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City of Birmingham.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1911.

BIRMINGHAM
HUDSON AND SON, PRINTERS, EDMUND STREET AND LIVERY STREET.

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PUBLIC HEALTH AND HOUSING DEPARTMENT,

THE COUNCIL HOUSE,

BIRMINGHAM,

August, 1912.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND HOUSING COMMITTEE.

GENTLEMEN,

In submitting my report on the health of the people of Birmingham during the year 1911, I desire in this preface to draw attention in the briefest possible manner to some of the advances which are recorded in the latter sections of the report, and at the same time to note what appear to me to be some of the conditions most urgently calling for remedy.

The year 1911 will be memorable in the history of preventive medicine for the passing of the Insurance Act. A large part of the cost of this Act falls upon the State. It is therefore competent for the State to require that such additional information shall be forthcoming as to the incidence of preventable disease as will be most useful for preventing such disease, and will thereby benefit not only the insured persons but the tax-payers in general.

Locally, the most important work accomplished during 1911 was the passing of the Act of Parliament which extended the area of the city from 13,477 acres to 43,537 acres. By far the most important aspect of this extension is the power it gives to properly deal with the provision of really healthy and pleasant dwellings for the people, while at the same time enabling better provision to be made for the commerce of this large city—a point which is frequently overlooked. No city can contemplate the continued emigration of the best of its inhabitants to districts outside its boundary without realising that sooner or later its very existence must be threatened by higher cost of living.

Among the smaller, but none the less important, accomplishments of the year is the success which has followed our anti-tuberculosis work. The volume of work has been small—about 800 patients only having been dealt with—but we have advanced in our methods of dealing with the subject, so that we are now within measurable distance of providing treatment for all who cannot themselves afford it. The people of Birmingham are becoming educated to the necessity of preventing this disease. We are showing them that it can be done in the City quite as efficiently as anywhere else, and they are realising how very important it is to live under healthy conditions.

I am afraid that the first impression given by the "Interim Report on Tuberculosis" is that reliance can be placed on treatment. This is not the case, for at best treatment will cure a few only and prolong the lives of a good many. It is cheaper and better to prevent such a disease than to treat it when it is found. To a large extent the process of prevention must depend on education of the people. We need to begin in the school with healthy class rooms and ample attention to the cleanliness of the children. Housing and workshop conditions can still further be improved, but to a large extent this must be demanded

by the people themselves. The evidence that the people are recognising the value of good houses is everywhere to be seen in Birmingham. It is becoming increasingly difficult to let bad houses to anybody but inefficients as tenants.

We have before us many difficult problems if it is desired to make the people really healthy. Among the most difficult are the dirtiness, the thriftlessness, and the poverty of the poorest part of the community. Many of these are inefficients, and never can be made to compete on equal terms with their fellows. Much is being done for them already, but much more can be done by education for the young on lines suitable to this class and by restrictive legislation, which, while punishing the dirty and thriftless, will in no way hinder the clean and thrifty. For the sake of the clean and the healthy we must restrict the dirty.

Largely on account of conditions of dirtiness and ignorance, our infant mortality rate is too high, and many valuable lives are consequently being sacrificed. Here, also, advancement will probably depend upon better appreciation of what is meant by healthy living. In a City where so many young women enter factories as soon as they leave school it is particularly necessary that evening continuation schools should be made compulsory, with a view to counteracting the very unhealthy influence of the factory on the mothers of the future.

The possibility of prolonging the effective working capacity of the individual is a subject which requires careful consideration. We have endeavoured to prevent death at the earlier ages, but have devoted little attention to combating the prevalent idea that an individual is too old at 50 for any new employment; yet as a nation we have expended much money on the training of each person, and it would appear to be economically a mistake to get so little out of the individual as we do at present.

In this country we have never recognised sufficiently the importance of investigation work in the prevention of disease. There are a very large number of diseases of which it may be said we know nothing of their causation. Without this knowledge little can be done other than to record their incidence. Such a disease is appendicitis, which annually causes a large number of deaths, and brings many people in imminent danger of death—but for the timely assistance of the competent surgeon. Yet we have no idea as to its cause and how to prevent it.

