

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

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Barking Urban District Council.

THE
ANNUAL REPORT

OF THE
MEDICAL OFFICER OF HEALTH

AND
SANITARY INSPECTOR

For the Year 1922.

SUMMARY OF VITAL STATISTICS FOR YEAR 1922.

GENERAL STATISTICS.

Area of Urban District—3,897 acres land, 209 tidal waters.

Population—(1921) 35,543; (1922) 36,680.

Number of inhabited houses (1921)—6,716.

Number of families or separate occupiers—6,698

Rateable value—£205,563.

Sum represented by Penny Rate—£819 8s. 9d.

	Births.	Males.	Females.	Rate per 1,000 Pop.
Legitimate	...	425	430	} 24.0
Illegitimate	...	10	17	
Deaths	...	203	161	9.9
Number of Women dying in consequence of Childbirth:				
From Sepsis	—
From other causes	2
Deaths of Infants under 1 year of Age:				
Legitimate	49
Illegitimate	—
Infantile mortality rate	55.5
Deaths from:				
Measles (all ages)	3
Whooping Cough (all ages)	2
Diarrhœa (under 2 years)	4

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH FOR THE URBAN
DISTRICT OF BARKING TOWN, IN THE COUNTY OF
ESSEX, FOR THE YEAR ENDING 31st DECEMBER, 1922.

To the Chairman and Members of the Urban District of
Barking Town.

GENTLEMEN,

The general features of the year have already been referred to in the annual summary given in January.

Under the circumstances, it would be hardly wise to dwell unduly on the very favourable state of the public health during the year under review. The figures are allowed to speak for themselves.

R. J. EWART.

The rates for certain diseases in the following tables, are compared with England and Wales, great and small Towns, and London respectively.

Barking Town Urban District Council.

*With the
Medical Officer of Health's
Compliments*

PUBLIC OFFICES,
BARKING, ESSEX.

Nothing is more certain than that

BIRTH RATE, DEATH RATE, AND ANALYSIS OF MORTALITY

(Provisional figures. Populations estimated to the middle of 1921 have been used for the purposes of this Table. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns.)

	Birth Rate per 1,000 Total Population.	ANNUAL DEATH RATE PER 1,000 POPULATION.										RATE PER 1,000 BIRTHS.		PERCENTAGE OF TOTAL DEATHS.		
		All Causes.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Violence.	Diarrhoea & Enteritis (under Two years).	Total Deaths under One year.	Deaths in Public Institutions.	Certified Causes of Death.	Inquest Cases.	Uncertified Causes of Death.
England and Wales	20.6	12.9	0.01	0.00	0.15	0.04	0.16	0.11	0.54	0.44	6.2	77	25.6	92.7	6.2	1.1
105 County Boroughs and Great Towns including London	21.4	13.0	0.01	0.00	0.22	0.05	0.19	0.13	0.56	0.41	7.6	82	32.9	92.6	6.7	0.7
155 Smaller Towns (1921 Adjusted Populations 20,000-50,000)	20.5	11.7	0.01	0.00	0.01	0.03	0.15	0.09	0.58	0.35	5.6	75	16.9	93.6	5.1	1.3
London	21.0	13.4	0.01	0.00	0.35	0.07	0.25	0.25	0.57	0.45	7.1	74	48.7	92.1	7.8	0.1
BARKING	24.0	9.9	0.01	0.00	0.01	0.04	0.05	0.16	0.55	0.38	3.3	55.5	15.3	—	—	—

It is seen that the area compares very favourably and the conclusion would appear to be justifiable that each inhabitant enjoys certain benefits not granted to other similarly situated areas. The small proportion of deaths (15.3 per cent.) occurring in institutions and its decrease on previous years, does suggest that some progress had been made in respect to housing conditions and that the standards of life have been maintained.

Comparing the town with itself, the following shows much cause for gratification as regards the general death rate and infant mortality, which are the lowest on record.

