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City of Birmingham.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR,

1924.

BIRMINGHAM:
TEMPLAR PRINTING WORKS, EDMUND STREET.

1925.

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Public Health Department,
The Council House,
Birmingham.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH COMMITTEE.

Ladies and Gentlemen,

The general health of Birmingham during the year 1924 may be considered to have been satisfactory. The death-rate was a low one, when we take into consideration the fact that Birmingham is a large industrial town in which there was a good deal of unemployment and in which a very considerable number of people had been living under wretched conditions due to house shortage.

In general, too, the incidence of infectious disease was low, and but for a fairly extensive outbreak of Influenza in the Spring the mortality rate would have been still lower and possibly the lowest on record.

The only measure of healthiness for a town which is at present in general use is the death rate. It is obvious that this is a crude and inexact method of estimating general health. It is becoming more important that some measure of the sickness which occurs should be our guide rather than fatal illnesses.

During the year 1924 we ascertained that in the Public Health Department and in a number of large industrial concerns all of which could be considered as giving the best conditions for working, the average amount of sickness among male employees was 10 days per annum and among female employees about 11 days per annum. In other words about one employee in every 30 was permanently absent. The cause of the sickness was Influenza and respiratory catarrhs in from one-third to one-half of the total cases.

Unfortunately, most employers of labour do not keep records of the time lost by reason of sickness. There is, however, no doubt that the total amount is very large. Recently Sir George Newman in reporting on sickness among persons who are insured under the National Insurance Act gave figures which indicate that amongst this group of workers the loss is equal to the absence of half a million persons from work for a year. This, of course, does not include the wives of the insured people nor their families. When these are added the loss due to sickness is very great. But in addition to this great loss there is a considerable amount of inefficiency due to ill-health, which, while not causing absence from work, renders the person less efficient, and, therefore, less able to earn to his full capacity.

By far the larger part of all sickness is preventable. To a very great extent it can only be prevented by the individual knowing how to live a healthy life. It is, therefore, an important function and duty of the Public Health Authority to do everything in their power to inform the community how to live under healthy conditions. All indications point to the diffusion of this knowledge amongst the people as the chief cause of the better health which is now enjoyed, as compared with that in previous years.

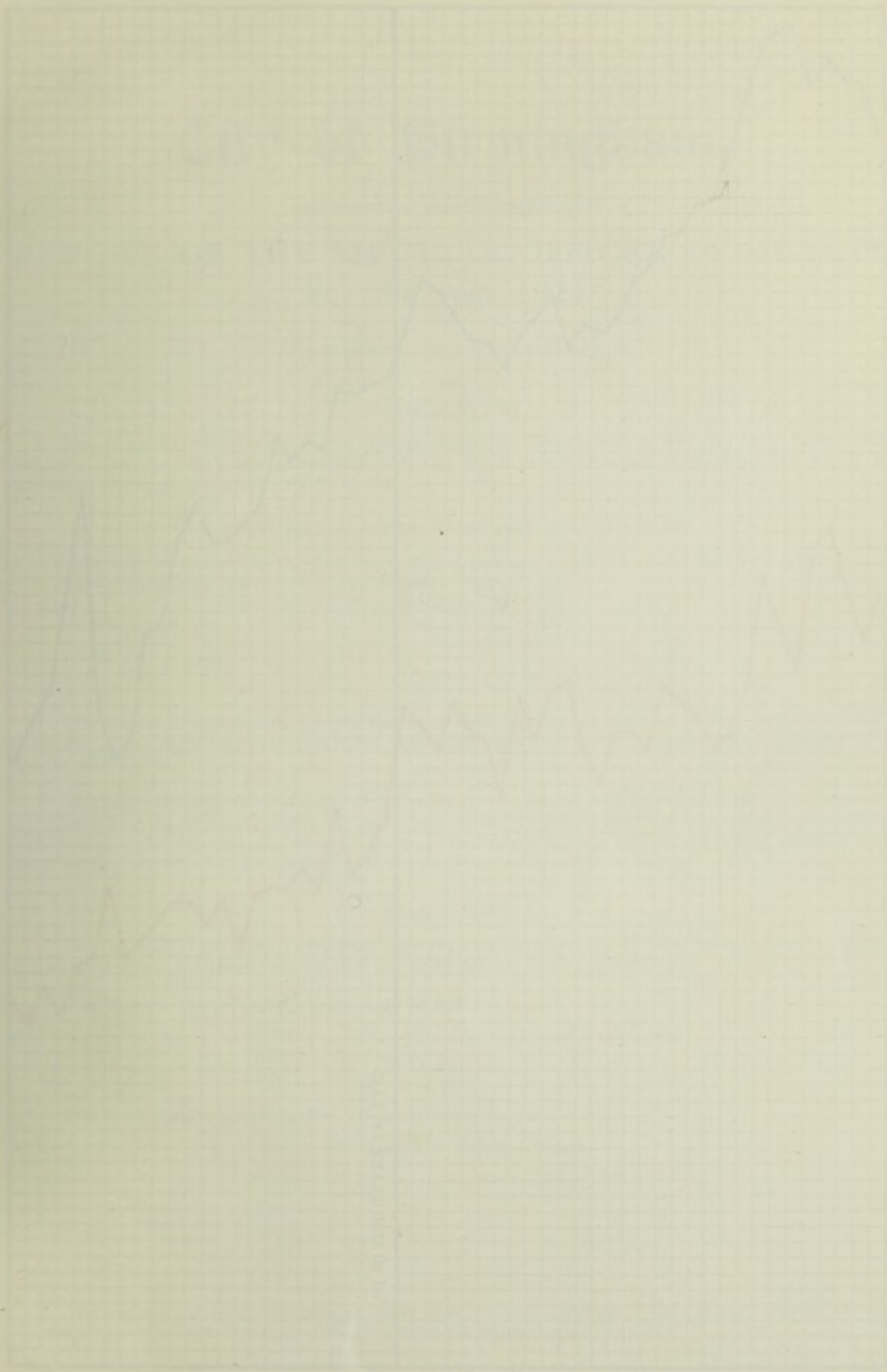
Good progress has been made in the provision of houses for the people, but many thousands of families are still living under the most distressful conditions. In Birmingham these people are bearing the intolerable conditions with fortitude and in the hope that houses will soon be available for them.

I am,

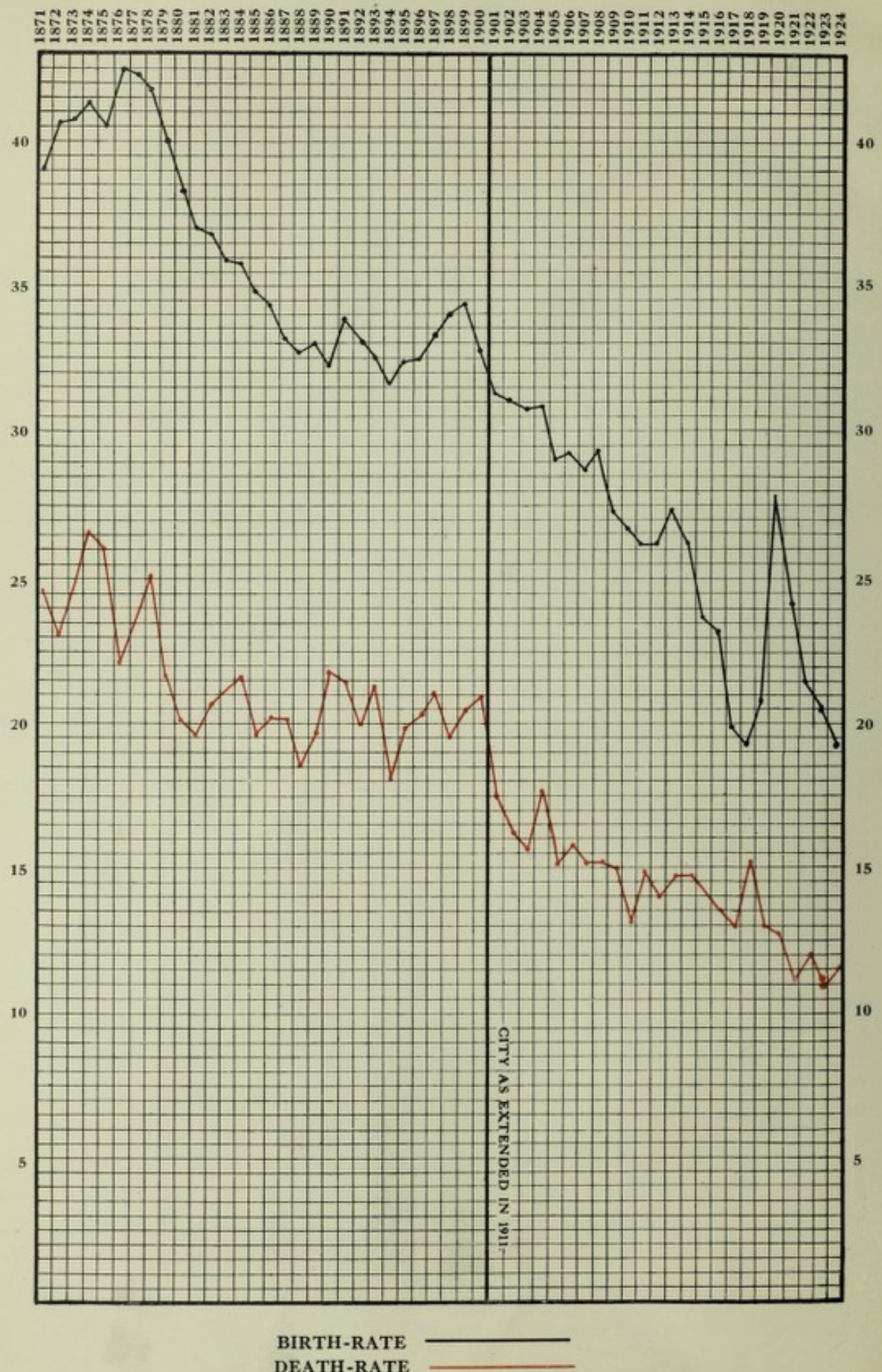
Your obedient servant,

JOHN ROBERTSON,

Medical Officer of Health.



BIRTH-RATE AND DEATH-RATE PER 1000.



City of Birmingham.

REPORT OF THE MEDICAL OFFICER OF HEALTH
For the year 1924.

POPULATION.

The Registrar General estimated the population of Birmingham to be on June 30th, 1924, 946,980. Our local estimate is 944,386, and this figure has been used throughout the report for statistical purposes unless otherwise stated.

NATURAL INCREASE OF THE POPULATION.

This may be defined as the increase in population due to the excess of births over deaths.

Average annual increase 1905-1914 (about)	...	...	...	...	...		10,000.
Increase (from same cause)	in	1920	...	13,660			
,,	,,	,,	,,	,,	1921	...	11,773
,,	,,	,,	,,	,,	1922	...	8,638
,,	,,	,,	,,	,,	1923	...	8,821
,,	,,	,,	,,	,,	1924	...	7,209

The estimated increase in the population of Birmingham for the year ended June 30th, 1924, over that of the preceding year was 8,307, while the estimated increase due to excess of births over deaths was 7,209.

The importance of these figures at the present time lies in the fact that they indicate what a very large number of people there are every year in Birmingham requiring housing accommodation. The population of the City continues to grow, notwithstanding the present industrial conditions, so that housing accommodation is still enormously less than it ought to be.

MARRIAGES.

During 1924 there were 7,694 weddings registered, that is, 15,388 persons were married. This represents a marriage rate of 16.0 per 1,000 of the total population.

The rates in the preceding years were as follows:—

1923	...	...	...	...	16.3 per 1,000.
1922	...	...	...	...	15.5 ,, ,,
1921	...	...	...	...	15.9 ,, ,,

For comparative purposes the following rates are set out:—

MARRIAGES IN CENSUS YEARS.

1881	...	...	...	...	16.2 per 1,000.
1891	...	...	...	...	19.2 ,, ,,
1901	...	...	...	...	18.8 ,, ,,
1911	...	...	...	...	19.2 ,, ,,
1921	...	...	...	...	15.9 ,, ,,
1924	...	...	...	...	16.0 ,, ,,

Here again the important fact emerges that the young people in the City are getting married in comparatively large numbers, and most of these people require houses.

BIRTHS.

The number of babies born in 1924 was 18,390. This is equal to a birth-rate of 19.2 per 1,000 of the population, and is, as will be seen below, a lower rate than had ever previously been registered in Birmingham. If the birth-rate recorded in the five years 1901-1905 had occurred in 1924, 11,079 more babies would have been born than was actually the case. During the past twenty years the number of births has been materially reduced and the rate of reduction appears to be an ever-increasing one, so that if it continues in less than 20 years the birth-rate of Birmingham may be lower than the death-rate, a condition of affairs which will produce a population either stationary or decreasing. (See chart on page 8).

Birth-Rates per 1,000.

	Birmingham.	England and Wales.
1901-1905	30.7	28.2
1906-1910	28.3	26.3
1911-1915	25.9	23.6
1916	23.1	20.9
1917	19.7	17.8
1918	19.4	17.7
1919	20.9	18.5
1920	27.6	25.5
1921	24.1	22.4
1922	21.5	20.4
1923	20.4	19.7
1924	19.2	18.8

Birth Rates in Wards.

The next table is prepared to indicate as far as possible where the birth-rate has fallen.

	Ward.	Birth-rate, 1924.	Average Birth-rate 1912-1914.	Decrease.	Average.
Central Wards	St. Paul's	28.0	32.3	— 4.3	7.3
	St. Mary's	28.1	35.2	— 7.1	
	Duddeston and Nechells	27.0	37.2	—10.2	
	St. Bartholomew's	26.8	34.5	— 7.7	
	St. Martin's & Deritend	24.1	33.1	— 9.0	
	Market Hall	20.7	25.6	— 4.9	
	Ladywood	21.9	29.5	— 7.6	
Middle Ring	Lozells	17.4	23.2	— 5.8	7.9
	Aston	23.1	31.4	— 8.3	
	Washwood Heath	20.6	29.9	— 9.3	
	Saltley	18.4	29.0	—10.6	
	Small Heath	14.1	23.5	— 9.4	
	Sparkbrook	16.9	25.5	— 8.6	
	Balsall Heath	18.4	23.6	— 5.2	
	Edgbaston	13.3	16.4	— 3.1	
	Rotton Park	19.3	29.0	— 9.7	
	All Saints'	20.6	29.8	— 9.2	
Outer Ring	Soho	15.1	22.6	— 7.5	7.0
	Sandwell	12.7	22.0	— 9.3	
	Handsworth	12.8	19.6	— 6.8	
	Erdington North	17.1	22.8	— 5.7	
	Erdington South	17.7	22.2	— 4.5	
	Yardley	15.0	23.9	— 8.9	
	Acock's Green	16.7	27.1	—10.4	
	Sparkhill	16.2	18.5	— 2.3	
	Moseley & King's Heath	12.8	17.5	— 4.7	
	Selly Oak	15.7	26.7	—11.0	
	King's Norton	14.5	22.8	— 8.3	
	Northfield	19.8	22.5	— 2.7	
	Harborne	14.5	22.6	— 8.1	

It will be seen from the above table that the average birth-rate in the three years 1912, 1913, and 1914 is taken and compared with the birth-rate for 1924.

In every one of the municipal wards a decline in the birth-rate has taken place during the interval. It will also be noticed that the actual reduction is as large in the old central area of the City as it is in the outer suburbs.

If, however, these reductions are calculated as percentages, then for the central wards there has been a reduction of 22 per cent. in the last ten years, in the middle ring of wards the reduction has been at the rate of 30 per cent., and in the outer ring the figure is 31 per cent.

BIRTH CONTROL.

A good deal of discussion has taken place within the last few years on this subject, and as it is indirectly a matter of public health importance, as well as one of great national importance, it would appear not to be out of place to put on record some of the points for and against the practice.

Its public health importance largely centres round the fact that already in a certain number of cases most mischievous results have come to light in Birmingham, due to the fact that methods of birth control are becoming widely known among young people who, as a result, indulge in promiscuous intercourse with a knowledge that no inconvenient result will follow. At the same time these young people are being supplied with information as to the methods of preventing venereal disease in such intercourse.

It seems likely, therefore, that when these two controls are applied together there may be a great deal more promiscuous intercourse than at the present time, and if this did happen it would be a serious menace to the family life of this country which has been our pride in years gone by.

From this point of view, therefore, the control of birth is of considerable public health importance.

In general terms two arguments are put forward by those who advocate the systematic teaching of birth control to the whole population.

The first and most obvious reason is that there are a large number of women who are in poverty largely as a result of bearing children at frequent intervals under conditions which make it impossible for the mother herself to obtain sufficient rest and nourishment and whose children, by reason of their number, do not get the attention, care, and food they ought to have. These are chiefly the mothers in the poorer quarters of the town who are subsisting on the barest necessities of life. It is said that their children by reason of inevitable maternal neglect grow up to be men and women of inferior physique and even of inferior conduct. The contention of the advocates of birth control is that if proper control were practised such families would be reduced to two or three children who could then be reared with care and attention, while in such cases the mother herself would not be debilitated by frequent childbearing.

The second important argument is that of the eugenist who in general terms alleges that because the birth-rate is about twice as great amongst what he calls the inferior part of the population, therefore the nation is being recruited mainly from bad material and that the quality of the race suffers accordingly.

No one doubts that heredity does play a very important part in the mental and physical condition of mankind, and, therefore, if it were possible to do for the human race what is everywhere done in the case of domestic animals, it would in time lead to vast improvements in the mental characteristics and physique of the people. In the case of bovine animals it has been possible by selective breeding to obtain herds of cattle which produce more milk or a better quality of beef. In the case of horses it is possible to breed for speed or for strength. In the case of the vegetable kingdom similar single characteristics can be isolated and developed by breeding.

Examples are quoted of families who for several generations have produced men of fine physique or men of great mental capacity, but in the case of the human subject these instances are rare because it is more or less by accident that voluntary mating takes place between parties both of whom have come from exceptionally good strains. It is inconceivable that these parties should go back for more than a few generations as exceptionally good or that they should continue to remain in their high state for more than a few generations because of the difficulty of securing that both parties to the marriage shall be of exceptional ability. Another point which appears to be overlooked by the eugenist is that the qualities required in the human subject are multitudinous and cannot be the same in all individuals, and as it is impossible to breed animals with numerous qualities, so it is inconceivable that more than a certain number of characters can be produced by purposeful mating in the case of the human subject.

Everyone is agreed that lunatics, idiots, feeble-minded people and those suffering from certain diseases should not marry, but when these groups have been excluded very little can be done so long as our voluntary system of mating exists.

It seems, therefore, that the eugenic idea of doing something to increase the stock from the part of the community with the best physique and best brains is theoretically correct but practically impossible so long as our present customs exist.

There is, however, another very important aspect of this eugenic question. If one eliminates lunatics, feeble minded people, etc., and divides the remainder of the population into the poorer class and the upper class, is there any reason to suspect that one half is superior to the other half provided the environmental conditions are approximately equal? To a very large extent, but not entirely, the lower unskilled labouring classes have grown into what they are by reason of their environment. But, to a very large extent also, such environment can be improved. There appears to be not sufficient recognition of the fact that in all grades of society there are thriftless, idle people. They are not so noticeable, however, among the upper classes as they are in the lower classes.

Certain ancient races have been instanced as examples for us to live up to. They undoubtedly had wonderful physique resulting from breeding for war purposes and much of their art arose from their appreciation of human form and action, very much as a horse breeder appreciates the form and action of a good horse. When one, however, looks into the question as to how this efficiency was obtained one speedily comes to the conclusion that such practices as infanticide, the killing off of the feeble and the old, general prostitution, could not be tolerated to-day.

The birth statistics of Birmingham clearly show that the City is fast approaching the condition when without any teaching of birth control the population will become a diminishing one. For England as a whole the population is almost stationary at the present time. It would seem that such a condition is likely to portend decay of the Empire as it has done in other nations where birth control has been practised for long periods. Birth control and prophylaxis against venereal disease are being practised to a certain extent and unfortunately these practises are being taught to a considerable number of unmarried people in factories and workshops.

There are, in addition, many more subtle points in this question of birth control which cannot be overlooked. Almost certainly better environment, without any other cause, would give rise to a lower birth-rate. It is quite certain that men and women who are overnourished have smaller families than those who are poorly nourished and this is particularly the reason why the birth-rate amongst the upper classes is less than that amongst the poorest of the community.

So, too, it is very questionable whether the members of large families do not make better citizens than the members of families of one or two only, also a good many arguments could be brought forward to indicate that the labourer with a family of five or six children is on the whole better off and lives a happier life than the labourer without a family or with a family of one or two only.

Birth control is an unnatural process and if generally recognised is more likely to be put into operation among the skilled artisan class and middle class than amongst the poorest of the community. That is to say that the people who advocate birth control are advocating something which will operate precisely in the opposite direction to that which they imagine.

ILLEGITIMACY.

There were 583 illegitimate babies born during 1924, as compared with 610 in 1923. The numbers in the preceding years were as follows :—

1922	719
1921	823
1920	894
1919	858
1918	858

The illegitimate births during 1924, represented 3.2 per cent. of the total number of births.

The infant mortality rate amongst illegitimate babies was 142 per 1,000 births, against 81 per 1,000 births amongst legitimate babies.

NOTIFICATION OF BIRTHS ACT.

This useful Act continues to be worked satisfactorily in the City, 17,928 births of live children having been notified, representing 97 per cent. of the total births. The early information which this form of notification gives enables our child welfare work to be commenced at an earlier period and at a period when it is most important that advice and supervision should be made possible.

STILL BIRTHS.

There were 544 still births notified during the year, as compared with 629 in the preceding year. This represents one still birth to every 34 live births. In practice in all cases in which a still birth is reported certain enquiries are made with a view to ascertaining the cause and the possibility of taking steps in the future to prevent a recurrence. (See page 49).

DEATHS.

The deaths of 11,181 persons were registered during the year, against 10,248 in the preceding year. Of the deaths 5,742 were of males and 5,439 of females, that is to say, 303 more males than females, although there are more females than males in the population.

Death-Rate.

The death-rate was 11.6 per 1,000 of the population, as compared with 11.0 in 1923, and 12.1 in 1922. The death-rate for males was 12.7 per 1,000, and for females 10.7 per 1,000.

The rates in Birmingham and in England and Wales are shown below :—

Death-Rates per 1,000 in Birmingham, 1871 to 1924.

	Birmingham.	England and Wales.
1871-1875 (Old City)	25.2	22.0
1876-1880 ,,	22.8	20.8
1881-1885 ,,	20.7	19.4
1886-1890 ,,	20.2	18.9
1891-1895 ,,	20.3	18.7
1896-1900 ,,	20.5	17.7
1901-1905 (Present Area)	16.5	16.0
1906-1910 ,,	15.0	14.7
1911-1915 ,,	14.6	14.3
1916 ,,	13.5	14.4
1917 ,,	12.6	14.4
1918 ,,	15.2	17.6
1919 ,,	13.0	13.7
1920 ,,	12.6	12.4
1921 ,,	11.3	12.1
1922 ,,	12.1	12.8
1923 ,,	11.0	11.6
1924 ,,	11.6	12.2

Comparative Death-Rates in Nine Largest Towns.

(From Registrar-General's Figures.)

London	12.1 per 1,000
Glasgow	16.1 ,,
Birmingham	11.5 ,,
Liverpool	13.3 ,,
Manchester	13.7 ,,
Sheffield	11.5 ,,
Leeds	14.1 ,,
Edinburgh	14.8 ,,
Bristol	12.0 ,,

The next table gives the death-rate in each of the municipal wards :—

	Ward.	Approximate Population.	Death-Rate.
Central Wards	St. Paul's	31,400	14.1
	St. Mary's	33,800	15.5
	Duddeston and Nechells	45,600	13.4
	St. Bartholomew's	40,100	14.9
	St. Martin's and Deritend	44,900	15.4
	Market Hall	18,600	14.9
	Ladywood	30,300	13.1
Middle Ring	Lozells	34,000	12.3
	Aston	41,600	12.2
	Washwood Heath	40,700	8.9
	Saltley	32,200	10.1
	Small Heath	31,800	10.8
	Sparkbrook	37,200	10.8
	Balsall Heath	39,300	13.0
	Edgbaston	35,100	10.8
	Rotton Park	41,900	11.4
	All Saints'	43,500	11.8

	Ward.	Approximate Population.	Death-Rate.
Outer Ring ...	Soho	27,800 ...	11.8
	Sandwell	20,600 ...	8.9
	Handsworth	28,400 ...	9.8
	Erdington North	20,400 ...	10.6
	Erdington South	22,600 ...	8.9
	Yardley	17,800 ...	9.5
	Acock's Green	31,600 ...	10.0
	Sparkhill	28,300 ...	10.0
	Moseley and King's Heath ...	29,100 ...	10.1
	Selly Oak	29,400 ...	9.0
	King's Norton	24,100 ...	10.0
	Northfield	9,180 ...	8.9
	Harborne	16,700 ...	10.4

The highest mortality, it will be noticed, was in St. Mary's Ward and St. Martin's and Deritend Ward, while the lowest mortality occurred in Washwood Heath Ward, Sandwell Ward, Erdington South, and Northfield, each of these Wards having a death-rate of 8.9 per 1,000.

It will be noted that the death-rate in the poorest wards is approaching nearer to that in the middle class wards than in past years.

Reduction in the Death-Rate.

If the average mortality rate in the years 1912, 1913, and 1914 is taken and compared with that occurring in 1922, 1923 and 1924 the percentage reduction in each of the wards was as follows :—

	Ward.	Mean Death-Rate, 1912-1914	Death-Rate, 1922-1924	Increase or Decrease	Percentage Increase or Decrease.
Central Wards ...	St. Paul's	20.4	14.3	—6.1	—30
	St. Mary's	25.2	16.0	—9.2	—37
	Duddeston & Nechells	21.5	13.4	—8.1	—38
	St. Bartholomew's ...	21.5	14.8	—6.7	—31
	St. Martin's & Deritend	20.5	15.4	—5.1	—25
	Market Hall	18.6	14.0	—4.6	—25
	Ladywood	17.9	13.5	—4.4	—25
Middle Ring ...	Lozells	13.7	12.1	—1.6	—12
	Aston	15.8	12.1	—3.7	—23
	Washwood Heath ...	13.3	9.8	—3.5	—26
	Saltley	12.1	9.5	—2.6	—21
	Small Heath ...	11.6	10.5	—1.1	— 9
	Sparkbrook ...	12.8	11.1	—1.7	—13
	Balsall Heath ...	12.5	12.2	—0.3	— 2
	Edgbaston	11.7	11.1	—0.6	— 5
	Rotton Park ...	15.4	11.3	—4.1	—27
	All Saints'	15.1	11.7	—3.4	—23
Outer Ring ...	Soho	12.5	11.4	—1.1	— 9
	Sandwell	9.5	9.0	—0.5	— 5
	Handsworth	10.4	9.7	—0.7	— 7
	Erdington North ...	10.3	10.1	—0.2	— 2
	Erdington South ...	9.6	9.0	—0.6	— 6
	Yardley	10.8	9.0	—1.8	—17
	Acock's Green ...	11.8	9.4	—2.4	—20
	Sparkhill	9.3	10.0	+0.7	+ 8
	Moseley & King's Heath	9.5	11.1	+1.6	+17
	Selly Oak	11.5	9.4	—2.1	—18
	King's Norton ...	9.6	8.6	—1.0	—10
	Northfield	9.2	8.8	—0.4	— 4
	Harborne	10.1	10.1	=	=
	Whole City	14.6	11.6	—3.0	—21

Mortality at Different Age Periods.

The death-rates at different age periods during 1924 were as follows:—

	Approximate Population.	Deaths.	Approximate Death-Rate per 1,000:
Under 1 year	17,330	1,518	86.2
1 and under 2	17,430	443	25.0
2 ,, 3	17,750	167	9.2
3 ,, 4	19,650	113	5.6
4 ,, 5	22,240	72	3.2
5 ,, 10	90,040	178	1.9
10 ,, 15	91,290	121	1.3
15 ,, 20	87,140	199	2.2
20 ,, 25	81,890	249	3.0
25 ,, 35	147,260	527	3.5
35 ,, 45	135,410	848	6.2
45 ,, 55	108,010	1,243	11.3
55 ,, 65	63,940	1,653	25.4
65 and upwards	45,000	3,850	84.2

Chief Causes of Death.

The next Table shows the chief causes of death in 1924, and the five previous years.

Deaths from	1919.	1920.	1921.	1922.	1923.	Average 1919-1923.	1924.	Increase or Decrease
Measles	189	147	153	79	186	151	79	— 72
Whooping Cough	60	182	93	356	44	147	185	+ 38
Diphtheria	126	201	120	89	139	135	100	— 35
Influenza	1,062	421	134	442	264	465	375	— 90
Pulmonary Tuberculosis	1,019	843	890	899	860	902	934	+ 32
Other Tuberculosis	169	158	145	150	146	154	121	— 33
Cancer	935	1,014	1,020	1,090	1,092	1,030	1,251	+221
Cerebral Hæmorrhage	473	464	474	499	458	474	492	+ 18
Convulsions (under 5)	96	111	85	61	66	84	63	— 21
Organic Disease of Heart ...	1,187	1,143	1,113	1,214	1,120	1,155	1,256	+101
Arterio Sclerosis	203	184	198	250	205	208	248	+ 40
Cerebral Embolism & Thrombosis	98	100	79	98	117	98	142	+ 44
Bronchitis	1,285	1,066	798	1,080	897	1,025	1,021	— 4
Pneumonia	1,013	1,011	950	998	834	961	916	— 45
Diarrhœa and Enteritis	260	309	442	224	261	299	231	— 68
Nephritis and Bright's Disease ...	230	200	219	230	255	227	242	+ 15
Premature Birth	437	507	447	439	356	437	405	— 32
Debility, etc.	208	207	214	151	111	178	140	— 38
Old Age	628	576	577	556	493	566	467	— 99
Suicide	98	98	93	112	130	106	97	— 9
Accident, etc.	314	313	238	234	285	277	299	+ 22

INFANT MORTALITY.

(See page 46).

INFECTIOUS DISEASES.

The deaths during 1924 from some of the chief infectious diseases were as follows:—

Disease.	Deaths in 1924	Average 1914-23.	Above or below the average
Enteric Fever	5	6	— 1
Smallpox	0	0	—
Measles	79	199	—120
Scarlet Fever	23	53	— 30
Whooping Cough	185	195	— 10
Diphtheria	100	146	— 46
Diarrhœa and Enteritis	231	425	—194
Pulmonary Tuberculosis	934	1,016	— 82
Other Forms of Tuberculosis	121	190	— 69
Influenza	375	503	—128

The prevalence of the notifiable diseases is shown in the next table :—

Disease.	Cases in 1924	Average 1914-23.	Above or below the average
Enteric Fever	48	28	+ 20
Smallpox	0	0	—
Scarlet Fever	2,219	3,129	—910
Diphtheria	1,887	1,250	+637
Erysipelas	403	484	— 81
Puerperal Fever	120	135	— 15
Ophthalmia Neonatorum	413	359	+ 54
Pulmonary Tuberculosis	1,780	2,645	—865
Other Forms of Tuberculosis	349	398	— 49
Acute Primary or Influenzal Pneumonia ...	2,407	Only recently notifiable.	
Cerebro-Spinal Fever	11	21	— 10
Acute Poliomyelitis	39	12	+ 27
Polio Encephalitis	6	Only recently notifiable.	
Encephalitis Lethargica	282	,,	,,
Malaria	2	,,	,,
Dysentery	2	,,	,,
Trench Fever	0	,,	,,

The elementary school teachers reported the following cases, to which visits were paid by Health Visitors (see page 94) :—

Measles	5,969
German Measles	112
Whooping Cough	4,783
Chicken Pox	4,591
Mumps	1,906

ENTERIC FEVER.

The statistics relating to the incidence and mortality from this disease are set out below :—

	Cases reported.	Deaths.	Mortality rate per cent.	Death-rate per 1,000.
1916	19	5	26	.01
1917	22	7	32	.01
1918	23	5	22	.01
1919	34	9	26	.01
1920	12	0	—	—
1921	26	5	19	.01
1922	11	3	27	.00
1923	32	4	12	.00
1924	48	5	10	.01

The record for 1924 is not quite so good as in several preceding years, but on the whole it may be considered not to be unsatisfactory.

It will be remembered that twenty years ago many hundreds of cases of Enteric Fever occurred every year, while now few cases are notified. During 1924 a small outbreak occurred in one area of the City, this being an extension from a localised outbreak in the preceding year. The most careful inquiry into all possible sources of infection produced no result whatever. The only satisfaction derived from the enquiry was the fact that in many other districts of England somewhat similar outbreaks occurred of the same type of the disease, apparently without any cause being ascertained. There seems to be no doubt that some means of infection which has not been previously recognised as a source of the disease was in operation.

SMALLPOX.

No case of Smallpox was notified in the City during 1924.

During the whole of the year numerous cases have occurred in towns and rural areas within easy distance of Birmingham and, therefore, the City has been fortunate in escaping invasion. No less than 3,792 cases occurred in England and Wales in 1924. With this prevalence in surrounding areas—Coventry, Nuneaton, Derby, Burton and a few cases in the Black Country—it is somewhat remarkable that Birmingham has not been invaded by the disease. In addition to the risk of invasion from neighbouring areas the City has had a large number of persons arriving from

foreign countries. In a proportion of these cases smallpox has broken out in the ship and this information is forwarded to us together with the name and address of any contact. These contacts are kept under observation during the quarantine period. Fortunately none of these persons developed the disease.

VACCINATION.

The following are the vaccination statistics for the year ending December 31st, 1923.

Births returned	19,246		
Conscientious objections	2,625,	or 13.6	per cent. of total.
Died unvaccinated	1,104		
Successfully vaccinated	12,585,	or 69.4	per cent. of survivors.
Insusceptible	62,	or 0.3	,, ,,
Postponed by medical certificate	169,	or 0.9	,, ,,
Removed to other districts	517,	or 2.8	,, ,,
Lost sight of	434,	or 2.4	,, ,,
Still under notice	1,750,	or 9.6	,, ,,

MEASLES.

The average number of deaths from measles during each of the past 20 years was 260. In addition a number of patients have been damaged for life by this disease every year. This latter number is an unknown quantity but it may safely be said that at least 1,000 children are more or less damaged for life by reason of this common ailment. Because of this damage some of these children die from other diseases when otherwise they would not have died.

It is true to say that measles is a very serious illness so far as the community is concerned.

The cases and deaths are set out below.

	CASES.		DEATHS.		Death-Rate (Measles only).
	Measles.	German Measles.	Measles.	German Measles.	
1905	?	?	300	?	.38
1906	?	?	275	?	.34
1907	?	?	409	?	.51
1908	?	?	70	?	.08
1909	?	?	676	?	.82
1910	?	?	42	?	.05
1911	?	?	395	?	.47
1912	7,693*	1,088*	571	3	.67
1913	3,661*	85*	398	1	.46
1914	4,612*	61*	310	—	.35
1915	8,144*	680*	420	—	.47
1916	10,635	4,996	101	1	.11
1917	15,516	472	333	4	.37
1918	5,413	300	71	1	.08
1919	15,158	565	189	—	.20
1920	7,144*	477*	147	2	.16
1921	4,618*	121*	153	1	.17
1922	4,147*	125*	79	0	.09
1923	7,787*	96*	186	1	.20
1924	5,969*	112*	79	0	.08

* Partial notification only through schools.

The ages at which death occurred were as follows:—

	No. of deaths.	Percentage of total deaths.
Under 1 year	18	23
Between 1 and 2 years	39	49
,, 2 ,, 3 ,,	9	11
,, 3 ,, 4 ,,	4	5
,, 4 ,, 5 ,,	3	4
Over 5 years	6	8

Measles attacks the whole community without respect of persons. In some outbreaks the attack rate is higher in one suburb than another but when one year is taken with another it is found that few children escape. If this is the case we get only about one third of the total cases reported from schools.

While measles is no respecter of persons it is a fact that measles is rarely fatal when good nursing and intelligence are brought to bear in treating the disease. The death-rate among intelligent people is very little, while it is among the less intelligent and careless that nearly all the deaths occur. In the central wards, containing one-third of the population of the City, the death-rate is five or six times what it is in the outer ring of wards.

The essential requirement to save life is to keep the child in a warm well-ventilated room with clean surroundings; in addition, great benefit in severe cases is derived from the services of a skilled nurse for a few days in securing cleanliness of the mouth and other details that appear trivial to an untrained person. Warmth, good ventilation and cleanliness would save at least 200 of the 260 children who die annually.

All the nursing institutions have made an arrangement whereby the nursing of cases of measles is paid for by the Public Health Committee. The difficulty is in being able to get the nurse early enough to the cases where the conditions are unfavourable.

The question has often been asked as to why these children should not be provided for in one of the City Hospitals. It will be obvious at once that hospital provision for the vast majority of cases is unnecessary. Then it will always be difficult to construct a limiting regulation so as to cover the cases occurring in poor and dirty houses. If no limitation is placed on admission it is possible that the cases during epidemic periods will be so numerous as to make hospital provision very expensive, while at other intervals this large accommodation would be unused. If additional hospital accommodation were provided it might be possible to take children under three years of age from the poorest parts of the City and to make use of this accommodation for cases of whooping cough as well as of diphtheria.

SCARLET FEVER.

The following table shows the incidence and mortality from scarlet fever for nine years.

Year.	Cases. reported.	Deaths.	Percentage Mortality based on cases notified.	Death-rate per 1,000 of population.
1916	1,796	26	1.45	.03
1917	1,143	12	1.05	.01
1918	1,035	11	1.06	.01
1919	2,821	45	1.60	.05
1920	5,563	110	1.98	.12
1921	3,320	40	1.20	.04
1922	3,250	36	1.11	.04
1923	2,619	39	1.49	.04
1924	2,219	23	1.04	.02

This disease was formerly much more fatal than it has been in recent years. For instance, in 1878 when Birmingham had a population of 383,117 persons no less than 995 died of scarlet fever equal to a death-rate per thousand of 2.6, that is about 100 times as great as the death-rate last year when 23 deaths were registered.

Like measles, however, scarlet fever infection, although of a mild or non-fatal type leaves many of the sufferers with damaged health permanently or for some years. Nose and throat complications are frequent with equally frequent changes to hearing and to the sense of smell. Gland infections may occur, heart damage is not infrequent, as is also lasting damage to the structure of the kidneys. The mild infections are therefore in need of careful treatment to prevent these sequelæ. One of the methods of giving this care is the isolation of the sufferer.

It is somewhat remarkable that the people of this country appear to be very susceptible to this infection compared with some European peoples. For instance, the disease is regularly more frequent here than in Germany, France or Italy. That is to say some peoples are more susceptible than others. When the Dick test for susceptibility becomes general it may be possible to separate the races of the world according to their susceptibility to scarlet fever, as now may be done by means of the Schick test in diphtheria.

In Birmingham about five or six children out of every seven escape an attack of scarlet fever during the whole of their lifetime. It is a common experience to find cases of this disease which have been diagnosed only after the infectious period has ceased and who have not spread the infection to the many other children with whom they have been in daily contact in the home or in school.

Ages of Those Attacked.

Ages.	Cases notified.*	Deaths.	Case fatality per cent.
Under 5 years	548	15	2.7
5—9 years	883	7	0.8
10—14 years	481	0	0.0
15—19 years	120	1	0.8
20 years and over	187	0	0.0
All ages	2,219	23	1.0

* Corrected for errors in diagnosis.

Return Cases.

Of the 2,219 cases of Scarlet Fever occurring during the year 79 or 3.6 per cent. were cases developing in the homes within a month of the discharge from hospital or from home isolation of 64 original patients. Of these infecting patients 60 discharged from hospital were followed by 75 return cases, and 4 after isolation at home were followed by 4 return cases.

Details of return cases are as follows :—

	No. of infecting cases discharged.	No. of infecting cases, each followed by—			Total No. of Return cases
		One R. Case.	Two R cases.	Four R cases.	
Patients treated in Hospital.	60	47	12	1	75
Patients treated at Home.	4	4	—	—	4

WHOOPING COUGH.

This again is a very serious disease among the young. Not only is the mortality high but the consequences of a non-fatal attack are often of life long duration.

The mortality from the disease since 1918 has been as follows.

