now being erected on a well-designed sanitary basis, and the next step is to see that districts shall develop on town planning lines. Schemes to ensure this were received during the year from Woodford, Loughton and Ilford.

The South Essex Joint Advisory Town Planning Committee, which was formed at the invitation of the Ministry of Health in June, 1922, held several meetings during the year. As stated in the Annual Report for 1922, the duty of this Committee was to prepare a town planning scheme and statement for the area on the northern bank of the Thames, from Shoeburyness on the East to the large Western centres of population at East and West Ham, but financial considerations compelled the Committee to turn their attention to a smaller scheme to be produced by the Local Surveyors. The Committee have received and considered reports from the Surveyors of the Orsett Rural, Grays Urban and Tilbury Urban Districts, who had conferred with the Chief Engineer of the Port of London Authority, and reached an agreement with him on a general scheme. In view of the extensive additions and improvements foreshadowed for this dockland area, the local Surveyors are to be congratulated upon this agreement, which has for its object the control of these developments on sound town planning lines.

MENTAL DEFICIENCY ACT, 1913.

The services of Dr. T. P. Puddicombe, Chief Assistant County Medical Officer, have again been available for both the County Education Committee and the County Committee for the Care of the Mentally Defective in examining and reporting upon all cases of suspected mental deficiency. He has also, on application being made to the County Council, examined and given advice on any case of suspected mental defect brought before the Justices.

The work of ascertainment and certification has continued throughout the year, although the number of cases sent for institutional care is still restricted by the orders of the Board of Control.

115 cases have been investigated and reported on for the Committee for the Care of the Mentally Defective and were classed as follows :—

| | | Males. | Females. | Total. |
|------------------------------|-----|--------|----------|--------|
| Feeble-minded | ... | 28 | 34 | 62 |
| Imbeciles (Mongols 9) | ... | 21 | 21 | 42 |
| Idiots | ... | 5 | 6 | 11 |
| Border-line cases | ... | 1 | — | 1 |
| Not classified under the Act | ... | 6 | 9 | 15 |
| | | <hr/> | <hr/> | <hr/> |
| Totals | ... | 61 | 70 | 131 |

44 patients (22 of each sex) were placed in Institutions during the year 1921 bringing the total number of Essex cases provided for by the Committee Institutions to 296 (139 males and 157 females). Two have been placed under Guardianship, making the total number thus dealt with 8, all being females.

The number placed under Statutory Supervision during the year was 55 (30 males and 25 females), bringing the total thus dealt with up to 330 (171 males and 159 females).

The Essex Voluntary Association for Mental Welfare has continued to render valuable assistance by keeping in touch with cases needing supervision.

METEOROLOGY.

The County Meteorological Station at Chelmsford has again kindly supplied the data set out in Table XI. below. Reference to the last two columns shows that the average number of rainy days per month was 15, the highest number being in the months of February and October, and in not a single month were there less than nine rainy days.

TABLE XI.

OBSERVATIONS FROM THE COUNTY METEOROLOGICAL STATION AT CHELMSFORD.

[illegible]

SALE OF FOOD AND DRUGS ACTS.

As in previous years, the supervision of the duties under these Acts was not undertaken by the County Medical Officer. The attention of the County Council is respectfully called to this fact as it is of such importance that it ought to be considered at an early date. Dr. Bernard J. Dyer, the County Analyst, receives samples direct from the Food and Drugs Inspectors, and he has kindly furnished the following particulars of the work done during the period 1st December, 1922, to 30th November, 1923. Included in the table set out below are samples which have been submitted by the County Inspectors, Local Sanitary Authorities, Private Purchasers and Hospitals.

It will be seen that four Local Sanitary Authorities submitted 144 samples, which is the largest number since the year 1916. Other Local Sanitary Authorities should avail themselves of the powers given in Section 13 of the Sale of Food and Drugs Act, 1875, under which they may authorise the Medical Officer of Health or Sanitary Inspector to purchase samples at the cost of the Local Sanitary Authority, and submit same for examination to the County Analyst. Much good work could undoubtedly be accomplished by an extension of this supplementary inspectorial service.

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

ANNUAL SUMMARY.

December 1st, 1922—November 30th, 1923.

| | Samples Analysed. | Samples Unsatisfactory. | Percentage of Adulteration |
|--|----------------------|----------------------------|-------------------------------|
| Northern District of the County ... | 773 | 20 | 2·6 |
| Southern District of the County ... | 909 | 34 | 3·7 |
| Metropolitan District of the County ... | 1207 | 46 | 3·8 |
| Chingford Urban District Council ... | 12 | — | 3·4 |
| Walthamstow Urban District Council ... | 73 | 1 | |
| Wanstead Urban District Council ... | 51 | 4 | |
| West Ham Union ... | 1 | — | |
| Woodford Urban District Council ... | 8 | — | |
| Private Persons ... | 1 | — | |
| | <u>3035</u> | <u>105</u> | <u>3·5</u> |
| | | Samples Analysed. | Samples Unsatisfactory. |
| Baking Powder ... | ... | 40 | — |
| Blanc Mange Powder ... | ... | 1 | — |
| Bun Flour ... | ... | 2 | — |
| Butter ... | ... | 726 | 2 |
| Butter and Margarine Mixture ... | ... | 1 | — |
| Cakes, various, other than Sponge Cakes .. | ... | 28 | — |
| Carried forward ... | ... | <u>798</u> | <u>2</u> |

| | | | | Samples Analysed. | Samples Unsatisfactory |
|--------------------------------|-----------------|-----|-----|----------------------|---------------------------|
| | Brought forward | ... | ... | 798 | 2 |
| Cheese | ... | ... | ... | 10 | — |
| Chocolates | ... | ... | ... | 2 | — |
| Chocolate Powder | ... | ... | ... | 1 | — |
| Chicory | ... | ... | ... | 1 | — |
| Cocoa | ... | ... | ... | 131 | 1 |
| „ Essence | ... | ... | ... | 2 | — |
| „ Extract | ... | ... | ... | 2 | — |
| Coffee | ... | ... | ... | 31 | 1 |
| Coffee and Chicory | ... | ... | ... | 1 | — |
| Coffee Mixture | ... | ... | ... | 1 | — |
| Cough Candy | ... | ... | ... | 1 | — |
| Cough Sweets | ... | ... | ... | 1 | — |
| Cream | ... | ... | ... | 23 | 10 |
| Cream, Preserved | ... | ... | ... | 31 | — |
| Custard Powder | ... | ... | ... | 4 | — |
| Drugs :— | | | | | |
| Ammoniated Tincture of Quinine | ... | ... | ... | 1 | — |
| Aspirin Tablets | ... | ... | ... | 1 | — |
| Bicarbonate of Soda | ... | ... | ... | 1 | — |
| Camphorated Oil | ... | ... | ... | 7 | — |
| Epsom Salts | ... | ... | ... | 7 | — |
| Glauber Salts | ... | ... | ... | 1 | — |
| Glycerine | ... | ... | ... | 1 | — |
| Egg Powder Substitute | ... | ... | ... | 11 | — |
| Egg Yolk | ... | ... | ... | 1 | — |
| Flour | ... | ... | ... | 2 | — |
| Gravy Salt | ... | ... | ... | 1 | — |
| Ground Almonds | ... | ... | ... | 2 | — |
| Jam | ... | ... | ... | 2 | — |
| Lard | ... | ... | ... | 299 | 1 |
| Lemon Curd | ... | ... | ... | 1 | — |
| Lemonade Powder | ... | ... | ... | 5 | — |
| Margarine | ... | ... | ... | 292 | — |
| Marmite | ... | ... | ... | 1 | — |
| Milk | ... | ... | ... | 1143 | 75 |
| Milk, Condensed | ... | ... | ... | 16 | — |
| Milk, Dried | ... | ... | ... | 1 | — |
| Milk, Separated | ... | ... | ... | 4 | — |
| Milk, Skimmed | ... | ... | ... | 5 | 1 |
| Mixed Spice | ... | ... | ... | 1 | — |
| Mustard | ... | ... | ... | 2 | — |
| Mustard, Compound | ... | ... | ... | 2 | — |
| Orange Jelly | ... | ... | ... | 2 | — |
| Oxo Cubes | ... | ... | ... | 1 | — |
| Pepper | ... | ... | ... | 21 | — |
| Rice | ... | ... | ... | 1 | — |
| Sausages | ... | ... | ... | 3 | — |
| Self-raising Flour | ... | ... | ... | 20 | 1 |
| Sponge Cake | ... | ... | ... | 105 | 13 |
| Sponge Mixture | ... | ... | ... | 4 | — |
| Soup Powder | ... | ... | ... | 2 | — |
| Table Cream | ... | ... | ... | 1 | — |
| Tea | ... | ... | ... | 10 | — |
| Vinegar | ... | ... | ... | 15 | — |
| | | | | 3,035 | 105 |

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

Butter.

Two samples of Butter consisted of mixtures containing only 60 per cent. Butter and 40 per cent. Margarine.

Cocoa.

One sample of Cocoa taken in the earlier part of the year was appreciably contaminated with Arsenic, having emanated from a factory in which, by an unfortunate accident, some impure material found its way into the Cocoa.

Coffee.

One sample of Coffee contained a small quantity of Chicory.

Cream.

Ten samples sold as Cream consisted of Preserved Cream containing Boric Acid, but in no case exceeding the maximum quantity allowable where proper declaration is made.

Lard.

One sample of Lard contained 4·5 per cent. water.

Milk.

Thirty-eight samples of Milk contained added water in the proportion indicated as follows:—

4 samples contained 4 per cent.

| | | | |
|-----------|---|----|---|
| 1 sample | „ | 4½ | „ |
| 3 samples | „ | 5 | „ |
| 3 „ | „ | 7 | „ |
| 3 „ | „ | 8 | „ |
| 2 „ | „ | 10 | „ |
| 2 „ | „ | 11 | „ |
| 2 „ | „ | 13 | „ |
| 3 „ | „ | 14 | „ |
| 2 „ | „ | 15 | „ |
| 1 sample | „ | 17 | „ |
| 2 samples | „ | 19 | „ |
| 2 „ | „ | 20 | „ |
| 1 sample | „ | 21 | „ |
| 3 samples | „ | 22 | „ |
| 1 sample | „ | 25 | „ |
| 1 „ | „ | 47 | „ |
| 1 „ | „ | 80 | „ |
| 1 „ | „ | 83 | „ |

Thirty-seven samples of milk were deficient in fat:—

2 samples to the extent of 5 per cent.

| | | | | |
|-----------|---|---|----|---|
| 4 | „ | „ | 6 | „ |
| 9 | „ | „ | 8 | „ |
| 2 | „ | „ | 10 | „ |
| 4 | „ | „ | 11 | „ |
| 2 | „ | „ | 13 | „ |
| 1 sample | „ | „ | 14 | „ |
| 1 | „ | „ | 15 | „ |
| 1 | „ | „ | 19 | „ |
| 3 samples | „ | „ | 20 | „ |
| 1 sample | „ | „ | 23 | „ |
| 2 samples | „ | „ | 25 | „ |
| 1 sample | „ | „ | 26 | „ |
| 1 | „ | „ | 28 | „ |
| 2 samples | „ | „ | 33 | „ |
| 1 sample | „ | „ | 38 | „ |

One sample sold as "Skimmed Milk" consisted of whole Milk mixed with 12 per cent. of water.

One sample of Self-raising Flour consisted of ordinary Flour, presumably supplied by mistake.

Thirteen samples of Sponge Cake contained Boric Acid, presumably from the use of preserved egg yolk. The quantity of Boric Acid was, in five cases, 0.1 per cent.; in four cases, from 0.15 to 0.2 per cent.; in two cases, about 0.3 per cent.; in one case, 0.4 per cent.; and in another case, 0.5 per cent.

PART II.