VITAL STATISTICS OF WHOLE DISTRICT FROM 1917 TO 1922.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Nett.		Number.	Rate.	Of Non-residents registered in the District.	Of residents registered out of the District.	Under One year of age.		At all Ages.	
		Number.	Rate.					Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12
1917	{ 32394 36110 }	758	23.4	520	14.4	—	111	89	117.4	631	17.4
1918	{ 31579 35383 }	728	23.1	542	15.3	—	98	60	82.4	640	18.1
1919	{ 33804 35214 }	815	33.0	277	8.1	—	95	54	65.0	372	11.0
1920	35151	1086	30.9	339	9.6	—	110	92	83.0	449	12.6
1921	36250	968	26.0	297	7.1	—	97	74	74.1	394	10.8
1922	36680	882	24.0	308	8.1	—	56	49	55.5	364	9.9

NOTIFIABLE DISEASES DURING THE YEAR 1922.

The infectious diseases notified in the district are given in the following tables. The figures are less than in previous years.

DISEASE.	At all Ages.	TOTAL CASES NOTIFIED AT AGES.												WARDS.				Total Cases Re- moved to Hospital.	
		YEARS.												North.	South.	East.	West.		
		Under 1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65 and over							
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	51	7	5	7	2	9	10	11	—	—	—	—	—	4	17	20	10	51	—
Scarlet Fever	53	2	1	7	—	8	17	10	8	—	—	—	—	9	13	24	7	49	—
Erysipelas	36	1	—	—	—	—	—	1	1	5	10	18	—	5	13	13	5	—	—
Enteric Fever	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	2	—	—	—
Puerperal Fever	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	2	—	—	—
Pneumonia	103	15	13	8	3	4	3	3	8	17	8	21	13	40	30	20	4	—	—
Cerebro Spinal Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum	10	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	925	70	159	154	117	174	221	15	6	5	4	—	116	423	286	100	5	—	—
Whooping Cough	83	14	17	19	17	14	—	—	—	—	2	—	11	23	43	6	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis, Male	24	—	—	—	1	—	—	—	1	5	7	10	8	2	11	3	5	—	—
" " Female	26	—	1	—	1	—	—	2	5	7	6	4	5	9	6	6	—	—	—
Non-Pulmonary Tuberculosis, Male	10	—	—	—	2	—	3	1	1	—	1	2	—	4	4	2	—	—	—
" " Female	13	—	2	1	2	—	1	3	2	—	1	1	2	5	4	2	—	—	—
Totals	1,338	119	198	196	144	210	255	46	32	43	39	56	173	551	443	161	114	—	—

During the year (December) the order making Measles and Whooping Cough compulsorily notifiable was rescinded. A statement relative to certain facts noticed whilst the disease was officially recognised, is given at the end of the report.

OTHER INFECTIOUS DISEASES.

	Number Notified.	Number Visited.	Number Treated.	Removed to Hospital.
Ophthalmia ...	10	10	—	—
Measles ...	925	925	—	5
Whooping Cough ...	83	83	—	—
No. children injected with Whooping Cough Vaccine	—	—	10	—

MEASLES 1922.

NOTIFICATIONS IN EACH WEEK.

Week ending	Number Notified.	Week ending	Number Notified.
January 7th	2	May 27th	48
" 14th	2	June 3rd	38
" 21st	2	" 10th	11
" 28th	1	" 17th	17
February 4th	2	" 24th	10
" 11th	8	July 1st	8
" 18th	3	" 8th	8
" 25th	41	" 15th	6
March 4th	28	" 22nd	6
" 11th	49	" 29th	4
" 18th	47	August 5th	1
" 25th	73	" 12th	3
April 1st	86	" 19th	3
" 8th	102	" 26th	1
" 15th	63	September 2nd	3
" 22nd	72	" 9th	1
" 29th	37	" 16th	1
May 6th	58	October 7th	1
" 13th	44	November 4th	1
" 20th	34		

TUBERCULOSIS.

