

## **[Report of the Medical Officer of Health for Harrow].**

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The  
**Urban District Council of Harrow**

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**Annual Report**

OF THE  
**MEDICAL OFFICER OF HEALTH**

FOR THE YEAR

**1937**

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E. W. CARYL THOMAS, M.D., B.Sc., D.P.H.,  
BARRISTER-AT-LAW.

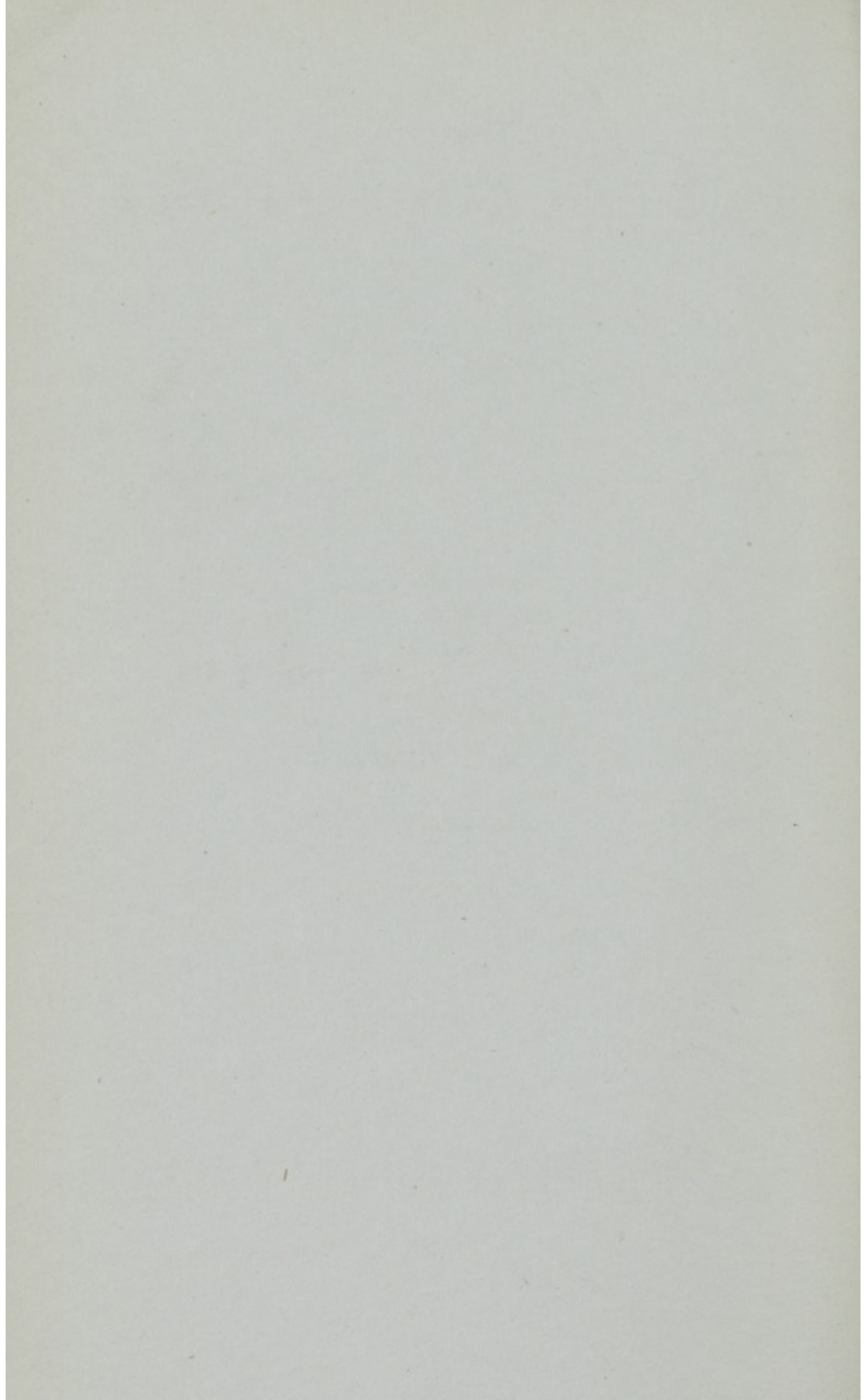


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BARRISTER-AT-LAW.

TOWN OF HARROW  
The  
Urban District Council of Harrow

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# Annual Report

OF THE  
MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1937

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E. W. CAROL THOMAS, M.D., B.Sc., D.P.H.

Barrister-at-Law

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## REPORT OF THE MEDICAL OFFICER OF HEALTH.

**To the Chairman and Members of the Urban District Council  
of Harrow.**

MR. CHAIRMAN, MRS. LEECH AND GENTLEMEN,

I beg to submit the Annual Report on the Health and Sanitary Circumstances of the District for the year 1937.

The demand for clinic services continues to increase, necessitating the opening of an additional five infant welfare and two ante-natal sessions during the year. Attendances at the infant welfare centres reached a figure of 71,403 and at the ante-natal clinics of 7,038, the corresponding figures for 1934 being 31,784 and 1,354. The appointment of additional health visitors enabled more frequent home visits to be made to toddlers, the number this year being 10,246 as compared with 4,979 in the preceding year. To enable more to take advantage of the treatment services the scale of income was amended. In addition to benefiting in this way those in receipt of milk can now be granted amounts exceeding the previous allowance of one pint. To put into operation the provisions of the Midwives Act, fifteen midwives acting under a superintendent were appointed and began their duties on July 19th. A further application of the Council to erect and maintain a maternity hospital met with no success, the County Council now being accepted as the authority to provide institutional maternity accommodation for this area.

Further groups of insanitary property were dealt with, fourteen individual houses being the subject of demolition orders and fifty-two being the subject of eight Clearance Orders. By the transfer of the tenants to the Glebe and Berridge Estate houses, it is hoped that shortly all persons living in properties which have been subject to Demolition Orders will be suitably housed.

Further steps were taken regarding the erection of a clinic at Kenmore Estate, and in conjunction with the County Council for combined buildings at Honey-pot Lane, Pinner and Malvern Avenue. No. 76, Marlborough Hill was opened as a temporary clinic to enable the services previously provided at Tyneholme to be continued pending the erection of the new central clinic on this site.

The vital statistics for the district are satisfactory, the infant mortality rate being particularly so.

I have the honour to be,

Mrs. Leech and Gentlemen,

Your obedient servant,

E. W. CARYL THOMAS,

Medical Officer of Health.

Council Offices,

Harrow-on-the-Hill.

May 20th, 1938.



# OFFICERS OF THE PUBLIC HEALTH SERVICES.

## Full-time Staff.

### Medical Officer of Health :

E. W. CARYL THOMAS, M.D., B.Sc., D.P.H., Barrister-at-Law.

### Assistant Medical Officers of Health :

O. C. DOBSON, M.D., B.Hy., D.P.H.

MABEL DODDS, M.B., B.S.

MARGARET DOUGLAS, M.B., B.S.

### Sanitary Inspectors :

A. B. KRAMM (Senior Inspector) ††

D. J. ANDERTON (Sanitary Inspectors' Assistant).

R. S. COOPER, ††

H. DRABBLE, ††\*

A. C. GROOM, ††

†Cert. R.San.I.

‡Meat Inspectors' Cert.

S. N. KING, ††\*

J. E. JOHNSON, ††

P. SCHOFIELD, ††

B. H. WHITE† (Shops Act Inspector).

\*Smoke Inspectors' Cert.

### Health Visitors :

MRS. D. BRACE (Supt. Health Visitor) ††\*

MISS B. COOPER, ††\*

MISS G. COUZENS, ††\*

MISS B. EDWARDS, ††\*

MISS A. W. EVANS, ††\*

MISS T. M. LEE, †

MISS E. J. LEWIS, ††\*

MISS E. K. WILTON, ††

MISS D. MARSHALL, ††\*

MISS E. MATTHEWS, ††\*

MISS G. M. REED, ††\*

MISS G. RICHARDSON, ††\*

MISS M. J. SIMPSON, ††\*

MISS M. J. WALDEGRAVE, †\*

### Midwives :

MISS M. CARPENTER (Supt. Midwife) ††§

MRS. M. L. ANGEL, ††

MISS A. W. H. CRAFT, †

MRS. M. M. FRANCIS, ††

MRS. S. B. FRASER, ††

MRS. A. H. JANES, †

MISS E. A. LAMB, ††

MRS. B. LUNDY, †

MRS. E. M. WILDING, †

MRS. F. R. MOONEY, †

MRS. D. PONTER, ††

MISS P. E. RAEBURN, †

MISS M. R. ROBERTSON, †

MISS R. M. ROUGH, ††

MISS M. SIMON, ††

MRS. E. A. WHITCHURCH, †

*Matron of Isolation Hospital :* MISS V. R. THOMAS, ††

*District Fever Nurse :* MISS V. G. ROBERTSON.

†State Registered Nurse.

‡State Cert. Midwife.

\*Health Visitors' Cert.

§Midwife Teachers' Cert.

### Clerical Staff :

W. GOODFELLOW, Chief Clerk.

Nine whole-time Clerks.

## Part-time Staff.

### Consultant Gynæcologists :

MARGARET BASDEN, M.D., F.R.C.S., F.C.O.G.

R. CHRISTIE BROWN, M.S., F.R.C.S., M.C.O.G.

ARNOLD L. WALKER, M.B., F.R.C.S., M.C.O.G.

### Consultant Surgeon :

R. TREVOR JONES, B.Sc., M.B., B.S., F.R.C.S.

### Maternity and Child Welfare Officers :

NORAH BEAUMONT, M.B., B.S., D.P.H.

ETHEL M. BRAND, L.M.S.S.A.

LUCY PARKER, M.D., M.R.C.P.

### Birth Control Clinic Medical Officer :

ROSALIE BURKE, M.R.C.S., L.R.C.P.

## STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (in acres) ... ..	12,558
Registrar-General's estimate of resident population, mid-year, 1937 ... ..	174,800
Number of inhabited houses including flats (end of 1937) according to Rate Books ... ..	52,681
Rateable Value (April 1st, 1938) ... ..	£1,940,000
Sum represented by a penny rate (1937/8) ... ..	£7,450

### Social Conditions of Inhabitants.

See Annual Report for the year 1934.

The Manager of the Local Labour Exchange reports that the figures of unemployment for 1937 do not differ materially from those in previous years. For males the heaviest winter figure was about 2,000, those on the register being chiefly building workers and persons employed in the distributive trades. The unemployment is not affected by the defence programme, and with the renewed building activity in the spring the number of unemployed males should fall considerably. The figure of 500 unemployed females is a slight rise on the figure recorded in previous years. The steady flow of persons from distressed areas into this district apparently still continues.

### Extracts from Vital Statistics for the Year.

Live Births :—	<i>Total.</i>	<i>Male.</i>	<i>Female.</i>	
Legitimate	3,008	1,565	1,443	} Birth Rate per 1,000 of the estimated resi- dent population, 17·7
Illegitimate	90	55	35	
Stillbirths :—				
Legitimate	95	57	38	} Rate per 1,000 total (live and still) births, 2·9
Illegitimate	—	—	—	
Deaths	1,348	639	709	} Death rate per 1,000 of the estimated resi- dent population, 7·7

Deaths from puerperal causes :—		<i>Rate per 1,000 total (live and still) births.</i>
	<i>Deaths.</i>	
Puerperal sepsis ...	7	2.19
Other puerperal causes	6	1.88
Total ... ..	13	4.07

Death rate of Infants under one year of age :—

All infants per 1,000 live births ... ..	35.5
Legitimate infants per 1,000 legitimate live births	35.5
Illegitimate infants per 1,000 illegitimate live births	33.3

Deaths from Cancer (all ages) ... ..	226
„ „ Measles (all ages) ... ..	1
„ „ Whooping Cough (all ages) ...	7
„ „ Diarrhœa (under 2 years of age)	5

Influenza, which had become prevalent in the latter part of 1936, continued into the early weeks of the year, but the type generally was mild and few deaths were recorded. The incidence of scarlet fever was relatively low, as was also that of diphtheria.

### Population.

The mid-year estimate of population is 174,800. This increase of 14,500 over the figure of 160,300 for mid-year 1936 is partly due to the natural increase of population (i.e. the excess of births over deaths, this figure being 1,633 in 1936 and 1,750 in 1937) and partly due to the occupation of the new houses erected (4,173 in 1936 and 4,222 in 1937).

Analysis of the valuation list at December 31st showed that there were 48,247 houses, 3,493 semi-contained flats and 941 flats over shops in this district. Of this number it was estimated that about 3,500 were empty. Applying the figure of the average number of persons per house as was recorded in previous years to the estimated number of houses occupied at mid-year gives a population at this date of 175,000. A figure of 177,000 is obtained when the ratio of local government electors, namely 96,936 in 1937 and 87,754 in 1936, is applied to the estimated mid-year population of 1936 of 160,300. On the other hand the ratio of the number of estimated mid-year population to the number of electors has steadily declined from a figure of 1.92 in 1934 to 1.87 in 1935 and 1.82 in 1936. If a similar fall can be assumed to have occurred, on this basis the mid-year figure of population is 171,500.

The greatest development continues to be found in Pinner South and Stanmore South Wards ; and the least in Harrow-on-the-Hill and Greenhill, Headstone and Wealdstone South Wards.

### Birth Rate.

3,098 births were registered during the year, the birth rate per 1,000 population being, therefore, 17·7. The corresponding figure for England and Wales was 14·9 and the local figures for the three preceding years 1936 to 1934 were 17·8, 17·5 and 16·4. A high birth rate can be anticipated for some years as the recently erected properties will, on an average, contain a higher than normal proportion of young adults.

### Deaths and Death Rate.

Total deaths in the district...	...	...	...	810
Outward transfers	...	...	...	60
Inward transfers	...	...	...	598
Deaths of residents	...	...	...	1,348

Of the 60 deaths of non-residents occurring in the district, 10 took place at the Orthopædic Hospital, 10 at the Harrow and Wealdstone Hospital, one at the Stanmore Cottage Hospital, 18 at local nursing or maternity homes and 20 in private houses.

Of the 598 deaths of local residents which occurred outside the area most took place in institutions, 278 being at Redhill Hospital, 34 at other county hospitals and 17 at Barnet hospital. 20 deaths occurred at institutions for the treatment of the tuberculous (11 at county tuberculosis institutions) and 20 at mental hospitals (17 at Shenley). 33 deaths occurred in hospitals just outside the district and 7 at municipal isolation hospitals. 124 deaths took place in various of the London general and maternity hospitals, including 6 deaths of infants of mothers confined in the hospitals.

Sixty-nine local residents died in the Harrow and Wealdstone hospital.

1,348 deaths in a population of 174,800 is a death rate of 7·7 compared with local figures of 8·1, 7·7 and 7·7 for the years 1934 to 1936, a figure of 12·4 for England and Wales and one of 12·5 for the Great Towns. The corrected death rate obtained by the application of the areal comparability factor of 1·17 is 9·01. The corresponding figures for the years 1934 to 1936 were 9·5, 9·01 and 9·01.

The fatalities of the infectious diseases expressed as a rate per thousand population compare favourably with figures for the country as a whole. The rates for measles (0·006), diphtheria (0·02) and influenza (0·29) were all lower than the corresponding national rates of 0·02, 0·07 and 0·45. Those of whooping cough and scarlet fever were the same as the national rates of 0·04 and 0·01.

Deaths from tuberculosis, both pulmonary and non-pulmonary forms, were fewer than those in the previous year. The death rate per 100,000 population of 50·8 was well below the figure of 69·2, recorded for the country as a whole in 1936.

The infant mortality rate was exceptionally low, being only 35·5 compared with the figure of 58 for England and Wales and 62 for the Great Towns. The local figures for the years 1934 to 1936 were 47, 42·1 and 44·9. The rise in the 1936 figure was attributed to the prevalence of influenza in the latter part of the year. This epidemic continued into the earlier weeks of 1937 and caused fatalities, including some of infants under one year of age.

The maternal mortality rate was 4·07 compared with local figures for the years 1934 to 1936 of 5·99, 3·46 and 4·02, and a figure of 3·11 for England and Wales.

There were 226 deaths recorded from cancer, the recorded death rate per million living being 1,291 compared with a figure of 1,587 for England and Wales for the year 1935. The following is an analysis of the affected sites, being the proportional frequency of sites of cancer expressed as a rate per 1,000 of all deaths from cancer, the international grouping being used, and the figures for England and Wales for the year 1936 being included for purposes of comparison :—

<i>International Group Number.</i>	<i>Proportional Rate per 1,000.</i>			
	<i>Local.</i>		<i>England and Wales.</i>	
	<i>Male.</i>	<i>Female.</i>	<i>Male.</i>	<i>Female.</i>
45. Lip, tongue, etc ...	10	24	97	15
46. Stomach ...	180	181	225	166
Rectum ...	100	70	107	59
Other abdominal ...	270	220	274	261
47. Respiratory ...	190	24	113	32
48. Uterus ...	—	94	—	133
49. Ovary, etc. ...	—	24	—	58
50. Breast ...	—	235	3	201
51. Urogenital ...	130	55	117	73

There were 18 suicidal deaths (13 male and 5 female) during the year, giving a rate of 100,000 population per 10·3 compared with a figure of 12·7 for the country as a whole for 1936. The commonest method was the use of coal-gas (6 male and 3 female), cut throat and the railway track being the next most common (3 male in each case). Poisons (arsenic and hydrogen cyanide) were used by two.

Of the 55 (37 male and 18 female) other deaths from violence 30 were due to road accidents of which 13 were of pedestrians. Falls of elderly persons accounted for 6 deaths.

The following table gives the percentage of deaths at certain age periods, with the corresponding rates for England and Wales for the year 1936 :—

<i>Age periods.</i>	<i>Percentage of Total Deaths.</i>	
	<i>Local, 1937.</i>	<i>England and Wales, 1936.</i>
0-1 ... ..	8.2	7.1
1-4 ... ..	1.7	2.5
5-14... ..	2.4	2.0
15-24... ..	4.3	3.1
25-34... ..	5.8	3.9
35-44... ..	7.6	5.1
45-54... ..	9.8	9.2
55-64... ..	15.8	16.6
65-74... ..	22.5	24.0
75 and over... ..	21.8	26.5

The commonest causes of deaths are shown in the following table, in which the local rates for certain causes are compared with those of England and Wales for the year 1936, the figures representing the percentage of deaths from the particular cause of total deaths :—

	<i>Local, 1937.</i>	<i>England and Wales, 1936.</i>
1. Diseases of the heart and circulatory system ... ..	244	317
2. Malignant disease ... ..	167	134
3. Bronchitis, pneumonia and other respiratory diseases ... ..	85	102
4. All forms of tuberculosis ... ..	66	57

## GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

### HOSPITALS PROVIDED OR SUBSIDISED BY THE LOCAL AUTHORITY OR BY THE COUNTY COUNCIL.

#### a. (1) Fever.

The two Isolation Hospitals in the District were described in the Annual Report for 1934.

#### (2) Smallpox.

The Middlesex County Council is the authority for the provision of smallpox hospital accommodation for the whole of the administrative county. By agreement with the London County Council cases of smallpox occurring in the County of Middlesex are removed to the River Hospitals.

#### b. Tuberculosis.

The Middlesex County Council is the authority by whom arrangements are made for the treatment of those in the County suffering from tuberculosis. The County Council possesses two sanatoria. That at Harefield contains 150 male, 150 female and 60 children's beds for pulmonary sanatorium cases, and 4 male, 4 female and 10 children's beds for observation pulmonary cases. Clare Hall Sanatorium, for late sanatorium cases, contains 120 male and 60 female beds. Six beds are reserved at the Victoria Home, Margate, for non-pulmonary cases amongst children. In addition, there are 102 beds available in the hospitals or institutions of the County Council, 92 for pulmonary disease in adults and 2 for children, and 4 for non-pulmonary disease in adults and 4 for children.

Those for whom institutional accommodation is required and who cannot be accommodated at the County institutions are admitted to sanatoria or hospitals belonging to other local authorities or to voluntary organisations where the cost of their maintenance is met by the County Council.

The County Council have decided to provide free institutional treatment for persons suffering from tuberculosis, whether dealt with in sanatoria or in the County Council's general hospitals.

### HOSPITALS FOR GENERAL CASES.

#### (1) Hospitals for Medical and Surgical Cases.

The two hospitals most used by the local inhabitants are the Harrow and Wealdstone Hospital, and the Redhill County Hospital. For particulars of the in-patient accommodation of these institutions see the Annual Report for the year 1935; and of other hospitals used by local residents see the Annual Report for the year 1934.

The accommodation at the Redhill Hospital, which had for some years been 215 beds, was supplemented during 1936, bringing the complement to 225. Of this number 64 were medical beds (male 33, female 31); 65 surgical (male 34, female 31); 19 ear, nose and throat (male 5, female 8, and children 6); children 28; maternity beds 21, cradles 20, and isolation beds and cradles 6, and 2 beds for sick nurses.

The following consultative out-patient clinics are held at the Harrow and Wealdstone Hospital: medical, surgical, diseases of children, diseases of women, ear, nose and throat, radiological and dermatological. Massage, electrical and light treatment are provided at 76, Marlborough Hill.

At Redhill Hospital the in-patients transferred to out-patients, casualties and patients seen for consultation or otherwise are seen at the following out-patient departments: general medical, general surgical, ear nose and throat, X-ray, massage, electro therapeutic and ultra-violet light (daily); ante-natal (thrice weekly); orthopædic and dental (twice weekly); post-natal, head injury clinic, varicose vein clinic, genito-urinary clinic and gynæcological clinic (each once weekly).

Of the 4,716 patients admitted to Redhill Hospital in 1936, 1,375 came from Harrow, 2,196 from Hendon, 1,078 from Wembley and 67 from other parts of Middlesex. During the same year 606 of the 2,143 patients admitted to the Central Middlesex Hospital came from Harrow or Hendon.

## **(2) Hospitals for Maternity Cases.**

Although the County Council have, since April, 1936, made no charge to the Council for the admission of maternity cases to the County Hospitals, owing to the extreme inadequacy of the maternity accommodation in the County Hospitals, it has still been necessary for the Council to arrange for the admission of maternity cases to various of the London maternity and general hospitals.

Cases of puerperal infection are admitted either to the London County Council North-Western Fever Hospital or to Queen Charlotte's Isolation Hospital.

## **(3) Hospitals for Children.**

Apart from the arrangement by which cases of ophthalmia neonatorum are admitted to St. Margaret's Hospital, Hampstead, there is no provision for admission of children to hospital.

## **(4) Orthopædic Hospitals.**

The Council has no agreement with any particular orthopædic hospital for the admission of patients, though responsibility for the payment of fees of necessitous cases admitted to the various orthopædic hospitals is accepted.



## AMBULANCE FACILITIES.

### (a) For Infectious Cases.

Infectious cases are removed by the Austin ambulance, which is housed alternately at the two isolation hospitals.

### (b) For Non-Infectious Cases and Accidents.

There are four ambulances for the removal of non-infectious and accident cases: two 20-h.p. Austin ambulances housed at the Headquarters Station, a similar ambulance at the Harrow-on-the-Hill Station and a 20-h.p. Talbot ambulance housed at the Wealdstone Station.

A summary of the rules and conditions governing the use of the ambulance is contained in the Annual Report for 1935. Paragraph 3 (a) of these reads: "no charge shall be made for cases of accident, seizures or fits happening at home, in the street, at work or elsewhere within the district if removed within twenty-four hours of the accident, seizure or fit occurring. After such period the case shall be considered as a sick removal and the charges mentioned hereafter shall apply." This rule has now been altered to read: "no charge shall be made for cases of accident, seizure or fit napping in the street, at work or in any place of public assembly in the district."

The Council agreed to an arrangement with the Hospital Saving Association by which the Association's "green voucher" is accepted in lieu of charging the person otherwise liable for payment, the Association paying 7/6 per case in respect of removals to hospitals within the district and to Redhill and the Pinner and Northwood hospitals, and a larger sum for removals to hospitals outside the district. The Association accepts responsibility only when the ambulance is ordered by a medical practitioner and only in respect of stretcher cases.