COMBINED MEDICAL SERVICE.

No new developments have occurred since the publication of last year's Annual Report, which gave a table showing the full combined medical service schemes in operation or pending. All the schemes indicated in that table have been in operation during the year under review.

During the year the County Medical Officer gave a lecture to members of the Royal Institute of Public Health, entitled, "The Ideal Unit for Public Health Administration," in which he emphasised the following conclusions:—

- (1) That there is urgent need for the establishment of a new local government unit and for the consolidation of the Public Health Acts.
- (2) That meanwhile the Essex scheme of combined medical service consolidates with efficiency and sufficiency the public health services in Rural Districts.
- (3) That by the Essex scheme the County Council and Local Sanitary Authority secure a sufficient and efficient medical service.
- (4) That what is most important of all, the medical man who secures a combined medical appointment under the Essex Scheme is saved from the blind alley posts, he secures a reasonable salary, he is the central medical officer of the district, and he is fitting himself for the combined posts already established in the larger centres of population.
- (5) That the same principle holds in the case of health visitors, dentists and treatment centres.

Other County Councils are now becoming interested in this scheme, several having written for particulars and for observations in regard to its administration.

In May, 1924, a Conference of Combined Medical Officers was held, when each officer was asked for his views on the working of the scheme. The general inferences to be drawn from the discussion were:—

- (1) That there were few objections to the scheme and that it was certainly better than any former arrangement.
- (2) That for Rural Districts in particular, it was an ideal scheme.
- (3) That the scheme depends largely upon the personal relationship between the County Medical Officer and the Combined Medical Officers.

Although the scheme has now been in operation more than four years, it may be regarded as still in the experimental stage. As far as the Local Sanitary Authorities are concerned, no objections have, up to the present, been made. From the County Council's standpoint, the only real objection is that members of both the Public Health Committee and the Education Committee feel they have not quite the same direct touch with their officers as they had when each service was a "water tight" department. Nevertheless, it is generally felt that failing new units for local government being made by Parliament, the Combined Medical Service Scheme is decidedly the best that can be adopted for rural districts. A population of from 25,000 to 30,000 in an area of something like 60,000 to 70,000 acres is about what one man can reasonably undertake.

When considering larger Urban Districts, one is liable to come across a few additional minor difficulties, particularly in respect to the clinical side of tuberculosis work.

From the central administration standpoint, the scheme is more intricate and difficult, but not sufficiently so as to be a serious matter.

PART III.

TUBERCULOSIS.

Notifications.

A summary of the notifications of Tuberculosis made in the Administrative County of Essex during the period 31st December, 1922, to 29th December, 1923, is given below :-

TABLE XII.

| Age Periods. | Notifications on Form A. | | | | | | | | | | | | Total Notifica- tions on Form A. |
|----------------------|--------------------------|--------|---------|----------|----------|----------|----------|----------|----------|----------|-------------------|-----------------------------------|---|
| | Primary Notifications. | | | | | | | | | | | Total Primary Notifications | |
| | 0 to 1 | 1 to 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 65 | 65 and upwards | | |
| Pulmonary, Males ... | 2 | 6 | 24 | 24 | 64 | 97 | 159 | 124 | 88 | 41 | 5 | 634 | 682 |
| „ Females ... | 1 | 4 | 32 | 85 | 78 | 85 | 135 | 77 | 56 | 20 | 13 | 536 | 570 |
| Non-Pulmonary, Males | 4 | 31 | 34 | 23 | 11 | 13 | 8 | 10 | 8 | 2 | — | 144 | 148 |
| „ Females | 6 | 23 | 26 | 18 | 17 | 24 | 18 | 4 | 3 | 3 | 2 | 144 | 154 |
| Totals, 1923 ... | 13 | 64 | 116 | 100 | 170 | 219 | 320 | 215 | 155 | 66 | 20 | 1458 | 1554 |
| „ 1922 ... | 7 | 44 | 59 | 72 | 148 | 140 | 184 | 169 | 110 | 54 | 22 | 1009 | 1073 |
| „ 1921 ... | 18 | 55 | 75 | 84 | 160 | 177 | 225 | 203 | 114 | 72 | 21 | 1204 | 1281 |

| Age Periods. | Notifications on Form B. | | | | | Notifications on Form C. | |
|--------------------------|--------------------------|---------|----------|-----------------------------|--------------------------------|--------------------------|------------|
| | Primary Notifications. | | | | Total Notifications on Form B. | Poor Law Institutions. | Sanatoria. |
| | Under 5 | 5 to 10 | 10 to 15 | Total Primary Notifications | | | |
| Pulmonary, Males ... | — | 2 | 1 | 3 | 3 | 29 | 323 |
| „ Females ... | — | 1 | 1 | 2 | 2 | 22 | 191 |
| Non-Pulmonary, Males ... | — | 9 | — | 9 | 9 | 7 | 54 |
| „ Females | — | 7 | — | 7 | 7 | 9 | 30 |
| Total, 1923 ... | — | 19 | 2 | 21 | 21 | 67 | 598 |
| „ 1922 ... | 2 | 8 | 15 | 25 | 25 | 31 | 473 |
| „ 1921 ... | 1 | 13 | 9 | 23 | 23 | 9 | 385 |

TOTALS.

| | 1923. | 1922. |
|--------------------------------------|--------------|--------------|
| Form A. (Medical Practitioners) ... | 1,554 | 1,073 |
| „ B. (School Medical Inspectors) ... | 21 | 25 |
| „ C. (Poor Law) ... | 67 | 31 |
| „ „ (Sanatoria) ... | 598 | 473 |
| | <u>2,240</u> | <u>1,602</u> |

The total notifications as compared to primary notifications for the past ten years are as follows :—

| Year. | No. of Notifications. | No. of Primary Notifications. |
|-------|--------------------------|-------------------------------------|
| 1914 | 3,495 | 2,864 |
| 1915 | 2,200 | 1,821 |
| 1916 | 2,121 | 1,803 |
| 1917 | 2,268 | ? |
| 1918 | 1,992 | ? |
| 1919 | 1,951 | 1,440 |
| 1920 | 1,473 | 1,097 |
| 1921 | 1,698 | 1,281 |
| 1922 | 1,602 | 1,073 |
| 1923 | 2,240 | 1,458 |

On 28th January, 1924, the Ministry of Health asked for the usual annual return of the above notifications, and also for a supplemental return showing new cases of Tuberculosis coming to the knowledge of the County Medical Officer during the period from the 31st December, 1922, to 29th December, 1923, otherwise than by notification on Form A or B under the Public Health (Tuberculosis) Regulations, 1912. This special return is repeated in Table XIII.

The Ministry also asked for the County Medical Officer's observations upon the considerable increase in the total notifications as compared with several years past. A reply was given to the effect that early in 1923 a system was adopted whereby all unnotified cases coming to the knowledge of the Department in any of the following circumstances were reported to the Local Medical Officers of Health with a view to their being notified under the Regulations :—

- (a) Registrar's notification of death from Tuberculosis.
- (b) Cases applying for treatment under County Council scheme.
- (c) Positive sputum results from County Laboratory.

The opinion was expressed that the increase in the total number of notifications on Form A was not due to a greater incidence of the disease but rather to the above mentioned special steps.

Table XV. shows that of the 771 registered deaths from Tuberculosis, 705 have been traced in respect to their notification under the Public Health (Tuberculosis) Regulations. This Table shows a most unsatisfactory state of affairs in some districts notably Colchester, Chelmsford, Braintree Rural, Orsett Rural. Deducting those in which we have no information, it is seen that out of 449 deaths from tuberculosis only 81 (or 18 per cent.) were notified 12 months or more before death. The Local Medical Officer of Health should consider very carefully the cause of this delay and seek measures to remove it.

TABLE XIII.

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

| 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. | Total cases. |
|--------------------------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------|--------------|
| Pulmonary, Males ... | .. | 1 | 3 | 2 | 5 | 5 | 12 | 8 | 7 | 5 | 2 | 50 |
| „ Females ... | ... | 1 | 2 | 5 | 8 | 4 | 15 | 9 | 6 | ... | 1 | 51 |
| Non-pulmonary, Males ... | ... | 3 | 3 | ... | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 19 |
| „ Females .. | ... | 3 | 2 | 2 | ... | 3 | 1 | 1 | 1 | 1 | ... | 14 |

Deaths.

Table XIV. below gives the number of deaths at all ages from pulmonary and non-pulmonary Tuberculosis in the Administrative County of Essex as compared to England and Wales, since the inception of sanatorium benefit in 1911. In the aggregate there is an appreciable decrease in the number of deaths in Essex, the figure recorded being the second lowest during the past thirteen years.

TABLE XIV.

NUMBER OF DEATHS FROM TUBERCULOSIS IN ENGLAND AND WALES AND ESSEX DURING THE YEARS 1911-23.

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

TABLE XV.

SHewing DEATHS FROM TUBERCULOSIS REGISTERED WITH LOCAL REGISTRARS
 BIRTHS AND DEATHS IN THE ADMINISTRATIVE COUNTY DURING 1923, AND
 PARTICULARS REGARDING NOTIFICATION UNDER THE PUBLIC HEALTH (TUBERCULOSIS)
 REGULATIONS, 1912. (*Transferable Deaths are excluded*).

| DISTRICTS. | No. of Deaths. | When Notified. | | | | | | | No. Informants. |
|-------------------------|----------------|----------------|---------------------------|-----------------------------|------------------------------|----------------------------|----------------------------|----------------------------|-----------------|
| | | 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. | Within 4-8 years of death. | |
| Urban. | | | | | | | | | |
| Barking | 38 | 5 | 6 | 2 | 8 | 6 | ... | ... | 11 |
| Braintree | 7 | 1 | 2 | 1 | ... | ... | ... | ... | 3 |
| Brentwood | 7 | 1 | 2 | 1 | ... | ... | 1 | 1 | 1 |
| Brightlingsea ... | 3 | ... | 2 | 1 | ... | ... | ... | ... | ... |
| Buckhurst Hill ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... |
| Burnham | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Chelmsford B. ... | 19 | 1 | 3 | 1 | ... | 1 | 1 | ... | 12 |
| Chingford | 2 | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Clacton | 7 | 1 | 2 | 1 | ... | ... | ... | ... | 3 |
| Colchester B. ... | 41 | 4 | 9 | 9 | 5 | 1 | ... | 2 | 11 |
| Epping | 8 | 1 | 3 | 1 | 1 | ... | ... | ... | 2 |
| Frinton | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Grays | 19 | 3 | 4 | 1 | 3 | ... | ... | 1 | 7 |
| Halstead | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| Harwich B. | 6 | ... | 2 | 1 | ... | ... | ... | 1 | 2 |
| Ilford | 56 | 6 | 12 | 9 | 7 | 3 | 1 | 1 | 17 |
| Leyton | 122 | 8 | 18 | 13 | 21 | 9 | 5 | 2 | 46 |
| Loughton | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Maldon B. | 4 | 1 | ... | ... | 1 | ... | ... | ... | 2 |
| Romford | 17 | 3 | 4 | 2 | 1 | 2 | ... | 1 | 4 |
| Saffron Walden B. ... | 6 | ... | ... | ... | ... | 1 | ... | ... | 2 |
| Shoeburyness ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tilbury | 3 | ... | 2 | ... | ... | ... | ... | ... | 1 |
| Waltham Holy Cross ... | 6 | 1 | 1 | ... | 3 | ... | ... | ... | 1 |
| Walthamstow | 121 | 10 | 22 | 16 | 22 | 10 | 8 | 2 | 31 |
| Walton-on-the-Naze ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Wanstead | 8 | 1 | 2 | ... | 1 | 3 | ... | ... | 1 |
| Witham | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Wivenhoe | 2 | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Woodford | 10 | ... | 4 | 1 | 1 | ... | ... | ... | 4 |
| Totals | 517 | 48 | 101 | 61 | 74 | 37 | 16 | 11 | 166 |
| Rural. | | | | | | | | | |
| Belchamp | 2 | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Billericay | 15 | 4 | 1 | ... | 2 | 1 | ... | ... | 7 |
| Braintree | 22 | 1 | 9 | 2 | 3 | ... | ... | 1 | 6 |
| Bumpstead | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Chelmsford | 9 | ... | 1 | ... | ... | 1 | ... | 1 | 6 |
| Dunmow | 9 | ... | 1 | ... | ... | 1 | ... | 2 | 5 |
| Epping | 8 | ... | 1 | 1 | 2 | ... | ... | ... | 4 |
| Halstead | 7 | 2 | 2 | 1 | ... | 1 | ... | ... | 1 |
| Lexden and Winstree ... | 13 | 2 | 1 | ... | 1 | ... | ... | ... | 9 |
| Maldon | 11 | 1 | 3 | 1 | ... | ... | ... | ... | 6 |
| Ongar | 3 | ... | 1 | ... | ... | ... | ... | ... | 2 |
| Orsett | 19 | 1 | 4 | ... | ... | 1 | 1 | ... | 12 |
| Rochford | 24 | 2 | 9 | 2 | 1 | ... | 1 | 1 | 8 |
| Romford | 24 | 1 | 8 | 3 | 2 | 1 | 1 | ... | 8 |
| Saffron Walden | 5 | ... | 1 | ... | 1 | 1 | ... | ... | 2 |
| Stansted | 2 | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Tendring | 15 | ... | 2 | 2 | 1 | ... | 1 | ... | 9 |
| Totals | 188 | 14 | 45 | 12 | 13 | 8 | 4 | 5 | 87 |
| URBAN DISTRICTS ... | 517 | 48 | 101 | 61 | 74 | 37 | 16 | 11 | 166 |
| RURAL DISTRICTS ... | 188 | 14 | 45 | 12 | 13 | 8 | 4 | 5 | 87 |
| TOTALS | 705 | 62 | 146 | 73 | 87 | 45 | 20 | 16 | 253 |