Ages at death.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Under 1 year	95	19	77	50	147	17	78
Between 1 and 2 years	98	21	59	26	135	16	65
,, 2 ,, 3 ,, ...	45	8	17	5	46	6	23
,, 3 ,, 4 ,, ...	19	7	12	6	16	3	10
,, 4 ,, 5 ,, ...	9	2	9	1	5	1	6
Over 5 years	11	3	8	5	7	1	3
Totals (Average 171)	277	60	182	93	356	44	185

It will be seen that the year 1924, while not one of the worst, was one with a high mortality.

Like measles, the deaths from whooping cough are always four or five times as numerous in the central wards as in the suburban wards. Dirt and ignorance contribute largely to these deaths in causing the fatal broncho-pneumonia. No less than 143 deaths of the total of 185 in 1924 were of infants under two years.

Good nursing is what is needed from the commencement. The cases are difficult to diagnose early and therefore are at present reported to the nursing societies usually too late to produce the result wished for.

It is often asked—why not admit these tiny infants to hospital from poor homes. If such were attempted new and special hospital accommodation would be needed. The amount of space would have to be large for the disease causes large epidemics. If advanced cases were admitted with broncho-pneumonia developed the fatality rate would be so high as to alarm the community in general.

DIPHTHERIA.

The new cases notified after allowing for revisions of diagnosis numbered 1,887 and the deaths 100 during 1924.

It will be seen from the table set out below that the number of cases was greater than in any previous year but that the deaths were fewer in number than in any of the last 35 years except 1891, 1893, 1900 and 1922.

The death-rate per thousand of the population was .10. In 1922 the mortality rate was as low. Otherwise this is the lowest death-rate.

The case mortality was the lowest on record—5 per cent.

	Cases Notified.	Case-rate per 1,000 of Population.	Deaths.	Death-rate per 1,000.	Case Mortality per cent.
1890	283*	.69	123	.28	43
1891	205	.48	59	.14	29
1892	533	1.10	115	.24	22
1893	387	.79	98	.20	25
1894	406	.83	108	.22	27
1895	741	1.50	219	.44	30
1896	1,194	2.35	312	.61	26
1897	713	1.41	171	.34	24
1898	689	1.36	139	.27	20
1899	720	1.40	149	.29	21
1900	542	1.05	86	.17	16
1901	789†	1.04†	125†	.16†	16†
1902	1,118	1.44	189	.24	17
1903	1,176	1.52	176	.23	15
1904	902	1.15	167	.21	19
1905	972	1.23	136	.17	14
1906	1,165	1.46	138	.17	12
1907	1,459	1.81	159	.20	11
1908	1,229	1.49	168	.20	14
1909	1,136	1.38	167	.20	15
1910	1,063	1.28	112	.13	11
1911	1,134	1.35	112	.13	10
1912	807	.95	101	.12	13
1913	991	1.13	169	.19	17
1914	1,623	1.84	260	.30	16
1915	1,072	1.21	135	.15	13
1916	951	1.07	116	.13	12
1917	770	.86	112	.13	14
1918	881	1.02	160	.18	18
1919	970	1.05	126	.14	13
1920	1,755	1.93	201	.22	11
1921	1,652	1.80	120	.13	7
1922	1,285	1.39	89	.10	7
1923	1,537	1.65	139	.15	9
1924	1,887	1.97	100	.10	5

* Notification became compulsory on January 20th, 1890.
† The figures from 1901 onwards relate to Greater Birmingham.
Note.—In recent years the cases have been revised as far as possible to exclude errors in diagnosis.

During 1924 there was therefore greater frequency of the disease and the fatality rate was very low.

Two explanations may be offered for these conditions. Many of the cases were mild in character while in other instances patients were notified in larger numbers than ever before as a result of a positive bacteriological report. In fact many cases were not suffering from the disease Diphtheria but were carriers. This point is dealt with by Dr. Harries in his report on page 78.

The second cause of the reduced mortality is the fact that great credit is due to Dr. Harries and his staff for the vastly improved treatment and nursing introduced by him. Better antitoxin has undoubtedly played a part and has saved several lives. The cost of antitoxin is heavy. In the financial year ending March 31st, 1924, the Health Committee paid £2,763 for antitoxin distributed free to doctors and that used at the hospital. The extra cost of antitoxin however has been money well spent for it has saved many lives.

DISTRIBUTION OF DIPHTHERIA.

		Cases Notified.	Case-rate per 1,000.		Case Mortality per cent.	
Central Wards	St. Paul's	178	5.56		6	
	St. Mary's	117	3.40		4	
	Duddeston and Nechells	91	1.96		5	
	St. Bartholomew's	110	2.69	Average	5	Average
	St. Martin's and Deritend	91	1.99	2.81	2	5
	Market Hall	31	1.63		3	
	Ladywood	75	2.43		11	
Middle Ring	Lozells	84	2.42		2	
	Aston	129	3.05		5	
	Washwood Heath	97	2.34		5	
	Saltley	76	2.32		4	
	Small Heath	74	2.28	Average	8	Average
	Sparkbrook	48	1.27	1.98	6	4
	Balsall Heath	58	1.45		2	
	Edgbaston	32	0.89		—	
	Rotton Park	59	1.38		5	
	All Saints'	106	2.39		4	
Outer Ring	Soho	14	0.49		—	
	Sandwell	34	1.62		3	
	Handsworth	54	1.87		9	
	Erdington North	22	1.06		23	
	Erdington South	25	1.08		4	
	Yardley	32	1.76		9	
	Acock's Green	70	2.17	Average	9	Average
	Sparkhill	19	0.66	1.32	—	7
	Moseley and King's Heath	21	0.71		10	
	Selly Oak	9	0.30		11	
	King's Norton	13	0.53		8	
	Northfield	22	2.35		5	
	Harborne	43	2.53		5	

It will be seen from the above table that the number of cases was larger among the poor than in better class quarters.

AGE INCIDENCE.

Ages.	Cases Notified.	Deaths Registered.	Case Mortality per cent.
Under 1 year	32	4	12
Between 1 and 2 years	74	9	12
Between 2 and 3 years	127	10	8
Between 3 and 4 years	137	16	12
Between 4 and 5 years	135	9	7
Between 5 and 10 years	623	40	6
Between 10 and 15 years	343	11	3
Between 15 and 20 years	174	1	1
20 years and over	242	0	—
Total	1,887	100	5

Of the 1,887 cases of Diphtheria 1,613 were removed for treatment during 1924 at the City Hospital.

On December 10th, the following preliminary report was submitted to the Public Health Committee, and subsequently instructions were given to introduce the scheme outlined.

"REPORT BY THE MEDICAL OFFICER OF HEALTH TO THE PUBLIC HEALTH COMMITTEE ON THE PREVENTION OF DIPHTHERIA.

"Your Committee have frequently expressed concern at the great loss of life from Diphtheria, and have given instructions at various times for all possible steps to be taken which might reduce the number of cases and deaths.

"In addition to the loss of life, many people are permanently damaged every year as the result of an attack of Diphtheria. Again, the cost of the disease to parents and to the City, although of less importance than the illness, is yet a considerable item, amounting at a low estimate to £30,000 or £40,000 per annum in Birmingham.

Statistics.

"Briefly, the facts regarding the incidence and mortality from Diphtheria are that the number of new cases has averaged each year in the past four years, 1,557; and the deaths during these four years have averaged each year 137.

Anti-toxin Treatment.

"The more extended use of anti-toxin during recent years and the provision of a better anti-toxin have reduced the case mortality from 29.2 per cent. in the years 1890-1893 to 8.5 per cent. in the years 1920-1923. It is theoretically possible to reduce the mortality still further by the administration of anti-toxin, but this is in practice difficult, for it necessitates the calling in of a doctor by the parents of the children at a much earlier stage of the illness than at present.

"Experience in the past indicates that a very large number of Diphtheria cases are mistaken for mild sore throat for several days before a doctor is called in. Anti-toxin given early and in sufficient amount is almost a certain cure for Diphtheria. When Diphtheria occurs there can be no doubt that the efforts of the Public Health Department should be directed to saving the child's life by getting anti-toxin administered as early as possible.

"But anti-toxin, although capable of saving life, does not do anything towards the prevention of the occurrence of cases of Diphtheria. The number of new cases occurring in the City is about as numerous now as it ever was, but the use of anti-toxin has prevented a large number of the cases having a fatal issue.

Widespread Infection.

"Diphtheria is due to a very well-known germ, which can be easily discovered in the throat of a patient by swabbing and identifying afterwards in a laboratory. Few other diseases can be identified with so great certainty as in the case of Diphtheria.

"The swabbing of enormous numbers of throats under all sorts of conditions has proved that the germ of Diphtheria may grow in the throat of a perfectly healthy person without causing any signs of illness. Probably from three to ten per cent. of the healthy children of Birmingham are what are called Diphtheria carriers. This to a large extent explains how Diphtheria germs are spread, and how it is we get the large number of cases we do. Much is already known about these carriers, but for the moment it is unnecessary to refer in detail to their condition.

The New Method of Prevention.

"Recently a method has been worked out of protecting children against Diphtheria infection by the injection under the skin of a mixture of Diphtheria toxin and anti-toxin, or of a Diphtheria toxoid.

"It is usually unwise to claim for every new method too certain results, for human life is made up of so many variables that what may be proved to be true in the first thousand cases may not be true in every other class. Not only are there fundamental constitutional differences among children, but mistakes or failures on the part of doctors have to be taken into consideration.

"The result of the process of immunisation of children against Diphtheria appears, however, to be real and substantial, and although many points are not yet sufficiently determined, there appears to be no doubt that the immunisation of a child (say) at two years of age will prevent that child from contracting Diphtheria for probably eight years; that is to say, during the period when the child is most liable to attack and at the age when the disease is most fatal.

"Efficient vaccination and re-vaccination protect against contracting Smallpox, and so efficient active immunisation protects against Diphtheria with apparently equal certainty and uniformity.

"It would appear that, in future, parents who do not have their children protected will be held to be guilty of negligence if a child is attacked, and particularly if it dies from Diphtheria, because they have neglected to take steps which might have been a reliable preventive.

"If all young children were protected, there ought to be an almost entire cessation of the disease, with the attendant saving of life and avoidance of ill-health.

"Already the value of immunisation has been proved in Birmingham among the nursing staff in our Diphtheria wards, where experience during the past three years has shown that no properly immunised nurse or ward maid has contracted the disease, although she has been working in the Diphtheria wards.

"It might be added here that the process of immunisation of adults is a much more difficult one than that of children, yet our experience has been consistently good.

Scientific Principles.

"It is not necessary here to go into the difficult and somewhat involved scientific principles which underlie this process of immunisation other than to say that many workers have contributed to the result—viz., Austrians, Germans, French, and Americans. These workers have proved that it is possible to determine whether an individual is susceptible or not to the infection of Diphtheria by means of a test called the Schick test, and, therefore, it is possible to divide a community into those people who will take Diphtheria if infected and those who will not. It was then found possible to take people who were proved to be susceptible to Diphtheria and to render them insusceptible by giving them doses of a toxin anti-toxin mixture.

"As in the case of active artificial immunity in other diseases, so in the case of Diphtheria there is probably a limit to its duration. Experience appears to indicate that the duration is sufficiently long in the case of a young child to protect it during the most vulnerable period of its life.

Where the Method is in Use.

"Much of the original work to make the process of immunisation practicable was done in America, and in nearly every American city the immunisation of the young population is recommended and is being carried into effect in the case of enormous numbers of children. Several towns in this country are beginning the work, and it is also being undertaken in certain large residential schools where cases of Diphtheria used to occur constantly.

"The length of time since this work was commenced is insufficient to enable us to give the results after (say) ten years, but the small number of results which are available all indicate that the duration of the immunisation is considerable and the effect good. As an example in 57,000 New York school children who were proved by the Schick test to be susceptible to Diphtheria, and who were afterwards immunised, only five had been noted to have Diphtheria after five years, while of 90,000 other children 56 contracted Diphtheria.

Who Should be Immunised.

"The Schick test has been used in a great many cities, but it has the disadvantage of requiring the children to attend on two or three occasions after it has been applied and before the diagnosis is made as to whether the child is immune or not. It is not essential in the case of young children, because 80 to 90 per cent. of children from one to three years of age are susceptible, while only 28 per cent. between 11 and 12 years of age are susceptible. That is to say, people acquire a natural immunity by age.

"It is, therefore, possible to adopt the method of immunising all children (say) from two to five years old without carrying out a Schick test other than to ascertain the efficiency of the immunisation.

What Immunisation Will Mean.

"To carry out the immunisation of children under five years of age would mean that each child should receive a small dose of the toxin anti-toxin mixture under the skin of the arm about once a week for three weeks. At the end of a period varying from three to six months the immunisation develops and remains for several years.

Suggestions.

"It is desirable that parents of young children (say) between two and five years of age should be offered this protection for their children.

"This might in the first instance be done by giving to mothers attending Maternity and Child Welfare Centres a leaflet setting out exactly what the method is and what they are to expect, and then allowing them to bring their children voluntarily on appointed days for the administration of the dose of toxin anti-toxin.

"It is unlikely that any general medical practitioners will undertake this work, because the technique involved, although simple in itself, is based on difficult immunological data, and requires the use of freshly prepared toxin anti-toxin mixtures.

"The immunisation in the first instance should be limited to children under five years of age, and a card index should be kept for reference.

"One doctor and a nurse could apply the method to probably 100 children in a morning session of two hours, and as three doses are needed, this would mean that complete immunisation of about twenty children could be done in one hour. The cost of the three doses of toxin anti-toxin is about 2s. 6d., while doctors and nurse would cost about 30s. per hour, or approximately for doctor, nurse, and material, 4s. per child for the three doses.

"To test the efficiency of the method used it would be desirable to Schick test a proportion of the children immunised at the end of four to six months time.

Leaflet.

"I append the sort of information which I think might be given to parents before asking them to have their children immunised."

HOW TO PREVENT DIPTHERIA.

TO PARENTS OF CHILDREN BETWEEN 2 and 5 YEARS OF AGE.

Diphtheria is a very fatal disease in young children.

When a case does occur, the giving of anti-toxin early is very successful. But, unfortunately, the great majority of the cases are recognised too late.

Recently a new discovery has been made whereby a child can be inoculated against Diphtheria. The results are so good that in some large American cities a death from Diphtheria is thought to be a mark of neglect on the part of parents who have not had their children protected.

The results among the nurses and maids at the Birmingham City Fever Hospital, where Diphtheria cases are treated, are so good as to confirm the good reports from other towns.

The Public Health Committee want to offer this protection to all parents of young children.

The method consists of injecting under the skin a few drops of what is called Toxin Anti-Toxin on three separate days at intervals of one week. Those who decide to protect their children should come to the Maternity and Child Welfare Centre at.....at 10 a.m. on any Monday.

When the child has been protected, a certificate to this effect will be given, stating also whether the immunisation has been checked by the Schick test or not.

BIRMINGHAM,
December 10th, 1924.

Certain valuable experience gained at the City Fever Hospital is recorded by the Medical Superintendent, Dr. E. H. R. Harries, see page 78.

Of the 1887 cases occurring during the year 88 or 4.7 per cent. were return cases following the discharge from hospital of 55 original patients.

The details are as follows :—

No. of infecting cases discharged.	No. of infecting cases each followed by—					Total No. of R. Cases.
	One R Case.	Two R. cases.	Three R. cases	Four R. cases	Six R. cases.	
55	34	16	2	1	2	88

INFLUENZA.

The position as regards deaths from this disease is indicated in the following tabular statement

1913	112
1914	142
1915	146
1916	146
1917	98
1918	2,172
1919	1,062
1920	421
1921	134
1922	442
1923	264
1924	375

The deaths occurred mostly in the first and second quarters, viz. :—

First Quarter	244	deaths.
Second Quarter	90	,,
Third Quarter	14	,,
Fourth Quarter	27	,,
Total deaths	375	

The Influenza prevalence commenced about the middle of February and ended towards the middle of April.

The ages at death in 1918 to 1924 inclusive were as follows :—

Ages.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	Total deaths for 7 years.
0—5 ...	267	118	48	14	29	18	22	516
5—10 ...	130	22	11	2	3	1	4	173
10—15 ...	93	20	14	—	3	5	4	139
15—20 ...	138	46	12	4	14	8	9	231
20—25 ...	168	67	20	1	13	7	5	281
25—35 ...	570	226	76	8	47	13	30	970
35—45 ...	266	143	68	26	53	29	47	632
45—55 ...	222	152	78	16	74	39	64	645
55—65 ...	145	123	44	25	76	42	64	519
65—75 ...	134	94	34	24	78	64	70	498
75—85 ...	36	43	15	12	45	33	44	228
85 upwards	3	8	1	2	7	5	12	38
Totals	2172	1062	421	134	442	264	375	4870

It will be seen from the above that the majority of deaths take place after 25 years of age. At this age there appears to develop a malignancy which is not found in earlier years. The

majority of deaths among adults are due to a particularly dangerous type of broncho-pneumonia. If such cases could be put under good modern hospital treatment many of the lives could be saved. This remark applies with equal cogency to the cases of death among the young from pneumonia of which there were 580 recorded under the age of 35 during the year 1924.

DIARRHŒA AND ENTERITIS.

There were 231 deaths from these diseases—of which 150 were under 1 year of age; 20 between 1 and 2 years of age; 8 between 2 and 5 years of age; 26 between 5 and 55 years of age; 27 over 55.

Only on one occasion has a smaller number of deaths been recorded, viz., in 1922 when 7 fewer deaths occurred. The meteorological conditions and deaths during the last 10 years are set out below.

	Deaths from Diarrhœa and Enteritis.	Death-rate per 1,000.	Highest Temp. of the Air.*	Days with Temp. of 75 Fahr. or over.*	Maximum Soil Temperature (4ft.)*	Amount of Rain in inches.*	Days with 0.01 or more of Rain.*
1915 ...	684	0.77	74.6	0	54.3	8.34	44
1916 ...	489	0.55	82.1	14	54.8	5.42	36
1917 ...	366	0.41	78.4	5	54.0	9.74	55
1918 ...	445	0.51	81.3	13	55.9	9.83	54
1919 ...	260	0.28	83.0	12	55.0	8.44	39
1920 ...	309	0.34	73.0	0	53.0	7.59	53
1921 ...	442	0.48	89.2	27	57.0	5.54	27
1922 ...	224	0.24	71.5	0	52.8	13.45	55
1923 ...	261	0.28	91.9	15	54.2	9.50	49
1924 ...	231	0.24	84.5	2	53.0	10.33	63

* In the third quarter of the year.

Cold wet summers have the effect of reducing the number of deaths from this disease—that is to say that dryness and heat are in some way associated with the occurrence of fatal cases of diarrhœa and enteritis.

But apart altogether from heat or dryness there are a certain number of deaths take place from these diseases during the colder months of the year—possibly the nature of the disease differs in those from the acute hot weather type. During the winter months of 1924, January, February, March, April and November and December there were 112 deaths—at the rate of 224 per annum. That is to say that the excess deaths during the warmer six months of 1924 numbered only 7 above that which might have been expected had winter weather prevailed throughout the year. There was, therefore, during 1924 no epidemic diarrhœa.

TUBERCULOSIS.

Some progress was made in 1924, particularly in reducing the incidence and mortality from non-pulmonary tuberculosis.

Compared with other large cities Birmingham takes a favourable position with regard to Tuberculosis.

It is quite obvious that while the cases and deaths have been enormously reduced during the past 20 years the problem of dealing with this disease is still an important and difficult one.

There are even now over 1,000 deaths and over 2,000 fresh attacks annually from tuberculosis, a disease which is quite obviously preventable.

The gross cost to the public of treatment and prevention in one year is approximately £85,000, of which about £35,000 comes from the City rates.

The register shows that there are about 15,000 persons in Birmingham who are suffering from tuberculosis. Many of these have recovered sufficiently to return to full work. Probably one half of the patients are unable to work, i.e., six or seven thousand young adults unable to do anything for their own support. It will therefore pay to spend money in reducing the incidence of this disease apart altogether from the great advantage from the patients' point of view.

The new cases of Tuberculosis reported are from 40 to 50 per cent. below what they were about ten years ago, and the mortality from all forms of Tuberculosis shows approximately the same reduction.

The statistics in regard to Tuberculosis are set out in the following tables:—

TUBERCULOSIS (ALL FORMS).

New Cases Notified in 1924.

Pulmonary Tuberculosis	1,780
Tubercular Meningitis	42
Tubercle of the Abdomen	83
Tubercle of the Spinal Column	28
Tubercle of the Joints	46
Disseminated Tuberculosis	18
Tubercle of the Glands and other parts	132

Deaths during 1924 which had not been notified as Cases:—

Pulmonary Tuberculosis	68
Tubercular Meningitis	16
Tubercle of the Abdomen	9
Tubercle of the Spinal Column	3
Tubercle of the Joints	1
Disseminated Tuberculosis	5
Tubercle of Glands and other parts	4

Cases and Deaths from Tuberculosis (All Forms).

	Cases Notified.	Deaths.	Death-rate in Birmingham.	Death-rate in England & Wales.
1913	5,196	1,341	1.53	1.35
1914	3,815	1,293	1.47	1.36
1915	3,518	1,377	1.55	1.51
1916	3,830	1,324	1.48	1.53
1917	3,543	1,405	1.56	1.62
1918	3,254	1,385	1.60	1.69
1919	3,116	1,188	1.28	1.26
1920	2,974	1,001	1.10	1.13
1921	2,247	1,035	1.13	1.13
1922	1,961	1,049	1.13	1.12
1923	2,166	1,006	1.08	1.06
1924	2,129	1,055	1.10	—

PULMONARY TUBERCULOSIS.

	Cases Notified.	Deaths.	Death-rate in Birmingham.	Death-rate in England & Wales.
1905	—	994	1.26	1.14
1906	—	908	1.14	1.16
1907	—	898	1.11	1.15
1908	—	1,021	1.24	1.12
1909	—	1,008	1.22	1.09
1910	—	898	1.08	1.01
1911	—	958	1.14	1.08
1912	4,394	1,088	1.28	1.04
1913	4,229	1,041	1.19	1.01
1914	3,317	1,059	1.20	1.04
1915	3,027	1,141	1.28	1.16
1916	3,388	1,107	1.24	1.18
1917	3,074	1,169	1.30	1.25
1918	2,905	1,171	1.35	1.34
1919	2,704	1,019	1.10	1.00
1920	2,609	843	.93	.89
1921	1,969	890	.97	.88
1922	1,669	899	.97	.89
1923	1,785	860	.92	.84
1924	1,780	934	.97	—

The Incidence-rate and Death-rate from Pulmonary Tuberculosis in males and females are shown below :—

	Incidence-rate.		Death-rate.	
	Males.	Females.	Males.	Females.
1918	4.24	2.67	1.91	0.93
1919	3.72	2.23	1.38	0.86
1920	3.56	2.26	1.20	0.69
1921	2.49	1.85	1.27	0.71
1922	2.08	1.55	1.27	0.71
1923	2.21	1.65	1.17	0.70
1924	2.20	1.54	1.25	0.72

DISTRIBUTION OF PULMONARY TUBERCULOSIS.

		Case-rate per 1,000.	
Central Wards ...	St. Paul's	2.16	
	St. Mary's	3.02	
	Duddeston and Nechells	2.69	Average 1924 2.70
	St. Bartholomew's	2.40	,, 1919-23 3.33
	St. Martin's and Deritend	4.39	
	Market Hall	2.11	
	Ladywood	2.10	
Middle Ring ...	Lozells	1.65	
	Aston	2.43	
	Washwood Heath	1.88	
	Saltley	1.62	
	Small Heath	1.54	Average 1924 1.74
	Sparkbrook	1.32	,, 1919-23 2.17
	Balsall Heath	2.09	
	Edgbaston	1.01	
	Rotton Park	2.20	
	All Saints'	1.62	
Outer Ring ...	Soho	1.38	
	Sandwell	0.76	
	Handsworth	1.31	
	Erdington North	0.92	
	Erdington South	1.52	
	Yardley	1.27	Average 1924 1.23
	Acock's Green	1.34	,, 1919-23 1.69
	Sparkhill	1.25	
	Moseley and King's Heath	1.11	
	Selly Oak	0.93	
	King's Norton	1.34	
	Northfield	1.28	
	Harborne	1.53	

OTHER FORMS OF TUBERCULOSIS.

	Cases Notified.	Deaths.	Death-rate in Birmingham.	Death-rate in England & Wales.
1903 ...	— ...	370 ...	.48 ...	.54
1904 ...	— ...	351 ...	.45 ...	.54
1905 ...	— ...	322 ...	.41 ...	.49
1906 ...	— ...	295 ...	.37 ...	.50
1907 ...	— ...	343 ...	.43 ...	.47
1908 ...	— ...	287 ...	.35 ...	.47
1909 ...	— ...	248 ...	.30 ...	.45
1910 ...	— ...	270 ...	.32 ...	.42
1911 ...	— ...	272 ...	.32 ...	.38
1912 ...	— ...	204 ...	.24 ...	.33
1913 ...	967 ...	300 ...	.34 ...	.34
1914 ...	498 ...	234 ...	.27 ...	.32
1915 ...	491 ...	236 ...	.27 ...	.35
1916 ...	442 ...	217 ...	.24 ...	.35
1917 ...	469 ...	236 ...	.26 ...	.37
1918 ...	349 ...	214 ...	.25 ...	.35
1919 ...	412 ...	169 ...	.18 ...	.26
1920 ...	365 ...	158 ...	.17 ...	.24
1921 ...	278 ...	145 ...	.16 ...	.24
1922 ...	292 ...	150 ...	.16 ...	.23
1923 ...	381 ...	146 ...	.16 ...	.23
1924 ...	349 ...	121 ...	.13 ...	—

The comparative incidence in the nine largest towns of Great Britain during the year 1923 are shown in the next table, where it will be seen that Birmingham compares favourably with the other towns mentioned, particularly when it is borne in mind that our City is largely one where unskilled artisans are employed at relatively low wages and where the housing and environmental conditions are specially bad at the present time.

COMPARATIVE INCIDENCE AND MORTALITY FROM TUBERCULOSIS IN 1923.

(Registrar-General's Figures.)

Towns.	Case-rate per 1,000, all forms.	Mortality-rate per 1,000. All forms.	Pulmonary only.	Non-pulmonary.
London	2.29 ...	1.16	0.97	.19
*Glasgow	2.72 ...	1.43	1.01	.42
Birmingham	2.34 ...	1.06	0.88	.18
Liverpool	3.21 ...	1.61	1.25	.36
Manchester	2.96 ...	1.53	1.24	.29
Sheffield	3.28 ...	1.02	0.85	.17
Leeds	2.58 ...	1.37	1.07	.30
*Edinburgh	2.76 ...	1.25	0.93	.32
Bristol	2.77 ...	1.21	0.95	.26

*From Annual Reports of Medical Officers of Health.

PREVENTION OF TUBERCULOSIS.

Birmingham has consistently pursued a policy which divides itself into two parts, viz., (1) Finding out where infection exists and attempting to limit the spread of this infection, and (2) educating the public into taking steps to prevent those conditions which so frequently predispose to Tuberculosis.

LIMITING THE INFECTION.

It is always difficult to say how much spread of infection is attributable to each contributory cause. Since the Birmingham scheme was inaugurated a very large number of the total consumptive people in Birmingham have at one or other time been in a sanatorium, and have been trained to take care that their infectious spit does not spread the disease to others. Of course, many of these people when they come home from the sanatorium forget or neglect to carry out what they have been taught, but while this is true of a certain number the educational value of the sanatorium in this respect has been very great. The general public now realise the danger from the cough or the sputum of a consumptive, and even when the consumptive is careless his friends and neighbours recognise the fact and either caution him or complain to the authorities of his bad habits.

One of the great advantages of the Birmingham scheme is that there has always been a sufficiency of beds to enable the Tuberculosis Officer to admit cases for instructional or curative purposes as the case might be. The importance of our having a redundancy of beds for consumptives is, therefore, very great.

The work of the Tuberculosis Visitors is important in relation to the spread of infection. In practically all cases they visit the home and see that an attempt is made to obtain a sufficient degree of isolation if the patient has not already done this for himself. All cases are visited three or four times a year, and in cases where there is carelessness or an acute amount of infection visits are paid more frequently. The prime object of the Tuberculosis Visitors' work is to secure the limitation of infectivity, but in addition to this she assists in many other directions by her visits. Not the least important object of her visit is to find out any other inmates of the house who appear to be in failing health. Such inmates are invited to be examined at Broad Street Dispensary, so that if Tuberculosis should be developing the case will probably be recognised much earlier than would otherwise happen.

Removal of very infectious cases to hospital is important. No less than 424 consumptives died in public institutions during the year, thus limiting the risk of spreading infection very greatly.

Fifteen trained nurses are employed in visiting cases of Tuberculosis in their homes. Their visits during 1924 were as follows:—

New cases reported	2,146
Primary visits paid to civilians	2,010
,, ,, ex-soldiers	206
Periodic re-visits paid to civilians	23,575
,, ,, ex-soldiers	6,429
Special re-visits	13,900
Useless calls	3,330
Total calls	51,596
Patients provided with a shelter	42
,, recommended for extra nourishment	188
,, ,, additional bed	195
Nuisances Reported to Sanitary Inspectors	448
Houses disinfected	1,926

Preventing the Cause of Consumption.

This is an even more important duty than limiting the amount of infection, because if it were possible to get people to live under ideally healthy conditions there would be very little chance of Tuberculosis spreading. Very much has yet to be done to improve the knowledge of the public in the general laws of healthy living, but here again a good deal is being done in the sanatoria. Relatives and friends of tuberculosis patients visiting the sanatoria see for themselves the benefit which sanatorium treatment gives to their relatives, and sanatorium treatment is not much more than living under really healthy conditions such as: Abundance of fresh air; rest, with exercise later in the open air and sunlight; and reasonably good wholesome food at proper intervals.

There are, of course, many other factors, such as working under insanitary conditions, but these are more or less under the control of the individual. If he thinks his workplace or the character of the work is likely to affect his health he has a remedy in his own hands by leaving the work.

Another source of infection is cows' milk, which is dealt with on page 42.

Housing Accommodation in Consumptive Cases.

Among the 1,780 cases of Pulmonary Tuberculosis notified there were 89 in which no record was obtained as to the home conditions. These were mostly cases in Institutions and Lodging Houses. In the remaining 1,691 instances, particulars were taken as to the home conditions.

The records show that 542 cases occurred in back to back houses and 1,149 in houses with through ventilation. There are approximately 40,000 houses of the back to back type in the City, so that the incidence rate was 13 per 1,000 houses. In the through-ventilation houses the rate was 7 per 1,000 houses, i.e., about half as high.

In many instances the housing accommodation was deplorable. In 40 cases the consumptive lived in a single room. In two instances the occupants of this single room numbered 8. In three cases there were 6 occupants, in three others there were 5, in six cases there were 4, and in 13 cases 3. The single room had to be used, of course, as both a living-room and bedroom.

In 52 other cases the consumptive and his family occupied two rooms, and in 481 instances the home consisted of three rooms. The size of the families in these three-roomed houses was as follows:—

2	occupants	in 33	instances.
3	,,	67	,,
4	,,	75	,,
5	,,	85	,,
6	,,	87	,,
7	,,	44	,,
8	,,	37	,,
9	,,	31	,,
10	,,	13	,,
11	,,	6	,,
12	,,	3	,,

The housing accommodation in which the new cases of consumption were living is much inferior to that in the City as a whole as shown by the figures below. The first column shows the average number of persons per room in the houses in which a case of consumption was notified last year. The second shows the same information, as ascertained at the Census, for the whole population of the City :—

No. of rooms	Average No. of occupants. (Consumption Houses).	Average No. of persons (all houses).
1	3.4	2.2
2	1.9	1.4
3	1.8	1.4
4	1.4	1.1
5	1.2	.9
6	.9	.7

Bearing in mind the inadequacy of the housing accommodation it is not surprising that the sleeping arrangements were in many cases unsatisfactory. It is, of course, very necessary, as a rule, that a consumptive should have a separate bedroom. Out of the 1,691 notified cases only 306 had this advantage, while in 1,076 cases the patient was not only sharing a room, but also sharing a bed with someone else.

To meet, to some extent, this lack of proper sleeping accommodation, beds are sent out either on loan or on the hire-payment system by the Public Health Department. Last year 196 beds were issued and the total number of beds now in use under the scheme is 880.

TREATMENT OF TUBERCULOSIS.

The next statement shows the number of persons examined by the Medical Staff at Broad Street Centre :—

Tuberculosis Patients Examined at Broad Street Centre.

	New Patients.	Contacts or Suspects.	Old Patients Re-examined.
Completed Examinations	1,573	947	6,139
Number recommended for Sanatorium	612	256	756
,, ,, Observation	164	92	57
,, ,, Dispensary	83	22	1,550
,, ,, Domiciliary	93	59	1,074
No treatment required at present	621	518	2,702
Incomplete Examinations	599	1,022	564
Total Examinations	2,172	1,969	6,703

X-Ray examinations were made in 3,158 cases.

The number of patients sent to the different Sanatoria is given in the statement below :—

Patients Treated at Sanatoria.

	Yardley Road.	Salterley Grange.	Romsley Hill.	West Heath.	Total.
In sanatorium at beginning of year	302	56	82	83	523
Admitted during year	1,000	204	304	260	1,768
Discharged	837	209	284	169	1,499
Died	157	3	11	98	269
Remaining at end of year	308	48	91	76	523

The number of patients who attended at Broad Street Centre for out-patient treatment (in most cases after a previous stay at a sanatorium) was as follows :—

Treatment at Broad Street Dispensary.

New patients attending for treatment	564
Total attendances of old and new patients	20,746

LIGHT TREATMENT.

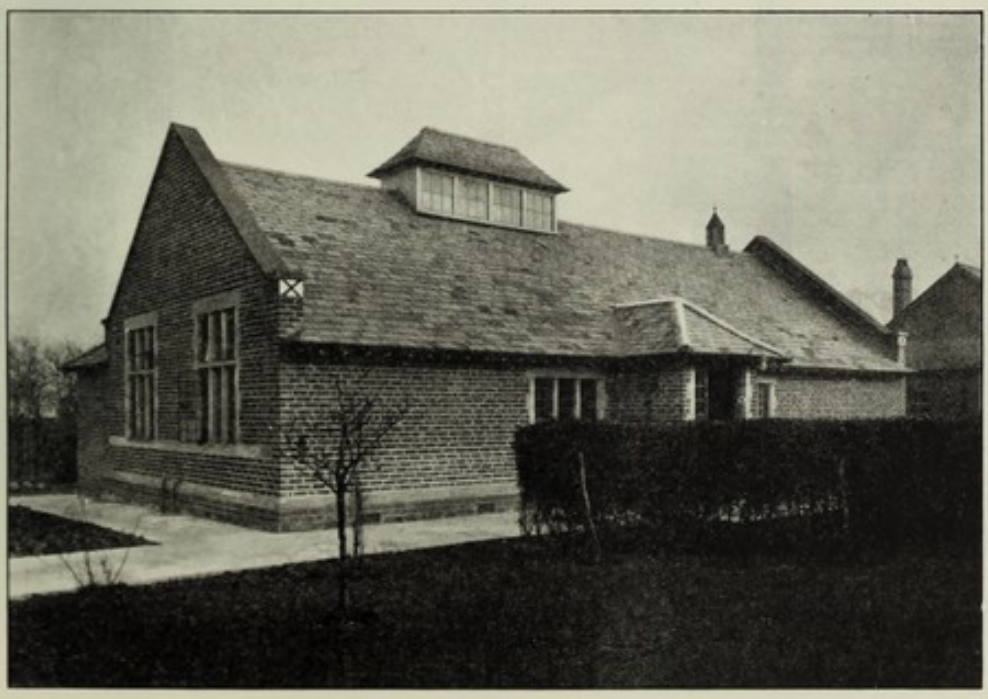
During the year the Public Health Committee agreed to establish a Light Treatment Department for Tuberculosis. The value of natural sunlight as a restorative has been appreciated by the general public for a great many years, and as far back as the days when ancient Greece and Rome were at the height of their civilisation solarite places for exposing the body to the sun's rays were established, apparently with beneficial results.

The process appears to have passed into desuetude for special treatment purposes until Dr. Rollier, of Leysin in Switzerland, by establishing a sanatorium for the treatment of children suffering from tuberculous disease of the bones demonstrated the extraordinary value of a regulated exposure to sunlight in the open air. Within the past few years several similar attempts have been made to cure early cases of tuberculous disease by exposure to sunlight, and its success has been very marked.

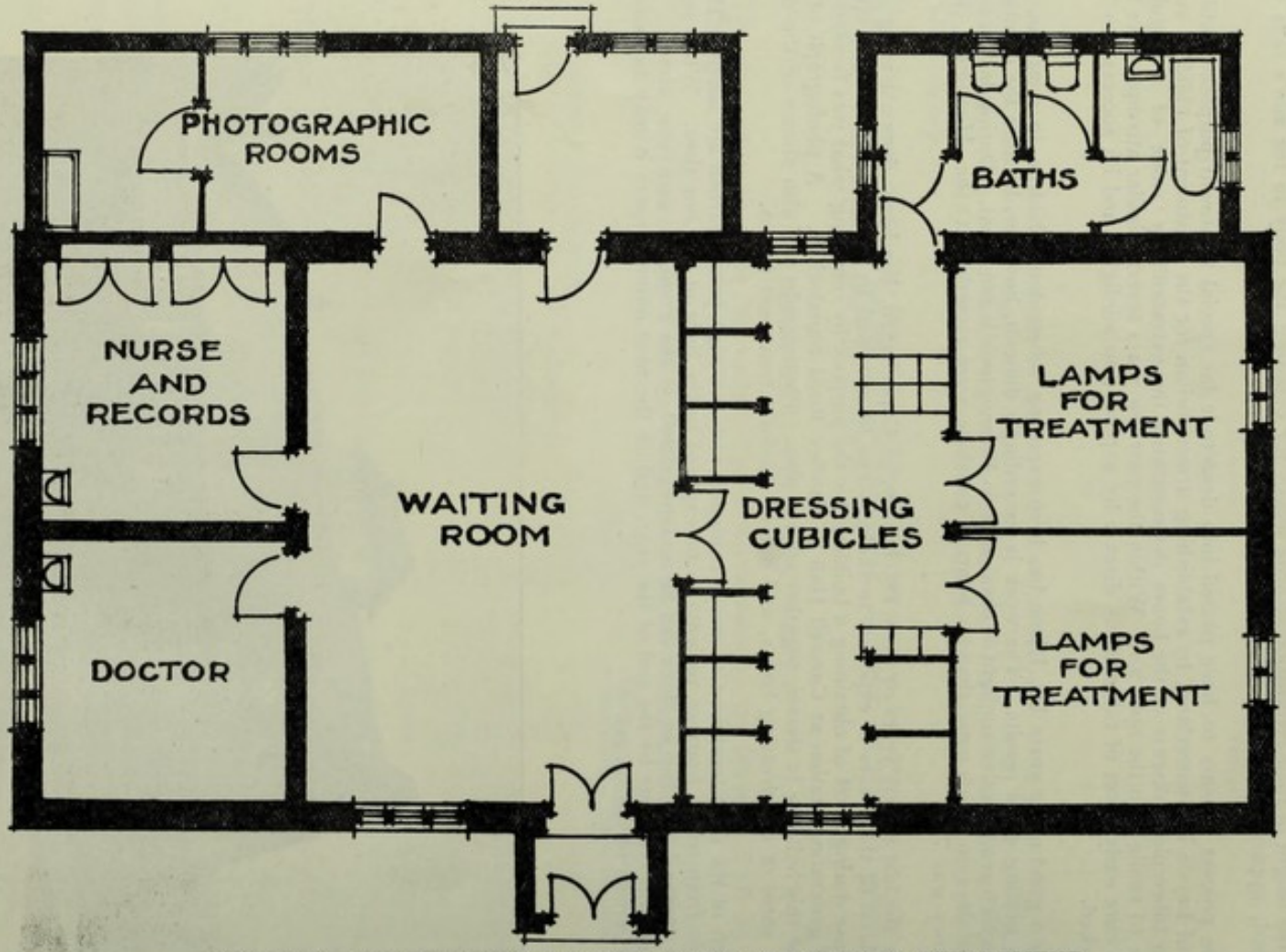
For a good many years Dr. Dixon has been exposing tuberculous children to sunshine, and has been getting good results. The work is exceedingly difficult, however, because the number of days on which really active sunlight is obtainable in Birmingham is not great. During last year the number of days on which more than six hours of sunshine were recorded at the Monument Road Observatory was 71.

