

[Report of the Medical Officer of Health for Dagenham].

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The Urban District Council of Dagenham



1926

ANNUAL REPORT

OF THE

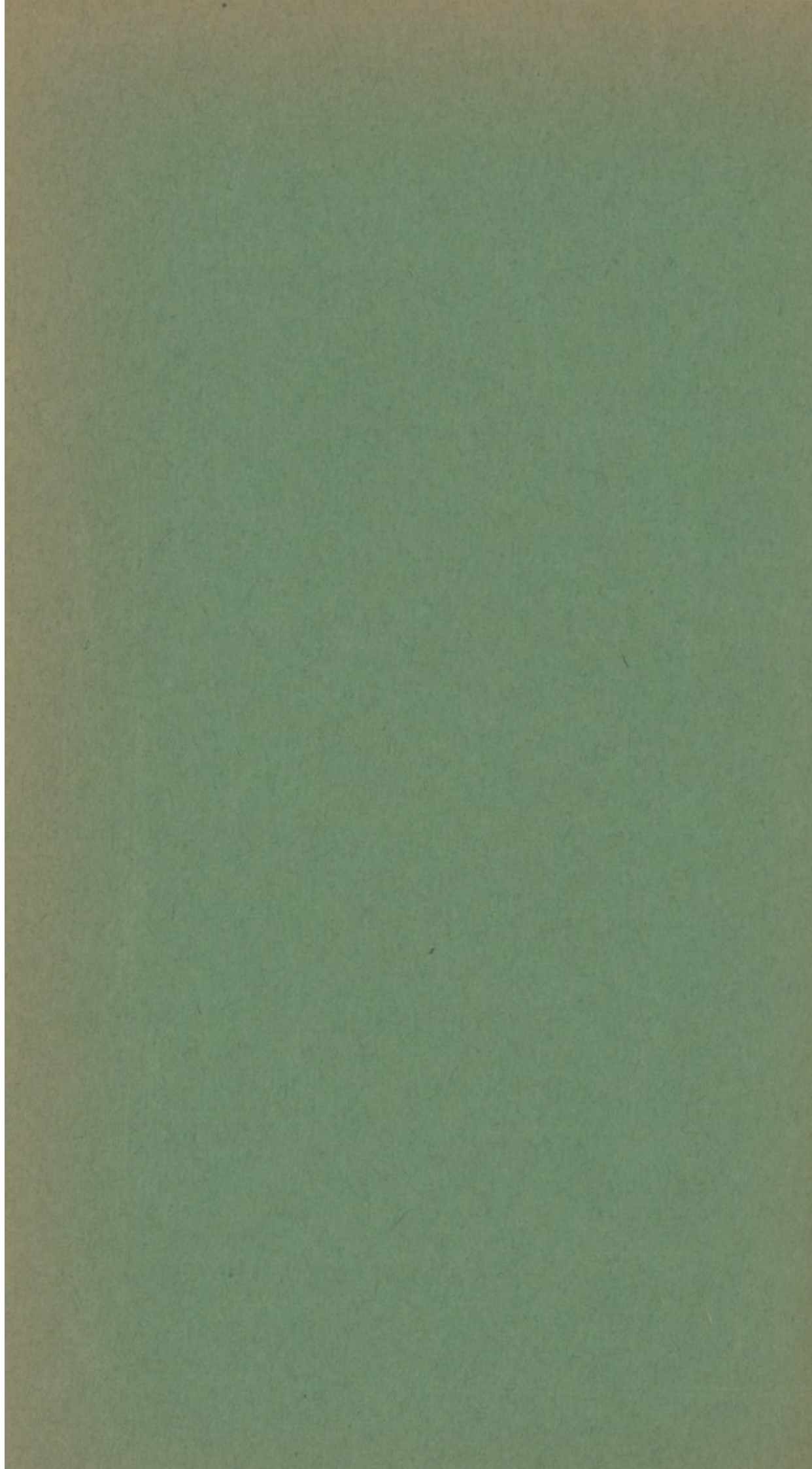
MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1928

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

BARRISTER-AT-LAW.



The Urban District Council of Dagenham



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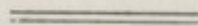
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MEMBERS OF THE COUNCIL.

Councillor C. DELLOW, J.P., Chairman.

„ H. R. HILL, Vice Chairman.

„ P. G. ASHTON

„ A. E. BALE

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„ A. ROGERS

„ (Mrs.) M. ROTHWELL,

Chairman of Public Health and
Maternity and Child Welfare
Committees.

„ G. B. SMITH

„ (Mrs.) L. TOWNSEND

„ J. W. H. TYLER

To the Chairman and Members of the Urban District Council of Dagenham.

Mr. Chairman, Ladies and Gentlemen,

I beg to submit my report on the health and sanitary conditions of the district for the year 1928.

The growth of the L.C.C. Becontree Housing Estate continued with great rapidity, an additional 4,000 houses having been erected, making the total number in this district 13,650. This was the year of greatest expansion of the estate in the Urban District, in which the full development should be reached within a few months.

To cope with the needs of the increasing population a number of new Infant Welfare Centres and Ante-natal Clinics have been opened. It is hoped that in the near future there will be erected two Combined Treatment Centres which will also be available for the services provided by the Essex County Council.

The Council has been alive to the needs of the district, and through the Dagenham Act will secure for the inhabitants the necessary land for Parks and Open Spaces; also land for housing sites and Cemeteries.

Consideration is also being given to new methods of treatment of the sewage and improvements in the disposal of house refuse.

The accommodation at the Isolation Hospital is being extended, and it is anticipated that there will be a new large General Hospital available in the neighbourhood, with probably a local central Out-Patients Department in this area.

In the report an attempt has again been made to allocate the population to the various age groups. These results confirm the findings of last year's analysis shewing again a paucity of persons over 45 in the Estate houses and a marked diminu-

tion of expected numbers of age group 15 to 25. Similar checks as applied before confirm the accuracy of this allocation. For instance, the number of individuals under one year in a normally distributed population of this size, would be 1,120. The assumed distribution gives 1,850, whereas the actual number of births registered was 1,792. Again the children of school age in a normally distributed population would be 1,120. The theoretical number is 1,850, whereas actually at the mid-year there were 1,650 at school. Further, the last L.C.C. census of the Estate shewed that 47% of the population were under 15. In the assumed distribution this number is 46% as compared with the normal of 25%.

These unusual conditions result in the work in connection with the Maternity and Child Welfare, and School Services and also the incidence of infectious diseases in this area being equal to that of an area whose population is from one-fourth to one-third greater.

I desire to thank the members of the Council and administrative staff for the help they have given me in the past year.

I have the honour to be,

Mr. Chairman, Ladies and Gentlemen,

Your obedient servant,

E. W. CARYL THOMAS.

Public Health Offices,
Becontree Avenue,
Chadwell Heath.

29th May, 1929.

GENERAL STATISTICS.

Area (exclusive of tidal water and foreshore), 6,556 acres.					
Population Census 1921	...	...	...	...	9,127
Registrar General's Estimate 1928 (mid-year)					67,500
No. of structurally separate dwellings (Census 1921)					1,871
No. of families (Census 1921)	...	...	...	...	1,957
Rateable value (mid-year 1928)	...	...	...	...	£263,468
Sum represented by a penny rate	...	...	...	...	£1,090

Occupations of Inhabitants.

The largest of the local occupations is building. Towards the end of the year the rate of building of the Estate houses slowed down, resulting in a large reduction in the number of men employed. The year saw the opening of another factory in the locality, and the long awaited hope of the establishment of works for the manufacture of Ford cars is shortly to materialise. The site is about 300 acres and it is anticipated that when fully developed in about three year's time the factory will give employment to some 15,000 men. Others works will also probably develop here, and the district will change from one in which most of the workers are occupied outside the locality, to one which will probably attract outside labour.

Extracts from Vital Statistics for the Year.

Births.

	Total.	Male.	Female.
Legitimate	1,745	886	859
Illegitimate	47	32	15
	1,792	918	874

Birth rate 26.5

Deaths.

492	285	207
-----	-----	-----

Death rate 7.3

Number of women dying in, or in consequence of, childbirth	
from Sepsis	...
other causes	...

Deaths of infants under one year of age per 1,000 births:—	
Legitimate 70.4	Illegitimate 170.2
	Total 73.1

Deaths from Measles (all ages)	...	21
„ „ Whooping Cough (all ages)	...	9
„ „ Diarrhoea (under 2 years of age)	...	28

Population.

The Registrar General's figure of 67,500 is somewhat below the local estimate, which for the mid year was taken as 72,000, a figure arrived at on the assumption that the average population per house was 5.

This average is higher than that found actually to exist at the time the last census was taken by the L.C.C. of their Estate, an increase which is expected when the age distribution of the population is taken into consideration. In general the average per house is maintained at a fairly constant level, a rise due to births being balanced by the deaths and marriages. In this population each of these factors is abnormal. The population of young adults is resulting in a high birth rate, and also a low death rate, whilst the relative paucity of those at marriageable age accounts for a low marriage rate. The resultant of these opposing factors causes the average population per house to rise steadily. It is found that the average per house on the older sections of the estate is higher than in the newer portions.

The deaths occurring in the district are classified according as to whether the person was:—

	over 45.	under 45 years of age.
1. Resident of Estate House ...	67	289
2. Resident of house erected prior to 1921	77	32
3. Resident of house erected since 1921 (excluding 1)	13	14

The distribution of deaths during the year in the houses erected prior to 1921, agrees closely with that holding for England and Wales, namely, 32% of total deaths under 45, and would, on this basis represent the deaths in a population of 8,800, agreeing fairly with the 1921 census of 9,127. This would indicate that for the past year there was no abnormal influence affecting the death rate in this locality.

Accordingly, therefore, the 289 deaths of persons under 45 occurring in the Estate houses, should represent the total population of some 77,000, of whom 55,400 will be under 45 and 21,600 over 45.

Corresponding to 289 deaths amongst persons under 45 in a normally distributed population, there would be amongst those of over 45, 614 deaths. Actually in the Estate houses there occurred in this age group only 67 deaths; that is persons over 45 are only 10% represented on this Estate. The population

would therefore be 55,400 plus 10% of 21,600 = 57,000. That is five to the house of those let on 2nd July, 1928.

The deaths in the group 15 to 25 were only 17 against an expected 35, further evidence of a relative paucity at this age.

The following table shows the distribution of the population of 67,500, being roughly 52,500 in the Estate houses, with this abnormal age distribution, and 15,000 being assumed to be normally distributed. The last column shows a population of 66,000 divided out according to the normal age distribution.

TABLE I.

Ages.	Normal distribution.	Allocation in Estate Houses.	Presumed distribution in Entire Area.	Normal distribution.
0/1	250	1,600	1,850	1,120
1/5	1,000	6,300	7,300	4,250
5/14	2,500	16,000	18,500	11,200
15/24	2,650	5,200	7,850	12,000
25/44	4,300	20,500	24,800	19,350
45 & up.	4,050	2,650	6,700	18,220
	14,750	52,250	67,000	66,140

Births.

1,792 births were registered during the year grouped as follows in respect of sex and legitimacy.

		Males.		Females.		Total.
Legitimate	...	886	...	859	...	1,745
Illegitimate	...	32	...	15	...	47
		918	...	874	...	1,792

The birth rate per 1,000 of population was thus 26.5 compared with 16.7 for England and Wales. The fertility rate is 105 compared with 106 for England and Wales for 1927 for the same ages.

The illegitimate rate is 2.92%. The figure for this district for last year was 2.1 and for England and Wales in 1925, 4.07.

Marriages.

Marriages which actually took place in the Dagenham					
Urban District ...	...	...	...	...	108

Marriages of Dagenham Residents solemnized at the Registry Office, Romford:—

Both parties belonging to Dagenham ...	...	57
Male only " " " "	...	19
Female only " " " "	...	21

Death Rate.

Total deaths in district ...	...	323
Transfers out of district ...	...	62
Inward transfers ...	...	231
Deaths of residents ...	...	492

Of the 62 deaths occurring in the district of non-residents 49 took place at the West Ham Sanatorium and 6 in the Isolation Hospital.

Of the 231 deaths of local residents taking place outside this area, most occurred in institutions. Of these 145 occurred at Oldchurch Hospital, 14 at the London Hospital, 10 at Brentwood Mental Hospital, 7 at Queen Mary's Hospital, Stratford, 6 at the London Fever Hospital, 5 at Great Ormond Street Children's Hospital, and 4 each at the Ilford Emergency and St. Bartholomew's Hospitals.

492 deaths in a population of 67,500, represents a death rate of 7.29 as compared with that of England and Wales of 11.7. This year 30.9% of the total deaths occurred in persons over 45, as compared with 36.1 occurring last year, and with a figure of 68 for England and Wales in 1927, showing that the influence of the factors making for a low death rate, namely, the introduction of a low age population more than counterbalances the factors tending to raise the death rate to normal, namely, the gradual progressive changes to a normal age distribution through persons passing from the lower-than-average to the higher-than-average group. The explanation of the fact that in spite of this, the death rate figure is raised, may be either that the figure taken as representing the population for this year is too low, or that the one for last year was too high—the death rate based on local estimated figures actually does show a slight fall.

TABLE II.

[illegible]

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

Hospitals provided or subsidised by the Local Authority or by the County Council.

a. (1) **Fever.**

Rush Green Isolation Hospital maintained by the Romford Joint Hospital Board which consists of representatives from the Urban District Councils of Dagenham, Hornchurch and Romford and the Rural District Council of Romford.

The lack of accommodation at the hospital made itself felt throughout most of the year. Of all the cases of Scarlet Fever only one-third were admitted, whilst on one occasion it was necessary for a case of Diphtheria to be nursed at home for two days prior to removal.

In June 1928 a public enquiry was held in connection with the proposed extension to the hospital, where provision is to be made for an additional 100 beds. It is not likely, however, that any beds will be available to relieve the conditions which will hold next autumn, when it is probable that an even smaller proportion of Scarlet Fever cases will obtain admission, and it may even happen that some Diphtheria patients may be required to remain at home.

By a Provisional Order of 17/5/27, confirmed by Parliament on 22/12/27, the representation on the Joint Hospital Board was altered, five persons representing Dagenham out of a total of 15, instead of as previously, 2 out of 8. This change took effect from 1/4/28.