Estimates—1923-24.

Provision was made in these Estimates for the diagnosis and treatment as follows :—

| Nature of Services. | | | | Amount. |
|---------------------------|-----|-----|-----|---------|
| | | | | £ |
| Tuberculosis Officers | ... | ... | ... | 4,460 |
| Nurses | ... | ... | ... | 3,100 |
| Dispensaries | ... | ... | ... | 2,270 |
| County Council Sanatoria | ... | ... | ... | 19,423 |
| Other Sanatoria | ... | ... | ... | 12,330 |
| Shelters | ... | ... | ... | 450 |
| Dental Treatment | ... | ... | ... | 100 |
| Extra Nourishment | ... | ... | ... | 300 |
| After-care and Propaganda | ... | ... | ... | 100 |
| Laboratory | ... | ... | ... | 300 |
| Sundries | ... | ... | ... | 300 |
| | | | | <hr/> |
| | | | | £43,133 |
| | | | | <hr/> |

Medical and Nursing Service.

(a) TUBERCULOSIS OFFICERS. The principle of combined medical service has been followed wherever possible, and a full list of the medical staff is given on page 8.

(b) TUBERCULOSIS NURSES. On page 9 will be found a list of the Health Visitors who undertook tuberculosis work, and who were assisted by 135 District Nurse-Midwives, under the agreement which the County Council have with the Essex County Nursing Association.

(c) SUMMARY OF WORK. In the Tables XVI. and XVII. an attempt is made to summarise the many and varied duties of the Tuberculosis Officers and Nurses, and the treatment granted to patients during the year.

TABLE XVI.

SHOWING DISPENSARY ATTENDANCES, EXAMINATIONS, ETC., FOR THE YEARS 1922 AND 1923.

| Attendances, etc. | | 1922. | 1923. |
|---|-----|---------|---------|
| | | Number. | Number. |
| Dispensary attendances | ... | 16,452 | 17,737 |
| Contacts and suspects examined | ... | 1,970 | 1,802 |
| Patients examined at request of medical practitioners or Ministry of Pensions | | | |
| | ... | 1,828 | 1,769 |
| Sputa specimens examined | ... | 3,191 | 3,645 |
| Domiciliary visits by Tuberculosis Officers | ... | 1,944 | 1,605 |
| " " " Nurses | ... | 13,500 | 13,014 |

TABLE XVII.

SHOWING TREATMENT GRANTED TO PATIENTS DURING 1922 AND 1923.

| Kind. | 1922. Number. | 1923. Number. |
|--------------------------------------|------------------|------------------|
| Dispensary ... | 1,127 | 779 |
| Sanatoria ... | 861 | 977 |
| Domiciliary (including Shelters) ... | 1,901 | 1,796 |
| Observation ... | 3,390 | 3,152 |
| Total ... | 7,635 | 6,704 |
| Patients discharged ... | 1,698 | 954 |
| Totals at end of year ... | 5,937 | 5,750 |

Dispensaries and Visiting Stations.

At the conclusion of 1923, the Dispensaries and Visiting Stations enumerated below were open and under the charge of the Tuberculosis Officers named :—

| | |
|------------|--|
| BARKING | ... Tuberculosis Officer, Kerr Simpson, M.D., D.P.H. Dispensary, 37, Linton Road, Mondays, 4 to 6 p.m. Thursdays, 10.30 a.m. to 12.30 p.m. |
| BRAINTREE | ... Tuberculosis Officer, P. J. Gaffikin, M.C., M.B., B.Ch., B.A.O., D.P.H. Dispensary, Co-operative Buildings, Wednesday, 11.30 a.m. to 1 p.m. Sanatorium, Black Notley. |
| CHELMSFORD | ... Tuberculosis Officer, R. H. Vercoe, B.A., M.R.C.S., L.R.C.P., D.P.H. Dispensary, General Hospital, London Road, Fridays, 2 to 4 p.m. |
| CLACTON | ... Tuberculosis Officer, W. A. Milne, M.B., Ch.B., D.P.H. Dispensary, Skelmersdale Road, Fridays, 11 a.m. to 12 noon. |
| COLCHESTER | ... Tuberculosis Officer, W. F. Corfield, M.D., D.P.H. Dispensary, St. John's Street, Tuesdays, 10.30 a.m. to 12.30 p.m. Thursdays, 10.30 a.m. to 12.30 p.m. Sanatorium, Colchester. Patients from the Wivenhoe Urban District and Lexden and Winstree Rural District are seen during the same sessions by W. H. Alderton, M.C., M.R.C.S., L.R.C.P., D.P.H. |

- DUNMOW ... Tuberculosis Officer, P. J. Gaffikin, M.C., M.D.,
B.Ch., B.A.O., D.P.H.
Dispensary, 18, Mount Pleasant Terrace, The
Causeway, Tuesdays, 1st and 3rd in each month,
10.30 to 11.30 a.m.
- EPPING ... Tuberculosis Officer, Charlotte Brown, L.R.C.P.,
L.R.C.S.
Dispensary, c/o Gas and Electricity Co.'s Office,
Wednesdays, 2nd and 4th in each month, 10.30 to
11.30 a.m.
Sanatoria, Chingford and High Beech.
- GRAYS ... Tuberculosis Officer, W. B. Wood, M.A., M.D.,
B.Ch., M.R.C.P., D.P.H.
Dispensary, Hilldrop House, 59, London Road,
Grays. Mondays, 4 to 6 p.m., Thursdays, 4 to 6
p.m.
- HALSTEAD ... Tuberculosis Officer, J. S. Ranson, M.R.C.S.,
L.R.C.P., D.P.H.
Dispensary, Out-patients Dept., Cottage Hospital,
Fridays, 2nd and 4th in each month, 11.30 a.m. to
1.30 p.m.
Sanatorium, Sible Hedingham.
- HARWICH ... Tuberculosis Officer, J. Ramsbottom, M.B., Ch.B.,
D.P.H.
Dispensary, c/o Mr. Woodward, Corner Chemist,
1, Church Street. Tuesdays, 11 a.m. to 12 noon.
- ILFORD ... Tuberculosis Officer, A. H. Jacob, L.R.C.P.,
L.R.C.S.
Dispensary, 38, Oakfield Road, Tuesdays, 3 to 5
p.m., Fridays, 4 to 6 p.m.
Sanatorium, Ilford.
- LEYTON ... Tuberculosis Officers, J. Sorley, M.A., M.D.,
D.P.H., LL.B., and Charlotte Brown, L.R.C.P.,
L.R.C.S.
Dispensary, 180, High Road, Mondays, 2 to 4
p.m. (children only), Thursdays, 10 a.m. to 12
noon (new cases only), and 6 to 8 p.m., Fridays,
2 to 4 p.m.
- MALDON ... Tuberculosis Officer, W. H. Alderton, M.C.,
M.R.C.S., L.R.C.P., D.P.H.
Dispensary, 114, High Street, Tuesdays, 2nd and
4th in each month, 10.30 a.m. to 11.30 a.m.

| | | |
|----------------|-----|---|
| ROMFORD | ... | Tuberculosis Officer, A. H. Jacob, L.R.C.S. L.R.C.S. Dispensary, 29, Eastern Road, Tuesdays Fridays, 9.30 a.m. to 12.30 p.m. |
| SAFFRON WALDEN | ... | Tuberculosis Officer, S. R. Richardson, B.A., M.B.Ch., B.A.O., D.P.H. Dispensary, Adult School Room, High Street Tuesdays, 1st and 3rd in each month, 2 p.m. 4 p.m. |
| SOUTHEND | ... | Tuberculosis Officer, G. N. Meachen, M.D., B.S. Dispensary, 30, Clarence Street, Mondays Thursdays and Saturdays, 2.30 to 4.30 p.m. (men 2.30, women 3.15), Tuesdays, 6.30 to 8.30 p.m. (men only), Fridays, 6.30 to 8.30 p.m. (women only). |
| *WALTHAM ABBEY | ... | Tuberculosis Officer, Charlotte Brown, L.R.C.S. L.R.C.S., Dispensary, 31, Greenyard, Mondays, 11 a.m. to 12 noon. |
| WALTHAMSTOW | ... | Tuberculosis Officer, J. Sorley, M.A., M.D., D.F.P.S. LL.B. Dispensary, 334, Hoe Street, Mondays, 2 to 4 p.m. Tuesdays, 10 a.m. to 12 noon and 6 to 8 p.m. Wednesdays, 10 to 12 noon (new cases only), Fridays, 10 to 12 noon (children only). *Now closed. |

The County Scheme for the Treatment of Tuberculosis, as revised in November, 1921, has been continued without any alteration, and the reports from some of the District Tuberculosis Officers reveal the increasing usefulness of the Dispensaries throughout the County. A selection of these reports is now presented.

Dr. A. H. Jacob (Ilford and Romford) is of opinion that "Dispensary services appear now to be quite definitely a necessary part of the Scheme. By their means the public is made acquainted with first principles in prevention and treatment and I believe those patients using the Dispensary profit by this, and that they appreciate what is being done, as witness the fact that they continue so regularly and that many new cases come as a result of their recommendations. There is no reason, I think, to alter the existing arrangement whereby all drugging is done by the Medical Attendant, but there is good reason for thinking that such medicines as are supplied freely under the County Scheme are needed, and that necessary cases would not do so well without this help.

"It remains a fact observed on all hands, that large numbers of cases first come under the eye of the Tuberculosis Officer in a very advanced stage of the disease. As soon as active propaganda work is undertaken to educate the public (through Care Associations and otherwise) this will, I believe, become a less conspicuous

"feature of the work. Meantime, the local medical men continue to use the Dispensary freely, and it is through co-operation with them that progress alone will become apparent."