It is to be noted that out of 38 deaths from Tuberculosis, in eight cases no notification was received. On enquiry it was found that in six instances a change of address or doctor had occurred and no action could be taken. In two instances the diagnosis of Tuberculosis was made late in the illness and the practitioner, for obvious reasons, was reluctant to notify. Beyond this, the notifications can be regarded as a fair reflection of the amount of clinically recognisable disease at present in the district.

CAUSES OF SICKNESS AND DEATH.

The following tables give the actual causes of sickness and death, and in so far as it shows no marked variation from what is to be expected from year to year, comment is unnecessary. The tables give the causes of death and age distribution (the old wards have been retained as being more suitable for statistical purposes, though it is doubtful if this sub-grouping is worth while).

DEATHS, 1922. ACCORDING TO AGE AND WARD.

Causes of Death.	M.	F.	Under													Over 65	North	South	East	West	TOTALS
			1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65								
Enteric Fever ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Small Pox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles ...	2	1	1	1	—	1	—	—	—	—	—	—	—	—	—	—	2	1	—	—	3
Scarlet Fever ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Whooping Cough ...	1	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	2
Diphtheria ...	3	3	1	3	—	—	2	—	—	—	—	—	—	—	—	—	—	5	1	—	6
Influenza ...	11	16	—	3	1	—	—	—	—	—	—	3	2	7	8	3	5	12	8	2	27
Encephalitis lethargica ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningococcal meningitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis ...	20	13	—	1	1	—	—	1	2	2	12	6	7	1	6	7	8	12	33	—	
Other Tubercular Diseases ...	5	5	—	2	1	—	—	—	—	—	—	—	3	2	2	3	4	3	—	—	10
Cancer, Malignant Disease ...	21	11	—	—	—	—	—	—	—	—	—	3	9	12	8	5	11	12	4	—	32
Rheumatic Fever ...	1	4	—	—	—	—	—	—	2	2	—	—	—	1	1	1	2	1	—	—	5
Diabetes ...	1	2	—	—	—	—	—	—	—	—	—	1	1	1	—	2	1	—	—	—	3
Cerebral Hæmorrhage ...	8	13	—	—	—	—	—	—	—	—	—	6	7	8	4	6	8	3	—	—	21
Heart Disease ...	21	15	—	—	1	—	1	—	—	—	—	4	5	10	15	6	10	16	4	—	36
Arterio-sclerosis ...	1	3	—	—	—	—	—	—	—	—	—	—	1	1	2	1	1	1	1	—	4
Bronchitis ...	18	11	6	2	1	—	—	—	—	—	—	2	—	7	11	8	9	5	7	—	29
Pneumonia (all forms) ...	14	15	10	8	1	1	—	—	—	—	—	3	2	—	4	3	6	8	12	—	29
Other Respiratory Diseases ...	3	1	—	—	—	—	—	—	—	—	—	—	1	1	2	—	2	1	1	—	4
Ulcer of Stomach or Duodenum ...	4	2	—	—	—	—	—	—	—	—	—	—	1	3	2	—	2	2	2	—	6
Diarrhœa (under 2 years) ...	3	1	3	1	—	—	—	—	—	—	—	—	—	—	—	—	2	1	1	—	4
Appendicitis and Typhlitis ...	—	2	—	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1	—	—	2
Cirrhosis of liver ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1
Acute and Chronic Nephritis ...	11	7	—	—	—	—	—	—	1	—	1	2	7	7	5	6	6	1	—	—	18
Puerperal Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other accidents and diseases of pregnancy ...	—	2	—	—	—	—	—	—	—	—	—	—	2	—	—	1	1	—	—	—	2
Congenital Debility, etc. ...	11	6	17	—	—	—	—	—	—	—	—	—	—	—	—	2	7	5	3	—	17
Suicide ...	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Other deaths from violence ...	7	5	3	1	—	1	—	1	1	—	—	1	1	3	—	1	3	7	1	—	12
Other defined diseases ...	33	22	7	—	—	—	—	—	—	—	—	3	3	16	26	13	9	19	14	—	55
Totals ...	203	161	49	22	7	3	3	2	7	7	33	51	87	93	67	103	123	71	—	—	364

INFANT MORTALITY DURING THE YEAR 1922.