(2) **Smallpox.**

The Joint Hospital Board, with other districts, has an arrangement with the West Ham Corporation for the reception of Smallpox cases at Orsett or Dagenham Hospitals.

The other districts are East Ham, Ilford, Leyton, Walthamstow Joint Hospital Board, Barking, Billericay, Wanstead, Epping (Rural and Urban District), Ongar, Brentwood and Loughton. In spite of the number of cases occurring, it was not necessary, in 1928, to make use of the Dagenham Hospital.

b. (1) Tuberculosis.

The following table is a list of the hospitals at which the Essex County Council, as the Tuberculosis Authority, provides beds.

Children.

Pulmonary.

		Type of case.
Sible Hedingham ...	A	Non-infectious
Church Army San.		
Farnham ...	C Boys 12-16	Doubtful and non-infectious
East Anglian San.		
Nayland ...	B Male & Female	Infectious
Victoria Park Hospital	B	Requiring special investigation

Non-Pulmonary.

Sible Hedingham ...	A	Glands
High Beech Hospital	A	Bones, joints and glands
Other Places.		
Alton ...	C	
Princess Mary's Hospital, Margate ...	C	

Adults.

Pulmonary.

Harold Court ...	A M	Early
Black Notley ...	A F	Early
Colchester Isolation Hospital ...	B F	Intermediate
Chingford Isolation Hospital ...	B F	Advanced.
St. Columba's Swiss Cottage ...	B F	Very advanced
St. Joseph's Hospice	B M and F	Moribund
Hermitage San. I. of Wight ...	B M	Early
Marillac San. ...	B F	Moderately advanced
London Fever Hospital, Islington ...	B M	Advanced.
Victoria Park Hospital	B	Special investigation

Adults—Pulmonary. (Continued).

			Type of case.
Ventnor	...	C	
Midhurst	...	C	
Eversfield Hospital	...	C	
Preston Hall	...	C M	Generally ex-service
Papworth	...	C M	Generally ex-service
Burrow Hill, Frimley	C M 15-17		Treatment & Training

Non-Pulmonary.

Ilford Isolation Hos- pital	...	B M
Chingford Isolation Hospital	...	B F
St. Anthony's Cheam	C M and F	
Other institutions, viz:—		
Royal Sea Bathing Hospital, Margate	C	

A. County Institution.

B. Definite number of beds reserved by County.

C. No reservation of beds.

Total about 480 beds.

(2) Maternity.

Maternity cases from this district are admitted, by arrangement with the Council, to Oldchurch Hospital, and Queen Mary's Hospital, Stratford.

Puerperal cases are admitted to Oldchurch Hospital.

(3) Children.

The following Table shews the hospitals at which the Council has arranged that certain cases shall be treated.

Tonsils and Adenoids.—Queen Mary's Hospital. Oldchurch Hospital if requiring in-patient treatment.

Ophthalmia.—St. Margaret's Hospital, Hampstead.

Pneumonia.—Oldchurch Hospital.

(4) Orthopædic.—Royal National Orthopædic Hospital for in-patient treatment.**Institutional provision for unmarried mothers, illegitimate infants and homeless children.**

The only provision of this nature is that made by the Romford Guardians at their Institution.

Ambulance Facilities.

(a) For Infectious Cases.

A motor ambulance provided by the Joint Hospital Board is stationed at the Isolation Hospital at Rush Green.

(b) For Non-Infectious cases and accidents.

The Morris Ambulance maintained by the Council is stationed at the Fire Station, Beacontree Heath. During the course of the year,

the number of accident cases=	119
" " " other " =	338
" " " journeys made=	655
" " " miles run ...=	5,652
calls on other ambulances ...=	7

In April it was decided to make a charge of 7/6 within the Urban area and 15/- outside, except for non-residents who would be charged 1/- per mile. In December these rates were altered—bonafide ratepayers and inhabitants of the district being conveyed free to Oldchurch and to Ilford Emergency Hospitals, and at a charge of 7/6 to any London Hospital; Non-residents to be charged 1/3 per mile.

Clinics and Treatment Centres.

The following Infant Welfare Centres are maintained by the Council:—

CENTRE.	Held	Day	Average Attend-ances.	Average New Cases.
Congregational Church Hall, Mill Lane, Chadwell Heath	Weekly	Monday, p.m.	31	2
Church Institute, Burnside Road, Chadwell Heath	Weekly	Friday, p.m.	62	8
Transferring the Tues. Session in Oct. 1928, to	Bi-weekly	Tuesday p.m.	58	7
St. Mary's Mission Hall, Grafton Road, Chadwell Heath	Weekly	Tuesday, p.m.,	77	9
Wesleyan Chapel, Heathway, Dagenham	Weekly	Wednesday, p.m.	84	12
from Nov. 1928	Bi-weekly	Thursday, a.m.	30	2
Labour Institute, Church Elm Lane, Dagenham	Weekly	Thursday, p.m.	62	4
from Feb. 1928				

The following Ante-natal clinics are held:—

Church Institute, Burnside Road. Chadwell Heath (after June 30 till October) when it was transferred to St. Mary's Mission Hall, Grafton Road, Chadwell Heath	Fortnightly Weekly	Tuesday, a.m.	10	4
	Weekly	Tuesday, a.m.	3	1
Wesleyan Chapel, Heathway Dagenham	Weekly	Wednesday, a.m.	12	5

The School Clinic maintained by the Essex Education Committee was transferred from the premises at Finnymore Road, Dagenham, in April, to 25, Alibon Road, Dagenham. It is open on Monday, Tuesday and Wednesday mornings, with a doctor in attendance on Tuesdays.

A Tuberculosis visiting station, maintained by the Essex County Council, is held at the same address as the school Clinic, being open on Thursday morning and afternoon. The Ilford Tuberculosis Dispensary at 38, Oakfield Road, also maintained by the County Council is more convenient for persons in the northern part of the district. This is open for adults on Monday 7.30, Tuesday 3 o'clock, Friday 4 o'clock, and for children on Wednesday at 10 o'clock.

There are no Treatment Centres for Venereal Diseases in this area, which is included in that for which provision is made in the London and Home Counties scheme.

Public Health Officers of the Local Authority.

Medical Staff.

*The Medical Officer of Health is a part-time officer of the Council, the remainder of his time being taken up as Assistant County Medical Officer for the same area.

The following are part-time medical officers in charge of the Maternity and Child Welfare clinics.

*Sybil Pratt, M.R.C.S., L.R.C.P.

*Eleanor Henderson, M.B., Ch.B., D.P.H.

*Proportion of salary contributed under Public Health Acts, or by Exchequer grants.

Health Visitors.

- * M. A. S. Batty, General trained: Cert. C.M.B., H.V's Certificate
- * I. Richardson, General trained: Cert. C.M.B., H.V's Certificate

In February, 1928, two additional Health Visitors commenced duties:—

- * A. L. Hinton, Children's training. H.V's Certificate C.M.B.
- * M. Smith, General trained, C.M.B.

Up to February, 1928, the Local Authority's Health Visitors were confined to Maternity and Child Welfare Work. Since that date the four have been acting, in addition, as school nurses for the district, devoting roughly one-third of their time to school work.

Sanitary Inspectors.

- * G. T. Carter, Senior Sanitary Inspector.
Certificate of Royal Sanitary Institute;
Meat Inspector's Certificate.
- * J. A. Dawson, Second Sanitary Inspector.
Certificate of Royal Sanitary Institute;
Meat Inspector's Certificate.

Clerical Staff.

- Two full-time clerks.
- * One full-time clerk dealing with foodstuffs at Infant Welfare Centres.

Professional Nursing in the Home.

(a) General.

Two nurse-midwives are maintained by the Dagenham District Nursing Association. Grants are paid to the Association by the Essex County Council in respect of Maternity, School work and Tuberculosis nursing.

(b) For Infectious Diseases.

The same arrangement continues as to the home visiting of Scarlet Fever cases by the Health Visitors.

* Proportion of salary contributed under Public Health Acts or by Exchequer grants.

Midwives.

There are no midwives in the district employed by the Local Authority. 19 midwives live in the district with their practice confined almost entirely to this area. (This figure includes one bona fide midwife).

Four midwives live on the boundaries of the district and have some cases here.

Legislation in Force.

The following bye-laws were made by the Romford Rural District Council and have been taken over by the Dagenham Urban District Council:—

Date of Confirmation.

Cleansing of Footpaths	January 1885
Removal of House Refuse	January 1885
Cleansing of Earth Closets, etc.	January 1885
Common Lodging Houses	December 1901
Nuisances	May 1902
Houses Let in Lodgings	June 1902
Tents, Vans, Sheds, etc.	March 1908

Regulation of Certain Offensive Trades.

Animal Charcoal Manufacturer; Blood Boiler; Blood Drier; Bone Boiler; Cat Gut Manufacturer; Fat Melter or Fat Extractor; Fish Skin Dresser; Glue Maker; Size Maker; Gut Scraper; Leather Dresser; Manufacture of Manure from fish offal or other putrescible animal matter; Soap Boiler; Tallow Melter; Tanner and Tripe Boiler.

Confirming Order July, 1911.

Bye-laws confirmed August, 1912.

Rag and Bone Dealer; Fish Fryer.

Confirming Order 25th March, 1927.

Bye-laws confirmed 26th September, 1928.

Slaughter Houses (Revised).

26th September, 1928.

New Streets and Buildings.

July, 1925.

Regulations with respect to Dairies, Cowsheds, etc.

February, 1908.

Adoptive Acts.

Public Health Act (Amendment) Act 1890 (Part III—5/12/27.

Infectious Disease (Prevention) Act 1890.—1/3/23.

Private Street Works Act, 1892.

Public Health Act (Amendment) Act 1907 (except Sections 19, 61, 78, 79, 82/86 and 92/94.)

Small Dwellings Acquisitions Acts.

Public Health Act 1925.

Local Acts.

Dagenham Urban District Council Act, 1928 (3/8/28).

The purpose is to enable the compulsory acquisition of scheduled lands.

(a) For purposes of Public Walks and Pleasure Grounds.

(b) For purposes of Cemeteries, with reservations of portions for playing fields, for municipal purposes, etc.

Under this Act the following areas have been acquired.

Open Spaces.

Chadwell Heath Ward ...	...	20 acres
Beacontree Heath Ward ...	...	124 „

Housing Sites.

Beacontree Ward ...	...	11 „
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Cemeteries.

Eastbrook End ...	...	26 „
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These lands were obtained at an average figure of £154 per acre.

SANITARY CIRCUMSTANCES OF THE AREA.

Water.

See the report of 1927.

Water has been laid on from the main to two cottages in Eastbrookend Lane, as the spring which provided the original supply has been drained by the Rom River Gravel Pit some quarter of a mile distant.

Drainage and Sewerage.

See Report, 1927.

The drainage of the Isolation Hospital, in view of the extension, is giving rise to difficulties. The most satisfactory solution would appear to be to run a sewer up the Beam Valley. Into this could be run a sewer draining the Manor Farm Estate, a plot at present disposing of its sewage by pail closets and cesspools. A sewer laid in this valley would no doubt, open up the land on the other side, and possibly, could form part of a comprehensive scheme for sewage disposal in connection with the building developments of neighbouring authorities.

A certain number of houses have been approved for habitation subject to their being drained into a cesspool to be emptied by the occupants and to their being connected to a sewer when laid. As the water supply is, in many cases, obtained from surface wells sunk in the same parcel of land as is used for the emptying of the cesspools, such an arrangement is far from ideal.

Two cottages in Church Elm Lane were provided with new sanitary conveniences in place of cesspools and have been connected to the public sewer.

In the course of the year difficulties have arisen in connection with the drainage of a factory in the southern part of the area, the trade waste consisting of yeast cells, etc., depositing and causing an obstruction in the sewers. Further, the high content of albuminoid ammonia appreciably raised the figure in the effluent from the sewage works, which was above the standard permitted by the Port of London Authority to be discharged into the river. The sewage works are to be extended, and for this purpose, following a public enquiry, Mudland Farm was purchased and a sum voted for the improvement of the sludge disposal works. The extension will probably include one of the Activated Sludge methods of treatment, in which case it would appear advisable that the trade effluents from the factory site should be run into a separate sewer and disposed of in a plant different from that dealing with the domestic sewage.

Arrangements have been made for the drainage of a block of Dagenham houses on Ilford No. 1 section, hitherto draining into Ilford, to drain into the Dagenham sewers, and also for the drainage of the new Barking No. 12 section to be disposed of at the Rainham works.

Nuisances have arisen in connection with combined drains; the drainage of groups of shops being permitted under combined drainage deeds. When blockage occurs in such drains, difficulties arise in ascertaining where the responsibility lies, and in one case where there was flooding, the Local Authority

as a matter of urgency had to clear the drain. Such combined drains should be permitted only in exceptional circumstances, and rather than fix responsibility on one person for clearance, a better arrangement would be for the Local Authority to clear the drain and be reimbursed by one specific person.

Closet Accommodation.

The only sanitary conveniences available for use by the general public are those adjoining the various licensed premises. Owing to shopping centres having been developed near to, and the sites being used as bus termini, these structures are insufficient for the use made of them, and have in some instances been enlarged; in one case being extended at the cost of the owner conditional on the Council's cleansing and maintaining the same in good condition.

Although it is the duty of the owners of licensed premises to provide sanitary accommodation for the use of their clientele, this duty does not extend to providing facilities for use by the general public. It seems unfair therefore to make extensive demands on the owners of the premises if the accommodation they provide is sufficient for the needs of their customers.

An underground sanitary convenience is to be constructed at the "Chequers," another is proposed at Beacontree Heath. Further conveniences should be provided, particularly in connection with the parks in the district.

Scavenging.

The following table gives some statistics relating to the collection of refuse.

1. Tonnage of House Refuse removed per week—267 tons.
2. Number of houses from which removed—14,500.
3. Cost—£3,753.
4. Cost per house—10s. 4d. per annum.
5. At March, 1928, the transport consisted of:—
 - 2 S.D. Freighters.
 - 1 Fordson Tractor.
 - 1 Harvester Tractor.
 - 4 Trailers.