Dr. S. R. Richardson (Saffron Walden) has met with few serious difficulties as Tuberculosis Officer, and gives reasons for the low average attendance at the Dispensary during 1923. He considers "that this is partly due to the fact that patients who are fit for work and have been fortunate enough to obtain constant employment are naturally unwilling to risk losing it by taking a day off occasionally. A second factor is the inability of many patients to pay rail or bus fares. In addition to these, there is undoubtedly a considerable number, not in work, suffering from advanced or slowly progressing disease, who do not appreciate the importance of advice or observation, and are unwilling to attend unless there is a possibility of receiving treatment such as Cod Liver Oil or other medicaments."

Dr. J. Ramsbottom (Tendring Rural) states that "the absence of a Centre for the Tendring Area makes this part of the district a very difficult one to work. There are 84 patients on the register and, with the exception of those residing in the few adjacent parishes, they cannot reasonably be expected to go to Harwich. The Dispensary in the latter town is situated two miles beyond the north-east boundary of Tendring Rural District, and with bad travelling facilities. A dispensary or consulting room in a reasonably accessible part in the centre of the district is very necessary."

As regards the Harwich Dispensary, Dr. Ramsbottom records that "the County Scheme works well in this part of my district. This is due to the fact that the area is served by a Dispensary which is within reasonable reach of any patient residing within it. The local practitioners freely send their patients for consultations. The nurse keeps the Tuberculosis Officer posted concerning the condition and requirements of patients on the books, and any unsatisfactory case can be seen at the Dispensary by arrangement or visited at home."

In respect to the general scheme of treatment, Dr. W. H. Alderton (Lexden and Winstree Rural) finds that it "works efficiently. It is unusual for a patient to wait long for treatment, no matter how specialised the treatment may be. This in my opinion, is one of the best features of the County Scheme, and one which is due to the proximity of all parts of the County to London. Patients, I find, are not slow to appreciate the advantages derived from the Scheme, especially as regards the special services."

Dr. W. A. Milne (Clacton) found it difficult to write a report on the Tuberculosis Scheme as carried out in England to-day. When it appeared over 10 years ago "I was not 'struck' with it, and my four years as Tuberculosis Officer in Clacton have not tended to make me alter my opinion. I, therefore, start with a mind somewhat biassed against it, and observations made by me probably do not faithfully represent the facts. The literature connected with it is so enormous that it is impossible for one who gives only a small part of his time to Tuberculosis to have more than a most meagre acquaintance with what is written about it."

"The reasoning on which the Scheme was founded was, I take it, somewhat as follows:—Tuberculosis is produced by a bacillus, it is therefore an infectious disease; the results of *post mortem* examinations show that probably at least 90 per cent. of people have suffered from it at some time in their lives—it is therefore an eminently curable disease. Cure, then, those who present signs of it in an active form and you will have removed a great reservoir of infection. But is it eminently curable in all cases? My experience in Clacton shows that this is very far from being the case by any means at present at our disposal. Get a case ever so early (and one has to admit that one very seldom does get them early) and put it under the most favourable environmental circumstances, yet he would be a boy who would state that such a case is a permanent cure, and that as a future source of infection it has ceased to count."

Sanatorium Treatment.

(1) BEDS. Table XVIII. shows the number of beds occupied and the number of patients treated during the years 1922 and 1923. The need for economy resulted in a decreased number of beds at the end of 1923, but, nevertheless, residential treatment was provided for 26 more patients than was the case in 1922. This reduction of beds was in connection with institutions not controlled by the County Council, who provided 35 additional beds at their own Sanatoria.

Artificial Pneumo-Thorax Treatment. An additional special form of treatment was included in the County Scheme by the provision of 2 beds at the Victoria Park Hospital, London, for Artificial Pneumo-Thorax Treatment. These beds were reserved for patients specially recommended for this particular treatment.

(2) COUNTY COUNCIL INSTITUTIONS. The County Accountant has kindly supplied Table XIX. (page 59), which gives particulars regarding the average cost per patient per week at each of the four institutions controlled by the County Council. On the 17th July, 1922, the Ministry of Health forwarded model forms to all Local Authorities in England for the keeping of accounts, in order that at the end of each six months a statement could be furnished in connection with the maintenance costings at each Residential Institution owned by the Authority. These statements for the year ended 31st March, 1923, have been summarised by the Ministry, who by Memorandum 87, dated December, 1923, forwarded a complete return of the costs under various headings at all Residential Institutions throughout England. The average cost per patient per week at the four County sanatoria compares favourably with the costs at other institutions. Of the 98 institutions in the Adult Group, Black Notley was No. 1 (the cheapest) and Harold Court was No. 67. Of the 14 institutions in the Children's Group, Sible Hedingham was No. 1 (the cheapest) and High Beech Hospital was No. 12.

(a) *Harold Court Sanatorium.* Increased accommodation for adult male patients was provided during the year, the number of beds being 53 as compared to 43 in the previous year. Treatment was given during the year to 260 patients.

TABLE XVIII.

SHEWING NUMBER OF BEDS PROVIDED AND NUMBER OF PATIENTS ACCOMMODATED
DURING THE YEARS 1922 AND 1923.

| Name of Institution. | Kind of Patient Treated. | Number of Beds at end of | | Number of Patients treated during | |
|-------------------------|--------------------------|--------------------------|------|-----------------------------------|------|
| | | 1922 | 1923 | 1922 | 1923 |
| Harold Court... | Males. | 43 | 53 | 206 | 260 |
| Ilford ... | " | 19 | 19 | 89 | 77 |
| Colchester ... | " | 12 | 13 | 59 | 66 |
| Other Institutions ... | " | 58 | 41 | 161 | 153 |
| Black Notley ... | Females. | 30 | 45 | 191 | 232 |
| Chingford ... | " | 14 | 12 | 76 | 70 |
| †Orsett ... | " | 8 | 8 | 25 | 36 |
| Other Institutions ... | " | 21 | 11 | 73 | 49 |
| High Beech (Surgical).. | Children. | 32 | 32 | 57 | 60 |
| Sible Hedingham ... | " | 35 | 31 | 143 | 144 |
| Other Institutions ... | " | 33 | 29 | 120 | 79 |
| Totals ... | | 305 | 294 | 1200 | 1226 |

†Discontinued on 31st December, 1923.

SUMMARY OF BEDS PROVIDED.

| | 1922. | 1923. |
|---|-------|-------|
| County Council Institutions ... | 140 | 161 |
| Isolation Hospitals under Agreement ... | 53 | 52 |
| Other Institutions as required ... | 112 | 81 |
| Total ... | 305 | 294 |

the average length of stay being 65 days. This institution has continued its usefulness, particularly in the care of advanced patients in the special wards. Dr. T. P. Puddicombe, Chief Assistant County Medical Officer, succeeded Dr. A. H. Jacob as temporary Medical Superintendent from January, 1923, to August, 1924, and the success of the institution was due to him and to the Matron, Clerk-Steward, and Staff who have performed their work efficiently.

Several improvements and renovations have been carried out, and at the time of writing the County Council have agreed to purchase, with the approval of the Ministry of Health, the adjoining Harold Court Nursery. This property is in the centre of the Sanatorium grounds and has always been a stumbling block in the way of developments. The County Council are now able to proceed with a much more suitable lay-out scheme for the institution, the total acreage now being 29·3.

(b) *Black Notley Sanatorium.* Increased accommodation for adult female patients was provided during the year, the number of beds being 45 as against 30 for the previous year. Treatment was given to 232 patients, the average length of stay being 59 days. Dr. P. J. Gaffikin assumed duty as Medical Superintendent on 1st October, 1923, and has on several occasions reported upon the satisfactory and efficient manner in which the Matron and her Staff have carried out their duties.

On the 11th March, 1923, Lord Lambourne and several members of the King Edward Memorial Fund Committee visited the Sanatorium and, generally speaking, were favourably impressed with the institution. Subsequently, Lord Lambourne intimated that his Committee had passed the following resolution:—

That the £2,100 remaining from the collection for the Memorial to the late King Edward VII., be allocated for a Recreation Hall and the necessary kitchens, as agreed at the public meeting of subscribers held at the Shire Hall on the 17th July 1914, and that no public money be spent in the erection of the building.

This Memorial Hall will form a valuable addition to the Sanatorium and at a meeting of the County Council on the 2nd October, 1923, the following resolution was carried unanimously:—

That the gift by the Special Committee of the King Edward VII. Memorial Fund of a Recreation Hall to be erected at the Black Notley Sanatorium as a Memorial to the late King Edward VII., be accepted; that permission be given to the Committee to erect the same in a position to be approved, and that the thanks of the County Council be conveyed to the Memorial Fund Committee for the gift.

In view of the desirability of providing more permanent and convenient accommodation for children suffering from Pulmonary Tuberculosis, in lieu of the Small-pox Hospital at Sible Hedingham, and of the need of extra land for the above-mentioned Memorial Hall, the County Council have decided to purchase a field of

TABLE XIX.

SHOWING FOR EACH SANATORIUM THE AVERAGE COST PER PATIENT PER WEEK.

YEAR ENDED 31ST MARCH, 1924.

(Kindly supplied by the County Accountant.)

| Item of Expenditure. | BLACK NOTLEY. (Average No. of Patients 41·44). | | HAROLD COURT. (Average No. of Patients 51·31). | | HIGH BEECH. (Average No. of Patients 31·51). | | SIBLE HEDINGHAM. (Average No. of Patients 31·81). | |
|--|--|---|--|---|--|---|---|---|
| | Amount. £ | Average cost per Patient per week. d. | Amount. £ | Average cost per Patient per week. d. | Amount. £ | Average cost per Patient per week. d. | Amount. £ | Average cost per Patient per week. d. |
| Salaries ... | 849 | 94·04 | 1605 | 143·59 | 1523 | 221·86 | 640 | 92·35 |
| Provisions ... | 1022 | 113·20 | 2297 | 205·49 | 713 | 103·87 | 592 | 85·43 |
| Drugs and Medical Appliances ... | 81 | 8·97 | 143 | 12·79 | 129 | 18·79 | 13 | 1·88 |
| Fuel, Light and Water ... | 189 | 20·71 | 455 | 40·70 | 240 | 34·96 | 128 | 18·47 |
| Domestic Renewals, Repairs, &c. ... | 187 | 20·16 | 412 | 36·85 | 149 | 21·72 | 80 | 11·54 |
| Laundry ... | 165 | 18·28 | 261 | 23·35 | 102 | 14·86 | 68 | 9·81 |
| Structural Renewals, Repairs, &c. ... | 252 | 27·91 | 233 | 20·84 | 46 | 6·70 | 79 | 11·40 |
| Garden ... | 18 | 1·99 | ... | ... | 22 | 3·20 | 61 | 8·80 |
| Travelling Expenses of Patients and Staff ... | 93 | 10·30 | 109 | 9·75 | 85 | 12·38 | 73 | 10·53 |
| Printing, Stationery, &c. ... | 33 | 3·66 | 74 | 6·62 | 18 | 2·62 | 21 | 3·03 |
| Rates, Taxes, Insurance ... | 18 | 1·99 | 82 | 7·34 | 84 | 12·24 | 51 | 7·36 |
| Miscellaneous ... | 59 | 6·54 | 132 | 11·81 | 53 | 7·72 | 28 | 4·04 |
| Rent .. | 2959 | 327·75 | 5803 | 519·13 | 3164 | 460·92 | 1834 | 264·64 |
| | 9 | 1·0 | 268 | 23·98 | 85 | 12·38 | 120 | 17·32 |
| Capital Expenditure defrayed from Revenue | 2968 | 328·75 | 6071 | 543·11 | 3249 | 473·30 | 1954 | 281·96 |
| | 96 | 10·63 | 849 | 75·95 | 34 | 4·95 | 39 | 5·63 |
| Gross Total .. | 3064 | 339·38 | 6920 | 619·06 | 3283 | 478·25 | 1993 | 287·59 |
| Profit on Farm Account ... | — | ... | 82 | 7·34 | ... | ... | ... | ... |
| Other Receipts ... | 2 | ·21 | 52 | 4·65 | 8 | 1·17 | 40 | 5·77 |
| Nett Total .. | 3062 | 339·17 | 6786 | 607·07 | 3275 | 477·08 | 1953 | 281·82 |

26 acres adjoining the Black Notley Sanatorium, subject to the approval of the Ministry of Health. Schemes for these extensions and for the provision of adequate sewage disposal works are now in the course of preparation, and the much needed systems of water supply and electric lighting have been completed.