The following table gives the actual causes of death of children dying under one year of age. It is to be observed that the smallness of the number is due to the absence of deaths from diarrhoea.

Nett deaths from stated causes at various ages under 1 year.

Causes of Death. (All causes certified.)	Under 1 week.	1—2 weeks.	2—3 weeks.	3—4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total under 1 year.
Small pox	—	—	—	—	—	—	—	—	—	—
Chicken pox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	1	—	1
Scarlet fever	—	—	—	—	—	—	—	—	—	—
Whooping cough	—	—	—	—	—	—	—	—	1	1
Diphtheria and croup	—	—	—	—	—	—	—	1	—	1
Erysipelas	—	—	—	—	—	—	—	—	—	—
Tubercular meningitis	—	—	—	—	—	—	—	—	—	—
Other tubercular dis- eases	—	—	—	—	—	—	—	—	—	—
Meningitis (not tuber- cular)	—	—	—	—	—	—	—	—	1	1
Convulsions	—	—	1	—	1	—	—	—	—	1
Laryngitis	—	—	—	—	—	—	—	—	—	—
Bronchitis	—	—	—	1	1	2	1	—	2	6
Pneumonia (all forms)	—	—	—	—	—	1	3	5	1	10
Diarrhoea	—	—	—	—	—	—	—	3	—	3
Enteritis	—	—	—	—	—	—	—	—	—	—
Gastritis	—	—	—	—	1	—	—	—	—	—
Syphilis	—	—	—	1	—	—	—	—	—	1
Rickets	—	—	—	—	—	—	—	—	—	—
Suffocation, overlaying	—	—	1	—	1	—	—	—	—	1
Injury at birth	—	—	—	—	—	—	—	—	—	—
Atalectasis	—	—	—	—	—	—	—	—	—	—
Congenital malforma- tion	—	—	—	—	—	—	—	—	—	—
Premature birth	9	—	2	—	11	—	—	—	—	11
Atrophy, debility and marasmus	1	1	—	—	2	—	—	—	—	2
Other causes	3	2	2	1	8	—	—	1	1	10
TOTALS	13	3	6	3	25	3	4	11	6	49

Nett Births in the Year:—

Legitimate	855
Illegitimate	27

Nett Deaths in the Year:—

Legitimate	49
Illegitimate	—

SUMMARY OF NURSING ARRANGEMENTS,
HOSPITALS & OTHER INSTITUTIONS, AVAILABLE
FOR THE DISTRICT.

PROFESSIONAL NURSING IN THE HOME.

A. General—A voluntary association (The Plaistow Maternity Charity) has a Branch in the district, and supplies midwives and home nurses, the latter are sent on a requisition from a practitioner.

B. Infectious Diseases—If the staff is available the Council supplies nurses for the home nursing of measles and other infectious diseases on the requisition of a registered practitioner.

C. Midwives—There are five midwives practicing in the district, two of whom are employed by the Council. The work done is given on another page of this report.

D. Clinics and Treatment Centres—Three Infants Clinics are held weekly, as follows:—

INFANT CLINICS AND WORK OF HEALTH VISITORS.

Name and Situation.	Accommodation.	Average Attendance.	Times Opened.	Provided by.
Kennedy Hall Gordon Road	2 rooms	20	Monday 2—5	Council
Clinic East Street	4 rooms	58	Tuesday 2—5	..
Abbey Hall Abbey Road	2 rooms	30	Thursday 2—4.30	..

REPORT FOR THE HOSPITAL FOR THE YEAR 1922.

Patients admitted:—

Diphtheria—52, including 6 deaths from Cardiac failure, and 3 tracheotomies (all recovered).

Scarlet Fever—49, including 1 death (mentally defective). Three return cases of Scarlet Fever.

Measles—5.

Phthisis—5 including 1 death.

Pneumonia—4 including 2 deaths.

General sickness—10 including 2 operations.

One secondary rise of temperature—Scarlet fever, nursed in the Ward.