For the last twenty years or more Dr. Finsen, of Copenhagen, has been demonstrating that some at least of the effects of exposure to sunlight can be obtained by artificial light. The opportunity arose during 1924 of obtaining a building for the purpose by removing what was formerly an electrical generating station at Canwell Hall to Yardley Road Sanatorium. A photograph of the outside of this building is shown, together with a plan. Photographs are also shown of the waiting hall, some of the dressing boxes, and one of the light treatment rooms.

Each of the light treatment rooms is equipped with two high power carbon arc lamps. These will enable from ten to fourteen patients to be exposed to the light at any one time. When couch cases are exposed only two or three can be accommodated in the room at any one time. The installation was complete by the end of the year, and in the next annual report it may be possible to record certain of the results.



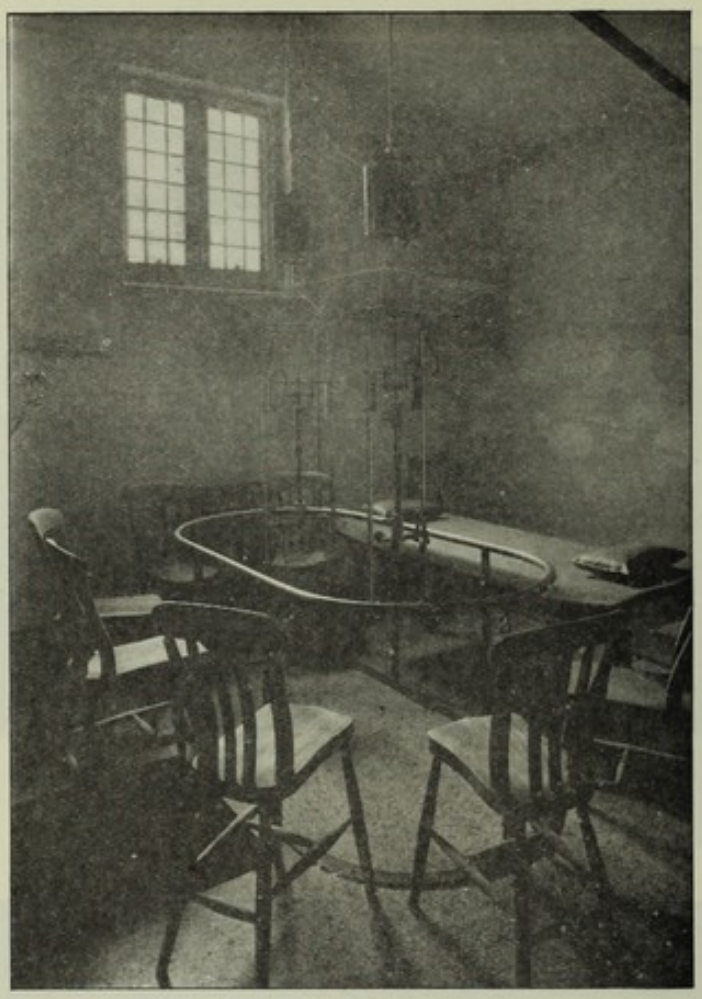
LIGHT TREATMENT DEPARTMENT.



GENERAL ARRANGEMENT OF THE LIGHT TREATMENT DEPARTMENT.

GENERAL WAITING ROOM.

DRESSING BOXES.



ONE OF THE LAMP ROOMS
WITH TWO 75 AMPERE CARBON ARC LAMPS.

THE ANTI-TUBERCULOSIS CENTRE.

(REPORT BY DR. G. B. DIXON, CHIEF TUBERCULOSIS OFFICER).

The Anti-Tuberculosis Centre is open daily for five days during the week, and on Saturday for half a day. There are four evening sessions each week. New patients are examined and old patients are re-examined by appointment during the morning and afternoon; treatment is given during the evenings to those who are working, and in the afternoon to children and those women and men who are not working. Those patients who are unable to attend for examination are visited and examined by members of the medical staff at their own homes. Consultations are also held between doctors and the Chief Tuberculosis Officer at the patients' own homes. On return from sanatoria, patients are again seen at the Centre where many continue to attend as out-patients; some however, return to their own doctors. The patients attending the Centre are examined from time to time, and those old patients who have discontinued regular attendance are re-examined after varying intervals of time.

ATTENDANCES AND EXAMINATIONS OF PATIENTS.

During the year 1924 the total number of attendances, both for the purpose of diagnosis and treatment, was 34,923, the total attendances for treatment alone were 21,495; the total number of examinations was 10,198, and in addition there were 3,230 X-ray examinations. As compared with last year there was an increase in the total attendances for the purpose of treatment, and the number of examinations also showed a slight increase.

During the year we examined 1,147 newly notified cases of pulmonary tuberculosis out of the 1,780 persons who were notified to the Medical Officer of Health as suffering from this disease; this figure indicates that 64.4 per cent. of all notified cases of pulmonary tuberculosis in the City were examined at the Centre during the year. In addition, 2,288 return cases, i.e., those who had been treated in previous years, were re-examined, as well as 1,258 "suspect" cases and 483 "contact" cases; we also examined during the year 1,506 patients who had completed a course of treatment. These figures show that the total number of patients examined was 6,682 and they received 10,198 examinations.

TREATMENT RECOMMENDED.

In the two tables below, the variety of treatment recommended for the different categories of adults and children are shown, and in the two later tables the same patients are classified according to the stage of their disease. In these tables the last two items in each deal with those patients who required treatment for disease other than pulmonary tuberculosis, or for whom no treatment was considered necessary.

Adult Patients.

	Newly notified cases.	Return cases.	"Suspect" cases.	"Contact" cases.	Total.
Sanatorium Observation	48	6	90	7	151
Sanatorium	498	413	251	4	1,166
Domiciliary	80	456	44	—	580
Dispensary	33	150	19	6	208
Dispensary supervision	5	488	3	—	496
Home Treatment for disease other than P.T.	4	91	8	1	104
Hospital Treatment for disease other than P.T. ...	—	—	—	—	—
No Treatment required	268	347	504	134	1,253
	936	1,951	919	152	3,958

Children.

	Newly notified cases.	Return cases.	"Suspect" cases.	"Contact" cases.	Total.
Sanatorium observation	33	4	52	26	115
Sanatorium	33	55	38	11	137
Domiciliary	6	8	2	1	17
Dispensary	14	53	10	7	84
Dispensary supervision	—	124	1	1	126
Home Treatment for disease other than P.T.	—	6	—	—	6
Hospital Treatment for disease other than P.T. ...	1	—	—	—	1
No Treatment required	124	87	236	285	732
	211	337	339	331	1,218

CLASSIFICATION OF PATIENTS ACCORDING TO STAGE OF DISEASE.

Adults.

	Newly notified cases.	Return cases.	Suspects and Contacts.	Total.
Stage I.	71	458	68	597
Stage II.	128	939	113	1,180
Stage III.	415	513	174	1,102
No active signs of Tuberculosis	300	27	701	1,028
T.B. other than pulmonary	22	14	15	51
				3,958

Children.

	Newly notified cases.	Return cases.	Suspects and Contacts.	Total.
Stage I.	13	132	28	173
Stage II.	15	112	35	162
Stage III.	12	55	12	79
No active signs of Tuberculosis	142	16	576	734
T.B. other than pulmonary	29	22	19	70
				1,218

WORKING CAPACITY WHEN FIRST EXAMINED.

In the following tables the patients referred to us for treatment are again sub-divided into adults and child patients, and the working capacity of the different types of patient in each sub-division is shown. It is interesting to note that among the adults 32.8 per cent. were sent to us whilst their working capacity was still unimpaired, and only 12.2 per cent. came to us when totally incapacitated. In the case of the children this point is more emphasised; 68.8 per cent. had an unimpaired working capacity and 2.6 per cent. were totally incapacitated, the working capacity indicated here being the ability or otherwise to attend school regularly.

Adults.

	Newly notified cases.	Old cases.	Suspects and Contacts.	Total.
Unimpaired	255	419	627	1,301
Impaired	467	1,341	364	2,172
Totally incapacitated	214	191	80	485
				3,958

CHILDREN.

	Newly notified cases.	Old cases.	Suspects and Contacts.	Total.
Unimpaired	138	147	554	839
Impaired	59	177	111	347
Totally incapacitated	14	13	5	32
				1,218

FAMILY HISTORY.

A survey of the family and social history of the 5,176 patients submitted to us for examination and treatment during the year shows that there was no history of existing tuberculosis or knowledge of relatives dying of, or suffering from, tuberculosis in connection with 2,788 or 53.8 per cent. In 2,388 or 46.1 per cent. there was a history of some near relative or intimate friend either being affected with tuberculosis or having succumbed to it. In 302 instances or 5.8 per cent. the relative affected was the father, and in 189 or 3.6 per cent. the relative affected was the mother, and in 486 instances or 9.3 per cent. the brother or sister was affected. In 815 instances two or more relatives were known to have suffered from tuberculosis.

DENTAL TREATMENT.

The services of a part-time dental surgeon are utilised at the Centre for the necessary treatment of our patients. The treatment is conservative in type, and consists mainly of extractions, fillings and scalings. There is no fund to assist in the provision of artificial dentures. Those patients who wish to provide their own can do so under conditions advantageous to themselves by arrangement with the dentist. The condition of the teeth and gums of most of our patients is carefully noted, and in the table below is briefly summarised the dental condition of patients seen during the year so far as dental caries, masticatory power, and the state of the gums were concerned. The dental surgeon informs me that there were 885 extractions for which local anæsthesia was administered on 199 occasions, and that the general anæsthesia was administered on 15 occasions. There were 29 fillings and 54 scalings, and dentures were supplied in 39 instances.

CONDITION OF TEETH AND GUMS.

Number of Teeth with infected pulp chambers.			Masticatory power in Molars and Bicuspeds.			State of Gums.		
None.	1 to 4.	More than 4.	Six or more.	Less than 6.	None.	Healthy.	Gingivitis.	Pyorrhœa.
1,414	2,841	861.	3,009	1,362	626	3,133	940.	857.

SPUTUM RESULTS.

Amongst the adult patients suffering from tuberculosis there were 853 or 29 per cent. who presented tubercle bacilli in their sputum, and amongst the children there were 12 or 4.5 per cent. whose sputum was positive for tubercle bacilli.

In the two tables below the sputum conditions of all patients referred to us during the year are summarised. They are sub-divided into adults and children, and are arranged to show the sputum conditions of the different types of patients.

ADULTS.

	Notified cases.	Return cases.	Suspects and Contacts.	Total.
Tubercle bacilli present	385	331	137	853
Tubercle bacilli absent	330	1,155	596	2,081
No sputum	221	465	338	1,024
				3,958

CHILDREN.

	Notified cases.	Return cases.	Suspects and Contacts.	Total.
Tubercle bacilli present	1	11	—	12
Tubercle bacilli absent	35	89	126	250
No sputum	175	237	544	956
				1,218

LABORATORY WORK AT CENTRE.

In the Laboratory during the year there were 8,084 specimens of sputum examined; there were 94 other specimens also examined. Of sputum specimens 1,896 which were previously negative after one staining were examined by the concentration method of Davis, the results being as follows:—

Tubercle Bacilli demonstrated after 1st concentration ... 39 or 4.07 per cent.
" " " " 2nd " ... 7 or .82 "
" " " " 3rd " ... Nil.
No change after 4th, 5th or 6th concentration.

LABORATORY WORK—YARDLEY ROAD SANATORIUM.

We examined during the year 2,392 specimens of urine and 4,563 specimens of sputum. Of the sputum specimens examined 925 presented tubercle bacilli after staining alone, and the remaining 3,638 specimens were tested by the sedimentation method devised by Ellerman and Erlandsen. Of these 1,080 or 29.65 per cent. after this test, were found to contain tubercle bacilli; these were not found in every instance after one examination and in some cases the test had to be repeated on several occasions before a positive result was obtained, as shown in the following table:—

Tubercle Bacilli found after	1st	sedimentation	in	654	instances.			
,,	,,	,,	,,	2nd	,,	,,	342	,,
,,	,,	,,	,,	3rd	,,	,,	44	,,
,,	,,	,,	,,	4th	,,	,,	39	,,
,,	,,	,,	,,	5th	,,	,,	1	,,

COMPLETED CASES.

During the year 1,506 patients completed a course of treatment at the Centre, of whom 1,336 were adults and 170 were children.

Working Capacity.

In the following tables the change between the working capacity at the commencement and termination of treatment of the patients differentiated into stages of disease, is shown for both adults and children.

Adults.

	Stage I.	Stage II.	Stage III.	Other than pulmonary.	Total.
Unimpaired working capacity becoming impaired ...	10	4	—	1	15
Unimpaired becoming totally incapacitated	—	—	—	—	—
Unimpaired capacity persisting	7	6	1	—	14
Impaired becoming unimpaired	70	60	10	2	142
Impaired becoming totally incapacitated	3	23	48	2	76
Impaired capacity persisting	138	374	277	14	803
Totally incapacitated becoming impaired	14	51	89	4	158
Totally incapacitated becoming unimpaired	6	7	4	2	19
Totally incapacitated persisting	1	21	85	2	109
					1,336

Children.

	Stage I.	Stage II.	Stage III.	Other than pulmonary.	Total.
Unimpaired working capacity becoming impaired ...	4	2	—	—	6
Unimpaired becoming totally incapacitated	—	—	—	—	—
Unimpaired capacity persisting	2	—	—	1	3
Impaired becoming unimpaired	14	17	3	5	39
Impaired becoming totally incapacitated	—	2	2	—	4
Impaired capacity persisting	35	36	19	—	90
Totally incapacitated becoming impaired	2	8	10	4	24
Totally incapacitated becoming unimpaired	1	—	1	—	2
Totally incapacitated persisting	—	1	—	1	2
					170

AFTER CARE.

Results of Investigation into the Present Condition of the Patients Treated in the Past.

In the following tables are set out, as briefly as possible, the main points in connection with an investigation undertaken to ascertain the condition of our past patients who received treatment at the Centre between the year 1913 and 1920 inclusive.

Amongst the patients treated during the year 1913 at the Centre 524 or 31.8 per cent. of the total are still working. The mortality is very much higher amongst those whose sputum contained tubercle bacilli.

Results of an Inquiry into Present Condition of Patients Treated in Previous Years Whose Sputum Contained Tubercle Bacilli.

Year.	No. of patients treated.	Now working regularly.	Working irregularly.	Totally incapacitated.	Known to have left City.	Lost all trace.	Known to have died.
1913 ...	504	19.6%	5.7%	2.3%	3.1%	33.5%	35.5%
1914 ...	573	20.0%	11.5%	1.0%	5.9%	19.8%	41.5%
1915 ...	309	15.5%	10.3%	2.2%	5.1%	25.5%	41.1%
1916 ...	207	25.1%	7.2%	1.9%	7.7%	11.5%	46.3%
1917 ...	212	25.9%	15.0%	1.4%	6.6%	13.6%	37.2%
1918 ...	191	27.2%	14.1%	.5%	10.4%	9.4%	38.2%
1919 ...	219	18.7%	22.3%	.4%	4.5%	11.8%	42.0%
1920 ...	275	18.9%	24.7%	2.9%	6.9%	5.4%	41.0%

RESULTS OF AN INQUIRY INTO PRESENT CONDITION OF PATIENTS TREATED IN PREVIOUS YEARS WHOSE SPUTUM DID NOT CONTAIN TUBERCLE BACILLI.

1913	...	1139	27.2%	7.5%	.7%	6.0%	43.9%	14.3%
1914	...	895	40.5%	7.0%	1.3%	6.7%	32.6%	11.7%
1915	...	1222	39.3%	7.2%	1.4%	6.1%	31.5%	14.3%
1916	...	996	50.2%	8.2%	2.0%	8.4%	21.2%	9.8%
1917	...	812	56.0%	9.2%	1.2%	8.4%	17.8%	7.1%
1918	...	820	48.0%	14.2%	.8%	8.6%	18.4%	9.7%
1919	...	773	42.1%	22.5%	.5%	6.7%	19.9%	8.1%
1920	...	795	49.4%	26.5%	.5%	5.4%	10.8%	7.2%

SUMMARY OF REPORT.

1. Compared with the previous year there was an increase in the number of attendances for the purpose of treatment, and an increase in the number of patients examined.

2. 64.43 per cent. of the total number of those notified in the City as suffering from pulmonary tuberculosis, during the year, were examined at the Centre.

3. No less than 994 persons were examined during the year at their own homes.

4. The number of contacts and suspects examined during the year was 1,741 as compared with 1,147 newly notified patients.

5. Amongst the adult patients notified during the year and examined at the Centre 32.8 per cent. had but a slightly impaired capacity for work, 12.2 per cent. were totally incapacitated from work.

6. Amongst the adult patients suffering from tuberculosis 29 per cent. presented tubercle bacilli in their sputum, whilst only 4.5 per cent. of the children showed tubercle bacilli in their sputum.

SANATORIA FOR TUBERCULOSIS.

(REPORT BY DR. G. B. DIXON, CHIEF TUBERCULOSIS OFFICER).

The Birmingham Public Health Committee has 588 beds available for the treatment and prevention of pulmonary tuberculosis exclusive of those in the Training Colony at West Heath. These beds are distributed in four different Sanatoria, namely, Yardley Road Sanatorium, West Heath Sanatorium, Salterley Grange Sanatorium, Cheltenham, and Romsley Hill Sanatorium, Halesowen. The three former are the property of the City, but in the latter, which belongs to the Birmingham Hospital Saturday Fund, 93 beds are rented. The Yardley Road Sanatorium is situated in a suburban part of the city, about 3½ miles from its centre, and has accommodation for 325 patients. The beds are available for male and female adults, and for children. There are 154 beds for male adults, 10 of which are reserved for the admission of patients for observation purposes, and the remainder are ultilized for the treatment of those in the intermediate and advanced stages of tuberculosis. There are 52 beds provided for female adults, including 8 beds reserved for observation purposes. The female patients admitted are those in the early and intermediate stages of tuberculosis. There are 119 beds for the treatment of children, and included in these are 15 beds available for the purpose of observation. Children in all stages of tuberculosis are admitted.

The West Heath Sanatorium is situated about 6 miles from the centre of the City; it contains 102 beds, 78 of which are set apart for the treatment of female adult patients suffering from advanced tuberculosis, 24 beds are available for male patients.

The Salterley Grange Sanatorium, with 68 beds, is situated in the Cotswold Hills, about 3¼ miles from Cheltenham, and has accommodation for 36 males and 32 females. The patients selected are all of adult age, and are the most promising from a medical standpoint of all our patients, the majority suffering from tuberculosis in an early stage.

Romsley Hill Sanatorium is the property of the Birmingham Hospital Saturday Fund, and is situated in the Clent Hills, 11 miles from the centre of the City. The Birmingham Health Committee rent 93 beds for the admission of their patients, 63 for males, and 30 for female adults. Those in all stages of the disease are admitted.

Admission to these different Sanatoria is arranged by the staff of Tuberculosis Officers, after examination of the patients at the Municipal Anti-Tuberculosis Centre, 44a, Broad Street. The treatment given to patients in the Sanatoria is on similar lines, and includes hygienic and dietetic treatment, graduated rest, exercise and occupation, the employment of appropriate drugs when indicated, or specific treatment by means of the various tuberculins and vaccines, etc. Heliotherapy, treatment by ultra violet rays, and artificial pneumothorax are undertaken in suitable cases.

TOTAL NUMBERS TREATED IN THE SANATORIA AND DURATION OF STAY.

During the year 1924, there were 1,696 patients discharged from all the Sanatoria. Of this number 114 were male children, 105 were female children, 913 were adult males and 564 were adult females.

The average durations of stay recorded in days for male, female and child patients in the Sanatoria were as follows:—120.5 days for males, 116.2 days for females, and 137.8 days for children.

OBSERVATION PATIENTS.

The beds reserved for the purpose of observation are all at the Yardley Road Sanatorium, and vary in number from time to time, the average being about thirty.

Observation patients are those who, after careful and repeated examinations at the Centre, are found to be indefinite, either as to the absence or presence of tuberculosis, or as to its activity or otherwise when present, and are usually admitted for a period varying from two to four weeks. Of the 1,696 treated in all the Sanatoria 238 or 14.03 per cent. were admitted primarily to Yardley Road Sanatorium for the purpose of observation. The medical findings after varying periods of observation in connection with these patients are set out in the following table:—

	Positive diagnosis.	Negative diagnosis.	Total.
Adult Males	26	40	66
Adult Females	21	43	64
Children	48	60	108
	95=39.91%	143=60.08%	238

Discharged Patients, Tabulated According to Sex and Age.

In the following table the patients have been classed according to their sex and age.

It will be seen that the largest number of our patients are included in the age period between twenty and twenty-five years.

	Females.	Males.
Under 10 years	62	66
11 to 15 ,, ...	51	59
16 to 20 ,, ...	93	80
21 to 25 ,, ...	100	114
26 to 30 ,, ...	83	89
31 to 35 ,, ...	95	107
36 to 40 ,, ...	63	142
41 to 45 ,, ...	58	136
46 to 50 ,, ...	30	90
51 to 55 ,, ...	14	72
56 to 60 ,, ...	15	48
Over 60 ,, ...	5	24
	669	1,027

CLASSIFICATION OF PATIENTS' DISEASE.

In this table the patients are scheduled according to the classification of Turban-Gerhardt, which represents the anatomical extent of the disease present. It will be noted that the largest number of our patients were included in Stage III., which indicates a fairly extensive area of lung disease.

	Stage I.	Stage II.	Stage III.	T.B. other than pulmonary	No active signs.
Adult Males.					
Yardley Road Sanatorium	27	88	376	13	40
Salterley Grange Sanatorium	34	73	26	—	—
Romsley Hill Sanatorium	27	66	102	2	—
West Heath Sanatorium	—	16	23	—	—
Adult Females.					
Yardley Road Sanatorium	28	60	48	9	43
Salterley Grange Sanatorium	20	40	11	2	—
Romsley Hill Sanatorium	6	26	59	—	—
West Heath Sanatorium	5	37	167	3	—
Children.					
Yardley Road Sanatorium	43	54	43	16	60
West Heath Sanatorium	—	1	2	—	—
	190	461	857	45	143

SPUTUM.

Out of the total number of adult patients discharged from the Sanatoria during the year, 905 or 61.2 per cent. presented tubercle bacilli in their sputum whilst in the Sanatoria.

	No sputum persisting.	No sputum becoming T.B.—	No sputum becoming T.B.+	T.B.— persisting.	T.B.— becoming T.B.+	T.B.— becoming no sputum.	T.B.+ persisting.	T.B.+ becoming T.B.—	T.B.+ becoming no sputum.	Totals
Yardley Road	8	5	1	102	13	10	322	37	6	504 Adult Males.
Sanatorium	27	3	1	40	4	23	36	6	5	145 Adult Females.
	101	6	1	16	—	25	4	2	1	156 Children.
										143 No active signs.
										918
Romsley Hill	—	1	1	38	7	4	127	18	1	197 Adult Males.
Sanatorium	5	1	1	17	3	—	57	6	1	91 Adult Females.
										288
Salterley	14	1	1	19	5	35	33	9	16	133 Adult Males.
Grange	24	—	1	11	2	13	18	1	3	73 Adult Females
Sanatorium										
										206
West Heath	—	—	—	21	1	—	15	1	1	39 Adult Males.
Sanatorium	17	1	1	44	3	6	126	12	2	212 Adult Females.
				1		1	1			3 Children.
										254

Occupations.

In the following table the occupations of both male and female adult patients are shown.

	Males.	Females.
Out-door occupations	88	11
Domestic occupations	9	272
Sedentary occupations	64	34
Commercial occupations	30	13
Engineering trade	191	76
Metal trade	242	73
Building trade	65	1
Other trades	226	82
	915	562

TREATMENT CARRIED OUT WHILST IN SANATORIA.

The majority of the patients treated in the Sanatoria during the year accepted the treatment advised by the medical officers. In 979 instances, extensions of the treatment primarily advised were accepted. There were 104 patients who left the Sanatoria against medical advice, and 4 were dismissed. Deaths in Sanatoria numbered 266, the great majority of which occurred amongst patients in the hospital beds provided for those with advanced and acute disease.

	Remaining full time recommended	Extension of time accepted.	Left against medical advice.	Left before time with M.O.'s consent	Dismissed.	Died.
Adult Males	177	455	65	38	4	174
Adult Females	88	334	33	22	—	87
Children	15	190	6	3	—	5

PULMONARY CONDITION AFTER TREATMENT.

In the following table is shown the condition of the patients' pulmonary disease on discharge. A description of the different terms is given in the report of the work in connection with the Anti-Tuberculosis Centre.

	Disease inactive.	Disease improved.	Disease stationary.	Disease progressing.	Dead	No active signs.	Obs. left before diagnosis made.
Adult Males.							
Yardley Road Sanatorium ...	47	205	33	70	149	34	6
Romsley Hill Sanatorium ...	4	100	63	24	6	—	—
Salterley Grange Sanatorium	35	75	11	9	3	—	—
West Heath Sanatorium ...	3	17	1	2	16	—	—
Female Adults.							
Yardley Road Sanatorium ...	41	75	12	12	5	42	1
Romsley Hill Sanatorium ...	—	39	28	19	5	—	—
Salterley Grange Sanatorium	28	32	8	5	—	—	—
West Heath Sanatorium ...	6	87	13	29	77	—	—
Children.							
Yardley Road Sanatorium ...	67	82	—	4	3	57	3
West Heath Sanatorium ...	—	1	—	—	2	—	—
	231	713	169	174	266	133	10

ILLNESSES PREVIOUS TO ADMISSION.

In 141 or 9.54 per cent. instances, adult patients had a history of having suffered from pleurisy at periods varying from one to twelve years prior to their examination by us. In 132 or 8.93 per cent. of the adult patients there was a history of pneumonia having occurred from one to twelve years previously. Large numbers of patients attributed the onset of their tuberculosis to an attack of influenza, and in the case of many of our child patients measles appears frequently as a probable predisposing cause of tuberculosis.

GAIN OR LOSS IN WEIGHT.

Amongst a total of 1,696 patients discharged from the Sanatoria, many of whom were advanced hospital cases, having been admitted as a measure of prophylaxis, 34 or 2 per cent. remained stationary, and 1,045 or 61.6 per cent. gained weight in amounts varying from one to twenty-five pounds.

WORKING CAPACITY.

The working capacity of patients is shown in the following table:—

	Males.	Females.	Children.	Total.
Unimpaired capacity for work becoming impaired ...	—	—	1	1
Unimpaired capacity persisting	—	—	2	2
Impaired capacity for work becoming unimpaired ...	59	39	35	133
Impaired capacity for work becoming totally incapacitated	81	42	1	124
Impaired capacity persisting	474	243	89	806
Total incapacity becoming impaired	87	51	22	160
Total incapacity becoming unimpaired	5	—	2	7
Total incapacity persisting	167	146	7	320
No active signs	40	43	60	143
	913	564	219	1,696

SUMMARY.

The average duration of patients' stay for all the Sanatoria, was 120.5 days for males, 116.2 days for females, and 137.8 days for children.

Of the patients discharged from all the Sanatoria during the year no less than 14 per cent. had passed through the observation beds at Yardley Road Sanatorium. This proves the necessity for beds for observation purposes, and is some measure of the care which is taken in arriving at a correct diagnosis of pulmonary tuberculosis. The provision of an adequate number of observation beds allows of an accurate diagnosis being made in a larger number of what would otherwise remain as doubtful cases.

The largest number of our patients in any hemi-decade were those drawn from the age period 20 to 25 years.

Over 50 per cent. of the patients discharged were in Stage III., 27 per cent. were in Stage II., and 11 per cent. were in Stage I.

There were 61.2 per cent. of our total of discharged adult patients who presented tubercle bacilli in their sputum whilst in the Sanatoria. The number who showed bacillary loss, decided after three examinations was 14 per cent.

Over 61 per cent. of all the patients discharged from Sanatoria gained weight in amounts varying from one to twenty-five pounds, only 2 per cent. remaining stationary.

A larger number of our patients are being treated by means of the production of an artificial pneumothorax than has been the case for some years past. The treatment if it is to be satisfactorily carried out, makes a large demand upon the time of the medical staff.

The classification used throughout the reports is that of Turban-Gerhardt, which states that:—

Stage I.—Comprises those with disease of slight severity, limited to small areas on either side, which in the case of infection of both apices does not extend below the spine of the scapula or the clavicle, or in the case of affection of the apex of one lung does not extend below the second rib in front.

Stage II.—Comprises those with disease of slight severity more extensive than Stage I., but affecting at most the whole of one lobe, or severe disease extending at most to the half of one lobe.

Stage III.—All cases of greater severity than Group II. and all those with considerable cavities.

Stage IV.—Include those cases where no disease can be found, or where the lesion is definitely proved to be obsolete.

In November a Light Department was opened at Yardley Road Sanatorium for the treatment of various forms of Tuberculosis by means of the Ultra-Violet rays. The department is a separate building consisting of a waiting hall, 2 light treatment rooms, dressing rooms, doctors' and nurses' rooms, and sanitary annex which includes two shower baths. The light treatment rooms each contain two 75 amp. carbon arc lights. In each room 6 to 8 sitting patients, or 3 recumbent patients can be treated at the same time. The patients at present being treated are those who are resident in the Sanatorium, and a certain number of out-patients from the Anti-Tuberculosis Centre. The types of case treated are those suffering from tuberculosis of the bones, joints, glands, larynx and skin.

Artificial Pneumo-thorax as treatment for suitable cases of Pulmonary Tuberculosis has been made use of during the year. I do not consider it advisable to utilize this treatment, except as an emergency treatment for serious hæmoptysis, before first trying the effect of other forms of treatment. Our experience too, suggests that the too slavish adherence to the anatomical distribution of disease in the lung when ascertained by radiographs is to be deprecated as the one and only factor to be considered before coming to a decision. Quite good results have been obtained after the collapse of one lung when the other showed radiographically, evidence of a fair amount of disease, which on physical examination was not particularly active. It seems to me that in every case in which the question of an induction of artificial pneumo-thorax arises, it is essential to decide whether we are only going to use the treatment for those cases in which the prospect of arrest of the disease is really favourable, or, are we also going to employ it for those in whom there is only a doubtful prospect of arrest of the disease with a reasonable prospect of alleviating troublesome symptoms and prolonging the patient's life in comparative comfort. I feel that a more extensive use of artificial pneumo-thorax treatment for what might be regarded as ameliorative purposes is justifiable.

TUBERCULOSIS AND THE MILK SUPPLY.

By W. Brennan De Vine, M.C., F.R.C.V.S., D.V.S.M. (Vict.).

Tuberculosis and Milk Supply.

The precautions to reduce the amount of tubercle infection in the milk sold in the City have been continued on similar lines as in previous years, namely:—

(a) The detection of infected milk.

(b) The eradication of tuberculosis from dairy herds supplying milk to Birmingham.

(a) The Detection of Infected Milk.

In addition to samples taken at Railway Stations, Milk Depots, etc., samples have been taken from lorries or floats, of milk arriving in the city by road, and samples have also been taken at outside farms.

The following samples were taken at Railway Stations, Depots, etc., from milk arriving in the city from outside sources.

	Free.	Infected.	Total.
Number of samples collected	277	26	303

In connection with the 26 infected samples, each of the farms from which the milk came was visited, and all milking cows were examined and further mixed and individual samples of milk taken as follows:—

	Infected.	Free.	Total.
Mixed	9	37	46
Individual	23	89	112
	32	126	158

23 cows affected with tuberculosis were traced to outside farms, and 22 of these were slaughtered, and on 31st December 1 was isolated pending slaughter. It was not possible to trace all the offending cows because in several instances cows had "dried off" or been disposed of for slaughter between the time of taking the Station sample and our subsequent visit to the farm.

In addition, three cows were found in City dairies to be clinically affected with tuberculosis of the Mammary Gland, and by arrangement with the owners these cows were slaughtered.

Compensation.—In numerous cases where we detected cows secreting tubercle infected milk, we experienced difficulties in getting the owners of these cows to dispose of them for slaughter, and with a view to encouraging the immediate disposal of these cows the Public Health Committee passed the following Resolution:—

> 8283. Resolved "That the Veterinary Superintendent be authorised for a period of six months to make payments of half the owner's loss up to a sum of £8 per animal, as compensation for the slaughter of tubercle infected cows, the Veterinary Superintendent to then report further on the matter."

During the year compensation amounting to £40 was paid in respect of nine tuberculous cows.

(b) The Eradication of Tuberculosis from Dairy Herds Supplying Milk to Birmingham.

At the beginning of the year there were 18 herds continuing under the above scheme. During the year we had ten applications for herds to be tested with a view to their inclusion in the scheme. Of these herds tested for the first time in three cases the owners decided not to go on with the test. Of the herds which had been tested for some time, herd No. 15 was discontinued during the year, owing to the high percentage of reacting cows and to the difficulty experienced in maintaining a free herd.

At the end of the year there were 24 herds continuing under the scheme, an increase of six over the previous year.

Grade "A" (Tuberculin Tested Milk).

Herds Nos. 1, 4, 21, 22, 23, 24, 25, 26, 27 and 28 as included in the following list of herds dealt with under the Birmingham Scheme, were specially tested by us in accordance with the terms and conditions prescribed in the Milk (Special Designations) Order, 1923.

Before a licence is granted to a Producer, he has to furnish a Veterinary Certificate showing the results of an examination of the herd carried out not more than three months before the date of the application, together with a certificate of a prescribed tuberculin test of the herd carried out within a similar period. In addition, every applicant has to make satisfactory arrangements for the production, storage, treatment and distribution of the milk.

Of these ten herds which were specially tested, the owners of herds Nos. 26, 27 and 28 have definitely decided not to go on with the scheme for the production of Grade "A" milk, owing to the high percentage of reactors in their herds.

The following is a list of herds dealt with under the Scheme:—

		Approx. No. in. Herd.	Herds free.	Herds being Freed.	Grade A. Milk.	Breeding Herds.	Non-Breeding Herds.	Mixed Herds.	City Dairies.	Outside Dairies.
1	...	74	1	—	1	1	—	—	1	—
2	...	12	1	—	—	—	1	—	1	—
3	...	40	1	—	—	—	—	1	—	1
4	...	45	1	—	1	1	—	—	—	1
5	...	77	1	—	—	—	—	1	—	1
6	...	20	1	—	—	1	—	—	1	—
7	...	40	1	—	—	1	—	—	—	1
8	...	30	1	—	—	—	—	1	—	1
9	...	12	1	—	—	1	—	—	1	—
10	...	25	1	—	—	1	—	—	—	1
11	...	16	1	—	—	1	—	—	—	1
12	...	15	1	—	—	1	—	—	—	1
13	...	5	1	—	—	1	—	—	—	1
14	...	12	1	—	—	—	—	1	1	—
15	...	50	Discontinued.							
16	...	22	1	—	—	1	—	—	—	1
17	...	14	1	—	—	1	—	—	—	1
18	...	50	1	—	—	1	—	—	1	—
				Herds Tested for First Time.						
19	...	20	—	1	1	1	—	—	—	1
20	...	35	—	1	1	1	—	—	—	1
21	...	40	—	1	1	1	—	—	—	1
22	...	14	—	1	1	1	—	—	—	1
23	...	37	—	1	1	1	—	—	—	1
24	...	40	—	1	1	1	—	—	—	1
25	...	33	—	1	1	1	—	—	—	1
26	...	36	Discontinued.							
27	...	38	Discontinued.							
28	...	25	Discontinued.							

Cow Testing.

The testing of the herds which come under the scheme has been carried out half-yearly:—

				Tested.	Passed.	Failed.	Doubtful.
1	Grade "A"	...	...	259	255	4	—
2		...	...	19	11	8	—
3		...	...	115	92	20	3
4	Grade "A"	...	...	79	72	5	2
5		...	...	132	95	37	—
6		...	...	36	32	4	—
7		...	...	71	69	2	—
8		...	...	53	34	19	—
9		...	...	18	18	—	—
10		...	...	45	43	2	—
11		...	...	27	27	—	—
12		...	...	37	35	2	—
13		...	...	10	10	—	—
14		...	...	21	19	2	—
15	Discontinued	...	...	129	90	37	2
16		...	...	40	40	—	—
17		...	...	29	28	1	—
18		...	...	95	92	2	1

HERDS TESTED FOR THE FIRST TIME.

19	... ...	33	20	13	—
20	... ...	52	14	38	—
21	Grade "A"	63	44	19	—
22	,, ...	14	12	2	—
23	,, ...	33	12	21	—
24	,, ...	40	1	39	—
25	,, ...	33	23	10	—
26	,, discontinued	36	13	23	—
27	,, discontinued	38	13	25	—
28	,, discontinued	24	11	13	—
		1581	1225	348	8

Among the animals submitted to the test, those tested for the first time (including Grade "A") numbered 431 cows; of these, 223 cows, or 51.7 per cent. failed to pass the test.

COST INCURRED BY TESTING HERDS.

The testing of the herds has continued to be carried out chiefly by the Corporation Veterinary Staff, and partly by Local Veterinary Surgeons on behalf of the Corporation. The cost of this work during the year was £83 6s. 3d., of which £54 7s. 6d. was for tuberculin and £28 18s. 9d. for veterinary fees and expenses. In 1923 the cost was £91 9s. 8d. and in 1922 £69 4s. 2d.

SUMMARY.

Dairy farms in the City	135
Milking Cows in the City	1,740
Visits to Sheds during 1924	2,003
Cows in City Dairies with affected udders	3
Visits to outside farms during 1924	82
Samples of Milk taken	461
Infected samples	58
Herds Tested (including Grade "A")	28
Cows tested	1,581
Cows which passed the test	1,225
Cows which failed to pass the test	356

PASTEURISATION AND STERILIZATION OF MILK.

Both of these processes, if carried out efficiently will prevent milk infected with living Tubercle Bacilli from conveying the disease to the human subject. About 75 per cent. of the milk sold in the City is passed through one or other of these processes before being distributed, so that at the present time the number of children and others exposed to infection from this source is less than formerly.

A large number of dairymen in the City have within the past two years introduced apparatus to pasteurise or sterilise the milk sold by them.

Sterilised Milk as sold in Birmingham is milk which has first been homogenised, i.e., milk in which the fat globules have been so broken up as to prevent cream from rising. The milk is then put into clean bottles and these are immersed in water which is raised to the boiling point, and kept at this temperature for half an hour.

Pasteurised Milk is milk which has been heated to 145°F. and kept at this temperature for half an hour. The milk is then cooled to 40°F. and filled into sterile bottles.

The difference between these two varieties of milk may be important from a health point of view. Sterilised milk by being kept at a high temperature looses some of its vitamine content—it has a "boiled" taste. The calcium salts in it are altered in composition. No fat will rise—it cannot be made into cream, junket or cheese. It has the advantage that disease germs are killed, and that every person taking milk from a bottle gets his proper proportion of fat.

Pasteurised milk on the other hand has been heated to a lower temperature. It has no "boiled" taste, is free from disease germs, but has not been sterilised completely. It will therefore become sour if kept too long. Cream will rise, and it may be used in the making of junket, butter, cheese, etc., as ordinary raw milk is used.

Both of these varieties of milk have the great advantage of being freed from disease germs, such as those causing scarlet fever, diphtheria, typhoid fever and tuberculosis.

During the year the following samples were bacteriologically examined:—

BIRMINGHAM PASTEURIZERS.

No.	Raw Milk. No. of Samples.	Raw Milk. Average Bacteria.	Pasteurized Milk. No. of Samples	Pasteurized Milk. Average Bacteria.
1	27	112,080	4	109,325
2	38	234,973	19	5,812
3	34	350,997	40	30,140
4	53	134,491	6	8,608
5	14	30,150	24	9,767
6	41	303,241	19	32,024
7	39	490,850	19	37,925
8	33	273,627	15	7,510
9	43	435,159	27	162,376
10	52	340,492	14	182,722
11	35	100,540	18	13,865
12	41	344,416	29	30,849
13	50	96,054	—	—
14	1	107,000	7	31,742
15	51	66,462	9	24,635
16	39	245,019	24	2,569
17	32	275,673	25	71,840
18	40	205,467	24	42,971
19	13	796,038	24	4,413
20	34	160,374	3	86

BOTTLING OF MILK.