17 men were engaged on collection.
4 men on Tip.

At September, 1928:—

- 2 S.D. Freighters.
- 2 Harvester Tractors and Trailers.
- 1 Fordson Tractor and Trailers were engaged.
- 22 men were engaged on collection.
- 4/5 men on Tip.

*average wt. p. house
av. cost p. house*

In addition to collection from houses, refuse is collected from the schools in the district.

For collection of trade refuse a charge was made of 5s. per load or 6d. per bin, but in spite of facilities offered for removal, some traders continue to use their own incinerators for its disposal, continuing a practice in operation before any alternative arrangements were made. The smoke from these incinerators causes much annoyance to local inhabitants.

The refuse is removed to the Tip in the northern part of the district. This method of disposal was originally one of filling in a gravel pit. The bulk of material, however, is now so enormous that, in spite of the pit still being worked for gravel, dumping has to take place at higher levels, with the result that the Tip is now above road level. Being thus elevated it is exposed to all winds and is continuously alight, the smoke and fumes being noticeable at considerable distances. Further, the dump being a breeding ground for rats and flies, the nuisance calls for some change in the method of refuse disposal.

Complaints have been received about passages at the rear of certain premises. The plans of a group of shops showing a secondary means of access to the premises appear to have been approved by the Council. These places being unlighted and lonely are used for the disposal of filth and rubbish, besides being used as public conveniences. They are the right of way for the several occupiers, who have divided responsibility. The difficulty arises that one owner can hold up the making of the passage. Rather than endeavour to remedy the nuisances after their creation, it would be more satisfactory to ensure freedom from such nuisances before approving the original plans, these passages becoming ultimately either new streets or private means of access.

Sanitary Inspection of the District.

Report of Sanitary Inspectors.

(a) Nature and number of inspections.

Houses	...	...	...	...	1,202
Bakehouses	...	...	...	...	39
Slaughterhouses	...	...	...	...	321
Milkshops and Dairies	...	...	...	...	145
Cowsheds	...	...	...	...	130
Infectious diseases enquiries	...	...	...	...	1,578
Houses disinfected	...	...	...	...	1,076
Bedding removed for disinfection	...	...	...	...	3
No. of nuisances investigated	...	...	...	...	86

(b) Notices served.

Statutory, 60	...	...	...	...	60
Informal, 26	...	...	...	...	21

Disinfection and Disinfestation.

Disinfection of Homes.

All houses are disinfected as a routine practice after the occurrence of Scarlet Fever or Diphtheria, being fumigated with a Formigator left for six hours. The rooms of the Estate houses are subsequently distempered by the L.C.C. Authorities. Rooms vacated by tubercular persons are fumigated on request.

It was pointed out to the Council that such fumigation was largely ineffective and unnecessary, and it was suggested that the practice should be discontinued.

Bedding.

By arrangement with the Joint Hospital Board, bedding can be removed and stoved at the hospital, at the expense of the owner.

There are no facilities in the district for the cleansing of verminous persons or their belongings.

Rats and Mice (Destruction) Act 1919.

Rats in this locality are limited to confined areas, namely the refuse tip, farms and premises on made soil. Use is still being made of the rat poison obtainable at the Sanitary Department.

Smoke Abatement.

No action has been necessary during the year for the abatement of smoke.

Offensive Trades.

Following the declaration of the trade or business of Rag and Bone Dealers and Fish Fryers as Offensive Trades, bye-laws were confirmed with regard to the conduct of these businesses by the Ministry of Health in October, 1928.

Fried Fish Shops.

There are now 10 fried fish shops in the district compared with 2 in 1919 and 4 in 1926, the corresponding figures for fishmongers' shops being 14, 2 and 4.

During the year 2 fish frying vans were disapproved and their use discontinued. Not included in the above figures, one application for permission to commence fish frying was made,

but was not granted owing to the unsuitability of the premises for this purpose. One fish owner commenced occupation of unsuitable premises, that is without drainage or water supply; these premises have been closed for this purpose.

Tents, Vans, Sheds.

Two sites in the district are occupied by migratory inhabitants of vans, paying rent to the owners of the land. During the winter months nuisances arise through overcrowding of the sites, as although each site may hold, at times, one dozen or more vans, there is in each yard only one water-closet and one standpipe.

Schools.

The following new schools were opened in the course of the year:—Grafton Road, Lymington Road, Fanshawe Crescent, Goresbrook Road, Hunters Hall, Parsloes, Halbutt Street, and South Wood Lane. Additional accommodation was provided at Marsh Green School.

Infectious Diseases.

No schools were closed during the year on account of the prevalence of Infectious Disease, and few cases of disease could definitely be attributed to school infection.

Owing to the large number of cases of Scarlet Fever being nursed at home, under the Regulations by which contacts of such have to be excluded for 14 days after the home has been disinfected by the sanitary authority, much school time is lost in the course of the year, as on an average for every case of Scarlet Fever there is one school child excluded (286 exclusions for 276 cases). The following figures (relating to public elementary schools only) show that the risk through allowing contacts of home treated Scarlet Fever cases to attend school after an exclusion period of, say, 10 days, is very slight. The Memorandum on Closure and Exclusion from School issued jointly by the Ministry of Health and Board of Education gives the period of incubation of Scarlet Fever as from 1 to 8 days. The 10 days is merely to cover this period. Out of 265 cases of Scarlet Fever occurring in school children in this area in the last two years, the number that occurred in the same class as a possible infecting case, within a period of 10 days from the last date of attendance of this case was 23. Even if we assume that the cases occurring in the same class were actually infected in school, less than 1 in 10 is

secondary to a school case. But this assumption cannot be made, as cases of outside infection occur amongst children not attending school.

Further evidence of this small effect of schools in the spread of infection is the fact that there is little change of incidence of infection occurring during the school holidays. Further, there were some cases infectious while attending school, but little damage resulted. Of four cases attending school until desquamation was obvious, only once did another case of Scarlet Fever occur, and even then not until the tenth day following the exclusion of this child.

Of the cases occurring secondary to home treated cases there were 28 infecting cases, in 11 of whom onset was within 8 days of the diagnosis of the primary cases and, therefore, would have been excluded from school. Of the other 17 cases whose onset was after 10 days of the onset of the primary cases, six were patients where diagnosis of the primary case was missed, and one was the case of a mother nursing her infected child. That leaves 10, or one third of the secondaries at home which occurred outside after exclusion period of ten days. Assuming that these ten cases are of school children who attend school and infected in the same proportion as the original primary cases, they would then give rise to $\frac{23}{285} \times 10$ cases, or one additional case of Scarlet Fever. Actually, of course, the risk would be less than this for the reasons:—

- (a) That those cases occurring in the schools include those which are secondary to primary cases which are missed for long periods, and are, therefore, at large while infectious, and
- (b) That the secondary cases are diagnosed earlier, even though to only a slight extent than the primary as evidenced by the Doctors being called in earlier.

There is a further point—so far as the home contacts themselves are concerned, if they are attending school, there is less likelihood of their coming in contact with the patients, not only for the period they are at school, but also for the rest of the time.

On the grounds given above, a suggestion was made to the Essex Education Committee that they should agree to a shorter period of exclusion of contacts of the home treated cases. The Committee, however, did not adopt the suggestion, with the result that some one thousand school weeks are sacrificed in order to save a possible consequent additional case of scarlet fever.

On the Administration of the Factory and Workshop Act, 1901.

In this district there are 16 factories, 17 workshops, and 15 workplaces.

1. Inspection.

PREMISES.	Number of		
	Inspections.	Written Notices.	Prosecutions
Factories	48	—	—
Workshops	51	—	—
Workplaces	184	—	—

2. Defects.

Nuisances under the Public Health Acts.

	Found.	Remedied.
Want of Cleanliness	3	3
" Other Nuisances "	4	4
	—	—
	7	7

3. Outwork in Unwholesome Premises—Section 108.

There was no outwork conducted in unwholesome premises.

There were 92 premises in which outwork was carried out compared with 10 in 1919.

The following table shews the various occupations:—

Cardboard Boxes	... 1	Shirts	 3
Wearing Apparel	... 22	Ties	 3
Tailors	 9	Embroidery	 1
Neckwear	 3	Underclothing	 1
Umbrellas	 3	Paper Caps	 1
Collars	 2	Furs	 3
Trimmings	 2	Boots	 6
Art Flowers	 1	Waterproofs	 2
Bags (Hand)	 1	Overalls	 3
Dressing Gowns	 2	Xmas Crackers	 2
Brushes	 5	Robes	 6
Blouses	 7	Art Needlework	 1
Millinery	 1	Chemists Sundries	 1

Rag Flock Act, 1911 and 1918.

There are no premises in the District in which rag flock is manufactured, used or sold.

HOUSING STATISTICS FOR THE YEAR 1928.

The following is the table required by the Ministry of Health:—

Number of houses erected during 1928—

(a) Total [including (b)]	...	...	...	...	4,165
(b) With State assistance under the Housing Acts—					
(1) By the Local Authority	...	...	...	...	0
(2) By other bodies or persons	...	...	...	...	4,125

1. Unfit Dwelling Houses.

Inspection.

(1) Total number of houses inspected for housing defects (under Public Health or Housing Acts)	1,202
(2) Numbers of houses which were inspected and recorded under Housing (Consolidated) Regulations 1925	270
(3) Number of houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	1
(4) Number of houses (exclusive of 3) found not to be in all respects reasonably fit for human habitation	243

2. Remedy of defects without service of formal notices.

Number of defective houses rendered fit in consequence of informan action by the Local Authority or their officers	15
--	----

3. Action under Statutory Powers.

A. Proceedings under S. 3. Housing Act, 1925—

(1) Number of houses in respect of which notices were served requiring repairs	228
(2) Number of houses which were rendered fit	
(a) By owners	218
(b) By Local Authority in default of owners	0
(3) Number of houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	1

B. Proceedings under Public Health Act.

(1) Number of houses in respect of which notices were served requiring defects to be remedied	126
---	-----

- (2) Number of dwelling houses in which defects were remedied—
- | | | | | | |
|---|-----|-----|-----|-----|-----|
| (a) By owners | ... | ... | ... | ... | 107 |
| (b) By Local Authority in default of owners | | | | | 0 |

C. Proceedings under S.S. 11, 14, and 15 of Housing Act, 1925.

- | | | | |
|--|-----|-----|---|
| (1) Number of representations made with a view to the making of Closing Orders | ... | ... | 3 |
| (2) Number of houses in respect of which Closing Orders were made | ... | ... | 3 |
| (3) Number of houses in respect of which Closing Orders were determined, the houses having been rendered fit | ... | ... | 0 |
| (4) Number of houses in respect of which Demolition Orders were made | ... | ... | 2 |
| (5) Number of houses demolished by owners | ... | ... | 5 |

[As last year it was assumed by some that these defects were present in the new Estate houses, it is considered advisable to point out that the vast majority were in the 1,800 old houses of the district.]

Housing.

In anticipation of the erection of further houses necessary to remedy the overcrowding occurring in some premises, the Council is acquiring three plots of land, viz:—Eastbrook Farm, Rabbit Field and the Railway Pond Field, a total of about 40 acres.

Development of L.C.C. Estate.

The following table shews the growth of that portion of the Becontree estate in Dagenham, the figures given being those houses erected in each year up to December 31st.

Year.	No. built in year.	Total No. in Dagenham.
1921	36	36
1922	946	982
1923	406	1,388
1924	1,279	2,667
1925	1,418	4,085
1926	2,114	6,199
1927	3,402	9,601
1928	4,048	13,649

1525

1400

15033

1530

232

15265

The following table gives the roads on the Estate divided into sections, the dates alongside of each section being those when the first and last houses were handed over.

Names of Roads in Sections of L.C.C. Estate.

Ilford No. 1 Section.

2/11/21—15/1/25.

Bennetts Castle Lane.
Baron Road.
Burnside Road.
Bushgrove Road.
Bushway.
Chadway.
Chittys Lane.
Fossway.
Greenway Lane (part).
Green side.
Greenway.
Grovelway (part).
Haydon Road.
Lindisfarne Road.
Linkway.
Manor Square.
Mayfield Road.
Seabrook Road (part).

Valence No. 4 Section.

29/6/25—14/6/26.

Agnes Gardens.
Aylmer Road.
Bonham Road.
Green Lane (part).
Grovelway (part).
Henshawe Road.
Kemp Road (part).
Margery Road.
Neville Gardens.
Neville Road.
Valence Avenue.
Valence Circus (part).
Valence Wood Road (part).

Valence No. 7 Section.

20/3/26—28/3/27.

Adomar Road.
Aylmer Road (part).

Valence No. 7 Section—Cont.

Blomville Road (part).
Brittain Road.
Charlecote Road.
Coote Gardens.
Coote Road.
Dare Gardens.
Grafton Road (part).
Lucy Gardens.
Nicholas Road (part).
Rowlands Road (part).
Valence Circus (part).
Valence Wood Road (part).
Weylond Road.
Windsor Road.
Winmill Road.
Wood Lane (part).

Becontree No. 10 Section.

28/3/27—14/1/29.

Becontree Avenue (part).
Bentry Road.
Blomville Road (part).
Bonham Road (part).
Boulton Road (part).
Cornshaw Road.
David Road.
Eleanor Gardens.
Freshwater Road.
Grafton Gardens.
Grafton Road (part).
Green Lane (part).
Hitherfield Road.
Homestead Road.
Joan Gardens.
Joan Road.
Kemp Road.
Lymington Road.
Lynnett Road.
Morris Road.
Nicholas Road (part).

Becontree No. 10 Section—Cont. Dagenham No. 6 Section.

7/12/25—7/3/27.

Rowlands Road (part).
 Stanhope Gardens.
 Stanhope Road (part).
 Stockdale Road.
 Turnage Road.
 Walnut Tree Road.
 Warrington Road.
 Warrington Square.
 Wood Lane (part).

Cartwright Road.
 Chaplin Road (part).
 Coleman Road.
 Dagenham Avenue (part).
 Finnymore Road.
 Hatfield Road.
 Hedgemans Road (part).
 Lloyd Road.
 Talbot Road (part).
 Tilney Road.
 Walfrey Gardens.