The following is a summary of the extent to which the ambulances have been used during the year and figures for previous years:—

	1937	1936	1935
Accident cases ... ..	517	480	400
Maternity cases ... ..	336	211	142
Other cases ... ..	1,229	971	897

The number of maternity cases removed should prove to be the maximum as in future, with an increasing number of maternity patients being accommodated in the County Council hospitals, there should be fewer removals of such patients to the London hospitals.

## CLINICS AND TREATMENT CENTRES.

The following is a summary of the various clinics and treatment centres in the district at December 31st, 1937 :—

### Infant Welfare Centres.

- The Broadway Clinic, Wealdstone—Tuesdays, Wednesdays and Thursdays at 1.30 p.m.
- Elmwood Avenue Clinic, Kenton—Wednesdays, Thursdays and Fridays at 1.30 p.m.
- Spiritualist Church Hall, Vaughan Road, West Harrow—Wednesdays at 1.30 p.m.
- Baptist Church Hall, Northolt Road, South Harrow—Tuesdays and Thursdays at 1.30 p.m.
- St. George's Hall, Headstone—Tuesdays and Wednesdays at 1.30 p.m.
- The Institute, Whitchurch Lane, Stanmore—Mondays, Thursdays and Fridays at 1.30 p.m.
- Memorial Hall, Harrow Weald—Thursdays at 2 p.m.
- Baptist Church Hall, Imperial Drive—Mondays, Tuesdays and Thursdays at 1.30 p.m.
- Methodist Church Hall, Love Lane, Pinner—Fridays at 1.30 p.m.
- Baptist Church Hall, Streatfield Road, Kenton—Mondays, Tuesdays and Wednesdays at 2.30 p.m.
- Methodist Church Hall, Walton Avenue, South Harrow—Mondays at 1.30 p.m.

### Toddlers' Clinics.

- The Broadway Clinic, Wealdstone—Alternate Fridays at 1.30 p.m.
- Elmwood Avenue Clinic, Kenton—Alternate Fridays at 9.30 a.m.
- Baptist Church Hall, Imperial Drive, Rayners Lane—Wednesdays at 9.30 a.m.

### Ante-Natal Clinics.

- The Broadway Clinic, Wealdstone—Mondays at 1.30 p.m. and Fridays at 9.30 a.m.
- Elmwood Avenue Clinic, Kenton—Wednesdays and Thursdays at 9.30 a.m.
- The Institute, Whitchurch Lane, Stanmore—Mondays at 9.30 a.m.
- Baptist Church Hall, Imperial Drive, Rayners Lane—Tuesdays and Thursdays at 9.30 a.m.
- Baptist Church Hall, Northolt Road, South Harrow—Tuesdays at 9.30 a.m.
- 76, Marlborough Hill, Wealdstone—Mondays at 1.30 p.m.

Methodist Church Hall, Walton Avenue, South Harrow—Mondays at 9.30 a.m.

Methodist Church Hall, Love Lane, Pinner—Alternate Fridays at 9.30 a.m.

### **Birth Control Clinic.**

The Broadway Clinic, Wealdstone—Mornings of the first and third Tuesdays of the Month.

### **Consultant Ante-Natal Clinic.**

The Broadway Clinic, Wealdstone—Mornings of the second and fourth Tuesdays of the month.

All these clinics are maintained by the local authority.

### **Treatment Centres.**

Massage and light clinics are held at 76, Marlborough Hill, Wealdstone, on the mornings of Tuesdays, Thursdays and Saturdays.

In addition the Harrow and Wealdstone Hospital maintain sessions at this address on the mornings and evenings of Mondays, Wednesdays and Fridays.

### **School Treatment Services.**

Minor Ailments Clinic :—

Roxeth Hill School, Harrow—Tuesdays at 9.30 a.m.

Broadway Clinic, Wealdstone—Monday and Thursday at 9.30 a.m.

Whitchurch Institute—Friday at 9.30 a.m.

Ophthalmic Clinic :—

Broadway Clinic, Wealdstone—Wednesdays and Saturdays at 9.30 a.m.

Dental Clinics :—

76, Marlborough Hill, Wealdstone—Afternoons of Tuesdays and Wednesdays, all day Thursdays and Fridays.

Elmwood Avenue Clinic, Kenton—daily except Wednesdays.

Baptist Church Hall, Northolt Road, South Harrow—daily except Tuesdays and Thursdays.

Whitchurch Institute, Stanmore—Wednesdays all day.

By arrangement with the Middlesex County Council, children under school age can receive minor ailment treatment at the school clinics held at Roxeth Hill School and at the Whitchurch Institute.

Patients requiring treatment under the Council's maternity and child welfare scheme are referred to the County Council's ophthalmic clinic held at the Broadway, Wealdstone, or to the dental treatment held at 76, Marlborough Hill, Wealdstone.

### **Tuberculosis Clinic.**

Sessions are held at the Tuberculosis Dispensary at 53, Greenhill Crescent, on Monday mornings, Thursday afternoons and at 6 p.m. on the second and fourth Wednesdays of the month. At the clinic held at 158, The Broadway, Hendon, sessions are held on Wednesday and Friday mornings and at 6 p.m. on the first and third Wednesdays of the month.

### **Venereal Diseases.**

Provision for the treatment of venereal disease is made under the London and Home Counties Scheme. All treatment, whether in-patient or out-patient, is provided free of charge, the County Council having resolved that any necessary treatment for venereal disease provided through the Council's general hospital service should be granted free of charge. Travelling expenses are paid by the County Council to out-patients in necessitous circumstances who otherwise might be unable to make the numerous attendances over long periods which are usually necessary if a cure is to be obtained.

During 1936 3,288 new cases were dealt with under the scheme, the total attendances being 131,721. Of this number, 439 attended at the Prince of Wales Hospital, Tottenham, the only centre in the County providing this treatment. At this hospital patients made a total number of 29,071 visits, or a ratio of 66 visits per new patient as contrasted with a ratio of 36 visits per new patient made by those treated at other hospitals under the scheme. Such a marked variation suggests that greater advantage would be taken of the services if they were made more accessible.

## **PROFESSIONAL NURSING IN THE HOME.**

### **(a) General.**

Towards the end of the year the Stanmore Nursing Association merged into the Harrow, Wealdstone and Harrow Weald District Nursing Association, which now, therefore, covers the entire district except for a portion served by the Pinner Nursing Association and a small portion on the eastern border of the area. The Harrow Association now works from two homes; one at Warneford, Bessborough Road, Harrow, the other at 93, Uppingham Avenue, Belmont. Altogether 2,190 patients were nursed, 27,747 visits being paid.

## (b) Nursing of Cases of Infectious Disease.

Apart from the arrangements made under the maternity and child welfare scheme, there is no provision for home nursing of cases of infectious disease. Regular visits are paid to the homes of those suffering from notifiable diseases, but on these occasions advice only is given and no treatment carried out.

## LABORATORY FACILITIES.

Examination of clinical material is undertaken at the laboratories of the Clinical Research Association. During the year 34 swabs were examined for the diphtheria bacillus, or for the haemolytic streptococcus, 195 samples of sputum for the tubercle bacillus, 18 samples of faeces and 10 of blood and 4 samples for other purposes. At the same laboratory 31 samples of milk were examined.

Most diphtheria swabs are now examined at the Isolation Hospital.

## PREVENTION OF BLINDNESS.

Consideration was given to Circular 1621 regarding the steps which might be taken to prevent blindness and impairment of eyesight. In this connection the statistics of the Middlesex County Council register of the blind at March 31st are of interest, from which it appears that there were three under five years of age; in the age group 5-16, 50; 16-21, 38; 21-40, 269; 40-50, 267; 50-70, 717; and over seventy years of age, 646. 70 per cent. of the blind in the county, therefore, are over 50 years of age, glaucoma and cataract being responsible for a substantial proportion of the incidence of lost sight, whereas ophthalmia neonatorum is now a relatively unimportant factor. With regard to those matters which particularly concern the maternity and child welfare authority, the four recommendations made are already in force, namely, a comprehensive and adequate system of ante-natal supervision, with the reference of suitable cases for expert examination of the eye; the silver nitrate used prophylactically on infants' eyes at birth, renewed monthly; arrangements for the institutional treatment of cases of ophthalmia neonatorum at a hospital with a specialist on the staff, the mother being admitted with the infant; and arrangements for the service of school clinics and the ophthalmic surgeon attending them to be available for children under school age. Regarding the prevention of disability of the eye following on infectious disease the council adopted the recommendation that the medical officer in charge of the isolation hospital should call in an ophthalmologist to advise on and treat any case of infectious disease requiring specialist's advice.

## CAMPAIGN ADVERTISING THE HEALTH SERVICES.

As part of the National Campaign for the advertisement of the health services, arrangements were made for the exhibition of posters giving publicity to the local health services, fifteen 16-sheet D.C. and 500 D.C. posters being exhibited each month. A further 150 D.C. posters were supplied to local organisations and for exhibition at local cinemas, while 10,000 folders were distributed monthly. Articles dealing with the health services appropriate to the particular services on which attention was being concentrated appeared in the journals of local organisations, while at the meetings of local organisations reference was made to the health services.

## LEGISLATION IN FORCE.

See page 21 of the Annual Report, 1935, and page 19 of the Report for 1936.

Bye-laws dealing with the following matters were made during the year or have become operative since the date of the last report :—

Hairdressers and Barbers—made under S. 78 of the Middlesex County Council Act, 1934, came into operation 1.2.1937.

Camping Grounds—made under S. 57 of the Middlesex County Council Act, 1934, came into operation 1.4.1937.

Establishments for Massage or Special Treatment—made under S. 68 of the Middlesex County Council Act, 1934, came into operation 1.9.37.

## SANITARY CIRCUMSTANCES OF THE AREA.

### WATER.

Apart from the small portion of the district served by the Rickmansworth and Uxbridge Valley Water Company, the area is served by the Colne Valley Water Company. The water originating in the gathering grounds in the Chilterns is pumped at a number of stations from wells about 200 feet deep in the chalk. At the Bushey pumping station in its passage to the softening tanks it is injected with ammonia and chlorine. The softening tanks are first charged with saturated lime water. As the chlorinated water enters the tanks it is dosed with ammonium sulphate to inhibit objectionable tastes. To assist the precipitation of the calcium carbonate about half a grain per gallon of sulphate of alumina is added to the hard waters entering the tanks. During the entire period of sedimentation of some seven to ten hours the chloramine is in contact with the water. The water gravitates to the pumps through a floating arm pipe, the mouth of which draws at a depth of two to three feet from the surface. As the softened chlorinated water passes to the supply pumps, it is dechlorinated with the requisite amount of sulphur dioxide. This treatment effects reduction in the total hardness from twenty-three to between ten to twelve grains per gallon.

At the Eastbury Pumping Station the softening is carried out by the Base Exchange process, use being made of the synthetic zoolite "doucil." A proportion of the water is softened to zero and is then bulked with an approximately equal amount of unsoftened water, the total hardness of the resultant mixture being about ten. This soft water is then chlorinated with chloramine and passes through a contact tank with baffles to ensure adequate mixing and the necessary period of contact to effect sterilisation. On passing from the tank to the pumps it is dechlorinated by sulphur dioxide.

The purity of the supply is ensured by the supervision carried out by a resident staff of chemists and bacteriologists, some of whom are on duty every day of the year, both day and night, collecting and examining samples of all the waters at the Company's works. The following is a summary of the number of samples examined during the year:—

	<i>Well Waters.</i>	<i>Waters softened and chlorinated sent into supply.</i>	<i>Total.</i>
Chemical ... ..	101	147	248
Bacteriological ...	205	554	759
Mineral ... ..	31	55	86

Of the 554 samples of softened supply water which was examined 96.2 per cent. showed the absence of B.Coli. in 100 c.c.

No complaints regarding the water supply have been received during the year and no samples submitted for analysis.

The following are the results of two samples of water taken in this district, provided by the courtesy of Mr. Purves Sinclair, General Manager of the Company.

				<i>Results in parts per 100,000.</i>	
				<i>Sample A.</i>	<i>Sample B.</i>
Appearance	...	...	...	Bright	Bright
Colour	...	...	...	0 mm	0 mm
Odour	...	...	...	Normal	Normal
Reaction pH	...	...	...	7.4	7.2
Total Solids dried at 180° C.	...	...	...	33.0	41.0
Chlorine in Chlorides	...	...	...	5.14	6.05
Nitrogen in Nitrates	...	...	...	0.47	0.44
Nitrogen in Nitrites	...	...	...	Absent	Absent
Hardness—Total	...	...	...	15.2	15.6
Permanent	...	...	...	2.8	1.4
Temporary	...	...	...	12.4	14.2
Metals—Lead	...	...	...	Absent	Absent
Copper	...	...	...	Absent	Absent
Iron	...	...	...	0.0040	0.0042
Zinc	...	...	...	Absent	Absent
Free Ammonia	...	...	...	0.0004	0.0009
Albuminoid Ammonia	...	...	...	0.0041	0.0046
Oxygen absorbed in 3 hrs. at 37° C.	...	...	...	0.034	0.037
Free Carbon Dioxide	...	...	...	0.9	2.0

#### *Bacteriological Results.*

No. of organisms per c.c. on agar in					
24 hours at 37° C.	...	...	...	1	9
B. Coli	...	...	...	Absent in 100 c.c.	100 c.c.
B. Welchii	...	...	...	Absent in 100 c.c.	100 c.c.

A summary of the analysis of Sample A is :—This is a bright and colourless water which is moderate in hardness, neutral in reaction and free from objectionable metals. The organic and bacteriological results conform with an excellent standard. The water may, therefore, be regarded as being pure and wholesome and it is in every way suitable for drinking and domestic purposes.

A summary of the analysis of Sample B is :—This is a bright and colourless water which is moderate in hardness, neutral in reaction and free from objectionable metals. The organic and bacteriological results conform with an excellent standard. The water may, therefore, be regarded as being pure and wholesome and it is in every way suitable for drinking and domestic purposes.



The Rickmansworth and Uxbridge Valley Water Company have pumping-stations at Ickenham, West Drayton and Mill End. The area of this district served by this company includes parts of Wood End Avenue, Westwood Avenue, Wood End Road and Cavendish Avenue.

Occasionally intimations are received from the Water Company of their intention to cut off the supply to one of the houses on account of the failure of the householder to pay the water rate. In the rare instances in which this step has actually proved necessary the supply has been restored after a very short period.

A number of complaints have been received regarding the defectiveness of the floats in water cisterns. It appears that this happens in the cheaper kind of float in which the two halves have been soldered. The water for some reason acts on the solder, causing a leak in the float.

### **DRAINAGE AND SEWERAGE.**

The more important sewerage works undertaken by the Council during the year were the Moat Farm Surface Water Scheme (from the Headstone Manor Recreation Ground to the Embassy Cinema, North Harrow) and the construction of a relief outfall sewer connecting the main sewer in Edgware Road to the County Council's sewer in Headstone Lane. 760 yards of existing sewer in Edgware Road was replaced and worn-out ejectors at the Sudbury Hill Pumping Station were replaced.

### **PUBLIC CLEANSING.**

#### **Refuse Collection.**

There was no change made during the year in the arrangements for the collection of house refuse, though it appears that difficulty has been experienced in the existing arrangements with regard to the collection from blocks of flats.

The following arrangements for the collection of trade refuse were approved by the Council in December, 1934.

1. One free collection of two bins per week.
2. Additional collections per week, if required, at a cost of three guineas per annum for each additional collection.
3. All bins in excess of two at any collection to be charged at the rate of 6d. per bin.
4. Collections of fish offal at a charge of three guineas per annum in respect of each collection per week.
5. Disposal of refuse delivered to the destructor at a charge of 6s. 8d. per ton.

Section 73 of the Public Health Act provides that a local authority may undertake the collection of trade refuse and shall

make a reasonable charge for the service. On the assumption that one bin per shop could reasonably be considered to represent the proportion of house refuse collected from the shop, the arrangements for the collection of refuse from shops were modified to provide the free collection of only one bin per week instead of two as formerly.

In the draft Bill the wording of the paragraph relating to the charges for collection of trade refuse was "if the authority determine to recover the cost or some part of the cost incurred by them in removing trade refuse they may make reasonable charges for removing such refuse." This was altered in the passage of the Bill to "the local authority shall make reasonable charges for removing trade refuse." From the point of view of those concerned with the avoidance of nuisances in the district this alteration is unfortunate. If shop refuse is not removed—and many shop-keepers object strongly to any additional charges for removal—the refuse either collects, in which case rats are encouraged and, during the warmer months, flies and smells emanate, or it is burned, to the annoyance of neighbouring residents.

While the question of what can legitimately be construed as "house refuse" as contrasted with "trade refuse" has been disputed and while it is reasonable to exclude garden refuse, it does seem that it is inadvisable to attempt unduly to restrict the conception of "house refuse." Householders have more to dispose of than ashes and empty tins, and do not take kindly to any suggestion of additional charges for the removal of waste goods not within this category. The report of the Departmental Committee on London Cleansing rightly drew attention to the necessity of detailed consideration being given to the costs of the cleansing services, but it is suggested that the prime consideration should always be the provision of the service to the householders.

### **Refuse Disposal.**

In the early part of the year consideration was given to the question of the future disposal of the refuse of the district, and at their meeting on February 2nd the Council approved "the policy of incineration as the method of disposal of the whole of the household and trade refuse of this district." In September, however, attention was drawn to a new method of disposal of refuse by the "hyganic process" whereby the refuse is so treated as to break down a large proportion of it into a form suitable for use as a fertiliser, the processes to which the refuse is subjected being degradation, fermentation, oxidation and dehydration. The refuse is discharged from the collection vehicles direct into a 70-ton hopper, from which it is elevated by a grab into a similar hopper feeding the picking belts where rags, bottles, etc. are removed by hand-picking and tins, etc. by a magnetic drum. The refuse then passes into a rotary screen allowing the removal of ash. All this section of the

plant is under cover. The tailings then travel on a covered conveyor belt running the whole length of a series of treatment cells. Alongside each pair of cells is a small bin capable of holding one hour's supply of refuse. The refuse is diverted from the conveyor belt by means of a movable trip into the bin alongside the cell to be filled and from here is transferred by a grab into the cell. Each day one cell is charged and one discharged. In the cell it is sown with a bacterial culture and oxygen-consuming fungus. After a week's detention in the hermetically sealed cell under anærobic conditions, the refuse is subjected to ærobic action for a further week, air being pumped in under pressure. It is understood that in the ærobic stage temperatures are reached which are sufficiently high to ensure the destruction of all pathogenic organisms. By the end of this time the refuse has been changed into an innocuous friable material which, after crushing, is ready for use as a fertilizer, being loaded direct into vehicles or delivered into a covered store. The amount of fertilizer recovered is anticipated to be 35-40 per cent. of the gross amount of refuse delivered.

Of the sources of possible nuisances which may arise, some are inherent in the particular process, while others are common to other methods of refuse disposal. Of the latter there is the possible blowing about of dust, paper, etc. on the occasion of the delivery of the refuse from the collection vehicles; the possible nuisances arising from disposal or storage of re-claimed products such as bottles and fine ash; and nuisances arising from the incineration which it is understood will be carried out to a limited extent in running the machinery working the air-compressing plant. From the time of despatch from the vehicles to its deposit in the bins the refuse, crude or separated, is under cover. Anticipated nuisances from this step onwards are of dust, etc. being blown about when the refuse is transferred from the bin to the cell; smell from the bins at the times when they have to be uncovered; smell from any liquor waste from the bins, and smell from the treated product at any stage from the removal from the bin to its disposal. As to the possibility of smell from the cells during treatment it is understood that for the first seven days the cells are hermetically sealed. During the ærobic period of treatment, when compressed air is being passed through the material, the gases will pass from the cells through a scrubber, passing then through a stack in which they will mix with flue gases from the incinerator. A centrifugal fan will maintain a slight suction on the air in the cells during the treatment process.

At their meeting on January 1st, 1938, the Council approved "the principle of destructing all refuse by the 'hyganic' process."

The weekly average amounts of refuse disposed of in December were, at the Harrow destructor, 275 tons; at the Wealdstone destructor, 150 tons; at the Pinner controlled tip, 210 tons; and at the Stanmore controlled tip, 220 tons.

The costs of the collection for the nine months ending December 29th were 10s. 8½d. per ton and for disposal 3s. 7d. per ton.

### Street Cleansing.

Main roads and shopping centres are cleansed twice daily; main district roads once daily; district roads generally three times a week; cul-de-sacs twice weekly and private streets at least once a week. The sweepings are collected in orderly barrows and are disposed of at the tips. The roads in certain areas of the district tend to become littered presumably by the carelessness of the neighbouring inhabitants, whose houses and fences also are allowed to fall into a state of disrepair. More frequent street cleansing in such areas might be a small contribution towards arresting the deterioration in the tone of the locality.

## PUBLIC CONVENIENCES.

A list of the public conveniences in the district appeared in the Annual Report for 1935.

Owing to the widening of Roxborough Bridge, the convenience there has been demolished. A new convenience has been constructed in the Harrow Weald recreation ground, accessible from the public highway as well as from the ground. The accommodation is: for women, 3 w.c.'s; for men, 3 w.c.'s and urinal stalls and lavatory basins in each compartment. In October the Council agreed to the construction of conveniences in the following recreation grounds: Alexandra Park (children's convenience); Byron recreation ground; Canon Park recreation ground; Little Common, Pinner; Lowlands recreation ground; Montesole playing-fields; and Pinner recreation ground. It was later agreed that conveniences be erected at Alexandra Park (fronting Alexandra Avenue near the southern entrance to the Park); Great Stanmore recreation ground (fronting Stanmore Hill adjoining the entrance to the recreation ground); and Stanmore Common (fronting the road across the common opposite the cricket ground), the conveniences so situated being accessible to the public both from the ground and from the highway. The accommodation to be provided in the conveniences is: men, 3 w.c.'s and 5 urinal stalls; boys, 1 w.c.; women, 3 w.c.'s; and girls, 3 w.c.'s.

The erection of a new convenience is contemplated on the site at the junction of Buckingham Road and Whitchurch Lane, with accommodation on the male side of 3 w.c.'s and 6 urinal stalls and on the female side of 3 w.c.'s, with lavatory and attendance room on each side.

Certain parts of the district are still in urgent need of conveniences, the demand being most acute possibly in Kenton near the railway bridge.

## MORTUARY.

Particulars of the mortuary are contained in the Annual Report for 1934.

160 bodies were received during the year. Post-mortem examinations were carried out on 100, and 46 inquests were held.

44 bodies were admitted for storage and 16 bodies of persons dying from accident or suicide on whom no post-mortem examination was carried out in the mortuary.

## SWIMMING BATHS.

Particulars of the two swimming baths were given in the Annual Report for 1934.

Daily tests are carried out for the presence of free chlorine and for the pH value, while periodical samples are submitted for complete chemical and bacteriological analysis. Those of the water at the Christchurch Avenue Bath were, on the whole, satisfactory. A sample in June gave 1,100 organisms per c.c. on agar at 20° C., though *B.Coli* and *B.Welchii* were absent in 100 c.c. and the water contained 0.25 parts per million of free chlorine. Chemically both the free and albuminoid ammonia content were low, as was also the oxygen absorption figure. A sample in August again showed an excessive number of organisms, *B.Coli* being present in 50 c.c. in spite of there being 0.2 parts per million of free chlorine. The water was of a satisfactory degree of organic purity. The results of the analysis indicated insufficient sterilization. The next sample, however, proved entirely satisfactory: "this is a clear and bright water of normal colour and faint earthy odour. The water contains no excess of saline matter, is of neutral re-action, contains a minute trace of free chlorine and is of a satisfactory degree of organic quality. Bacteriologically it is of a very high degree of purity. It is a clean water, suitable and safe for swimming bath purposes."