One secondary rise of temperature—Diphtheria, nursed in the Ward.

No secondary rises of temperature of cases nursed in the cubicles.

Duration of stay in hospital compared with previous years:—

Year.	Scarlet Fever.		Diphtheria.	
	Days.		Days.	
1922 ...	37.6	...	29.9	
1921 ...	36.83	...	30.65	
1914 ...	37.26	...	25.0	
1913 ...	37.1	...	19.5	
1912 ...	39.5	...	41.2	
1911 ...	52.44	...	40.0	

ANNUAL STATISTICS RELATING TO MATERNITY
CASES ADMITTED TO UPNEY HOSPITAL AND
ATTENDED ON THE DISTRICT.

	Hospital.	District.
Total number of cases admitted...	114	—
Average duration of stay ...	14 days	—
Number of cases delivered—		
(a) Midwives	109	152
(b) Doctors	1	9
Number of cases in which medical attention was sought by the midwife with reasons for requiring assistance—		
(a) Ante-natal	1	1
(b) During labour	2	6
(c) After labour	1	4
(d) For infant	6	5
Number of cases notified as puerperal sepsis with result of treatment in each case	—	—
Number of cases in which temperature rose above 100.4 for 24 hours with rise of pulse rate...	2	2
Number of cases notified as Ophthalmia Neona- torum, with result of treatment in each case	—	1
Number of cases of "inflammation of the eyes" however slight	3	—
Number of infants not entirely breast-fed while in the institution, with reasons why they were not breast-fed	12	—
	(Weakness of mother, depressed nipples)	
Number of maternal deaths with causes	—	—

Number of foetal deaths (still-born or within ten days of birth) and their causes, and the results of the post-mortem examination, if obtainable: 2 macerated; 1 anencephalus; 2 premature, and 1 heart.

GENERAL CONDITIONS INFLUENCING INFANT LIFE AS FOUND BY
HEALTH VISITOR.

	Number Visited.	Breast.	Artificial	Mixed.	Cradle Used.	Dirty Houses.	Mother Ill. (1922.)
1st visit							9 Anæmia 1 Breast abscess 1 Phlebitis 2 Tuberculosis 1 Nephritis 1 Rheumatoid arthritis 1 P.P. Hæmorrhage (died) 2 Puerperal fever 1 Bronchitis 1 Spinal deformity 1 Ovarian disease. 1 Diarrhœa — 22
1922	1,020	955	44	21	113	40	
1921	974	784	99	91	177	89	
2nd visit							
1922	233	145	69	19	—	—	
1921	173	109	43	21	—	—	
3rd visit							
1922	71	35	18	18	—	—	
1921	57	24	23	10	—	—	

SIZE OF TENEMENTS, AND NUMBER OF OCCUPANTS IN SUCH HOUSES,
IN WHICH A BIRTH OCCURRED IN 1922.

ROOMS PER TENEMENT.	OCCUPANTS PER TENEMENT.																	TOTALS.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	
1	--	2	75	34	8	1	3	3	--	--	--	--	--	--	--	--	--	126
2	--	--	70	50	16	11	5	--	1	--	--	1	1	--	--	--	--	155
3	--	1	15	17	24	13	7	8	--	--	1	--	--	--	--	--	--	86
4	--	--	21	47	49	51	37	35	27	21	8	5	4	3	--	--	--	308
5	--	1	2	12	27	18	10	8	13	6	3	4	2	--	1	--	--	107
6	--	--	4	9	8	5	5	8	8	1	1	--	1	1	1	--	--	52
7	--	--	--	2	1	--	--	--	--	--	--	--	--	--	--	--	--	3
8	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	2
9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTALS	4	187	171	133	101	67	62	49	28	13	10	8	4	2	--	--	--	839

STATEMENT DEALING WITH MILK DISTRIBUTION, SUPPLY OF FREE MEALS,
AND DOMESTIC ASSISTANCE, DURING THE YEAR 1922.