Dagenham No. 2 Section.

24/9/23—13/7/25.

Armstead Walk.
 Arnold Road (part).
 Broad Street.
 Church Elm Lane (part).
 Comyns Road.
 Darcy Gardens.
 Digby Gardens.
 Downing Road (part).
 Ford Road (part).
 Heathway (part).
 Langhorne Road (part).

Dagenham No. 6a Section.

30/8/26—12/11/28.

Brett Gardens.
 Chaplin Road (part).
 Dagenham Avenue (part).
 Eaton Gardens.
 Goresbrook Road (part).
 Hedgemans Road (part).
 Lullington Road.
 Mordaunt Gardens.
 Sheldon Road.
 Treswell Road.
 Urswick Road.
 Vincent Road.

Dagenham No. 3 Section.

22/9/24—3/8/25.

Arnold Road (part).
 Blackborne Road.
 Coombes Road.
 Davie Road.
 Downing Road (part).
 Ford Road (part).
 Goresbrook Road (part).
 Haresfield Road.
 Harrison Road.
 Huntings Road.
 Langhorne Road (part).
 Manning Road.
 Nutbrowne Road.
 Rowdowns Road.
 Talbot Road (part).

Dagenham No. 8 Section.

4/4/27—8/10/28.

Alibon Gardens.
 Alibon Road (part).
 Croppath Road.
 Dunbar Gardens.
 Eastfield Road (part).
 Heathway (part).
 Holgate Gardens.
 Holgate Road.
 Hunters Hall Road.
 Hunter Square.
 Ivyhouse Road.
 Lake Gardens.
 Parsloes Avenue (part).
 Pettits Place.
 Pettits Road.

Dagenham No. 8 Section—Cont. Dagenham No. 9 Section—Cont.

Pondfield Road.
 Reede Road.
 Reede Gardens.
 Rogers Gardens.
 Rogers Road.
 Rock Gardens.
 Rockwell Road.
 Spurling Road.
 Standfield Gardens.
 Standfield Road.
 Sterry Crescent.
 Sterry Gardens.
 Sterry Road.
 Waters Gardens.
 Wells Gardens.
 White Gardens.
 Witham Road.

Pasture Road (part).
 Powell Gardens.
 Raydons Road.
 Shortcrofts Road.
 Robinson Road (part).
 Singleton Road.
 Spinney Gardens.
 Springpond Road.
 Terrace Walk.
 Wayside Gardens.
 Westfield Road (part).

Dagenham No. 9 Section.

20/2/28.

Ayloff Road.
 Barnmead Gardens.
 Barnmead Road.
 Cherry Gardens.
 Eastfield Gardens.
 Eastfield Road (part).
 Fanshawe Crescent.
 Halbutt Street (part).
 Harris Road.
 Heathway (part).
 Ivyhouse Road (part).
 Ivy Walk.
 Kingsmill Gardens.
 Kingsmill Road.
 Meadow Road.
 Meadow Walk.
 Monmouth Road.
 Northfield Road (part).
 Osborne Road.
 Osborne Square.
 Oxlow Lane (part).
 Parsloes Avenue (part).

Dagenham No. 11 Section.

4/7/28.

Bainbridge Road.
 Beverley Road.
 Boxoll Road.
 Carew Road.
 Connor Road.
 Cornwallis Road.
 Elliott Road.
 Five Elms Road.
 Halbutt Street (part).
 Haskard Road.
 Heathway (part).
 Hobart Road.
 Keppel Road.
 Maxey Road.
 Northfield Road (part).
 Oglethorpe Road.
 Oxlow Lane (part).
 Parsloes Avenue (part).
 Pasture Road (part).
 Porters Avenue.
 Robinson Road.
 St. Georges Road.
 Thompson Road.
 Verney Road.
 Westfield Road (part).
 Weston Gardens.
 Weston Road.
 Wren Road.

Open Spaces.

The following is a list of the Open Spaces in this district:—

Chadwell Heath Ward—

Recreation Ground	...	...	...	7 acres.
Scheduled Land	...	...	...	20 „

Becontree Ward—

Beacontree Heath	...	...	...	14½ „
Scheduled Land (145, minus 11 for housing minus 10 reserved)	...	...	...	124 „
Valence Park (from L.C.C.)...	...	...	...	24 „

Dagenham Ward—

Old Dagenham Park (23, minus 5 reserved)	...	...	...	18 „
Unused Housing Site	...	...	...	2 „
Goresbrook (from L.C.C.)	...	...	...	38 „
Wantz Stream Land (from L.C.C.)...	...	...	...	8½ „

INSPECTION AND SUPERVISION OF FOOD.

(a) Milk Supply.

In this district there are 15 dairies, 8 milkshops and 8 cowsheds, the corresponding figures for 1919 being 7, 2 and 10. The list of retailers in detail is:—

Ordinary milk	...	...	...	...	26
Grade "A" Bottling Licence	...	...	...	...	1
Grade "A" Supplementary	...	...	...	...	6
Pasteurised Supplementary	...	...	...	...	6
Certified Supplementary	...	...	...	...	5
Company Distributing Centres	...	...	...	...	5

In the last few years frequent changes have been made with respect to Dairymen and Dairy premises. In 1919, 10

dairymen were registered, of whom 5 remain. 5 of the 15 registered in 1923 remain as part of the 26 registered in 1928. From 1926 to 1928, 2 cowkeepers and retailers have moved out of the district, 1 cowshed has been demolished, 3 cowsheds have been discontinued and 1 cowshed has changed hands. 2 retailers have discontinued and 4 retailers have been absorbed by a Company. In 1928, 2 retailers were absorbed, 1 cowshed discontinued, and of the 2 cowsheds proposed, 1 proposal was abandoned.

Milk Sampling.

During the year 130 milk samples were analysed. The following table shows the results of the analysis of the 108 samples of ordinary milk, divided into those produced on a small scale (subdivided according as to whether or not produced in this district) and those on a large scale.

No of Bacteria. per c.c.	SMALL DEALERS.				LARGE SCALE	
	Local produce.		Not local.		Satis- factory	NOT
	Satis- factory	NOT	Satis- factory	NOT		
Under 30,000 ...	5	—	8	—	3	—
30,000 to 200,000	19	3	27	6	3	3
200,000 to 500,000	—	2	3	6	—	2
Over 500,000 ...	—	5	—	7	—	2

Standards now in operation under the Milk (Special Designations) Order, 1923, for the various classes of milk are that the number of Bacteria per c.c. shall not exceed, in the case of Certified milk 30,000 (with no B. Coli in .1 c.c.), Grade "A" milk 200,000 (no B. Coli in .01 c.c.), for Pasteurised milk 100,000. In the table those considered unsatisfactory in spite of small counts are due to causes such as excessive numbers of B. Coli indicating excremental contamination, presence of cells suggesting mastitis, etc.

It can be seen that the small producers without any elaborate plant compare more than favourably with the large scale dealers; also that it is reasonable to expect any of them to have a count below 200,000, viz.: that of Grade "A" milk.

The present system of milk sampling is to take all in turn, but where a bad or doubtful result is obtained, to follow that up with another to ensure that steps have been taken to remedy the fault. This results in some cases of another poor sample, increasing the proportion of the unsatisfactory ones in the table.

The 5 samples of sterilized milk were all satisfactory, whilst 4 of Grade "A" all had a count below 50,000. The Pasteurised milk, however, was not satisfactory. Of 13 samples only 7 were below the count of 100,000, whilst of the 6 above, 3 exceeded 250,000, results comparing most unfavourably with those of the ordinary milk produced by small dealers. When it is realised that counts below 200,000 can be obtained (and even many below 30,000) it seems not unreasonable to hope that the present standard set for the count of Grade "A" milk shall be applied to all classes of milk.

In no samples analysed were Tubercle Bacilli found microscopically. In the case of some, samples where examination suggesting mastitis, inoculation tests were performed for the presence of Tubercle Bacilli, but with negative results in each case.

No action has been necessary under the Public Health (Prevention of Tuberculosis) Regulations, 1925, as regards any persons employed in the milk trade.

The following regulations came into operation during 1928, their object being to secure for the notice "Unfit for Babies" more prominence in the case of certain milks.

Public Health (Condensed Milk) Amendment Regulations, 1927—Amending 1923 Regulations.

Public Health (Dried Milk) Amendment Regulations, 1927—Amending the 1923 Regulations.

(b) **Meat.**

In this district there are four Slaughter-houses, of which one is licenced and three registered, and to which a total of 321 visits were paid during the year. These premises are mostly of unsuitable construction, the small space available prohibiting any satisfactory alterations being made so as to render them suitable for the present demands made on them. In addition they are situated in busy localities with consequent disadvantages of driving animals through congested thoroughfares. To remedy these conditions, it would seem worth while for the Local Authority to erect and maintain a public Abattoir.

The number of butchers' shops in the district has grown from 7 in 1919 to 9 in 1926 and 30 in 1928. Practically all of these have installed and use glass shop fronts.

Bakehouses.

There are 4 bakehouses in the district (2 factory and 2 retail) there being none underground. 39 visits were paid in the course of the year.

Sale of Food and Drugs Acts.

These Acts are administered by the Essex County Council, to whom Dr. Bernard Dyer is public analyst. Chemical analyses, including that of water, effluents, etc., are carried out in the County Laboratory, Queen Victoria Street, London.

In the latter part of the year the Local Council authorised the Senior Sanitary Inspector to take samples for analysis.

Shops Acts, 1912, etc.

The Inspectors appointed by the County Council see that the provisions of the Shops Acts and Early Closing orders are complied with. The County Council can make arrangements with the Councils of Urban Districts for the exercise by the Council of that district as agents for the County Council. Application was made to the Essex County Council in October for that purpose, but the request was not complied with.

TABLE III.
INFECTIOUS DISEASES.

	Cases Notified.	Admitted to Isolation Hospital.	Admitted to Other Isol. Hosp.	Admitted to Other Hospitals.	Deaths.
Scarlet Fever	340	124	—	—	2
Diphtheria	213	209	2	—	14
Enteric Fever	1	—	—	1	1
Puerperal Fever	13	—	—	8	2
Puerperal Pyrexia	10	—	—	2	—
Pneumonia					
Primary	131	—	—	—	64 (includes secondary)
Influenzal	11				
Erysipelas... ..	15	—	—	3	—
Encephalitis Lethargica	1	—	—	1	1
Ophthalmia Neonatorum	20	—	—	1	—
Cerebro Spinal Meningitis	1	—	—	1	2
Poliomyelitis	3	—	—	2	—
Polioencephalitis... ..	1	—	—	—	—

TABLE IV.

	Under 1 year.	1	2	3	4	5	10	15	20	25	35	45	55	65	Total
Chicken Pox ...	7	10	12	17	14	138	10	2	1	—	1	—	—	—	212
Diphtheria ...	1	10	25	21	27	88	17	9	2	9	1	—	—	—	210
Scarlet Fever ...	—	14	22	31	32	185	32	10	5	11	1	1	—	—	344
Enteric Fever ...	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Puerperal Fever ...	—	—	—	—	—	—	—	1	2	10	—	—	—	—	13
Puerperal Pyrexia...	—	—	—	—	—	—	—	—	—	5	3	—	—	—	8
Pneumonia Primary	17	12	12	12	7	25	5	3	—	11	14	6	1	4	129
„ Influenzal	3	—	—	—	—	2	—	—	—	2	3	1	—	—	11
Erysipelas ...	—	—	1	—	—	1	—	—	—	6	2	4	—	1	15
Encephalitis															
Lethargica	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1
Poliomyelitis ...	—	—	—	—	—	3	—	—	—	—	—	—	—	—	3
Cerebro Spinal Men	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Polioencephalitis ...	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1

In the 1927 report it was shown that the prevalence of infection of Scarlet Fever and Diphtheria in this locality was respectively 1.6 and 1.7 times that obtaining in the country.

For 1928 it will be observed that the corresponding figures are 1.4 and 1.3. In the last report it was suggested that this increased incidence was due to the aggregation of population showing an altered proportion of susceptibles to immunes, that is, that it was the massing together of this population containing a large percentage of susceptibles that caused that want of balance which resulted in the greater proportion of infections. Following this line it was thought that the history of infection in relation to the developments of the Estate may provide some clue.

Graph 1 shows—

Curve 1—the development of the Estate in houses each year.

Curves 2 and 3—the incidence (actual cases) of primary cases of Scarlet Fever and Diphtheria occurring each year in the Estate houses.

Curves 4 and 5 represent the expected incidence of Scarlet Fever and Diphtheria respectively, calculated on the actual incidence rate in the country as a whole for each year. Allowance is made for the altered age distribution—those susceptible to these diseases being assumed for each year to be 50% in excess of those occurring in a normal population.

These curves however, represent all cases, whereas curves 2 and 3 take into consideration only primary cases, these latter for purpose of comparison, therefore needing to be raised by

10% or 15%. The assumption also is made that the population growth will be at the same rate as that of the houses.

It is noticed that it is not until after the year 1925 that the curves of infection show any marked upward trend. Up to this period Scarlet Fever is very slowly and steadily rising, whereas the Diphtheria curve is less settled, showing the greater effect of local causes. This is particularly marked in the year 1922, where the cases are due to an outbreak of the disease in a school which affected both Estate and native children. After 1925, however, the curve representing both diseases took a marked turn and runs upward parallel to the population curve, though the Diphtheria curve was a year later in showing the same acceleration.

It will be noticed too, that in the case of both diseases up to 1926, the incidence was below normal, whereas since then it has been above the expected.

This graph therefore brings out the following points regarding the incidence of these two diseases on the Estate.

1. That the same factors are in operation in both diseases.
2. That it is not until the fifth year that the influences making for excess becomes operative.
3. Having taken effect it has remained operative since—and further, that it is increasing according to the increase in population.

In the development of the Estate a change took place about 1925, not only in respect of the actual rate of growth, but also of spatial relationship.