It must be obvious that if milk is to be bottled, each bottle before being filled must be efficiently cleaned. The bottles are sent back to the dairy caked inside and out with dried milk, and it is not by any means an easy matter efficiently to wash these bottles, when the washing has to be done on a wholesale scale and in the shortest possible time.

Dr. Bowes, one of the Assistant Medical Officers of Health, has carried out an investigation on the efficiency of the washing of bottles as carried out by various dairy men in Birmingham.

The method of examination was as follows. A number of bottles (eight from each firm), were collected immediately after the process of washing had been completed and at once covered with sterilised rubber caps. In order to ascertain the number of bacterial organisms present in each bottle, 10 cubic centimetres of sterilised water was put into each bottle, shaken round, and allowed to stand for five minutes or more. A fraction of this water was examined, and thus the number or organisms present in each bottle and capable of demonstration under the conditions of the experiment could be calculated.

As a preliminary experiment, some bottles were examined where the process of washing was obviously inefficient, and consisted of a soak in soda solution, followed by brushing with a machine brush and a rinse by means of water jets. Six bottles examined after this treatment showed from 440 to 26,000 organisms per bottle.

A summary of the results from individual firms may be given as follows:—

Firm No. 1 used a mechanical washer in which the bottles were subjected to the action of hot soda solution, followed by water near boiling point. The number of organisms per bottle varied from 20 to 100, numbers so small that the process might be said to be efficient.

Firm No. 2 washed the bottles by hand in hot soda solution, followed by a rinse under the tap. The bottles showed the presence of organisms varying in number from 80 to 144,000 per bottle. That is to say, the bottles were so contaminated with organisms from the milk previously put into them that the fresh milk for which they were intended would be damaged.

Firm No. 3 soaked the bottles first in soda solution, brushed them with a hard rotated brush, and finally rinsed them in a tank of cold water. The results varied from 30 to 1,910 organisms per bottle.

Firm No. 4 used a mechanical bottle washer in which the bottles were subjected to the action of hot soda solution, hot water, and finally steam. Here the results varied from nil to 110 germs per bottle.

Firm No. 5 employed a similar bottle washer to that in use in the last case, and the number of organisms varied from nil to 200.

Firm No. 6 used a similar type of washer, the number of organisms in this case varying from nil to 100.

Firm No. 7 washed the bottles by hand in a soda solution, and afterwards rinsed with cold water. The bottles contained from nil to 1,440 organisms per bottle.

Firm No. 8 washed the bottles in soda solution, brushed, and rinsed them, and finally subjected them to the action of steam in a large tank for an hour. The results showed that the bottles contained no organisms.

Firm No. 9 employed a soak in soda solution, machine worked brushes, water jets, and finally a rinse in a water tank. The number of organisms varied from 67 to 3,010 per bottle.

The above results indicate that the method of steaming for a prolonged period as used by Firm No. 8 alone gives results which may be said to be absolutely efficient in ensuring freedom from bacterial organisms, while the more elaborate type of mechanical washers as used by Firms Nos. 4, 5, and 6 give results which are satisfactory for all practical purposes. Methods of washing by hand with or without the use of some simple machinery as carried out by Firms Nos. 2, 3, 7, and 9 do not yield satisfactory results.

INFANT MORTALITY.

The Infant Mortality rate was not so low during 1924 as in the preceding year, but with the exception of 1923 the rate was as good as in any previous year. The reason for the higher mortality was a considerable prevalence in the early months of the year of Influenza with death resulting from Pneumonia and Bronchitis.

For the last six years the Infant Mortality rate in Birmingham has been about one-half of what it used to be twenty years ago. This will be seen from the figures in the accompanying table.

INFANT MORTALITY RATE.

	Birmingham.	England and Wales.
1901-05	157	138
1906-10	131	117
1911-15	126	110
1916	104	91
1917	101	96
1918	99	97
1919	84	89
1920	83	80
1921	83	83
1922	86	77
1923	72	69
1924	83	75

Distribution of Infant Mortality.

The following table shows the Infant Mortality rate in each of the municipal wards.

		Infant Mortality Rate, 1924.	Infant Mortality Rate, 1914-1923.	Increase or Decrease in 1924.
Central Wards:	St. Paul's	87	129	—42
	St. Mary's	123	142	—19
	Duddeston and Nechells	103	124	—21
	St. Bartholomew's	119	128	— 9
Average infant mortality rate, 101.	St. Martin's and Deritend	110	117	— 7
	Market Hall	81	118	—37
	Ladywood	86	111	—25
Middle Ring:	Lozells	68	87	—19
	Aston	87	102	—15
	Washwood Heath	62	87	—25
	Saltley	95	82	+13
	Small Heath	85	74	+11
Average infant mortality rate, 77.	Sparkbrook	64	82	—18
	Balsall Heath	83	76	+ 7
	Edgbaston	67	73	— 6
	Rotton Park	85	96	—11
	All Saints'	80	99	—19
Outer Ring:	Soho	63	76	—13
	Sandwell	67	68	— 1
	Handsworth	49	70	—21
	Erdington North	70	64	+ 6
	Erdington South	52	64	—12
	Yardley	62	69	— 7
Average infant mortality rate, 60.	Acock's Green	50	70	—20
	Sparkhill	58	61	— 3
	Moseley and King's Heath	69	60	+ 9
	Selly Oak	74	68	+ 6
	King's Norton	59	65	— 6
	Northfield	54	64	—10
	Harborne	57	61	— 4
	City	83	95	—12

St. Mary's Ward has for many years had the unenviable distinction of having the highest infant mortality rate and the highest general death-rate. Next to St. Mary's comes St. Bartholomew's with a rate of 119 per 1,000 births, St. Martin's and Deritend with a rate of 110, and Duddeston and Nechells with a rate of 103. In nearly all the wards, however, the mortality amongst infants was higher in 1924 than in 1923.

In addition the table shows the increase or decrease in the average infant mortality rate in 1924 as compared with the years 1914—1923.

Infant Mortality in Other Towns.

The following rates have been copied from the Registrar General's figures. It will be noticed that the calculation of the Registrar General shows the infant mortality rate to be lower than that obtained by our own calculation.

Glasgow	119
Birmingham	80
Liverpool	102
Manchester	97
Sheffield	88
Leeds	102
Bristol	69
Edinburgh	89
England and Wales	75

From the above figures it will be seen that the Birmingham rate during 1924 is exceeded by all the other seven towns except Bristol. If all the mothers of Birmingham were intelligent and careful in the feeding and rearing of their babies the infant mortality rate should be about 40 per 1,000 born. It is quite practicable to aim at a reduction of the infant mortality rate over the whole city to 40 per 1,000 births.

Infant Deaths by Age and Cause.

Infantile Mortality during the Year, 1924.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Cause of Death.	Weeks. 0.	1.	2.	3.	Total under One Month.	Months. 1.	3.	6.	9.	Total Deaths under One Year.
Measles	—	—	—	—	—	1	3	4	10	18
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	1	1	15	14	22	26	78
Diphtheria and Croup ...	—	—	—	—	—	—	1	—	3	4
Influenza	—	1	—	1	2	2	1	1	2	8
Tuberculous Meningitis ...	—	—	—	—	—	—	2	3	6	11
Abdominal Tuberculosis ...	—	—	—	—	—	1	3	2	—	6
Other Tuberculous Diseases	—	—	—	—	—	2	1	1	4	8
Rickets	—	—	—	—	—	—	—	—	2	2
Syphilis	—	—	1	1	2	1	1	3	—	7
Encephalitis Lethargica	—	—	—	—	—	—	—	—	2	2
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	2	2
Meningitis (not Tuberculous)	—	—	—	—	—	2	4	5	3	14
Convulsions	7	2	4	3	16	11	5	7	12	51
Bronchitis	—	1	10	5	16	44	21	19	17	117
Pneumonia (all forms) ...	3	3	3	2	11	36	55	80	67	249
Gastritis	—	—	1	1	2	3	3	2	—	10
Diarrhoea, Enteritis, etc. ...	1	1	3	4	9	34	64	25	18	150
Congenital Malformations ...	32	7	6	5	50	15	12	4	1	82
Premature Birth	278	44	25	20	367	30	6	2	—	405
Atrophy, Debility and Marasmus	37	14	11	4	66	38	18	11	7	140
Atelectasis	19	1	1	1	22	—	—	—	—	22
Injury at Birth	20	3	—	1	24	—	—	—	—	24
Neglect (under 3 months) ...	7	—	—	—	7	—	—	—	—	7
Suffocation (overlying) ...	5	2	—	2	9	2	6	—	2	19
Other Causes	11	8	11	3	33	10	20	12	7	82
All Causes	420	87	76	54	637	247	240	203	191	1,518

Of the 1,518 deaths 649 were due to different conditions of feebleness at birth. There were 366 due to Bronchitis and Pneumonia, that is to say, 1,015 infants died under one year of age from either some lung complication or some form of feebleness at birth, i.e., two-thirds of the infants who died. There were 160 deaths of infants from gastritis or diarrhœa and 78 from Whooping Cough.

Infant Mortality at Different Age Periods.

The babies who died during 1924 were 1,518 in number, and the following table gives the ages at death :—

Under 7 days ...	420 or 28 per cent.	All under one month 42 per cent.
7 days to 28 days	217 or 14 ,,	
1—3 months ...	247 or 16 ,,	
3—6 ,, ...	240 or 16 ,,	
6—9 ,, ...	203 or 13 ,,	
9-12 ,, ...	191 or 13 ,,	

These figures indicate that no less than 42 per cent. of all the deaths take place amongst children under one month of age. Stated in another way the rates of death per 1,000 births were as follows :—

All under 4 weeks	34.6
4 weeks to 3 months	13.4
3—6 months	13.0
6—9 ,, ...	11.0
9-12 ,, ...	10.4

STILL BIRTHS.

There were 544 still births reported during 1924, which is equal to one every 34 live births. This number is considerably smaller than in preceding years, and doubtless this reduction is due to the more careful attention given to ante-natal conditions. In 1919 one still birth took place to every 26 live births, while in 1924 there was one still birth to every 34 live births. It may be said that this represents a reduction in the number of still births of about 150 every year.

Of the 544 still births 41 occurred in houses which were not suitable for visiting. In the other cases a visit was paid and advice was given to the mother as to any treatment which seemed desirable. After an interval a further visit was paid to ascertain if the mother's health was satisfactory.

As a result of these visits certain information came to light which is of interest.

As regards the age of the mothers, five were under 20, 176 between 20 and 30, 184 between 30 and 40, and 75 over 40 years. In the other cases the age was not recorded.

In only nine out of 470 cases was the birth illegitimate.

In 269 the period of pregnancy was nine months, in 76 it was eight months, and in 136 it was seven months or less.

Out of 423 cases in which the duration of labour was noted there were 104 less than six hours, 154 between six and twelve hours, and 165 over 12 hours.

Among 434 cases in which information was obtained there were 143 in which the child was macerated, showing that death had taken place some time before.

The following table seems to indicate that many of the women who had still-born babies have been liable to the same experience in previous confinements.

PREGNANCIES OF MOTHERS WHO HAD STILLBIRTHS IN 1924.

	No. of Mothers.	Mothers who had the following number of Stillbirths or Miscarriages.								
		1.	2.	3.	4.	5.	6.	7.	8.	9.
1 Pregnancy	150 ...	150	—	—	—	—	—	—	—	—
2 Pregnancies	74 ...	54	20	—	—	—	—	—	—	—
3 ,, ...	69 ...	51	11	7	—	—	—	—	—	—
4 ,, ...	41 ...	25	13	1	2	—	—	—	—	—
5 ,, ...	33 ...	19	11	3	—	—	—	—	—	—
6 ,, ...	37 ...	23	7	4	1	1	1	—	—	—
7 ,, ...	18 ...	12	3	1	—	2	—	—	—	—
8 ,, ...	22 ...	12	4	3	1	1	1	—	—	—
9 ,, ...	16 ...	7	3	2	—	1	—	1	1	1
10 ,, ...	13 ...	4	5	2	2	—	—	—	—	—
11 ,, ...	4 ...	2	1	—	—	—	1	—	—	—
12 ,, ...	3 ...	1	1	—	1	—	—	—	—	—
13 ,, ...	5 ...	3	2	—	—	—	—	—	—	—
14 ,, ...	2 ...	1	—	—	—	—	1	—	—	—
16 ,, ...	4 ...	—	1	1	2	—	—	—	—	—
18 ,, ...	1 ...	—	—	—	1	—	—	—	—	—
Total*	492 ...	364	82	24	10	5	4	1	1	1

* In 11 instances no information was obtained.

In the 492 cases in which information could be obtained the women who had a still-born baby during 1924 had had during their lives 1,887 conceptions. Of these conceptions no less than 713 resulted in a miscarriage or a still-birth. This gives the extremely high proportion of 37.8 per cent. This is probably at least three times as high as the proportion in the entire population.

CHILD MORTALITY.

Among the children aged over one and under five years there were 795 deaths in 1924, the causes of death being as follows :—

Measles	55
Whooping Cough	104
Diphtheria	44
Scarlet Fever	15
Tuberculosis	55
Bronchitis and Pneumonia	295
Diarrhœa and Enteritis	28
Burns	32
All other causes	167

Here again, it will be noticed that a very large number of these children died from bronchitis and pneumonia and whooping cough. The deaths from bronchitis and pneumonia were largely increased by the epidemic of influenza which affected children during the early months of the year.

MATERNITY AND CHILD WELFARE CENTRES.

There were 22 Centres in operation in 1924. The work done at these Centres is set out in the table on the opposite page.

It will be evident, however, that the statistical results given in the table indicate in only a very inadequate manner the scope and nature of the work.

Briefly stated, the work of a Maternity and Child Welfare Centre is educational. The desire is that all healthy babies should be brought to the Centre, so that such advice may be given as will enable the mother to keep the baby in health.

At all the Centres sessions are held for infants and children up to 5 years of age, at which a record is taken of the child's weight and state of health. At all the ordinary consultations a doctor is in attendance and all suitable cases are medically examined. Health talks are given to the mothers while they are waiting at the Centre, and classes are held for instruction in cookery and sewing.

Special clinics are held for mothers (both before and after confinement) at which advice is given by the doctor in attendance. Definite efforts are made to get expectant mothers to come to these clinics in the hope that any conditions which might militate against a normal confinement may be attended to.

The staff engaged in the work of the Centres includes 6 whole-time and 14 part-time doctors and 68 nurses.

Home-visits are paid to the babies born in the areas attached to the Centres as early as possible and re-visits are paid from time to time as required.

Maternity and Child Welfare Centres—Year 1924.

	Aston St.	Berkeley Rd., Hay Mills.	Bloomsbury St.	Bristol Road South, Northfield.*	Carnegie Institute.	Harborne Lane, Selly Oak.	Hope St.	Irving St.	Lansdowne St., Winson Green.	Lichfield Rd.	St. Vincent St.	Short Heath Rd., Erdington.	Smith St.	Stratford Rd.	Trinity Rd.	Warwick Rd., Greet.	Washwood Heath Rd.	Wright St.	Floodgate St.	Stirchley and Cotteridge.	Handsworth.	Harborne.	Total.
Infants and Children :—																							
Births (and stillbirths) reported	829	392	1243	107	1028	371	1121	586	969	1135	910	494	950	1044	689	459	978	948	661	246	570	251	15981
Primary visits ...	803	371	1102	101	930	326	1149	612	902	1204	979	422	1202	1033	651	476	909	1037	655	299	562	244	15969
Re-visits (infants and children)	10181	5393	16528	1304	14634	3228	15436	7253	13793	17662	13643	4802	17148	17430	5960	5749	9131	13222	5630	4969	9360	4283	216739
Total visits & re-visits	10984	5764	17630	1405	15564	3554	16585	7865	14695	18866	14622	5224	18350	18463	6611	6225	10040	14259	6285	5268	9922	4527	232708
Mothers :—																							
Primary visits ...	163	65	114	26	149	122	224	30	249	173	104	123	89	195	119	201	146	192	259	46	172	58	3019
Re-visits	198	60	123	16	143	114	238	35	312	129	146	58	52	155	120	236	103	297	1153	86	309	123	4206
Total visits & re-visits	361	125	237	42	292	236	462	65	561	302	250	181	141	350	239	437	249	489	1412	132	481	181	7225
Children's Consultations :																							
Number held	122	98	146	49	199	51	200	100	195	194	200	96	198	200	99	99	200	100	98	48	97	98	2887
Fresh children attend'g	612	273	793	93	1161	221	731	466	678	1140	653	396	906	772	609	473	764	616	427	148	428	219	12579
Total attendances ...	6105	3906	6609	1050	10628	1945	7501	4044	7031	11067	7640	4036	9608	7616	4376	4197	8206	4931	5492	2224	5741	3045	126998
Number seen by Doctor	2769	2792	3412	900	4915	1374	3990	2125	4293	4918	4770	1888	4265	4185	2462	2497	4544	2799	1159	1090	1435	1767	64349
Mothers' Consultations :																							
Number held	49	51	48	13	98	22	49	—	51	49	49	49	100	48	51	49	49	51	48	12	23	22	981
Fresh mothers attend'g																							
Ante-Natal ...	215	82	307	25	503	84	232	—	166	460	182	88	459	199	112	137	223	239	204	28	56	42	4043
Post-Natal ...	56	22	32	7	79	9	33	—	88	141	64	31	69	42	79	34	85	67	19	12	11	13	993
Total attendances ...	603	226	641	87	1060	252	484	—	496	865	531	393	1023	480	385	532	696	531	723	107	99	181	10395
Attendance at :—																							
Sewing classes ...	923	781	749	—	629	7	728	397	469	695	495	483	412	229	445	1064	394	548	879	118	544	208	11197
Cookery classes ...	176	—	—	193	572	99	—	—	127	243	—	—	92	205	—	115	—	—	—	—	144	—	1966
Health Talks	2213	1007	1117	1162	5777	655	2251	378	2777	1540	1343	1878	2162	1841	566	1326	1265	1192	739	1454	514	65	33222

*Including Longbridge and Bartley Green.

Attendances at Dental Clinics: (Extractions) Mothers, 988; Children, 646

FIRST ANNUAL REPORT ON THE CARNEGIE INFANT WELFARE INSTITUTE.

By Ethel Cassie, M.D., D.P.H.

This report deals with the year ending December 31st, 1924.

The Carnegie Infant Welfare Institute replaces the Centre formerly held at Farm Street, but in addition to the work of a local Centre it fulfils certain other functions in connection with the general infant welfare work of the whole City.

The number of mothers bringing their children to the new Centre has increased. The average number of Consultations at Farm Street Centre was 147 per annum, with a total attendance of 5,839, i.e., an average of 39 babies per consultation. At the Carnegie Institute there have been 199 infant Consultations, with a total attendance of 10,628, giving an average of 53 per Consultation.

Home Visiting from the Centre.

There are four Visitors and two Pupils attached to the Centre for Home Visiting and other work. The pupils are Infant Visitors who have recently joined the staff and are attached to the Centre for instructional purposes.

The child population in the district served by the Centre, i.e., children under five years of age, numbers 3,985, and of these 730 are under twelve months old.

The number of home visits paid from the Centre was 3,007 to children under one year of age, an average of four per child, and 10,301 to children between one and five years of age, an average of three visits per child.

BABIES WAITING TO BE WEIGHED.

At these visits the mothers are encouraged to bring their children to the Centre for weighing and medical advice. They are also recommended to come for mothercraft instruction. The Visitors devote a large amount of their time to work at the Centre during Consultations, and in other ways assist in the general educational work going on at the Centre.

Consultations for Mothers and Children.

Four afternoon consultations are held for children each week. Mothers who are unable to come without their toddlers have a room provided at the Centre and an attendant to look after the toddler while the mother is having her infant examined.

Experience demonstrates that it is possible to deal with about 70 children during an afternoon when sufficient voluntary help is available. With any larger number it would only be possible if the medical and other staff were increased.

Consultations for mothers are held weekly.

TODDLERS WAITING FOR THEIR MOTHERS.

Infant Consultations.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Attendances of children under one year	1498	1558	1866	1842	6764
Attendances of children over one year	979	825	949	1111	3864
Total attendances	2477	2383	2815	2953	10628
Number of consultations	52	46	49	52	199

Mothers' Consultations.

Attendances of ante-natal cases	230	194	207	232	863
Attendances of post-natal cases	63	50	46	38	197
Total attendances	293	244	253	270	1060
Number of consultations	26	22	24	26	98

The total number of mothers' consultations was 98. The average attendance at each of these was 10, a sufficient number for one doctor to do efficiently, as these cases occupy a considerable time.

Attendance of Ante-Natal Cases.

1st Attendance at:—	No. of cases.	Total attendances.	Average attendance per case.
2nd month of pregnancy	9	36	4
3rd ,, ,, ...	17	36	2
4th ,, ,, ...	25	50	2
5th ,, ,, ...	49	107	2
6th ,, ,, ...	69	134	2
7th ,, ,, ...	109	167	1½
8th ,, ,, ...	49	51	1
	327	581	

Conditions Found at Ante-Natal Clinics.

Small measurements:—	
Small external conjugate	43
All Measurements—small	16
Contracted pelvis. (All measurements below normal and ext. cong. below 7½-ins.)	34
Albuminuria	9
Ante-partum hæmorrhage:—	
Threatened abortion	6
Other causes	10
Diseases of the heart	22
Diseases of the lungs:—	
Tuberculosis	2
Other diseases	6
Anæmia	58
Pyelitis	5
Malnutrition	7
Nephritis and Phlebitis	1
Severe varicose veins	39
Constipation	67
Bad teeth	57
Fits (epileptic)	4
Goitre with tachycardia	3
Malposition of uterus	5
Bartholini's cyst	3
Diarrhœa and vomiting	7
Diseases of the eye	4
Wassermann reaction	3
Tapeworms	1

Attendance at Classes.

	Number held.	Attendance.
Sewing Classes	42	629
Cookery Classes	35	572
Mothercraft Classes	30	306

Health Talks.

Two health talks are given at each infant consultation to groups of mothers whenever this is possible. There were 5,777 mothers who attended these health talks during the year. Similar talks were given to mothers attending ante-natal clinics.

A LECTURE TO MOTHERS ON HEALTH MATTERS.

Lectures.

Special lectures are given to mothers and fathers on the first Monday in each month. Tea and music are provided before the lecture. The attendance has been fairly good, from 30 to 75 having been present, but the number of men coming is small. Special lectures were also given during Baby Week.

Meals for Expectant and Nursing Mothers.

There are seven Dinner Centres in Birmingham for expectant and nursing mothers, and one of these is at the Carnegie Institute. Dinner is served at 12 o'clock to women who have been recommended by the medical officers. A substantial meal, consisting of meat, two vegetables, and a pudding is provided, for which a charge of 2d. is made. The number of women who attended was 115, and 3,872 meals were provided. These meals are particularly helpful to the nursing mothers.

Dental Clinics.

Formerly the dental work under the Child Welfare Scheme was done at the Tuberculosis Centre in Broad Street. With the opening of the Carnegie Institute the work was transferred, and it is now done in much more suitable surroundings. Women who had previously attended at Broad Street have expressed their great appreciation of the change. Expectant and nursing mothers and children up to five years of age are dealt with. The bulk of the work consists of extractions. The Dental Surgeons find that only too frequently the mouths in the case of the women patients are in such a septic state that conservative treatment is out of the question, while the children are only brought with abscessed teeth.

Two afternoon and one morning clinic are held regularly. A fourth clinic was required for 14 weeks owing to a long waiting list.

Number of dental clinics held	145
Total attendances:—	
Mothers	1,883
Children	683
General anæsthetics used	1,088

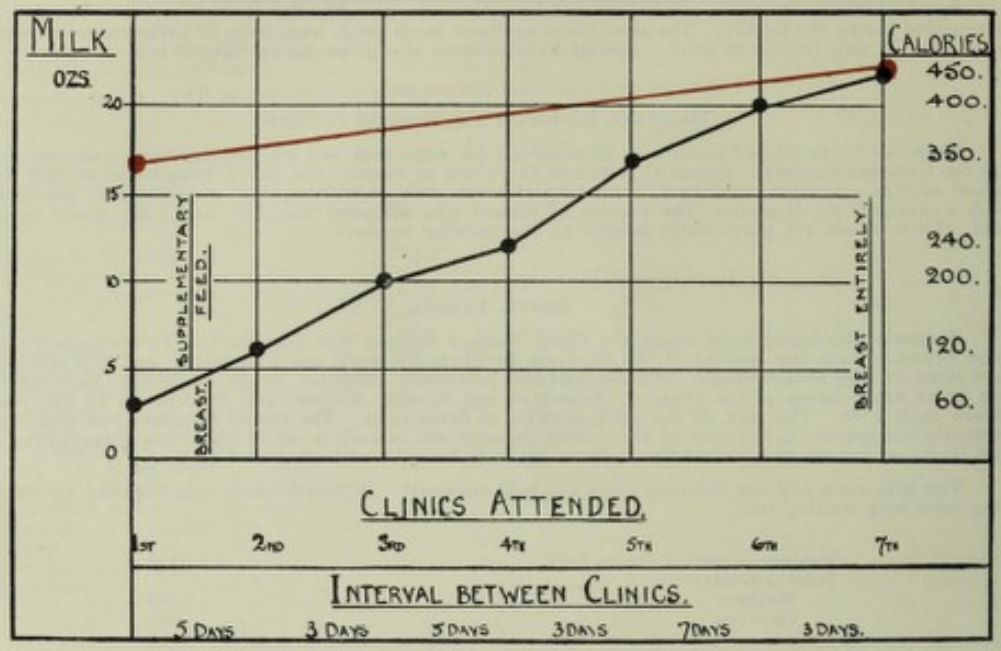
TEST FEEDING CLINIC.

Clinics for the Regulation of Breast Feeding.

These Clinics are used for the establishment and continuance of breast feeding, and have proved of the greatest value. At an ordinary infant consultation it is not possible to have more than one test feed done, and it is then done with difficulty and under adverse conditions, so that the result is not very reliable. The method used is to weigh the child before the feed, and again after the feed, the difference giving the amount of breast milk taken; in addition the amount of milk which can be expressed after the feed from the breast is ascertained. The amount of breast milk normally secreted varies markedly at different times in the

Test Feeding Clinic.

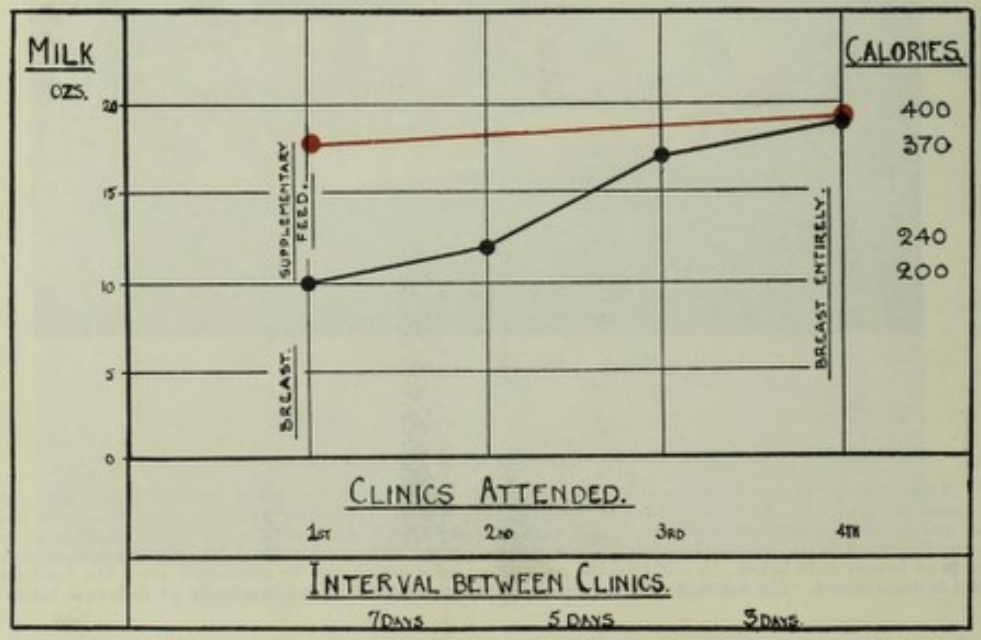
Baby "R." Age at first clinic - 1 month, Weight. - 7lbs.



● Amount of BREAST MILK REQUIRED by BABY.
● " " " " TAKEN " "

This Baby is now 9 months, and has since been entirely Breast Fed.

Baby "S." Age at first clinic - 1 month, Weight 7½ lbs.



● Amount of BREAST MILK REQUIRED by BABY.
● " " " " TAKEN " "

This Baby is now 5 months, and has since been entirely Breast Fed.

day, and to obtain an absolutely accurate picture all the feeds given during the 24 hours should be taken, but this is not possible in non-resident cases, and the aim is to have three test feeds done, and take an average. It is then possible to deal with some certainty with the various problems which arise, e.g., to regulate supplementary feeding, to stimulate secretion where necessary, to decide on the necessity for weaning, etc. The mothers themselves are frequently quite mistaken as to the quantity of milk the child is receiving, a mother with a deficient supply being quite sure she has plenty, and another with ample being equally certain she has not enough. An extreme case was one in which the mother was breast feeding and giving Virol. The child was greatly wasted, weighing 6 lbs. The test feed showed that the breast gave extremely small quantities of milk, a teaspoonful only being obtained on two occasions. The child was healthy but had suffered from slow starvation, and with supplementary feeds he put on ¾ lb. in a week.

The test feeding clinics are open to mothers from all over the City, but the distances are sometimes prohibitive. In spite of this, however, mothers have attended from Harborne and other outlying areas. Much depends on the advice given them by their medical attendants.

Number of Test Feeding Clinics (March to December)	60
Number of mothers attending	186
Number of attendances	283

A large number of mothers only required to attend once. It should be understood that for the first six months the clinic made slow progress, as arrangements were not perfected, and it was largely a case of preparing the ground.

The Massage Clinic.

As many children are in great need of simple massage, and remedial exercises, the Matron undertook to devote a morning to teaching the mothers how to do these for their own children; she was assisted by a pupil nurse, who herself thus learnt the methods employed. The children were sent by the medical officers with instructions as to what was required. The results obtained were encouraging.

It is hoped during the coming year to extend and elaborate this work in conjunction with the Ultra-Violet Light Treatment, which is being made available.

Massage Clinics:—

Number held	44
Attendances	368.

The Observation Ward.

It would be difficult to exaggerate the importance and value of a ward of this type in connection with a large Child Welfare Centre. There can be no doubt that if any appreciable advance is to be made in the methods of treatment, and the prevention of ill-health in young infants, careful observation and elaborate methods of investigation are necessary. Even a small number of beds furnishes much valuable material, and what can be done is only limited by the time available for the work. The small laboratory has proved most valuable, but a trained laboratory assistant would give the help which would enable the scope of the investigations to be very largely extended.

The following note of what is being attempted on the investigation side will be of interest:—

A. Investigation of stomach contents with a view to:—

(a) Ascertaining age at which free Hydrochloric Acid appears in gastric juice.

(b) Ascertaining the deficit of free Hydrochloric Acid in stomach contents of infants in normal and pathological conditions on different kinds of foods.

(c) Ascertaining the total acidity of stomach contents with the object of finding the optimum acidity for digestion.

(d) Ascertaining the range of hydrogen ion concentration on different foods in normal cases, and variations from this range, in pathological conditions.

Number of stomach contents investigated, 115.

B. Investigation of faeces with a view to:—

(a) Ascertaining the relationship between the character and reaction of the stools, and variations in the predominant bacterial flora, particularly in cases of chronic colitis, fat indigestion, and putrefactive protein indigestion.

(b) Studying the alteration in the character of the bacterial flora in varying clinical conditions.

(c) Finding an association between certain kinds of bowel infection and severe secondary anæmias.

Number of stools investigated, 223.

C. Investigation of urines, with a view to:—

(a) Ascertaining the frequency of some degree of pyelitis or cystitis in chronic bowel infections.

(b) Ascertaining the degree and frequency of acidosis in such conditions and in rickets.

D. Blood examination with a view to:—

Ascertaining the frequency and type of anæmias met with in conditions of intestinal toxæmia and other clinical conditions.

The ward contains nine beds and there is in addition a single room for a mother. Children are admitted up to the age of five years.

Number of children admitted	91
Number of children in ward Jan. 1st, 1924	6
Number of children in ward Jan. 1st, 1925	8
Number of children died	4
Number of children discharged	85
Average length of stay—30 days.	
Number of children under 12 months	64
Number of children over 12 months	33

Conditions From Which the Children Admitted Were Suffering.

Primary Conditions.		Secondary Conditions.
General infection with enteritis	12	1 anæmia, 1 pyelitis, 2 wasting.
Enteritis with diarrhœa	3	1 anæmia, 1 wasting.
Enteritis with fat indigestion	7	4 wasting, 1 eczema, 1 bronchitis.
Enteritis with offensive stools	16	7 anæmia and rickets (H.B. less than 60), 1 pyelitis, 1 Urticaria.
Acute gastro enteritis	2	1 pyelitis, 1 Urticaria.
Chronic vomiting	2	1 wasting.
Habit vomiting	2	1 wasting.
Pyloric Stenosis	2	1 wasting.
Dietetic mismanagement	10	1 chronic vomiting, 6 fat indigestion, 8 wasting.
Rickets	8	1 wasting, 1 protein indigestion, 1 fat indigestion, 1 anæmia.
Pyelitis	2	1 rickets, 2 wasting.
Catarrhal jaundice	1	
Brain injury (birth)	1	
Asthma and acidosis	1	
Toxæmia with lymphocytosis, etc.	1	Urticaria.
Cœliac disease	1	Wasting.
Cleft palate	1	Wasting.
Hypothyroidism	1	
Skin condition (affecting general health)	3	
General mismanagement and neurosis	6	
Restoration of breast feeding	9	
	91	

Deaths:—

Acute gastro enteritis. Syncope	2
General infection with enteritis. Pneumonia	1
Pyo-nephrosis. Syncope	1
	4

There can be no doubt that one of the urgent needs of the City is a residential convalescent home for young children. Many cases have to be sent home from the ward before their health completely justifies this course, owing to the pressure on the few beds available. Children are constantly seen at the infant consultations whose health remains much below normal for prolonged periods, owing to the difficulty of recovering after acute illness in unsuitable home conditions.

The nervous child too can only be dealt with satisfactorily away from home; once the child is put on the right lines, all, except the most foolish mothers, can usually deal with the case.

Many demands have been made on the Observation Ward beds for the premature infant, but a mixed ward of this type is not a suitable place for the premature infant who is peculiarly liable to infections of all kinds. The nursing in the ward has been done on a modified barrier system, and there has been no spread of infection.

Mothers Admitted for the Restoration of Breast Feeding.

Nine mothers and babies were admitted during the year. In five cases the child left the ward entirely breast fed, in two the mother continued breast feeding but required to supplement it, and in two the mother refused to remain in the ward long enough to obtain any successful result, and did not continue breast feeding after leaving the institution. In no case was there any difficulty in digesting the mother's milk, but in six cases the children were in bad health, and in four the mothers were unwell. The commonest cause of difficulty with breast feeding is overfeeding in the earlier weeks, except in cases of congenital debility, but these cases are easily corrected. A more serious cause is a mild infective enteritis, with loss of appetite in the baby, and it is only by treating the child, and at the same time encouraging the secretion of milk in the mother, that good results can be obtained. All the successful cases belonged to this group, and taking the child off the breast, as had been recommended in two instances, would obviously have hindered and not helped as far as the child's health was concerned. It is much more difficult to completely restore breast feeding where the mother is in poor health, in fact, in some cases it is impossible to get a sufficient quantity. Fortunately, however, this difficulty usually occurs in older babies, who can readily digest supplementary feeds which can be regulated from time to time by test feeding.

The Training Course for the Newly Appointed Infant Visitors.

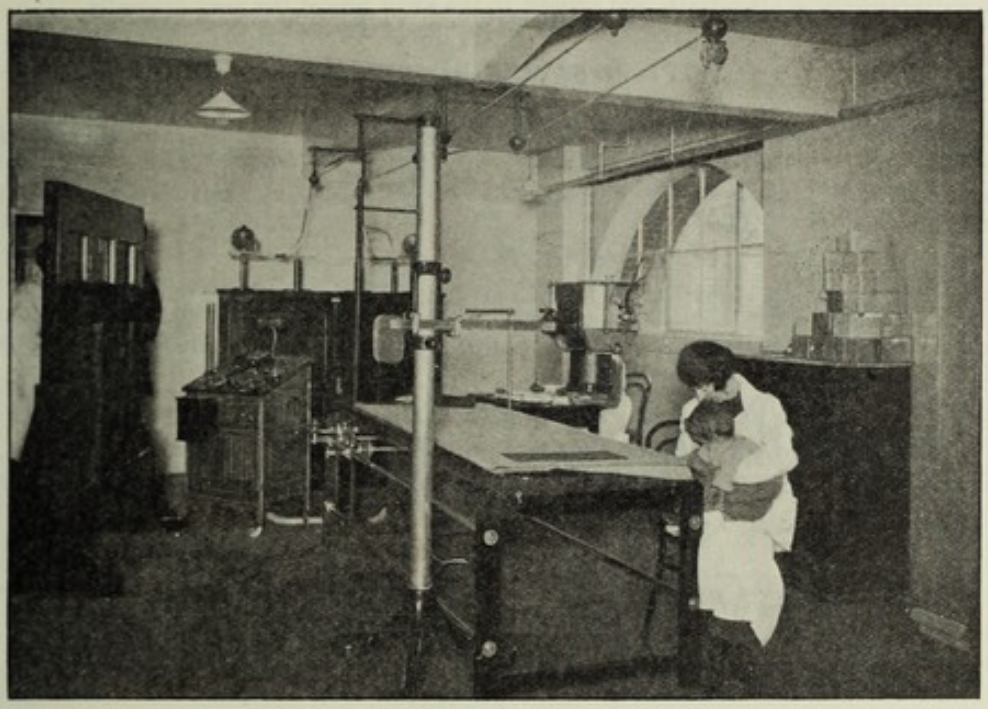
All infant visitors on appointment are now required to work for three months at the Carnegie Institute. One month is spent in the ward, and two months at the Centre. Teaching is given in record keeping, the method of giving health talks, assisting at ante-natal and infant consultations, and of doing home visiting, test feeds, and simple remedial exercises. Lectures are also given by the doctors on infant feeding and other kindred subjects. Ward Clinics are held regularly so that the whole staff may be kept in touch with the work in the Ward.

Ten visitors have already completed their course at the Institute, and in every case have expressed their gratitude for this preliminary training. The Senior Visitors at the Centres have been glad also of this preliminary training course, as the difficulty of dealing with new comers is greatly diminished.

General Conclusions.

The Institute has already more than justified itself from the point of view of the district it serves, and of the City as a whole. It has been a year of beginnings, and it is hoped to make steady progress in the future. The X-Ray Department began work at the end of November, but details are not given as the work was largely tentative. The lamp for the Light Treatment was obtained in December, but it was not until January, 1925, that its use commenced.

The bulk of the work accomplished has been very good, and credit should be given to the Matron, the infant visitors, and the nursing staff for what they have accomplished, especially in view of the fact that the staff is a small one for the needs of the Institute. What has been done would not have been done without the loyal and enthusiastic co-operation of the permanent staff, and the help of the Voluntary Committee and of the Mothers' Committee.



X RAY ROOM.
Examination for Rickets.

The Building.

On the whole the building has proved well adapted to its purpose. It gives a satisfying effect of space and dignity, and this has been satisfactorily sustained by the simple but well designed scheme of furnishing.

The large hall is particularly successful in its effect, which has been heightened by a fine painting of a mother and child presented by Alderman W. A. Cadbury.

In an educational centre the æsthetic effect is of great importance, and there can be no doubt that it is fully appreciated by those who use the building.

With the development of the work certain defects and deficiencies have naturally been revealed. The double entrance is, for example, a defect, and many of the minor fittings have proved unsatisfactory.