Every year recently has seen new Acts of Parliament passed for the benefit of the community. Nobody welcomes these more than your Committee and their officers. The public, however, do not recognise that nearly every one of these Acts involves some additional expenditure.

The year that has passed has been a difficult and strenuous one for the Staff of the Health Department. The reorganisation consequent on the City extension cast on everyone an obligation to do his best, and I have great pleasure in recording the satisfaction which it has given me to feel that at all times every member has responded to the call of duty in a perfectly exemplary way. From the junior clerks upwards it has seemed as if each considered that the success of the health administration in the Greater Birmingham area depended on his individual effort, and he has risen to the occasion.

To your Committee I would, in submitting this report, desire to say how very much the whole staff appreciates the kindly feeling and assistance you have shown to us.

I am, Gentlemen,

Your obedient Servant,

JOHN ROBERTSON, M.D., B.Sc.

REPORT OF THE MEDICAL OFFICER OF HEALTH

For the Year 1911.

GREATER BIRMINGHAM STATISTICS FOR 1911.

The City was extended on November 9th, 1911, to nearly four times its former area. At the end of this report will be found reports dealing with the Health Statistics of each of the added areas up to November 9th. The main part of this report deals with the old Birmingham area, so that, but for this short section, no record would exist of the added areas for a complete year.

POPULATION.

The preliminary census report shows that the population of Greater Birmingham on April 3rd, 1911, was 840,372.

The constituent parts of Greater Birmingham had the following estimated population on June 30th, 1911 :—

Old Birmingham Area	526,030
Aston	74,985
Erdington	32,500
Handsworth	69,010
King's Norton and Northfield	79,812
Yardley	60,000
Extended City	842,337

It is difficult to obtain accurate figures as to the complete population of other towns, for many are now in the false position in which Birmingham was, prior to the extension. It is safe to say, however, that there are but few larger masses of population in one City administration than is the case in Birmingham.

Among the great Cities of Europe and America the following have larger populations :—

New York	4,983,385	Philadelphia	1,580,250
London	4,521,301	Moscow	1,536,300
Paris	2,847,229	Buenos Aires	1,329,697
Chicago	2,244,835	Hamburg	953,080
Berlin	2,071,940	Rio de Janeiro...	898,699
Vienna	2,047,968	Budapest	890,430
St. Petersburg	1,661,500	Birmingham	842,337

It may be noted that while Birmingham only stands twelfth in the mass of its population, but few of the cities mentioned above have such complete control of their own development as occurs in Birmingham. In a large number, the area under one control is considerably less. Everything appears, therefore, to favour really wholesome development here, as compared with many of the other towns. It is an enormous advantage to have so large an area to operate over in the immediate future, and it is hoped that close attention will be given to the newer areas, both as regards their roads, their houses, the means of transit, and the facilities for manufacturers to carry on their businesses.

BIRTHS.

The statistics of our City show that it is one of the healthiest manufacturing cities in the world. This is probably largely due to the extent to which the people are spread, giving each individual a relatively large area.

Birmingham, like other places, is restricting its birth-rate. Last year in Greater Birmingham, the rate was 26·1. The mean rate in the old city in 1871-1880 was 40·7 per 1,000 of the population; last year (1911) it was 28·0 per 1,000, a decrease of nearly 32%. The added areas show a similar change.

During 1911 the birth-rates in the old and new parts of the City were as follows:—

Old Area of Birmingham	28·0 per 1,000.
Aston Manor	27·3 ,,
Erdington	21·0 ,,
Handsworth	20·9 ,,
King's Norton and Northfield	21·8 ,,
Yardley	23·3 ,,

The decline in the birth-rate which is evident in Birmingham, is everywhere prevalent in this country. The causes in operation in producing this decline are of great national importance. The following figures, taken from the Registrar-General's Annual Summary, show the birth-rates in most of the European and American towns which have a population of over 500,000.