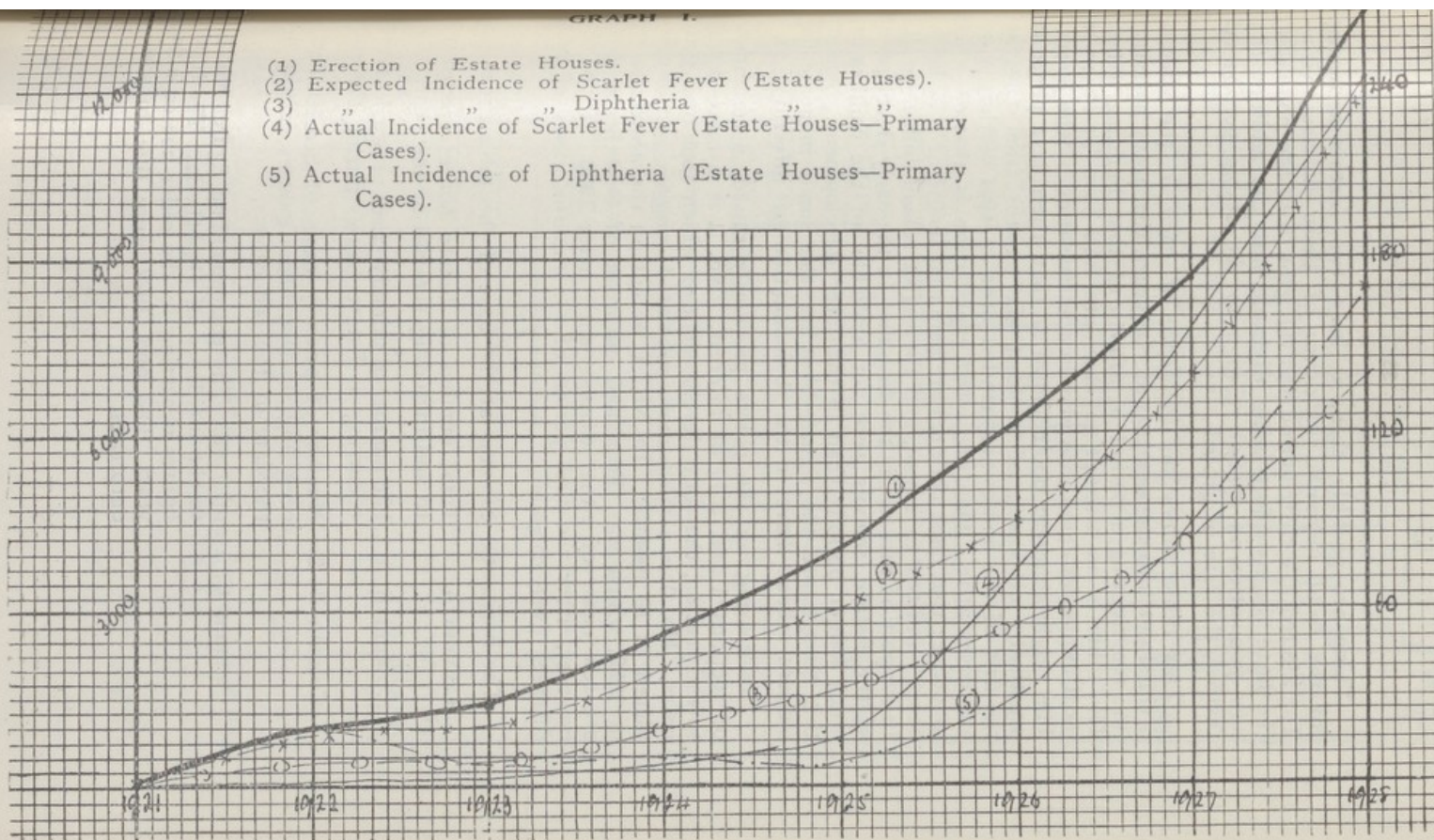
The first houses in Dagenham handed over were in Ilford No. 1 section in November, 1921; this section was completed in January, 1925, viz.:—1,321 houses in, roughly, three years.

In October, 1923, the first house on Dagenham No. 2 section was completed, a section widely and completely separated from Ilford No. 1. In two years 1,986 houses were completed in two contiguous sections, Nos 2 and 3. The remaining sections then grew adjacent to these others and filling up the intervening space, the development of these taking place at a greater rate than previous building.

The change, therefore, about 1925 was that whereas up to that time there was a slower development and also one less congested; after that date the new population came here at a greatly increased rate and also was nearer the previously settled portions.

GRAPH I.

- (1) Erection of Estate Houses.
- (2) Expected Incidence of Scarlet Fever (Estate Houses).
- (3) " " " " Diphtheria
- (4) Actual Incidence of Scarlet Fever (Estate Houses—Primary Cases).
- (5) Actual Incidence of Diphtheria (Estate Houses—Primary Cases).



There are possibly then, at least two factors accounting for the local increased incidence of these diseases, viz.:—The altered age distribution and the growth of the population, the latter in its effect being divisible into the addition of a new population in spatial relation to the stable portion and further, the rate of growth.

This table shows the incidence of each of the diseases divided out into the quarters of the years, the heavy horizontal line representing a period of growth of that building section. The table is an attempt to elucidate how soon or otherwise local influences came into play in the causation of the disease. The single concrete point shown is that there is a period in practically all cases, of at least six months from the time the first of the houses are handed over on that section before any cases arise. One suggested explanation is that of school influence; that most children are here that length of time before being admitted to school, and thereafter school influences act. In support of this too, is the fact that in the early development of the Estate, schools were not available for the children for much longer periods than in the later development. Against this though are the figures showing the small influence the modern schools have in the dissemination of infection.

As bearing on the points previously raised, a comparison of sections 1 and 8 is of interest. No. 1 is a more widely spread section, the total development of which took over three years. No. 8 is a much more populated compact section completed in 18 months. In No. 1, except in the third quarter of 1922, which was the school outbreak of Diphtheria, there are few cases of either disease until after 1926. In No. 8, however, after the first period of six months, cases of both diseases were common.

The horizontal columns at the base of the table are:—

- Column A. Total number of Estate houses erected up to and including the end of the year.
- Column B. 1. The number of primary cases of Scarlet Fever occurring in Estate houses during the year.
- Column B. 2. Number of primary cases of Scarlet Fever occurring in Dagenham houses existing at the date of the last census.
- Columns C. 1 and C. 2. The corresponding figures relating to the incidence of Diphtheria. The larger figures occurring in the older houses in the years 1922 and 1927 were due to school outbreaks.

TABLE V.
(Showing the incidence of Scarlet Fever and Diphtheria).

TABLE V. (Showing the incidence of Scarlet Fever and Diphtheria).																																1st	1929	1929	1929
No. of building. Section.		No. of houses built.	1922				1923				1924				1925				1926				1927				1928				1st	2nd	3rd	4th	
			1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.	1st q.	2nd q.	3rd q.	4th q.					
1	Sc. F.	1321			2	1	—	2	1	—	1	2	1	1	—	1	6	5	6	5	3	6	6	23	8	4	5	6	8	—	6	23			
	Diph.		3	11	5	3	—	1	2	5	3	1	—	1	1	2	2	—	1	3	—	5	—	4	6	6	5	7	1	—	7				
2	Sc. F.	990									1	—	2	2	3	2	1	—	2	7	4	4	2	4	5	18	7	6	5	9	8	25			
	Diph.										1	1	1	—	—	—	1	2	1	4	4	3	6	9	8	2	3	3	3	1	3	8			
3	Sc. F.	996													3	2	2	2	1	4	3	6	—	5	2	14	4	8	7	14	8	15			
	Diph.																	2	—	1	3	3	2	3	1	2	6	2	4	2	1	6			
4	Sc. F.	1055															1	4	4	4	6	2	8	8	5	9	2	2	6	3	1	10			
	Diph.																																		
6	Sc. F.	994																		3	2	4	1	4	3	4	5	—	1	4	—	5			
	Diph.																			1	1	2	1	2	5	—	2	3	5	11	11	4			
6A	Sc. F.	596																						1	3	—	1	2	9	1	9	1	5		
	Diph.																																		
7	Sc. F.	1005																																	
	Diph.																																		
8	Sc. F.	2236																																	
	Diph.																																		
9	Sc. F.	1723																																	
	Diph.																																		
10	Sc. F.	2089																																	
	Diph.																																		
11	Sc. F.	730																																	
	Diph.																																		
A		36		982				1388				2667				4085					6199			9601			13,649								
B ₁		0		3				3				10				15					74			158			244								
B ₂		11		11				11				8				3					6			34			24								
C ₁		0		19				6				10				8					81			92			170								
C ₂		10		22				9				9				6					4			24			8								

The heavy horizontal line indicates the period taken to build the houses in the various sections.

Amongst the ætiological factors concerned in the production of Diphtheria, is frequently placed dampness of houses. This estate is of very rapid development and houses are occupied within a very short time of their completion. Any influence of dampness as a cause of Diphtheria should therefore be apparent.

Graph 2 consists of three curves showing:—

1. The total number of Estate houses at the end of each year.
2. The number of persons who have been in the area for varying periods before contracting Diphtheria (only primary cases on the Estate are dealt with).

The periods selected are under one month, 1-2-months and thereafter every six months.

The figures for the shorter periods are multiplied by the necessary factor for them to be represented on the same scale as the curves for other periods.

3. The number of persons who were, at the time they contracted Diphtheria as primary cases, living in houses which had been erected for varying periods, the same periods being selected as for the other curves. These curves 2 and 3 will differ slightly, owing to:—

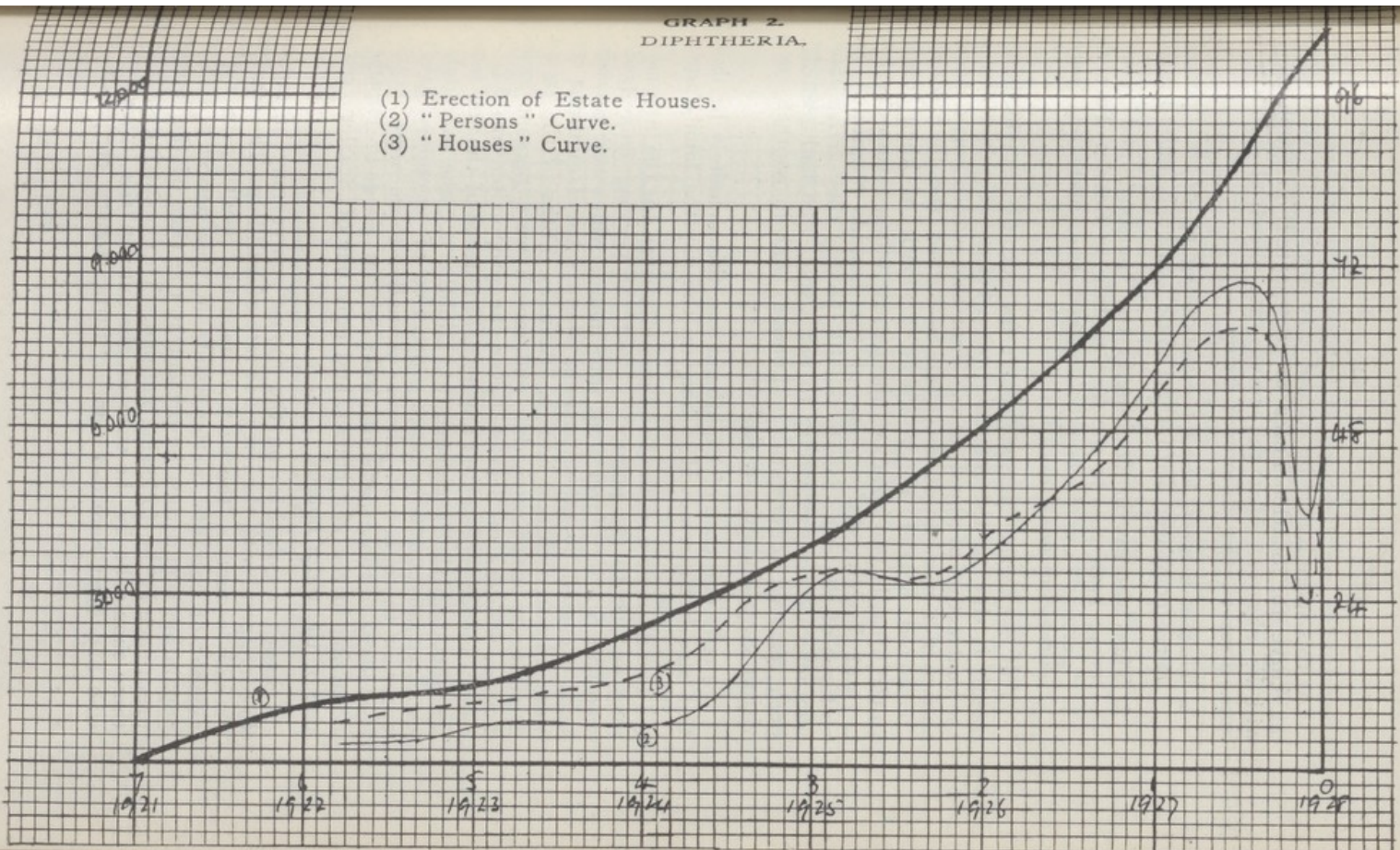
- (a) A certain amount of transfer taking place on the Estate, so that persons who have been in this locality for some years, may be occupying a new house.
- (b) Similarly, a new comer to the district may be occupying an old house.
- (c) Children born here will not be the same age as the house they are living in.

These factors result in a smoothing out of curve 2 compared with 3, suggesting that the causes lie in the persons more than in the houses, and that the "house" curve is only a reflection of the "persons" curve.

If the incidence of the disease were merely a function of the actual population, the "persons" curve should run parallel to the "development" curve of graph 1. On comparing the two however, it is seen that they differ. The early rise is slow but becomes rapid, the maximum slope being evident from the period of 5 to 15 months. After this there is a sharp fall to the second month, followed by a rise to the first.

GRAPH 2.
DIPHThERIA.

- (1) Erection of Estate Houses.
- (2) "Persons" Curve.
- (3) "Houses" Curve.



At this stage it may be advisable to consider the corresponding curve for Scarlet Fever as represented on graph 3. It will be observed that the curves are essentially similar in both diseases, the difference being:—

1. That in Scarlet Fever the smoothing up of the "persons" curve compared with the "house" curve is more marked.
2. That whereas in Diphtheria the "persons" and "house" curve both rise in the first month, in Scarlet Fever the "persons" curve shows a marked rise, and the "house" curve continues to fall.