Another class room would be most convenient, the present one is now in use every afternoon, and no extension of the classes is therefore possible. The laboratory is much too small, and the balcony is in an inconvenient position, while a larger number of staff bedrooms are required. With a comparatively small expenditure, however, these deficiencies could be made good.

THE STAFF.

Medical Officers (Part Time):

Ethel Cassie, M.D., D.P.H.
Elsie M. Humpherson, M.B., Ch.B.
Ursula Cox, L.R.C.P., D.P.H.
Mabel Prosser, M.B., Ch.B. (Dental anæsthetist).
James Brailsford, M.B., Ch.B. (Radiologist).

Dental Surgeons (Part Time):

R. V. Payton, L.D.S., and V. R. Allen, L.D.S.

Matron Superintendent: Miss Exell.

Assistant Superintendent: Miss Lloyd.

Infant visitors, 3.

Pupil visitors, 3.

Part Time, Playroom Assistant, 1.

Ward Staff: 1 sister, 1 staff nurse, 1 assistant nurse, and 1 probationer.

Domestic Staff: 3 maids, 1 cook, and 1 porter.

Voluntary Helpers:

There is a Voluntary Committee consisting of 16 members, all of whom are active workers at the Centre. Two or more members assist at each consultation and in other ways. Help is also provided for necessitous cases. There is, too, a Mothers' Committee which assists in many directions, such as making tea, acting as perambulator attendants, and helping in the social side of the work generally.

WITTON BABIES HOSPITAL.

There are 25 beds at this Hospital intended for the treatment of cases of Marasmus, Rickets, etc.

There were 108 cases admitted during the year, and in all but two cases they improved considerably during their stay.

HEATHFIELD ROAD MATERNITY HOME.

During the calendar year there were 264 cases admitted to this Institution, 240 being delivered by the Midwives and 24 by Doctors.

No case of Puerperal Fever arose, and no case of Ophthalmia Neonatorum.

No death of a patient occurred, but in four cases the baby was still-born.

Medical assistance was called in in 57 cases on behalf of the mother, and 10 on behalf of the infant.

HOME HELPS.

The number of calls for help in the home during the lying-in period again showed an increase, the cases numbering 270 last year against 203 in 1923, and 137 in 1922.

PYPE HAYES CONVALESCENT HOME.

This Home was used during the year by 411 mothers, who needed convalescent treatment.

MATERNITY FEEDING CENTRES.

During the year there were 39,975 dinners served at the seven Maternity Feeding Centres where the attendances have been very regular, but the number of names on the roll at each dinner centre has been fewer than last year.

The two-course dinner provided has been of good quality and as many changes as possible were introduced into the menu.

During the summer months an effort was made to make a further variety by having cold meats and fresh green salads once or twice a week, but it was evident that hot meat dishes were more popular.

Owing to increased prices of food the caterers found it necessary to raise their charges during the fourth quarter of the year, but the price charged to the mothers remained the same (2d. per dinner).

No new dinner-centres were opened during the year.

The transport arrangements have proved extremely satisfactory—the cooked food has always been delivered in sufficient time to allow of re-heating before the meals were served at the Centres.

ATTENDANCES.

St. Vincent Street	6,186	
Carnegie Institute	3,872	
Newtown Row	6,052	
Smith Street	6,964	39,975
Hope Street	4,738	
River Street	6,145	
Bloomsbury Street	6,018	

	£	s.	d.
Cost of food	1,130	4	1
Transport	148	4	0
	1,278	8	1
Receipts from Centres	336	3	4
Net cost of meals	£942	4	9
Cost per meal		5.6d.	

MIDWIVES ACTS.

During 1924, 231 midwives notified their intention to practise midwifery in the City, being 170 certificated and 61 *bona-fide* midwives. Of these 15 resided outside the City Boundary.

Eleven midwives ceased to practise, of whom 8 left to go to other districts; 2 gave up on account of age, and one died.

The midwives attended 11,459 births—equal to 62 per cent of the total.

The midwives reported to the Public Health Department that they had to call in medical aid in order to comply with the Rules of the Central Midwives Board in 1,968 cases—that is in 17 per cent. of the cases. In the previous year help was required in 19 per cent. of the cases.

The reasons for calling for medical help were as follows:—

In the case of the mother.		In the case of the child.	
Delayed labour	507	Ophthalmia	198
Laceration of perineum	342	Prematurity	117
Hæmorrhage	115	Convulsions	13
Adherent placenta	78	Jaundice	17
Placenta prævia	5	Deformity	38
Abnormal presentation	77	Skin eruption	78
Abortion or miscarriage	34	Other causes	101
Rise of temperature	103		
Eclampsia	1		
Other causes	144		

It will be evident that the Birmingham midwives make use freely of the services of medical men. The fact that a medical man who is called on the request of a midwife is paid by the Public Health Department in cases where the fee could not be paid by the patient has been of substantial advantage to the patients for now there is little difficulty in obtaining aid in emergency.

Claims for payment by the Public Health Department were made in 519 cases—that is in 26 per cent. of the cases. In the other 74 per cent. the patient paid the fee.

The total amount paid for these 519 cases was £821 10s. 3d. Against this amount £545 14s. 5d. was recovered during 1924—that is about 66 per cent. The cost of recovery was £202 3s. 3d., so that the net cost to the City for their assistance during confinement and the lying-in period was £477 19s. 1d., or approximately 18/6 per claim.

Midwife Supervision. The two Midwife Inspectors paid 406 visits to midwives at their homes, and had 259 interviews with midwives at the Council House. They paid 950 visits in regard to cases for medical assistance; 660 visits to cases of reported ophthalmia neonatorum; 170 visits to stillbirths and 124 visits to cases of Puerperal Fever.

One woman whose name had been removed from the Midwives Roll was prosecuted for again acting as a midwife. This woman was fined £5 0s. 0d.

There was during 1924 no serious breach of the Rules by any midwife. A few minor infringements of the rules were noted, and the midwives were cautioned in each case.

The scheme for encouraging midwives to undertake at least part of the ante-natal supervision of their cases continues to work satisfactorily, and during the year a certain number of mothers were greatly benefited and in some cases probably life was saved.

Puerperal Mortality. The cases and deaths from Puerperal Fever are set out in the following tabular statement :—

Year.	Cases.	Deaths.	Deaths per 1,000 births.
1912	78	27	1.22
1913	112	44	1.85
1914	149	33	1.42
1915	161	35	1.65
1916	170	31	1.50
1917	97	26	1.47
1918	92	29	1.72
1919	105	23	1.19
1920	148	51	2.03
1921	105	26	1.17
1922	137	25	1.26
1923	186	34	1.78
1924	120	37	2.01

It will be seen that the deaths per 1,000 births were as numerous as ever, and that the total number of cases notified fluctuates from year to year without any very apparent reason and in a perfectly irregular manner. This is very unsatisfactory when it is remembered that efforts have been made to reduce the incidence and mortality for many years.

The Ministry of Health have taken up the question of prevention as have also the various branches of the medical profession concerned, and it is hoped that some means will be found which will lower this great waste of human life.

The steps which have already been taken are as follows :—

(1) The Midwives Acts were passed to secure that midwives shall be trained and supervised. As a result there is now a large body of properly trained women available.

(2) Doctors, health visitors, midwife inspectors, midwives, and others give pregnant women ante-natal advice.

(3) Hospital provision has been arranged so that any woman suffering from Puerperal Fever in Birmingham may be removed by ambulance at any hour to the Women's Hospital, where she will receive expert treatment free of charge.

(4) A good deal is being done in the training of medical students with a view to preventing puerperal sepsis.

There is, however, no doubt that a considerable number of confinements are being conducted in homes that are quite unsuitable—further, that on the part of some doctors and some midwives there is not sufficient attention paid to the prevention of sepsis.

Untrained handy-women still practise under the supervision of medical men as maternity nurses. It is desirable that a much larger number of women than at present should be confined in Nursing Homes where strict asepsis is possible, and where there is no need for hurry as is too frequently the case when the accoucheur has others to attend to.

It is most important to ascertain what number of cases of Puerperal Fever would occur if good conditions surrounded the patient. There is no doubt that fewer cases will result. At the present time there seems to be too much importance attached to auto-infection, i.e., infection arising from the woman herself as distinguished from infection introduced from without.

The next table indicates the death-rate per 1,000 births from peurperal sepsis and other causes associated with childbirth.

Year.	Puerperal Fever.	Other Causes.	Total Mortality. Birmingham.	England & Wales.
1912	1.22	2.03	3.25	3.78
1913	1.85	2.01	3.86	3.71
1914	1.42	1.77	3.19	3.95
1915	1.65	1.79	3.44	3.94
1916	1.50	1.94	3.44	3.87
1917	1.47	1.13	2.60	3.66
1918	1.72	1.31	3.03	3.55
1919	1.19	1.45	2.64	4.12
1920	2.03	1.56	3.59	4.12
1921	1.17	1.67	2.84	3.71
1922	1.26	1.76	3.02	3.58
1923	1.78	1.73	3.51	3.60
1924	2.01	1.90	3.91	3.70

PEMPHIGUS NEONATORUM.

During 1924 this infection continued to be prevalent. 45 cases were reported by midwives, and 11 deaths occurred, as compared with 126 cases and ten deaths in 1923. Nearly one-half of the cases appear to be spread by midwives. On the other hand no origin was found in the remaining cases.

The disease is a mild and unimportant one if treated under proper conditions. In the homes of the poor, and especially in the case of dirty homes, this simple disease assumes grave importance because of the secondary septic infection which kills.

OPHTHALMIA NEONATORUM.

The cases of this disease reported during the past ten years are set out in the following table :—

Year.	No. of cases reported.	No. of babies blind in : One eye.	Both eyes	No. of babies with eyes otherwise impaired.
1915	324	1	0	4
1916	334	3	0	7
1917	237	3	0	6
1918	228	3	0	6
1919	282	4	0	5
1920	444	?	?	6
1921	427	1	0	—
1922	484	1	0	1
1923	433	—	—	10
1924	413	1	1	1

During 1924 the cases with damaged eyes were as follows :—

No.	By whom confined.	Prophylactic used.	Where treated.	Result.
1.	Doctor and handy woman.	None.	Eye Hospital.	Totally blind in both eyes. Child died.
2.	Midwife.	Sol. Nit. Silver.	Eye Hospital.	Totally blind right eye.
3.	Dudley Road Hospital.	?	Dudley Road Hospital and Eye Hospital.	Both eyes slightly defective.

Of the 413 cases reported during 1924 only 35 were treated at home, while 378 were treated at a hospital—23 being in-patients.

VENEREAL DISEASES.

There was a slight increase in the new cases applying for treatment at the Clinics during 1924. This may be a more apparent increase than real for there is little doubt but that a certain number of infected persons treat themselves or have so little inconvenience from mild infections that they do not apply for any form of treatment.

The new cases of Syphilis and Gonorrhœa coming up for treatment since public clinics were established have been as follows :—

Year.	New cases of Syphilis. Male.	Female.	Babies.	Total.	New cases of Gonorrhœa. Male.	Female.	Babies.	Total.
1918 ...	502	355	—	857	588	100	—	688
1919 ...	782	459	—	1,241	1,399	187	—	1,586
1920 ...	704	441	—	1,145	1,190	185	—	1,375
1921 ...	423	343	—	766	825	131	—	956
1922 ...	220	237	—	457	628	83	—	711
1923 ...	296	239	—	535	666	89	—	755
1924 ...	291	301	18	610	691	73	5	769

Note.—About 90 per cent. of these cases are Birmingham residents.

The Clinics at which these persons were treated were as follows :—

	New cases of Syphilis	Gonorrhœa.	Total new cases.	Total attendances.
General Hospital	484	602	1,086	34,051
Skin and Urinary Hospital ...	48	129	177	9,313
Women's Hospital ...	40	33	73	1,923
Aston Street Clinic	38	5	43	546

Particulars of the cases treated during 1924 are given below :—

	Syphilis. Males.	Females.	Babies.	Total	Gonorrhœa. Males.	Females.	Babies.	Total
Number of patients under treatment or observation, January 1st, 1924 ...	129	379	8	516	393	190	5	588
Total number of new cases	291	301	18	610	691	73	5	769
Total number of attendances	4,550	6,780	195	11,525	32,763	1,394	151	34,308
Aggregate number of in-patient days ...	208	505	—	713	171	425	—	596
Ceased attendance before completion of treatment	136	187	13	336	53	40	5	98
Ceased attendance after completion of treatment, but before final tests ...	85	255	—	340	308	136	—	444
Transferred to other Centres after treatment	14	6	—	20	49	3	1	53
Discharged after completion of treatment and observation	30	46	—	76	167	19	2	188
Number of doses of Salvarsan substitutes	5,033							
Number of patients under treatment or observation on January 1st, 1925 ...	155	186	13	354	507	65	2	574

During the year under review the Public Health Committee decided to take steps to close the Clinic at the Skin and Urinary Hospital because it was redundant—also that at the Women's Hospital because the work could be transferred with benefit to the *ad hoc* Clinic at 10a, Aston Street.

On July 12th, 1916, the Public Health (Venereal Diseases) Regulations were issued giving the Public Health Committee power to deal with Venereal Diseases by two methods.

(*a*) The establishment of treatment centres where reliable methods of cure might be provided free of charge and with secrecy. By curing an infected person he or she will not spread the disease and therefore the cure is undertaken for preventive purposes.

(*b*) The education of the public in the dangers of venereal diseases and the reasons why by aiming at a high standard of sex conduct health will be improved and the nation benefited.

As regards (*a*) the work accomplished has been set out above. On the whole the type of infections in Birmingham is reputed to have been mild.

In regard to (*b*) the work has been mainly done by the Birmingham Branch of the National Council for Combating Venereal Diseases which is subsidised to the extent of £250 per annum by the Public Health Committee. This has proved to be an excellent plan for arousing general interest in an unsavoury subject. Public lectures have been given, also lectures to clubs and special organisations of young people. Particularly useful have been the lectures to parents of senior scholars, the subject in these cases being what a parent should tell his child and how he should approach the subject of sex in dealing with young persons.

The following is an extract from the annual report of this organisation :—

A feature of our recent work has been the giving of dinner-hour lectures in factory canteens. These have been so much appreciated that the lecturers have been asked to choose their own time to give further lectures. This has resulted in some cases in a series of lectures being arranged, all bearing on the same subject.

Other firms having no canteen facilities to offer have arranged special evening meetings in the factories, sparing no trouble to make the meetings a success, printing notices and leaflets at their own expense, erecting platforms and inserting notices in the Works' Gazette or Magazine.

One firm, unable to do either, closed down for 35 minutes to allow the Secretary to address a thousand of their women and girl employees.

In several factories it is possible for lectures to be given to both sexes in their separate canteens simultaneously. This is generally agreed to be ideal. A pleasing feature of this work is the readiness of managers personally to supervise, to introduce lecturers and, in some cases, to take the chair. In the evening meetings as much time as is necessary is allowed to permit of free discussion and personal interviews afterwards.

Co-Operative Guilds.—Both Men's and Women's Guilds are taking a keen interest in our work and assisting in propaganda, as a result of lectures given to them.

Lectures have also been given by request to members of Adult Schools, The Mothers' Union, Girls' Clubs, Sisterhood Meetings, C. of E. Women's Fellowships, and C.E.M.S., Women's Unionist and Labour Parties and Young People's Guilds.

Interviews.—Three hundred and fifty-five women and girls have applied for information during the year, one-third of these came as a result of public notices, others through recommendations or as a result of lectures.

The experience gained in every branch of our work goes to prove the existence of an appalling amount of ignorance concerning Venereal Diseases. There is, too, a great deal of apathy concerning questions vital to a high moral standard of life. The root cause of moral lapse on the part of many young people is traced directly to the lack of sex teaching in the home.

The cost of venereal disease treatment and prevention during 1924 was as follows :—

Cost of Venereal Diseases Scheme for Year ending 31st December, 1924.

	£	s.	d.
General Hospital Clinic	4,033	6	7
Skin and Urinary Hospital Clinic	1,145	6	7
Women's Hospital Clinic	446	18	0
Cleveland House, Wolverhampton, Clinic	192	4	1
Aston Street Clinic	185	15	5
Dr. E. W. Assinder	402	12	9
Cost of Salvarsan	1,059	12	9
Cost of Gonococcal Vaccine	95	0	0
Bacteriological Laboratory	208	4	6
Grant, N.C.C.V.D.	250	0	0
Stationery and other expenses	94	8	6
	£8,113	9	2

DETAILED EXPENDITURE OF CLINICS, YEAR 1924-25.

	General Hospital. £ s. d.	Skin & Urinary Hospital. £ s. d.	Women's Hospital. £ s. d.	Aston Street. £ s. d.
Medical officers	1,363 6 1	237 3 1	231 18 0	105 0 0
Pathologists	250 0 0	106 8 0		—
Salaries of orderlies, nurses, etc.	684 4 8	256 0 0		33 7 4
Clerical & administrative salaries	268 12 0	75 0 0		—
Provision for officers	194 17 5	—		—
Rent, rates, taxes, light, etc.	216 3 4	100 0 0		26 7 0
Drugs	551 19 10	356 17 0		—
Dressings	56 6 5	—		17 13 3
Apparatus	126 8 5	—		—
In-patient days	127 2 9	10 10 0	215 0 0	—
Stationery, printing and postage	40 17 4	3 8 6		2 0 0
Laundry (officers')	43 4 8	—		—
Building alterations	43 4 0	—		—
Furniture	23 9 1	—		1 7 10
Employers' liability insurance	11 3 9	—		—
Sundries	32 6 10	—		—
Totals	£4,033 6 7	£1,145 6 7	£446 18 0	£185 15 5

CANCER.

There were 1,251 deaths from Cancer in 1924. This is 159 more than in any previous year. For comparative purposes the following table relating to Cancer statistics is inserted:—

	Total Cancer Deaths in Birmingham.	Cancer Death Rate. Birmingham.	England & Wales.
1912	791	.93	1.02
1913	893	1.02	1.06
1914	773	.88	1.07
1915	885	1.00	1.12
1916	897	1.00	1.17
1917	912	1.02	1.21
1918	883	1.02	1.22
1919	935	1.01	1.14
1920	1,014	1.12	1.16
1921	1,020	1.12	1.21
1922	1,090	1.18	1.23
1923	1,092	1.17	1.27
1924	1,251	1.30	—

On the next page will be found a table showing for each age group the number of males and females who died of cancer and the site of the cancer.

Only 16 cases died under 25 years of age, of whom 11 were males and 5 females. At ages over 75 years the relative proportion of the sexes attacked was reversed—57 males and 109 females died. Of the total deaths 588 of males and 663 of females.

DEATH-RATE FROM CANCER PER 100,000.

Years.	Death-Rate.	Proportion of population over 45 years of age per 1,000 population.
1880-82	47	160
1890-92	63	166
1900-02	73	171
1910-12	90	191
1920-22	114	232
1923	117	240
1924	130	244

Largely the cancer increase is due to the fact that there now exists in every 1,000 of the population a much larger number of persons at ages most likely to be attacked by cancer.

Approximately there are in Birmingham 444,760 persons under 25 years of age and among these there were 16 deaths last year, i.e., 4 per 100,000. At ages of 45 years and upwards there are 216,950 persons and among these there occurred 1,126 deaths, i.e., 519 per 100,000. Any population containing large numbers of people at the cancer age will naturally have a higher incidence of the disease. Because all our English populations grow older in the mass than formerly one must expect an increase in the cancer mortality.

DEATHS FROM CANCER IN 1924.

Ages.	Lip, Tongue, Palate, Jaw.			Pharynx, Œsophagus, Stomach, Liver.			Peritoneum, Intestine, Rectum.			Female Organs of Reproduction.			Breast.			Skin.			Other Organs.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	1	1	2
5—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3	3	—	3
10—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	1	1	1	1	2
15—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	1	1	2
20—	—	—	—	1	—	1	1	—	1	—	1	1	—	—	—	—	—	—	3	1	4	5	2	7
25—	2	—	2	6	—	6	3	—	3	—	3	3	—	—	—	—	—	—	6	—	6	17	3	20
35—	2	1	3	13	8	21	3	8	11	—	18	18	—	16	16	1	—	1	9	10	19	28	61	89
45—	11	1	12	32	23	55	21	22	43	—	39	39	—	26	26	—	1	1	46	14	60	110	126	236
55—	27	4	31	75	42	117	44	33	77	—	39	39	—	36	36	2	3	5	52	17	69	200	174	374
65—	14	1	15	65	57	122	49	51	100	—	25	25	—	31	31	3	—	3	34	20	54	165	185	350
75—	3	2	5	19	26	45	11	32	43	—	9	9	—	17	17	3	—	3	15	7	22	51	93	144
85—	2	1	3	2	4	6	—	5	5	—	1	1	—	2	2	—	—	—	2	3	5	6	16	22
All Ages	61	10	71	213	160	373	133	151	284	—	135	135	—	128	128	9	4	13	172	75	247	588	663	1251

Cases of cancer of the breast are the most obvious and most definite types of cancer that can be investigated. During 1923 and 1924 there were 229 deaths from this variety of cancer and amongst these there were 17 cases in which no information could be obtained because the relatives of the deceased had left the City or for some other reason. This left 212 cases in regard to which information was obtained from relatives of the deceased.

The object of the enquiry was to ascertain whether patients who had cancer of the breast had neglected to call in a doctor early enough and for this reason enquiry was made as to the average duration of time which elapsed between the patient first noticing a lump and the consultation with a doctor. It was found that the average duration of the cancer was 44.5 months, and that the interval between first noticing the cancer and consulting a doctor averaged 10.2 months.

In 99 cases in which the information was obtained the interval was between 1 month and 2 years, in 46 it was less than 1 month, and in 19 it was over 2 years.

Of the 212 cases, 116 were operated on and 96 were not operated on, that is to say the patients applied to the doctor so late as to be told that the case was too late for operation.

Of the cases that were operated on the length of life after first noticing the trouble amounted to 46.5 months while in those that were not operated on the after life amounted to 42.2 months.

There is the most abundant evidence that an early removal of the cancerous growth before it involves other structures of the body gives by far the best chance of recovery and in a considerable proportion of cases the results are quite satisfactory. As an illustration, in a recent death certificate the fact was noted of an operation for cancer 20 years ago, the patient dying now of heart disease.

In view of the strongly expressed opinion amongst surgeons on the necessity of early operations a leaflet was distributed to every house in the City setting out the points mentioned above and as a result of this a good many women have applied for information about doubtful lumps.

CEREBRO-SPINAL FEVER.

The cases and deaths in the last few years were as follows:—

Year.	Cases Notified.	Died.	Fatality per cent.
1917	29	21	72
1918	16	10	62
1919	14	9	64
1920	25	18	72
1921	9	7	78
1922	18	16	89
1923	4	2	50
1924	11	8	73

The following are some of the facts about the cases occurring during 1924.

No.	Date notified.	Sex.	Age.	Treated at	Diagnosis verified bacteriologically.	Result.
1.	Jan. 9th	F.	1½	Hospital	Yes	Died Jan. 8th.
2.	Jan. 24th	M.	1	Hospital	Yes	Died Jan. 24th.
3.	—	F.	2	Home	No	Died Mar. 6th. Not notified as a case.
4.	Mar. 24th	M.	9 mths.	Home	No.	Died Mar. 23rd.
5.	April 10th	M.	1¼	Home	No.	Died April 13th.
6.	April 25th	M.	1½	Home	No.	Died April 30th.
7.	May 2nd	F.	66	Home	No.	Died May 2nd.
8.	June 14th	F.	4	Hospital	Yes.	Paralysis right arm. General muscular weakness. Can only distinguish day from night.
9.	Sept. 12th	M.	3	Hospital	Yes.	Died Sept. 9th.
10.	Oct. 14th	F.	13	Hospital	Yes.	Recovered.
11.	Oct. 25th	M.	3	Hospital	Yes.	Recovered.

ACUTE ANTERIOR POLIOMYELITIS (INFANTILE PARALYSIS).

During 1924 there was a further increase in the number of cases notified.

Year.		Cases notified	Died	Complete recovery (6 months)	One or more limbs paralysed (after end of year).
1917	...	11	2	6	3
1918	...	4	—	2	2
1919	...	14	1	6	7
1920	...	1	—	—	—
1921	...	11	4	1	6
1922	...	6	—	1	5
1923	...	33	3	1	29
1924	...	39	5*	5	25

* One from intercurrent diphtheria.

Of the 39 cases 31 were children under five years of age. The disease was most prevalent during the third quarter of the year.

In 2 cases there was paralysis of all four extremities.

In 15 cases there was paralysis of two extremities.

In 18 cases there was paralysis of one extremity.

In one case the paralysis was confined to the neck muscles.

In three cases in which the extremities were involved the paralysis extended to the respiratory muscles, and in one case to the spinal muscles.

In one family only was there evidence of more than one child having been attacked. This family consisted of the father, mother and four children. On Feb. 21st, a son, aged 8, was taken ill. A non-paralytic case (abortive type). On July 23rd, a son, aged 5, was taken ill. Paralysis of all four extremities occurred involving the legs only on July 31st. On July 27th, a son, aged 11, was taken ill. A non-paralytic case (abortive type). The youngest child remained well.

The following notes on the condition of the surviving cases in May 1925, are appended.

Five children were found to have completely recovered and four had no definite motor or sensory paralysis but some wasting or weakness of certain groups of muscles.

No.	Notified.	Sex.	Age.	Date of onset.	Condition of patient in May, 1925.
1	Jan. 7	F.	9 mths.	Dec. 22	Death from anterior poliomyelitis on Jan. 2nd.
2	,, 7	F.	3 mths.	,, 24	Paralysis of right arm and shoulder muscles. Slight movement of fingers.
3	,, 8	F.	3	,, 25	Paralysis of right ankle.
4	,, 24	F.	1¾	Jan. 7	Recovery.
5	Feb. 21	M.	2	Feb. 11	Paralysis of both arms. Recovery delayed by Measles.
6	,, 21	M.	11 mths.	,, 7	Right leg paralysed from hip.
7	June 13	M.	2	June 6	Left calf muscles wasted. Runs about without splints.
8	,, 28	F.	2½	,, 3	Paralysis of left leg below knee joint. Thigh muscles weak.
9	July 2	M.	1¾	,, 23	Paralysis of left ankle.
10	,, 4	M.	1¾	,, 16	Wasting of right calf and thigh muscles. Drop foot.
11	,, 9	F.	3	,, 23	Paralysis of left leg below the knee. Can walk with splints.
12	,, 9	M.	4	,, 30	Wasting of muscles from left shoulder to elbow.
13	,, 29	M.	2	May 30	Wasting of right calf muscles. Slight drop foot.
14	,, 31	M.	8	July 21	No paralytic symptoms. Recovery.
15	,, 31	M.	3	,, 23	Muscles of left knee joint and large toe weak. Slight weakness of right foot.
16	,, 31	M.	11	,, 27	No paralytic symptoms. Recovery.
17	Aug. 9	M.	3	,, 28	Paralysis of both legs from the thigh. Patient can walk with splints fitted.
18	,, 11	M.	3	,, 11	Slight wasting of left calf muscles. Weakness at knee joint. Can run about.

No.	Notified.	Sex.	Age.	Date of onset.	Condition of patient in May, 1925.
19	Aug. 15	F.	3	Aug. 9	Can walk but weakness in left leg and back muscles. No splints.
20	,, 21	M.	6	July 21	Arm in splint. Leg in irons. Cannot lift shoulder or raise knee. Movement in fingers and toes.
21	,, 22	F.	2	Aug. 7	Death from anterior polimyelitis on Aug. 14th.
22	,, 28	F.	2	,, 21	Paralysis left leg from knee down.
23	,, 28	F.	3	,, 19	Paralysis of left leg below knee. Movement in toes.
24	Sept. 1	F.	1¾	,, 14	Recovery complete—original paralysis of both legs and back muscles.
25	,, 8	M.	8	,, 21	Slight paralysis left side of face. Left leg easily fatigued.
26	,, 11	F.	1	Sept. 5	Recovery complete.
27	,, 17	M.	6	,, 5	Paralysis of right shoulder and right forearm. Splint.
28	,, 18	F.	15	Aug. 15	Patient at work. Slight weakness of left leg.
29	,, 19	F.	8 mths.	Sept. 6	Death in April 1925, from Diphtheria. At time of death total paralysis of left arm.
30	Oct. 1	M.	2	,, 20	Walks with limp. Slight drop foot (left). Trips occasionally.
31	,, 3	M.	1¼	Aug. 7	Right leg paralysis—to undergo surgical treatment.
32	,, 22	M.	8	Oct. 15	Right leg in splints, wasting of thigh and calf muscles. Able to walk unaided.
33	,, 28	M.	1½	,, 15	General wasting of left arm—in splints. Slight weakness of left leg. Movement good.
34	,, 31	F.	7	,, 29	Slight wasting of neck muscles. No support required.
35	Nov. 3	M.	3	Sept. 30	Death from anterior poliomyelitis on Oct. 29th.
36	,, 3	M.	1	Oct. 27	Death from anterior poliomyelitis on Nov. 3rd.
37	,, 6	F.	2	July 6	Paralysis of right wrist; shoulder elbow and fingers strong.
38	,, 13	M.	2	Nov. 8	Both legs weak. Right drop foot. Cannot rise from the floor unaided.
39	,, 13	M.	1¾	,, 8	Paralysis of left leg from the thigh.

POLIO ENCEPHALITIS.

Six cases were notified during the year. One proved fatal, and in two cases there was complete recovery.

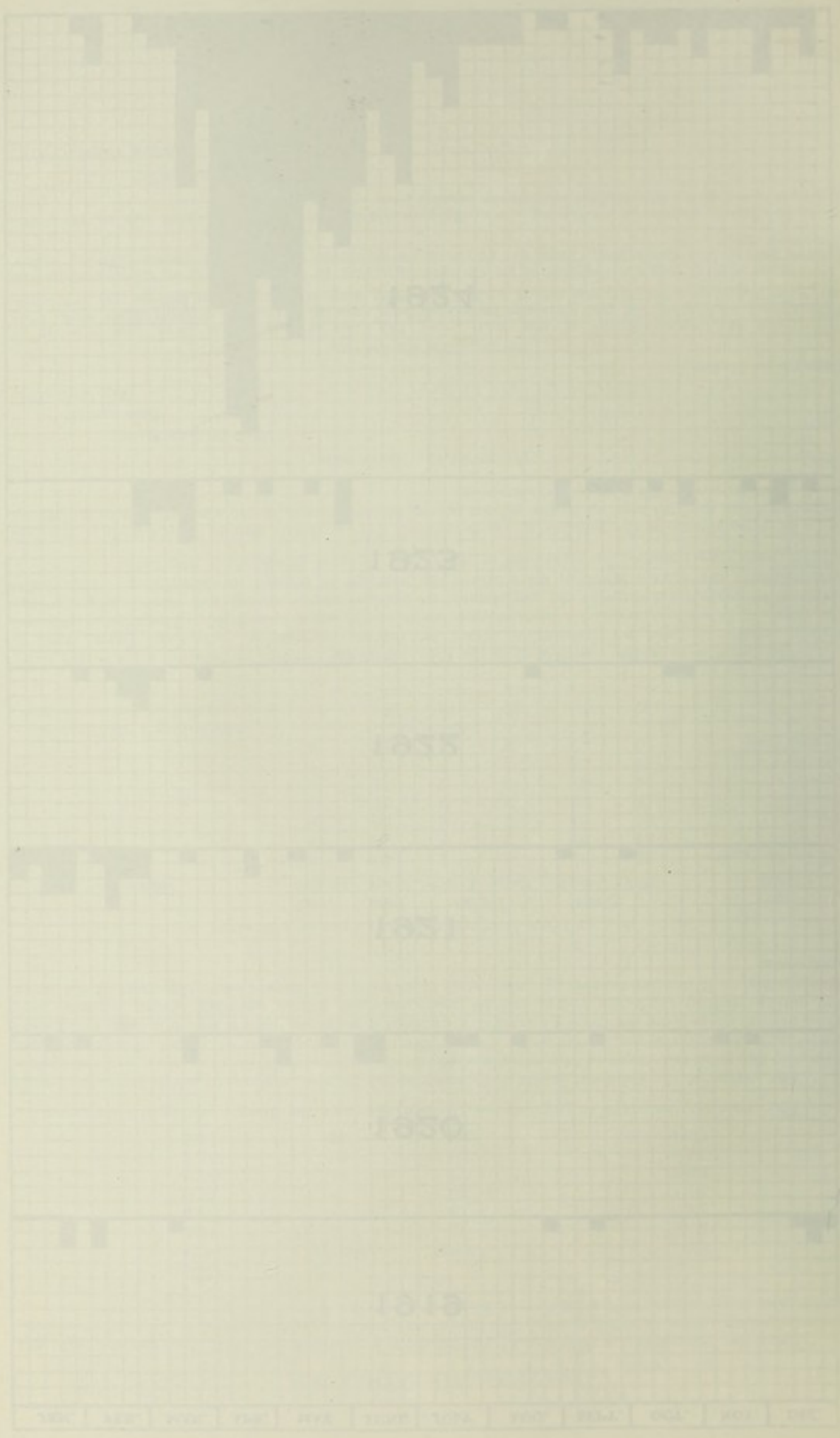
The circumstances attending the occurrence of two of these cases in the same family is worthy of note in considering the possibility of the communication of infection by personal contact. The family consisted of the father, mother and six children. Two only (the patients who were twin boys aged 3 years) were under 10 years.

N.P. was taken suddenly ill on July 10th with high temperature, very severe headache and delirium. Sore throat, rigidity of the neck and swallowing affected. He had convulsions on July 12th, followed by unconsciousness at times, and paralysis of right leg and arm. There is now complete recovery.

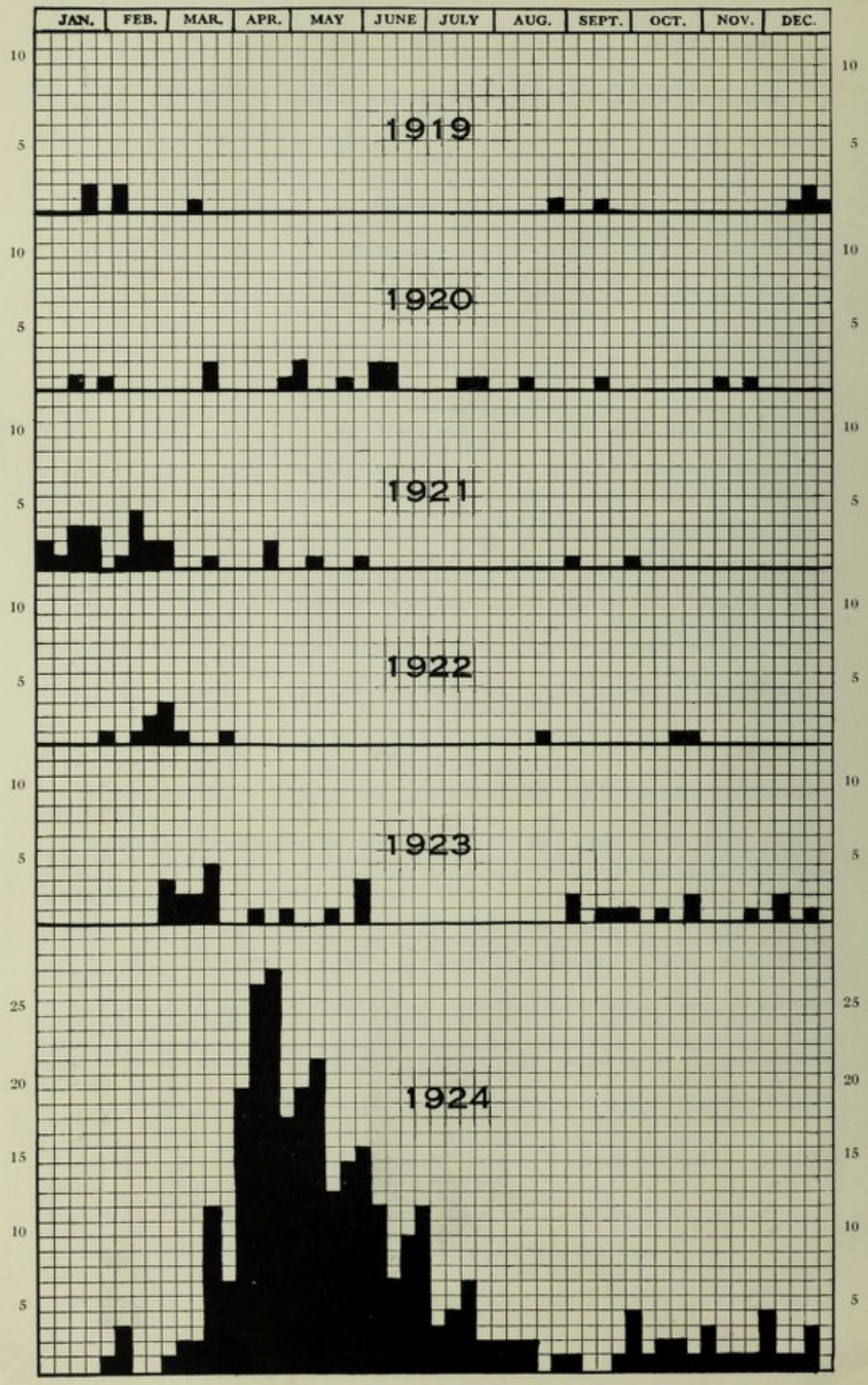
D.P. (the twin) occupied the same bedroom as his brother, but slept in a cot. He was taken definitely ill on July 18th (he had vomiting before this date) with severe headache and delirium. Rigidity of the neck, pain in legs and had very severe convulsions on July 24th, followed by unconsciousness and paralysis of left arm and leg. In May, 1925, the left leg was still paralysed from the thigh.

Both patients were admitted into the Children's Hospital on July 24th, where the diagnosis was made.

No.	Notified.	Sex.	Age.	Condition of patient in May, 1925.
1	Feb. 28	M.	1½	Occasional squint. Recovery from facial paralysis.
2	July 29	M.	3	No paralysis. Recovery.
3	,, 29	M.	3	Paralysis of left leg from thigh.
4	Sept. 3	F.	2½	Paralysis of left side of face—improving.
5	,, 3	M.	1¾	Complete recovery.
6	Oct. 20	M.	2 mths.	Death from polio encephalitis on Oct. 12th.



CASES OF ENCEPHALITIS LETHARGICA.



ENCEPHALITIS LETHARGICA.

Since the compulsory notification of Encephalitis Lethargica in 1919 this disease did not assume epidemic form until 1924, when 282 cases were notified, and accepted as such after investigation and observation, with a fatality of 15.6 per cent.

Year.	Cases.	Deaths.	Fatality per cent.
1919	11	5	45.5
1920	18	7	38.9
1921	25	8	32.0
1922	12	4	33.3
1923	29	12	41.4
1924	282	44	15.6

The chart on the opposite page shows the prevalence of the disease during the six years.

The extent of the epidemic is not fully represented by the number of notifications received; owing to the insidious onset of the initial symptoms the nature of the disease may not be determined until the sequelæ are recognised. During the medical inspection of school children at least 20 additional cases were discovered amongst the school population, which had not been recognised and notified during the acute stage, and 10 cases amongst adults showing severe sequelæ have been notified in 1925 after an average interval of 11 months had elapsed since the onset of the acute symptoms.

AGE AND SEX DISTRIBUTION OF CASES AND DEATHS.

Age Groups.	Cases. Male.	Cases. Female.	Deaths. Male.	Deaths. Female.	Total Cases.	Total Deaths.	Remarks.
Under 10 years	21	19	4	1	40	5	
10—20 ,,	37	39	3	1	76	4	
20—30 ,,	35	31	5	3	66	8	
30—40 ,,	14	23	2	3	37	5	
40—50 ,,	18	13	2	4	31	6	
50—60 ,,	12	8	4	3	20	7	
60 and over	10	2	9	—	12	9	
	147	135	29	15	282	44*	*Including 1 1925 death, 1 certified as Influenza, and 3 Suicides.

The cases were widely distributed in the City, involving families in different streets and fairly widely separated, and no connection could be traced suggesting infection from one to the other. In no instance did a second case occur in the same household. The disease was not confined to any special class of the population, no marked overcrowding was recorded, and in the vast majority the houses involved were above the average in respect to cleanliness. Practically all the cases were removed for treatment to one of the General Hospitals in the City.