London	24·8 per 1,000.	Vienna...	20·0 per 1,000.
Greater Birmingham ...	26·1 ,,	St. Petersburg ...	28·2 ,,
Liverpool	30·2 ,,	Moscow	35·2 ,,
Manchester	26·2 ,,	Hamburg	21·7 ,,
Glasgow	27·7 ,,	Dresden	20·1 ,,
New York	27·0 ,,	Breslau	26·9 ,,
Rio de Janeiro	27·4 ,,	Munich	22·3 ,,
Buenos Aires	35·2 ,,	Budapest	25·3 ,,
Paris	17·2 ,,	Milan	23·8 ,,
Brussels	17·1 ,,	Rome	25·4 ,,
Berlin	20·8 ,,	Amsterdam	22·7 ,,

DEATHS.

The death-rate of Greater Birmingham for 1911 was 15·0 per 1,000 of the population.

The mean death-rate for the five years, 1907-1911, was 14·7 per 1,000.

In certain of the great towns of Europe and America the death rates for 1911 were as follows:—

London	15·0	Brussels	13·9
Birmingham	15·0	Berlin	15·6
Liverpool	20·0	Vienna	16·4
Manchester	17·0	St. Petersburg	20·8
Glasgow	17·7	Moscow	27·2
New York	15·1	Hamburg	14·7
Chicago	14·6	Dresden	14·6
Philadelphia	16·5	Breslau	19·5
Boston	17·1	Munich	15·8
Baltimore	17·5	Budapest	19·4
Rio de Janeiro	24·4	Milan	20·1
Buenos Aires	16·8	Rome	16·2
Paris	17·2	Amsterdam	12·4

If further comparison is made with other smaller manufacturing towns in England or on the Continent, the relatively good position of Birmingham only becomes the more evident.

INFANT MORTALITY.

Infant mortality in a working class community is usually high. Last year in Greater Birmingham it was 150 per 1,000 births.

For the five years ending December 31st, 1911, it was 129 per 1,000 births.

In the European and American cities already referred to the infant mortality rates were as follows for the year 1911 :—

London	129	Vienna	166
Birmingham	150	St. Petersburg	231
Liverpool	154	Moscow	321
Manchester	154	Hamburg	158
Glasgow	139	Dresden	166
New York	112	Breslau	207
Rio de Janeiro	182	Munich	176
Buenos Aires	105	Budapest	161
Paris	118	Rome	135
Brussels	137	Amsterdam	91
Berlin	173		

TYPHOID FEVER AND PHTHISIS.

To enable further comparison to be made, it will suffice to give the mortality rates for two other diseases—Typhoid Fever and Phthisis.

	Typhoid Fever.	Phthisis.
London	0·03	1·35
Birmingham	0·04	1·14
Liverpool	0·04	1·69
Manchester	0·07	1·56
Glasgow	0·08	1·28
New York	0·11	1·80
Chicago	0·11	1·68†
Philadelphia	0·14	1·83
Boston	0·09	1·55
Rio de Janeiro	0·05	3·66
Paris	0·13	3·43
Brussels	0·08	—
Berlin	0·03	1·68
Vienna	0·02	2·66
St. Petersburg	0·35	2·67
Moscow	0·14	2·47
Hamburg	0·05	1·25
Dresden	0·05	1·77
Breslau	0·05	2·42
Munich	0·02	1·93
Budapest	0·17	3·32
Milan	0·38	2·03
Amsterdam	0·05	1·35

† Tuberculosis (all forms).

STATISTICS FOR THE OLD CITY FOR 1911.

Having given the preceding brief comparative review of the statistics for Greater Birmingham, the portion which follows will deal with the vital statistics for that part of the City which was under the control of the Health Committee during the whole year, viz.: the area which formed the old City. As regards administrative work, however, the figures given will apply to the old City for the entire year, and to the added area from November 8th to December 31st, 1911.