(c) *Sible Hedingham Sanatorium.* As arranged with the Ministry of Health, the number of beds at this Sanatorium has been reduced from 35 to 31. Treatment was provided for 144 children, the average length of stay being 83 days. Dr. J. Ranson took up duty as Medical Superintendent on the 17th September, 1923, and with the assistance of the Matron, Sister-Teacher and Staff, has produced excellent results, most of the children having received great benefit from their stay at the Sanatorium. One interesting and useful innovation was the formation of a Cub Pack as a Branch of the Boy Scout Movement, by Mr. T. T. Miller, of Sible Hedingham, who has done splendid work amongst the numerous boys who have passed through the institution.

In view of the proposal to transfer this institution to Black Notley, as before mentioned, no improvements have been carried out during the year.

(d) *High Beech Hospital for Surgical Tuberculosis.* 32 beds were provided at this Institution. 60 children were treated, the average length of stay being 203 days. Sir Henry J. Gauvain (whose valuable services as Consulting Surgeon are also available throughout the County) has continued his monthly visits to this Institution, in order to advise the Medical Superintendent, Dr. Charlotte Brown. Their combined work has again produced excellent results. Much credit is also due to the Matron, Teacher and Staff, for their efficient work throughout the year.

On 3rd April, 1923, the County Council sanctioned a scheme of extensions and improvements at an estimated cost of £5,000, subject to the approval of the Ministry of Health, and to the obtaining of an extension of the lease for a further period of 21 years, making a total of 42 years. Subsequent communications with the lessors revealed the fact that they were not prepared to approve the scheme, as the proposed alterations and additions were very extensive and would convert the building into a hospital of a different class than was contemplated when the present building was erected. Alternative proposals are now receiving the consideration of the Public Health Committee.

The following particulars of two patients, being an extract from a report by the Medical Superintendent, are typical of the results which are obtained at this Hospital:—

“F.D., who has been over three years in the Hospital, is now fit to be discharged. This boy was admitted with acute tuberculous disease of the knee joint, great swelling and deformity and several abscesses. It was only with the greatest difficulty that we saved the leg from amputation. He is now in good health, the disease is arrested, and he is able to get about with a perfectly useful limb.

"A.V.P., another boy who has been in the Hospital for two years, will shortly be discharged. This boy was admitted with acute disease of the spine in the upper part of the neck at its junction with the head. This resulted in partial dislocation of the spine with consequent paralysis of all four limbs. He was also very deaf. This boy has now the use of his limbs, there is no paralysis, and he is no longer deaf. There is hardly any deformity of the neck. A special form of apparatus has been devised in order that the neck may remain straight during the time he is walking about and at work after his discharge. He is a very useful boy in the home and garden."

(e) *General*. Each adult patient on leaving sanatorium is supplied with a copy of Form T.T. 65 to guide him in the protection of himself and family. This leaflet includes a list of the Tuberculosis Dispensaries with hours of attendance, as well as the following advice :—

ADVICE TO PATIENTS ON LEAVING SANATORIUM.

You have now completed the course of sanatorium treatment which had for its object the arrest of the disease by providing suitable rest, exercise and diet (thereby increasing your resistive powers to Tuberculosis) and teaching you how to avoid a recurrence of the disease and its conveyance to others.

You should protect the health of yourself and family by continuing to live at home as you did in the sanatorium. The following hints will help you :—

FOOD. Sufficient wholesome food is such an essential part of the treatment that wages may be more important than surroundings, *i.e.*, a higher wage, even though it involves less healthy working conditions, is in many cases better than more healthy work at wages which necessitate a poorer diet. You are fighting a chronic and persistent disease, and your strongest weapons are good food, fresh air and sunlight, adequate rest, cleanliness, determination and a cheerful attitude of mind.

FRESH AIR. Avoid stuffy rooms—keep windows wide open—take walks in open air regularly.

EXERCISE. Use your leisure time wisely in the open air. Avoid arduous exercise. Walking, bowls, gentle cycling, and golf are excellent.

REST. Sleep gives complete rest. Go to bed early and sleep by yourself, having windows wide open. Too little furniture in a bedroom is far better than too much.

CLEANLINESS. Disease usually accompanies dirt and dust which are the lairs of germs and flies, the latter being amongst the worst carriers of disease. Therefore see that your house and surroundings are kept spotlessly clean and that flies are destroyed by means of flypapers, fly-bats, etc. All household refuse should be burnt or placed in an ashbin with a tight-fitting lid.

It is important that anyone suffering from Tuberculosis should never touch food, even his own food, until he has washed his hands. A warm bath weekly is essential and much benefit is to be derived from a daily bath or sponge.

Continue to expectorate into a flask or paper handkerchief, afterwards burning the handkerchief and the contents of the flask, and boiling the latter at regular intervals.

TEETH. Sound teeth are necessary if you are to obtain full benefit from your food. Bad teeth infect sound teeth and cause toothache, headache, indigestion, anæmia, etc. Therefore, have your teeth put right and kept right. Apply to your own Doctor or the Tuberculosis Officer when any dental treatment required can be arranged under the County Scheme. Brush your teeth daily from side to side, up and down, and back and front with a good tooth brush and clean water. Tooth paste or soap may be used. Every six months ask your Doctor or Tuberculosis Officer to look at your teeth, when any further treatment required can be arranged under the County Scheme. Remember that a clean mouth is a healthy mouth.

AFTER-CARE ASSOCIATIONS. These are established at Chelmsford, Barking, Ilford, Leyton, Colchester, Romford and Saffron Walden, to render practical help and sympathy. The Tuberculosis Officers or Nurses have authority to bring before such Associations particulars of any patient needing help or advice.

GENERAL. Use commonsense. Do not attempt too much—avoid over-exertion. Do not worry. If slightly unwell, consult your own Doctor *at once*, or if he is not readily available, see the Tuberculosis Officer or Nurse at any of the Dispensaries named overleaf, or, failing them and the local district nurse, communicate with the undersigned.

W. A. BULLOUGH,
Chief Tuberculosis Officer.

In respect to sanatorium treatment generally, Dr. A. H. Jacob (Ilford and Romford) states that "sanatorium provision is sufficient, but a more extended stay for the early case is very desirable, and the urgency too for special provision for the more advanced and the hopeless case is a matter that I know you have already become aware of—removal of infection from the home being still the great desideratum."

Dr. S. R. Richardson (Saffron Walden) reports that "as regards the admission of early cases and others generally recognised as suitable for sanatorium treatment in my experience, the working of the County Scheme has been entirely satisfactory. I have, however, found difficulty in dealing with a few advanced cases who are practically homeless, avoided by relatives, live in unsuitable dwellings, and are usually careless in their habits, and refuse to recognise their responsibility as dangerous sources of infection."

Dr. W. H. Alderton (Lexden & Winstree) points out that "there are a few who are not catered for in all parts of the County, namely, advanced cases of an incurable character, which ought to be in an infirmary. This type of case, apparently, will have to wait until there is ample housing accommodation for everyone before it can be efficiently segregated. This should be the main object in dealing with advanced incurables, for I hold that sanatorium should be reserved for those who can be benefitted; this is especially so where there are insufficient beds to allow of a prolonged stay for the early cases."

"What return is the country getting for the vast sums spent on sanatorium treatment?" asks Dr. W. A. Milne (Clacton). "It is not getting cures, that is, genuine and permanent cures. At most it is getting a temporary freedom from infection during the short time the patient is in an institution, and possibly, as some of my unkind friends are in the habit of stating, a permanent freedom by a hastening of the end produced thereby. In all seriousness, the results obtained do not appear to be commensurate with the expenditure involved. A good part of the money lavished on sanatorium would be better spent by applying it to the supervision and treatment of infants and children and to improving the environmental conditions of the working classes. The results obtained from the institutional treatment of surgical tuberculosis and the so-called pre-tuberculosis in children are good and this side of the work should be developed as much as possible. There is also a real lack of facilities for properly dealing with the advanced lung case. I have this year come across what might be regarded as a disadvantage of the combined service. Being engaged in all branches of public health work, I live on the spot and am well known to everyone, with the result that all kinds of pressure are brought to bear from influential quarters and otherwise to get cases which are frequently by no means suitable into the County sanatoria. The provision of suitable institutions would go far to remove this difficulty."

In fairness to the sanatoria in Essex, it ought to be pointed out that, strictly speaking, we have not any sanatoria, but institutions which are really hospitals. The term sanatoria usually signifies an institution exclusively for patients in a very early stage of the disease. Probably 20 per cent. or less of the adult patients entering our sanatoria would be classified as early cases, the remainder being intermediate and advanced cases. Our policy has been that of the Ministry of Health, viz., to give short educational courses to the large intermediate class whilst giving unlimited stay to the early and advanced patients.

On the whole, subdued optimism is the feeling experienced by a careful investigator into the results of the anti-tuberculosis campaign in Essex. The number of deaths is steadily diminishing year by year. It cannot be emphasised too often that Tuberculosis is largely a disease of ill nutrition and bad environment. With our present limited knowledge it is only partially a medical problem. In reality, it is a social, educational and economic matter, depending on the hygienic habits of the people in respect to diet and cleanliness and the all important question of housing. Social and economic factors which render full success in Sanatoria are much more difficult to achieve for the working classes than in the case of the well-to-do classes. Experience shews that Sanatorium treatment can only alleviate the majority and actually relieve a minority. This is no fault of the Sanatorium principle. For various reasons, patients only apply for treatment at a stage of the disease when a permanent arrest of the tuberculous mischief can hardly be expected. Sometimes complaint is made that a patient's stay in a Sanatorium is too short. It must be realised that for the great bulk of adult patients a long stay is not economically justifiable, and if the money saved in this direction could be allocated to After-Care Committees we should get better value for the same total expenditure.

Although this disappointing result applies more particularly to young adults it must be realised that there is an obligation to provide the costly Sanatorium treatment for such persons quite apart from the humane point of view. If it were merely a business proposition, it would be better to spend a great deal more of the money available on preventive work amongst very young children, as by increasing their natural resistance to the disease, many of them would avoid a breakdown later in life.

As Sir George Newman says: "The proper conduct of the Tuberculosis service depends, not only upon the efficient management of Dispensaries and Sanatoria, of occupational centres and village settlements, and of after-care, but upon the whole *preventive attack*. Sanitation, lighting and ventilation, the nutrition of the people, the abolition of tuberculous milk, industrial hygiene, housing, domestic cleanliness—these and auxiliary questions must receive concurrent and vigilant attention."

(f) *Supply of Milk to County Sanatoria.* In order to ascertain that the milk supplied for the patients was of good quality, the Food and Drugs Inspectors have taken samples of milk from the vendors supplying the Sanatoria, and the Public Analyst has reported all samples to be genuine.

Railway Vouchers.

The arrangement with the Railway Companies in Essex under which Railway Vouchers are issued direct from the Public Health Department to necessitous patients, has continued to work successfully. Under this arrangement a considerable amount of time and expense are saved. During the year 452 vouchers were issued, the total railway fares amounting to £139 9s. 0d.

Extra Nourishment.