The analyses of the water at the Charles Crescent baths, however, showed that the purification processes were insufficient to maintain the requisite standard of purity. The chemical analysis of a sample taken in June showed evidence of contamination by bathers, while it contained 1,200 organisms per c.c. and no free chlorine. The analysis of a sample in July gave figures of 0.0880 of free and 0.0560 albuminoid ammonia and an oxygen absorption figure of 0.095. Bacteriologically this pollution by bathers was masked by the chlorination, free chlorine being present and the total bacterial count being only 110 organisms per c.c. The next sample again showed the effects of pollution by bathers, giving high figures for free and albuminoid ammonia and oxygen absorption. There was no free chlorine present on this occasion and the bacterial count showed the presence of 3,100 organisms per c.c.

though excretal organisms were not demonstrated. The next sample showed the presence of free chlorine which kept down the bacterial content to 360 per c.c., though this time B.Coli and streptococci were present in 10 c.c. This sample, again, gave high ammonia and oxygen absorption figures, indicating pollution which in this case was not controlled by chlorination. These results suggested that unless some restriction were to be placed on the number of bathers, the purification processes would need to be augmented.

Under existing arrangements the water is filtered and subsequently chlorinated. The capacity of the filtration plant, however, does not permit of a turnover more rapidly than once in every eight hours. It was decided, therefore, to instal during the winter months an additional filtration plant capable of dealing with 45,000 gallons per hour which would permit of a turnover of  $4\frac{1}{2}$  hours. The plant will consist of two 8-foot diameter pressure filters filled with quartz to a minimum of 3 feet. Alumina-ferric will be added as a coagulant to the water in its passage to the filter, and subsequent neutralization will be effected by the addition of soda ash.

### SCHOOLS.

A list of the schools of the district with their accommodation appeared in the Annual Report for 1935. Since that list was compiled the only new school is Stanburn temporary. The number of schools in the district is now 24, and the number of departments 42. 22 of the departments are making use of temporary accommodation, but in spite of this the average number on the roll exceeds the accommodation. The increase in the number of scholars and accommodation is shown below:—

	<i>Position at end of</i>		<i>Increase.</i>
	<i>March,</i>	<i>January,</i>	
	1937.	1938.	
Accommodation ... ..	14,794	16,587	1,793
Temporary accommodation ...	2,320	2,552	232
Number on roll ... ..	17,031	18,245	1,214

School attendance has played little part in the spread of the notifiable infections. No schools were closed during the year on the action of the sanitary authority, and no premises disinfected.

### ESTABLISHMENTS FOR MASSAGE OR SPECIAL TREATMENT.

The Council adopted Part VII of the Middlesex County Council Act, 1934, regarding establishments for massage and special treatment which are defined as premises for the reception or treatment of persons requiring (a) massage, manicure or

chiroprody, (b) electric treatment or radiant heat, light, electric, vapour or other baths for therapeutic treatment, or (c) other similar treatment.

By the provisions of the Act, and subject to certain provisos regarding practice by medical practitioners or members of the Chartered Society of Massage and Medical Gymnastics and certain premises, such as hospitals, no person shall carry on an establishment for massage or special treatment without a licence from the local authority authorising him so to do. Under Section 68 of the Act bye-laws were made regarding the conduct of the business.

Licensed premises are visited twice a year. By the end of the year four premises had been licensed.

### SANITARY INSPECTION OF DISTRICT.

(a) Number of :—

Houses inspected under the Housing Act, 1936	...	...	...	...	...	377
Houses found unfit	...	...	...	...	...	145
Houses not in all respects fit	...	...	...	...	...	195
Revisits	...	...	...	...	...	4,628
Surveys under Housing Act, 1936	...	...	...	...	...	1,774
Houses inspected under Public Health Acts	...	...	...	...	...	2,098
Houses found defective	...	...	...	...	...	768
Revisits	...	...	...	...	...	3,686
Other premises visited for nuisances	...	...	...	...	...	937
Revisits	...	...	...	...	...	779
Complaints investigated	...	...	...	...	...	1,564
Complaints re rats investigated	...	...	...	...	...	105
Visits re infectious disease...	...	...	...	...	...	13

Inspections of :—

Foster parents' premises	...	...	...	...	84
Factories	...	...	...	...	351
Workshops	...	...	...	...	234
Workplaces	...	...	...	...	126
Outworkers' premises	...	...	...	...	81
Cinemas and places of entertainments	...	...	...	...	67
Houses-let-in-lodgings	...	...	...	...	1

## Visits to :—

Slaughterhouses...	...	...	...	902
Greengrocers	...	...	..	233
Butchers...	...	...	...	666
Provision Merchants	...	...	..	377
Cowsheds	...	...	...	70
Dairies	...	...	...	283
Ice Cream Premises	...	...	...	18
Fish Shops	...	...	...	199
Fried Fish Shops	...	...	...	138
Bakehouses	...	...	...	131
Other Food Premises	...	...	...	277
Hairdressers	...	...	...	73
Premises where rag flock used	...	...	...	3
Inspections of premises under periodical inspection	...	...	...	643
Observations for smoke nuisances	...	...	...	30
Visits under Shops Acts	...	...	...	2,536
Evening observations under Shops Acts...	...	...	...	191

(b) Notices served.	No. complied with.
Statutory	46
Informal	1,738
	33
	1,654

**SMOKE ABATEMENT.**

This district is very free from atmospheric pollution, the chief offenders being the gas works about which complaints are at times received regarding nuisances from dust and soot, and a timber workshop which at times causes smoke by burning waste. During the year 30 observations were carried out. During the 690 minutes' observation black smoke was seen for only one minute, dense smoke for  $7\frac{3}{8}$  minutes and moderate smoke for  $250\frac{1}{2}$  minutes.

**SHOPS ACTS, 1912-1936.**

Inspections under the Shops Acts are undertaken by the Sanitary Inspectors. During the year 336 new shops were registered so that by the end of the year the total number of shops on the register was 2,092.

2,536 visits were paid to shops under the above Acts and 191 evening observations made. 132 contraventions were recorded,



these being classified as: serving customers after closing hours, 77; intervals for meals not given to assistants, 17; assistants not having a half-holiday, 2; young persons employed after the statutory time, 20; absence of suitable and sufficient sanitary and washing accommodation, 10; temperature of shop not maintained, 3; absence of sitting accommodation for female assistants, 1; absence of suitable and sufficient facilities for taking of meals, 2.

348 letters were sent to traders regarding the absence of appropriate notices.

In three cases it was necessary to take legal proceedings, and in 15 instances the traders concerned received a final warning. One certificate of exemption from the provisions requiring sanitary accommodation was granted.

The Shops (Sunday Trading Restriction) Act, 1936, came into operation on May 1st. The chief effects of the Act are to require the closing of shops on Sundays subject to a number of exceptions designed to meet the reasonable needs of the public; and to provide for compensatory holidays during the week for persons employed on Sunday about the business of those shops which are permitted to open, subject to exemption for certain classes of workers. During the year the following contraventions were noted:—serving customers with non-exempted goods, 1; assistants not receiving a compensatory holiday, 12.

The particulars of the various orders in force in different parts of the district were given in the report for 1935. There is no general closing order operative throughout the district. During the year an effort was made to obtain details of those proposals which would prove most acceptable to the general body of traders in the district. A scheme was drawn up and steps will be taken to endeavour to get the necessary majority vote of the traders to put it into operation.

### **RATS AND MICE (DESTRUCTION) ACT, 1919.**

105 complaints were received during the year regarding the presence of rats. On receipt of a complaint, an inspection is made by a sanitary inspector; where any sanitary defects or nuisances remediable under the Public Health Acts likely to be predisposing causes of the presence of rats are found the necessary action is taken, and the complaint is forwarded to the County's inspector.

### **PLACES OF PUBLIC ENTERTAINMENT.**

67 visits were paid to places of public entertainment for inspection of their sanitary condition. In all instances the sanitary arrangements were found to be satisfactory.

## FACTORY AND WORKSHOP ACT, 1901.

In this district there are 188 factories, 171 workshops, and 58 workplaces, to which the following numbers of visits were paid during the year : factories, 351 ; workshops, 234 ; workplaces, 126.

Of the 48 public health nuisances detected, 16 were due to want of cleanliness. There were 13 instances of unsatisfactory sanitary accommodation, these being unsuitable or defective in nine cases and insufficient in four. 19 other nuisances were detected.

54 notices from other Councils and one from an employer were received containing the addresses of 78 outworkers. Of the local outworkers, 72 were engaged in the making of wearing apparel, 11 in leatherwork, one in brushmaking, one in the making of artificial flowers and one in box-making. 81 visits of inspection were made to outworkers' premises, in none of which were unwholesome conditions found to exist.

### ERADICATION OF BED BUGS.

During the year twelve council houses and forty-two other dwellings were found to be infested with vermin, while of the total of 107 houses included in clearance areas in regard to which Orders have been confirmed, twenty-nine were found to be verminous.

The council houses were treated with vermicine spray. Mild infestations of other houses were similarly dealt with, but premises more severely affected were treated by outside contractors, the cost of the work being borne either by the owners or the occupiers. Eight houses in clearance areas were dealt with, making a total of fifty private houses and twelve council houses disinfested. A limited amount of disinfestation was carried out by members of the Council's staff trained in the use of heavy naphtha.

Before removal of tenants from infested houses to council houses, the houses and the household effects are fumigated, or the household effects sprayed. After removal periodic visits are paid to the homes of those transferred to council houses from condemned properties to ascertain their freedom from infestation. Up to the present it would appear that the methods of disinfestation have proved successful.

## HOUSING.

### HOUSING STATISTICS FOR THE YEAR, 1937.

Number of New Houses erected during the Year :—

Total	...	...	...	...	...	...	...	4,222
(1) By the Local Authority	...	...	...	...	...	...	...	18
(2) By other Local Authorities (L.C.C.)	...	...	...	...	...	...	...	573
(3) By other bodies and persons	...	...	...	...	...	...	...	3,631

#### 1. Inspection of Dwelling-Houses during the year :—

(1) (a)	Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	...	...	...	...	2,475
(b)	Number of inspections made for the purpose	...	...	...	...	10,789
(2) (a)	Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	...	...	...	...	377
(b)	Number of inspections made for the purpose	...	...	...	...	5,005
(3)	Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	...	145
(4)	Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	...	...	...	...	963

#### 2. Remedy of Defects during the Year without Service of Formal Notices :—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers	...	...	...	...	833
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#### 3. Action under Statutory Powers during the Year :—

A. Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936 :—

(1)	Number of dwelling-houses in respect of which notices were served requiring repairs	...	...	...	18
(2)	Number of dwelling-houses which were rendered fit after service of formal notices :—	...	...	...	7
(a)	By owners	...	...	...	—
(b)	By local authority in default of owners	...	...	...	—

B. Proceedings under Public Health Acts :—	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied ... ..	28
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) By owners ... ..	26
(b) By local authority in default of owners ... ..	—
C. Proceedings under Sections 11 and 13 of the Housing Act, 1936 :—	
(1) Number of dwelling-houses in respect of which Demolition Orders were made ... ..	14
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders ... ..	20
D. Proceedings under Section 12 of the Housing Act, 1936 :—	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made ... ..	3
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit ... ..	—

#### 4. Housing Act, 1936. Part IV. Overcrowding :—

(a) (i) Number of dwellings overcrowded at the end of the year ... ..	61
(ii) Number of families dwelling therein ... ..	61
(iii) Number of persons dwelling therein ... ..	460
(b) (i) Number of new cases of overcrowding reported during the year ... ..	53
(c) (i) Number of cases of overcrowding relieved during the year ... ..	113
(ii) Number of persons concerned in such cases ... ..	707
(d) Particulars of any cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding ... ..	—

## ACTION UNDER THE 1936 HOUSING ACT.

## Section 1.

In last year's report it was stated that steps had been taken to obtain Clearance Orders in respect of a number of properties, but that by December 31st, 1936, the Orders had not been confirmed. The properties were grouped under the following titles :—West End Lane, No. 1 (6 houses) ; West End Lane, No. 2 (2) ; High Street, Edgware (7) ; Green Lane, Stanmore (8) ; Canning Road, Wealdstone (14) ; Rose Cottages, Little Common (3). During the early part of 1937 all these Orders were confirmed.

The following table gives a list of the properties dealt with during the year and the position regarding them at the end of the year.

<i>Title of Order.</i>	<i>No. of Houses.</i>	<i>Position at end of Year.</i>
Moss Lane, Pinner ...	4	Application opposed. Public Inquiry. Clearance Order confirmed.
Greenford Road ...	3	Application not opposed. Clearance Order confirmed.
The Broadway, Stanmore... ..	19	Application opposed. Public Inquiry. Clearance Order confirmed.
Church Road, Stanmore	4	Application not opposed. Clearance Order confirmed.
Middle Road ... ..	3	Application not opposed. Clearance Order confirmed.
High Street, Stanmore, No. 1 ... ..	3	Application opposed. Public Inquiry.
High Street, Stanmore, No. 2 ... ..	4	Application not opposed. Order confirmed January, 1938.
Ferndale Terrace ...	12	Application opposed. Public Inquiry. Clearance Order confirmed January, 1938.

Owing to the difficulties which have been met in connection with the erection of new houses, little demolition of condemned properties has actually proved possible, though numbers of tenants from the worst of the houses have been accommodated in Council houses.

In 1932 the Minister of Health called for a report from all authorities of the properties it was anticipated would be considered for demolition under the Housing Act, 1930, with a five years' programme showing the rate it was proposed to deal with these properties. All the houses included in the proposals of the con-

stituent authorities of this area have been dealt with, but new properties continue to be brought to light, and this will possibly continue for some years. The complement of the sanitary inspectorate is not sufficient to permit of any degree of systematic inspection to be carried out, so that the internal structure of some properties which superficially appear satisfactory come as a revelation when an inspector has occasion to visit the premises. For this reason it can be anticipated that for an appreciable time yet properties will be found which will need to be considered with a view to demolition.

### Sections 11 and 12.

Notices to appear were served on the owners of twenty-three properties; twenty under Section 11 and three under Section 12.

Out of the twenty under Section 11, Demolition Orders were made in respect of fourteen, of which 5 became vacant before the end of the year. An undertaking to re-condition was accepted in regard to three; an undertaking to demolish within eighteen months in regard to three; and an undertaking that it would not be used for human habitation in respect of one. Approval was given to the three parts of properties dealt with under Section 12 being used as stores.

The following statement extracted from the returns on Form H. 256 shows the position at the beginning and at the end of the year:—

	<i>Position at</i>		
	<i>December 31st,</i>		
	1936.	1937.	
Number of houses demolished under Section 11	45	65	20
Parts of buildings closed under Section 12 ...	3	7	4
Number of persons displaced from these houses	127	196	69
Number of dwelling-houses made fit under Sections 9-12 ... ..	73	80	7
Insanitary houses demolished in anticipation of formal procedure under Section 11 ...	19	19	—
Insanitary houses closed (but not demolished) on an undertaking (which has not been cancelled) by the owner under Section 11 ...	15	26	11
Houses made fit as a result of informal notice preliminary to formal notice under Section 9	734	884	150

### Section 13.

The question of dealing with the area bounded on the south by the Bridge School, east by Station Road, north by Marlborough Hill and west by Milton Road as a redevelopment area was still under consideration at the end of the year.

## Overcrowding.

At the time of the survey carried out early in 1936 under Section 1 of the Housing Act, 1935, to determine the extent of overcrowding, it was found that 152 houses were overcrowded. By December, 1936, this figure had been reduced to 94, 11 families having been rehoused in council houses and the overcrowding in 47 houses having been abated by removal of the occupants.

By December 31st, 1937, this figure had been still further reduced to 32, the 62 cases of overcrowding having been abated by the removal of families to council houses in 9 cases; by the transfer into larger council houses in 4, and by the movements of the occupants in 49.

Of the 35 cases found at the time of the survey not to be overcrowded, but which, by reason of the ageing of the children would become overcrowded within two years, 8 were abated by December 31st, 1936, 4 by the tenants being rehoused in council houses and 4 by other movements of tenants. This figure was further reduced during 1937, 5 families being rehoused in council houses and 11 moving elsewhere. Of those 35 potentially overcrowded, then, found at the time of the survey, only 11 were, in fact, overcrowded at December 31st, 1937.

Since the survey, however, a further 53 overcrowded houses have been discovered in which overcrowding had occurred subsequent to the survey but before the appointed day. During the year the overcrowding of 14 of these was abated by rehousing of the families in council houses and 21 by movements of the occupants elsewhere, this leaving a net increase of 18 new cases of overcrowding during the year.

The number of cases of overcrowding at December 31st, 1937, is, therefore, 61, this figure being made up of 32 families in the original survey, 11 review cases and 18 new cases. 35 (eight of which were review or new cases) of these families are to be rehoused in the Council's four-bedroomed houses and 16 in three-bedroomed houses. Three of the families occupy houses that are to be dealt with under slum clearance procedure. Three of the houses are owner-occupied; in two the overcrowding is due to the presence of lodgers, in one the crowding is shortly to be abated by the movement of a member of the family, while the remaining case will be abated when the occupant moves into the house he is erecting. By the middle of the year, it is anticipated, practically all the overcrowding found up to the end of 1937 will have been abated, though a few further cases will probably be found of families who moved into the district between the date of the survey and of the appointed day.

During the year a certificate as to the permitted number of occupants under Section 6 (2) of the Housing Act, 1935, was given in respect of 5,400 premises.

### Council Housing.

18 bungalows for the aged were erected at Kings Road, South Harrow, the formal opening taking place on October 4th. There is an undoubted demand for such accommodation and it is hoped that further similar habitations will be erected. Looking to the future, by reason of the altered age distribution of the population with the weighting of the proportion of the aged brought about by the falling birth rate, it can be visualized that a much greater proportion of building activity than has obtained in the past will of necessity be devoted to this type of habitation.

By the end of the year the development of the Glebe and of the Berridge Estates with their 46 and 68 houses was well advanced.

Towards the end of the year the Housing Committee were authorised to proceed with the development of the southern portion of the land comprised in the Harrow Urban (Rayners Lane) Housing Confirmation Order, 1936, the proposal being for the erection of 82 houses and 248 flats.

An analysis of the 1,467 applications for council houses showed that in 578 cases the applicant was insufficiently accommodated or was experiencing hardship, in 434 he was suitably housed but at a high rental, while 329 applicants were either without family and/or living outside the area but working inside.

On September 30th there were 1,049 houses or flats void (excluding those not previously let).

The principle was agreed to of applying the subsidy in respect of the houses provided under slum clearance schemes to a pool to be utilised for reducing the rents both of the houses attracting the subsidy and houses for the aged.



# INSPECTION AND SUPERVISION OF FOOD.

## (A) MILK SUPPLY.

### Producers.

There are now 11 cowkeepers occupying 13 separate registered cowsheds in the district compared with 15 in the previous year. Of these five hold licences for the production of accredited milk. Eight only of these producers sell milk in the district by retail.

### Retailers.

Including the three company distributors, there are 85 retailers of milk in this district.

The following is a summary of the various classes of retailer :—

Number of local producers who sell milk locally	...	8
Number of premises from which the three multiple firms distribute milk	... ..	31
Number of premises from which the single retailers distribute milk	... ..	9
Number of retailers not occupying premises in the district	... ..	12
Number of shops from which milk is sold in unopened receptacles only	... ..	58

### Licences.

The following licences were in force in respect of premises in the district :—

Bottling or retailing of T.T. milk at premises other than at place of production	... ..	17
(Of these, 8 belong to one firm and 2 to another.)		
Supplementary licences issued to producers outside the district to retail T.T. milk in the district...	...	5
Pasteurizing establishments	... ..	3
Selling of pasteurized milk at premises other than establishments where pasteurization is carried on	...	41
(Of these, 17 premises belong to one firm, 12 to one, 3 to one and 2 to another.)		
Supplementary licences issued to producers outside the district to retail pasteurized milk in the district	...	5

### Milk Sampling.

26 samples of pasteurized milk were examined, of which one gave an unsatisfactory count. Six were submitted to and passed the phosphatase test.

One sample of accredited milk was submitted to a bacteriological and to a methylene blue test with satisfactory results.

One of the 6 samples of ordinary milk proved unsatisfactory.

### Ice Cream Sampling.

One of the two samples of ice cream submitted for analysis from local producers proved unsatisfactory.

### Milk and Dairies Act, and Tuberculosis Order.

The following is a copy of a report on the working of the Milk and Dairies Act, 1915, and the Tuberculosis Order, 1925 :—

“ During the year 1937, twenty-eight samples of milk were taken from retailers in the district. These samples were submitted to the Lister Institute for animal inoculation tests for the presence of tubercle bacilli. Four of these samples, all of which were produced in Buckinghamshire, were found to contain living tubercle bacilli. In two of these instances the offending animal was discovered and slaughtered. In one instance three cows in the herd examined were found to be suffering from mastitis but none from tuberculosis, and in the remaining instance I have not yet heard from the County Medical Officer of Buckinghamshire the results of any action he may have taken in the matter. During 1937 one cow was reported by an owner as suspected to be suffering from tuberculosis and was slaughtered.

“ Routine examination of milch cattle was carried out during the year by Mr. Reginald Wooff, M.R.C.V.S., the County Council's wholtime veterinary inspector; 1,249 inspections of bovine animals. One cow was reported as a suspicious case and was submitted to the tuberculin (double intradermal) test, but did not react. One other cow reported as suffering from tuberculosis died and the post-mortem examination revealed signs of advanced tuberculosis.”

## (B) MEAT AND OTHER FOOD.

### Meat Inspection.

There are eight licensed but no registered slaughter-houses in the district. These premises are kept under observation, 902 visits being paid during the year and 4,090 carcasses examined.

Of the 208 beasts slaughtered, 86 were unsound in some respect, the liver being affected in 47 instances of which 34 were due to parasitic disease and 9 to abscess. Two entire carcasses were destroyed, one for jaundice and one on account of fevered condition. Tuberculous lesions were found in the lungs of 24, the mesenteric fat of 14, the liver of 9, the head of 8, the tongue of 4 and in other sites in 2 (commonly more than one site being affected in the same animal). The forequarters of one carcass were condemned on account of tuberculosis and an entire carcass on account of generalized tuberculosis. Of the 161 cattle (excluding cows) slaughtered, 43, or 26 per cent., were unsound in some respect.

The percentage affected with tuberculosis was 16, one entire carcase and parts of 26 carcasses being condemned on this account. In addition 73 lbs. of beef were condemned on account of contamination and bruising.

386 of the 2,425 pigs slaughtered were diseased in some respect, more than one organ of the same animal frequently being affected. The entire carcase in five cases was condemned on account of fevered condition. Pneumonia was present in 50 cases, pleurisy in 14 and other lesions of the lung in 6, pericarditis in 24, lesions of the liver 15 (parasitic disease 7, cirrhosis 6), and other lesions 9 (including bruising of 6). Tuberculosis was found in the entire carcase of 6, in the mesenteric fat of 142, in the head of 108, in the lungs of 53, in the liver of 51 and in the spleen of 3.

Of the 1,203 sheep slaughtered only 31 were found unsound in any respect. The commonest abnormal states were parasitic diseases affecting the liver of 16 and the lungs of 7. In addition two carcasses were condemned on account of enteritis with emaciation and another because of emaciation and bruising.

Only 4 of the 250 calves were unsound, two being due to tuberculous lesions.

The following table gives particulars of the numbers of animals slaughtered and the incidence of disease:—

	<i>Cattle excluding Cows.</i>	<i>Cows.</i>	<i>Calves.</i>	<i>Sheep &amp; Lambs.</i>	<i>Pigs.</i>
Number killed ... ..	161	47	250	1,203	2,425
Number inspected ... ..	161	47	250	1,203	2,425
<b>ALL DISEASES EXCEPT TUBERCULOSIS.</b>					
Whole carcasses condemned	—	1	—	3	5
No. of carcasses of which some part of organ was condemned ... ..	43	5	2	28	116
Percentage of the number inspected affected with disease other than tuber- culosis ... ..	26·7	10·6	·8	2·3	4·8
<b>TUBERCULOSIS ONLY.</b>					
Whole carcasses condemned	1	—	—	—	6
Carcasses of which some part or organ was condemned	26	11	2	—	265
Percentage affected with tuberculosis ... ..	16·1	23·4	·8	—	10·9

### **Bakehouses.**

There are 31 factory and 12 retail bakehouses in the district, to which 131 visits were paid during the year.