POPULATION.

There is now available the preliminary Census Report.

Our local estimate of the population of the Old Birmingham area on June 30th, 1911, was 537,500

The estimate of the Registrar-General was 575,545

The numbers living in the City calculated from the Census Returns was 526,030

The error in the local estimate was so small that rates of mortality calculated from it would have been practically correct.

The local estimate is based upon the fact that in different areas of the City the number of persons per inhabited house is by no means the same, but remains fairly constant for the particular area during a term of years. It is only necessary to have an accurate return of the inhabited houses for each district and to multiply this by the number of persons per house found at the last Census to obtain a fairly accurate estimate of the population.

In order to avoid discrepancy between the local figures and those issued weekly by the Registrar-General, it has been the custom in the past to adopt the Registrar-General's estimate of the population. In future, however, whenever our local estimate differs materially from the Registrar-General's, the local figures should be used.

OCCUPIED HOUSES.

The table on the next page gives the number of occupied houses in each of the old wards for 16 years. It indicates very clearly the areas where growth of population is taking place, as also the areas where the number of houses are diminishing.

In eleven wards there were on March 31st, 1911, 5,192 fewer occupied houses than on the same date in 1898. In the remaining seven wards there were 17,447 houses which did not exist in 1896.

At the bottom of the table of occupied houses will be found the yearly percentage addition in houses to the old City as a whole.

In 1910 the added houses numbered 1,989; in 1911 the number was only 389.

WARD POPULATIONS AND AREAS.

The following table shows the area, estimated population, and persons per acre in each of the old wards, based on the number of occupied houses.

Ward.	Area in Acres.	Population 1911.*	Person per Acre.
Rotton Park	1,233	48,567	39·4
All Saints'	532	42,774	80·4
Ladywood	249	23,200	93·2
St. Paul's	264	13,742	52·1
St. George's	120	19,004	158·4
St. Stephen's	169	21,232	125·6
St. Mary's	184	11,917	64·8
St. Bartholomew's	313	21,407	68·4
Market Hall	229	8,095	35·3
St. Thomas's	179	16,258	90·8
St. Martin's	468	21,891	46·8
Edgbaston and Harborne ...	4,245	33,797	8·0
Deritend	279	21,557	77·3
Bordesley	1,387	63,529	45·8
Duddeston	299	20,936	70·0
Nechells	512	31,868	62·2
Balsall Heath	463	39,532	85·4
Saltley	2,352	61,837	26·3

* Exclusive of large Institutions.

In the whole City the estimated population was 526,030, spread over an area of 13,477 acres, giving an average of 39·0 persons per acre. It will be noticed that in the old wards the density varied from 8 to 158 persons per acre.

Occupied Houses.