The following classes of patients likely to benefit to the greatest extent from grants of extra nourishment as advised by the Ministry of Health, have been kept in view throughout the year when grants have been made:—

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

There has therefore been a great falling off in the amount expended on extra nourishment, as will be seen from the following amounts for the last four years:—

| Year. | | | Estimated | | Actual | | |
|---------|-----|-----|--------------|-----|--------------|----|----|
| | | | Expenditure. | | Expenditure. | | |
| | | | £ | | £ s. d. | | |
| 1921-22 | ... | ... | 1,100 | ... | 890 | 16 | 11 |
| 1922-23 | ... | ... | 355 | ... | 270 | 18 | 5 |
| 1923-24 | ... | ... | 300 | ... | 109 | 16 | 11 |
| 1924-25 | ... | ... | 300 | ... | — | | |

Each order is issued on the understanding that 'Grade A' milk will be obtained if it is procurable in the district.

No case of hardship has come to the notice of the Public Health Department owing to the above restrictions.

Dental Treatment.

The County Council's Scheme, outlined in the Annual Report for 1919, has been continued. Under this scheme 55 patients were treated, having 235 extractions, 24 fillings and 21 scalings.

Contributions.

As stated in the Annual Report for 1921, contributions are now asked for not only from parents of children who receive institutional treatment, but also from adult patients (ex-service men excluded). The total amount so collected during the year was £1,738 13s. 10d. The services of School Attendance Officers have been utilised for the collection of these contributions, and these Officers are allowed for this extra duty a commission of $7\frac{1}{2}$ per cent. Careful enquiry is made from time to time and it does not appear that these contributions are restrictive in character. I have not heard of a single patient who has been prevented from receiving the necessary treatment owing to this system of contributions.

After-Care.

The Public Health Committee have carefully considered the question of grants for Tuberculosis After-Care Associations, and on the 6th March, 1924, they agreed to bring into force as and from the 1st April, 1924, the following Objects and Conditions:—

OBJECTS. Tuberculosis Care Associations are an integral part of the County Council's Scheme for the prevention and treatment of Tuberculosis, their objects being:—

1. To educate the general public by means of lectures, lantern and cinema exhibitions, etc.
2. To provide special splints, instruments, water beds, air cushions, etc., for necessitous patients.
3. To provide clothing, boots, etc., for necessitous patients.
4. To assist in obtaining suitable employment for tuberculosis patients.
5. To assist in obtaining suitable homes for tuberculosis patients.
6. To render such help as will enable a consumptive person to complete his or her full term of treatment, and later to adopt suitable employment.
7. To provide extra nourishment (milk, eggs, butter, meat, etc.), for necessitous cases.

CONDITIONS. The establishment of Tuberculosis Care Associations is approved by the Ministry of Health, and in order to assist each Association in fulfilling the objects enumerated above, the County Council are prepared to make to each Association a grant of not exceeding £20 per annum for the purposes of After-Care, provided that the following conditions are complied with:—

1. To elect a Chairman, Vice-Chairman, Secretary, Treasurer and Auditors.
2. To meet monthly, or oftener, as required.
3. To co-opt representatives of County Council, Local Sanitary Authorities, Boards of Guardians, Insurance Committee, Education Committee, Care of Children Committee and District Nursing Associations. (It is also advisable to appoint representatives of the British Legion, War Pensions Committee, Women's Institutes, Religious Denominations, Employers, etc.)
4. To appoint the District Tuberculosis Officer as Medical Adviser.
5. To receive reports from the District Tuberculosis Officer and Health Visitor.
6. To establish and maintain a Voluntary Fund to meet current expenses.
7. To submit to the Chief Tuberculosis Officer an Annual Report and Statement of Accounts.

During the year an additional Care Association was established at Romford, and has already been the means of assisting many tuberculosis patients.

Table XX. gives a list of the Tuberculosis Care Associations throughout the County, and shows the extent to which they have rendered assistance to patients. Cases needing assistance should be referred to the respective Tuberculosis Officer for the District who acts as Medical Adviser to the Association :—

TABLE XX.
TUBERCULOSIS AFTER-CARE ASSOCIATIONS IN ESSEX.

| Name of Association. | Day and Time of Meetings. | Year ended. | Income including Balance in hand. | Expenditure. | | No. of Cases assisted. | Assistance Provided. |
|----------------------|---|--|--|--------------------|------------------|------------------------|--|
| | | | | Cases assisted. | Other Items. | | |
| BARKING ... | Third Tuesday in each month at 8 p.m. | 31/10/23 | £ s. d. 198 2 7 | £ s. d. 131 2 1 | £ s. d. 8 3 7 | 29 | Extra nourishment Provision of clothing and boots Railway fares |
| CHELMSFORD ... | Fourth Monday in each month at 7 p.m. | 31/7/23 | 257 4 2 | 90 6 2 | 5 13 2 | 23 | Extra nourishment Provision of clothing Monetary assistance Provision of air cushions Christmas grants |
| COLCHESTER ... | Quarterly (oftener if required) | 31/12/23 | 17 3 6 | 7 7 6 | — | 7 | Provision of milk clothing, boots and dentures |
| ILFORD ... | First Thursday in each month at 7.30 p.m. | 30/9/23 | 272 4 6 | 171 10 0 | 6 3 9 | 41 | Provision of extra nourishment and clothing |
| LEYTON ... | Third Friday in each month at 7 p.m. | 30/11/23 | 162 8 9 | 51 14 3 | 7 19 9 | 14 | Extra nourishment Provision of clothing " dentures " nursing service Payment of rent |
| ROMFORD ... | Second Friday in the month | This Association held its first meeting on 2nd November, 1923. | | | | | |
| SAFFRON WALDEN | First and third Tuesday in each month | 31/12/23 | No meetings were held during the year. | | | | |

PART IV.

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

(1) COUNTY AREA. During the year 1923, the County Council were responsible for administering the above Acts in the following 26 sanitary districts :—

| Districts. | | Acreage. | Population. | No. of Births notified. |
|---------------------------|-----|----------|-------------|-------------------------|
| Maldon B. ... | ... | 3,028 | 6,590 | 115 |
| Saffron Walden B. ... | ... | 7,502 | 5,874 | 79 |
| Braintree U. ... | ... | 2,224 | 6,970 | 125 |
| Brentwood U. ... | ... | 460 | 6,853 | 154 |
| Brightlingsea U. ... | ... | 2,867 | 4,500 | 84 |
| Burnham-on-Crouch U. ... | ... | 4,517 | 3,434 | 42 |
| Chingford U. ... | ... | 2,808 | 9,482 | 146 |
| Epping U. ... | ... | 1,420 | 4,196 | 93 |
| Frinton-on-Sea U. ... | ... | 422 | 3,032 | 25 |
| Halstead U. ... | ... | 647 | 5,923 | 107 |
| Shoeburyness U. ... | ... | 1,036 | 6,413 | 117 |
| Walton-on-the-Naze U. ... | ... | 2,046 | 3,664 | 31 |
| Witham U.... | ... | 3,713 | 3,717 | 66 |
| Wivenhoe U. ... | ... | 1,564 | 2,329 | 25 |
| Belchamp R. ... | ... | 26,500 | 4,219 | 54 |
| Billericay R. ... | ... | 49,394 | 24,211 | 337 |
| Braintree R. ... | ... | 62,349 | 18,779 | 254 |
| Bumpstead R. ... | ... | 11,874 | 2,376 | 49 |
| Dunmow R. ... | ... | 73,503 | 15,352 | 230 |
| Epping R.... | ... | 39,055 | 14,625 | 221 |
| Halstead R. ... | ... | 38,712 | 9,743 | 124 |
| Ongar R. ... | ... | 47,236 | 10,054 | 179 |
| Rochford R. ... | ... | 55,003 | 22,863 | 466 |
| Saffron Walden R. ... | ... | 59,975 | 10,087 | 139 |
| Stansted R. ... | ... | 22,954 | 6,828 | 93 |
| Tendring R. ... | ... | 73,131 | 21,721 | 406 |
| Total | ... | 593,940 | 233,835 | 3,761 |

(2) SCHEME. For the year 1923-24 the following provision was made in the estimates for the services indicated, and the expenditure is also shown for comparative purposes :—

| | Estimates. | Expenditure |
|--|---------------|---------------|
| | £ | £ |
| Nursing Association for Midwifery (proportion) ... | 4,250 | 4,061 |
| Grants to Midwives ... | 150 | 130 |
| Health Visitors (proportion)... | 940 | 920 |
| „ Allowances (proportion) ... | 90 | 183 |
| Medical Services (proportion) ... | 920 | 812 |
| Child Welfare Centres ... | 250 | 308 |
| Fees to Doctors called in ... | 750 | 954 |
| Inspection of Midwives ... | 150 | 150 |
| Milk ... | 500 | 361 |
| Other Payments ... | 400 | 319 |
| | <u>8,400</u> | <u>8,198</u> |
| Less amount recovered from patients in respect of medical practitioners' fees ... | — | 177 |
| | <u>£8,400</u> | <u>£8,021</u> |

The need for economy prevailed during the year under review, so that it was only possible to maintain the existing skeleton scheme for Maternity and Child Welfare in the 26 sanitary districts.

In October, 1923, a special report was submitted to the Maternity and Child Welfare Sub-Committee giving a comparison of a complete Child Welfare Scheme with that at present administered by the County Council. As a result, provision was made in the Estimates for the year 1924-25 for extending the Scheme follows :—

- (a) *Medical Service.* One additional whole-time Medical Officer for Child Welfare purposes.
- (b) *Nursing Service.* One additional whole-time Health Visitor for Child Welfare purposes.
- (c) *Child Welfare Centres.* £3,000 to be set aside by the Public Health and Education Committees for capital expenditure in establishing three Combined Treatment Centres.
- (d) *Hospital Treatment for Mothers and Children.* £100 for the treatment of complicated and difficult cases of confinement and £100 for the treatment of special cases of Ophthalmia Neonatorum, Epidemic Diarrhoea, etc.

(e) *Maternity Ward.* The Essex County Nursing Association asked for the County Council's assistance in the establishment of a Maternity Home at Leytonstone. After prolonged consideration, the Public Health Committee sent the following resolution to the Ministry of Health who desired to have the County Council's views on the proposal :—

"That the Ministry of Health be informed that this Committee are of opinion that the Maternity Hospital proposed to be erected by the Essex County Nursing Association at their Training Home at Leytonstone is necessary ; that they are unable to recommend the County Council to make any capital grant towards the provision of the Hospital, but would consider recommending the Council to assist in the maintenance expenses of the Hospital under the provisions of the agreement now in force between the County Council and the Association."

(3) **MEDICAL SERVICE.** A full list of the County Medical Staff is given on page 8 and of these 13 devote part of their time to Child Welfare work by attending Centres, giving "Talks" to parents, visiting midwives, etc. The principle of Combined Medical Service has been followed.

(4) **NURSING SERVICE.** On 31st December, 1923, the Health Visiting Staff consisted of the following :—

| | | | Whole-time. | Part-time. |
|--|-----|-------|-------------|------------|
| (a) Nurses undertaking Child Welfare, School and Tuberculosis work | ... | ... | 17 | 2 |
| (b) Nurses undertaking School and Tuberculosis work only | ... | ... | 6 | 3 |
| (c) Nurses undertaking Tuberculosis work only | ... | ... | 5 | 2 |
| | | Total | 28 | 7 |

The duties of these nurses are defined in General Instructions, which are being revised and amended according to requirements arising from experience gained during the past few years.

A summary of work carried out by the nurses during the 12 months ended 31st December, 1923, is given in Table XXI. From the Registrar's returns it was found that 146 births (4.05) had not been notified to the County Medical Officer. This shows an appreciable decrease on the previous year's figure. Where necessary the attention of doctors or midwives concerned was drawn to the requirements of the Notification of Births Acts.

TABLE XXI.