PERIOD.	FRESH MILK Supplied Free and at Half-price (per day).		DRIED MILK (per week).					
	Pint Free.	Pint Half-price.	1 lb. Free.	1½ lbs. Free.	2 lbs. Free.	3 lbs. Free.	1½ lbs. Half-price.	2 lbs. Half-price.
1 month and under	61	3	7	2	21	1	2	8
2 months	65	2	4	3	13	—	1	4
3	43	1	—	5	8	1	—	4
4	28	1	5	2	7	1	—	—
5	17	1	1	1	1	—	—	—
6	16	—	1	1	2	—	—	—
7	6	—	—	—	—	—	—	—
8	4	—	—	—	1	—	—	—
9	1	—	—	—	—	—	—	—

	DINNERS (daily).			HOME HELPS.	
	@ 1/4	@ 8d.	@ 1/-		
1 month	13	1	1	For a period of 2 weeks (daily) at 10/- per week	... 1
2	8	—	—	" " 2 " " (free)	... 1
3	3	—	—	" " 12 " " at 10/- per week	... 1
4	1	—	—		
5	—	—	—		
6	—	—	—		

DISTRIBUTION OF BIRTHS ACCORDING
TO MOTHER'S AGE.

Age of Mother.	Babies Born.	Deaths.	Still Births.	Age of Mother.	Babies Born.	Deaths.	Still Births.
17	2	—	—	33	18	1	—
18	6	—	1	34	32	1	1
19	8	—	—	35	25	1	1
20	16	1	—	36	31	—	1
21	25	—	3	37	20	—	—
22	46	1	—	38	23	2	—
23	52	—	—	39	29	—	1
24	57	2	2	40	29	1	2
25	57	3	—	41	16	1	—
26	57	2	1	42	13	2	—
27	40	2	1	43	12	2	1
28	47	1	1	44	7	—	—
29	43	3	1	45	3	—	—
30	46	1	—	46	—	—	—
31	37	1	—	47	1	—	—
32	31	—	—	48	1	—	1

INFANTILE MORTALITY
AND PHYSICAL CHARACTERS OF THE MOTHER.

BABIES BORN.							
HEIGHT.			WEIGHT.		INTELLIGENCE.		
Tall.	Medium.	Short.	Average & above.	Below Average.	Average.	Below Average	
255	375	159	714	75	726	63	
DEATHS.							
10	8	9	25	2	20	7	
STILL BIRTHS.							
1	9	7	14	3	13	4	
Totals	11	17	16	39	5	33	11
Rate per 1,000 Births.	44	45	100	54	62	44	140

The general trend is the same as for previous years.

SANITARY ADMINISTRATION.

HOUSING CONDITIONS.

Statistics—Year ended December, 1922.

I.—General:—

(1) Estimated population	...	...	...	...	36,680
(2) General death-rate	...	...	...	...	9.9
(3) Death-rate from tuberculosis	...	...	...	...	0.8
(4) Infantile mortality rate	...	...	...	...	55.5
(5) Number of dwelling-houses of all classes	...	...	...	...	7,400
(6) Number of working-class dwelling-houses	...	...	...	...	7,323
(7) Number of working-class dwelling-houses erected	...	...	...	...	303

II.—Unfit dwelling-houses:—

(1)—Inspection:—

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	...	...	...	...	3,439
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulation, 1910	...	...	...	...	458
(3) Number of dwelling-houses found to be in a state so dangerous or injurious as to be unfit for human habitation	...	...	...	...	3
(4) Number of dwelling-houses (exclusive of those referred to under the previous sub-heading) found not to be in all respects reasonably fit for human habitation	...	...	...	...	204

(2)—Remedy of defects without service of formal notice:—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	1,334
---	-----	-----	-----	-----	-------

(3)—Action under Statutory Powers:—

A.—Proceedings under Section 28 of the Housing
Town Planning, etc., Act, 1919.

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	204
(2) Number of dwelling-houses which were rendered fit	
(a) by owners	180
(b) by Local Authority in default of owners	1
(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close ...	—

B.—Proceedings under Public Health Acts.