Ward.	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Increase or Decrease in 16 years, 1896–1911.
Rotton Park ...	8354	8615	8739	9079	9442	10199	10041	10215	10383	10573	10761	11065	11028	10767	10819	10799	+2445
All Saints' ...	7827	7853	8075	8549	9028	8847	8939	8996	9195	9024	9084	9393	9311	9243	9381	9332	+1505
Ladywood ...	5703	5692	5605	5639	5645	5627	5634	5662	5669	5570	5539	5564	5561	5438	5464	5314	— 389
St. Paul's ...	3762	3718	3688	3650	3630	3187	3316	3318	3341	3314	3217	3088	3009	2825	2964	2994	— 768
St. George's ...	4577	4572	4585	4670	4632	4572	4623	4618	4621	4604	4627	4543	4401	4240	4330	4390	— 187
St. Stephen's	4749	4741	4864	4913	4882	4963	4952	4962	4930	4861	4809	4859	4683	4598	4524	4537	— 212
St. Mary's ...	3174	3262	3205	3230	3237	3308	3325	3378	3297	3233	2888	2783	2480	2569	2613	2540	— 634
S. Barth'mew's	5195	5134	5119	5315	5326	5297	5301	5241	5089	4884	4865	4545	4489	4347	4399	4321	— 874
Market Hall ...	2429	2363	2362	2372	2335	2109	2094	2075	2005	1980	2068	1954	1929	1920	1840	1837	— 592
St. Thomas's ...	4050	4056	4030	4088	4170	4201	4067	4061	4106	4062	3958	3799	3816	3775	3743	3645	— 405
St. Martin's ...	5150	5163	5170	5216	5260	5220	5250	5233	5331	5373	5213	5254	5109	4946	4975	4878	— 272
Edgbaston and Harborne ...	5734	5863	6056	6289	6373	6386	6473	6496	6491	6432	6801	6891	6825	6868	7199	*7157	+*1423
Deritend ...	5269	5305	5415	5370	5248	5232	5194	5101	5118	5026	5036	4911	4819	4632	4612	4673	— 596
Bordesley ...	9412	10231	10869	11179	11514	11703	11907	12168	11905	12519	12809	13069	13280	13277	13467	13882	+4470
Duddeston ...	4795	4921	5240	5082	5132	5060	5026	4977	4958	4946	4847	4873	4688	4588	4596	4532	— 263
Nechells ...	6757	6771	6869	7036	7021	7012	6955	7023	6947	6841	7020	6732	6821	6712	6719	6785	+ 28
Balsall Heath	8200	8250	8419	8547	8650	8700	8750	8825	9000	9061	9183	9029	9027	9030	9038	9043	843
Saltley... ...	5720	6188	6764	7242	8053	8340	8715	8960	9223	9333	10019	10557	10634	10959	12040	12453	6733
City ...	100857	102698	105074	107466	109578	109963	110562	111309	111609	111636	112744	112909	111910	110734	112723	113112	+12255
Increase or Decrease on previous year ...		+1841	+2376	+ 2392	+2112	+ 385	+ 599	+ 747	+ 300	+ 27	+1108	+ 165	— 999	—1176	+1989	+ 389	
Percentage ...		+1·82	+2·32	+ 2·28	+ 1·97	+ 0·35	+ 0·55	+ 0·68	+ 0·27	+ 0·02	+ 0·99	+ 0·15	— 0·88	— 1·05	+ 1·80	+ 0·35	

* Including Quinton.

MARRIAGES.

The number of marriages recorded in the old City area in 1911 was 5,027, an increase of 185 over 1910.

The number of persons married is equal to a rate of 19·2 per 1,000 of the population.

The rates during the past ten years have been as follows:—

1902	... ...	19·3	
1903	... ...	18·7	
1904	... ...	17·7	
1905	... ...	18·2	
1906	... ...	18·9	
1907	... ...	19·7	
1908	... ...	17·7	
1909	... ...	17·2	
1910	... ...	18·5	
1911	... ...	19·2	

BIRTHS.

There were 14,704 births recorded during the year as compared with 14,898 in 1910, 14,985 in 1909, 16,141 in 1908, and 15,619 in 1907. The birth-rate for the year was 28·0 per 1,000. This is the lowest yet recorded, as will be seen from the following figures:—

	Birmingham.	England and Wales.		Birmingham.	England and Wales.
1871—1875	40·4	35·5	1906	30·7	27·2
1876—1880	41·0	35·3	1907	29·9	26·5
1881—1885	36·1	33·5	1908	30·3	26·7
1886—1890	32·9	31·4	1909	28·6	25·8
1891—1895	32·7	30·5	1910	28·4	25·1
1896—1900	33·3	29·3	1911	28·0	24·4
1901—1905	31·9	28·2			

The birth-rate in England and Wales was also a low one. In the towns having a population of over 200,000 the birth-rate during 1911 was as follows:—

	Birth rate per 1,000.		Birth-rate per 1,000.
London	24·8	Bradford	19·0
Liverpool	30·2	Newcastle	26·6
Manchester	26·2	Hull	28·6
Birmingham	28·0	Nottingham	24·5
Leeds	23·8	Leicester	22·7
Sheffield	27·8	Stoke-on-Trent	31·5
Bristol	21·8	Salford	27·2
West Ham	30·0	Portsmouth	25·0

The birth-rates in the different wards of the City during the last eight years are set out below:—

Birth-rates in Wards.