In some instances it was found the premises needed cleansing which was carried out on receipt of notice from this department.

### **Food Shops.**

727 visits were paid to butchers' shops, 199 to fish shops, 377 to provision shops, 283 to dairies and milk shops and 233 to green-grocers' shops. The following amounts of food-stuffs were condemned and voluntarily surrendered: prawns 30 lbs.; fresh fruit of various descriptions 51 lbs.; tinned fruit  $\frac{1}{2}$  lb.; and marmalade 2,199 lbs.

### **Fried Fish Shops.**

Fish frying is one of the scheduled offensive trades in the district. At the beginning of the year there were 27 such premises in the area. During the year two businesses closed down and another four were sanctioned, but only three established, making a total at the end of the year of 28.

To these 138 visits were paid. Most of the businesses are carried on in up-to-date premises with modern appliances. The premises are kept clean, and the few complaints received were promptly attended to.

## **(C) ADULTERATION, ETC.**

### **Food and Drugs.**

During the year 194 samples were analysed. Of these 141 were of milk of which 5 were adulterated. Two out of the 53 samples of other commodities proved to be adulterated. Three cases were prosecuted, convictions being obtained in each instance.

In the report of the Local Government and Public Health Consolidation Committee on the draft Food and Drugs Bill it is recommended that the laws which previously appeared in two separate codes, namely, the food and drugs code, aiming at the protection of purchasers from fraud and deception, and the public health code, aiming at the safeguarding of public health, should be combined in a single measure. The Committee also suggests that the authorities outside London which should be responsible for the provisions of the Bill should be the councils of county boroughs, boroughs and those urban districts with a population at the last census of 40,000. Reference was made to the desirable standard of three samples for analysis per 1,000 population annually.

## **(D) CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF FOOD.**

These examinations are carried out at the Laboratories of the Clinical Research Association Limited, Watergate House, Adelphi, London, W.C.2.

## ISOLATION HOSPITALS. DESCRIPTION OF PREMISES.

Particulars of the hospitals were given in the Annual Report for 1934.

The operating theatre approved in 1936 was erected and equipped in the early part of the year. Beyond this, structural alterations have been kept down to a minimum in view of the limited period for which it is hoped the existing premises will be required. Consideration was given to the question of providing a recreation room and office accommodation at the Rayners Lane Hospital, but it was decided to take no action.

### ADMINISTRATION.

Authority had previously been given to arrangements being made for the admission to outside hospitals of infectious cases other than mumps and chicken-pox. This reservation has been modified to permit of the removal of any patients suffering from either of these infections from the hospitals in the district. It was also decided that the use of the infectious ambulance for removal of infectious cases within the district should be without charge.

Authority was given to the summoning of an ophthalmic surgeon to such patients in the isolation hospitals as require skilled treatment for ocular conditions.

Towards the end of the year the question of nurses' hours and service conditions was considered and consideration given to the practicability of establishing a 96 hours' fortnight for the nurses and for the domestic staff. Increasing difficulty is being experienced generally in obtaining nurses. In 1930 the "Lancet" Commission was appointed "to enquire into the reasons for the shortage of candidates, trained and untrained, for nursing sick in general or special hospitals throughout the country and to offer suggestions for making the service more attractive to women suitable for this necessary work." The recommendations included improvement in the remuneration of the trained staff rather than increasing the payment of probationers; limitation of the span of work with due allowance of time for meals, off-duty hours during the day independent of meal times, and one free day off each week. Since the date of the findings of this Commission which reported in 1932, perhaps partly owing to the fact that the shortage of entrants to the nursing profession has demonstrated that, under the existing conditions, the service is not sufficiently attractive to encourage sufficient entrants, there has been a general move to improve the service conditions of nurses. At the present time there is sitting an Inter-Departmental Committee on the nursing services, appointed by the Minister of Health and the President of

the Board of Education, to investigate and make recommendations as to what steps should be taken to ensure that an adequate domiciliary and institutional nursing service might be maintained.

### ADEQUACY OF ACCOMMODATION.

For the greater part of the year the accommodation at the hospital was sufficient to meet the demands for beds for cases of scarlet fever and diphtheria. The very slight increase in notifications of diphtheria, however, which occurred in December, overstrained the accommodation available for this disease and cases had to be sent outside. As in previous years, cases of double infection had to be treated elsewhere, as had also those infections other than scarlet fever and diphtheria for which institutional treatment was required. Owing to the low incidence of scarlet fever in the earlier months of the year when influenza was prevalent it was possible to make use of a block for the admission of a limited number of patients suffering from complications of influenza.

The following table shows the extent to which use was made of the hospital during the year:—

<i>Admitted as</i>	<i>In Hospital 1/1/1937</i>	<i>Admitted during year.</i>	<i>Total.</i>	<i>Dis- charged.</i>	<i>Died.</i>	<i>In Hospital 31/12/37</i>
Scarlet Fever	9	316	325	277	0	48
Diphtheria ...	3	82	85	68	4	13
Influenza ...	0	12	12	10	2	0

In addition to these cases there were 71 others who were admitted to the isolation hospitals of other authorities who, had suitable accommodation been available, would have been admitted to the local hospitals.

The highest number of local patients under treatment during the year in isolation hospitals (either local or those of other authorities) was 84. The highest number of patients suffering from scarlet fever only was 55, from diphtheria only was 27, and from other diseases (including double infections) was 16.

The extent to which cases have been hospitalized in the past does not necessarily represent the demand for the future. Firstly, the incidence of the various diseases fluctuates and while provision need not and would not be made for the reception of all cases occurring in epidemic times, provision should be made for the reception of cases occurring in the years of high incidence. For instance, whereas in 1937 only 415 cases of scarlet fever occurred in this area, in 1934, 621 occurred in a population of about two-thirds the size. Also the proportion of scarlet fever patients for whom removal is requested varies, the percentage figures for the four years 1934 to 1937 being 79, 70, 55 and 74. As regards the incidence of diphtheria, this area has, for years, been very fortunate, the rate for 1937, although representing a large increase on the

incidence for the immediately preceding years, being only a fraction of the incidence rate for the country as a whole. This continued low level of incidence, in the absence of a much higher degree of artificial immunization of the community than is likely to be attained except following the occurrence of an epidemic, must in time lower the herd immunity of the inhabitants of the district to a degree that it will then be ripe for an explosive outbreak. There are a number of infectious notifiable diseases which, ordinarily, occur only sporadically for whose treatment the proper place is the isolation hospital, and cases of poliomyelitis, cerebro-spinal meningitis, etc., erysipelas and typhoid fever should be admitted to the cubicles of an isolation hospital rather than to the medical wards of a general hospital. Cases of diarrhoea in infants should preferably be similarly segregated rather than be admitted to childrens' wards, while many patients suffering from such conditions as acute tonsillitis are in urgent need of nursing which can be obtained for many families only in hospital, but such cases should not be admitted to general wards. Broadly, the function of the isolation hospital should be the provision of accommodation for the reception of patients requiring hospital treatment, but who because of the infectious nature of their complaint cannot be admitted to general hospitals.

The small isolation hospital with few or no separate small isolation wards is run under great difficulties. Not only do these arise on the admission of a case of which the diagnosis is doubtful, but in times of epidemic prevalence of such diseases as measles and chicken-pox, diseases with long incubation periods, many patients are admitted with the main disease, such as scarlet fever or diphtheria, only to find some days later that they were incubating the other infection. To be able to deal with such circumstances, accommodation over and above that which might appear to be sufficient to accommodate patients in non-epidemic times is required.

### PROVISION OF NEW ISOLATION HOSPITAL.

In July, 1936, an indication was given that the Council might be able to obtain a certain site on which to erect an isolation hospital which seemed eminently suited for the purpose. Owing to difficulties in regard to covenants the Council is even yet not in possession of the land.

### CLINICAL ASPECTS.

#### Diphtheria.

Admissions—

Number admitted on a diagnosis of diphtheria...	...	82
Number of cases clinically diphtheria ...	...	59
Number of carriers...	...	9

In 14 cases the diagnosis of diphtheria was not confirmed, the revised diagnosis in each case being acute tonsillitis.

Of those cases clinically diphtheria 49 were faucial and 10 nasal. Of the carriers 4 were faucial and 5 nasal.

Period of stay.—The average length of stay in hospital of all cases was 30.2 days; of clinically diphtheria cases 40.6; of carriers 9.6 and of those suffering from tonsillitis 9.4 days.

Deaths.—Number of deaths, 4.

Case mortality, 6.8 per cent.

The days of disease on which these patients were admitted were the 3rd, the 4th, the 7th and the 15th.

Complications:—Paralyses, 10, comprising palatal 9 and 1 of the extrinsic eye muscles; albuminuria 2; otorrhœa 3; rhinorrhœa 2; and adenitis 3.

Cross Infection.—4 cases contracted secondary infections while in hospital, the added infection being measles in one and scarlet fever in three.

Double Infection.—One patient was suffering from scarlet fever and diphtheria on admission, while another was incubating measles.

Day of Disease on Admission.—The following summarizes the information with regard to the duration of illness at the time of admission of the 49 cases of faucial diphtheria:—

<i>Day.</i>	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>6th</i>	<i>7th</i>	<i>Over</i> <i>7</i>
Number of cases ...	—	9	5	19	6	3	2	5

Serum Administration.—The average amount of serum used per case was 25,588 units.

Operations.—No operations were performed.

Bacteriological Examination.—1,963 swabs were examined for the Klebs-Loeffler bacillus. Of the 807 sent in by general medical practitioners, 61 were positive. Of the 480 swabs from patients in the diphtheria wards, 60 were positive. Of the 676 swabs from patients admitted to hospital suffering from other diseases, 3 were positive.

Immunization.—None of the patients suffering from diphtheria had been immunized against this infection.

### Scarlet Fever.

Admissions:—

Number admitted with diagnosis of scarlet fever ...	316
Number suffering from scarlet fever ... ..	290
Number in whom diagnosis not confirmed ... ..	26

Of these 26 cases, four suffered from an erythema, 15 from acute tonsillitis, three from measles, one each from whooping cough, bronchitis, peritonsillar abscess, and otitis media.



Period of stay.—The average length of stay of all cases was 30·1 days. The average stay of scarlet fever cases was 31·7, the duration in uncomplicated cases being 23·9 and of complicated cases 46·3. Non-scarlet fever cases were detained on an average of 13·5 days. Deaths.—Nil.

Complications.—85 cases (or 34·8 per cent.) suffered from some complication, 25 of these having more than one complication during the course of the illness. Adenitis occurred in 35 cases (14·3 per cent.), otorrhœa in 27 (11·1), rhinorrhœa in 16 (6·6), abscess in 11 (4·5), albuminuria in 9 (3·7), rheumatism, secondary sore throat and relapse in 3 each (1·2 per cent.), purpura, bronchitis and endo-carditis in one each (0·4 per cent.)

Operations.—No major operations were performed. Four minor operations were carried out, each being the opening of an abscess. Cross Infection.—Diphtheria developed in three cases and measles in twelve.

Double Infection.—Two cases were suffering from whooping cough and one was incubating measles on admission.

Serum treatment.—Serum was given in 58 cases (20 c.c.s in 19 and 10 c.c.s in 39). Reactions followed in 22 cases, four being after 20 c.c.s and 18 after 10 c.c.s. Only one case to whom serum was given had been previously immunized against diphtheria; this patient had a reaction following injection of 10 c.c.s of serum. Only 24 out of the 316 cases admitted gave a history of having been immunized against diphtheria.

Prontosil Treatment.—Prontosil was used in 58 cases and appeared to be of value in the treatment of the complicated cases in which it was given.

Return Cases.—Return cases occurred in 19 households, to which the patient had returned home during the year after treatment in hospital for scarlet fever.

### **Influenza.**

Admissions.—Twelve patients were admitted on a diagnosis of influenza, in ten of which the diagnosis was confirmed. The other two patients were found to be suffering from cerebro-spinal meningitis and abscess of the back.

Period of stay.—The average length of stay of all cases was 16·8 days; of uncomplicated cases 10·4 days and of complicated cases 18·6 days. Deaths.—Two deaths occurred amongst the 12 patients admitted, one being that of the case of cerebro-spinal meningitis which proved fatal on the second day after admission. The fatal case of influenza had developed pneumonia.

Complications.—Five out of the 10 influenza cases had pneumonia as a complication.

## PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

### PREVALENCE OF INFECTIOUS DISEASE (other than Tuberculosis)

Disease.	Under 1 yr.	1-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-34 yrs.	35-44 yrs.	45-54 yrs.	55-64 yrs.	65 & over.	Total
Scarlet Fever ...	1	66	226	51	17	15	21	13	5	-	1	416
Diphtheria ...	1	13	47	18	4	6	2	3	-	1	-	95
Pneumonia ...	4	8	4	4	6	7	18	26	22	9	14	122
Erysipelas ...	1	-	-	1	2	3	5	9	4	2	5	32
Puerperal Fever	-	-	-	-	-	1	3	1	-	-	-	5
Puerperal Pyrexia	-	-	-	-	1	4	21	3	-	-	-	29
Enteric Fever...	-	1	-	1	-	-	-	-	-	-	-	2
Ophthalmia Neonatorum	14	-	-	-	-	-	-	-	-	-	-	14
Cerebro-spinal Fever	1	1	2	-	-	-	3	-	-	-	-	7
Dysentery ...	-	2	12	6	-	-	2	-	2	-	-	24
Acute Polio- myelitis	-	-	2	1	-	-	1	-	-	-	-	4
Encephalitis Lethargica	-	-	1	-	-	-	-	-	-	-	-	1

Disease.	Cases Notified	Admitted to Harrow Isolation Hospital	Admitted to other Isolation Hospitals	Admitted to other Hospitals	Deaths Registered
Scarlet Fever ...	416	290	14	—	2
Diphtheria ...	95	82	20	—	4
Pneumonia ...	122	—	—	—	83
Erysipelas ...	32	—	15	2	1
Puerperal Fever ...	5	—	3	—	} 7
Puerperal Pyrexia ...	29	—	17	6	
Enteric Fever ...	2	—	—	—	—
Ophthalmia Neonatorum ...	14	—	2	2	—
Cerebro-spinal Fever ...	7	1	3	3	5
Dysentery ...	24	—	—	1	—
Acute poliomyelitis ...	4	—	—	4	—
Encephalitis Lethargica ...	1	—	—	1	—

### CONTROL OF INFECTIOUS DISEASE.

#### Fumigation and Disinfection.

The policy of the Council since March, 1935, has been to discourage unnecessary fumigation, the facilities available being:—

(a) free fumigation in all cases of typhoid fever and smallpox ;

(b) free fumigation in those exceptional cases where the Medical Officer of Health is satisfied that disinfection cannot reasonably be carried out in the home ; (c) free supply of disinfectants in all cases upon request ; (d) fumigation in other cases upon request at stated charges. In March it was agreed that these facilities be

modified so that terminal fumigation and stoving of articles be provided free in the case of open tuberculosis and of scabies.

### **Exclusion.**

At the time of the first visit to the home following receipt of the notification of infectious disease, particulars are obtained regarding contacts. In the case of adults in most diseases action is taken only where the contact is brought into relation with food-stuffs or into intimate contact with susceptibles. In such circumstances it is, at times, necessary to advise a period of abstention from work. If the contacts are working in other districts in similar circumstances intimation of such cases is given to the local medical officer of health. Child contacts attending the public elementary schools may be excluded by the sanitary authority by Article 57 of the Code of Regulations for Public Elementary Schools, 1922 :—" If the sanitary authority of a district or any two members thereof acting on the advice of the Medical Officer of Health require either the closure of a school or the exclusion of children for a specified time with a view to preventing spread of disease or danger to health." Exclusion may also be enforced by action of the Local Education Authority under Article 53 by which the school medical officer has power to exclude children from school on the grounds that their exclusion is desirable to prevent the spread of disease. The Medical Officer of Health, therefore, can proceed only through the Sanitary Authority or two members thereof. Under Section 150 of the Public Health Act, 1936, which corresponds to Section 57 of the Public Health Acts (Amendment) Act, 1907, he can insist on exclusion. " A person having the care of children who is or has been suffering from or has been exposed to infection of a notifiable disease shall not, after receiving notice from the Medical Officer of Health of the district that the child is not to be sent to school, permit the child to attend school until he has obtained from the Medical Officer of Health a certificate, for which no charge shall be made, that in his opinion the child may attend school without undue risk of communicating the disease to others." In practice, not one of these three procedures is followed. According to the regulations of the Middlesex Education Committee as to infectious disease, " if a head teacher receives information from the medical officer of health of a district that a child is suffering from infectious disease or comes from a house where such disease exists the child must be excluded from school according to the instructions given by the medical officer of health of the district." At the time of the first visit the parents are advised to exclude the contacts for a time sufficiently long to exceed somewhat the ordinary incubation period of the disease, dating from the removal of the child in the case of a hospital treated patient, and a notice is sent to the head teacher of the department of the school attended by each contact requesting that the contact be not admitted until a further intimation is

sent. On further examination of the child contact at the end of the incubation period of the disease, if there are no signs suggesting that the child is incubating the disease, the parents are advised as to when the contact may return to school and a notice to this effect is sent to the head teacher.

At one time the exclusion of contacts was carried out to a far greater extent than obtains to-day, many firms and authorities insisting on the exclusion of adults in circumstances in which it was most unlikely that infection would be spread. A more moderate policy, however, is now generally adopted: for instance, the policy of the Post Office is now tending towards abolishing quarantine, permitting contacts to remain at work under medical supervision when they are in good health. There is now a tendency to take a similar line in regard to school children and some authorities have modified their regulations to permit the attendance of contacts at school, relying on the examination of each contact on entry as a precaution and excluding those contacts who show the slightest signs of their possibly being incubators of the disease. The operation of such a rational policy should save much waste of school time.

Measles and whooping cough are not notifiable in this district and particulars in such cases are received only from the head teachers' weekly returns. As there may be children under five years of age in the house in which a school child is suffering from one of these complaints, visits are paid to all these homes on receipt of the head teacher's intimation and advice given, particularly regarding precautionary measures to be taken.

### **Incidence.**

### **DIPHTHERIA.**

112 notifications of diphtheria were received during the year, the diagnosis, however, being revised in 14 of these cases to some other condition, of which the most common was tonsillitis. The figure is a sharp rise on that for the preceding year but is well below the national rate, the incidence of diphtheria cases being only 0.54 per 1,000 population compared with a figure of 1.81 for the country as a whole. This is the eighth consecutive year in which a low incidence has prevailed. While the district may be considered fortunate in having these low rates, the absence of the disease entails a loss in those sub-infective doses by which the immunity of each individual member of the population is raised and so leads to the development of a state of low herd immunity in the population. In such circumstances the district becomes ripe for an explosive outbreak. In the absence of cases, or carriers who may be related to cases, the herd immunity of the population can be raised only by artificial immunization.

Secondary infections occurred on five occasions. In three instances the first case was unrecognised and the individual patients gave rise to one, two and three infections. In each of the other two

homes each patient gave rise to one infection, the onset of the secondary case being the day of the removal of the primary case in one instance, and five days later in the other.

In two homes cases of diphtheria occurred shortly after the return home of a patient discharged after being in hospital for the treatment of scarlet fever.

Two patients were bacteriological cases occurring after the removal of tonsils and adenoids.

Ten patients were suffering only from nasal diphtheria.

### **Place of Treatment.**

Most cases were admitted for treatment at the Rayners Lane Isolation Hospital. Towards the end of the year even an average of three cases per week over six weeks was too much for the accommodation available and patients were admitted to the hospitals of other authorities. During the year nine patients were admitted to the isolation hospitals of the London County Council, four being removed as in-patients and five as out-patients of general hospitals in London.

### **Deaths.**

Four deaths were recorded as due to diphtheria. In one, the child admitted on account of diphtheria died shortly after admission from tetany. Another patient was admitted on the seventh day of illness suffering from hæmorrhagic diphtheria. Delay occurred in another instance, the patient not being admitted until the eighth day of disease. One patient admitted on the third day appeared to be attacked by a virulent strain, two other children in the same class being affected about the same time, but fortunately recovered.

### **Bacteriological Examinations.**

1,963 nose and throat swabs were examined for Klebs-Loeffler bacilli at the Rayners Lane Isolation Hospital during the year and a few at the laboratories of the Clinical Research Association.

### **Immunization.**

The same arrangements were continued as in previous years by which immunization against diphtheria was carried out by the patients' own medical attendants, T.A.M. being used as the antigen, three doses being given at two or three weeks' interval. 226 children completed the course of injections and a further 8 received one or more doses after Schick testing had proved them to be still susceptible after they had received a previous course. Of the 118 children Schick tested subsequent to the course of inoculations, 9 were found to re-act positively.

Of recent years much publicity has been given to the one-shot method. In the case of the earlier preparations injections were

given in repeated doses as the tissue reaction to a dose which it was anticipated would be sufficient to produce immunity was too severe and the practice was evolved of giving three doses at weekly intervals. Controlled work showed that better results could be obtained where the intervals between the injections were rather longer than one week. Three weekly doses preceded by a Schick test entailed the attendance of the patient over a period of one month; with longer intervals between injections, the period was lengthened. To overcome the necessity for repeated inoculations an attempt was made to so alter the antigen that after injection it was liberated into the body tissues only slowly—the so-called “depot” effect—the hope being that the gradual release of a single dose of antigen into the tissues would effect the same results as the repeated inoculations. The immobilising of the antigen was to be brought about by the tissue re-action to alum added to the preparation, so there was marketed alum-precipitated toxoid, a preparation advertised as the one-shot dose antigen. A number of satisfactory accounts were published from which it appeared that in some districts this preparation effected a conversion rate comparable to that obtained by the use of other preparations, but subsequent results have not justified the optimistic claims made in the early days. The efficacy of an antigen to change a Schick positive into a negative re-actor depends on factors independent of the quality of the preparation, its dosage and interval between injections, the chief perhaps being the state of the tissues of the individual who is being injected. This depends very largely on his history of contact with the diphtheria organism. In those areas where diphtheria is constantly smouldering, young children have been subjected to repeated sub-infective doses and even those who are not immune as disclosed by the Schick test may be bordering on the state of immunity. In such a case even a small dose of any preparation is sufficient to tip the scale and render the child Schick negative. Very different, however, is the case of a child who has not been exposed to these repeated sub-infective doses of the diphtheria organism. In such a child the body tissues have not been stimulated to produce the necessary anti-toxin and in such cases even three injections of a potent antigen may be insufficient to raise the anti-toxic content of the blood serum to a degree sufficient to give a Schick negative re-action, and a child may still re-act positively after three doses. This accounts for those children who need additional doses after a complete course. In this district the average level of immunity must be low. No child under ten primarily Schick tested has given a negative result, and most of those even up to the age of thirteen have been found to be positive. For this reason no modifications of the original proposals have since been made as it seemed that only those methods which have been proved to be most successful can be recommended for use in a district where the general level of the immunity must be low. The use of the one-shot method is being gradually abandoned, though the same preparation is now

being recommended to be given in two small doses. Very favourable results are recorded, but it will be of interest to learn the degree of its success in districts with a low herd immunity, and also the duration of the immunity produced.

In this district there appear to have been comparatively few instances of failure to complete the first course. Doubtless many parents who would have had their children done if there were an efficient one-shot preparation are deterred from ever beginning the treatment in anticipation of the number of attendances. It is questionable, however, to what extent the response would be more satisfactory if there were to be only two instead of three injections.