This rise in the "persons" curve for both diseases in the first month is due to the influence of previous neighbourhood in the contraction of the disease. That this was so was definitely shown in a number of cases, viz.:—out of the 15 cases who contracted Scarlet Fever within a month of their coming to the area, in two instances the patient was a return case from a child discharged from one of the London hospitals. Two children of the same family fell ill the day they arrived here; another case was secondary to her sister, who had previously been removed to hospital in London, and in another case a visitor gave a child the disease.

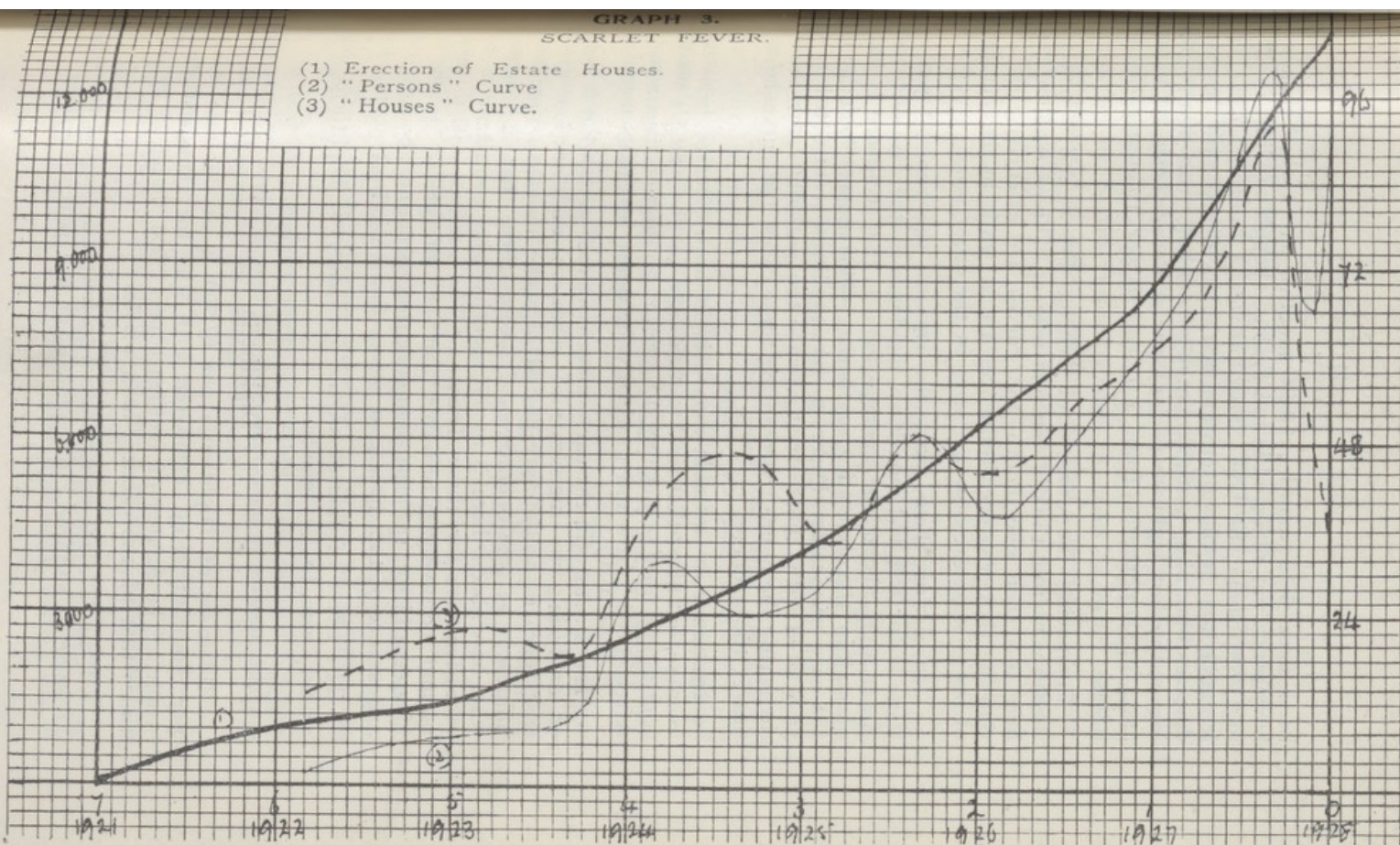
In only one case of Diphtheria can this definitely be shown, this case being removed to hospital the day the family arrived.

The difference in the two "house" curves for the first month may be due to the possibility that the persons from London who had Scarlet Fever went into houses which had previously been occupied by other tenants, whereas the Diphtheria cases were admitted to new houses. Actually $\frac{4}{5}$ ths of the cases of Diphtheria occurring within one month were persons in new houses, whereas in Scarlet Fever the proportion was $\frac{3}{5}$. If the difference represented any actual influence of the new houses as affecting the incidence of Diphtheria, one would have expected an unusually large proportion of secondary cases to occur in these homes, whereas actually, there were no cases secondary to those cases of either Scarlet Fever or Diphtheria occurring in the new houses, and only one of Scarlet Fever in one of the older houses.

Some irregularities on the "house" curve may be expected to correspond with the irregular rate of building. The maximum activity occurs in the summer months, resulting in a larger number of entrants to the Estate at this period. This new population would thus be present at the time of the increased prevalence in the following autumn. This occurring each year, there should be by the time of the autumn rise, more persons who had been here 0-6 months, 12-18 months, etc., than had

GRAPH 3.
SCARLET FEVER.

- (1) Erection of Estate Houses.
- (2) "Persons" Curve
- (3) "Houses" Curve.



been here 6-12 months, 18-24 months, etc. Such influence however, is not reflected in the graphs, though possibly accounting for some of the irregularities. Another cause for irregularities is the alteration in the incidence rate for those diseases obtaining in the country as a whole, this figure varying in the last eight years for Scarlet Fever, from 2.1 to 3.6, and for Diphtheria from 1.0 to 1.7 per thousand persons living.

Comparing the curves for Scarlet Fever and Diphtheria then, apart from the difference in respect of those who had been here less than one month, the curves are essentially similar, showing that whatever influences are at work in the causation of one disease are also operative in the other.

Considering them from the end of the shortest periods, there is for the first month an incidence in the case of Scarlet Fever well above the average, whilst the incidence is more normal in the case of Diphtheria. This excess incidence in the case of Scarlet Fever is due to illness contracted in, or associated with, the district whence the patients came, and on deducting the figure representing these cases, the curves become nearer the average.

Incidence in the next month is in both diseases below the average, but after that rises to maximum for the next six months, continuing for the ensuing 12 months to higher than normal. After this it falls and gradually becomes less than normal.

The low rate in the early months agrees with what is found on analysing the incidence of cases on each section, viz:—that there is preliminary period of some months before local influences become operative. It seems then, that it is persons who have been here 5 to 17 months who contribute to our excessive rate for these diseases. The gradual fall to below normal occurring afterwards can be interpreted as due to insusceptibility through immunisation brought about by the appearance of the disease in the earlier periods of stay.

The effect of houses on the incidence of Diphtheria then would seem to be remote.

Diphtheria.

213 cases of Diphtheria per 67,500 is at the rate of 3.16 per thousand living, compared with 1.55 for the country as a whole. The figures of incidence per 1,000 under 15 are 1.29 times that of the country as a whole.

Of the 213, 209 were removed to hospital, those 4 remaining at home in suitable circumstances at the parents' request. In

one case, owing to lack of beds, it was necessary to commence home treatment of a patient who was admitted shortly after.

These 213 cases are an average of 4 per week, the greatest incidence being in the first two and the last two months of the year. No particular school or locality suffered to any extent.

Of the primary cases 167 were on the Estate (out of a population of 24,000 children) and 12 cases in other houses in a population of 3,750 children, so that this year the incidence fell much more heavily in proportion on the Estate houses.

Secondary Cases.

In 17 houses there were 24 secondary cases, i.e., 14 primary cases gave rise to one secondary; in two instances, two cases followed, and in one 3, in one house one of the secondaries was missed and infected others, and similarly, where 4 secondary cases occurred probably through the initial secondary infecting three others, or others passing it on.

In 5 cases the secondary was diagnosed when the Doctor was called in to the primary case. In three instances the primary was a nasal Diphtheria and another case recognised by positive swab and the history.

In other instances the primary case in 8 out of the 11 was not removed before the fourth day.

24 secondaries from 213 primary cases is 9%, decidedly less than last year.

Of 142 primary cases giving rise to secondaries, 73 were removed before the fourth day, and 69 on fourth day or later.

Influence of crowding on production of secondaries.

In the 145 instances where there were primary cases only—the average population per house was:—under 15, 2.76; over 15, 2.26—occurring in an average of 2.45 bedrooms, 1.49 living rooms.

In those 19 instances where secondary cases occurred, population under 15—2.79, over 15—2.26, occurring in accommodation of 2.23 bedrooms, 1.33 living rooms.

Return Cases.

The following is a summary of the 8 return cases occurring on the discharge of six patients:—

1. Female 9, removed third day, in hospital 29 days; on leaving she had a typical nasal discharge with positive

- swab; re-admitted for six weeks. Infected the only remaining children—the first, female 8, onset 15th day after return home; second, a female of 2, onset 28th day.
2. Female 4, removed 1st day, in hospital 26 days—onset of return case 15th day—swab negative—two other children unaffected.
 3. Male 6, removed 5th day, in hospital 47 days. Return case, female 2, onset 15th day; only remaining child. Swab of infecting case positive, re-admitted for six weeks.
 4. Male 6, removed 4th day, in hospital 55 days. Return case, male 3, onset 18th day. Of two other children in the house one had a typical nose, but negative swab. The other had rhinorrhœa, with previous history of sore throat, headache, etc. Probably this infecting case infected all three of the children, or one handed it on to the other. Swabs of all were negative.
 5. Male 8, removed 4th day, in hospital 39 days. The return case was the mother—onset 15th day, no other children in the house.
 6. Male 9, removed third day, in hospital 22 days. First case, male 17, onset 16th day, the second—an adult female, onset 18th day, she was a ? return case and ? secondary from the first return case.

The interest lies in the fact that these cases were at home before removal 3, 1, 5, 4, 4, 3 days without giving rise to infection, and yet caused it on return home. Possibly during the stay in hospital they acquired a more infectious organism, or possibly it is due to the fact that the children were ill before removal, and so less likely to expose others to infection.

Death Rate.

16 deaths (11 male, 5 female) from Diphtheria occurred in the course of the year, two being patients infected in 1927; all who had it in 1928 have since recovered.

The case mortality accordingly is 7%. Five of these cases were Laryngeal Diphtheria. The others were removed to hospital, one on second day from onset, three on the third day and the remaining five on or after the fifth day.

Schick Testing and Immunisation.

In the latter part of the year the Council authorised arrangements to be made whereby those parents who so desire should have their children immunised against Diphtheria. At the

time of the occurrence of a case in a house, a leaflet is left pointing out the advisability of the parents having their children so treated. Very few requests have, however, been received and up to the end of the year no children had been tested or immunised.

Bacteriological Examination.

541 swabs were examined during the year at the Essex County Public Health Laboratories.

Schools and Diphtheria.

In two years 1927 and 1928, there were 135 cases of Diphtheria occurring amongst school children. Included in this number were:—

1. 17 cases associated with a definite school outbreak lasting for five weeks, in which the figures were in each week, 2, 7, 4, 3 and 1, an outbreak thought to have been initiated by a convalescent carrier.
2. Definite instances of school infection occurring where a positive nasal swab was obtained of a child attending, and in each case this infecting child causing the disease in members of his family; in one case, two, and in another, three of the family.

Of the other cases amongst scholars, 20 were children in school attending a department in which a case had occurred recently. Of these only 13 occurred within a period of ten days from the last attendance of the previous case (memorandum issued by the Ministry of Health and Board of Education gives the incubation period of Diphtheria as 2 to 10 days).

Of these only 11 were class mates. In ordinary circumstances it does not seem that the ordinary clinical case of Diphtheria spreads to any extent in school. There were at least 7 cases of Diphtheria who attended school for some period exceeding one day after the onset, and followed by no other case, and also one instance of a nasal Diphtheria who attended for two weeks without giving rise to any spread of infection in school.

Scarlet Fever.

340 cases of Scarlet Fever in a population of 67,500 is at the rate of 5.05 per thousand living, compared with the figure of 2.61 for England and Wales. The figures of incidence per 1,000 children under 15 are 1.4 times that of the country as a whole.

Of the primary cases 242 occurred in Estate houses, and 36 in other houses, the incidence in the two types being roughly proportional to the susceptible populations.

Owing to lack of accommodation at the Isolation Hospital, in the course of the year about two thirds of the patients had to be treated at home, the proportion it was possible to remove varying, of course, at different times of the year, the greatest proportion having to stay at home at the time of maximum incidence of Diphtheria, when one of the wards, originally allocated to Scarlet Fever, had to be used for the reception of cases of this disease.

In spite of the many cases which have been home treated, it has always been possible to admit to hospital all for whom admission is required on clinical grounds.

At those times when beds were available, removal was not insisted upon where home circumstances seemed favourable and the parents expressed a desire to retain the patient at home. It seemed illogical in these cases to stress the danger of spread of infection in July, when few cases prevailed and attempt to obtain removal, and then in November to have to refuse admission to cases in which the possible spread of infection appeared to be much greater.

In the first three months of the year accommodation was limited, and during that period 40 cases were treated at home to 17 removed. For six weeks beds were more free and during this time only 12 were home treated against 17 in hospital. For the next month again admissions were restricted, 19 cases being treated at home, and 8 in hospital.