	1904	1905	1906	1907	1908	1909	1910	1911
Rotton Park	31·7	28·3	28·7	25·2	27·6	26·3	25·8	26·4
All Saints'	32·5	32·1	31·6	30·8	31·7	29·3	30·4	28·4
Ladywood	32·5	28·9	30·5	29·4	30·5	29·4	28·6	29·3
St. Paul's	27·6	26·1	26·1	24·5	26.5	23·6	23·2	24·5
St. George's	37·7	33;9	34·9	34·3	35·8	36·6	34·3	33·4
St. Stephen's	37·8	34·8	36·9	35·0	35·5	35·0	35·4	35·5
St. Mary's	26·9	27·2	29·9	27·6	32·7	29·2	27·6	29·0
St. Bartholomew's	37·4	34·6	33·8	35·8	34·0	36·2	31·7	32·7
Market Hall	21·6	23·8	19·6	16·9	16·3	16·4	15·2	12·5
St. Thomas's	31·6	29·5	30·8	32·8	32·6	31·3	30·5	29·1
St. Martin's	28·7	24·4	26·0	25·9	26·4	25·6	23·1	24·1
Edgbaston and Harborne ...	19·4	19·7	18·6	19·2	20·6	18·4	19·5	18·6
Deritend	35·3	34·9	34·8	34·3	35·6	33·6	33·2	33·8
Bordesley	30·8	27·5	26·6	27·2	26·4	25·1	24·7	24·3
Duddeston	37·2	33·8	37·3	34·5	36·8	32·3	33·7	34·3
Nechells	36·3	36·3	36·1	36·4	38·1	34·5	34·8	37·0
Balsall Heath	27·1	27·0	24·3	25·8	26·9	24·4	23·9	23·3
Saltley	35·0	32·2	32·6	29·3	31·7	28·4	26·3	27·5

The low rate in Market Hall is due to the fact that this ward has but a small residential population, among whom there are many caretakers without families and a considerable number of unmarried shop assistants. To some extent the variations in the death-rate in the other wards are doubtless due also to the differences in the age and sex constitution of the population.

NOTIFICATION OF BIRTHS ACT, 1907.

Under this Act there were 15,086 births reported during 1911, of which 462 were still-births, *i.e.*, 3·1 per cent.

The actual number of the babies visited during 1911 was 10,290 or 68%. In 1910 the percentage visited was 82%.

The total number of births registered in the old City during 1911 was 14,704 and 917 of these had not been notified in accordance with the Act. This gives 6·2 as the percentage of defaulters. The same system of dealing with these defaulters as in previous years has been continued.

DEATHS.

The deaths of 8,892 persons were recorded during 1911. This is equal to a mortality-rate of 17·0 per 1,000, as compared with 14·8 in the previous year. The increased mortality is accounted for by the large number of deaths from summer diarrhœa, which resulted indirectly from the very hot weather.

The death-rate for each year since our records commenced is set out below :—

	Death-rate per 1,000.			Death-rate per 1,000.	
1871	24·9		1891	21·7	
1872	23·1		1892	20·0	
1873	24·8	Average 25·2	1893	21·5	Average 20·3
1874	26·8		1894	18·2	
1875	26·3		1895	19·9	
1876	22·4		1896	20·4	
1877	23·9		1897	21·1	
1878	25·2	Average 22·8	1898	19·5	Average 20·5
1879	21·8		1899	20·5	
1880	20·5		1900	21·0	
1881	19·8		1901	20·0	
1882	20·8		1902	18·2	
1883	21·4	Average 20·7	1903	17·5	Average 18·4
1884	21·6		1904	19·8	
1885	19·8		1905	16·7	
1886	20·5		1906	17·5	
1887	20·4		1907	17·0	
1888	18·6	Average 20·2	1908	16·9	Average 16·6
1889	19·7		1909	16·6	
1890	22·0		1910	14·8	
			1911	17·0	