The arrangements for immunization have been in force since January, 1935. The early results were quite successful, many parents having had their children immunized. Further publicity in the autumn of 1935, however, did not prove very fruitful of results, and in 1936 only 315 children completed the course of injections. It is felt that perhaps better results would be obtained by concentrating on selected age-groups rather than carrying on a more diffuse propaganda directed to children of all ages. As the immunity of the infant passes off at about one year of age and the toddler is then reaching the stage in which he is more likely to be exposed to risk, the age-group chosen was nine to twelve months. A letter is sent to the parents of all children of this age pointing out the advisability of the child being immunized more particularly at this age. The medical practitioners were also circularised inviting their co-operation in the arrangements, and the health visitors were asked to discuss the subject with the mothers.

### **Provision of Anti-toxin.**

Diphtheria anti-toxin is available free of charge for medical practitioners for the treatment of necessitous patients. Twenty-five lots were issued during the year, totalling 336,000 units.

### **Incidence.**

#### **SCARLET FEVER.**

415 cases of scarlet fever were notified during the year, this being an incidence of 2.31 per 1,000 population compared with the figure of 2.56 for the country as a whole.

The incidence of infection was fairly even in the first nine months of the year, but became rather heavier in the last quarter.

### **Place of Treatment.**

The accommodation at the hospital for the ordinary cases proved sufficient throughout the year. 110 cases were treated at home at the election of the parents and 16 were admitted to other isolation hospitals. Of these, four were cases of double infection or contacts of some other infection and therefore required to be nursed other than in a general ward. Most of the remainder were in-patients at London hospitals. Six patients were first nursed at

home but were later admitted to hospital. In one instance removal was requested because of the development of aural complications, in three, owing to the lack of nursing facilities as the mother had contracted the infection, and in two instances because of the difficulty of caring for the patient.

Of the 316 cases treated in hospital, ten were removed either from a hospital or residential school. In only two instances was the reason given for the request for the removal the clinical condition of the patient. Eight were admitted because nursing of the patient at home would have entailed the abstention from work of some member of the household. In 105 instances there was either limitation of accommodation to such a degree that the patient could not have a bedroom to himself or there were numbers of susceptible children at home. Forty-five of those admitted to hospital were adults. In twenty-one other cases there would have been difficulty in the nursing of the patient, in some cases there being no one to look after the patient or there being a young baby in the home demanding the mother's attention; and in a few cases there was extreme poverty. In ninety-one instances there appeared to be no real reason for the removal of the patient to hospital in that the illness was apparently not of a severe character, there was sufficient accommodation in the home to permit of the patient having a room to himself and there appeared to be no others in the house demanding the whole attention of the mother. It is questionable in such circumstances whether it is better for the patient to be removed to hospital. Being placed in a general ward he is subjected to infection by strains of organisms other than his original one. The return case rate approximates that to which secondary infection occurs in home-treated cases after the date on which removal could have been effected. The prevailing type of illness is mild in character, and the whole question of whether or not it is better for a child in such circumstances to be removed to hospital really devolves largely on the degree to which the child, if kept at home, would be subjected to the same restriction in bed as he is in the isolation hospital. Quite apart from the removal of infectious patients, treatment of the sick in hospitals is becoming more popular, largely, probably, because there is less disruption of home life if the patient is removed than if he is treated at home. For this reason many would appear to concur in the removal of their children to hospital because the alternative is not put to them. On the other hand, there is no wholesale demand on the part of the public for the removal to hospital of uncomplicated cases of measles and whooping cough, diseases which are more infectious and much more damaging to younger child contacts than the scarlet fever of to-day. Possibly if there were less insistence on the exclusion of child contacts from school, parents would be more inclined as a matter of course to treat cases at home. Apart from the fact that exclusion of the contact results in a loss of school time, as a preventive measure the practice is of questionable utility, possibly, on occasion,



even being harmful. During the time he is excluded from school to avoid the risk of infecting his fellow scholars, he is more likely to come into contact at home or elsewhere with those of under school age, children of ages at which many diseases are more dangerous than in the case of school children and, moreover, contact in such circumstances may be closer and more prolonged than would occur at school.

### Secondary Infections.

Secondary infections occurred in 24 households, in 21 of which there was only one secondary case : in 2 there were two, and in one there were four.

In 9 of the households the primary case was nursed at home. In three of these the primary case was missed, the intervals separating the onset of illness of the primary and of the secondary case being 5, 12 and 17 days. In two cases where the interval was only 2 days presumably the secondary case had been infected before isolation of the primary case. In regard to the other secondary infections the intervals were 10, 12, 16 and 16 days. In these four cases it is to be presumed that, had the primary case been removed to hospital, the secondary infections would not have occurred. In the case of two, the secondary patient was a mother nursing the original patient. In assessing the value of removal to the isolation hospital of scarlet fever patients with the object of preventing spread of infection, these 4 secondary infections occurring in households in which were nursed 106 primary patients must be weighed against the 24 return cases which occurred in 20 households on the return home of 306 patients treated in the isolation hospital for scarlet fever. It is appreciated, of course, that one of the factors determining the decision to remove a case to hospital is the number of susceptible contacts in the home, and that there will actually be a higher population at risk in each household where a return case occurred as compared with those in which the secondary infections took place.

Removal of the primary case to hospital did not prevent the occurrence of secondary infections in a number of cases because the secondary patient was already infected before the illness was diagnosed in the primary case. In 8 instances the secondary case was diagnosed at the same time as the primary and the patients removed together. The intervals separating the onsets of illness were 1 day in one instance, 2 days in 3, 3 days in 2, and in two other cases 9 and 15 days. In each of these later cases the diagnosis of illness in the second led to the recognition of the disease in the primary case. A missed case of longer duration caused one secondary infection in one house, 2 in another and 4 in a third, in each case in this last household the onset of illness of each patient being either before or within 24 hours of the removal of the infecting case. In another household one secondary case occurred this year, infected probably by a missed case, as he was

the fifth member of the household to succumb in turn. In only three instances was the onset of the secondary case subsequent to the removal of the primary, the intervals separating the removal of the primary to the onset of the secondary being 1, 2 and 3 days, the last of these cases being the mother of the original patient.

### **Return Cases.**

There were 20 households in which return cases occurred, in 18 there being only one return case, and in two, 3 return cases. Of the discharged patients 19 had been treated in the local isolation hospitals, this being a percentage of patients discharged after being treated for scarlet fever of 6·5.

8 of the discharged patients showed no abnormal signs at the time of onset of illness of the secondary case. In 5 the interval separating the return home of the primary to the onset of illness of the secondary was under 1 week; in 2 instances it was over 1 but under 2 weeks, and in 1 over 2 but under 3 weeks. 12 presumably infecting patients showed some abnormality, this being a nasal discharge in 11 and otorrhœa in one, all of which had developed subsequent to the return home of the patient. In these cases where the infecting patient demonstrated some abnormality, the average interval separating the time from the return home to the onset of the return case was longer than in those where the infecting patients were apparently well, the intervals being under 1 week in 4, 1 to 2 weeks in 4, 2 to 3 weeks in 3, and 3 to 4 weeks in one. In 3 instances the return case was the mother.

Of the patients who gave rise to return cases 4 were discharged from hospital within 28 days from the onset of illness, 10 in their fifth week, 3 in the sixth, while the other 3 were in hospital for over 6 weeks, two being detained because of otorrhœa.

### **Recovery Cases.**

One recovery case occurred, the infected patient being the mother of the primary case. The interval separating the onsets of the illnesses was 29 days.

### **Home Treated Cases.**

110 patients suffering from scarlet fever were treated in their homes.

Most cases were uncomplicated and made uninterrupted recoveries. The following is the percentage incidence of complications, the figures in brackets being the incidence of complications in hospital treated cases: adenitis 6 (14·5); rhinorrhœa 1 (6·6); otorrhœa 4 (11·1); nephritis, albuminuria (3·7) and secondary sore throat (1·2) one each.

### **Cases following Operation on the Nasopharynx.**

There were three cases this year in which scarlet fever followed operative treatment of tonsils and adenoids, in all three of which the operation had taken place in London hospitals. The intervals

separating the onset of illness from the date of operation were 5, 6 and 8 days.

### **Deaths.**

Two deaths were registered as being due to scarlet fever. One was that of an adult female who was operated on for an acute abdomen, the certificate reading "streptococcal septicæmia, scarlet fever, laparotomy." The other was a child who developed an abscess some weeks after having recovered from scarlet fever and died from failure of a congenitally malformed heart.

### **Dick Testing.**

Apart from those tests carried out in the isolation hospital for diagnostic purposes no provision was made for Dick testing.

### **Schools and Scarlet Fever.**

Only 174 of those cases notified were children who, prior to succumbing to their illness, were in attendance at a public elementary school. In 75 cases the patient was the only person in attendance at school who suffered from scarlet fever at that time, the onset of illness in any other child who attended the same department being separated from that of each of these cases by an interval of at least 10 days. In a number of other cases there was little to suggest that school attendance was responsible for the infection. Two cases occurred in the same department of a school during the same week but with the preceding and succeeding weeks both free on 8 occasions, and three cases occurred similarly once. Single cases in two consecutive weeks occurred six times and 3 cases distributed over two or three weeks on three occasions. There were only five groupings suggesting that school attendance was responsible for the spread of infection. In one infants' department 7 cases over three weeks and some weeks later 4 cases in each of two consecutive weeks occurred. In another infants' department 6 cases occurred over three weeks, and in a third 5 over two weeks. One school department had cases smouldering through the summer and the autumn terms. Altogether in 30 school weeks 42 cases occurred in this department, some weeks being free and only on one occasion there being as many as four cases. In the summer term the brunt was borne by two classes, though in the autumn term the infection was more widespread throughout the department.

### **Period of Residence of Patients Notified.**

Of 401 patients notified as suffering from scarlet fever 10 had lived in the district less than one month; 11 had been here over one but under 3 months, 17 over 3 but under 6 months, and 35 over 6 but under 12 months. 36 had been here over 12 but under 18 months, and 14 over 18 months but under 2 years. 63 were in their third year of residence, 53 in their fourth, 44 in their fifth and 118 had lived here over five years.

## ENTERIC FEVER.

Five notifications of enteric fever were received during the year, in only two of which, however, was the diagnosis confirmed. One was a case of paratyphoid B infection in a child, diagnosed a few days after admission to a local convalescent home. The other patient was a boy who for two weeks preceding the onset had been away in a camp outside the district.

## DYSENTERY.

In November a child was notified as suffering from dysentery, infection being due to the Sonne organism. From the last week in November to the end of the year a further 11 cases were notified, most of them demonstrating the presence of the Sonne organism in the fæces and probably all of them being due to this cause. This incidence of infection was part of a widespread prevalence of this disease not confined to this country but which had, since the middle of 1937, been present in a number of continental countries. In this country the incidence in the earlier part of the year was not excessive, but from some time in July a number of districts had been affected, some very heavily. In London from the middle of September the incidence steadily rose and the disease became so widespread that for two weeks in December 25 out of the 29 Metropolitan Boroughs were affected; and in December many of the districts lying to the north of London were affected to varying degrees. Although in one town it was suspected that the source of infection was milk taken from one farm and subsequent to pasteurization of this supply the outbreak ceased, in most districts there was no factor common to all afflicted members of the population. The absence of any such common factor, the extent of the prevalence of the disease and the failure by rigid aseptic precautions to prevent the spread of infection in a ward to which the disease had been introduced suggests the possibility of its being air-borne. In hog cholera, a disease due to a filterable virus, *B. suispestifer* is constantly found as a secondary invader. The explosive character of this outbreak of dysentery resembles that due to a virus infection, so possibly the Sonne organism is a secondary invader in this disease.

In five of the households members other than the primary case were affected. In almost all cases the illness was mild in character, recovery following in a few days.

## UNDULANT FEVER.

One case of undulant fever was reported in a man who was admitted to hospital on August 9th with a history of illness dating from July 19th. The only time he consumed milk outside this district was in late June and in early July.

## ERYSIPELAS.

32 cases of erysipelas were notified during the year, the sexes being equally affected.

The face was affected in about two-thirds of the cases, the legs and the head being the other most common sites.

One case proved fatal.

One-half of the cases were treated at home. Most of the remaining patients were admitted to isolation hospitals.

## SMALLPOX.

No cases of smallpox were notified. Visits were paid to the homes of those who while on board ship were contacts of this infection.

746 primary vaccinations were performed by public vaccinators in this district, 690 to infants under one and 56 over one year of age. In addition there were 33 successful re-vaccinations.

## EPIDEMIC DISEASES OF THE CENTRAL NERVOUS SYSTEM.

### Cerebro-spinal fever.

Seven notifications of cerebro-spinal fever were received, these being in respect of two males of 6 and 28 years of age in January, a girl of 5 in March (all these cases proving fatal), males of 25 and 34 in June, and males of 2 years and of 7 months in December.

In June a child of 2 months who had not been notified died in a general hospital in London from post-basis meningitis.

Three of the notified cases were removed to isolation hospitals, two to county hospitals, and two to voluntary general hospitals.

### Encephalitis Lethargica.

Encephalitis lethargica appeared on the death certificate of a woman of 36. In May a girl of 6 was notified as suffering from this disease and was removed to a general hospital where she apparently made a complete recovery.

### Acute Anterior Poliomyelitis.

Six cases of acute anterior poliomyelitis were notified, but the diagnosis in two was not confirmed. The first was a girl of 7 notified in May. In August a boy of 11 was diagnosed as suffering from poliomyelitis which had apparently been contracted in another district in July. In June a woman of 21 and in July a girl of 6 were notified.

Three of the patients were admitted to general hospitals, and one to an orthopædic hospital.

## NON-NOTIFIABLE INFECTIONS.

### Measles.

Although 1937 was not a year in which measles was expected to be epidemic, two public elementary schools were quite heavily affected (103 and 97 cases) in the summer term, and two others more lightly affected. From the middle of the Christmas term onwards the 1937/8 epidemic had started, infants' departments of three schools being quite heavily attacked (127, 114 and 97 cases), two other departments less severely, and a few cases occurring in a number of other schools. The total number of children about whom intimation that they were suffering from measles was received from the head teachers during the year was 684 compared with a figure of 1,641 in 1936, an epidemic year. 669 visits were paid by health visitors to homes where there were cases of measles, and 1,626 visits to homes where there were other infectious patients. 19 patients were removed to isolation hospitals for treatment.

### Whooping Cough.

Whooping cough was more prevalent than in the previous year, intimation being received of 427 school children suffering as compared with a figure of 223 in 1936. The highest incidence occurred in the summer term, very few schools being affected, and those only lightly, in the Christmas term. Though 21 departments were affected to some extent the brunt was borne by four schools of which each had between 40 and 80 cases during the year. 12 patients were removed to isolation hospitals for treatment.

### Chicken-pox.

Chicken-pox was more prevalent this year than last, 919 intimations of school children affected being received as compared with 541 in the previous year. Only one school was appreciably affected in the spring, having 77 cases, this school being then free for the rest of the year. Two schools were heavily affected in the summer term (200 and 92 cases) and four others more lightly affected. Another two were severely attacked in the Christmas term (132 and 81 cases) and a further three less severely. In only one school were there any appreciable numbers of cases in more than one term.

### Mumps.

Mumps also was more prevalent this year than last, with 578 school cases as compared with 248. This illness was more common in the summer term than the rest of the year, only four schools having an appreciable number of cases in the spring term and only two in the Christmas term, these latter having also been affected in the summer term. Those schools attacked in the spring term remained free for the rest of the year.

## Influenza.

The epidemic of influenza in the winter of 1936/37 affected this district towards the end of December 1936. It became more prevalent in the first two months of 1937. During the year 50 deaths were ascribed to influenza, most of these occurring from the middle of January to the middle of February.

## TUBERCULOSIS.

### Notifications.

	New Cases.								Deaths.				
	Primary Notification.				Brought to notice other than by Form A.								
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary		
	M	F	M	F	M	F	M	F	M	F	M	F	
Under 1	—	—	—	—	—	—	—	—	—	—	—	1	1
1—	2	3	1	2	—	—	—	—	—	—	—	2	—
5—	3	3	1	3	—	—	1	1	—	—	} 2	—	—
10—	3	1	3	2	—	—	—	—	—	—		—	—
15—	7	12	—	5	—	—	—	—	} 3	16	2	—	—
20—	16	12	4	5	—	—	—	—		7	11	1	1
25—	36	46	1	3	1	1	—	—	8	8	—	—	—
35—	26	13	3	2	—	—	—	—	8	1	—	3	—
45—	11	2	—	4	—	—	—	—	3	3	—	—	—
55—	7	2	—	—	—	—	—	—	5	1	—	—	—
65 & upwards.	3	2	—	1	—	—	—	—	—	—	—	—	—
Total...	114	96	13	27	1	1	1	1	34	40	8	5	—

During the year 212 pulmonary cases (115 male and 97 female) were added to the register as compared with 190 for the year 1936. Of this number, 85 had previously been notified in other districts as suffering from this disease before they removed here. In view of the short period which elapsed between their coming to reside here and the date the disease was notified, it is probable that many other patients had been infected before transfer. Assuming, however, that all those 127 cases who had not been previously notified contracted the infection here, the rate per 1,000 population of new cases would be 0.73 compared with the national rate in 1936 of 1.1.

Of those cases locally contracted, one in four gave a family history of infection. Amongst the males there was no especial preponderance amongst workers at any particular employment; one-half of the females were engaged on housework, most of them being married.

Of the 80 cases who transferred here while suffering from tuberculosis, 61 were known of within six months of transfer and a further seven within the twelvemonth. Six were learned of in their second year of residence, three in the third, but three had been here for three or more years.

42 cases (14 male and 28 female) of non-pulmonary disease were learned of during the year, being a rate of 0.24 per 1,000 population compared with the figure of 0.36 for England and Wales for the year 1936. Of these, 13 were notified as suffering from the disease before they moved into this district. In almost one-half of the cases bones or joints were affected, the remaining cases being almost equally divided into lesions of the cervical glands and abdominal tuberculosis. Roughly the same proportions hold for those who contracted the disease locally, though these included two cases of genito-urinary tuberculosis and one case of meningitis. In none of the non-pulmonary cases was a family history of tuberculosis obtained, and almost invariably the milk supply was pasteurized.

### Register.

	Pulmonary.		Non-Pulmonary.	
	Male.	Female.	Male.	Female.
No. on register Jan. 1st, 1937...	247	210	56	55
No. of New Cases added ...	114	96	13	27
No. of cases added—other than on Form A ... ..	1	1	1	1
No. of cases restored to register	3	1	—	—
No. of cases removed ... ..	79	65	13	21
No. on register Dec. 31st, 1937	286	243	57	62

Per 100,000 total population the numbers of pulmonary cases on the register at the end of the year were 163 male and 139 female, the comparable figures for the country as a whole at the end of 1935 being 292, and 252. The corresponding local figures for non-pulmonary tuberculosis were 3.2 and 2.5, and for England and Wales 12 and 11.5.

The following table is a summary of the cases removed from the register with the reason for their removal:

	<i>Pulmonary.</i>		<i>Non-Pulmonary.</i>	
	<i>Male.</i>	<i>Female.</i>	<i>Male.</i>	<i>Female.</i>
Left the District ...	25	20	4	5
Died ... ..	34	31	3	2
Cured ... ..	17	10	5	13
Diagnosis not confirmed or withdrawn ...	3	4	1	1



## Deaths.

75 persons (35 male and 40 female) died from pulmonary tuberculosis during the year and 14 (9 male and 5 female) from non-pulmonary tuberculosis. The death rate per million population was therefore 428 for the pulmonary disease compared with the figure of 583 for England and Wales for the year 1936, the comparable local figure for non-pulmonary tuberculosis being 80 and the corresponding national figure 109.

Tubercular disease resulted in 89 deaths, accounting for 6.6 per cent. of the total deaths in the district, the corresponding figure for England and Wales being 9.

20 deaths, or 22 per cent. of those who died from tuberculosis, occurred amongst patients who had not been notified in this district as suffering from tuberculosis. In four of these cases the diagnosis was made only as a result of post-mortem examination, and another four of the deaths were due to meningitis. Almost all the remaining deaths occurred in institutions outside the district. In the case of two of the patients who died in this district there was an old-standing history of tuberculosis.

More than one-half of the patients died within one year of the alleged onset of illness, only one-seventh surviving five years. Of the fatal cases who had been notified here one-fourth were notified only within one month of death, one-half within six months and altogether only 60 per cent. within the twelve-month. Included in these, of course, would be some who had transferred into the district and would have been under supervision prior to having been notified in this area. None of the fatal cases of non-pulmonary tuberculosis survived two years from the onset of the illness.

42 of the deaths of the pulmonary cases and seven of the non-pulmonary cases occurred in the district, mostly in the patients' own homes; while 33 of the pulmonary and seven of the non-pulmonary occurred outside the district, mostly in institutions.

## Preventive Measures.

Home visiting of tuberculous patients is now carried out by the staff of the Middlesex County Council.

Bacteriological examination of sputa is carried out at the laboratories of the Clinical Research Association, 195 samples having been examined during the year.

No action was taken during the year under Section 62 of the Public Health Act, 1925, for the compulsory removal to hospital of any infectious tuberculous person.

## MATERNITY AND CHILD WELFARE.

### REGISTRATION AND NOTIFICATION OF BIRTHS.

The total number of live births registered during the year was 3,098, 1,620 male and 1,478 female. Of these, 90 were illegitimate, being a percentage of total births of 2.9.

2,370 births occurred in the district (2,322 live and 48 still births). Of this number 235 (226 live and 9 still births) were to residents of other districts, leaving 2,096 live births and 39 still births notified in respect of local residents. Of this number, 1,489 were notified by midwives and 881 by doctors or parents.

1,023 (982 live and 41 still birth) notifications were transferred from other districts, being mostly in respect of births occurring to Harrow mothers in Middlesex County Council or London hospitals.

### STILL BIRTHS.

57 male and 38 female still births were registered, being a rate per 1,000 population of 0.54 compared with a figure of 0.60 for the country as a whole.

Out of the 71 cases in regard to which information is available, in 42 instances the death took place at full term, the foetus apparently being alive up to the time of labour. Difficult or long labour with normal presentation occurred in six instances, birth injury in two and breech delivery in seven. Disproportion, owing to the large size of the child accounted for difficulty in labour in seven instances, some cases being post mature; while there was a persistent occipito-posterior presentation on three occasions. A dropped cord was the cause in one instance, while in three there was knotting of the cord or the cord was round the neck. Ante-partum hæmorrhage occurred on four occasions, most due to placenta prævia, while there was toxæmia or albuminuria in three instances. One infant suffered from hydrocephalus, and in the case of one Caesarian section had been performed at term on account of a contraction of the pelvis. It is more particularly in the case where the death of the foetus occurs at the confinement that it is hoped that efficient ante-natal supervision will be able to reduce the still birth rate. At times, of course, the infant is sacrificed in the interests of the mother; in others, more particularly first pregnancies, where there is doubt as to the possibility of delivery by natural means a trial of labour is undertaken which, if successful, avoids the woman being condemned to Caesarian section for each future confinement, but if unsuccessful may result in the death of the foetus. Not every still birth occurring at full term is necessarily a reflection on those responsible for the ante-natal supervision of the mother.

A still birth occurred at or about term in four instances in which apparently the foetus was not alive at the time of the confinement, the alleged cause of death being shock or a fall.

In 25 instances the still birth occurred well before term. Toxæmia or albuminuria appeared to be the cause in ten instances, in two of which induction was effected in the interests of the mother's health. Ante-partum hæmorrhage was the next, almost as common, cause being responsible for the death of eight. Sufficiency of ante-natal beds is an urgent requirement for the admission of women suffering from even slight degrees of ante-partum hæmorrhage or toxæmia or albuminuria. It is difficult to get a woman with many household responsibilities to carry out the advice to lie up at home for what to her is apparently a trivial condition. In any event, the more severe cases of albuminuria need rigid dieting which can only be undertaken in hospital with the restriction of a calorie intake which can be enforced only in a patient confined to bed. It is understood that in the arrangements of the County Council ante-natal patients requiring institutional treatment will be admitted to the beds in the general medical wards of the Council's hospitals. Apart from this being just about as unsuitable an atmosphere as can be conceived for the expectant mother, it is understandable that, in view of the present demands on the limited accommodation, few patients suffering from these ante-natal conditions can be accepted.