During July beds were free, only 16 patients staying at home, 31 being removed. In August and September, beds were again getting short, and for these months there were 27 home against 28 hospital treated cases. For the last three months of the year 93 patients remained at home to 29 admitted. The totals for the year were:—home treated 216, hospital treated 124. The greatest number of actual cases at home at any one time was 46. When beds are scarce cases are admitted only in special circumstances as reported last year, the last cases admitted during the year being sent in for the following reasons:—

1. Clinical grounds	...	...	...	...	...	5
2. Difficulty in nursing—						
(a) adult patients	...	...	...	...	...	5
(b) absolute poverty in the home	...	...	...	...	...	3
(c) other reasons	...	...	...	...	...	6
					—	14
3. Wage earner would be excluded from work	...	...	...	...	...	3
4. Crowded homes with much risk of spread of infection	...	...	...	...	...	10

While these patients were admitted for these reasons, it does not, of course, mean that all of this type of case was included. For instance, the 10 cases admitted for overcrowding are 10 cases present in crowded homes which occurred while there was an empty bed available for the reception of that patient. There would be many other cases of just as great hardship, but if occurring at a time when there were no beds, could not be admitted. Similarly the three cases admitted on account of poverty, do not represent all the patients whose fathers were unemployed.

Many cases of hardship arose and applications were received by the Council for requests for assistance. The following is an extract of a report submitted to the Council:—

".....applications can be divided into the following groups:—

1. For assistance in payment for medical attendance, for medical necessities and food in connection with the disease from

- (a) persons in receipt of poor-law relief.

These would seem to be definitely the responsibility of the Guardians.

- (b) persons in receipt of unemployment benefit.

These are financially comparable to the previous group and would seem similarly to be a responsibility of the Guardians.

- (c) Those who are in employment, and who ordinarily can just pay their way, but for whom an illness of this nature makes impossible demands on the family purse.

Some of these people come under the qualification of "destitute," in that they are unable to obtain at their own cost the requisite medical attendance and nursing. For these it seems the duty of the Guardians to make provision. While this duty exists however in destitute cases, the definition of destitution is no doubt one to be left to the Guardians.

2. Cases where, owing to domestic difficulties, nursing assistance has to be called in. In such cases it may be argued that these are cases for the Guardians, as the application is received owing to financial distress; or it may be the moral responsibility of the Local Authority acting in these cases under their power under Sec. 67 Public Health Act (Amendment) Act 1907. "The Local Authority may provide nurses

for attendance on patients suffering from any infectious disease in their district, who, owing to want of accommodation at the hospital or danger of infection, cannot be removed to the hospital, or in cases where removal to hospital is believed to endanger the patient's health."

3. Where the earning members of the family are excluded owing to being engaged in occupations at which the disease may be spread.
 - (a) Where full wages are paid by employers; no assistance would be provided in this case.
 - (b) Where no wages are paid. As the exclusion is a preventive measure, the Local Sanitary Authority, as the body responsible for the maintenance of healthy conditions, should be empowered to compensate in these cases.

The Local Authority applied to the Ministry of Health for power to assist under Sec. 133 of the Public Health Act, 1875, viz., "Any Local Authority may, with the sanction of the Local Government Board, themselves provide or contract with any person to provide a temporary supply of medicine and medical assistance for the poorer inhabitants of the district."

Under this it was hoped that the Local Authority could assume responsibility for payment of Doctor's fees in cases where the family income was below the scale. Pending the decision of the Guardians on their policy with regard to this question of home treatment of infectious cases, the Ministry of Health have not, as yet, granted the necessary sanction.

In September, 1928, was considered the question of the provision of a nursing service for these home treated cases, providing either ordinary nursing or some special form of treatment such as the Milne. The objections to this procedure however, were:—

- (a) That in most cases no nursing as such was required and that the duties of any person so appointed would consist chiefly in allaying the anxiety of the mothers who would themselves carry out the actual nursing. This applied, of course, owing to the fortunate fact that the bulk of the cases are of a mild type, and any patients suffering from severe complications are admitted to hospital.
- (b) That any staff appointed would necessarily be temporary with attending disadvantages.

No arrangements therefore, were made for home nursing, the same practice as last year being carried out, viz., supervision by the Health Visitors.

A district in which as many as 200 cases of Scarlet Fever are nursed at home in one year suffers much indirectly. It has already been pointed out that there is a loss of 1,000 school weeks through exclusion. Cases of difficulty arise where a contact is excluded from his work for the period the patient is maintained at home, some firms apparently working on an illogical cast iron rule that all such contacts must be excluded, irrespective as to whether the contact has previously suffered, or whether he is prepared to abstain from contact with the patient. In the vast majority of cases the exercise of this rule is unnecessary. Whilst in some occupations such as dairying, any such regulations must be stringently enforced, it seems unnecessary to exclude such persons as clerks in general offices, more particularly when it is realized that early symptoms in adults are more marked and more readily detected than in children. Teacher home contacts are excluded for a period, yet many a child is in school whilst sickening for, and in some cases, actually suffering from the disease.

In popular opinion Scarlet Fever is still a dread disease, and accordingly rules are enforced in respect of it which give rise to much hardship, inconvenience and financial loss.

Secondary Cases.

Of the primary cases 178 were treated at home and 98 removed to hospital immediately. Of these home treated primary cases 28 gave rise to 34 secondaries, 24 giving rise to 1, 2 to 2, and 2 to 3 cases. This large number of secondary cases must not be attributed entirely to the absence of isolation accommodation, as many would have occurred even were there such facilities. In fact the maximum number which removal of the primary would possibly have prevented is 11, giving rise to 14 cases. Of the others that would have been infected in any case, the Doctor was not called in to the primary until after the notification of the secondary, in many cases not until the onset of the secondary and both diagnosed together—in 9 instances, whilst in another 8 the primary was a missed case with no Doctor called in. No case occurred subsequent to the freeing of a house from infection. The following figures show the population per house in the three classes of cases.

	Under 15.	Over 15.
1. Home treated primary cases where secondary occurred ...	3.03	2.14
2. Home treated primaries with no secondaries ...	2.33	2.29
3. Hospital treated cases ...	3.22	2.40

28 216
150
174

Return Cases

The following table analyses the particulars of Return Cases

Day on which Primary case removed.	In hospital from onset.	Day after return home on which Secondary infected.	
2	36	4	3 other children un- affected.
4	44	4	Remaining 2 children affected.
5	62	5	
2	36	13	All members of fam- ily not protected by previous attack were affected.
3	32	16	

i.e. No. of infecting cases 5.

No. of infected cases in 3 instances only 1; in 2 others
more than one either as direct return case, or as
secondary to return case.

For the purpose of estimating the value of removal to the isolation hospital as a factor in limiting the spread of infection, a comparison is made of the extent of secondary infection occurring in the two classes of cases, and also taking into consideration the return cases following hospital treatment. Strictly in assessing the value of removal to hospital, and considering the extent of secondary infection of home treated cases, one should exclude all the cases amongst those home treated cases in which infection would have occurred even had isolation facilities been available. For purposes of comparison, however, the only classes of cases not included are those in which the secondary case was diagnosed at the same time as, or before, the primary one.

Amongst the home treated there were 17 instances of secondary infection (with 17 actual cases) occurring in 160 homes with a susceptible population (children under 15) of 373 (366 over 15).

In the case of hospital removed patients, 7 patients gave rise to 7 cases in 87 homes, with a susceptible population of 280 (209 over 15). In addition, in the same population there were 5 patients returned from hospital giving rise to 10 infections. It would therefore seem that removal to hospital does little to limit the spread of infection.

The third day was again the most frequent on which removal was effected. The duration of stay of the primary prior to removal showed this time no influence in leading to secondary cases, as is shown by the following figures, which represent (a) the day of removal of primary cases, (b) the number of primary cases without a secondary infection, and (c) the number of cases where secondary infection occurred.

(a)	(b)	(c)
1st day ...	4 ...	1
2nd „ ...	20 ...	2
3rd „ ...	24 ...	2
4th „ ...	22 ...	1
5th „ and over	22 ...	2

Home Treated Cases.

The same practice was continued of supervision of these cases by the Health Visitor up to the sixth week. Disinfection was carried out shortly after 28th day in most cases. The prevailing type of illness has been very mild, and, of course, the more clinically severe had preference of beds. In few cases was it necessary on clinical grounds to remove to hospital a child who commenced home treatment. In 26 patients some complications were noticed. Of these one was Pneumonia with a fatal termination, 5 patients were subsequently removed on account of complications or severity of the case, two suffering from Otorrhœa, 1 gland, 1 septic throat, and 1 toxic case.

The following table gives a list of complications occurring in the remaining home treated cases.

Otorrhœa—9 (in all but one, of only a few days duration).
 Rheumatic pains—3 (all cleared up within 3 weeks).
 Abscess in neck—2 (lasting a few days).
 Heart trouble—3 (according to the Doctor all temporary).
 Kidney trouble—1 (due to child being taken out of bed to witness a firework display).
 Cervical Adenitis—3 (all in the third week but without renal complications).

Deaths.

There were 2 male deaths from Scarlet Fever, one due to Pneumonia, and the other to Mastoid complications.

Dick Test.

No children were submitted to the Dick test.

Schools.

No Public Elementary Schools were closed during the year for Scarlet Fever.

Enteric Fever.

2 cases of Enteric Fever were notified during the year; both were admitted to Oldchurch Hospital, both proving fatal. One was a female of 21, who worked out of the district. In the case of the other, a female of 32, the diagnosis was altered in hospital to Encephalitis.

Erysipelas.

Of the 15 cases notified, 3 were treated in hospital, and all recovered.

Cerebro Spinal Meningitis.

There were two deaths from Cerebro Spinal Meningitis, a male of 2 in April, and a female of 21 in September.

Poliomyelitis.

Three cases of Poliomyelitis were notified, and one of Polio Encephalitis—2 were admitted to Oldchurch Hospital for treatment. Two made good recoveries, whilst the other two are still under treatment.

Smallpox.

No cases of Smallpox occurred in this district in the course of the year. Considering the prevalence of this disease in the neighbourhood and the great risk of exposure to possible sources of infection by travelling, this can only be considered as a fortunate occurrence. The following table shows the deplorable state of affairs as regards vaccination in this area.

No. of successful vaccinations	...	...	...	370
Insusceptible	...	...	...	5
Conscientious Objectors	...	...	...	591
Postponed by Doctor's certificate...	...	...	...	37
Removed	...	...	...	57
Unaccounted for at present...	...	...	...	400

Owing to the prevalence of Smallpox in neighbouring localities, Chickenpox was, from 14/5/28 made a notifiable disease in this area, for a period of three months. 228 cases

were notified, 34 by school authorities. Of 190 notified by the doctors, 138 were children of school age, 49 under, and 3 over. Parents notified two children of pre-school age and 5 school children, of whom the school authorities had already notified four.

Anthrax and Plague.

There were no cases of Anthrax and Plague in this district.

Ophthalmia Neonatorum.

Notified.	Treated at Home.	Treated in Hospital.	Vision Unimpaired.	Vision Impaired.	Total Blindness.	Deaths.
20	19	1	19	1	—	—

The Public Health (Infectious Disease) Regulations, 1927, which came into operation 1/1/28 and revoked the Public Health (Pneumonia, Malaria, Dysentery, etc.) Regulation, 1919, provided that Trench Fever is no longer a notifiable disease, but that Malaria and Dysentery were still notifiable (except where Malaria has been induced in institutions for therapeutic purposes).

Tuberculosis.

	New Cases. (Forms A & B).				Transfers into District.				Deaths.			
	Pulmonary.		Non-pulmonary.		Pulmonary.		Non-pulmonary.		Pulmonary.		Non-pulmonary.	
	M	F	M	F	M	F	M	F	M	F	M	F
—	—	—	2	—	—	—	—	—	—	—	—	—
1	—	1	10	9	1	—	1	3	—	—	3	3
5	1	1	9	7	1	3	5	2	—	—	1	1
10	2	2	1	2	1	4	1	2	—	—	—	1
15	4	4	1	3	—	3	—	—	4	—	—	—
20	5	3	2	1	1	4	—	—	—	2	1	—
25	6	11	1	2	9	18	—	1	6	16	1	1
35	5	7	1	—	7	9	—	—	13	3	—	—
45	2	3	—	—	2	1	—	—	4	2	1	—
55	2	1	—	—	—	—	—	—	—	—	—	—
65 & upwards	—	—	—	—	—	—	—	—	—	—	—	—
Totals	27	33	27	24	26	51	8	8	27	23	7	6
1927 figs.	26	26	16	11	43	41	15	11	17	13	3	2

Register.

	Pulmonary		Non-pulmonary	
	Male.	Female	Male.	Female.
No. on register Jan. 1st, 1928	274	195	84	75
During the year—				
New notifications	27	33	27	24
Deaths	27	23	7	6
Transfers into area	24	52	8	7
Transfers out of area	4	2	1	5
No. on register Dec. 31st, 1928	304	254	111	105

The Tables show a slight rise in the notifications of primary cases of Pulmonary Tuberculosis as compared with 1927, and a very marked increase in the numbers of non-pulmonary cases. Although a larger population transferred here in 1928 than in the previous year, the number of cases of Tuberculosis amongst this group was smaller as regards the non-pulmonary cases of both sexes and also for the male pulmonary, though the female incidence of pulmonary disease showed some increase.

The number of cases on the Register at the end of the year was more than that at the beginning, an increase however which was not proportionate to the increase in the population.

Deaths.

The 50 pulmonary deaths are divisible into those occurring amongst—

- (a) Old residents of Dagenham 8
- (b) Those who transferred from London free of disease 9

The number of persons who lived here at various intervals before contracting the disease are:—under 1 year, 1; 1 to 2 years, 2; 2 to 3 years, 2; 3 to 4 years, 2; 4 to 5 years, 1; 5 to 6 years, 1.

These persons lived after the onset of illness—under 1 year, 6; under 2 years, 3.

This short period may possibly be accounted for by the patients not attending the Doctor and not being diagnosed before the disease had reached a well advanced stage.

(c) Those who transferred here suffering from the disease	...	...	...	...	...	25
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Those persons survived here—less than 1 year, 6; 1 to 2 years, 11; 2 to 3 years, 7; 3 to 4 years, 1.

All except one case (Larynx) of the non pulmonary type contracted the illness here.

Notification of those Pulmonary cases who died.