The comparative figures for Birmingham and England and Wales are as follows :—

	Birmingham.	England and Wales.
1871—1875	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	18·4	16·0
1906—1910	16·6	14·7
1911	17·0	14·6

In the next table will be found the comparative death-rates of other towns having a population of over 200,000. It is found that mortality varies so much at different ages and among the two sexes that unless the number of people at each age group, and of each sex, corresponds exactly, any comparison is rendered inaccurate.

The Registrar-General has, therefore, made a correction for the differences in the age and sex constitution of the population, and in the following table both the corrected and uncorrected rates are shown :—

	Crude Death-rate.		Corrected Death-rate.	
	Average 1906-10.	1911.	Average 1906-10.	1911.
Leicester	13·80	13·29	14·73	14·18
Portsmouth	14·06	14·05	14·44	14·43
Bristol	13·86	15·12	14·24	15·53
London	14·88	15·04	15·64	15·81
Bradford	15·32	14·89	16·93	16·46
West Ham	15·54	15·77	16·62	16·87
Nottingham	16·24	16·06	17·11	16·92
Hull	16·10	16·67	16·50	17·09
Newcastle	16·50	16·11	17·77	17·35
Sheffield...	16·30	16·12	17·57	17·37
Leeds	16·00	16·37	17·45	17·86
Birmingham	16·62	16·78	17·88	18·05
Salford	18·22	16·65	20·13	18·39
Manchester	18·12	16·99	26·18	18·92
Liverpool	19·60	19·96	20·98	21·36
Stoke-on-Trent	18·48	19·89	19·94	21·46

DEATH-RATES IN WARDS.

The year 1911 was by reason of having a long, dry, and very hot summer, a year of high mortality. Particularly was the mortality in the poorer parts of the City inflated in this way.

The death-rates in each ward for the past five years are set out below, and also the average of these five years :—

Wards.	Death-rate per 1,000.					
	1907.	1908.	1909.	1910.	1911.	Average 1907-11.
Rotton Park	13·3	12·7	13·3	11·2	13·8	12·9
All Saints'	14·1	15·6	14·1	13·2	15·2	14·4
Ladywood	15·7	15·9	16·9	14·6	17·6	16·1
St. Paul's	17·1	17·9	17·9	15·4	17·6	17·2
St. George's	19·3	22·1	20·6	15·7	19·7	19·5
St. Stephen's	21·2	23·1	23·2	18·7	22·7	21·8
St. Mary's	21·4	25·9	25·2	21·3	25·4	23·8
St. Bartholomew's ...	23·6	23·8	23·3	21·0	24·2	23·2
Market Hall	17·1	16·0	14·6	11·2	13·6	14·5
St. Thomas's	18·3	17·8	18·7	16·8	18·9	18·1
St. Martin's	16·4	16·0	16·8	14·2	17·1	16·1
Edgbaston and Harborne	11·9	11·0	10·9	10·5	12·3	11·3
Deritend	21·3	20·8	20·3	19·8	23·0	21·0
Bordesley	12·9	12·5	11·9	11·1	12·8	12·2
Duddeston	20·7	20·8	20·3	17·0	21·2	20·0
Nechells	20·5	20·6	19·2	17·4	20·2	19·6
Balsall Heath	13·6	13·7	14·0	11·8	12·8	13·2
Saltley	13·0	13·6	12·3	11·0	12·6	12·5
Whole City	16·1	15·9	15·5	13·7	17·0	15·6