### INFANT MORTALITY.

110 (66 male and 44 female) infants died under one year of age. The infant mortality rate, by which is expressed the number of deaths among infants under one year of age per 1,000 born was therefore 35·5, compared with the figure of 58 for the country as a whole, 62 for the Great Towns, 60 for London, and local rates of 42·1 and 44·9 for the years 1935 and 1936.

The following table indicates the ages at which these deaths occurred, with the corresponding figures for England and Wales for the year 1936 for comparison :

	Local.		England & Wales.	
	1937.		1936.	
	M.	F.	M.	F.
Under 4 weeks ... ..	23·4	19·1	34·12	25·98
4 weeks—3 months ... ..	4·3	3·4	10·78	7·65
3—6 months ... ..	6·1	2·7	9·37	7·08
6—9 months ... ..	4·3	3·4	6·60	5·31
9—12 months ... ..	1·8	2·0	5·33	4·42
Total under 1 Year ... ..	40·1	29·9	66·20	50·44

Below is set out an analysis of the causes of these deaths under 12 months with the corresponding figures for the country as a whole for the year 1936 :—

	Local 1937.		England & Wales. 1936.	
	M.	F.	M.	F.
Measles ... ..	—	—	1.16	0.90
Whooping cough ... ..	1.8	1.3	1.71	1.84
Influenza ... ..	1.2	—	0.31	0.22
Diarrhoea and enteritis ... ..	1.2	0.7	6.10	4.50
Premature birth ... ..	9.9	10.1	18.72	14.56
Congenital defects ... ..	0.6	6.1	8.94	7.22
Congenital debility and icterus ... ..	2.5	1.3	3.52	2.29
Developmental and wasting diseases	—	1.3	31.16	24.07
Birth injury ... ..	6.2	2.6	—	—
Tuberculous diseases ... ..	0.6	0.7	0.59	0.60
Convulsions ... ..	0.6	—	1.82	1.14
Bronchitis and pneumonia ... ..	6.7	5.3	12.28	9.22
Violence ... ..	2.4	—	} 11.07	7.95
Other causes ... ..	6.2	1.3		
<b>TOTAL</b> ... ..	<b>40.1</b>	<b>29.9</b>	<b>66.20</b>	<b>50.44</b>

68 infants failed to survive one month. The neonatal mortality or the death rate per 1,000 births occurring in infants at under one month was therefore 22, constituting 58 per cent. of the total infant mortality rate. The distribution of these deaths per 1,000 births amongst infants of different ages is set out below, with the corresponding figures for the country as a whole for the year 1936 :

	Local. 1937.		England & Wales. 1936.	
	M.	F.	M.	F.
Under 1 Day ... ..	7.1	—	10.65	—
1—7 Days ... ..	9.3	—	11.25	—
1—4 Weeks ... ..	5.1	—	8.26	—
<b>Total</b> ... ..	<b>21.5</b>	<b>—</b>	<b>30.16</b>	<b>—</b>

30 of the neonatal fatalities occurred in premature infants. In three of these the onset of the premature labour was due to antepartum hæmorrhage and in another four to some abnormal state of the mother (nephritis, toxæmia, etc.). In one instance labour had been induced and two deliveries were by Caesarian section. In five cases there was a twin pregnancy. In nine cases the infant suffered from congenital abnormality (congenital heart, 5 ; meningocele, 2 ; and anencephaly, 2). In thirteen instances there was a history of difficulty in labour. In five death was ascribed to atelectasis (twins, 1 ; maternal toxæmia, 1 ; and icterus, 1). In most of these cases the death occurred very shortly after delivery. Of the remaining infants who survived the first week but died within the

first month, the cause of death in two was influenza and in four some respiratory complaint.

The following table is an analysis of the causes of death of those infants of ages between one and twelve months:—

	1-3 Mths.	3-6 Mths.	6-9 Mths.	9-12 Mths.
Infectious Disease ...	1	2	2	1
Pneumonia & Bronchitis ...	3	8	3	4
Tuberculosis ...	—	1	1	—
Diarrhœal Diseases	2	1	3	—
Deficient Inherent Vitality ...	4	—	1	—
Violence ...	1	1	1	—
Other Causes ...	1	—	2	—
<b>TOTAL ...</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>5</b>

Five of the six deaths from infections were due to whooping cough, the other cause being influenza. It is probable that a number of those deaths which took place in the early part of the year and were ascribed to bronchitis and pneumonia were actually due to the influenza which was then prevalent. The group of "deficient inherent vitality" includes two suffering from prematurity, two from congenital debility, and one from marasmus.

### DEATHS OF OLDER CHILDREN.

The following table classifies the deaths of children between the ages of 1 and 5 years:—

	1-2 Yrs.	2-3 Yrs.	3-4 Yrs.	4-5 Yrs.
Infectious Disease ...	4	2	—	1
Pneumonia & Bronchitis ...	1	3	2	2
Tuberculosis ...	—	—	1	—
Violence ...	2	—	—	—
Other Causes ...	2	—	1	2
<b>TOTAL ...</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>5</b>

The death rates per 1,000 living at these ages in England and Wales for the year 1936 were 10·7, 5·0, 3·4 and 3·0. The local figures of actual deaths cannot be translated into corresponding rates as the actual numbers of those living in this district at these ages is not known, though some indication is obtained from the knowledge that in 1936 the number of births in the district was 2,873, in 1935 2,523 and in 1934 2,167.

## INFANT MORBIDITY.

### Ophthalmia Neonatorum.

Number of cases notified : 14.

Number treated at home : 12. In hospital : 2.

Vision unimpaired : 14. Impaired : nil. Blindness : nil.

Deaths : nil.

Of the 14 cases notified three were infants who were born in and had been notified from London hospitals.

All cases were mild in character and made complete recovery. Two infants were admitted for treatment under the Council's provisions to St. Margaret's Hospital, Hampstead. Three other cases were treated under the Council's arrangements by the staff of the local District Nursing Association.

### Pemphigus.

Pemphigus of the new-born has since 31st July, 1935, been notifiable in this district. One case was notified during the year.

### Incidence of dental disease.

The following table summarises the findings regarding the dental condition of children at various ages up to five years. In group A the condition of the teeth was satisfactory; group B represents those cases where minor fillings but not extractions might be required. In group D urgent treatment including extractions is required, while Group C is intermediary, treatment being required though not necessarily extractions.

Age.	<i>Attending</i>				<i>Not attending</i>			
	<i>Infant Welfare Centre.</i>				<i>Infant Welfare Centre.</i>			
	A.	B.	C.	D.	A.	B.	C.	D.
1-2	95	2.4	1.2	0.9	98	0.8	0.8	-
2-3	85	12	1.7	-	88	7	4	-
2-4	59	15	20	4	63	14	17	4
4-5	40	27	22	1	48	19	28	5

As was to be anticipated children of 1-2 years showed little evidence of caries, the incidence of which steadily increased with increasing age.

It will be noted that while the proportion of those who had sound teeth was slightly greater in the case of those children who did not attend the clinic than in those who did, there was less major dental trouble in those children who attended the clinic, presumably because those with bad mouths in attendance at the clinic had obtained treatment.

## MATERNAL MORTALITY.

Thirteen deaths were registered as due to or associated with pregnancy, giving a maternal mortality rate of 4·19 per 1,000 live births. Of these seven were due to sepsis, being a mortality rate from this cause of 2·26 and six to other accidents and diseases of pregnancy, a rate of 1·93. The corresponding rates for England and Wales were 3·23, 0·97 and 2·26, and for this district in 1936: 4·02, 0·67 and 3·35. The rates per 1,000 total births were 4·07, 2·19 and 1·88, compared with figures of 3·11, 0·94 and 2·17 for the country as a whole.

Of the deaths due to sepsis, only three occurred in women delivered at full term. The particulars of these cases are: (1) Following impaction of a persistent occipito-posterior presentation the patient was admitted to hospital where craniotomy was performed. Death was due to infection following trauma of the birth canal. (2) Pyrexia occurred in a patient who, after a normal labour had stitches inserted. On admission of the patient to hospital on the fourth day there was delayed involution and an unhealed perineal laceration. Hæmolytic streptococci were grown from vaginal culture. (3) The patient was delivered by forceps in a nursing home. Blood cultures later gave non-hæmolytic streptococci and the death was ascribed to a low grade puerperal infection by a non-hæmolytic streptococcus which resulted in bacterial endocarditis of an already damaged mitral valve. Three deaths were due to neglect of abortions: (1) Following an abortion at 12 weeks of her sixth pregnancy the patient was admitted to hospital on account of pyrexia due to strep. aureus which was found in the vaginal swab and on blood culture. (2) One month after delivery of a 30 weeks still birth at home the patient was admitted to hospital as an "acute abdomen." A mass of retained products was removed from the uterus. (3) On seeking advice regarding vaginal bleeding of six weeks' duration following an abortion in the second month of her fourth pregnancy, a patient was admitted to hospital but died a few hours after admission from septicæmia due to gas-producing organisms. The remaining death from sepsis occurred in a patient who, in her fourth month of pregnancy was admitted to hospital for treatment of a severely damaged heart. After 14 days' rest she was discharged but was re-admitted 10 days later with a 7 days' history of threatened abortion. Drug induction resulted, 14 days' later, in a 20 weeks' abortion. The retained products were removed under general anæsthesia, but the patient developed septicæmia—apparently a low grade infection on an already damaged heart valve. In the classification of the so-called "preventable" causes of maternal mortality the Departmental Committee grouped the primary avoidable factor under four main headings:—(1) Omission or inadequacy of ante-natal examination; (2) Error of judgment in management of the case; (3) Lack of reasonable facilities; (4) Negligence of the patient or of her friends. In three of these seven deaths the primary avoidable factor would

appear to be the fourth group. In the first case referred to one regrets that advantage was not taken at an early stage of the consultant service offered by the Council.

Of the deaths due to causes other than sepsis again only three occurred at full term. (1) Cæsarian section was performed at the seventh month on account of toxæmia for which the patient had already been in hospital on two occasions for investigation and treatment. Death was due to pulmonary embolism. The antenatal supervision of this case was carried out at the clinic. (2) Heart failure followed on childbirth in a woman with a severely damaged heart for the treatment of which she had already been in hospital. (3) A patient died of intestinal obstruction following Cæsarian section performed at full term on account of contraction of the pelvis. The following notes relate to the remaining four fatalities which occurred from causes other than sepsis in patients some time before term. (1) A patient attended the out-patient department of a hospital on account of bleeding following seven weeks' amenorrhœa. She refused to be admitted, but two days later she went in as an emergency case on account of severe bleeding. The uterus was evacuated under gas anæsthesia, but the patient died shortly afterwards. (2) A patient was admitted to hospital in the thirty-first week of pregnancy suffering from pyelitis and sub-acute endocarditis. On her fourth day in hospital she was normally delivered of a premature living child, but during administration of a general anæsthetic for the removal of the placenta she collapsed. Post-mortem examination showed signs of recent acute endocarditis, bilateral pyelo-nephritis and a morbidly adherent placenta. (3) A patient was admitted to hospital on April 12th on account of headache and vomiting, and pus and albumin in the urine. In a few days she developed in turn thrombosis of the left femoral vein, the iliac veins and the right femoral vein. She later miscarried and died suddenly on May 27th of right pulmonary embolism. (4) From June when she was in her second month of pregnancy to September, this patient was admitted to hospital on three separate occasions for investigation and treatment of her vomiting. Later in September she was again admitted aborting—but died nine hours after admission, the cause of death being "hepatitis, hyperemesis gravidarum."

In addition to these cases in which the death was allocated to causes due to or associated with pregnancy, there were four other fatalities in which pregnancy was a related factor though no reference was made to it on the death certificate, or in accordance with the registrar general's allocation the deaths were referred to other causes. One was a woman who, while pregnant, suffered from marked varicosity of the left leg and complained of cramp. In her seventh month of pregnancy she died of "thrombosed varicose veins, coronary thrombosis." In another patient pregnancy probably helped to over-tax a heart damaged by toxic goitre—when near full term she suffered from an attack of breathlessness for which she



was removed to hospital, but died almost immediately after admission. One woman died of shock due to a commencing abortion ; as this was self-induced the death was allocated to suicide. The remaining patient suffered from pulmonary tuberculosis and died from this cause in the puerperium.

### **Ministry of Health Report on Investigation into Maternal Mortality.**

Circular 1622 of the Ministry of Health drew the attention of local authorities to the Ministry's Report on Maternal Mortality and summarised certain recommendations made in the report. These recommendations and the extent to which they were already embraced by local practice or have since been dealt with are set out below :—

1. The establishment under the direction of the Medical Officer of Health of an adequate service of obstetrical consultations :

- (a) To assist medical practitioners who undertake domiciliary midwifery in cases of doubt or difficulty in the ante-natal period, at the time of confinement, and during the puerperium.

This provision is made, consultants being available to assist medical practitioners in ante-natal supervision and in connection with difficulties arising during the confinement or during the puerperium.

- (b) To conduct consultative ante-natal and post-natal clinics to which patients may be referred by general practitioners or from the routine ante-natal and post-natal clinics. This provision is also made, the monthly session having been changed to fortnightly. Post-natal as well as ante-natal cases are seen by the consultant. Practitioners frequently attend with their patients.

- (c) To exercise clinical supervision over the in-patient treatment of maternity patients for whom the local authority assumes responsibility.

The question of the provision of a maternity home is dealt with separately in this report.

- (d) To supervise the treatment of patients suffering from puerperal sepsis.

Cases of puerperal sepsis requiring hospital treatment are admitted to the wards of the Queen Charlotte's Isolation block or the puerperal infection block of the London County Council North Western Hospital.

- (e) To be responsible for the emergency domiciliary service for cases of grave obstetrical abnormality in which removal to hospital is contra-indicated.

This service is provided.

- (f) To assist the Medical Officer of Health in the confidential investigation of the circumstances associated with each maternal death occurring in the area.

It was decided that the existing arrangements by which the Medical Officer of Health undertakes the investigations should continue.

2. The local supervising authority in consultation with the local medical profession should, in future, be empowered to take steps to ensure that the best local obstetric skill is made available in all cases in which midwives are required under the rules of the Central Midwives Board to call in a doctor.

This matter was debated at a meeting of local practitioners at which the following resolutions were passed :—

- (1) That in order to obtain the best local obstetric skill we should support the policy of the local authority in forming a list of local practitioners open to all practitioners willing to undertake obstetric work on the summons of a midwife under the rules of the Central Midwives Board.
- (2) That we should establish a liaison between the profession and the local authority by setting up a consultative committee consisting of members of the local profession and of the local authority with a view to the maintenance of a high standard of midwifery.

At a subsequent meeting of the Public Health Committee at which these resolutions were considered it was resolved that the Public Health Committee be authorised in conjunction with the local medical practitioners to prepare and maintain a list of practitioners willing to undertake obstetric work upon receipt of a summons by a midwife under the rules of the Central Midwives Board. Five members were nominated as representatives of the Council at the proposed joint consultative committee.

3. Emergency units should be provided whereby members of the staffs of maternity departments will be available for the domiciliary treatment of maternity patients whose condition is too grave to justify their removal to hospital.

Since January, 1936, an emergency outfit has been stationed at the Fire Station ready to be conveyed to the home of any patient when the consultants require it. It was hoped that arrangements could be made for supplying a skilled nurse as well, but this as yet has not proved practicable—another disadvantage of the district's not possessing its own maternity home.

4. Properly constructed, adequately equipped and suitably staffed maternity accommodation (including a sufficient number of beds allocated to and reserved for ante-natal patients) should be

provided to meet the needs of every area. Wherever practicable accommodation should be provided in association with the general hospitals.

The question of the provision of maternity accommodation is referred to elsewhere.

5. Arrangements should be made for :—

- (a) Adequate domiciliary visiting by health visitors of expectant mothers with a view to encouraging them to engage an attendant for the confinement and place themselves under ante-natal supervision at an early stage of pregnancy.

Last year the health visitors paid 1,114 visits to 700 expectant mothers.

- (b) The provision of ante-natal clinics in every district in which the number of expectant mothers justifies it. In sparsely populated areas other arrangements should be made for efficient domiciliary ante-natal supervision.

Ante-natal clinics are provided wherever they are necessary if premises can be obtained. The Council maintains ten weekly and one fortnightly ante-natal clinics. In 1937 55.5 per cent. of expectant mothers attended the local clinics and 4.7 per cent. received supervision under the general practitioner ante-natal scheme.

- (c) The establishment of consultative ante-natal clinics to serve every area.

A central consultative ante-natal clinic is held here. Held at first monthly, the increasing attendances have necessitated a fortnightly session. Authority was given for the summoning of the consultant to ante-natal cases at their own homes in exceptional circumstances.

6. Satisfactory arrangements for the accommodation and treatment of patients suffering from puerperal sepsis and from abortion are essential.

Provision for abortion cases is made by the County Council.

7. The development of post-natal services including the establishment of clinics and arrangements for in-patient treatment is a matter of urgent necessity.

Post-natal cases are advised at the ordinary and at the consultative ante-natal clinics; while a special clinic is held for the advice of those women in whom further pregnancy would be detrimental to their health. The demand as yet does not warrant the holding of a separate post-natal clinic which should preferably be staffed by a consultant.

8. The education of the woman herself and of the general public should constantly be borne in mind by all concerned with maternal welfare as the whole-hearted co-operation of mothers is essential to the success of any measure designed to reduce maternal mortality.

This is done both at the clinics and at the time of home visiting.

9. The service of home helps should, wherever practicable, be provided.

Home helps are provided to necessitous cases.

10. Adequate records should be kept in connection with every branch of maternity service. Free interchange of such records between all professionally concerned is essential in order to secure continuity of supervision and treatment.

Reports are issued by the clinic medical officers to those who will be attending the mother at her confinement.

11. Arrangements should be made in every district to ensure that no expectant or nursing mother requiring extra nourishment on health grounds fails to receive it for such period as may be necessary.

This question was linked up with the consideration of Circular 1519 which drew attention to the first report of the Advisory Committee on Nutrition when the following report was submitted, dealing more particularly with the nourishment of expectant and nursing mothers :

In some districts meals are provided at food kitchens. One advantage of such an arrangement is the certainty that the food is consumed by the mothers and not by other members of the family. Owing to the size of the district and the very small numbers of expectant mothers in receipt of milk such an arrangement would not prove a satisfactory solution.

An alternative method is to issue vouchers to be handed in at certain restaurants with which arrangements had been made. It is questionable whether this procedure would be popular even if practicable.

According to the First Report of the Advisory Committee on Nutrition from the health standard there is no other single measure which would do more to improve the health, development and resistance to disease of the rising generation than a largely increased consumption of safe milk by mothers, children and adolescents—a recommendation being made that the average daily consumption of milk per head should be about two pints for expectant and nursing mothers, from one to two pints for children and not less than half a pint for the rest of the population.

It is very doubtful if an expectant mother would, over any length of time, be willing or able to take two pints of milk daily. Milk granted to an expectant mother is intended for her own consumption. Even out of a grant of one pint daily it is probable that, in many cases, the expectant mother consumes only a portion. The fraction is likely to be very much less if grants of two pints were made. For this reason it would seem that if it is desired to afford greater assistance to expectant mothers it should be provided in some form other than milk.

The essential elements which are most likely to be deficient in an ill-balanced diet in this country are calcium, phosphorus and iron and the vitamins B1, B2, C and D. Milk supplies the calcium, phosphorus and some of the vitamins B2 and B1, and the milk fat, vitamin A. Eggs are sources of vitamins A, B1, B2 and D and of iron. The commonest source of vitamin C is the orange. It is suggested that in place of an additional pint of milk daily it would be preferable to supply other foodstuffs to supplement the mineral and vitamin deficiency, such as, say, butter, half a pound, five eggs and 4d. to 6d. worth of oranges weekly. Butter and eggs could be ordered and delivered in the same way as the milk is at present distributed. Possibly arrangements could be made with certain fruit shops that they would accept vouchers.

It is appreciated that probably much of this grant would be consumed by other members of the family. If the consuming members were small children, they, at least, would benefit and their needs are secondary only to those of the expectant mother.

Up to the present the only grants of milk or food under the maternity and child welfare scheme have been wet or dried milk issued free or at half-cost. Consideration might be given to the question of issuing free to those expectant mothers who receive free milk vitamin preparations such as marmite and adexolin and iron preparations, and to children preparations of fish liver oil.

It was subsequently decided that the additional nourishment could best be supplied by increasing the amount of milk granted from one to two pints a day and by the issue, in addition, of adexolin tablets. It was resolved that nursing and expectant mothers be granted this additional nourishment, and that the scale for maternity assistance be amended to enable a greater number of expectant and nursing mothers to benefit from any such increased grant.

## PUERPERAL INFECTION.

Puerperal fever ceased as from September 30th to be a notifiable disease, so since that date any conditions which would previously have been notifiable as puerperal fever will be notifiable as puerperal pyrexia. During the year five notifications of puerperal fever were received and twenty-nine of puerperal pyrexia, the total rate being, therefore, 10·6 per 1,000 total births compared with a figure of 13·93 for the country as a whole.

Eight of these notifications were in respect of women confined in institutions in London.

The cause of pyrexia in those who were confined in this district was not ascertained in five instances. In six it was due to some lesion other than that of the genital tract (e.g., mastitis, phlebitis, infection of the urinary tract etc.), but in the remaining fifteen instances infection was of the genital tract. Three patients had normal confinements at about the same time in the same maternity home. Mild uterine infection followed on a normal confinement in six cases, most of them primiparae. In two other cases of normal delivery infection of a perineal tear occurred, one of these cases subsequently proving fatal. In three cases some operative interference was required at the confinement: in one for manual removal of the placenta; in the next, persistent occipito-posterior-presentation resulted in laceration of the genital tract with subsequent infection of the wound, while in the third case craniotomy was required for an impacted head resulting in trauma of the birth canal, subsequent infection and death. One of the cases of puerperal infection followed on a miscarriage.

The Council's provisions for the treatment of those suffering from these conditions is to arrange for admission either to the isolation block of Queen Charlotte's Hospital or to the London County Council's North Western Isolation Hospital, or to arrange for home nursing by the staff of the local nursing association.

Apart from those who were notified while already in-patients at London institutions, 19 of the notified cases were removed to hospital for treatment, and for two, home nursing was provided under the Council's arrangements.

## INFANT WELFARE SERVICES.

### HOME VISITING BY THE HEALTH VISITORS.

Routine visits are paid to infants as soon as possible after the fourteenth day, and special visits are paid to cases of ophthalmia neonatorum, puerperal infection, still births, infant deaths, etc. Each health visitor is appointed infant protection visitor for her own area.

The following table shows the number of visits paid by the health visitors during the year :—

(a) To expectant mothers	...	First visits	700
		Total visits	1,114
(b) To children under one year	...	First visits	3,255
of age	... ..	Total visits	8,415
(c) To children between the ages			
of one and five years	...	Total visits	10,246

### INFANT WELFARE CENTRES.

At the beginning of the year, eighteen infant welfare sessions were held at eleven separate premises. Early in the year an additional session was opened at the Baptist Church Hall, Imperial Drive and a third session at the Institute, Whitchurch Lane, Stanmore. The arrangements at Pinner which were in operation from the end of the previous year by which fortnightly sessions were held at two separate buildings, did not prove satisfactory and in place of these a weekly session has, since May, been held at the Methodist Church, Love Lane, Pinner. The weekly session opened at the Baptist Church Hall, Streatfield Road, Kenton, was soon crowded, so in March an additional session was opened. Owing to the shorter hours for which this building was available from the time it has been used as a temporary school a further weekly session proved necessary. The newly erected Methodist Church in Walton Avenue proved to be suitable for clinic purposes, so in November a weekly session was opened here and has proved a real convenience to mothers who previously had to journey to more distant centres. Towards the end of the year the session which had for long been held at the Conservative Club, Lowlands Road, was transferred to the Spiritualist Church Hall, Vaughan Road. At the end of the year 23 weekly sessions were being held at 11 separate premises. At these there was an average weekly attendance of about 1,400. At most of the sessions two health visitors attend, the health visitor in charge at any clinic being, as far as possible, the one who visits the district which the clinic serves. In addition a number of voluntary workers kindly assist at the clinics. A large proportion of the time of each health visitor, therefore, is taken up by her attendances at the clinics and restricts the extent of her home

visiting. On the other hand, as, at the clinics, each mother is personally interviewed by the health visitor there is, in the case of the more regular attenders, less need for frequent home visits.