In consequence of the number of cases notified during April, and in response to numerous enquiries from medical men as to the salient points of the disease, a circular letter was addressed to all practitioners in the City, as follows:—

PUBLIC HEALTH DEPARTMENT.

THE COUNCIL HOUSE,
BIRMINGHAM,
May 19th, 1924.

Dear Sir (or Madam).

ENCEPHALITIS LETHARGICA.

Since the commencement of this year about 150 cases of this disease have been reported in Birmingham, and during the past six weeks cases have been reported at the rate of about 20 per week. They are occurring all over the city, and almost without exception there is no connection between any two cases.

Many medical men have applied to me for some definition as to what should be included under the title of Encephalitis Lethargica. There are as you know numerous types of the disease differing widely from each other.

Dr. Stanley Barnes at my request has kindly prepared for me the enclosed short list of the types most prevalent in the Birmingham area at the present time. (See fly sheet).

Yours faithfully,

JOHN ROBERTSON.

Encephalitis Lethargica.

The following types of Encephalitis Lethargica are now prevalent in this district:—

1. Ocular. In the mildest cases there is only paralysis of one or more ocular muscles, and this may be incomplete. In most cases there is some damage to accommodation, and in many the light reflex is lost. Nystagmus and Asynergic action of the eyes are common. These symptoms may occur in association with lethargy or Parkinsonian rigidity, but may be completely independent of any other nervous symptoms. They are thus apt to be considered as Neuritis of the 6th or 3rd nerves.

2. The Myoclonic Form. The occurrence of rhythmic twitches in muscle groups, more particularly in the abdominal muscles and diaphragm, occur characteristically, and are almost unknown in any other acute disease. The connection of this form of Encephalitis with Epidemic Hiccough is not known, but it is possible that the latter is merely a mild variety of this condition.

3. Lethargic Cases. In these, unusual drowsiness or actual trance-like conditions are pronounced and usually associated with one of the other evidences of brain damage, such as an ocular paralysis or facial weakness.

4. Parkinsonian Type, where the main damage is in the Lenticular Nucleus. In these cases the disease is apt to be slowly but steadily progressive over an indefinite period running into years. A preliminary lethargy is followed by rigidity and a gait and attitude closely resembling that of Paralysis Agitans. In most of the cases observed no tremor occurs such as is usually seen in true Parkinson's disease.

5. A Cerebral Type, characterized by muttering delirium, sleepiness, partial Ptosis, and closely resembling Tubercular Meningitis. This type often shows a raised temperature, though rarely above 101 deg., and the rigidity, irritation, and Kernig's sign are much less marked than in Meningitis. These cases resemble in their general features the "typhoid state."

6. The Neuritic Form usually commences with an illness which is mistaken for Influenza, accompanied by more or less severe pains in limbs or trunk. It is only after the condition has remained stationary for several days and other symptoms, such as diplopia or lethargy, begin to develop that a diagnosis can be made.

7. Convulsive Types are rare, but some cases in children start with convulsions, and occasionally adults begin with an epileptic fit. The diagnosis can only be made if other evidence of inflammation of the nervous system occurs.

The onset of the disease may be sudden or insidious, the latter being characteristic of the Lethargic and Parkinsonian types. Many of the cases are afebrile; with any of the cases there may be an initial gastro-intestinal disturbance; or headache, catarrhal symptoms resembling Influenza or mental irritability may arise. In a few cases insomnia replaces lethargy; in others, periods of lethargy and insomnia succeed one another. Although the disease appears to attack the mesencephalon more particularly, yet any part of the central nervous system may be damaged and give rise to corresponding symptoms, but Optic Neuritis with swelling of the disc very rarely occurs. Other symptoms which occur with varying frequency are headache, vomiting, changes in character, vertigo, general malaise, languor, tremors, anorexia, rigors, and unconsciousness.

After Effects of Encephalitis Lethargica.

One of the characteristics of this disease is the persistence of some of the acute symptoms in a chronic form or the development of certain sequelæ which may persist after the acute symptoms have passed, or may develop some weeks or months after the patient was thought to have recovered. They are shown in a great variety of symptoms and combinations, such as relapses, changes in disposition, character and emotions, irritability of temper, moral delinquency, changes in the sleep wake rhythm, paresis and stiffness of the muscles, impaired memory, defective sight, tremors, automatic movements, sensory disturbances, and fatigue on exertion.

An inquiry was made during May, 1925, into the condition of 229 cases notified during 1924 and who survived the acute attack.

In order to present the results in tabular form the cases were classified into five groups:—

Group 1. Irritability of temper. Change of character and disposition. Tendency to lie and thieve. Noisy at night or severe mental disturbance.

Group 2. The Parkinsonian Syndrome tremor, resembling paralysis agitans, or halting and slowed movements, or muscular stiffness.

Group 3. Other sequelæ, such as increased tone of muscles, paralysis, and various sensory symptoms, salivation, etc.

Group 4. Some slight departure from the normal, but recovery almost complete. Patient able to carry out the ordinary daily duties as usual.

Group 5. Complete recovery.

The numbers of cases of various ages on the 5 different groups were found to be as follows:—

Age Groups.	Symptom Groups. 1.	2.	3.	4.	5.	Total.	Sleep rhythm reversed or marked insomnia.
1-10 years	14	3	4	4	8	33	13
10-15 ,,	11	6	2	6	5	30	16
15-20 ,,	5	9	8	10	9	41	11
Over 20 years	11	30	26	34	24	125	27
Totals	41	48	40	54	46	229*	67

*In addition one patient became blind and one developed diabetes.

BRONCHITIS AND PNEUMONIA.

The mortality from these diseases is indicated below.

DEATH-RATES FROM BRONCHITIS AND PNEUMONIA.

	Bronchitis. Birmingham.		Bronchitis. England and Wales		Pneumonia. Birmingham.		Pneumonia. England and Wales.	
1901	1.80		1.37		1.55		1.15	
1902	1.64		1.32		1.46		1.41	
1903	1.46	Average	1.11	Average	1.32	Average	1.22	Average
1904	1.76	1.62	1.25	1.24	1.49	1.44	1.28	1.27
1905	1.43		1.14		1.37		1.30	
1906	1.38		1.04		1.32		1.22	
1907	1.49		1.22		1.47		1.35	
1908	1.47	Average	1.10	Average	1.22	Average	1.19	Average
1909	1.47	1.41	1.15	1.09	1.36	1.30	1.30	1.23
1910	1.24		0.96		1.15		1.11	
1911	1.25		1.00		1.16		1.04	
1912	1.26		1.08		1.20		1.02	
1913	1.20	Average	1.06	Average	1.13	Average	1.02	Average
1914	1.26	1.27	1.08	1.13	1.24	1.20	1.08	1.10
1915	1.37		1.44		1.28		1.36	
1916	1.29		1.25		1.13		1.06	
1917	1.01		1.25		0.94		1.14	
1918	1.22	Average	1.23	Average	1.46	Average	1.65	Average
1919	1.39	1.22	1.24	1.20	1.10	1.15	1.06	1.18
1920	1.17		1.01		1.11		0.99	
1921	0.87		0.89		1.04		.0.92	
1922	1.17		1.07		1.08		1.07	
1923	0.96		0.85		0.89		0.87	
1924	1.06		—		0.95		—	

It will be noticed that in Birmingham the rate of mortality from both diseases was higher than in the preceding year. This was due to the continued prevalence of influenza for the whole of the spring months and to the damp inclement weather which lasted almost throughout the year.

The death-rates in the groups of wards were as follows:—

Central Wards	3.02 per 1,000.
Middle Ring of Wards ...	1.93 ,, ,,
Outer Ring of Wards ...	1.36 ,, ,,

That is to say these respiratory diseases were more than twice as fatal in the central districts. It is quite obvious that ignorance and carelessness were the cause of this higher fatality.

The cases which are notifiable under the Order are those of Acute Primary Pneumonia and Acute Influenzal Pneumonia.

The deaths at various age periods were as follows:—

	Deaths from pneumonia per 1,000 living at each age.	Deaths from Bronchitis per 1,000 living at each age.
Under 1 year	14.14	6.64
1 and under 5	3.10	0.66
5 ,, ,, 10	0.22	0.00
10 ,, ,, 15	0.05	0.00
15 ,, ,, 20	0.11	0.01
20 ,, ,, 25	0.17	0.04
25 ,, ,, 35	0.26	0.04
35 ,, ,, 45	0.46	0.17
45 ,, ,, 55	0.70	0.54
55 ,, ,, 65	1.22	2.16
65 and over	2.56	13.56

The total number of cases of pneumonia notified under the Order of the Local Government Board was as follows :—

1919	...	...	1,739	1922	...	...	2,166
1920	...	...	1,733	1923	...	...	2,119
1921	...	...	1,125	1924	...	...	2,407

SUICIDES, 1913—1924.

By	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Poison ...	32	19	5	6	5	5	9	20	9	14	17	7
Asphyxia ...	6	2	2	5	6	6	4	6	5	18	28	24
Hanging, Strangulation ...	14	18	12	9	11	8	24	17	22	18	15	10
Drowning ...	10	10	8	9	6	10	26	22	30	32	34	26
Firearms ...	5	6	3	3	6	8	2	6	3	5	2	2
Cutting or piercing ...	23	17	13	12	17	16	28	18	18	16	21	19
Jumping from high places	2	5	2	1	2	6	4	1	4	6	6	4
Crushing ...	8	6	1	1	1	1	1	6	1	3	4	3
Other suicides	—	—	1	—	1	—	—	2	1	—	3	2
Total	100	83	47	46	55	60	98	98	93	112	130	97

DEATHS IN PUBLIC INSTITUTIONS.

Of the 11,181 deaths in 1924, 4,127 occurred in institutions, viz. :—

2,410 in Poor Law Institutions.
304 in publicly provided Fever Hospitals, etc.
264 in publicly provided Sanatoria.
1,114 in other hospitals charitably supported.
35 in Homes.

DISEASES OF ANIMALS COMMUNICABLE TO MAN.

(Report by Brennan Devine, F.R.C.V.S., Veterinary Superintendent).

Anthrax.

There were several suspected cases of anthrax reported to us in the City area. In each case we examined blood specimens. In one case we found anthrax. This was confirmed by the Ministry of Agriculture and Fisheries. The beast's carcase was removed to Montague Street for destruction.

Foot and Mouth Disease.

During the year, particularly the early part, Foot and Mouth Disease was very prevalent in the Midland area surrounding Birmingham, as will be seen by the outbreaks confirmed in the counties scheduled as follows :—

Derby	72	outbreaks.
Leicester	43	,,
Northampton	69	,,
Stafford	107	,,
Warwick (including Birmingham)	48	,,
Worcester	21	,,
Salop	66	
Nottingham	110	,,
	536	

Included in the above were 14 outbreaks which occurred within the city area between the 1st January and 19th April, five of them occurring in the Public Abattoirs at Sherlock Street.

Following each outbreak, restrictions under the Foot and Mouth Disease Orders were imposed by the Ministry of Agriculture and Fisheries prohibiting the total movement of all animals within a 2-mile radius of an infected place, and movement except by licence within a 15-mile radius of an outbreak.

As there were many outbreaks in the areas immediately surrounding the city, the Birmingham City area was included in the scheduled areas in many cases, and for this reason we were for long periods unable to move cattle in Birmingham except under licence. These conditions imposed a great deal of work on the staff in this Department, it being compulsory for a Veterinary Inspector to examine all animals coming into the City. During the period that Birmingham was placed under restrictions 36,348 licences were issued by us with respect to the movement of animals into the Birmingham area.

Whenever any outbreaks occurred, the Ministry was always immediately notified, and they adopted the policy of slaughter in every case.

In each of the 5 outbreaks which occurred at the City Abattoirs we immediately had the Markets closed, no more animals being allowed in, and steps were taken for the immediate slaughter of all animals on the premises, this being followed by a thorough cleansing and disinfection of the lairs, slaughterhouses and markets generally. Thanks to the willing work of the Markets Dept. employees, this was expeditiously carried out in every case, the disinfection on each occasion being completed within 24 hours. The inspectors of the Ministry of Agriculture and Fisheries granted us permission to re-open the Market for slaughtering the following day.

As regards the outbreak which occurred at the Montague Street Pig Market on the 8th February, this Market was closed from February 8th to May 23rd, by order of the Ministry of Agriculture and Fisheries. This closing of Montague Street Market greatly interfered with the pig trade, and with pig dealers and pork butchers in the district. It necessitated the licensing of animals direct from farms to slaughterhouses in the City, and it was found in many cases on arrival of the pigs, that they were not suitable for the class of trade of the particular slaughterhouse to which they were sent, and these conditions caused a great upheaval in the trade.

The following is a list of the outbreaks which occurred in the City area during the year:—

Date.	Premises.	Animals slaughtered as diseased or exposed to infection.
Jan. 1	W. Biddle, Church Road Farm, South Yardley	21 cows.
,, 12	City Meat Market	
,, 31	Mrs. Palethorpe, Scotland Farm, Northfield	5 beasts, 1 calf and 34 pigs.
Feb. 5	J. W. Izod, Broomhall Farm, Hall Green	18 beasts and 23 pigs.
,, 3	City Meat Market	
,, 8	Montague Street Market	
,, 14	City Meat Market	
,, 27	City Meat Market	
,, 28	Dr. W. Allport, Park Mount, Bristol Road	4 cows and 1 calf.
Mar. 3	City Meat Market	
April 2	H. J. Horne, 128, Priory Road, Hall Green	7 pigs.
,, 2	T. Bradley, 132, Priory Road, Hall Green	24 pigs.
,, 16	F. R. Wells, College Farm, New Oscott	3 beasts.
,, 19	J. Andrews, Ward End Hall, Washwood Heath	10 pigs.

The following is a copy of the official return for the whole country for the year:—

	Outbreaks confirmed in the country.	Animals slaughtered as diseased or exposed to infection.
Total 52 weeks, 1924	1,515	101,917
,, 1923	1,854	125,098
,, 1922	1,140	55,599
,, 1921	44	3,085
,, 1920	93	11,665

Rabies.

I am pleased to report that no case of Rabies occurred in the City area during the year.

CITY HOSPITALS.

The following statement shows the cases dealt with during the 53 weeks which constitute the statistical year:—

Scarlet Fever.

	1924.	1923.	1922.
Under treatment at beginning of year	264	309	347
Admitted during year	1,675	1,801	2,092
Discharged	1,674	1,806	2,098
Died	28	40	32
Remaining at end of year	237	264	309

Diphtheria.

	1924.	1923.	1922.
Under treatment at beginning of year ...	198	211	198
Admitted during year	1,766	1,401	1,088
Discharged	1,510	1,294	1,001
Died	96	120	74
Remaining at end of year	358	198	211

These figures include a certain number of cases in which the diagnosis was revised in hospital.

A report was made to the City Council in July as to the necessity for pulling down three old wards at Little Bromwich and replacing them by means of modern buildings having better facilities for grouping the cases so as to prevent cross infection, also for making better and larger accommodation for nurses and maids. Approval was given to the scheme subject to the work not materially interfering with the work of house building.

The cost per bed of the treatment of cases in hospitals has been as follows :—

INFECTIOUS DISEASES HOSPITALS.

Weekly Cost Per Bed Occupied, Excluding Loans.

	No. of Cases admitted.	Cost per bed. £ s. d.
1891	1,269	15 9
1892	1,155	18 2
1893	2,302	18 2
1894	3,589	18 1
1895	2,693	15 4
1896	2,826	18 7
1897	1,641	1 0 7
1898	1,083	1 2 4
1899	1,052	19 0
1900	1,814	17 0
1901	3,188	14 1
1902	4,721	14 5
1903	2,719	19 11
1904	1,564	1 1 1
1905	1,955	18 8
1906	2,103	18 11
1907	3,046	16 1
1908	2,682	18 10
1909	2,869	17 6
1910	2,482	19 0
1911	2,346	1 3 0
1912	4,855	17 9
1913	6,624	17 7
1914	6,105	1 1 9
1915	3,189	1 4 0
1916	2,042	1 14 3
1917	1,550	2 2 8
1918	1,603	2 12 9
1919	2,987	1 16 2
1920	5,028	2 2 2
1921	3,364	2 6 4
1922	3,180	2 3 1
1923	3,202	2 2 5
1924	3,441	2 2 7

REPORT ON THE CITY HOSPITALS.

(By Dr. E. H. R. Harries Medical Superintendent).

I beg to submit to you a report upon the work of the City Hospitals for the year ending December 31st, 1924.

In addition to Little Bromwich Hospital, Witton Hospital was utilised for cases convalescent from scarlet fever transferred from Little Bromwich. Towards the end of the year it was decided by the Committee to reopen the City Hospital, Lodge Road, and to close Witton Hospital for the time being. The cases then at Witton were gradually transferred to Lodge Road as wards became available. The transfer was not completed until January 30th, 1925, since which date Witton Hospital has been closed.

The figures in respect of the cases admitted to the Hospitals are as follows:—

1. LITTLE BROMWICH HOSPITAL.

Scarlet Fever.

Remaining on Dec. 31st, 1923	241
Admitted during 1924	1,610
Discharged during 1924	1,690
Died during 1924	26
Remaining on Dec. 31st, 1924	135

Diphtheria.

Remaining on Dec. 31st, 1923	208
Admitted during 1924	1,734
Discharged during 1924	1,494
Died during 1924	96
Remaining on Dec. 31st, 1924	352

2. WITTON HOSPITAL.

Scarlet Fever (chiefly convalescents).

Admitted during 1924	477
Remaining on Dec. 31st, 1924	51

3. LODGE ROAD HOSPITAL.

Scarlet Fever.

Admitted during Dec., 1924	59
Discharged during December, 1924	8
Died during December, 1924	0
Remaining on Dec. 31st, 1924	51

In addition four cases of measles and four of chicken pox were admitted as such to Little Bromwich Hospital.

Scarlet Fever.

Cases of this disease have been of the usual mild type customary of late years. The case mortality rate calculated upon the crude number of admissions and number of deaths in both instances uncorrected for revised diagnosis only amounts to 1.5 per cent. This when corrected becomes slightly over 1 per cent.

Unfortunately, however, the ravages of scarlet fever cannot be accurately assessed by reference to case mortality alone. In a disease of such prevalence and exhibiting so many grades of initial severity varying from mild sore throat to profound toxæmic disturbance, morbidity which is obvious and immediate is important, but what may be described as delayed morbidity is of greater importance still. The real amount of morbidity due to scarlet fever is an unknown quantity.

It is a fact that initial severity of attack is no index of the probability or otherwise of some late manifestation of the disease. There is no guarantee that the case exhibiting the mildest sore throat with little or no rash may not, between the second and third week of the disease, exhibit severe complications. Conversely the patient with initial severe sore throat, brilliant rash, and considerable systematic disturbance not uncommonly fails to exhibit any of the manifestations of the late syndrome.

Damage wrought to hearing as a result of middle ear disease is in a fair way to being prevented or at least limited by the work of Otologists attached to fever hospitals, and it is satisfactory to record that at Little Bromwich Hospital the otological work initiated in 1922 has been continued with good results. The sum total of patients has declined *pari passu* with the lesser number of cases of scarlet fever admitted to the wards during the year 1924.

The decision of the Committee to re-open Lodge Road for the admission of considerable numbers of cases of scarlet fever has led to a revision of the arrangements for the otological work. The bulk of the otological cases are now treated in this Hospital (Lodge Road) where it has been possible to arrange for a special ward (as was the case at Little Bromwich). This ward has a great advantage over its counterpart at Little Bromwich owing to the fact that the operating theatre—which can rapidly be converted into a dark room for examination of ears—is attached to the ward.

Mr. Brayshaw Gilhespy, D.L.O., has sent me the following note for inclusion in this report:—

"In the treatment of cases of scarlet fever otitis reliance has been placed upon the careful dressing of the ear for the early cessation of the discharge. When considered necessary removal of tonsils and adenoids has been performed to expedite recovery.

"In many cases parents have been advised to have their children's throats attended to after leaving hospital, as a precaution against further infection of the middle ear by the throat.

"During the period under review a number of cases have required operative treatment of their mastoid bones. In previous years it has been noticed that, in cases of acute mastoiditis, the average duration of ear discharge after operation was only five days. Yet a longer time seemed to elapse before the wound over the bone healed than was the case after similar operations treated in non-infectious hospitals. Therefore, a patient, although no longer suffering from otorrhœa, could not be discharged from the Fever Hospital owing to the persistence of an open wound. During the present year this fact has been further emphasized. Such cases would probably heal more rapidly if suitable accommodation could be provided for them in a ward constructed on the lines suitable for the outdoor treatment of tuberculosis.

"A considerable number of cases admitted to the Otological ward during the year were cases of combined scarlet fever and diphtheria. It was found that if the middle ear became infected with diphtheria bacilli in addition to the organisms associated with scarlet fever, that the period of ear discharge was greatly lengthened.

"From the diphtheria blocks cases of otorrhœa and acute mastoiditis have been treated, and in a certain number of troublesome carriers of virulent diphtheria bacilli, correction of nose and throat abnormalities has resulted in the cessation of the carrier state, and the consequent discharge of the patient from hospital with safety to the community at large. It is possible that more detailed investigation of the nose and naso-pharynx of all convalescent carriers would result in a shortened period of stay of such cases in hospital."

I am in complete agreement with Mr. Gilhespy as to the advantage of abundant fresh air and sunlight in the treatment of the acute infections in general. The nearer the conditions can be approximated to those obtaining in Sanatoria, the better will be the results as seen not only with more rapid healing of post-operative wounds, and other suppurative conditions, but in the general well-being of the patients and the clearing up of the carrier state. Fortunately the new wards in contemplation for Little Bromwich will enable these things in large measure to be achieved. It is probable also that artificial light would prove to have as great a value in the treatment of certain conditions met with in the acute infections as it has in certain types of tuberculosis.

Although very important, acute otitis is only one of the hazards of scarlet fever. This disease is directly or indirectly responsible for a large amount of chronic heart disease, and an unknown but certainly considerable amount of chronic kidney disease.

In numerous cases medical officers in fever hospitals are able to observe from the very commencement, the effects of an acute infective process upon a previously healthy organism—the young child. It is beyond all question that most valuable light could be thrown upon the *beginnings* of heart disease—of kidney disease and of acute rheumatism, by organised and intensive clinical study in a field hitherto too little explored—the wards of fever hospitals. Work of this nature on the lines of modern heart and kidney investigations cannot be adequately prosecuted by Assistant Medical Officers in addition to their very exacting but very necessary routine work.

There is scope in the wards of the Birmingham City Hospitals for most valuable Cardiological work and for an enquiry into the real significance of kidney involvement in scarlet fever. Those not infrequent cases of double tonsillar infections with the organism of scarlet fever or diphtheria, and of rheumatism also await, and would amply repay specialized investigation.

The separation of a toxin by the Dicks in America derived from a hæmolytic streptococcus believed by them to be the organism causing scarlet fever, has led to a large amount of work upon the disease in many countries.

A considerable amount of investigation has been carried out upon the Dick toxin and certain curative antitoxins in the Birmingham Fever Hospitals. Some of the earlier work was done in conjunction with Dr. O'Brien, of the Wellcome Physiological Research Laboratories. Later, more extended investigations upon the Dick toxin have been carried out in association with Dr. Henry, the City Bacteriologist. The results obtained by Dr. Henry promise to prove of very great importance and value. From the point of view of the clinician, however, very much more extended observations are necessary before the discoveries of the Dicks can be said to rest upon such an assured basis as is now the case with the Schick test, and either passive or active immunisation against diphtheria. Although the curative scarlet fever antitoxic sera so far produced in laboratories in America and this country may be said to have shown great therapeutic promise, any definite opinion at this stage would be premature, and of little value.

This note is made simply to record the fact that the Birmingham City Hospitals have played a not unimportant part in various phases of recent research into scarlet fever. It is to be hoped that by the time that next year's report comes to be written, knowledge of the Dick toxin and of the various antitoxins will have become much more definite.

Diphtheria.

It will be noted that the very large total of 1,734 cases was admitted to Little Bromwich with a diagnosis of diphtheria. Were this figure to be accepted without correction, the case mortality would work out at 5.5 per cent. It has to be said, however, that numbers of cases were admitted merely upon the result of a swab, and without signs of clinical diphtheria. From the total of 1,734 admissions 342 cases which were merely "carriers" with possibly some other pathological condition have to be removed for statistical purposes.

The corrected figures in respect of diphtheria then become as follows:—

Total admissions for "Diphtheria"	1,734
Net number of cases of clinical diphtheria— (342 "Carriers" being removed)	1,392
Net number of deaths from Diphtheria— (Corrected for diagnosis)	84

Net case mortality per cent. based upon the corrected admissions and corrected deaths 6.0 per cent.

Having regard to the fact that this percentage case mortality of 6.0 per cent. includes all moribund and hopeless cases dying within a few hours, it may be deemed to be very satisfactory.

It is to be ascribed to the use of very large doses of antitoxin—approaching 200,000 units in some very bad cases—the increased employment of the intravenous route for injection, and a very high standard of nursing, so necessary for diphtheria, if disaster during the later phases of the disease is to be avoided.

It may be of interest to analyse these "carrier" cases in greater detail. The following table gives the gross number of admissions for diphtheria in each quarter, together with the number of those exhibiting no evidence of clinical diphtheria:—

	Admissions for Diphtheria.	Not Clinical Diphtheria.	Percentage.
1st Quarter ...	366	39	10
2nd Quarter ...	360	66	18
3rd Quarter ...	400	80	20
4th Quarter ...	608	157	25.8
Total ...	1,734	342	Average 18.4

If the "revisions" for the last quarter are still further analysed, the figures appear as follows:—

	Admissions for Diphtheria.	Not Clinical Diphtheria.	Percentage.
October	201	45	22.5
November ...	217	72	33
December ...	190	40	21
			Average 25.8

There is little doubt that the sudden rise in "carrier" admissions in this quarter—particularly November—was connected with the trial for manslaughter of a certain practitioner in another City during the latter days of October.

In the discrimination of these cases, and the safeguarding of the patient and the Hospital, very great use has been made of the Schick test and of virulence tests of the organisms (if any) present. These virulence tests have been carried out for us by the City Bacteriologist (Dr. Henry).

The Schick test has shown—as in previous years—that many of these Carriers are themselves in no danger of contracting clinical diphtheria—although sent into Hospital as such—since they are immune. Such immune cases can, of course, be discharged with safety from the clinical point of view as soon as their "carrier" state has been cleared up. This is sometimes a matter of great difficulty. There is little doubt that great harm is wrought by sending many of these cases into hospital as cases of diphtheria merely as the result of a more or less speculative swabbing. Such a case, although himself immune and harbouring possibly a few organisms—is sent into an environment of diphtheria. A sudden rush of cases leads to overcrowding of wards with concentration of infection. Saprophytic re-infection takes place from day to day and the transient carrier of a few organisms possibly becomes a chronic carrier of many. It is a fact also that the various swabbing processes resorted to in an endeavour to clear the carrier state, merely succeed in irritating mucous membranes and so providing a suitable nidus for the growth of bacilli.

The unfortunate social and economic results which may accrue from prolonged segregation in hospital of a working man or the mother of a family cannot be lost sight of.

The convalescent from an attack of clinical diphtheria who continues to carry organisms is in a different category. These organisms are always virulent. The great majority of cases of clinical diphtheria are clear bacteriologically—unless the wards are overcrowded—by the time of clinical fitness for discharge. The convalescents from clinical diphtheria who continue to "carry" have nearly always an unhealthy or abnormal condition of the naso-pharynx. As Mr. Gilhespy has reported a number of these cases have cleared up promptly after removal of the abnormality by operation. I am in agreement with all he says as to the desirability of making more extended provision for the operative treatment of the chronic convalescent carriers who are the subjects of naso-pharyngeal abnormalities. As already mentioned the various chemical sprays and applications are, in the majority of cases, worse than useless. They are irritative and tend to prolong the condition. Vaccines are equally useless. Needless to say the rational method of dealing with diphtheria is by the immunisation of the child population.

Immunisation of the Hospital Staff.

I am able to record that by means of the systematic Schick testing and immunisation of susceptibles of the staffs, both nursing and domestic, in the City Hospitals, that diphtheria as a cause of sickness amongst the staff has virtually ceased. In spite of the large number of admissions with a diagnosis of diphtheria (1,734) during the year, which, however doubtful clinically, were yet harbouring diphtheria bacilli, only one nurse—a probationer who had been on duty for two days in a scarlet ward—contracted clinical diphtheria. It seems convenient to repeat, with additions, a table which I presented in my report to you of last year:—

	Number of cases notified diphtheria admitted to wards.	Number of cases of clinical diphtheria amongst nursing staff.
1921—No differentiation of staff by Schick test	1,301	14
1922—Differentiation of staff by Schick test commenced January 28th	1,090	7
1923—Differentiation of staff by Schick test throughout the year	1,409	4
1924—Differentiation of staff by Schick test and active immunisation of susceptibles throughout year	1,734	1

Average number of nurses on staff in each year: 108.

The four nurses who developed clinical diphtheria in 1923 were all definitely Schick positive reactors, and the fact that they did so contract the disease formed an additional argument for the active immunisation of positive reactors even although they were not working in diphtheria wards.

Immunisation of all positive reactors was carried out from the Autumn of 1923 and throughout 1924, with a very satisfactory result, as shown in the above table.

I should like to emphasize the fact that there is not the slightest difficulty in getting consent from either nurses or maids to the performance of the Schick test on entry, or for subsequent immunisation by toxin antitoxin mixture of those found to be susceptible.

CITY BACTERIOLOGICAL LABORATORY.

During the year 13,049 examinations were carried out at the Bacteriological Laboratory. They included :—

Diphtheria swabs	7,611
Sputum for tubercle bacilli	2,333
Examinations in connection with venereal diseases	889
Milks, bacteriological examinations	1,593
Waters, ,, ,, ...	224
Shell fish ,, ,, ...	44
Widals, reaction for enteric fever	58
Faeces examinations	38
Miscellaneous examinations	259

The number of examinations in 1923 was 9,526.

	Total samples examined.	Cost of the Laboratory.	Cost per sample.
1921	8,172	£2,756 16 0	6/9
1922	6,107	£2,643 6 2	8/8
1923	9,526	£3,119 5 4	6/7
1924	13,049	£3,108 18 11	4/9

DISINFECTION.

The houses disinfected during the year were as follows :—

After Scarlet fever	1,887
Diphtheria	1,719
Enteric fever	51
Tuberculosis	2,197
Other Diseases	10

The following articles which had been exposed to infection were disinfected, either by steam under pressure or by formaldehyde gas :—

Beds	4,778	Pillows	5,853
Mattresses	1,458	Garments	3,818
Counterpanes	3,561	Boots	48
Blankets	5,594	Carpets	181
Sheets	2,208	Other articles	2,832
Bolsters	2,102		

HOUSING IN 1924.

As already stated, the excess of births over deaths last year was 7,209. It is estimated that 1,098 persons came to live in the City in addition to the ordinary immigration and emigration. The total increase for one year, therefore, was 8,307. For several years the annual increase has been as large or larger than it was in 1924. For the five years ending December, 1924, the average estimated increase was 10,020 per annum.

In the four largest towns the average number of new houses built per year per 100,000 of the population was as follows:—

Year.	New houses per 100,000	
Average 1901 to 1910	358	Prior to Finance Act.
1911	184	Diminished numbers due to insecurity of investment.
1912	138	
1913	134	
1914	124	
1915	70	Building stopped as a result of the War.
1916	45	
1917	20	
1918	1	
1919	5	
1920	50	Building recommenced largely as a result of subsidies.
1921	157	
1922	210	
1923	176	
1924	182	

On the basis of Birmingham's experience between 1901 and 1910, the number of new houses required annually with a population of 946,980 would be 3,543. In 1924 the number built and finished ready for occupation was 2,864.

The number of new houses erected in 1924 did not meet the normal growth of the City, nor has any provision been made yet for the deficiency which has been accumulating since 1911.

The provision of an increased number of dwellings has been a source of great effort on the part of both Parliament and Local Authorities. It is probably the knowledge that every possible effort has been made that has kept the sufferers quiet.

The people have, however, bombarded the Public Health Department with requests for relief in their housing conditions. Most of the cases have been investigated, and the more serious of them have been referred to the Estates Department.

The distress and irritation caused to families living and sleeping in one room, often an attic, is at present very great. Most of these rooms are let furnished at exorbitant rents of 8/- or 10/- weekly. The room is small, access to it is often through the living room of the sitting tenant, and it seldom has a fire grate sufficient in size to enable the cooking of meals to be undertaken properly.

In a number of these cases the room was first occupied by newly married couples, and everything went well until the first child arrived when trouble began between the occupier and tenant. Notice is given to quit the furnished lodging because of the family, and it becomes a matter of great difficulty for such a family to get another room. Most of these lodgers are persons in work, who would willingly and easily pay the rent of a self-contained cottage.

The following statement is inserted at the request of the Ministry of Health:—

HOUSING.

Number of new houses erected during the year:—

(a)	Total	2,864
(b)	With State assistance under the Housing Acts 1919, 1923, or 1924	
	(1) By the Local Authority	1,655
	(2) By other bodies or persons	859

1. Unfit Dwelling Houses.

Inspection—(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	59,547
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	4,315
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	12
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	45,849

2. Remedy of Defects without Service of Formal Notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers	39,942

3. Action under Statutory Powers.

A. Proceeding 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	316
(2) Number of dwelling-houses which were rendered fit after service of formal notices—	
(a) By owners	249
(b) By Local Authority in default owners	11
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declaration by owners of intention to close	0

B. Proceedings under Public Health Acts.

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	5,591
(2) Number of dwelling-houses in which defects were remedied after service of formal notices—	
(a) By owners	4,520
(b) By Local Authority in default of owners	15

C. Proceedings under Sections 17 and 18 of the Housing, Town Planning, etc., Act, 1909.

(1) Number of representations made with a view to the making of Closing Orders	12
(2) Number of dwelling-houses in respect of which Closing Orders were made	6
(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	35
(4) Number of dwelling-houses in respect of which Demolition Orders were made	15
(5) Number of dwelling-houses demolished in pursuance of Demolition Orders	13

The new houses built during the last five years have been as follows:—

New Houses Built.

	No. of houses erected by private enterprise.	Corporation houses.	Total.
1920	244	407	651
1921	426	970	1,396
1922	382	902	1,284
1923	556	1,508	2,064
1924	1,201	1,663	2,864
Total	2,809	5,450	8,259

The wards in which houses have been built during the last five years (1920-1924) are shown below.

	Houses erected by private enterprise.	Corporation houses.	Total
Acock's Green	241	241	482
All Saints'	1	0	1
Aston	0	4	4
Balsall Heath	0	0	0
Duddeston and Nechells	0	0	0
Edgbaston	192	0	192
Erdington N.	224	701	925
Erdington S.	96	538	634
Handsworth	30	110	140
Harborne	128	16	144
King's Norton	111	171	282

	Houses erected by private enterprise.	Corporation houses.	Total
Ladywood	0	0	0
Lozells	0	0	0
Market Hall	0	0	0
Moseley and King's Heath ...	343	435	778
Northfield	406	241	647
Rotton Park	23	0	23
St. Bartholomew's	0	0	0
St. Martin's and Deritend ...	0	0	0
St. Mary's	3	0	3
St. Paul's	1	0	1
Saltley	9	235	244
Sandwell	62	273	335
Selly Oak	189	0	189
Small Heath	12	192	204
Soho	33	0	33
Sparkbrook	2	0	2
Sparkhill	507	743	1,250
Washwood Heath	30	1,418	1,448
Yardley	166	132	298
	2,809	5,450	8,259

GENERAL SANITARY WORK.

The tables given below show that a larger number of inspections were made and a larger number of defects discovered than ever before. Since 1919 the increase in the defects for which notices were served is equal to 128 per cent. To a large extent these figures represent unwillingness on the part of the owners to maintain their small house property in reasonable state of repair, but things are getter better, even in this respect.

	Number of visits paid by inspectors.	Number of defects for which notices were served.
1917	94,860	33,419
1918	95,036	27,596
1919	111,379	56,611
1920	113,315	60,802
1921	119,147	62,497
1922	134,516	86,938
1923	143,866	104,210
1924	148,199	123,573

The next table gives fuller details of the character of the work done.

No. of visits and revisits paid :—

General House Inspection	10,536
Infectious Diseases	8,556
Nuisances or Complaints	33,822
Work ordered	49,599
Work in progress	22,221
Inspection of Dirty Courts	3,711
Manure Receptacles	919
Smoke or Water Tests	869
Tents, Vans and Sheds	420
Offensive Trades	147
Ice Cream Vendors	1,063
Rats Order	1,183
Calls on Owners or Agents	5,760
Rag Flock Act	28
Other Purposes	9,365
Total	148,199

Nuisances, etc., reported :—

Houses to be disinfected after Scarlet Fever	1,887
,, ,, ,, Diphtheria	1,719
,, ,, ,, Typhoid Fever	51
,, ,, ,, Other Diseases	10
Repairs to Houses	84,246
Houses to be cleansed	6,538
Houses to be provided with better ventilation	90
Houses to be provided with separate water supply	109
Cases of overcrowding to be remedied	47
Houses to be provided with Damp Courses	116
Water to be removed from Cellars	439
Spouting to be repaired or disconnected	5,426
Rain Water Cisterns to be disconnected or abolished	269
Ashpit Privies to be converted to Water Closets	125
Pan Privies to be converted to Water Closets	43
Privies and Closets to be limewashed	555
Water Closets to be repaired or reconstructed	4,170
Additional Water Closets to be provided	1,629
Ashplaces to be repaired or limewashed	242
Soilpipes to be repaired or removed	33
Urinals to be put in order or closed	85
Drains to be relaid or repaired	1,989
Drains to be opened and cleansed	6,558
Gully Traps to be provided	301
Interception Traps to be provided on main drains	33
Premises to be supplied with additional drains	109
Drains in cellars to be disconnected or abolished	14
Sink Bend Pipes to be repaired or affixed	1,253
Sanitary Sinks to be provided	443
Yards to be paved	173
Yards to be repaired	1,021
Courts or Yards to be cleansed by Tenants	76
Houses to be cleansed by Tenants	67
Wash Houses to be repaired or limewashed	1,903
Keeping of fowls to be discontinued	61
Nuisances from swine and swine styes abated	35
Accummulations of rubbish, manure, etc., to be removed	277
Manure receptacles to be provided or repaired	59
Dangerous premises to be reported to City Surveyor's Department	761
Defective Fittings to be reported to Water Department	1,489
Other Work to be done	919
Total	125,370

In connection with the defects discovered notices were issued as follows :—

Preliminary notices	16,443
Reminders	1,680
Statutory notices	3,109

In 98 instances a summons was issued. In one case a fine of 10/- was imposed. In 16 instances an order to do the work and pay the costs of the same was made; in the remaining 81 cases the work had been commenced by the time the summons was heard, and the defendant was ordered to pay the costs of the summons.

COURT-YARDS.

The two Inspectors who are appointed to visit court-yards and see that the closets and drain traps are in good working order, made 78,169 inspections of water closets. In 39,957 instances the closets were locked up, and in 38,212 they were open. In 181 instances the closet was dirty and in 192 defective.

Certain court-yards are cleansed periodically by the staff of Court Cleansers whose work during the year is set out in the following figures :—

Courts cleansed (paid)	11,898
Courts cleansed (free)	12,410
Houses stripped	55
Water closets inspected	105,872
Water closets opened	7,486
Water closets cleansed	63,918
Sheds washed	30,819
Drain traps cleansed	125,260
Drains opened	5,513

COMMON LODGING HOUSES.

At the end of the year there were 31 common lodging houses on the Register, with accommodation for 2,151 persons. Twenty-eight of these houses were for men and contained 2,049 beds. The other three were for women, and provided 102 beds.

The visits paid to these houses by day numbered 1,562 and by night 194. As a rule about 75 per cent. of the beds were found to be occupied.

HOUSES LET IN LODGINGS.

At the end of the year there were 606 houses registered as let in lodgings, with accommodation for 4,943 persons. Owing to the general lack of houses it is not possible at the present time to enforce the local bye-laws to their full extent.

The following defects were found and remedied during the year :—

Overcrowding	6
Repairs to houses	2,290
Rooms, passages and staircases not swept daily	20
Houses to be cleansed (walls and ceilings)	521
Drains, etc., obstructed	140
Water-closets to be repaired	116
Rubbish to be removed from yards and cellars	28
Ashbins to be provided	6
Water taps and pipes to be repaired	12
Washing accommodation to be provided	57
Sinks provided or repaired	19

CANAL BOATS REPORT.