SHEWING SUMMARY OF WORK CARRIED OUT BY EACH HEALTH VISITOR.

| Nursing Area. | Notifications received | | H Vs | | D.N.Ms | | Total Visits. | |
|--|------------------------|--------------|--------------|-------------|---------------|-------------|---------------|-------------|
| | Live Births. | Still Births | No of Visits | | No. of Visits | | Pre-Natal. | Post-Natal. |
| | | | Pre-Natal. | Post-natal. | Pre-Natal. | Post-Natal. | | |
| 1. Saffron Walden B. & R. | 212 | 6 | — | 218 | 534 | 1127 | 534 | 1344 |
| 2. Bumpstead & North Halstead & Belchamp | 139 | 9 | 47 | 814 | 380 | 801 | 427 | 1611 |
| 3. Halstead U. & South Halstead & Belchamp | 183 | 3 | 25 | 789 | 105 | 392 | 130 | 1188 |
| 5. Wivenhoe (part-time H.V.) | 23 | 2 | 8 | 89 | 55 | 187 | 63 | 277 |
| 6. Tendring West & Brightlingsea | 302 | 8 | 36 | 712 | 361 | 987 | 397 | 1699 |
| 7. Tendring East & Frinton | 201 | 4 | 57 | 1017 | 203 | 772 | 260 | 1788 |
| 8. Walton-on-Naze (part-time H.V.) | 30 | 1 | 90 | 435 | — | 119 | 90 | 553 |
| 10. Stansted & Dunmow (S.W.) | 133 | 2 | — | 91 | 428 | 1230 | 428 | 1322 |
| 11. Dunmow (part) | 181 | 7 | 60 | 764 | 659 | 1466 | 719 | 2233 |
| 12. Braintree U. & R. North | 202 | 8 | 25 | 474 | 504 | 966 | 529 | 1444 |
| 13. Braintree R. (South) & Witham | 230 | 5 | 14 | 566 | 362 | 1818 | 376 | 2388 |
| 14. Epping U. & R. | 304 | 10 | — | 832 | 632 | 1671 | 632 | 2503 |
| 15. Ongar Rural | 178 | 1 | 97 | 1138 | 53 | 203 | 150 | 1344 |
| 17. Burnham (part-time H.V.) | 41 | 1 | — | 178 | 40 | 240 | 40 | 411 |
| 18. Maldon B. | 110 | 5 | 7 | 1182 | 94 | 81 | 101 | 1266 |
| 19. Chingford U. | 143 | 3 | 33 | 1033 | — | — | 33 | 1033 |
| 24. Brentwood U. & part Billericay R. | 206 | 7 | 17 | 533 | 240 | 290 | 257 | 822 |
| 25. Billericay R. (part) | 266 | 12 | 19 | 451 | 211 | 329 | 230 | 788 |
| 28. Rochford R. & Shoeburyness U. | 565 | 18 | — | 412 | 84 | 158 | 84 | 577 |
| Totals | 3649 | 112 | 535 | 11729 | 4945 | 12837 | 5480 | 24566 |

During the year it was decided to appoint a Chief Health Nurse who would supervise and link up the work of the Health Visitors, and by an arrangement with the Essex County Nursing Association also supervise the work of the District Nurses and midwives.

Miss D. M. Landon, who holds the 3 years' General Training Certificate and the Central Midwives' Board and the Royal Sanitary Institute's Certificates, took up the appointment as and from 1st January, 1924, her combined duties being defined as follows:—

1. *Duties for County Council.*

- (a) To assist in initiating and supervising the Health Visitors, District Nurse-midwives and Nurses so far as the duties are undertaken on behalf of the County Council.
- (b) To assist in inspecting the work of the Health Visitors at the Child Welfare Centres, School Clinics and Tuberculosis Dispensaries, and in the establishment of new Centres, Clinics, etc.
- (c) To assist in the inspection of Certified Midwives and in making special investigations.

- (d) To attend meetings of District Education and District Tuberculosis Sub-Committees, Care of Children Committees, etc., as and when required.
- (e) To give "Talks" to parents and others at School Clinics, Child Welfare Centres and other places as and when required.
- (f) To furnish all necessary weekly and special reports, to work under the general direction of the County Medical Officer, and to undertake such other duties as he may require.

2. *Duties for Essex County Nursing Association.*

- (a) To assist in supervising the work of the District Nurses and Nurse-midwives in the affiliated districts.
- (b) To furnish all necessary reports and to undertake special investigations and other duties at the request of the Association.
- (c) To attend meetings of the Association and District Nursing Associations as and when required.
- (d) To work under the general direction of the General Superintendent.

(5) CHILD WELFARE CENTRES. These have been continued and augmented on a voluntary basis, being controlled by Local Voluntary Committees, to which grants are made by the County Council, provided the Terms of Reference enumerated in the last Annual Report are adopted. Centres so established in the County are as follows :—

| Address. | Population served. | Sessions. | Grant. | | |
|---|--------------------|---------------------------|--------|----|----|
| | | | £ | s. | d. |
| Progressive Club, Maldon ... | 6,590 | Weekly (Tuesday) ... | 20 | 0 | 0 |
| Trinity House, Halstead ... | 5,923 | Fortnightly (Thursday) | 20 | 0 | 0 |
| Council Offices, Shoeburyness | 6,413 | Fortnightly (Thursday) | 20 | 0 | 0 |
| Central Hall, High Street, ... Saffron Walden | 5,874 | Weekly (Friday) ... | 20 | 0 | 0 |
| Church House, New Road, ... Brentwood | 6,853 | Fortnightly (Friday) | 12 | 10 | 0 |
| Women's Institute Hall, St.... John's Road, Epping | 4,196 | Weekly (Tuesday) ... | 20 | 0 | 0 |
| Women's Institute, Club Room, Harlow | 3,201 | Fortnightly (Friday) | 10 | 0 | 0 |
| Parochial Hall, Junction Road, Warley | 5,974 | Fortnightly (Friday) | 12 | 10 | 0 |
| Reading Room, Pilgrims Hatch | 5,670 | Fortnightly (Tuesday) | 10 | 0 | 0 |

| Address. | Population served. | Sessions. | Grant. | |
|--|--------------------|--------------------------------|--------|-------|
| | | | £ | s. d. |
| Council Cottages, Matching Tye | 463 | Monthly (Friday) ... | 5 | 0 |
| Parish Room, Sheering ... | 778 | Monthly (Thursday) | 5 | 0 |
| Debden and Wimbish ... (Memorial Hall, Debden) | 1,214 | Monthly ... | 5 | 0 |
| New Hall, Theydon Bois ... | 1,267 | Weekly (Friday) ... | 5 | 0 |
| Assembly Room, Sible ... Hedingham | 2,723 | Fortnightly (Tuesday) | 15 | 0 |
| Parish Room, Abridge ... | 1,244 | Fortnightly ... (Thursday) | 7 | 10 |
| Congregational Chapel School- room, London Road, Brain- tree | 6,970 | Fortnightly ... (Tuesday) | 20 | 0 |
| Church Street, Bocking ... | 2,000 | Fortnightly ... (Wednesday) | 10 | 0 |
| Hampton Road Congregational Church Rooms, Chingford | 9,482 | Weekly (Tuesday) ... | 30 | 0 |
| Comrades Hall, Billericay ... | 5,164 | Fortnightly ... (Thursday) | 20 | 0 |
| Village Hall, Earls Colne ... | 2,732 | Fortnightly ... (Wednesday) | 15 | 0 |
| Congregational Church Hall, Hadleigh | 2,246 | Fortnightly ... (Tuesday) | 7 | 10 |
| Men's Institute, Hatfield ... Heath | 1,564 | Monthly (Friday) ... | 8 | 0 |
| Lecture Hall, Steeple Bump- stead | 1,784 | Fortnightly ... (Wednesday) | 10 | 0 |

(6) PROVISION OF MILK. The sum of £500 was set aside for the provision of milk for infants and expectant and nursing mothers during the year 1922-23. Two schemes were approved by the Ministry of Health as follows:—

| | £ |
|---|-------|
| (a) For districts served by Centres ... | 250 |
| (b) For districts not served by Centres ... | 250 |
| | <hr/> |
| | £500 |
| | <hr/> |

(a) *Districts served by Child Welfare Centres.* Fifteen Voluntary Child Welfare Centres participated in the County Council's scheme for the provision of milk, receiving a grant from the County Council to assist them in the expenditure in this connection. The following table shows the number of cases assisted by each Child Welfare Centre and the amount claimed from the County Council to meet this expenditure:—

| Centre. | | | No. of cases assisted. | Total amount paid by County Council for year ended 31st December, 1923. | | |
|-------------------|-----|-----|---------------------------|--|----|-----|
| | | | | £ | s. | d. |
| Abridge ... | ... | ... | — | — | — | — |
| Brentwood | ... | ... | 14 | 11 | 10 | 6 |
| Chingford | ... | ... | 30 | 12 | 5 | 6½ |
| Earls Colne | ... | ... | 2 | 2 | 8 | 3 |
| Epping ... | ... | ... | 18 | 9 | 1 | 3½ |
| Halstead | ... | ... | 25 | 44 | 8 | 9½ |
| Hatfield Heath | ... | ... | 7 | 1 | 13 | 2½ |
| Maldon ... | ... | ... | 50 | 40 | 3 | 8 |
| Saffron Walden | ... | ... | 15 | 11 | 13 | 10½ |
| Sheering | ... | ... | 2 | 0 | 6 | 8 |
| Shoeburyness | ... | ... | 3 | 1 | 12 | 8 |
| Sible Hedingham | ... | ... | 6 | 11 | 6 | 3 |
| Steeple Bumpstead | ... | ... | 4 | 2 | 18 | 11 |
| Theydon Bois | ... | ... | 4 | 2 | 16 | 8 |
| Warley ... | ... | ... | 21 | 16 | 17 | 3 |
| | | | 201 | £169 | 3 | 6½ |

(b) *Districts not served by Centres.* The scheme for these districts operates chiefly through the Health Visitors, whose duty it is to collect and forward all recommendations to the County Medical Officer after they have been countersigned by the Assistant County Medical Officer for the district.

Under this scheme 68 mothers and 50 infants were granted supplies of milk for varying periods free of charge, at a total cost of approximately £170. Each order for milk is issued on the understanding that 'Grade A' milk will be obtained if it is procurable in the district. Dried milk was also supplied to necessitous cases at cost price.

Baby Shows.

The services of the County Council's Medical and Health Visiting Staff have been utilised in six instances by voluntary societies organising Baby Shows. This work is not encouraged.

District Combined Committees.

The Halstead and Belchamp Care Committees continued to show a keen interest in the Child Welfare work in their areas. The Clerks to the various District Education Sub-Committees have also rendered every assistance in their power.

Pamphlet on "How to take care of Baby."

At the latter end of the year it was necessary to have a reprint of this pamphlet and opportunity was taken to revise the same thoroughly. The revised copies are circulated to the Child Welfare Medical Officers and Health Visitors for distribution to parents.

MIDWIVES ACTS, 1902 and 1918.

(a) PRACTISING MIDWIVES. During the year under review 278 midwives notified their intention to practise in the Administrative County. Of these, 248 were actually in practice at the end of the year 1923. 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.M. Certificated. |
|---|------------|-------------------------|---|
| 248 | 118 | 85 | 45 |

The total number of births which occurred during the year 1923 was 17,330, and of these, 6,994 (40.3 per cent.) were attended by midwives in the capacity of a midwife and 2,339 (13.5 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 1923, and it was found that 89 trained and 21 untrained midwives attended 10 or less cases each; 50 trained and 2 untrained attended 11—20 cases each; 40 trained and 6 untrained attended 21—40 cases each; 10 trained and 1 untrained, 41—60 cases each; 5 trained and 7 untrained, 61—100 cases each, and 9 trained and 9 untrained midwives attended over 100 cases each.