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	320
(2) Number of dwelling-houses in which defects were remedied—	
(a) by owners	294
(b) by Local Authority in default of owners...	—

C.—Proceedings under Section 17, 18, of the
Housing and Town Planning Act, 1909—

(1) Number of re-presentations made with a view to the making of closing orders	3
(2) Number of dwelling-houses in respect of which closing orders were made	3
(3) Number of dwelling-houses in respect of which closing orders were determined, the dwelling-house having been rendered fit	1
(4) Number of dwelling-houses in respect of which demolition orders were made	—
(5) Number of dwelling-houses demolished in pursuance of demolition orders	—

SUMMARY OF WORK DONE DURING THE YEAR 1922.

Inspections:—

House to house	...	...	...	...	...	458
Complaints	...	...	...	...	...	374
Infectious disease	...	...	...	...	...	136
Factories and Workshops	...	...	...	...	...	263
Schools	...	...	...	...	...	122
Cowsheds and Dairies	...	...	...	...	...	264
Common Lodging Houses	...	...	...	...	...	127
Food Shops	...	...	...	...	...	215
Miscellaneous	...	...	...	...	...	2,717
Total number of Inspections	...	...	...	...	...	4,676
—————						
Re-inspections of all kinds	...	...	...	...	...	5,765
Preliminary Notices served	...	...	...	...	...	1,760
Statutory Notices served	...	...	...	...	...	144
Housing and Town Planning Notices	...	...	...	...	...	204
Main drains cleared	...	...	...	...	...	173
Cess-pools cleared	...	...	...	...	...	75
Houses without proper dustbins	...	...	...	...	...	176
Houses over-crowded	...	...	...	...	...	77
Houses stripped and cleansed after infectious diseases...						35

MEASLES—ORDER OF BIRTH.

The following points bearing on the incidences of Measles and its spread are of some interest. The point under investigation is an attempt to measure the relative importance of infection derived from a general source as compared with the chance of one member of a family infecting another. The following tables give the order of birth and age of attack. Both records are to some extent incomplete, as the pressure of economic circumstances and increase in parental knowledge prevent medical attention being applied for, as the family gets larger. The economic stress is heavier, the mean size of family is larger, and the mean age of mother at birth is greater in the second than in the first records. Further, each case is the first case notified so that each family occurs once only in the record. It is to be assumed therefore that the chance of family infection will be reduced to a minimum as it must necessarily depend on mild or unrecognisable disease.

BIRTH SEQUENCE AND AGE OF ATTACK.

MEASLES—1919.

Age of Attack.	BIRTH SEQUENCE.										TOTALS.
	1	2	3	4	5	6	7	8	9	10	
O	5	3	1	2	—	1	—	—	—	—	12
1st year	10	6	1	2	—	—	1	1	—	—	21
2nd ..	16	10	5	1	1	1	—	—	—	—	34
3rd ..	10	13	4	1	3	1	1	—	—	—	33
4th ..	24	6	7	4	1	—	—	—	—	—	42
5th ..	30	25	21	9	6	5	2	—	—	—	98
6th ..	39	31	18	16	2	—	—	1	—	—	107
7th ..	29	16	14	4	1	1	—	1	—	—	66
8th ..	16	11	2	1	—	—	—	1	—	—	31
9th ..	7	3	3	1	—	—	—	—	—	—	14
10th ..	5	2	—	—	—	—	—	—	—	—	7
11th ..	6	1	1	1	—	—	—	—	—	—	9
12th ..	3	3	1	—	1	—	—	—	—	—	8
13th ..	5	—	—	—	—	—	—	—	—	—	5
14th ..	1	1	—	—	—	—	—	—	—	—	2
15th ..	1	1	—	—	—	—	—	—	—	—	2
16th ..	2	—	—	—	—	—	—	—	—	—	2
17th ..	1	—	—	—	—	—	—	—	—	—	1
TOTALS	210	132	78	42	15	9	4	4	—	—	494

$$r = +.144 - .034$$

ORDER OF BIRTH AND AGE OF ATTACK. MEASLES—1919.