The Council House,
Birmingham.
January 21st, 1925.

Gentlemen,

In compliance with Section 3 of the Canal Boats Act, 1884, I beg to submit the annual report of the work done by this Department during the year 1924 under the Canal Boats Acts 1877 and 1884, and the regulations under these Acts.

The Canal Boats Inspector for the City is Inspector W. G. E. Childs, who combines with this work the duties of Inspector of Common Lodging Houses. His salary for the joint appointment is 57/6 per week and bonus, with uniform and allowance for cycle.

Inspection of Boats.

During the year 1924 the number of boats inspected on the canals within the City area was 1,127, and the number of inspections during each quarter is shown as follows :—

During the first quarter of the year			296	boats	were examined.
,,	second	,,	319	,,	,,
,,	third	,,	246	,,	,,
,,	fourth	,,	266	,,	,,
	Total	...	1,127		

The 1,127 boats inspected were registered for the accommodation of 3,590 persons and when inspected were found to be carrying 1,358 men, 833 women and 872 children, a total of 3,063 persons, represented in terms of adults as 2,772.

The following table shows the number of boats inspected during the last five years, giving the number of persons whom the boats were registered to accommodate and the actual number of occupants at the time of inspection.

Year.	No. of boats inspected.	Registered to carry (adults).	Actually occupied by Men.	Women.	Children.	Total occupying.	Equivalent to adults.
1920 ...	930	3,076½	1,121	676	569	2,366	2,176
1921 ...	1,037	3,311½	1,224	773	817	2,814	2,542
1922 ...	1,093	3,414	1,319	842	873	3,034	2,743
1923 ...	1,107	3,730	1,396	878	960	3,234	2,914
1924 ...	1,127	3,590	1,358	833	872	3,063	2,772

Of the 1,127 boats inspected during the year it was found that 1,070 or 95 per cent. were in good condition and conforming with the Acts and Regulations, while in 57 or 5 per cent. of the total, various contraventions were found. These are classified thus:—

Boats with	one	contravention	each	12	making total contraventions	12
,,	two	,,	,,	14	,, ,, ,,	28
,,	three	,,	,,	7	,, ,, ,,	21
,,	four	,,	,,	24	,, ,, ,,	96
	Totals ...			57		157

Complaint notes were duly served on the owners in all cases.

During the year certificates were returned by owners, signed by various Canal Boat Inspectors, showing that 184 complaints had been remedied.

The following table shows the number and character of contraventions found and remedied during the year.

Contraventions referring to	Outstanding and brought forward from 1923.	Found during 1924.	Remedied during 1924.	Carried forward to 1925.
Cabins requiring painting	20	43	52	11
,, ,, repairs	11	31	34	8
,, ,, marking	11	42	42	11
Cabins leaking	8	24	29	3
Non-registration	1	6	7	—
Separation of sexes	1	3	4	—
Overcrowding	3	5	8	—
Not producing certificates	5	2	6	1
Dirty Cabins	—	1	1	—
Using fly boats as ordinary	—	—	—	—
Certificate not identifying owner and boat	1	—	1	—
	61	157	184	34

Infectious Disease.

Only one case of infectious disease was notified among the boat population during the year.

On September 3rd, a case of Diphtheria was notified on board the motor-boat "Robin," Registered No. 514, Uxbridge. The patient, a child aged 1 year, was visited and immediately removed to Hospital.

The boat came from London, the port of destination being Birmingham. The owners were notified that the boat was taken out of commission pending disinfection, which was done on September 4th.

Registration of Boats.

There were 17 boats registered during 1924 in Birmingham. 9 registrations were cancelled, thus leaving a total of 534 boats on the Birmingham Register on December 31st, 1924.

The registrations were as follows:—

New motor boats registered	7
New ordinary boats registered	6
Ordinary boats re-registered	4
	17
Registration cancelled	9
Increase	8

These re-registrations were due to change of ownership. Three were previously registered at Birmingham and one at Towcester. The authorities concerned were notified of the re-registration.

Seven steam boats were converted into motor boats, but these were not registered as the cabins were not re-constructed.

The number of boats on the Birmingham Register for the last five years has been as follows:—

December 31st,	1920,	Boats on Register	478
,,	1921	,, ...	505
,,	1922	,, ...	516
,,	1923	,, ...	526
,,	1924	,, ...	534

The 534 boats on the register at present are classified as follows:—

Ordinary boats	472
Steam boats	14
Motor boats	48
	534

I am, Gentlemen,

Your obedient servant,

W. H. DAVISON, M.B., D.P.H.
Chief Assistant Medical Officer of Health.

MILK SHOPS.

The work of the two Inspectors who have charge of the registration and supervision of milk shops is indicated in the following statement:—

No. of Milkshops on Register	4,530
No. of Dairies on Register	7
No. of Purveyors on Register	686
New milkshops registered	331
New purveyors registered	119
Milkshop transfers	468
No. of visits to Milkshops	6,020
No. of visits to Dairies	41
No. of visits to Purveyors	682
No. of visits to Railway Stations	53
Milk vessels examined at milkshops	10,642
Milk churns examined at stations	402
Milkshops and Stores limewashed	45
Sanitary defects found	19
Other contraventions	31
Cases of infectious disease reported	54
Milkshops registrations cancelled	147
Purveyors' registrations cancelled	112

INSPECTION OF COWS AND COWSHEDS.

(Report made by Mr. Brennan De Vine, F.R.C.V.S., Veterinary Superintendent).

The regular inspection of cows and cowsheds in the city has been continued on the lines of the previous year, the City being divided into two districts, north and south, and a Veterinary Inspector being placed in charge of each district.

Owing to the prevalence of Foot and Mouth Disease throughout the country during the year, and to the spread of the disease to Birmingham on 11th December, 1923, which was followed by 14 other outbreaks in the City during 1924, we were a scheduled infected area up to 14th June, 1924. In order to minimise the risk of spreading the infection, dairies within a 2-mile radius of an outbreak were not inspected by us for a period of 28 days from date of outbreak. There were 14 such outbreaks in various parts of the City which occurred between the 1st January and 19th April, and these necessarily curtailed the number of visits of inspection.

The following table shows the number of registered sheds, the number of visits paid by the Veterinary Inspectors to City dairies, and the number of Cows in City dairies at 31st December, 1924, as compared with the previous year:—

	Dairy farms.	Cowsheds.	Dairy cows.	Visits to sheds.
December 31st, 1924	135	271	1,740	2,003
December 31st, 1923	137	275	1,745	3,071

Cows.

The health, condition and cleanliness of the cows in the City dairies has been good, and in only four cases did we find it necessary to write to cowkeepers calling their attention to the condition of their cows and cowsheds.

Mastitis. Twelve cows were found in City dairies to be affected with acute catarrhal mastitis. In each case the owners were notified that the milk from these cows should not be sold for human consumption, and in the majority of cases, where possible, the animals were kept isolated from the rest of the herd.

Cowsheds.

New Cowkeepers.—4 applications were received from dairymen to commence keeping cows in the City for the sale of milk. In 3 cases the sheds had been registered before and in the other case the shed was a new one built to comply with the regulations.

Dairies Discontinued.—6 dairymen have discontinued keeping cows, and their names have been removed from the register.

Changes of Occupancy.—In 8 cases farms have changed hands and the register has been rectified accordingly.

Sheds.—Of the 271 sheds on the register, 269 have been given registration numbers and the other 2 are being altered to meet our requirements, prior to registration.

During the year alterations have been carried out in 6 sheds, and two other buildings have been converted into cowsheds.

4 sheds have been repaired according to our instructions.

INSPECTION OF MEAT, FISH, FRUIT, ETC.

(Report by Mr. Brennan De Vine, F.R.C.V.S., Veterinary Superintendent).

Inspection of Meats and other Foods.

With a view to obtaining uniformity and regular inspection of meat and other foods, the City is divided into four districts, a Food Inspector being placed in charge of each district. The inspection work in the Public Abattoirs, and the Wholesale Fish and Vegetable Market is carried out by Inspectors who are constantly employed there.

Slaughterhouses.

All private slaughterhouses in the City are regularly inspected, and during the year 6,512 visits of inspection were made.

Changes of Occupancy.—Five applications for change of occupancy of private slaughterhouses were received by the Markets and Fairs Committee. In each case the premises were inspected by us, and as they were found in a sanitary condition the applications were granted in each case.

Register.—At the 31st December, 1924, there were 119 private slaughterhouses and two knackeries in use:—

Registered slaughterhouses	63
Annually licenced slaughterhouses	56
Knackeries	2
	121

Registration of Premises used for the Manufacture of Potted Meats, Etc.

During the year the names of 34 persons have been added to the register and in addition 6 food preparation premises have changed hands. Two food preparation premises were closed during the year.

	No. in City. 1924.	1923.
A-la-Mode Beef	77	70
Sausage Manufacturers	34	32
Pork Pie Manufacturers, etc.	36	34
Tripe Dressers, etc.	63	63
Potted and Cooked Meat Manufacturers	154	133
	364	332

In addition to the visits of inspection paid by Inspectors to the above premises, fish friers' premises, and factories where pork pies, sausages, tripe, etc., are prepared, are not included in the above registration, but are regularly visited for the purpose of inspection.

Visits of Inspection.

During the year 67,204 visits of inspection were paid by the Inspectors as compared with 66,694 visits in 1923, namely:—

	Visits of Inspection. 1924.	1923.
Slaughterhouses	6,512	8,031
Beef Butchers	17,243	17,258
Pork Butchers	5,672	5,382
Fishmongers	6,952	6,802
Fruiterers	8,035	8,005
Provision Dealers	42	96
Ham and Bacon Dressers	686	643
Street Hawkers	15,764	12,617
Inspections by Request	1,220	1,102
Wholesale Provision Merchants	11	16
Cold Stores	121	119
A-la-Mode Beef Dealers	2,061	2,964
Tripe Dealers	105	345
Caterers	183	264
Fish Friers	2,589	3,038
Jam, etc., Manufacturers	7	8
Gut Cleaners	1	2
Horse Flesh Shops	—	2
	67,204	66,694

The above does not include the inspection work at the City Meat Market, visits to stalls in the Market Hall, Fish Market, Vegetable Market, or Bell Street, there being Inspectors constantly employed in these Markets.

Veterinary Inspector C. G. Allen, M.R.C.V.S., D.V.S.M. (Vict.).

Mr. R. P. Holmes, F.R.C.V.S., who was employed at the City Meat Market, was appointed Chief Veterinary Inspector to the Corporation of Bolton, and left to take up his appointment on 30th November. Mr. C. G. Allen, M.R.C.V.S., D.V.S.M. (Vict.), who had been here on probation since April, was appointed to the vacancy made by Mr. Holmes, and Mr. H. B. Allan, M.R.C.V.S., D.V.S.M. (Vict.), was appointed Assistant Veterinary Inspector on probation.

Slaughtering of Animals for Food.

Return of Animals Slaughtered in Public Slaughterhouses.

	Beasts.	Calves.	Sheep and Lambs.	Pigs.	Total.
1924	40,160	45,929	162,870	64,451	313,410
1923	40,112	60,847	149,010	34,880	284,849

Return of Animals Slaughtered at Montague Street.

Pigs	6,945
Beasts	2
Sheep	1

Foreign Animals.

The following is a return of foreign animals received in Birmingham during the year:—

	Beasts.	Sheep and Lambs.	Pigs.	Total.
Irish	3,391	2,606	13,458	19,455
Canadian	1,278	—	—	1,278
	4,669	2,606	13,458	20,733

Unsound Meat, Etc.

Return of Diseased Organs Destroyed as Unfit for Human Food.

	Bulls.	Cows.	Calves.	Swine.	Sheep.	Goats.	Total
Lungs—							
Tuberculosis	918	2,755	77	3,183	—	—	6,933
Other Conditions	287	862	505	1,704	3,491	25	6,874
Hearts—							
Tuberculosis	451	1,354	75	3,179	—	—	5,059
Other Conditions	109	338	505	1,694	3,341	25	6,012
Bowels—							
Tuberculosis	611	1,829	71	2,973	—	—	5,484
Other Conditions	110	335	302	1,264	371	25	2,407
Stomach—							
Tuberculosis	611	1,832	71	2,967	—	—	5,481
Other Conditions	134	408	302	1,030	376	25	2,275
Spleens—							
Tuberculosis	611	1,832	76	3,168	—	—	5,687
Other Conditions	152	463	507	1,673	3,287	25	6,107
Livers—							
Tuberculosis	655	1,969	77	3,188	—	—	5,889
Other Conditions	1,744	5,233	524	2,879	6,291	25	16,696
Kidneys—							
Tuberculosis	520	1,563	96	349	—	—	2,528
Other Conditions	120	376	572	418	743	48	2,277
Udders—							
Tuberculosis	—	228	—	197	—	—	425
Other Conditions	—	755	—	179	—	—	934
Heads—							
Tuberculosis	393	1,189	64	2,835	—	—	4,481
Other Conditions	154	469	354	249	955	24	2,205
Fore Quarters—							
Tuberculosis	12	46	—	1	—	—	59
Other Conditions	9	39	3	8	31	—	90
Hind Quarters—							
Tuberculosis	4	22	—	—	—	—	26
Other Conditions	12	42	6	1	4	2	67
Carcases—							
Tuberculosis	83	437	53	230	—	—	803
Other Conditions	126	269	386	397	786	25	1,989

Miscellaneous.

The quantity of miscellaneous meat surrendered was approximately 14 tons 8 cwts., of which the greater part was destroyed for putrefaction.

Weight of Meat Surrendered.

The total weight of meat surrendered during the year was 605 tons as compared with 520 tons during 1923.

The weight of meat surrendered included 221 carcases of calves for immaturity.

The number of cases of surrender is 11,431.

Frozen Meat.

During the year there were 4 tons 19 cwts. of frozen and chilled meat surrendered for putrefaction.

FISH DESTROYED.

Tons, 113; Cwts., 12; Quarters, 3; Lbs., 3¾.

No. of surrenders, 893.

SHELL FISH DESTROYED.

Tons, 19; Cwts., 3; Lbs., 15.

No. of surrenders, 118

Samples of Shell Fish, when in season, are collected weekly by us and sent to the City Laboratory for examination. No Shell Fish are allowed to be sold on our Markets unless they are accompanied by a certificate of origin.

POULTRY, ETC., DESTROYED.

Tons, 47; Cwts., 3; Lbs., 21¾.

No. of surrenders, 1,532.

FRUITS AND VEGETABLES DESTROYED.

Tons, 129; Qrs., 1.

No. of surrenders, 228.

MISCELLANEOUS FOODS DESTROYED.

Tons, 3; Cwts., 4; Lbs., 10.

No. of surrenders, 151.

SUGAR SWEEPINGS.

During the year notification was received of 217 bags (11 lots) of sugar sweepings being sent to Birmingham. On arrival these were subjected to a satisfactory process of refining, and before being allowed to be sold for human consumption were inspected and passed by us.

PROSECUTIONS.

On March 14th a stall holder in the Bull Ring was summoned at the Court and fined 10/- for selling imported Turkey eggs as English new laid in contravention of the Sale of Food Order, 1921.

On March 14th a farmer was summoned at the Court for moving cattle without licence, in contravention of the Foot and Mouth Disease Orders and was fined 10/-.

On May 23rd, a salesman in Smithfield Market was summoned at the Court for exposing for sale unfit tomatoes, and was fined £15.

On December 19th a butcher was fined 40/- and costs on two summonses for an offence against the Public Health Act 1875 in respect of exposing for sale tuberculosis diseased meat.

SHOPS ACTS.

The following statement gives particulars of the work done under the Shops Acts.

The total number of shops observed and visited during 1924 was as follows:—

Shops observed without entering	25,327
Systematic visits to shops	8,050
Re-visits	131
Special visits	641

Infringements found:—

Early closing notice not exhibited	390
Shop not closed at 1 p.m.	47
Exempted trade notice not exhibited	378
Young persons' notice not exhibited	1
Young persons' hours of work not exhibited	16
Assistants' half-holiday not exhibited	131
Assistants' meal times not exhibited	20
Seats for assistants not provided	7
Sanitary convenience not provided	3
Change of early closing day not notified	147
Prosecutions	22

(a) For keeping open the shop on the weekly half-holiday.
1 case fined 20/-.

(b) Butchers' Closing Order.
1 case fined £5 for third offence.
1 case fined £2 for second offence.
9 cases fined £1 for first offence.
1 summons not served, man gone.

(c) Shops Act, 1920.
7 cases fined 10/- for first offence.
2 cases fined 5/- for first offence.

FACTORIES AND WORKSHOPS.

Three Inspectors, two men and one woman, are engaged in carrying out the duties laid upon the Public Health Department by the Factory and Workshop Act. Other duties are carried out by H.M. Inspectors.

I. Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (including Factory Laundries) ...	1,179	125	—
Workshops (including Workshop Laundries) ...	5,888	219	—
Workplaces (other than Outworkers' premises)	232	21	—
Re-Visits	3,819	—	—
Total	11,118	365	—

II. Defects Found in Factories, Workshops and Workplaces.

Particulars. (1)	Number of Defects.			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
Nuisances under the Public Health Acts :—*				
Want of cleanliness	1,152	1,151		
Want of ventilation	23	23		
Overcrowding	4	4		
Want of drainage of floors	2	2		
Other nuisances	683	677		
Sanitary accommodation :				
Insufficient	59	58		
Unsuitable or defective	1,126	1,120		
Not separate for sexes	62	61		
Offences under the Factory and Workshop Acts :				
Illegal occupation of underground bakehouses (s. 101)				
Other offences				
(Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921)				
Total	3,111	3,096		

*Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

BLACK SMOKE.

Great credit is due to the Gas and Electric Supply Departments for the action they have taken in making it possible for small power users to obtain a clean and manageable source of heat. The Public Health Committee by their persistence in prosecuting the firms who pour out Black Smoke have, with the aid of the two above-mentioned Committees, done a great deal of good work.

Birmingham, although by no means a clean City, has enormously reduced the amount of Black Smoke poured out from factory chimneys. There is still much to be done—would that this may soon be commenced along two lines. (1) The abolition of the open coal fire in dwelling houses in towns. Such fires are extraordinarily wasteful as means of warming a dwelling, and are an important source of pollution of the air. There are few at present who will contemplate such a change in our regular habit without hesitation. It is no use blaming the factory chimney while leaving the domestic smoke nuisance alone. (2) The complete abolition of coal for power and metallurgical work, and its replacement by electric power or gas is now within the range of practical politics.

The following figures indicate the type and scope of the work done by the two Smoke Inspectors during 1924:—

Total number of observations of one hour's duration	4,183
Cases reported for excessive black smoke:—	
From boiler fires	80
From boiler and furnaces	24
Metallurgical furnaces	66
Total	170
Cases in which proceedings were instituted in court	60
Convictions obtained	60
Dismissed	Nil
Total amount of fines	£130 0 0
Average per case	(approx.) £2 3 0
Cases dealt with by cautionary letter	78

HEALTH VISITORS' WORK.

By Blanche Gardiner, B.A. (Superintendent of Health Visitors).

During the year the number of Health Visitors (General, Tuberculosis, and Infant welfare) varied very little from that of the previous year, viz., about 94, of whom 61 were engaged in Maternity and Child Welfare Work, 19 in General Health Visiting, and 14 in Tuberculosis Visiting.

There were no resignations on the general Health visiting staff, but one Tuberculosis Visitor left to take up nursing in British Columbia, and 12 Infant Visitors resigned (one to get married, one to go to Australia, and 10 to fill various posts).

Reports dealing with Maternity and Child Welfare work, and with Tuberculosis appear elsewhere, but the following table indicates the class of cases dealt with by the general Health Visitors. It includes visits to certain infants, and regarding illnesses of young children under five years of age, as well as of those of school age, and also visits to adults, of whom a certain proportion were of very advanced age.

	1922.	1923.	1924.
Primary Visits:—			
House Inspection	6,111	5,333	2,868
Infant Visits (including Stillbirths)	3,033	2,367	1,773
Measles	3,704	6,955	5,168
German Measles	102	79	102
Chicken Pox	3,083	3,545	3,817
Whooping Cough	5,169	1,364	3,468
Mumps	3,591	1,041	1,754
Influenza	569	397	389
Pneumonia	2,129	2,245	2,522
Epidemic Diarrhœa	544	10	8
Scabies	233	164	106
Impetigo	782	926	641
Conjunctivitis	72	64	62
Enlarged Glands	946	686	654
Bronchitis, Colds, etc.	3,058	2,514	2,660
Neglect, Insufficient Clothing, etc.	64	92	85
Verminous Cases	81	112	98
Visits to Schools	277	235	285
Visits to obtain addresses	421	271	407
Visits to Officials, Doctors, etc.	500	468	540
Visits to aged persons or on their behalf	216	214	145
Visits for special enquiries	685	516	842
Country Holiday Inspections	87	106	46
Health Talks	13	15	9
Other Visits	778	664	636
Total Primary Visits	36,248	30,383	29,085
Re-Visits	19,968	23,582	24,028
Total Effective Visits	56,216	53,965	53,113
Useless Visits (Out, Removed, etc.)	4,955	4,419	4,449
Grand Total	61,171	58,384	57,562

Scabies.

The number of scabies cases, reported from the schools or school clinics and visited in the homes, still shows a diminution, being 106 as compared with 164, and 233 of the two previous years. These numbers are small in contrast with the 1,300 to 1,500 cases that used to be reported during and just after the War. Thirty-one tickets for free baths at the Skin Hospital, were given by the Health Visitors to needy sufferers from scabies.

Pneumonia.

There were more notifications of Pneumonia this year than last, the doctors having notified 2,361 cases (as compared with 2,096 in 1923) and the health visitors paid 2,522 primary visits and 4,023 re-visits to these, and other pneumonia cases reported by the District Nursing societies, etc. The Health Visitors always make a point of visiting these cases on the day of receipt of notification with a view to helping the relatives to get into touch with the district nurses as early as possible, and to obtain help from other agencies where the home equipments are inadequate, for nursing this illness satisfactorily.

The Birmingham District Nursing Societies again gave most valuable assistance in nursing 698 cases of Pneumonia, severe Measles and Whooping cough, in accordance with the arrangements made with the Public Health Department. It was with great regret that in March we heard of the illness and death of Miss Roberts (Matron of the Central Home in Summerhill Road) whose kindness and ready help was so much valued.

Births.

The general Health visitors (whose visits to infants are mainly confined to those whose births occur beyond the boundaries of the Infant Welfare Centres) paid 1,730 primary visits, and 6,522 re-visits, and also 43 visits and 17 re-visits in connection with still-births.

The Aged.

Although the actual number (145) of old people (living in a neglected, dirty condition, and often alone) that was reported this year was less than that of last year (214), yet the cases were of a type even more difficult than usual to deal with satisfactorily. The fact ever remains, that people in their senility generally prefer to remain in their old and well-known surroundings, however great the discomfort and whatever the deficiency of food, firing, bedding, etc. Even when they have agreed and promised to go elsewhere (either to some other house—or to the Infirmary or a Home) yet when the ambulance is waiting for them at their door, they often have entirely forgotten their promise, and absolutely refuse to go away.

With regard to those aged people who are also blind, it is a satisfaction to know that these are visited regularly about once a fortnight, and that their welfare can be supervised by the special visitors from the Birmingham Royal Institution for the Blind.

Infectious Diseases.

It can be seen from the above table of figures that a large proportion of the health visitors' time (nearly 20,000 effective visits) is occupied in visiting homes where children are suffering from measles, whooping cough, chicken-pox, mumps, etc.

The parents, or those in charge, are seen, and where necessary instructed, and when the illness is acute are urged to have the district nurse; and also enquiries are made as to all the other children in the house, and those who have not previously had the disease are excluded from school for the requisite period.

Considering the many thousands of these school cases dealt with during the year and the unavoidable complexity of the forms filled in, it is satisfactory that so very few discrepancies occurred. Though reference was made last year to the serious illness of Dr. T. W. Beazeley, whose expert advice and kindly help had been of such value to the health visitors in this branch of their work, it was not till March of 1924 that the sad news of his death was received.

Special Enquiries.

The general health visitors are frequently asked to make enquiries into particular diseases, or matters of importance, at the moment. For example, this year a few visits were paid to Sleepy Sickness cases, others to ascertain the home conditions of certain Rheumatic and Choreaic children, and two health visitors made special investigations into deaths from Cancer of the Breast.

The Staff of Visitors.

Each year for the past 15 years, at the end of this Report on the Health Visitors' work, it has been a pleasure to record and to testify to the high quality of it, and to their continued keenness, in spite of having to visit, day after day, week after week, year after year, amongst people, and in homes, where often so much sickness and sadness, and unspeakable discomforts, are in evidence. One needs to have had this practical experience oneself in order to appreciate fully all the difficulties to which Health visitors are submitted.

Further, when it is remembered that much of the prevention of disease, and the diminution of both the Infant and general Mortality Rate, is undoubtedly partly due to the continuous, steady, uncomplaining work, throughout Great Britain, of these self-same Health visitors, surely the Ministry of Health and all in authority will grant to them unbegrudgingly, the full meed of consideration and honour that is their due.

TABLE I.

Vital Statistics during 1924 *and previous years.*

Year.	Population Estimated to middle of each Year.	Births.		Deaths.		Infant Mortality.		Deaths from											
								Influenza.		Tuberculosis.		Cancer.		Heart Disease. (Organic).		Bronchitis.		Pneumonia.	
		Number.	Rate.	Number.	Rate.	Deaths.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.
1901	760,989	23,866	31.4	13,290	17.5	4,205	176	122	.16	1,515	1.99	552	.73	896	1.18	1,363	1.80	1,173	1.55
1902	768,757	24,246*	31.2	12,650*	16.3	3,503*	144	97*	.12	1,356*	1.75	530*	.68	932*	1.20	1,270*	1.64	1,135 *	1.46
1903	776,604	23,956	30.9	12,224	15.8	3,525	147	79	.10	1,362	1.76	592	.76	905	1.17	1,131	1.46	1,025	1.32
1904	784,532	24,260	31.0	13,882	17.7	4,346	179	104	.13	1,369	1.75	578	.74	943	1.20	1,378	1.76	1,165	1.49
1905	792,540	22,939	29.0	11,948	15.1	3,224	141	107	.14	1,316	1.67	643	.81	889	1.12	1,131	1.43	1,084	1.37
1906	800,631	23,484	29.4	12,737	15.9	3,682	157	123	.15	1,203	1.51	664	.83	956	1.20	1,103	1.38	1,056	1.32
1907	808,803	23,233	28.8	12,356	15.3	3,084	133	128	.16	1,241	1.54	645	.80	1,041	1.29	1,201	1.49	1,189	1.47
1908	817,060	23,986*	29.1	12,596*	15.3	3,124*	130	255*	.31	1,308*	1.59	702*	.85	1,028*	1.25	1,214*	1.47	1,005*	1.22
1909	825,400	22,555	27.4	12,398	15.1	2,727	121	151	.18	1,256	1.52	678	.82	972	1.18	1,214	1.47	1,124	1.36
1910	833,826	22,288	26.8	11,001	13.2	2,570	115	93	.11	1,168	1.40	737	.89	954	1.15	1,034	1.24	954	1.15
1911	842,337	21,975	26.1	12,623	15.0	3,298	150	79	.09	1,230	1.46	748	.89	1,013	1.21	1,054	1.25	972	1.16
1912	850,947	22,168	26.1	12,005	14.1	2,470	111	98	.12	1,292	1.52	791	.93	969	1.14	1,073	1.26	1,017	1.20
1913	859,644	23,812*	27.3	12,962*	14.9	3,070*	129	112*	.13	1,341*	1.53	893*	1.02	1,135*	1.30	1,044*	1.20	988*	1.13
1914	882,534	23,207	26.4	13,026	14.8	2,839	122	142	.16	1,293	1.47	773	.88	1,301	1.48	1,109	1.26	1,090	1.24
1915	891,234	21,187	23.8	12,816	14.4	2,490	118	146	.16	1,377	1.55	885	1.00	1,338	1.51	1,219	1.37	1,140	1.28
1916	895,678	20,618	23.1	12,081	13.5	2,142	104	146	.16	1,324	1.48	897	1.00	1,290	1.45	1,148	1.29	1,006	1.13
1917	900,000	17,706	19.7	11,274	12.6	1,791	101	98	.11	1,405	1.56	912	1.02	1,298	1.45	910	1.01	846	0.94
1918	870,000	16,840	19.4	13,175	15.2	1,674	99	2,172	2.50	1,385	1.60	883	1.02	1,183	1.36	1,059	1.22	1,270	1.46
1919	910,000	19,335*	20.9	12,000*	13.0	1,630*	84	1,062*	1.15	1,188*	1.28	935*	1.01	1,187*	1.28	1,285*	1.39	1,013*	1.10
1920	910,000	25,069	27.6	11,409	12.6	2,072	83	421	.46	1,001	1.10	1,014	1.12	1,143	1.26	1,066	1.17	1,011	1.11
1921	919,683	22,134	24.1	10,361	11.3	1,838	83	134	.15	1,035	1.13	1,020	1.12	1,113	1.21	798	0.87	950	1.04
1922	927,844	19,850	21.5	11,212	12.1	1,705	86	442	.48	1,049	1.13	1,090	1.18	1,214	1.31	1,080	1.17	998	1.08
1923	936,079	19,069	20.4	10,248	11.0	1,370	72	264	.28	1,006	1.08	1,092	1.17	1,120	1.20	897	0.96	834	0.89
1924	944,386	18,390*	19.2	11,181*	11.6	1,518*	83	375*	.39	1,055*	1.10	1,251*	1.30	1,256	1.31	1,021*	1.06	916*	0.95

* 53 Weeks.

TABLE II.

Causes of, and Ages at Death during the Year ending January 3rd, 1925.

CAUSE OF DEATH.	AGES.																Males	Females	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
I.—General Diseases.																			
Enteric Fever	—	—	—	—	—	—	1	2	—	2	—	—	—	—	—	—	2	3	5
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	2	1	3
Smallpox—																			
(*a*) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Not Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Doubtful	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	18	39	9	4	3	5	—	1	—	—	—	—	—	—	—	—	34	45	79
Scarlet Fever	—	4	6	2	3	7	—	1	—	—	—	—	—	—	—	—	9	14	23
Whooping Cough	78	65	23	10	6	2	—	1	—	—	—	—	—	—	—	—	88	97	185
Diphtheria	4	9	10	16	9	40	11	1	—	—	—	—	—	—	—	—	50	50	100
Croup	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Influenza	8	7	5	2	—	4	4	9	5	30	47	64	64	70	44	12	184	191	375
Miliary Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera Nostras	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leprosy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	2	—	—	—	—	—	—	—	1	2	2	4	7	3	2	—	9	14	23
Other Epidemic Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pyaemia, Septicaemia	2	1	—	—	1	1	—	2	1	1	3	2	3	3	—	—	14	6	20
Glanders	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rabies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—	1	—	—	1	1	1	—	—	—	—	3	1	4
Mycoses	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	2	—	2
Pellagra	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beri-Beri	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Pulmonary Tuberculosis	—	3	1	2	3	3	7	61	82	196	226	176	92	25	2	—	539	340	879
Acute Phthisis	1	—	—	—	—	—	1	4	5	5	4	3	1	1	—	—	13	12	25
Acute Miliary Tuberculosis	4	4	1	2	2	3	3	1	3	3	1	2	1	—	—	—	17	13	30
Tuberculous Meningitis	11	12	6	5	2	8	4	4	4	—	3	1	—	—	—	—	31	29	60
Tuber. (Periton. Intes.)	6	2	3	2	—	2	1	1	3	—	1	1	—	1	—	—	12	11	23
Tuberc. (Spine)	—	—	—	—	1	1	—	—	1	2	1	—	1	—	—	—	3	4	7
Tuberc. (Joints)	1	1	—	—	—	1	—	—	1	—	—	—	—	2	—	—	1	5	6
Tuberc. (Other Organs)	—	—	1	—	—	—	1	2	1	1	1	3	—	2	—	—	10	2	12
Disseminated Tuberc.	2	—	1	1	—	1	—	—	1	4	1	—	2	—	—	—	6	7	13
Rickets	2	1	2	1	—	—	—	—	—	1	—	—	—	—	—	—	2	5	7
Syphilis	7	2	1	—	—	—	—	—	—	3	7	5	—	2	—	—	17	10	27
Other Venereal Diseases	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Cancer (buccal cavity)	—	—	—	—	—	—	—	—	—	2	3	12	31	15	5	3	61	10	71
Cancer (stomach, liver, etc.)	—	—	—	—	—	—	—	—	1	6	21	55	117	122	45	6	213	160	373
Cancer (periton. intest.)	—	—	—	—	—	—	1	—	1	3	11	43	77	100	43	5	133	151	284
Cancer (female organs)	—	—	—	—	—	—	—	—	1	3	18	39	39	25	9	1	—	135	135
Cancer (breast)	—	—	—	—	—	—	—	—	—	—	16	26	36	31	17	2	—	128	128
Cancer (skin)	—	—	—	—	—	—	—	—	—	—	1	1	5	3	3	—	9	4	13
Cancer (other organs)	—	—	—	1	1	3	1	2	4	6	19	60	69	54	22	5	172	75	247
Other Tumours	—	1	—	—	—	—	—	—	—	1	—	3	6	2	1	—	7	7	14
Rheumatic Fever	—	—	—	—	1	6	11	3	2	2	5	5	6	3	—	—	23	21	44
Chronic Rheumatism	—	—	—	—	—	—	—	—	—	—	—	3	11	12	10	3	14	25	39
Gout	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Scurvy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diabetes	—	—	—	—	—	—	1	—	4	3	4	9	28	31	4	—	39	45	84
Exoph. Goitre	—	—	—	—	—	—	1	—	1	1	3	6	3	—	—	—	—	15	15
Addison's Disease	—	—	—	—	—	—	—	1	—	2	1	1	1	—	—	—	1	5	6
Leucocy., Lymphad	1	—	—	1	1	3	2	1	3	3	3	5	4	1	1	—	24	5	29
Anaemia, Chlorosis	1	2	—	—	—	1	—	1	1	5	4	8	15	10	2	—	20	30	50
Other General Diseases	1	—	—	1	—	1	—	—	1	2	1	—	2	—	—	—	6	3	9
Alcoholism	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	2	—	2
Chron. Lead Poisoning	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	2	—	2

TABLE II.—*Continued.*

CAUSE OF DEATH.	AGES.																Males	Females	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Other Poisonings (occupational) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Poisonings (not occupational)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
II.—Nervous System.																			
Encephalitis Lethargica	2	2	1	—	—	—	1	1	3	5	5	5	10	3	1	—	25	14	39
Other Encephalitis	—	—	1	—	—	—	—	4	—	—	1	1	—	—	—	—	4	3	7
Cerebro-spinal Fever	2	3	1	1	—	—	—	—	—	—	—	—	—	—	—	—	5	2	7
Meningitis (other forms)	14	6	6	1	2	2	3	—	—	1	—	1	1	—	—	—	24	13	37
Locomotor Ataxy	—	—	—	—	—	—	—	—	—	1	7	9	10	4	—	-	26	5	31
Ac. Poliomyelitis	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	2	4
Polioencephalitis	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Other Dis., Spinal Cord	—	—	—	—	—	—	2	2	1	5	6	11	10	11	6	—	26	28	54
Cerebral Haemorrhage Apoplexy ...	—	—	—	1	—	—	—	1	—	3	11	59	118	183	100	16	208	284	492
Softening of Brain	—	—	—	—	—	—	—	—	—	—	—	1	3	10	5	2	10	11	21
Paralysis (no sp. cause)	—	—	—	—	—	—	—	—	—	—	—	1	5	24	12	5	24	23	47
Gen. Par. of Insane	—	—	—	—	—	—	—	—	—	4	13	10	4	1	1	—	31	2	33
Other Mental Alienation	—	—	—	—	—	—	—	—	1	2	—	1	2	—	—	—	3	3	6
Epilepsy	—	—	—	—	—	3	5	3	9	5	5	12	12	8	—	—	37	25	62
Convulsions (5 and over)	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	2	2
Convulsions (under 5)...	51	9	2	1	—	—	—	—	—	—	—	—	—	—	—	—	38	25	63
Chorea	—	—	—	—	—	1	2	2	—	2	1	—	1	—	—	—	1	8	9
Hysteria, Neuralgia, Neuritis ...	—	—	—	—	—	—	—	—	—	—	1	3	2	1	2	—	1	8	9
Other Diseases of Nervous System ...	1	3	3	—	—	2	1	1	5	6	9	14	6	3	1	—	25	30	55
Dis. of Eyes and Annexa	—	—	1	—	—	1	—	—	—	—	—	—	1	—	—	—	—	3	3
Mastoid Disease	—	—	2	—	—	3	—	1	2	—	—	—	—	1	—	—	5	4	9
Other Diseases of Ears	1	2	1	—	1	2	3	3	5	1	1	1	—	—	—	—	12	9	21
III.—Circulatory System.																			
Pericarditis	1	2	1	1	—	—	1	1	1	—	2	—	1	3	—	—	5	9	14
Acute Endocarditis	—	—	—	—	—	1	2	3	4	10	12	13	15	4	—	—	28	36	64
Valvular Disease	—	—	—	2	1	5	7	13	15	19	45	74	99	98	54	7	198	241	439
Fatty Degen. of Heart	—	—	—	—	—	—	—	—	—	—	2	1	10	10	7	1	9	22	31
Other Dis. of Heart	2	1	—	—	—	2	3	5	6	5	29	61	140	267	226	39	371	415	786
Angina Pectoris	—	—	—	—	—	—	—	—	—	1	1	7	3	10	2	1	20	5	25
Aneurysm	—	—	—	—	—	—	—	—	—	2	1	4	5	6	2	—	16	4	20
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	—	4	16	40	85	78	25	138	110	248
Other Dis. of Arteries...	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	2	3
Cer. Embolism, Throm.	—	1	—	—	—	—	—	—	—	—	5	9	34	53	35	5	77	65	142
Other Emb. and Throm.	—	—	—	—	—	—	1	—	1	1	1	2	4	1	—	—	5	6	11
Dis. of Veins	—	—	—	—	—	—	—	—	—	—	1	2	2	2	—	—	1	6	7
Status Lymphaticus	—	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2	1	3
Other Dis. of Lymph. System ...	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3	3
Other Dis. of Circulatory System ...	—	—	—	—	—	—	—	—	1	5	2	5	1	9	7	4	9	25	34
IV.—Respiratory System.																			
Dis. of Nasal Fossae	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	2	2
Dis. of Larynx	2	1	—	—	1	1	—	—	—	1	1	—	1	—	2	—	7	3	10
Dis. of Thyroid Body	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	2
Bronchitis	117	30	16	4	2	—	—	1	3	6	23	59	140	306	256	58	487	534	1,021
Broncopneumonia	203	135	31	11	8	9	3	3	2	7	9	18	25	26	18	1	286	223	509
Lobar Pneumonia	6	7	1	2	1	4	1	7	6	18	29	27	32	18	9	—	111	57	168
Pneumonia (type not stated) ...	40	30	7	8	2	7	1	—	6	14	25	32	22	23	17	5	145	94	239
Pleurisy	1	4	2	1	—	1	—	—	3	—	4	7	2	1	1	—	19	8	27
Pul. Cong., Pul. Apop.	1	—	1	—	—	1	—	—	—	—	2	—	1	6	3	4	7	12	19
Gangrene of Lungs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Asthma	—	—	—	—	—	—	—	—	—	1	5	6	11	13	6	—	24	18	42
Pulmon. Emphysema	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Fibroid Dis. of Lungs	—	—	—	—	—	—	—	—	1	—	1	—	4	1	—	—	7	—	7
Other Dis. of Respiratory System ...	—	—	—	—	—	—	—	1	—	1	3	4	3	2	—	—	9	5	14
V.—Digestive System.																			
Diseases of Teeth and Gums ...	1	—	—	1	—	—	—	1	1	2	—	—	2	—	—	—	2	6	8
Other Dis. of Mouth and Annexa ...	2	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—	3	2	5
Dis. of Phar., Tonsilitis	1	2	—	2	1	1	2	—	1	—	—	1	—	1	1	—	9	4	13