The following table shows the work done at the Infant Welfare Centres during the year:—

Total attendances at all Centres:—

(1) By children under one year of age ...	43,305
(2) By children between the ages of one and five years ... ..	28,098

Total number of children who first attended at the Centres during the year and who on the date of their first attendance were:—

(1) Under one year of age ... ..	2,484
(2) Between the ages of one and five years...	1,370

Total number of children under five years of age who attended at the Centres during the year and who at the end of the year were:—

(1) Under one year of age ... ..	2,047
(2) Over one year of age ... ..	5,472

The percentage of total notified births represented by the number of children under one year of age who attended for the first time was 87. The percentage of total registered births was 80.

### TODDLERS.

In March, 1936, a weekly toddlers' clinic was opened at the Broadway Clinic, the object being to arrange quarterly inspections for a limited number of children, the actual inspection following much on the lines of the routine medical inspection of school children, sufficient children being invited to ensure an attendance of about twenty at each session. Towards the end of the year fortnightly sessions were opened at Rayners Lane and at the Elmwood Avenue Clinic. During the past year as the number of applicants at the Rayners Lane area exceeded those at Broadway, the Rayners Lane clinic was held weekly and the Broadway Clinic fortnightly.

As to whether toddlers are better dealt with at the ordinary infant welfare centres or at separate toddlers' sessions depends partly on the district. In rural communities there may not be sufficient numbers of toddlers to warrant a separate session, or most of the toddlers would be brought to the centre with a smaller baby and the mother would not wish the double journey. The fact that the toddlers' problems, however, are so different from those of the infant justifies a separate session where it is practicable. In



this district a number of children are brought to the toddlers' clinics who had not and would not be brought to the infant welfare centres because they attend by appointment and are seen without long periods of waiting. It is a distinct advantage, too, to the clinic medical officer to know what time can be afforded to each child, a position she is not often in when conducting an infant welfare centre.

The clinics here deal with limited numbers of children. At an average of twenty per session, children being seen quarterly and allowing for removals, etc., any one centre can deal with only about 300 children a year. A more common arrangement of running toddlers' clinics is for children to be summoned annually which, assuming an average of 20 per session, enables 1,000 children to be examined in any year. While there is the advantage that, by this arrangement, advice can be given for the amelioration of the grosser physical defects of a large number of children, it is felt that the interval between the inspections is too long and far more benefit will follow the more frequent inspections. While the district is growing and so many clinic sessions have to be held, because larger numbers can be dealt with at infant welfare centres than at toddlers' clinics, the demand for infant welfare sessions must be met first. It is hoped that later, however, it may prove possible to meet what seems to be the optimum requirement, namely, for any area, two infant welfare sessions, one ante-natal clinic and one toddlers' session.

### TREATMENT.

The treatment services include the following : dental treatment, operative treatment of tonsils and adenoids, ultra-violet ray therapy, correction of visual defects, orthopædic treatment and the treatment of minor ailments.

In addition, arrangements are made for the admission of suitable cases to convalescent homes and for home nursing.

Facilities for treatment were on much the same lines as those recorded on page 81 of the Annual Report for the year 1935.

The following particulars show the extent to which the facilities for treatment are used.

Dental Treatment : 147 children under five years of age made 167 attendances. 217 mothers made 409 attendances and 40 were fitted with dentures.

Ultra-violet ray therapy : 156 children made a total of 875 attendances.

Orthopædic Treatment : 114 children made 610 attendances for treatment.

In addition, 15 children were examined by the orthopædic surgeon.

Correction of visual defects: 70 children were treated by arrangement with the Middlesex County Council, most of these being recommended to obtain glasses. Provision is made by which children wearing glasses are re-tested periodically.

Operative Treatment of Tonsils and Adenoids: 5 children were treated at the Harrow and Wealdstone Hospital for this condition under the provisions of the agreement.

Convalescent Homes: 11 children and 3 mothers were admitted to convalescent homes.

Home Nursing: Responsibility was accepted for the payment of the fees for the treatment of 15 patients.

These figures, of course, relate only to those who obtain these treatments under the Council's schemes. There will be many others, who, following advice obtained at the clinics, and who, because they are financially outside the schemes, will have obtained treatment by making their own arrangements. The question of enabling a greater number to obtain treatment under the provisions made by the Council, charging them the cost price to the Council for any treatment obtained, was considered towards the end of the year.

### INFANT LIFE PROTECTION.

The same arrangements continued in force with regard to the supervision of foster-children, each home being visited every month.

The following table summarises the information with regard to foster-children and foster-parents in the district:—

Number of persons on the register who were receiving infants for reward at the beginning of the year ...	71
Number of persons registered during the year ...	53
Number of persons removed from the register during the year (either by reason of removal from the district; no longer undertaking the care of the child, etc.) ...	12
Number of persons on the register who were receiving children for reward at the end of the year...	89
Number of children on the register at the beginning of the year ...	132
Number of children received during the year...	223
Number of children removed from the register during the year ...	200
Removed to care of parents ...	130
Removed to care of another foster-mother...	33
Legally adopted by foster-parent ...	6
Removed to charitable organisation, etc. ...	14

Removed to hospital... ..	6
Of this number one died.	
Foster parent left the district taking the child with her ... ..	4
Child attained the age of nine years... ..	7
Number of children on the register at the end of the year	155

Most of the foster-mothers in this district are registered for the care of one child only though some have up to four, and there are two children's homes suitably staffed which are registered for the reception of 22 and 20 children. Monthly visits are made by the health visitors to all homes.

Most foster-mothers await permission before receiving children, those who do not do so being mostly persons who move into the district with foster-children in their possession. It is unfortunate that advantage was not taken of the changes in recent legislation dealing with the care of foster-children to give added powers to the local authority, more particularly on the lines of licensing or registering of foster-parents and premises. Provision is made for the removal of foster-children kept in unsuitable premises or by unsuitable persons under Section 212 of the Public Health Act, 1936: "if a foster-child is about to be received or is being kept in any premises which are over-crowded, insanitary or dangerous or by any person who, by reason of old-age, infirmity, ill-health, ignorance, negligence, inebriety, immorality or criminal conduct or for any other reason is unfit to have care of the child, or in any premises or by any person in contravention of any of the provisions of this part of the Act, or in an environment which is detrimental to the child, a Court of Summary Jurisdiction may, on the application of the welfare authority, make an Order for the removal of the child to a place of safety"—a cumbersome procedure which could have been avoided by granting to local authorities the power of registration. It would have been preferable too if the onus of proof that a child in the care of those not its parents was not a foster-child lay on those having custody of the child. At the present the onus of proof that the child is being nursed or maintained "for reward" rests on the local authority. By collaboration between the interested parties the obtaining of proof can be rendered very difficult.

## MATERNITY SERVICES.

The facilities offered to mothers, expectant or parturient, include :—

**Ante-Natal :—**Ante-natal supervision by home visiting ; ante-natal clinics ; general practitioners' ante-natal scheme ; consultant ante-natal clinic ; consultation at the home in exceptional cases ; provision of milk ; dental treatment, including provision of dentures ; ophthalmic treatment ; and artificial sunlight treatment.

**At Confinement :—**Payment of midwife's fees in necessitous cases ; home helps ; maternity sets ; consultation in cases of difficult labour ; emergency maternity outfit ; institutional accommodation ; and ambulance for removal of women in labour.

**Post-Natal :—**Post-natal examination at the clinics, including consultant clinic ; provision of milk to nursing mothers ; dental treatment ; artificial sunlight treatment ; convalescent homes ; home nursing ; provision of consultations for cases of puerperal infection, and institutional treatment for such cases.

### ANTE-NATAL SUPERVISION.

#### Home Visiting.

During the year the health visitors paid a total of 1,114 visits to 700 expectant mothers. One of the repercussions of the operation of the Midwives Act will be the subtraction of ante-natal care from the duties of health visitors.

#### Ante-natal Clinics.

At the beginning of the year nine weekly ante-natal sessions were held at six separate premises, one maintained by the Council of Child Welfare, the remainder by the Council. The attendances at the session at St. Hilda's Hall became too large and, as no other suitable premises were available, a session was opened in a private house in Corbins Lane. Though, because of the limited accommodation, the numbers attending had to be kept down, the arrangements proved a useful supplement to the other clinics. On accommodation becoming available in November at Walton Avenue, however, this clinic was closed. The Council, in April, took over the services maintained by the Council of Child Welfare, including the ante-natal clinic, and since July this session has been held at the clinic at 76, Marlborough Hill. A new fortnightly ante-natal clinic was opened at the Methodist Church Hall, Love Lane, Pinner, towards the end of the year. At the end of the year, then, there were, in the district, ten weekly and one fortnightly ante-natal clinics held at eight separate addresses. Since the inception of the midwifery service, ante-natal clinics have been staffed by one midwife and one health visitor, instead of as formerly by two health visitors.

The following summarises the work done at the clinics during the year:—

Total number of expectant mothers attending the clinics ... ..	1,623
Total number of attendances by expectant mothers at all clinics ... ..	7,038
Percentage of total notified births (live and still) represented by the number of expectant mothers attending the clinics ... ..	55

About 40 per cent. of the women attended the ante-natal clinic of their own accord or were recommended by a friend; 30 per cent. were recommended by a health visitor; 19 by midwives; 8 by hospitals and 3 per cent. by local medical practitioners.

40 per cent. of those attending were pregnant for the first time; 30 for the second; 15 for the third; 7 for the fourth; 3 for the fifth and 5 per cent. for more than the fifth. Fifty women who attended were not pregnant.

The fifth and sixth months were the most frequent periods of gestation at the time the first attendance was made at the clinic. About half of the women at the time of the first attendance were between 3 and 6 months pregnant; 30 per cent. were over 6 months, while this year 20 per cent. attended before they were 3 months pregnant. Last year only about 10 per cent. attended before the fourth month of pregnancy. This earlier attendance is possibly to be accounted for by the difficulty experienced in obtaining admission to hospital unless a bed is booked at a very early stage of pregnancy.

One-half of the expectant mothers attended more than five times, approximately equal numbers attending once to five times.

The number of women advised by hospital authorities to attend the local clinics is very much higher this year. As mentioned in last year's report the Middlesex County Council agreed to the suggestion that the ante-natal supervision of normal cases to be admitted to Redhill Hospital be undertaken at the local clinics, subject to an examination by the hospital staff at about the 36th week of pregnancy. Actually only one case was passed to the clinic during the year under this scheme, but the arrangements are now working smoothly. Some hospital authorities, appreciating the hardship imposed on the expectant mother by repeated visits to distant institutions, encourage the normal patient to attend the local clinic. The following is the type of letter received in respect of normal patients from one hospital:—"Mrs. — has attended our ante-natal clinic to-day and is booked for her confinement. She is expecting on —. On examination the following conditions were present. . . . As she lives at some distance from the hospital and is in your area we should be grateful if you would keep her under observation in your clinic. We usually interview our patients every four weeks until the 30th week; fortnightly till the 36th week and

thereafter weekly until delivery. We would like to see her again at the 32nd and 36th weeks for obstetrical examination. Would you kindly record her urine and blood pressure on the back of the card. If you discover any symptoms which you think indicate that immediate hospital treatment is necessary will you please arrange with the house surgeon." It would be to the benefit of many women if other institutions would agree to the same arrangements, especially as about 35 per cent. of those attending the clinics had their confinements in hospitals, the admission of some, of course, of these being arranged from the clinic. In practice there often occurs a certain amount of overlapping of ante-natal supervision as expectant mothers tend to come to the ante-natal clinics even if other provision is being made for their supervision. As, more particularly in the later stages, testing of urine and reading of blood pressure cannot be performed too frequently these attendances at the clinics cannot be discouraged. Moreover, it is probable that at a hospital clinic attention will be devoted more particularly to the medical aspects. A study of the list of causes of maternal fatalities demonstrates what a small reduction in the mortality rate can be expected by ante-natal supervision which is purely medical in its outlook.

#### **Compensation for Midwives.**

The same arrangements continued in force by which compensation is paid to a midwife whose case is lost to her by reason of the medical officer exercising ante-natal care of the patient, referring her on medical grounds to hospital for her confinement. During the year compensation was paid in respect of 12 cases.

#### **Consultant Ante-natal Clinic.**

The consultant ante-natal clinic was held fortnightly at the Broadway Clinic throughout the year. The patients are mostly referred from the local ante-natal clinics, at least one visit of even the apparently normal primipara being encouraged. Patients are also referred direct by the general medical practitioners in the area and post-natal cases are also seen. During the year 313 women made 410 attendances. Of this number 38 were referred by local medical practitioners, 9 were post-natal and 5 gynæcological cases.

It was agreed that the Council pay the cost of X-raying those ante-natal cases in which the consultant considers this necessary.

#### **General Practitioner Ante-natal Scheme.**

The same arrangements by which pregnant women can receive ante-natal supervision by their own medical attendants was continued last year. Again only a very limited use was made of the scheme, 30 patients being seen by 8 practitioners. Of this number, 9 were insured patients.

Only three women attended for post-natal examination.

In general examinations are recommended at the 16th, 32nd and 36th weeks of pregnancy and one post-natal examination is advised. It was decided during the year that the Council would not ordinarily be prepared to pay for ante-natal and post-natal examinations of uninsured women over a maximum of four, but that in cases where an application setting out the circumstances is made the medical officer of health is authorised, if satisfied that such a course is necessary, to sanction a further examination or examinations at the expense of the Council.

By those who favour the clinic method of ante-natal supervision, it has been maintained that quite apart from the benefits of medical supervision the patient has the advantage of consulting the health visitors whose duty it is to discuss with the expectant mother all points in connection with her state of pregnancy and the full arrangements with regard to the confinement, whether this is to occur at home or in an institution. Those who obtain their ante-natal supervision at a hospital clinic where the considerations are wholly medical, or from their practitioners, are largely deprived of this side of ante-natal care. On the other hand one can look forward to the day when the midwife is sufficiently acquainted with the full work in the clinic and of the social services that she takes her rightful place there, displacing the health visitor. When that time comes the argument of those who favour the clinic because of these non-medical aspects will largely fall to the ground, as the patient will be seen by the midwife who will attend her at her confinement and a doctor who will not. In these circumstances it is rational to anticipate the replacement of the combination of the midwife and the clinic doctor by the midwife and the patient's own doctor, who would be the one who would be called in to the confinement if the presence of a doctor were found necessary. If to the supervision which the midwife herself undertakes for the patient could be entrusted to her the responsibility of reading of blood pressures so that the frequent attendances in the later stages of pregnancy could be to the midwife, there would in the normal case—and the vast majority of cases are normal—be no necessity for more than the three suggested medical examinations, for the carrying out of which the practitioner would probably be able to afford the time.

## ARRANGEMENTS MADE FOR THE CONFINEMENT.

### At Home.

1,589 confinements took place in the patients' own homes. Of these 872 were attended by midwives acting in their capacity as midwives and 444 by local midwives who had given notice of their intention to practise, acting as maternity nurses.

Up to the time when the Council's midwives, appointed under the Midwives Act, 1936, took up duties, the same forms of assistance were given to those who had their confinements at home as formerly.

It was decided, however, that after December 31st midwifery grants and assistance under the Council's maternity assistance scheme, grants by way of home helps and maternity outfits and other similar assistance be made only to women attended by midwives employed by the Council. In 359 cases the Council paid, or contributed to, the fee of the midwife, in 70 a home help was provided, and 43 maternity sets were issued.

Consultant services : Medical practitioners are now authorised to summon the consultant obstetrician without first communicating with the Medical Officer of Health, but both the consultant and practitioner are required subsequently to furnish the Medical Officer of Health with details of the case.

No call was made by the consultants for the use of the emergency maternity outfit housed at the Fire Station, nor was it found necessary to arrange for the blood transfusion service. No claims were made under the arrangement by which the Council accepts responsibility for the payment of the fee of one guinea to a medical practitioner called in to give an anæsthetic at a confinement.

When the consultants are summoned to a case of difficult labour and an operation is necessary, the Council accepts responsibility for the payment of the surgeon's fee if an operation is done at the patient's home. During the year it was agreed to accept similar responsibility if the surgeon operates at a nursing-home or hospital to which the patient is removed.

The following scale of charges is to be applied for recovery of the fees of the consultant whether for consultation or operation : no claim to be made where the family income does not exceed £250 per annum ; one-third of the sum to be claimed where it is between £250 and £350 ; two-thirds where it is between £350 and £450 ; and full cost to be recovered where the family income exceeds £450.

During the year a consultant was summoned on 14 occasions. Two of these were ante-natal cases of pyelitis of pregnancy which were taken into hospital for investigation and treatment. Two cases of delayed second stage ultimately had natural deliveries, one of the patients being admitted to hospital. In three cases of abnormal presentation the patients were removed to hospital and were delivered by Cæsarian section, each resulting in a living child. Another patient with an extended breech and a slightly contracted pelvis was removed to hospital and a living child delivered by Cæsarian section ; and a patient in whom a trial of labour had been advised was delivered by low forceps. The other conditions for which the consultants were summoned were complications in the puerperium. One patient was suffering from puerperal pyrexia, another required curettage in the puerperium, a third suffering from post-partum hæmorrhage required ligature to an artery ; one patient was suffering from pyosalpinx which followed on a miscarriage, and in the other case the aid of the consultant was invoked to recover a portion of needle which had broken while the perineum was being repaired.



### **In an Institution.**

781 births occurred in registered nursing-homes in this district. Most of the 235 births to mothers from outside districts which occurred here would have taken place in the local nursing-homes. Of these 781 confinements 656 were conducted by local practitioners, 105 by midwives, and at 498 midwives acted as maternity nurses.

Notifications of 870 births were received in respect of Harrow mothers having taken place in hospitals outside of Harrow. Of these notifications 229 were received from Queen Charlotte's Hospital, 207 from Redhill, 174 from the City of London, 61 from Queen Mary's Hospital, Hampstead, 38 from University College Hospital, 23 from the Royal Free Hospital, 18 from St. Mary's Hospital, 17 from Charing Cross Hospital, 15 from Elizabeth Garrett Anderson Hospital, 14 from the Middlesex and 10 from the Samaritan Hospital. Notifications were received of the occurrence of 125 births in nursing-homes and 28 in private houses outside the area.

Of the total of 3,098 births, then, some 1,600 occurred in the patients' own homes, some 500 in local nursing-homes and about 1,000 in hospitals or homes outside the district. Some 1,500, or 48 per cent., therefore, of the confinements took place in institutions either inside or outside the district. Of the total confinements 216 occurred in County Council hospitals, namely, 207 at Redhill, 1 at the Central Middlesex and 8 at the West Middlesex. This figure of 216 represents 7 per cent. of the total confinements. This small number is, of course, partly accounted for by the fact that, owing to the difficulty in obtaining admission for patients referred from the ante-natal clinics to the County Hospitals, accommodation for such patients requiring it was found at various of the London hospitals with which the Council has entered into arrangements. During the year 96 patients were admitted in this manner.

### **Local Maternity Home.**

Early in the year a deputation consisting of representatives of the Wembley and the Harrow Councils was received by members of the Middlesex County Council. As a result of this meeting it was understood that the opposition to the provision of maternity accommodation by the District Councils came not from the County Council but from the Ministry of Health; that the County Council contemplated the provision of sufficient accommodation to enable 40 per cent. of the confinements in the county to occur in their institutions; that the principle of building hospitals to include beds for the use of "paying patients" had not been considered by the County Council; and that no provision would be made for the patients to be attended by their own medical attendants.

Later in the year it was learned that the County Council had approved the purchase of Bushey Heath clinic, to be used for the

reception of maternity cases. This is a building used as a private nursing-home situated just outside the borders of Harrow and of the county, which has accommodation for about forty patients and the necessary staff. The objections to the erection by the Council of its own maternity home had been dictated by the belief that it was advisable that maternity homes should be run in conjunction with a general hospital. For this reason the proposal of the County Council with regard to the Bushey Heath clinic was that it should be run as an annexe to the Redhill Hospital, situated some three to four miles away! On receipt of this information the Council made representations to the Ministry asking that consent to the application of the County Council to loan sanction should be withheld on the grounds that the District Council was a proper authority to acquire Bushey Heath clinic as a maternity hospital for their own cases. The County Council was also approached with a view to the District Council taking over the contract for the purchase of the property. A deputation received by Mr. Robert Bernays, M.P., the Parliamentary Secretary of the Ministry of Health, was, however, informed that the Ministry looked to the County Council, the authority responsible for the provision of hospital accommodation, as the authority responsible for the provision of maternity hospital accommodation.

The Council had hitherto accepted responsibility for finding maternity accommodation for cases recommended at their ante-natal clinics for admission to hospital. In view of the definite refusal of the Ministry of permission for them to proceed with the provision of their own maternity hospital consideration was given to the question of the future policy with regard to accommodating such cases. The position had been that, because of the difficulty in obtaining admission of patients referred to the Redhill Hospital from the clinics that patients recommended from the ordinary ante-natal clinics, whether on medical, social or domestic grounds, were found accommodation at various of the London hospitals, the Council accepting responsibility for the payment of the hospital charges. In addition to this type of case, however, were those recommended for admission by the consultants, either when seen at the consultant ante-natal clinic or when they had been summoned in consultation by the patients' medical practitioners. The decision adopted as to future policy was:—1. That except cases recommended by any of the consultant gynaecologists for admission to hospitals under the consultant's care all maternity cases requiring institutional treatment be referred to the Middlesex County Council. 2. That the existing arrangements in regard to the consultant gynaecologist's cases be continued. 3. That in cases where the medical officer of health is of opinion that institutional treatment is necessary and patients are refused hospitalization by the Middlesex County Council the medical officer of health be authorised to arrange for their admission to hospital as heretofore.

## POST-NATAL SERVICES.

### Post-natal Examination.

133 women attended the clinic for post-natal examination, making altogether 219 attendances, while a further three were examined under the general practitioner ante-natal scheme.

### Puerperal Infection.

(a) Consultant services : The consultant was summoned to two patients suffering from puerperal pyrexia and to three patients shortly after confinement.

(b) Hospital services : Any cases of puerperal infection requiring hospital treatment are removed either to the London County Council North Western Hospital, or to the Isolation Block of Queen Charlotte's Hospital. During the year nineteen patients were removed.

(c) Home Nursing : Two patients suffering from puerperal infection were nursed under the Council's arrangements by the staff of the local District Nursing Association.

## BIRTH CONTROL CLINIC.

Fortnightly sessions of this clinic were held throughout the year. 188 women, of whom 130 attended for the first time, made a total of 362 attendances.

In addition there were four cases to whom no advice was given as there were no medical grounds justifying such action.

## MIDWIVES ACTS, 1902-1926.

The number of midwives who, during the year, notified their intention to practise in this district was 64. Of these 10 removed from the district or discontinued practice, leaving 54 in practice at the end of the year. Of the total number 26 were resident in the district and carried on a domiciliary practice almost entirely limited to this area ; 17 were engaged in local maternity homes, most of them entirely, though a few also carrying on a very limited domiciliary practice ; and 21 were resident in adjoining areas but attended some cases in this district.

The number of births attended in the district by midwives who gave notice of their intention to practise was 1,919. In 977 cases the midwife was in attendance as a midwife and in the remaining 942 as a maternity nurse. Of the confinements occurring in private houses in the district 1,145 were attended by local midwives whose practice is limited to domiciliary work (746 as midwives and 399 as maternity nurses) and 95 by midwives from adjoining areas (52 as midwives and 43 as maternity nurses).