In 21 instances reports were received from Health Visitors and others regarding cases of confinement attended by women acting as midwives who were not certificated. Letters of warning were sent to women acting as midwives without being under the direct supervision of a doctor, and the Health Visitors kept them under observation. In no case, however, was it found necessary to institute legal proceedings.

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

| | 1920. | 1921. | 1922. | 1923. |
|--|-------|-------|-------|-------|
| Records of Medical Aid ... | 1090 | 1083 | 1030 | 1022 |
| Records of Still-birth ... | 132 | 122 | 108 | 100 |
| Deaths of Mothers ... | 1 | 4 | 3 | ... |
| Deaths of Infants ... | 19 | 17 | 11 | ... |
| Artificial Feeding ... | 63 | 39 | 35 | 42 |
| Liability to be a Source of Infection ... | 31 | 46 | 41 | 37 |
| Laying-out for Burial ... | 95 | 102 | 129 | 183 |
| Ophthalmia Neonatorum or Discharging Eyes ... | 85 | 99 | 84 | 77 |

The 1,025 cases (14·1 per cent.) where midwives sought the assistance of doctors were for various reasons, namely :—

| | | | | |
|-----------------------------|-----|----------|-----------------------------|-----------|
| Albuminuria ... | ... | 5 cases. | Placenta Adherent ... | 49 cases. |
| Dangerous Feebleness of | | | Placenta Prævia ... | 4 „ |
| Infant ... | ... | 36 „ | Premature Birth ... | 48 „ |
| Eclampsia ... | ... | 4 „ | Prolonged Labour ... | 192 „ |
| Hæmorrhage :— | | | Presentation (abnormal) ... | 74 „ |
| Ante-partum ... | ... | 37 „ | Pyrexia (High Temp.) ... | 46 „ |
| Post-partum ... | ... | 33 „ | Rigid Os. ... | 3 „ |
| Instrumental Assistance ... | ... | 4 „ | Ruptured Perineum ... | 198 „ |
| Malformation of Child ... | ... | 4 „ | Spina Bifida ... | 3 „ |
| Miscarriage, Abortion ... | ... | 39 „ | Still-birth ... | 3 „ |
| Miscellaneous Causes ... | ... | 147 „ | Uterine Inertia ... | 25 „ |
| Ophthalmia Neonatorum or | | | | |
| Discharging Eyes ... | ... | 71 „ | | |

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, with a view to finding whether :—

- (a) the "high temperature" developed into Puerperal Fever.
- (b) the "discharging eyes" developed into Ophthalmia Neonatorum.
- (c) in either case the disease was preventable.
- (d) there was any neglect on the part of the midwife in attendance.

The results of these investigations showed that, during 1923, in two cases of high temperature and six cases of discharging eyes the midwives concerned had not properly carried out the Rules of the Central Midwives' Board. In one of these cases the midwife was reported to the Central Midwives' Board, who decided to postpone sentence pending further reports from the Local Supervising Authority at the end of three months, and again at the end of six months.

In another case the midwife was interviewed and cautioned by the Chairman and Vice-Chairman of the Maternity and Child Welfare Sub-Committee. With regard to the remaining six cases, letters of caution were sent to the midwives concerned by the Medical Adviser to the Local Supervising Authority.

Visits.

Eight hundred and twenty-seven (827) routine visits were made to midwives during the year and of these 586 were undertaken by doctors and 241 by the Chief Health Nurse.

Eight cases of minor infringements occurred in the practices of midwives and a written caution was sent to each midwife concerned by the Medical Adviser to the Local Supervising Authority.

Rules of the Central Midwives Board.

The Central Midwives' Board revised their Rules, such revision to take effect from 1st January, 1924. The principal alterations and amendments of Section E. are as follows:—

- (1) Notes to Rule 1 indicate under what circumstances a midwife acts
 - (i) a midwife and (ii) a maternity nurse.

A note is also made pointing out the desirability of midwives keeping a record of their ante-natal visits.
- (2) Note regarding "Duties to patient" to the effect that midwives must not, except in a grave emergency, undertake operative procedure.
- (3) Midwives are now required to notify the Local Supervising Authority in all cases of death of mother or child, whether a registered medical practitioner is in attendance or not.

A revised pamphlet on Section E. was accordingly circulated to practising midwives in the Administrative County of Essex.

Doctors' Fees.

In accordance with the Midwives Act, 1918, the County Council paid the sum £829 19s. 3d. as fees to medical practitioners and recovered from parents during the year the sum of £196 18s. 10d.

The following comparative table will be of interest, shewing (a) the number of medical aid notices received from midwives during the past four years and (b) the corresponding number of doctors' claims made against the County Council in respect of such notices. This table shows that the number of claims is steadily increasing although the number of medical aid notices received has gradually decreased:—

| Year. | No. of medical aid notices received from midwives. | | No. of medical aid notices for which doctors' claims have been received. | | Total amounts of claims. | | |
|-------|---|-------|--|-----|-----------------------------|-----|------|
| | | | | | £ | s. | d. |
| 1920 | ... | 1,090 | ... | 382 | ... | 549 | 9 1 |
| 1921 | ... | 1,083 | ... | 412 | ... | 811 | 7 6 |
| 1922 | ... | 1,030 | ... | 463 | ... | 769 | 4 6 |
| 1923 | ... | 1,025 | ... | 585 | ... | 829 | 19 3 |

Lectures to Midwives.

An excellent syllabus of lectures was again arranged under the auspices of the Essex Midwives' Association, of which the County Medical Officer is President, the midwives being invited to the following Centres, at each of which six lectures were given during the winter months:—Chelmsford, Colchester, Leytonstone, Safford Walden and Southend-on-Sea.

The County Medical Officer, County Sanitary Inspector, and Chief Health Nurse gave lectures on the following subjects :—

| | | |
|---------------------------|-----|---|
| County Medical Officer | ... | "Complications of Pregnancy" |
| County Sanitary Inspector | ... | "Flies" |
| Chief Health Nurse | ... | "Diet in health and disease," |
| | | "Diseases of the Ear, Nose and Throat." |

Opportunities were taken at one or two of the lectures to discuss the various aspects of the Combined Nursing Scheme and receive the points of view of the District Nurse-midwives. Many minor difficulties were solved which will undoubtedly result in a closer co-operation between the District Nurse-midwives and the Health Visitors.

At the Annual Meeting of the Association held at the Shire Hall, Chelmsford, on 12th October, 1923, Dr. F. M. Huxley, of Harley Street, London, gave an instructive and interesting lecture entitled "Relative size of the foetal head," which was much appreciated by the midwives.

Essex County Nursing Association.

(a) GENERAL. For the four quarters of the year 1923 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 | ... | 640 | 0 | 0 |
| (b) Maintenance of two Emergency Nurses | ... | 50 | 0 | 0 |
| (c) Grants to affiliated District Nursing Associations | ... | 4,239 | 6 | 9 |
| (d) Equipping District Nurse-midwives for new areas | ... | 90 | 0 | 0 |
| (e) Clerical and organising expenses | ... | 220 | 0 | 0 |
| Total | ... | £5,239 | 6 | 9 |

The agreement between the County Council and the Essex County Nursing Association continued to operate during the year. Unfortunately, under this agreement, and owing to the need for economy, the Association are not able to establish more than five new Associations per annum, but at the time of writing negotiations with the Ministry of Health are taking place with a view to removing this restriction.

(b) DISTRICT NURSING ASSOCIATIONS. The following Table shows the number of District Nursing Associations in the Administrative County at the end of the year which were affiliated to the County Nursing Association and which employ 136 Nurses :—

| No. of affiliated D.N. Associations. | No. undertaking Midwifery and District Nursing. | No. performing District Nursing duties only. |
|---|--|---|
| 129 | 115 | 14 |

A summary of the visits made by the District Nurses belonging to affiliated Associations during the years 1922 and 1923 is given below :—

| | 1922. | 1923. |
|-------------------------------|----------------|----------------|
| Midwifery | 22,165 | 24,729 |
| Maternity | 25,181 | 27,181 |
| District General | 167,782 | 161,492 |
| „ Tuberculosis | 2,647 | 3,009 |
| Health Visiting | 8,907 | 12,230 |
| Home (School Children) | 3,494 | 4,839 |
| Total number of visits | <u>230,176</u> | <u>233,480</u> |

Of the 129 affiliated Associations, 118 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 ... | 272 |
| Number still to be provided for | 105 |

The District Nurse-midwives co-operate efficiently with the County Council's whole-time Health Visitors, and the progress made is very satisfactory. There are still difficulties in some Districts, but it is hoped that with the appointment of the Chief Health Nurse, who commenced duty on 1st January, 1924, a more comprehensive knowledge of the Combined Nursing Scheme will be spread amongst the Nurses and Associations concerned.

TABLE XXIII.
CAUSES OF DEATH—YEAR 1923.
(Figures supplied by the Registrar-General.)

| SANITARY DISTRICT. | Enteric Fever. | Small-pox. | Measles. | Scarlet Fever. | Whooping Cough. | Diphtheria. | Influenza. | Eosiphilia Lethargia. | Meningococcal Meningitis. | Tuberculosis of Respiratory System. | Other Tuberculous Diseases. | Cancer. | Malignant Disease. | Rheumatic Fever. | Diabetes. | General Hemorrhage, &c. | Heart Disease. | Arterio-Sclerosis. | Bronchitis. | Pneumonia (all forms). | Other Respiratory Diseases. | Ulcer of Stomach or Intestine. | Diarrhoea, &c. (under 2 years). | Appendicitis and Typhilitis. | Cirrhosis of Liver. | Acute and Chronic Nephritis. | Purpura Septica. | Other Accidents and Diseases of Pregnancy and Parturition. | Congenital Deformities and Premature Births. | Suicides. | Other Deaths from Violence. | Other Defined Diseases. | Causes ill-defined or unknown. | Special causes included in previous columns. | TOTAL. | | | | | |
|---------------------------------|----------------|------------|----------|----------------|-----------------|-------------|------------|-----------------------|---------------------------|-------------------------------------|-----------------------------|---------|--------------------|------------------|-----------|-------------------------|----------------|--------------------|-------------|------------------------|-----------------------------|--------------------------------|---------------------------------|------------------------------|---------------------|------------------------------|------------------|--|--|-----------|-----------------------------|-------------------------|--------------------------------|--|--------|-----|--|--|--|--|
| URBAN. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BARKING | ... | ... | 1 | ... | 6 | 1 | 8 | ... | ... | 38 | 7 | 36 | 1 | 3 | 17 | 32 | 6 | 35 | 19 | 4 | 2 | 8 | 3 | 1 | 9 | 1 | 3 | 17 | 1 | 9 | 49 | 1 | ... | ... | ... | 318 | | | | |
| BRAINTREE | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 5 | 3 | 5 | ... | ... | 5 | 6 | 12 | 4 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | 1 | 17 | ... | ... | ... | 56 | | | | | |
| BRENTWOOD | ... | ... | ... | ... | 2 | 1 | 3 | ... | ... | 3 | 1 | 8 | ... | ... | 3 | 8 | 6 | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 70 | | | | | | |
| BRIGHTLINGSEA | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 1 | 4 | ... | ... | 1 | 4 | ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 50 | | | | | | |
| BUCKENHAM HILL | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 4 | ... | 9 | 1 | ... | 6 | 7 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 50 | | | | | | |
| BURNHAM | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 8 | ... | ... | 4 | 7 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 50 | | | | | | |
| CHELMSTFORD B. | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 14 | 22 | 31 | ... | ... | 3 | 17 | 21 | 12 | 12 | ... | ... | 3 | 2 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 51 | | | | | | |
| CHINGFORD | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 3 | 12 | ... | ... | 1 | 7 | 1 | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 204 | | | | | | |
| CLACTON | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 10 | 1 | 23 | ... | ... | 3 | 11 | 18 | 11 | 3 | 6 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 76 | | | | | | |
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