Order of Birth.	AGE OF ATTACK.																			TOTALS.	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		19
1	5	20	31	26	28	118	120	32	8	1	2	1	6	—	1	1	—	—	—	1	401
2	6	14	17	12	22	52	64	13	3	2	1	1	—	—	—	—	—	—	—	—	207
3	4	13	11	15	25	39	42	10	1	—	—	—	—	—	1	—	—	—	1	—	162
4	6	11	9	9	13	27	25	3	—	—	—	1	1	—	—	—	—	—	—	—	105
5	4	2	5	6	11	14	15	1	—	—	—	—	—	—	—	—	—	—	—	—	58
6	1	5	3	2	4	8	3	1	—	—	—	—	—	—	—	—	—	—	—	—	27
7	3	4	3	2	4	4	2	1	—	—	—	—	—	—	—	—	—	—	—	—	23
8	2	—	1	—	2	2	2	—	—	—	—	2	—	—	—	—	—	—	—	—	11
9	2	1	1	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—	7
10	—	—	—	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	4
11	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
12	—	—	—	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	4
13	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
14	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals	35	71	81	75	110	267	278	62	12	3	3	5	7	—	2	1	—	—	1	1	1,014

$r = -\overset{+}{.15912} - .021$

Standard Deviation.

Order = 1.4191

Standard Deviation.

Age = 2.747

The fact that the later born are attacked at earlier ages suggests, (a) the existence of a biological differentiation, or (b) that infection is introduced into the home by an older member of the family suffering from discomfort or showing recognisable signs.

A general case might be stated as follows:—

Let n_1, n_2 represent individuals, then the whole population consists of $n_1 + 2n_2 + 3n_3 + \dots$ persons. These are exposed to an extra domestic risk. The number of families m_1, m_2, \dots infected from this source is

$$\binom{m}{1-q}^n + \binom{m_1}{1-q}^{n_1} + \dots$$

But if we consider the

$$\binom{m-1}{m p q} + \frac{m(m-1)}{2} p_2 q_2^{m-2} + \dots$$

with 1, 2, 3 extra domestic cases, the intra domestic cases subsequently arising are functions of m .

Hence the total number of cases recorded will be drawn in greater proportions from larger families. To some extent this theorem can be tested by comparing the distribution (a) when the first case is notified and (b) when all cases are notified. (Notifications during war period and notifications 1920-1921). The figures are as follows:—

INCIDENCE OF MEASLES ACCORDING TO SIZE OF FAMILY.

Number of occupants.	First cases notified each group of occupants counted once only.	All cases notified each group of occupants counted according to number of cases.	Number of occupants per tenement which contains a child of one year of age.
1	—	—	2
2	8	3	5
3	72	44	99
4	129	105	128
5	114	100	128
6	90	96	119
7	68	68	93
8	59	59	77
9	21	20	54
10	10	6	20
11	7	27	23
12	2	3	3
13	3	1	4
14	1	—	—
TOTALS	582	532	757

CHILDREN UNDER 14 ONLY.

Number in family.	Counted once only.	All cases.
1	124	12
2	175	18
3	142	25
4	81	10
5	33	5
6	14	3
7	9	—
8	—	—
9	1	—
10	—	—
TOTALS	580	73

It is to be observed that when all cases are considered, the larger families are unduly represented but not greatly so. Further, if the distribution of susceptible families is represented by those which contain a child of one year of age, there would seem to be little evidence to believe that large families are unduly fit. The suggestion is that during epidemic periods the dosage is so heavy that the difference depending on intra or extra domestic infection is not sufficient to produce a demonstrable effect. Thus, on these lines, the earlier age of attack of the later born would seem to depend on biological causes. There is also a heavy error of omission affecting the later born attacked at later ages. This point has been dealt with statistically elsewhere. The conclusion would seem to be justifiable that the age of attack of the later birth numbers is more variable, an effect which may be dependent on parental age at birth.

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Medical Officer of Health.