At the end of the year there were in practice 26 independent midwives carrying on a domiciliary service. These between them

attended 246 cases during the year, two having over 40 cases, one 31, one 25, five between 10 and 20 cases, eleven under 10 cases, while six did not attend any.

By the rules of the Central Midwives' Board it is obligatory on midwives to send a notification to the local supervising authority in certain circumstances. During the year the following numbers of notifications were received :—

Sending for medical assistance ... ..	292
Still birth ... ..	11
Death of Infant ... ..	12
Death of Mother ... ..	—
Laying out the Dead ... ..	7
Artificial Feeding ... ..	18
Liability to be a Source of Infection ...	22

Of the 292 summonses to medical practitioners, 37 were on account of some condition during pregnancy, 87 during labour, 114 in the lying-in period and 54 abnormality of the infant.

Of the 37 summonses to a patient during pregnancy, the most frequent was on account of ante-partum hæmorrhage in 15 instances; three were because of post-maturity of the infant and seven because of albuminuria, œdema or toxæmia.

Of the 87 summonses to a patient during labour, the reason given in 45 instances was delayed labour, and in four uterine inertia. Abnormal presentation (including persistent occipito-posterior and breech) accounted for 28, and foetal distress for two. The doctor was summoned on four occasions on account of miscarriage or abortion.

75 of the 114 summonses to patients in the puerperium were on account of rupture of the perineum. Post-partum hæmorrhage, with or without adherence of the placenta, was the reason in ten cases. A raised temperature was the cause in thirteen instances, phlebitis in three and some abnormality of the breast in four.

Of the 54 summonses to infants, 26 were on account of some discharge from the eye, feebleness or asphyxia in 12, developmental abnormalities in 5, and some other abnormal state or condition in 10.

In the Ministry of Health report on maternal mortality it is recommended that the local supervising authority should be empowered to take steps to ensure that the best local obstetric skill is made available in all cases in which midwives are required under the rules of the Central Midwives' Board to call in a doctor. An analysis of the reasons for the summons shows that in many of the conditions for which the practitioners are summoned it is not obstetric skill that is required, and yet to attempt to put on the midwife the responsibility of deciding to which case she can, as by existing practice, summon the practitioner named by the patient and those to whom she must summon someone other than this practitioner, would prove difficult of practice.

Though the local authority is responsible in the first instance for the payment of the medical practitioners' fees for attendance on cases to which they have been summoned by midwives' medical aid notices, in regard to 64 out of the 292 summonses no claim was made on the authority. Of those made about 33 per cent. were for sums of 1 guinea, 25 per cent. for sums of 2 guineas and about 15 per cent. for sums of 5s., the average being about 25s. The authority is entitled to recover all or part of the fee paid out from those responsible for the care of the patient. It has been decided that no claim should be made in respect of attendances on cases of any discharge from an infant's eye, of which there were 26 cases during the year. By the operation of the scale adopted the full charge was claimed from about 70 per cent. of the remaining cases, from about 20 per cent. one-half of the charge was claimed, and in about 10 per cent. of the cases no claim was made.

### MIDWIVES ACT, 1936.

The approval of the Minister of Health was obtained to the Council's proposals regarding the putting into operation of the Midwives Act, 1936. The references in the proposals as to staff were "no arrangement is suggested for the employment of midwives by voluntary organisations, but nothing herein shall prevent the continuance by the Pinner Nursing Association and the Stanmore Nursing Association of the services now rendered by them, but no contribution shall be made thereto by the Council. The Council will themselves employ as whole-time servants, one superintendent midwife and eighteen other midwives, and will from time to time employ such other number of midwives as may be adequate for the needs of the area for the purposes of Section 1 of the Midwives Act, 1936."

The number of eighteen was arrived at in the light of particulars regarding the places in which confinements took place in 1935, and in anticipation of the continued growth of the population being maintained to 1937 which would give about 2,900 births in 1936 and 3,300 in 1937. Applying the ratio of home to total confinements, namely, 1,377 to 2,523 which occurred in 1935, to the 3,300 anticipated births for 1937 gave an estimate of 1,800 births to occur in the patients' own homes in 1937. Because of the high proportion of confinements in this district attended by medical practitioners either with imported midwives or other attendants, the ratio of midwives to be appointed to the number of domiciliary confinements was accepted as one per 100, the difference between this and the number of 80 cases which it is anticipated a midwife can deal with being off-set by the number of cases in which the services of the Council's midwives would not be used. On the basis of one midwife per 100 domiciliary confinements per annum, therefore, it appeared that eighteen midwives would be required to deal with the 1,800 domiciliary confinements. The figures of 1936, however, were a

marked change on those of the previous year, only 1,400 out of the 2,943 confinements occurring in the patients' own homes. Applying this ratio to the 3,300 births anticipated in 1937 gave a figure of domiciliary confinements of only 1,500. For this reason it was decided in the first place to appoint only fifteen midwives out of the eighteen agreed upon.

It was agreed that those appointed in the first place should, as far as possible, be selected from those already in practice in the district. While it was felt that it was desirable that the Council's midwives should be State Registered Nurses as well as possessing the certificate of the Central Midwives' Board it was decided that the double qualification should not be insisted upon in the case of those appointed at the inception of the scheme, but that this condition would operate in the case of those appointed subsequently. Out of the midwives practising in the area, fifteen were appointed and the scheme was put into operation on July 19th.

To smooth the change entailed by the midwives previously engaged in private practice, whose practice was not necessarily limited to this district, coming on the Council's staff it was agreed that all cases already booked by the midwives should continue to be undertaken by them even though the patient was not resident in the district, the charge to be made being that originally agreed as between the midwife and the patient.

It was agreed that a sterile maternity outfit be provided for use at all confinements at the cost of the Council.

The conditions of service of the midwives was given on page 79 of the report for 1936. In addition it was decided that midwives should be entitled to off-duty time in addition to the annual holiday of the equivalent of one day (from 8 a.m. to 11 p.m.) in each seven days, and to one week-end (from Friday noon to Monday 2 p.m.) in each three weeks, such off-duty time to be taken on such days as may be approved by the superintendent midwife. A policy of insurance has been taken out against liability in respect of third party claims under the domiciliary midwifery service. In addition to the standard charge for the services of a midwife, where a midwife acting as maternity nurse assists a medical practitioner in a circumcision case and does the subsequent dressings, a charge of 10s. 6d. is made.

The actual inception of the scheme was effected without too much difficulty, the chief of the difficulties being those arising out of off-duty time which is, at least, not on the ungenerous side, and the attendance of midwives at the ante-natal clinics. Up to this the ante-natal clinics had been staffed by two health visitors. They are, however, essentially the province of the midwife, and arrangements were made for each clinic to be staffed by one health visitor and by one midwife, the hope being that ultimately they will be taken over entirely by the midwives. In this district, however, there are ten sessions held weekly and one fortnightly,

so that it is at times difficult enough to arrange even for one midwife to attend each session. By the operation of the schedule of off-duty time coupled with the necessity for fourteen days' attendance on each patient, it follows that a patient has in attendance on her at least two and sometimes three midwives. While there are, perhaps, some who point to this as one of the disadvantages of the local authority's service, it seems that many more definitely favour the scheme as under it they feel that in no circumstances will they be left without the care of a midwife, a point which apparently used to be a source of worry to some who had only independent midwives and who could not be sure that they would be at their service when required. The fifteen midwives work in five teams of three. This arrangement permits of there ordinarily being one stand-by for calls.

Between July 19th and December 31st, 437 patients were attended to by the Council's midwives. Of the 294 attended by the midwives in their capacity as midwife 126 were brought over by the staff on their engagement, 36 were attended at full cost, to 99 some rebate on the charges was made and 33 were attended free. Of the 143 attended by the midwives in their capacity as maternity nurse 90 were brought over, 42 were attended at full cost, to ten some rebate was made and one was attended free.

This 437 as the number of cases is less than the number that could have been taken in the time by the staff appointed. This fact, however, does not indicate that too many were appointed. In the first place it was necessary to move a few of the staff to other addresses and these, naturally, would take some time to become known in their new districts. Then the surrender of the certificates by some under the provisions of the Act will reduce the number of cases dealt with by those other than the Council's staff. Actually in the month of December 102 patients were attended to, the monthly potential of the staff of fifteen at an average of eighty cases per year being one hundred.

There are those who are disposed to criticise the Act, maintaining that merely to provide better salaries, more off-duty time and fewer cases to be cared for will not effect the aims of the Act, namely, an improved midwifery service. There is, however, some immediate benefit accruing from the operation of the Act, namely, the elimination of the pin-money midwife who is unable, because of the small number of cases she attends, to maintain the skill she acquired in training, and the bringing into the health service of those carrying out the practice of midwifery. Also, the restriction in the number of cases to be attended will avoid that hurrying which must inevitably have occurred at times in the life of an independent midwife carrying on a successful practice where a number of confinements occur within a short interval of time. It is hoped, however, that the ultimate benefits from the operation of the Act will be more far-reaching than these immediate effects. What is required is the general raising of the standard of the profession of midwifery so that it will prove attractive as a profession. If it is made

attractive there should be no dearth of suitable applicants, and one can look to the time when the general standard of the entrants can be raised without this resulting in a shortage in the profession, and a lengthening in the period of training.

### NURSING AND MATERNITY HOMES.

Particulars of the registered homes in this district were given in the report for the year 1935.

The following homes were registered for the first time during the year :—“ Maitlands,” Marsh Road, Pinner, for the reception of six maternity and four other cases ; “ Summerland,” Pinner Road, for the reception of three maternity cases ; Lincoln House, High Street, Harrow-on-the-Hill, for the reception of not more than ten chronic patients. “ Parkside,” Alverston Avenue, Kenton, was previously registered for the reception of three chronic cases. Owing to the limited accommodation it was decided to amend the registration to a maximum of three chronic cases with a proviso that all the patients receiving treatment in the home at any one time should be persons of the same sex. Before the end of the year the keeper of the home removed from the district.

The Council again granted exemption from registration for a period of one year to the two voluntary hospitals in the area, while the Christian Science Nursing Home has been granted exemption by the Minister of Health.

Nursing-homes are inspected every six months, but those which are registered for the reception of maternity cases every three months.

### MILK ISSUES.

Reference has already been made to the modification in the issue of milk to expectant and nursing mothers, both in the amount granted and in the scale on which such grants are based. According to the first report of the Advisory Committee on Nutrition the average daily consumption of milk for children should be from one to two pints. It was decided, however, that the existing arrangement by which a grant to infants is normally restricted to one pint per day, but is, in special cases, upon the recommendation of the clinic medical officer, increased to  $1\frac{1}{2}$  pints, is adequate. The existing scheme, however, was amended as to the limit of income, bringing the scale of income on which grants of milk are made to weaned infants and toddlers into line with that for grants to expectant and nursing mothers. Early in the year it had been agreed that the travelling expenses of the wage-earner of the household be taken into consideration in arriving at the net income of the family.

The number of issues has steadily increased, the figure in December, 1937, being 438 compared with 352 for the corresponding month in 1936 and 236 in the previous year. Of this number 378 grants were for pasteurized milk and 60 for packet milk.



Of the 438 grants in December 57 were to expectant mothers and 381 were to those attending the infant welfare centres. 135 of these were in respect of infants under one year of age (25 under 3 months, 39 3-6 months, 41 6-9 months and 30 9-12 months); 130 1-2 years of age; 81 2-3 years of age; 23 3-4 years of age; and 12 over 4 years of age.

Analysis of the findings of a group of infants attending the infant welfare centres showed that of those under three months of age 66 per cent. were entirely breast-fed, 9 per cent. partly breast-fed and 25 per cent. artificially fed. The corresponding figures for those of ages 3-6 months were 44, 13 and 43; and those 6-9 months were 20, 30 and 50.

The following is a summary of particulars of the milk issues:—

Total quantity of milk supplied			
by the Council to expectant	(a) Liquid		
and nursing mothers and	Milk	15,197	gals.
young children during the	(b) Dried		
period 1st Jan., 1937 to 31st	Milk	31,637	lbs.
December, 1937.			
Total cost of above	(a) £1,612 17s. 9d.		
...	(b) £2,358 14s. 11d.		
...			
	Total:	£3,971 12s. 8d.	
Receipts	(a) Nil		
...	(b) £2,410 8s. 3d.		
...			
...			

### CLINIC BUILDINGS.

As the result of negotiations with the Middlesex County Council it has been decided to erect buildings which will comprise branch libraries, public halls and rooms, maternity and child welfare clinics and school clinics at three sites, namely, Cecil Park, Pinner, Malvern Avenue, South Harrow, and Honeypt Lane, Stanmore. The clinic to be erected by the Council at the Kenmore Park Estate will provide accommodation for maternity and child welfare services and for public meetings. The Public Health Committee agreed that a portion of the Council's depot at Bessborough Road would be suitable as a site for a clinic for maternity and child welfare purposes.

In anticipation of the demolition of "Tyneholme" with a view to the erection on the site of the central clinic, premises were acquired at 76, Marlborough Hill, and in July the maternity and child welfare services previously carried out at "Tyneholme" were transferred there. In this building dental sessions are held by the school medical service, and light and massage treatment clinics are held by the Harrow and Wealdstone Hospital.

Elmwood Clinic has been adapted for use as a dental clinic, the school authorities holding up to seven sessions a week there.

## SCHOOL MEDICAL SERVICES.

The following information regarding the school medical services in the district has been kindly supplied by the County School Medical Officer.

### ELEMENTARY SCHOOLS.

#### Medical Inspection.

The number of children on the roll at December 31st, 1937, was 17,917. The following are the particulars of children inspected during the year :—

Routine Medical Inspections	...	...	...	5,644
Entrants	...	...	...	2,329
Intermediates	...	...	...	1,431
Other ages	...	...	...	413
Leavers	...	...	...	1,471
Special Inspections	...	...	...	1,968
Re-inspections	...	...	...	1,939

#### Treatment of Minor Ailments.

The attendances at the clinics established for the treatment of minor ailments were :—

Roxeth Hill Council School, South Harrow	...	1,815
Broadway Clinic, Wealdstone	...	3,131
Whitchurch Institute, Stanmore	...	632

#### Treatment of Visual Defects.

641 children were refracted (including 146 re-tests) at the ophthalmic clinic held at the Broadway Clinic, Wealdstone, and 53 other children examined. Spectacles were prescribed for 410 children and changes of lens in a further 35, while repairs to the glasses of 101 children were arranged. Four cases of squint were referred to hospital for operation, and four children suffering from other diseases of the eye were sent to hospital for treatment.

#### Dental Inspection and Treatment.

Particulars of the routine dental inspection of elementary school children are set out below :—

AGES.											TOTAL
5	6	7	8	9	10	11	12	13	14	15	
666	1,164	1,091	958	922	869	1,105	726	527	66	3	8,097

Of this number 5,688 were found to require treatment.

## SECONDARY SCHOOLS.

### Medical Inspection.

There are four secondary schools in the district and one Junior Art School. The following are the particulars of the medical inspection carried out :—

AGES.								
10	11	12	13	14	15	16	17	TOTAL
3	132	173	44	19	168	62	3	604

### Treatment of Defective Vision.

75 children were refracted at the ophthalmic clinic (including 4 re-tests) of whom 56 were supplied with spectacles. 6 changes of lens were also provided and repairs to glasses carried out in five instances.

### Dental Treatment.

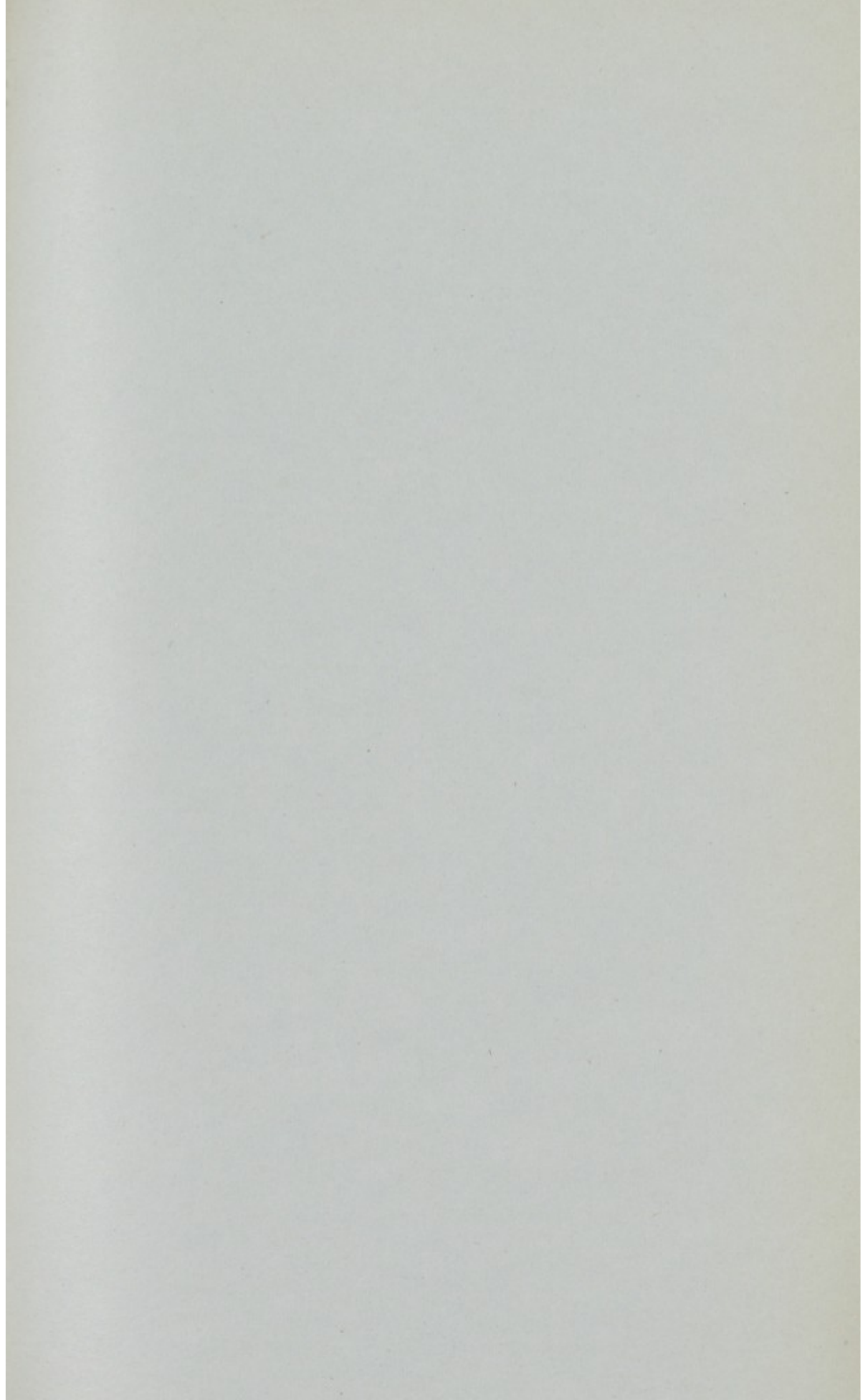
Particulars of the routine dental inspection of secondary, etc., school children are set out below :—

AGES.									
11	12	13	14	15	16	17	18	19	TOTAL
87	292	317	316	269	154	42	3	1	1,481

Of this number 818 were found to require treatment.

CAUSE OF DEATH	Under 1 year		Over 1 and under 2		Over 2 and under 5		Over 5 and under 15		Over 15 and under 25		Over 25 and under 35		Over 35 and under 45		Over 45 and under 55		Over 55 and under 65		Over 65 and under 75		Over 75		TOTAL		Registrar-General's Allocations			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1. Typhoid fever ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Measles ... ..	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
3. Scarlet fever ... ..	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	2
4. Whooping cough ... ..	3	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	3	4	
5. Diphtheria ... ..	—	—	—	—	—	—	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	3	1	3	
6. Influenza ... ..	2	—	1	2	1	—	—	—	2	1	1	—	2	1	4	1	4	4	3	9	7	5	27	23	28	23		
7. Encephalitis lethargica ... ..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	
8. Cerebro-spinal fever ... ..	1	—	—	—	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3	1	4	1	
9. Respiratory tuberculosis ... ..	—	—	—	—	—	—	—	—	3	16	7	11	8	8	8	1	3	3	5	1	—	—	—	34	40	35	40	
10. Other tuberculosis ... ..	1	1	—	—	2	—	2	—	2	—	1	1	—	—	—	3	—	—	—	—	—	—	—	8	5	9	5	
11. Syphilis ... ..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	
12. General paralysis of the Insane	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	2	—	—	2	—
13. Cancer ... ..	—	—	—	—	—	1	—	—	1	1	1	1	6	9	15	20	31	24	31	46	13	21	98	123	99	127		
14. Diabetes ... ..	—	—	—	—	—	—	1	1	—	—	—	—	—	—	1	—	—	4	3	2	2	2	7	9	7	10		
15. Cerebral haemorrhage ... ..	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	2	8	7	9	13	3	14	21	37	21	37		
16. Heart disease ... ..	—	1	1	—	—	—	—	2	3	1	3	6	6	2	12	9	25	23	38	40	28	57	117	141	127	142		
17. Aneurysm ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—	—	—	1	2	2	2	2	2	
18. Other circulatory diseases ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	10	4	6	8	14	11	31	24	29	28		
19. Bronchitis ... ..	2	1	—	—	—	1	—	—	—	—	1	—	—	—	3	5	2	6	4	5	6	18	18	17	15			
20. Pneumonia ... ..	9	7	—	2	2	2	1	3	—	—	1	2	3	1	7	4	3	1	5	13	7	14	38	49	37	46		
21. Other respiratory diseases ... ..	—	—	—	—	1	1	—	—	—	—	—	3	1	—	—	—	—	—	1	1	—	1	5	4	4	6		
22. Peptic ulcer ... ..	—	—	—	—	—	—	—	—	—	—	1	—	2	—	3	2	8	—	1	—	1	1	16	3	16	3		
23. Diarrhoea (under 2 years) ... ..	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	3		
24. Appendicitis ... ..	—	—	—	—	—	—	—	—	—	1	2	—	—	2	1	—	1	1	1	1	—	—	4	6	4	6		
25. Cirrhosis of liver ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	1	—	4	—	4	—		
26. Other diseases of liver ... ..	—	—	—	—	—	—	1	—	1	—	1	—	—	—	1	—	—	—	1	—	2	—	7	—	7	—		
27. Other digestive diseases ... ..	1	—	—	—	—	—	—	1	1	2	1	—	1	3	1	3	1	3	5	1	4	14	14	14	14	14		
28. Nephritis ... ..	—	—	—	—	—	—	1	—	—	2	3	7	5	3	3	3	2	7	2	4	5	26	21	26	21			
29. Puerperal sepsis ... ..	—	—	—	—	—	—	—	2	—	2	—	3	—	—	—	—	—	—	—	—	—	—	—	7	—	7	—	
30. Other puerperal causes ... ..	—	—	—	—	—	—	—	—	1	—	4	—	1	—	—	—	—	—	—	—	—	—	—	6	—	6	—	
31. Congenital debility ... ..	34	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34	30	34	30		
32. Senility ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	6	12	32	16	38	16	37	—	—	
33. Suicide ... ..	—	—	—	—	—	—	—	—	—	1	1	3	1	1	1	4	1	4	1	—	—	—	13	5	13	5	—	—
34. Other violence ... ..	4	—	—	2	—	—	3	3	8	1	11	1	2	1	2	2	2	5	5	1	1	4	38	20	37	18	—	—
35. Other defined diseases ... ..	6	1	—	—	—	1	4	5	4	6	3	4	5	13	7	7	5	9	6	6	9	3	49	55	48	58	—	—
36. Causes ill-defined ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ... ..	65	44	2	7	6	8	12	20	25	32	37	40	49	52	69	62	119	91	140	160	108	183	631	700	639	709	—	—





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