No. not on register at death	...	...	...	...	2
Only on register within—					
4 weeks of death	...	...	...	...	4
3 months of death	...	...	...	...	2
6 months of death	...	...	...	...	3
12 months of death	...	...	...	...	6

Non Pulmonary.

Not on register at death (P.M. diagnosis— treated as Pleurisy, Meningitis, T.B. Nephritis)	...	...	...	...	...	4
Within a few days of death—						
Meningitis	...	...	...	...	...	4
Peritonitis	...	...	...	...	...	2
Ac. Miliary	...	...	...	...	...	1
					—	7
One month of death (Peritonitis)	...	...	...	...	...	2
Two months of death (Peritonitis)	...	...	...	...	...	1

Sputum Analysis.

242 samples of sputa were submitted for analysis during the year, at the Essex County Public Health Laboratories.

Public Health Act, 1925, S. 62.

No action was taken during the year for compulsory removal to hospital of any infectious Tuberculous person.

The Tuberculosis scheme as administered by the Essex County Council provides:—

- (a) Tuberculosis Dispensaries.
- (b) Garden shelters for suitable cases.
- (c) Sanatorium accommodation for Surgical Tuberculosis.
- (d) Sanatorium accommodation for suitable early Pulmonary cases, and in some instances the more advanced.
- (e) Accommodation for bedridden and advanced cases.

MATERNITY AND CHILD WELFARE.

Notification of Births.

1,670 notifications of live births were received during the year (males 854, females 816).

422 notifications (including still births) were received from medical practitioners and parents, and 1,277 from midwives. In addition, information was received of 137 births outside this area.

The following list shows where most of these births occurred:—

Oldchurch Hospital	35
Queen Mary's Hospital, Stratford	23
East End Maternity Hospital	20
Ilford Maternity Home	8
Barking Maternity Home	4
Plaistow Maternity Hospital	4
City of London Maternity Home	4
Queen Charlotte's Hospital	3
Hackney Hospital	3
London Hospital	3

Still Births.

29 still births were notified (11 male, 18 female), the corresponding figures for registration being 41, 22 and 19.

The following analysis of cases of still births shows the preventable nature of some of these, either by ante-natal supervision, or provision of accommodation for labour.

1. Maternal causes	5
2. Difficulties in labour—	
Abnormal presentation	1
Breech delivery	4
Complications of labour	8
	— 13
3. Foetal causes	2
4. Macerated Foetus	2
5. Prematurity	3
6. Other causes	4

Infant Mortality.

131 deaths (77 male, 54 female) of infants under one year of age occurred, being an infant mortality rate of 73.1 compared with 65 for the country as a whole, and 62 for last year.

The rate amongst legitimate children is 70.4 and illegitimate 170.2.

Last year it was pointed out that there were certain factors in operation, which made for a low Infant Mortality rate. Amongst these were:—

1. That female births exceeded male. In 1928 this district returns to normal by showing an excess of male births. The male infant mortality rate works out at 83.8 and female 61.8, compared with last year's figures of 80.1 and 45.

A relative increase then of the male group with its higher mortality rate raises the figure.

2. That the illegitimate birth rate was low. This figure has risen slightly.
3. That the female premature births were abnormally low. It was pointed out in 1927 report that—

“should the premature births amongst females occur in any year at the normal rate, and other conditions remain the same, our infant mortality rate will rise to the rate obtaining for the country, and this without the healthiness of the locality diminishing.”

The rate increased from 3.2 in 1927 to 11.3 in 1928, and accounting for most of the rise in the female rate explains most of the rise in the total rate.

4. The complete absence of Measles, Whooping Cough, and Infectious diseases as a cause of death. This year there were 7 deaths from Whooping Cough and one each from Measles and Diphtheria.

The only cause of death which demonstrates excessive incidence and which accounts for the total rate exceeding that obtaining in the country as a whole, is Diarrhoea and Enteritis amounting to 25% of the infant mortality rate and particularly affecting males.

Enteritis: Of the deaths from this cause, one half occurred in the four months June to September. There was no increased prevalence in 1927 in the summer months, whereas one was expected for 1928 with its hotter weather. The deaths at the ages of four and six months amounted to half the total.

Below is a table showing the distribution in each sex of causes of deaths of infants under one year of age per 1,000 births.

				Male.	Female.
Measles and Whooping Cough	...			6.5	3.4
Diarrhoea and Enteritis	...	...		20.6	12.6
Pneumonia	...	...	...	10.9	11.4
Cerebro Spinal Meningitis	...	...		14.2	12.6
Tuberculosis	...	...	...	—	—
Convulsions	...	...	...	1.1	—
Bronchitis and Pneumonia	...	...		18.5	13.8
Other Causes	...	...	...	12.0	8.0
				83.8	61.8

The following table analyses the Neonatal Deaths, i.e., those occurring within one month of birth, which makes a total of 48 and provide by themselves an Infant Mortality Rate of 28.

Disease.	Under 1 day		1-7 days.		1-2 weeks.		2-3 weeks.		3-4 weeks.	
	M	F	M	F	M	F	M	F	M	F
Prematurity ...	5	5	2	2	—	3	2	3	—	—
Deficient Inherent Vitality...	1	1	1	1	—	—	—	—	—	—
Atelectasis ...	1	1	—	1	—	—	—	—	—	—
Congenital Heart	1	1	3	—	—	—	—	—	—	—
Asphyxia ...	2	—	—	—	—	—	—	—	—	—
Debility ...	1	—	—	—	—	—	—	—	—	—
Pneumonia ...	—	—	—	—	—	—	2	—	—	—
Congenital defects	—	—	—	—	1	—	1	1	—	—
Other causes ...	2	—	3	—	—	—	—	1	—	—

Child Deaths.

The following Table shows the distribution of Deaths for each year up to 5.

	1-2.		2-3.		3-4.		4-5.	
	M.	F.	M.	F.	M.	F.	M.	F.
Measles	3	3	2	0	1	2	0	0
Whooping Cough ...	2	2	0	0	0	1	0	0
Scarlet Fever	0	0	1	0	0	0	1	0
Diphtheria	1	1	1	2	3	0	3	1
Meningitis	0	0	1	0	0	0	0	0
Non-pulm. Tuberculosis	0	2	1	1	1	0	1	0
Pneumonia	9	2	3	1	0	1	1	0
Violence	0	1	0	0	0	1	0	1
Diarrhœa under 2 ...	0	2						
Others	4	0	1	0	0	0	0	0

Maternal Mortality.

The number of deaths recorded as being due to child birth or pregnancy during the year were:—from Sepsis 2, from other causes 2, being a Maternal Mortality rate of 2.23. All these deaths occurred in Institutions. The cases from Sepsis were: (1) Septicæmia following an incomplete abortion, (2) Septicæmia following manual removal of an adherent placenta. The other two cases were hæmorrhages due to tubal pregnancy and placenta prævia.

Investigations into Maternal Mortality due to pregnancy or child birth as suggested by the Maternal Mortality Committee of the Ministry of Health, are carried out by the Medical Officer.

Puerperal Fever and Pyrexia.

During the year there were notified 13 cases of Puerperal Fever (2 proving fatal) and ten of Puerperal Pyrexia. Of the 12 cases of Fever occurring in this district, 8 were removed to Oldchurch Hospital. In six cases instruments had been applied; in two manual removal of the placenta was performed, and one case followed an abortion.

Of the ten cases of Puerperal Pyrexia, all recovered. 2 were admitted to Oldchurch Hospital. One case followed instrumental delivery, and two followed miscarriages.

Work of the Health Visitors.

Routine visits are paid to infants as soon as possible after the tenth day, and special visits are paid respecting cases of Ophthalmia Neonatorum, Puerperal Fever, following up operations for Tonsils and Adenoids, etc.

During the year the Health Visitors paid the following visits:—

First visit to children under one year	...	...	2,071
Subsequent visits to these children	...	...	940
First visits to children 1 to 5	...	...	651
Subsequent visits to children 1 to 5	...	...	468
Visits to expectant mothers	...	...	364

Work at the Clinics.

Infant Welfare Centres:—

Total number of sessions held	...	...	237
Total attendances of children over 1 year	...	...	5,168
Total attendances of children under 1 year	...	...	8,935
Average attendance of children per session	...	...	60
Number of individual children	...	...	1,710

Ante-natal Clinics:—

Total number of sessions held	...	...	89
Total attendances of mothers	...	...	984
Average attendance per session	...	...	11
Number of first attendances	...	...	379

Infant Welfare Centres.

The number of Clinics at the end of the year was 6 compared with 3 at the beginning. More are required to meet the needs of sections of the population for whom the existing clinics are too distant. The district is handicapped in that there is a long interval between development of any new section and erection thereon of any premises suitable for Clinic purposes.

All the centres are maintained by the Local Authority, there being at each two Health Visitors, and a clerk dealing with the distribution of food stuffs.

In view of the large attendances at the Clinics, the services of voluntary helpers would materially help in maintaining order, while leaving the Health Visitors to approach the mothers either

individually or collectively. Under the present system the entire time of the two Health Visitors is taken up in marshalling the parents, note taking and weighing babies, leaving no time for any educational purposes.

Ante-natal Clinics.

The weekly Ante-natal Clinic in Dagenham Ward was continued, whilst the fortnightly Clinic in the Becontree Ward opened in the latter part of 1927, was changed to a weekly session. The total number of new cases attending was 379, being 21% of the number of births roughly. Little use was made of the Maternity Outfits available at cost price at the Clinics, in spite of the Midwives and Doctors having been circularised that they were obtainable. It was consequently decided to provide these free or at half price to those whose financial position justified such procedure.

In July the Ministry of Health approved of arrangements being made with Queen Mary's Hospital and Oldchurch Hospital for the reception of cases referred from the Ante-natal Clinics where necessary, on the grounds of complications of pregnancy, anticipated complications of labour or unsuitability of home circumstances. Many women continue to make their own arrangements with various institutions in London.

Treatment.

Tonsils and Adenoids: Under the arrangement with Queen Mary's Hospital, Stratford, for operative treatment of Tonsils and Adenoids 18 children were treated.

In June, 1928, the Ministry of Health approved of arrangements by which those children who needed to remain in an institution overnight, following the operation, should be dealt with at Oldchurch Hospital, at a cost of 22s. for the four nights, the grounds for retention being either the child's condition necessitating such action, or unsuitability of the home premises or nursing.

Orthopædic: In August the Ministry of Health approved of arrangements for in-patient treatment of Orthopædic cases at Balaam Street Hospital, Plaistow. Subsequently, however, owing to an alteration in the policy of the hospital, these arrangements fell through. At the same time sanction was given for the Local Authority to incur expenditure to assist in obtaining surgical appliances.

Ophthalmia: In November approval was received of the arrangements by which cases of Ophthalmia Neonatorum could

be admitted to St. Margaret's Hospital, Hampstead, with parents if possible, at a cost of 10s. per day per head. The Council's ambulance is used for the transport of such cases.

Assisted Milk Scheme.

The expenditure incurred by the Council under the Assisted Milk Scheme during the year was

For ordinary milk ...	£730	9	11
For dried milk ...	£192	4	0

The total sales of dried milk at the clinics amounted to £999 17s. 4d.

Ophthalmia Neonatorum.

20 notifications of Ophthalmia were received in the course of the year. All cases were attended primarily by the Midwives who called in the Doctor on a medical aid notice. The majority were slight cases, there being only one serious enough to be admitted to hospital.

In one case there was some blurring of the cornea.

Pemphigus.

Towards the end of the year a number of cases of Pemphigus occurred in various parts of the district, not confined to any one area or to any particular practice. These sporadic cases foreshadowed an extensive outbreak which occurred in the first few months of the current year. The nature of the disease, its method of spread and great difficulty of control by ordinary methods of disinfection would suggest that it is a general systemic infection, possibly spread by a carrier harbouring the organism in the nasopharynx.

Foster Children.

There were 73 additions and 34 erasures due to children reaching the age of 7 or removing from the district.

Maternity Homes.

The Nursing Home Registration Act which came into operation 1/7/28 repeals part 2 of the midwives and Maternity Homes Act, 1927. There are no Nursing or Maternity Homes in this district.

CO-ORDINATION OF SERVICES.

The necessary co-ordination of services was insured in 1928 by an arrangement which worked well. The Medical Officer of Health for the District was one of two School Medical Inspectors in the area. In February the arrangements of the nursing services were altered. Up to that time the school work for the Essex County Council was performed by the school nurses, while the nurses' duties under the Maternity and Child Welfare Act were performed by the Health Visitors of the Local Council. This arrangement was changed to one by which the same nurses acted both as school and child welfare nurses for a smaller area, an important consideration when dealing with a district growing as rapidly as this, and one in which changes are frequent. It was therefore with regret that it was learned that the Essex Education Committee proposed, from April 1st, 1929, to resume the previous arrangement, appointing their own staff for the school work, while the Local Authority employed whole time their own officers.

The following is an extract from a report submitted at the end of 1928 to the County School Medical Officer:—

"Since February the four Dagenham Urban District Health Visitors have given three sessions per week to school work for the County Council, being in total just over the services of one full time school nurse.

Understaffing in this connection is apparent when it is realized that since July in the schools of the district there has been more time given by doctors than by nurses. It is most regrettable that this combined arrangement of the nursing services is shortly to be terminated, more particularly in a district of this nature, one growing so rapidly and in which is occurring to a certain degree, transfers on the Estate and returns to London. One nurse dealing with all the services for a small area would be long enough in getting to know the inhabitants. To have separate nurses for the School, Tuberculosis and Child Welfare services with consequently larger areas for each individual nurse will certainly prevent any one of them acquiring a thorough knowledge of the people for some considerable time. In this district too, the children at present are of such an age that in practically every house there are some of pre-school age and children attending school. The duplication of visits to these houses is a cause of irritation to the householders

and an unnecessary waste of time on the part of the Visitors. It seems difficult to justify such a change of policy which certainly cannot be in the best interests of the inhabitants of the locality. For the successful continuance of the arrangement all that is needed is co-operation between two Local Authorities and the supervision necessary to secure for each Authority its quota of service from the entire staff. For the past year the County Council cannot complain of not having received their due proportion, and any deficiencies that may have arisen in the services of the nurses in school work has been due to the lamentable shortage of staff assigned for the purpose."