TABLE II.—*Continued.*

CAUSE OF DEATH.	AGES.															Males	Females	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Dis. of the Œsophagus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Perf. Ulcer of Stomach	—	—	—	—	—	—	—	1	—	6	11	21	18	8	—	—	45	20	65
Inflammation of Stomach	10	1	—	—	1	2	—	—	—	1	3	3	5	9	8	5	22	26	48
Other Dis. of Stomach	1	—	—	—	—	—	—	—	2	1	2	2	8	1	2	—	10	9	19
Diarrhoea, Enteritis	150	20	5	3	—	2	—	3	1	3	9	8	11	10	6	—	127	104	231
Ankylostomiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Intest. Parasites	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Appendicitis	1	—	3	2	3	7	7	7	6	9	7	7	3	4	1	—	38	29	67
Hernia	1	1	—	—	—	—	—	—	1	—	—	4	8	15	3	1	15	19	34
Intestinal Obstruction	11	2	—	—	—	1	1	1	2	—	2	6	5	11	4	1	23	24	47
Other Dis. of Intestine	—	1	—	—	—	1	—	—	1	—	4	5	2	2	—	1	8	9	17
Acute Yellow Atrophy of Liver ...	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Hydatid of Liver	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	1
Cirrhosis of Liver	—	—	—	—	—	—	—	—	—	—	2	10	21	9	2	—	28	16	44
Biliary Calculi	—	—	—	—	—	—	—	—	—	—	3	2	6	8	3	—	2	20	22
Other Dis. of Liver	—	—	—	2	—	—	—	—	1	—	—	3	10	5	3	2	7	19	26
Diseases of Spleen	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Peritonitis (cause unstated)	1	—	—	—	—	2	1	1	1	2	1	1	2	—	—	—	8	4	12
Other Diseases of Digestive System...	—	—	—	—	—	—	—	—	—	1	1	4	4	2	—	—	5	7	12
VI.—Genito-Urinary System.																			
Acute Nephritis	1	—	—	—	2	2	1	1	2	2	2	4	2	1	1	—	13	8	21
Bright's Disease	—	—	—	1	—	1	3	4	5	13	22	43	44	57	25	3	117	104	221
Chyluria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dis. of Kidneys and Annexa	1	1	—	—	—	—	—	—	—	—	2	1	5	3	2	1	5	11	16
Calculi. Urin. Passages	—	—	—	—	—	—	—	—	—	—	3	3	—	2	—	—	5	3	8
Diseases of Bladder	—	—	—	—	—	—	—	—	—	1	—	2	4	4	4	1	13	3	16
Diseases of Urethra, etc.	—	—	—	—	—	—	—	—	—	—	—	4	1	3	—	—	8	—	8
Diseases of Prostate	—	—	—	—	—	—	—	—	—	—	—	1	3	18	9	2	33	—	33
Diseases of Male Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uterine Haemorrhage...	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	2	2
Uterine Tumour	—	—	—	—	—	—	—	—	—	—	3	6	—	—	1	—	—	10	10
Other Diseases of Uterus	—	—	—	—	—	—	—	—	—	2	2	—	1	1	1	—	—	7	7
Ovarian Tumours	—	—	—	—	—	—	—	—	—	—	—	1	—	1	2	1	—	5	5
Other Diseases of Female Organs ...	—	—	—	—	—	—	—	1	—	1	4	1	—	—	—	—	—	7	7
Diseases of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VII.—The Puerperal State.																			
Accidents of Pregnancy	—	—	—	—	—	—	—	—	—	1	3	1	—	—	—	—	—	5	5
Puerperal Haemorrhage	—	—	—	—	—	—	—	—	—	4	1	2	—	—	—	—	—	7	7
Other Accidents of Childbirth ...	—	—	—	—	—	—	—	—	—	1	6	2	—	—	—	—	—	9	9
Puerperal Fever	—	—	—	—	—	—	—	—	7	19	11	—	—	—	—	—	—	37	37
Puer. Alb'ria and Convulsions ...	—	—	—	—	—	—	—	—	—	8	3	—	—	—	—	—	—	11	11
Phleg. Dolens. Embolism	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Puerperal Insanity	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	2
Puerperal Dis. of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII.—Skin and Cellular Tissue.																			
Senile Gangrene	—	—	—	—	—	—	—	—	—	—	—	—	1	8	11	4	11	13	24
Gangrene (other types)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Carbuncle, Boil	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	2	—	2
Acute Abscess, Phlegmon	4	2	1	—	—	—	—	—	—	1	2	4	1	4	1	—	11	9	20
Dis. of Integumentary System ...	18	2	—	—	—	—	2	—	—	2	—	—	1	4	1	—	18	12	30
IX.—Bones and Organs of Locomotion.																			
Diseases of Bones	1	—	1	1	—	3	5	2	—	1	1	1	—	1	—	—	11	6	17
Diseases of Joints	—	1	1	—	—	1	—	1	—	—	2	—	2	2	—	—	4	6	10
Amputations	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dis. of Locomotor System ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
X.—Malformations.																			
Congenital Malformations	82	8	1	1	—	1	—	1	2	—	—	3	—	—	—	—	54	45	99

TABLE II.—*Continued.*

CAUSE OF DEATH.	AGES.																Males	Females	Persons.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
XI.—Diseases of Early Infancy.																			
Premature Birth	405	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	229	176	405
Infantile Debility, Icterus, etc. ...	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90	50	140
Other Diseases, Early Infancy ...	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29	21	50
Lack of Care	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	2	7
XII.—Old Age.																			
Old Age	—	—	—	—	—	—	—	—	—	—	—	—	5	83	253	126	175	292	467
XIII.—External Causes.																			
Suicide—																			
By Poison	—	—	—	—	—	—	—	—	—	1	2	3	1	—	—	—	6	1	7
,, Asphyxia	—	—	—	—	—	—	—	—	—	—	1	9	8	6	—	—	16	8	24
,, Hanging, Strangulation	—	—	—	—	—	—	—	1	1	—	3	3	2	—	—	—	8	2	10
,, Drowning	—	—	—	—	—	—	—	—	—	1	10	6	4	4	1	—	19	7	26
,, Firearms	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	2	—	2
,, Cutting or Piercing	—	—	—	—	—	—	—	—	2	2	3	6	5	1	—	—	15	4	19
,, Jumping from High Places ...	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	2	2	4
,, Crushing	—	—	—	—	—	—	—	—	—	1	1	—	—	1	—	—	3	—	3
,, Other Suicides	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	2	2
Poisoning by Food	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Acute Poisonings	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	1	1	2
Conflagration	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burns (Conflagration excepted) ...	3	6	7	12	7	3	1	—	1	3	—	2	3	5	6	—	27	32	59
Deleterious Gases	19	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	12	9	21
Accidental Drowning	—	—	—	1	2	3	1	3	—	1	1	1	2	—	1	—	14	2	16
Injury—																			
By Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Cutting or Piercing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Fall	—	—	—	—	1	—	3	5	1	2	5	3	11	15	24	3	33	40	73
,, Mines and Quarries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Machines	—	—	—	—	—	—	1	3	—	—	5	—	2	—	—	—	10	1	11
,, Other Crushing	—	2	1	2	2	9	3	11	6	11	12	12	14	7	7	1	72	28	100
,, By Animals	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
,, Starvation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Excessive Cold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Effects of Heat	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
,, Lightning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Electricity	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Homicide by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Homicide by Cutting or Piercing ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Homicide, Other Means	1	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	1	2	3
Fractures (not specified)	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	1	2
Other Violence...	1	—	—	—	—	—	—	2	2	—	2	1	—	1	—	—	6	3	9
XIV.—Ill-Defined Cases.																			
Dropsy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syncope (1 and under 70)	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1
Sudden Death (Not Defined) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heart Failure (1 and under 70) ...	1	—	—	—	—	—	—	—	—	—	6	9	16	10	—	—	28	14	42
Other Ill-Defined Causes	—	1	—	—	1	—	1	—	—	—	—	1	1	—	—	—	3	2	5
Cause not Specified	5	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	4	2	6
Totals	1518	443	167	113	72	178	121	199	249	527	848	1243	1653	2042	1446	362	5742	5439	11181

TABLE III. *Births and Deaths Registered in, or belonging to, each Ward during the Year ending January 3rd, 1925.*

Causes of Death.	Acock's Green.	All Saints'	Aston.	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Enteric Fever	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	1	—	—	—	—	—	—	5
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	2	5	1	—	9	1	3	1	—	—	—	2	—	—	—	—	1	20	8	9	3	2	1	—	1	1	3	—	1	5	—	79
Scarlet Fever	1	3	1	—	—	—	1	1	—	1	2	—	—	—	—	—	1	2	2	1	—	1	—	—	1	—	—	2	2	1	—	23
Whooping Cough	4	14	9	5	17	5	1	3	2	—	3	15	1	2	1	—	20	21	12	14	14	6	—	—	1	4	4	2	4	—	1	185
Diphtheria, Croup ...	6	4	7	1	5	—	5	1	5	2	1	8	2	1	2	1	3	5	2	5	11	3	1	1	6	—	3	—	5	3	1	100
Influenza	16	22	14	13	18	16	9	6	16	10	12	13	16	6	13	3	7	14	12	14	16	18	4	11	10	12	14	14	16	8	2	375
Erysipelas	—	—	—	—	1	2	—	—	—	—	1	—	1	—	—	—	1	2	3	1	3	1	—	1	2	—	—	—	1	1	2	23
Pulmonary Tuberculosis	20	53	47	39	58	28	8	12	14	7	10	39	39	34	10	6	47	57	95	54	40	29	11	11	27	27	40	19	35	7	11	934
Tuberculous Meningitis ...	2	5	—	2	2	1	3	—	—	—	1	3	—	2	—	1	7	5	3	4	4	3	1	—	2	—	2	3	4	—	—	60
Abdominal Tuberculosis ...	1	1	—	—	—	1	1	3	3	—	—	—	—	—	—	—	1	—	4	—	—	2	—	1	—	1	1	—	3	—	—	23
Other Tuberculous Dis. ...	1	2	—	—	3	1	—	—	5	1	—	2	2	1	—	—	2	2	5	3	—	1	—	1	—	2	2	1	1	—	—	38
Cancer	54	63	47	68	55	51	27	22	40	24	34	35	60	36	39	7	56	52	63	42	35	47	21	33	44	41	55	33	27	25	15	1251
Rheumatic Fever ...	—	2	—	3	2	—	1	—	1	—	1	2	2	1	1	—	1	6	4	3	2	—	—	2	3	2	—	1	2	1	1	44
Diabetes	6	—	3	5	4	8	3	2	2	2	1	2	2	1	—	2	—	2	2	2	1	4	5	3	6	3	5	2	1	3	2	2	84
Encephalitis Lethargica ...	1	1	1	—	2	—	2	1	—	—	1	2	2	1	2	1	1	—	2	2	—	3	—	2	1	4	1	1	3	2	2	39
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	2	—	—	—	1	—	—	1	1	—	—	—	1	—	—	—	—	—	—	—	—	1	—	7
Meningitis (other forms) ...	1	—	2	1	4	2	1	2	1	—	—	3	3	1	1	1	2	1	—	2	2	2	1	—	1	—	1	—	2	—	—	37
Polio-Encephalitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	1	—	—	—	—	—	—	—	4
Cereb'l Haemorr., Apop.	19	22	25	22	21	21	10	12	7	7	7	14	12	19	20	7	17	20	30	16	14	14	14	13	22	23	17	18	17	7	5	492
Convulsions	3	2	7	3	2	2	1	1	1	—	1	4	2	—	—	1	3	9	3	6	—	3	2	2	2	—	3	1	1	—	—	65
Organic Dis. of Heart ...	34	64	63	61	79	52	34	27	40	25	28	40	58	35	31	11	47	53	61	49	51	29	16	29	44	41	34	35	47	16	22	1256
Arterio-Sclerosis	4	6	10	10	8	12	6	7	11	9	10	5	8	4	11	2	14	4	11	5	6	4	7	13	7	10	7	9	5	9	14	248
Cereb'l Embol., Thromb.	4	7	11	3	9	7	3	7	3	6	2	8	5	1	6	1	6	5	7	3	8	3	1	7	5	1	4	1	4	3	1	142
Bronchitis	25	45	47	67	62	28	10	8	19	14	22	29	42	22	28	8	28	63	81	57	37	34	20	23	34	39	46	20	35	13	15	1021
Pneumonia	20	52	45	27	62	22	19	15	16	9	7	52	43	22	19	3	53	67	67	81	50	21	11	9	19	20	22	21	24	7	11	916
Other Respiratory Dis. ...	1	2	6	11	10	7	2	2	4	3	2	4	6	3	—	—	2	10	7	6	4	3	6	3	2	3	5	3	4	2	1	124
Diarrhoea, Enteritis, etc—																																
Under two years... ...	3	8	6	3	11	2	2	3	1	—	—	7	4	7	3	—	10	23	14	20	16	6	1	5	4	1	2	2	3	1	2	170
Two years and over ...	4	5	3	3	—	2	1	—	1	—	3	1	2	2	3	1	6	5	1	2	1	2	—	3	2	2	2	1	2	1	—	61
Appendicitis, Typhlitis ...	2	4	4	3	4	2	3	3	2	1	2	3	2	4	2	—	7	2	2	—	—	2	3	3	1	1	1	3	—	—	1	67
Cirrhosis of Liver ...	1	2	3	3	5	3	2	2	—	—	—	1	—	2	5	1	3	1	1	—	1	—	1	1	1	1	—	—	3	1	—	44
Alcoholism...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	2
Nephritis & Bright's Dis.	7	12	7	14	10	16	4	4	8	5	5	4	11	7	5	1	8	15	9	10	11	7	3	5	10	6	13	4	8	11	2	242
Puerperal Fever	1	2	4	1	2	1	—	2	1	—	1	—	1	—	3	1	—	4	2	—	2	—	1	—	1	1	1	3	1	1	—	37
Other Acc. and Dis. of ... Pregnancy & Parturit'n	—	1	1	4	3	1	—	—	1	—	3	—	1	—	1	—	3	3	2	—	—	—	—	1	1	—	2	1	3	3	—	35
Congenital Debility and Malformation, Premature Birth ...	9	31	46	29	48	12	12	12	7	9	15	21	16	15	15	8	23	40	50	43	28	22	12	15	20	13	17	17	30	8	1	644
Old Age	10	14	14	23	24	22	14	3	13	8	12	23	16	13	16	3	16	18	34	15	16	5	7	18	13	14	32	17	17	2	15	467
Accidents or Negligence ...	10	14	17	17	18	5	4	6	8	3	8	21	6	9	5	3	11	17	20	12	12	5	6	6	12	8	4	8	10	8	6	299
Suicides	3	1	3	4	5	2	4	4	2	2	4	1	6	1	6	—	5	2	7	1	3	2	1	4	2	4	5	3	5	3	2	97
Other Causes	47	55	63	76	60	53	24	32	46	29	48	42	54	32	49	11	70	58	81	50	56	44	32	39	45	47	62	45	43	21	26	1440
Total Deaths	323	524	518	521	623	388	220	204	282	177	247	406	425	283	299	83	486	608	707	534	452	330	188	269	350	334	408	289	371	173	159	11181
Deaths under 1 year ...	27	73	85	61	129	32	25	21	18	14	21	58	41	32	26	10	70	130	121	119	78	57	18	35	39	27	41	27	53	17	13	1518
Births	537	912	979	737	1254	475	355	407	371	246	356	677	603	393	379	185	823	1096	1105	968	895	602	267	471	458	426	640	466	857	273	177	18390

TABLE IV.

Deaths under 1 *year Registered in, or belonging to, each Ward during the Year ending January 3rd,* 1925.

Causes of Death.	Acock's Green	All Saints'	Aston	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Measles	—	—	1	—	3	1	1	—	—	—	—	1	—	—	—	—	—	4	2	2	—	—	—	—	1	—	1	—	—	1	—	18
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	3	6	5	2	8	2	1	1	1	—	—	4	—	2	—	—	8	12	1	8	6	2	—	—	—	1	3	1	1	—	—	78
Diphtheria, Croup ...	—	—	1	—	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Influenza	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	2	—	1	—	—	—	—	1	—	—	8
Tuberculous Meningitis ...	—	—	—	—	—	—	2	—	—	—	—	1	—	—	—	1	—	1	2	—	—	—	1	—	—	—	1	1	1	—	—	11
Abdominal Tuberculosis ...	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	—	1	1	—	—	—	—	6
Other Tuberculous Dis. ...	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	—	1	—	2	1	—	—	—	1	—	—	—	—	—	—	—	8
Rickets	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Syphilis	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	—	—	—	—	—	—	—	—	1	—	—	7
Encephalitis Lethargica ...	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	2
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	2	—	—	2
Meningitis(not tuberculous)	1	—	1	1	1	1	—	—	1	—	—	—	1	1	—	1	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	14
Convulsions	2	2	6	2	2	2	1	1	1	—	1	2	2	—	—	—	3	6	2	5	—	2	1	2	2	—	2	1	1	—	—	51
Bronchitis	1	5	3	8	12	1	2	2	—	—	1	3	2	—	2	—	3	12	14	5	11	7	1	2	3	5	3	2	5	2	—	117
Pneumonia (all forms) ...	6	17	8	5	33	8	1	1	1	3	1	11	8	7	5	—	13	24	21	30	14	8	2	2	6	4	2	4	3	1	—	249
Gastritis	—	—	1	1	2	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	2	—	—	2	—	—	—	—	10
Diarrhoea, Enteritis, etc.	3	8	5	2	10	2	2	3	1	—	—	7	3	5	3	—	10	21	13	15	13	6	—	5	4	1	2	1	2	1	2	150
Congenital Malformations	—	5	8	1	9	2	1	1	1	1	1	3	2	3	3	—	4	4	7	2	1	2	—	2	6	2	2	2	6	1	—	82
Premature Birth ...	8	19	31	19	26	8	9	7	5	8	12	13	11	8	9	7	13	25	29	24	17	17	8	9	10	8	11	12	15	6	1	405
Atrophy, Debility and Marasmus	1	7	5	8	10	2	2	4	1	—	2	5	4	4	3	—	6	9	13	14	10	3	4	4	4	1	3	3	7	1	—	140
Atelectasis	—	—	—	2	2	1	1	—	2	—	1	—	1	—	—	—	1	—	5	—	1	—	—	1	—	2	—	—	2	—	—	22
Injury at Birth	—	1	—	2	3	1	—	—	—	1	1	2	3	—	—	—	1	—	—	4	—	1	—	—	—	—	2	—	1	1	—	24
Neglect (under 3 months)	—	—	1	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	1	7
Suffocation (overlying) ...	1	—	2	3	1	—	—	—	—	—	—	2	—	—	—	—	1	1	2	1	—	1	—	—	1	1	—	—	—	1	1	19
Other Causes	1	2	6	3	4	1	1	1	1	1	1	2	2	2	1	—	3	6	4	6	5	5	1	1	2	1	5	—	5	1	8	82
All Causes	27	73	85	61	129	32	25	21	18	14	21	58	41	32	26	10	70	130	121	119	78	57	18	35	39	27	41	27	53	17	13	1518

TABLE V.

Cases of Infectious Diseases notified during each week of the year 1924.

Week Number.	Week Ending	Enteric Fever.	Continued Fever.	Malaria.	Trench Fever.	Smallpox	Scarlet Fever.	Diphtheria.	Dysentery.	Erysipelas.	Pulmonary Tuberculosis.	Other Tuberculosis.	Encephalitis Lethargica.	Cerebro-Spinal Fever.	Poliomyelitis.	Polio-Encephalitis.	Pneumonia.	Puerperal Fever.	Ophthalmia Neonatorum.	Total.
	1924.																			
1	Jan. 5	1	—	—	—	—	44	30	—	10	31	6	—	—	—	—	49	5	6	182
2	,, 12	3	—	—	—	—	52	20	—	14	40	13	—	1	3	—	51	1	—	198
3	,, 19	1	—	—	—	—	37	37	1	8	37	13	—	—	—	—	45	1	13	193
4	,, 26	—	—	—	—	—	37	26	—	15	36	7	—	1	1	—	32	4	4	163
5	Feb. 2	2	—	—	—	—	33	29	—	11	48	4	1	—	—	—	51	5	8	192
6	,, 9	—	—	—	—	—	40	35	—	5	31	8	3	—	—	—	65	1	7	195
7	,, 16	1	—	—	—	—	34	42	—	8	43	9	—	—	—	—	62	4	9	212
8	,, 23	—	—	—	—	—	37	33	—	13	35	4	—	—	2	—	79	2	9	214
9	Mar. 1	1	—	—	—	—	39	44	—	6	32	4	1	—	—	1	106	8	5	247
10	,, 8	—	—	—	—	—	32	36	—	2	36	6	2	—	—	—	127	3	13	257
11	,, 15	4	—	—	—	—	30	33	—	6	54	12	2	1	—	—	151	3	9	305
12	,, 22	2	—	—	—	—	41	29	—	10	37	10	11	—	—	—	138	4	9	291
13	,, 29	2	—	—	—	—	47	23	—	9	41	10	6	1	—	—	117	4	5	265
14	April 5	—	—	1	—	—	47	32	—	9	52	7	19	—	—	—	88	3	10	268
15	,, 12	1	—	—	—	—	48	32	1	10	38	12	26	1	—	—	81	3	4	257
16	,, 19	1	—	—	—	—	32	32	—	5	37	4	27	—	—	—	64	4	10	216
17	,, 26	2	—	—	—	—	42	26	—	15	33	5	17	1	—	—	65	1	6	213
18	May 3	—	—	—	—	—	43	37	—	8	46	8	19	1	—	—	65	2	11	240
19	,, 10	—	—	—	—	—	39	23	—	7	32	10	21	—	—	—	43	1	8	184
20	,, 17	—	—	—	—	—	37	28	—	6	40	4	12	—	—	—	28	1	13	169
21	,, 24	1	—	—	—	—	51	30	—	6	41	5	14	—	—	—	36	2	9	195
22	,, 31	2	—	—	—	—	48	29	—	3	33	4	15	—	—	—	43	2	8	187
23	June 7	—	—	—	—	—	27	37	—	5	29	8	11	—	—	—	34	4	10	165
24	,, 14	—	—	—	—	—	45	25	—	7	24	3	6	1	1	—	20	3	10	145
25	,, 21	—	—	—	—	—	53	28	—	5	41	13	9	—	—	—	34	1	15	199
26	,, 28	—	—	—	—	—	49	30	—	8	45	10	11	—	1	—	33	—	8	195
27	July 5	1	—	—	—	—	43	28	—	4	41	8	3	—	2	—	23	1	5	159
28	,, 12	1	—	—	—	—	31	35	—	6	41	6	4	—	2	—	20	2	11	159
29	,, 19	—	—	—	—	—	35	41	—	2	42	9	6	—	—	—	25	1	5	166
30	,, 26	1	—	—	—	—	52	29	—	2	33	8	2	—	—	—	10	—	6	143
31	Aug. 2	—	—	—	—	—	40	34	—	5	35	6	2	—	4	2	21	2	12	163
32	,, 9	—	—	—	—	—	32	25	—	9	24	6	2	—	1	—	13	2	7	121
33	,, 16	2	—	—	—	—	34	26	—	5	29	1	2	—	2	—	29	3	14	147
34	,, 23	—	—	—	—	—	22	20	—	4	29	4	—	—	2	—	6	2	10	99
35	,, 30	1	—	—	—	—	48	35	—	10	26	8	1	—	2	—	17	6	5	159
36	Sept. 6	1	—	—	—	—	35	27	—	6	28	7	1	—	1	2	22	1	8	139
37	,, 13	3	—	—	—	—	44	38	—	6	28	4	—	1	2	—	20	—	7	153
38	,, 20	1	—	1	—	—	49	33	—	6	24	5	—	—	3	—	17	3	6	148
39	,, 27	1	—	—	—	—	46	35	—	8	32	7	1	—	—	—	21	2	12	165
40	Oct. 4	1	—	—	—	—	46	39	—	8	29	7	4	—	2	—	24	1	11	172
41	,, 11	1	—	—	—	—	50	56	—	7	21	5	1	—	—	—	31	3	2	177
42	,, 18	5	—	—	—	—	58	33	—	8	29	4	2	1	—	—	18	2	11	171
43	,, 25	—	—	—	—	—	53	53	—	6	41	6	2	1	1	1	19	1	3	187
44	Nov. 1	1	—	—	—	—	46	53	—	7	42	2	1	—	2	—	24	3	8	189
45	,, 8	—	—	—	—	—	52	51	—	14	26	4	3	—	3	—	26	1	9	189
46	,, 15	1	—	—	—	—	51	58	—	12	19	5	1	—	2	—	23	2	3	177
47	,, 22	—	—	—	—	—	52	61	—	9	28	6	1	—	—	—	31	4	8	200
48	,, 29	2	1	—	—	—	47	43	—	7	26	11	1	—	—	—	30	3	8	179
49	Dec. 6	1	—	—	—	—	45	45	—	12	35	7	4	—	—	—	44	—	5	198
50	,, 13	—	—	—	—	—	39	40	—	8	27	4	1	—	—	—	40	—	5	164
51	,, 20	—	—	—	—	—	30	51	—	8	22	4	1	—	—	—	51	1	2	170
52	,, 27	—	—	—	—	—	40	41	—	3	14	3	3	—	—	—	31	1	3	139
	1925.																			
53	Jan. 3	—	—	—	—	—	35	51	—	10	17	3	—	—	—	—	64	1	8	189
	Total	48	1	2	—	—	2219	1887	2	403	1780	349	282	11	39	6	2407	120	413	9969

TABLE VI.

Cases of Infectious Disease notified during the Year 1924. *Classified according to ages.*

DISEASE.	AGES.																Totals.
	0-	1-	2-	3-	4-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
Enteric Fever	—	—	1	—	1	11	4	9	5	8	5	4	—	—	—	—	48
Continued Fever	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Malaria	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	2
Trench Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	21	56	99	163	209	883	481	120	86	65	26	9	1	—	—	—	2219
Diphtheria	32	74	127	137	135	623	343	174	90	82	49	19	2	—	—	—	1887
Dysentery	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	2
Erysipelas	13	8	2	5	3	14	17	25	24	39	61	73	73	35	10	1	403
Pulmonary Tuberculosis	4	10	3	7	13	100	110	153	199	405	364	265	115	29	3	—	1780
Tuberculous Meningitis	8	10	2	3	2	7	4	3	1	—	1	1	—	—	—	—	42
Tuberculosis of Peritoneum and Intestines	10	10	13	7	4	17	8	4	4	5	1	—	—	—	—	—	83
Tuberculosis of Spinal Column	—	2	2	1	3	4	4	1	5	4	2	—	—	—	—	—	28
Tuberculosis of Joints	—	2	1	4	3	12	9	5	3	1	1	2	1	2	—	—	46
Tuberculosis of Other Organs	1	5	12	7	6	45	25	10	8	5	2	3	—	3	—	—	132
Disseminated Tuberculosis	1	—	1	—	1	2	3	1	—	2	1	4	2	—	—	—	18
Encephalitis Lethargica	2	4	3	1	1	29	30	43	36	52	29	29	18	4	1	—	282
Cerebro-Spinal Fever	2	3	1	2	1	—	1	—	—	—	—	—	—	1	—	—	11
Poliomyelitis	5	8	9	8	1	6	1	1	—	—	—	—	—	—	—	—	39
Polio-encephalitis	2	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	6
Pneumonia	245	277	152	127	87	216	87	119	115	244	240	219	138	95	39	7	2407
Puerperal Fever	—	—	—	—	—	—	—	1	26	68	25	—	—	—	—	—	120
Ophthalmia Neonatorum	413	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	413
TOTAL	759	471	428	474	470	1970	1127	670	603	982	807	628	350	169	53	8	9969

TABLE VII.

Cases of Infectious Diseases notified during the Year 1924. Classified according to Wards.

Causes of Death.	Acock's Green.	All Saints'	Aston.	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Rotton Park	St. Bartholomew's	St. Martin's and Deritend	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Enteric Fever	2	—	2	—	1	3	1	—	3	2	3	—	—	1	4	2	—	2	—	3	1	1	—	7	4	—	—	2	—	—	4	48
Continued Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Malaria...	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Trench Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	44	97	118	59	66	67	46	48	39	85	63	64	60	34	43	23	119	123	122	70	62	73	38	143	76	31	86	56	91	42	131	2219
Diphtheria	70	106	129	58	91	32	22	25	54	43	13	75	84	31	21	22	59	110	91	117	178	76	34	9	74	14	48	19	97	32	53	1887
Dysentery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	2
Erysipelas	12	8	18	9	49	11	7	4	10	5	9	8	14	3	7	—	17	20	31	19	21	15	4	9	10	8	17	7	20	7	24	403
Pulmonary Tuberculosis	43	72	103	84	125	36	19	35	38	26	33	65	57	40	33	12	94	98	201	104	69	53	16	28	50	39	50	36	78	23	20	1780
Tubercular Meningitis	1	6	—	2	1	1	2	—	—	—	1	3	1	1	—	1	4	5	3	1	4	1	—	—	—	—	1	2	1	—	—	42
Tuberculosis of Peritoneum and Intestines	1	2	2	6	3	1	—	2	4	—	—	2	—	1	1	2	4	4	23	4	1	4	1	3	1	—	4	—	5	2	—	83
Tuberculosis of Spinal Column	—	2	1	—	1	—	1	—	1	—	1	1	1	—	—	—	2	3	3	1	2	—	1	—	—	2	1	—	3	—	1	28
Tuberculosis of Joints	1	3	2	4	1	4	1	1	2	1	1	1	2	—	—	1	1	3	3	3	2	2	1	2	—	1	2	—	1	—	—	46
Tuberculosis of Other ... Organs	5	4	6	8	11	1	2	1	10	7	4	5	2	1	2	1	6	9	14	6	1	1	1	3	4	2	4	2	6	3	—	132
Disseminated Tuberculosis	—	1	1	1	3	—	—	1	—	—	—	1	1	1	—	—	—	—	2	1	—	1	—	3	—	—	—	—	1	—	—	18
Encephalitis Lethargica	7	13	16	5	12	6	8	8	10	1	6	18	15	7	26	5	8	12	7	13	11	11	5	5	8	9	6	7	11	2	4	282
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	2	1	1	—	2	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	1	1	1	11
Poliomyelitis	1	—	3	1	4	—	1	1	—	4	—	1	1	—	1	—	3	1	—	3	2	1	1	2	4	—	—	1	3	—	—	39
Polio-encephalitis ...	—	—	2	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	6
Pneumonia	52	151	132	52	114	55	36	31	84	30	22	167	92	59	55	10	168	165	134	206	150	50	29	52	58	33	50	31	77	26	36	2407
Puerperal Fever ...	2	4	6	2	12	4	2	3	4	1	2	3	4	1	3	1	7	7	8	3	2	8	3	2	2	1	5	5	8	3	2	120
Ophthalmia Neonatorum	3	26	21	16	44	7	3	8	4	2	1	12	14	4	2	—	23	35	40	46	32	21	2	2	8	3	9	—	19	6	—	413
Total	244	496	563	307	539	228	151	168	265	208	160	426	351	184	198	80	517	597	683	600	539	318	137	270	299	144	283	168	422	147	277	9969

TABLE VIII.

Temperature of the Air and Ground, Rainfall, Sunshine, and Wind in each Month of the Year 1924.
Observed at the Birmingham and Midland Institute Observatory, Edgbaston,
by Mr. A. J. Kelley.

Month.	Temperature of the Air.						Temperature of the Ground.		Hours of Sunshine.		Rainfall in Inches.		Days on which 0.01 inch or More of Rain Fell.	Miles of Wind.	
	Highest in the Shade.		Lowest in the shade.		Mean for the Month.										
	1924.	Above or below the previous highest. *	1924.	Above or below the previous lowest. *	1924.	Above or below the average. *	Max. at 1 foot deep.	Max. at 4 feet deep.	1924.	Above or below the average. *	1924.	Above or below the average. *		1924.	Above or below the average. *
Jan.	49°	— 9	24°	+ 13	39.5°	+ 1.3	43.0°	44.2°	44	+ 10	2.59	+ 0.55	18	9279	—1170
Feb.	49	— 13	22	+ 14	36.9	— 2.1	42.3	44.1	21	— 28	0.60	— 1.15	11	9474	+ 21
Mar.	59	— 11	25	+ 6	39.5	— 1.7	44.0	42.7	110	+ 35	0.93	— 1.05	10	8067	—2468
Apr.	65	— 14	30	+ 4	44.7	— 0.8	48.0	44.2	105	— 19	3.04	+ 1.35	13	8363	—1169
May	71	— 11	36	+ 5	52.2	+ 0.3	54.7	47.9	129	— 36	4.97	+ 2.90	23	7601	—1219
June	73	— 12	40	+ 2	56.7	— 0.9	59.0	51.2	145	— 9	2.54	+ 0.49	12	6943	—1437
July	84	— 8	45	+ 6	59.3	+ 0.1	62.0	52.9	192	+ 36	3.28	+ 0.83	18	8255	— 62
Aug.	73	— 21	45	+ 4	56.8	— 2.5	57.2	53.0	113	— 34	3.52	+ 0.64	24	7924	— 570
Sept.	66	— 25	43	+ 11	55.7	+ 0.1	56.8	53.0	91	— 20	3.53	+ 1.68	21	10290	+2274
Oct.	70	— 9	34	+ 6	49.6	+ 0.9	52.0	52.1	66	— 10	4.36	+ 1.71	15	8133	— 857
Nov.	56	— 6	29	+ 9	44.5	+ 2.0	48.9	50.0	22	— 24	2.02	— 0.13	12	9077	— 169
Dec.	53	— 4	33	+ 19	43.2	+ 3.8	46.2	48.0	34	+ 12	3.41	+ 0.62	14	10981	+ 393

*In the thirty-seven years 1887-1923.

TABLE IX.

Meteorology and Mortality in each week of the year 1924.

Week.		Total Deaths.	Deaths under 1 year.	Deaths 65 and up.	Deaths from						Temperature of the Air.			of Ground	Horizontal Movement of Air in Miles.	Hours of Sunshine.	Rainfall in Inches
No.	Ending. 1924.				Measles.	Whooping Cough.	Diarrhoea and Enteritis under 2.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Respiratory Diseases.	Highest in Shade.	Lowest in Shade.	Mean of Daily Maxima and Minima.	Highest 4 feet Deep.			
1	Jan. 5	205	21	78	1	1	4	13	1	39	47°	27°	40°	44.2°	1656	7.7	0.76
2	,, 12	222	30	89	—	3	10	19	3	39	48	24	35	44.1	2587	12.4	0.91
3	,, 19	227	34	88	1	1	5	14	4	46	49	27	40	43.7	2432	2.9	0.42
4	,, 26	194	29	64	—	6	—	17	1	37	49	33	42	43.9	1863	10.5	1.24
5	Feb. 2	231	33	88	1	2	4	23	5	53	47	34	42	44.0	1573	17.8	0.01
6	,, 9	241	35	92	1	5	3	19	2	49	49	36	43	44.1	2644	0.5	0.15
7	,, 16	224	31	81	—	8	2	19	2	53	45	25	34	44.1	1751	1.8	0.13
8	,, 23	306	51	110	2	7	4	22	4	85	45	22	35	43.7	2079	6.4	0.04
9	Mar. 1	355	52	128	3	13	2	30	4	105	44	24	34	42.8	2723	11.6	0.43
10	,, 8	405	62	147	1	17	1	26	4	116	45	25	34	42.2	1642	21.5	0.18
11	,, 15	369	55	129	1	5	1	31	2	104	59	29	43	41.8	1564	58.8	0.00
12	,, 22	399	63	130	2	9	1	29	7	118	56	29	40	42.0	1566	19.1	0.24
13	,, 29	361	46	147	2	11	1	21	4	114	55	33	43	42.5	2372	2.8	0.34
14	April 5	285	48	89	—	8	2	18	5	79	47	30	38	42.7	2278	10.8	0.00
15	,, 12	330	47	110	5	9	3	19	3	91	59	30	41	42.2	1455	21.8	0.68
16	,, 19	284	40	95	5	13	3	25	2	48	61	32	46	42.3	1681	39.6	0.37
17	,, 26	245	33	89	2	4	1	25	1	49	65	36	50	43.8	2185	22.4	0.73
18	May 3	248	35	69	4	2	3	37	5	52	57	41	48	44.4	1876	15.8	1.61
19	,, 10	197	28	62	5	2	3	15	3	33	54	36	45	45.0	2117	29.3	0.73
20	,, 17	204	17	77	6	4	2	18	1	28	64	41	53	45.8	1643	45.5	0.32
21	,, 24	189	25	71	3	—	1	12	2	25	65	43	55	46.9	1645	16.4	1.55
22	,, 31	185	22	53	6	3	1	20	1	18	71	44	57	47.9	1640	33.5	2.02
23	June 7	165	22	47	5	1	3	17	—	23	62	43	54	49.0	1399	12.2	1.36
24	,, 14	169	20	49	2	4	3	18	2	21	65	40	55	49.4	2084	36.4	0.52
25	,, 21	145	21	48	2	2	2	15	1	14	70	46	59	50.0	1291	46.2	0.64
26	,, 28	158	15	48	2	6	3	12	5	16	73	46	60	51.0	1421	43.0	0.02
27	July 5	169	19	56	1	—	1	16	4	27	66	45	56	51.2	2687	38.5	0.44
28	,, 12	173	16	63	—	1	3	22	4	17	85	51	64	51.4	1967	61.5	0.01
29	,, 19	144	21	51	1	1	2	11	—	14	73	49	60	52.9	1850	60.8	0.60
30	,, 26	160	18	56	2	3	3	13	1	15	70	48	57	52.8	1584	18.7	0.76
31	Aug. 2	155	14	51	—	2	2	9	2	17	70	47	59	52.5	1523	24.7	2.12
32	,, 9	153	19	48	—	—	2	10	1	15	70	47	58	53.0	1633	38.1	0.39
33	,, 16	157	24	51	2	1	5	17	—	19	73	49	58	53.0	1367	35.8	0.91
34	,, 23	161	20	56	2	—	3	16	2	18	64	45	54	53.0	2289	26.2	0.94
35	,, 30	152	17	48	2	2	1	15	2	8	65	47	55	52.5	1773	7.9	0.61
36	Sept. 6	154	20	60	—	1	5	11	—	22	66	53	59	52.9	1775	8.1	0.05
37	,, 13	148	21	48	—	1	5	14	—	18	66	44	57	53.0	2323	16.9	1.57
38	,, 20	172	21	60	1	3	6	14	1	15	65	45	56	53.0	2799	25.3	0.61
39	,, 27	171	24	49	—	—	7	19	4	17	61	44	52	52.9	2498	29.5	0.90
40	Oct. 4	167	22	42	—	1	6	15	7	19	62	38	52	52.2	1834	19.3	0.40
41	,, 11	164	18	57	—	1	3	9	—	19	58	40	50	51.9	2333	21.8	1.50
42	,, 18	191	26	64	—	2	8	13	—	17	70	40	52	51.4	1154	11.6	0.28
43	,, 25	186	28	55	—	1	7	22	2	29	56	34	46	51.3	1966	18.1	0.85
44	Nov. 1	169	23	53	—	3	5	16	5	23	57	42	50	50.9	2387	7.9	1.99
45	,, 8	187	16	69	1	—	5	21	4	17	56	31	44	50.0	2275	8.1	0.00
46	,, 15	184	20	79	1	—	2	13	1	28	51	41	45	49.2	1693	0.6	0.52
47	,, 22	168	23	64	1	—	4	18	—	28	51	29	42	48.9	1959	2.1	0.20
48	,, 29	169	27	53	—	—	4	9	2	21	54	35	46	48.0	2401	11.2	0.81
49	Dec. 6	166	26	55	—	3	1	10	—	35	53	38	46	48.0	2255	9.9	1.13
50	,, 13	189	28	72	—	2	3	16	3	33	51	33	43	48.0	1776	1.8	0.15
51	,, 20	231	25	83	—	3	5	20	1	39	53	35	44	47.8	2102	8.8	0.41
52	,, 27	175	29	56	2	4	1	20	—	32	51	35	43	47.0	3329	5.9	1.21
53	1925. Jan. 3	223	38	73	1	4	3	11	1	44	54	33	41	46.8	3656	7.4	1.68