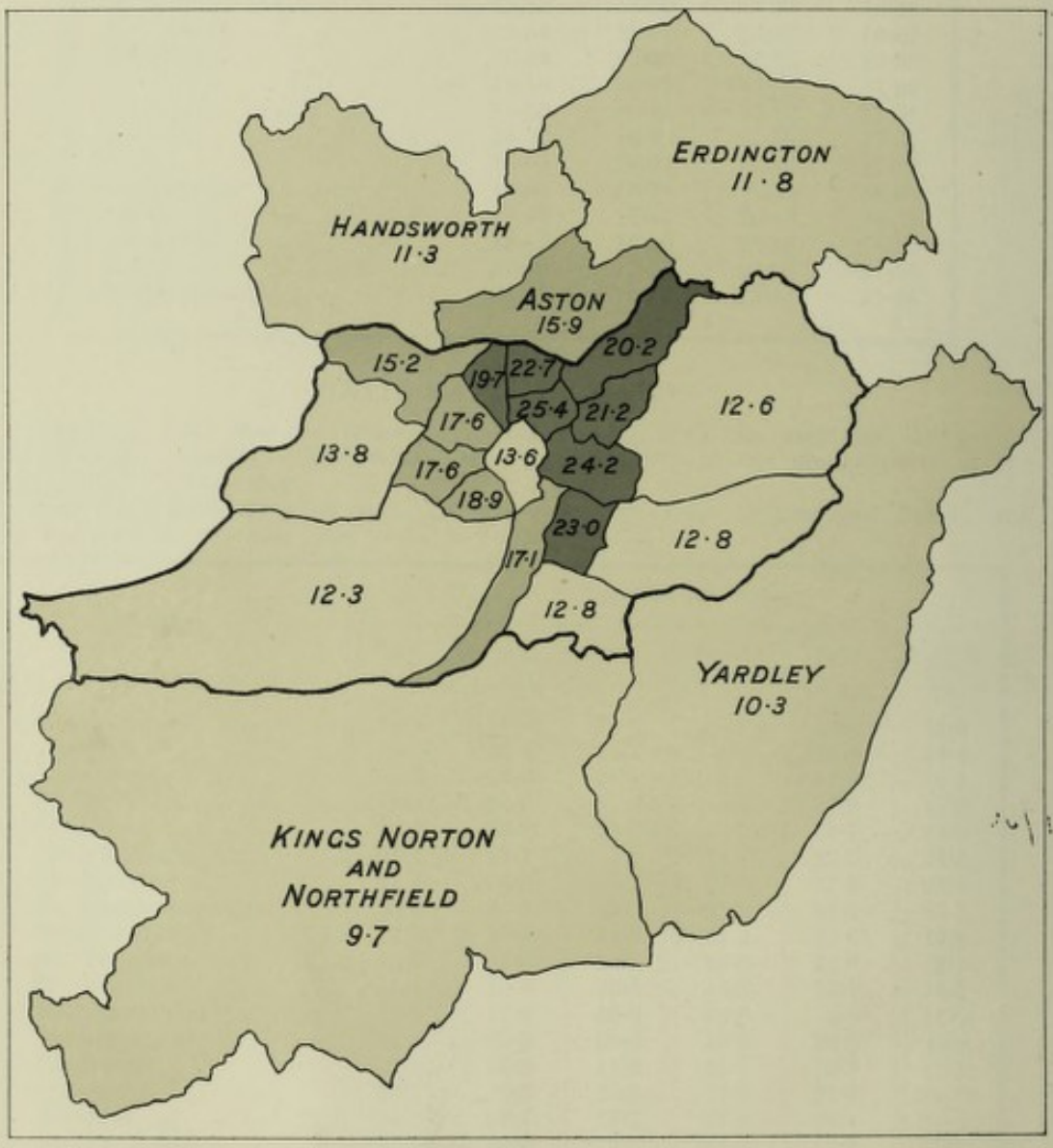
It will be noted that the mortality was highest in St. Mary's (25·4); St. Bartholomew's (24·2); and Deritend, (23·0). It was lowest in Edgbaston (12·3); Saltley, (12·6); and Balsall Heath and Bordesley, (12·8).

The death-rate was nearly double in the three first mentioned wards (with a population of over 54,000) what was recorded in the latter four wards (with a population of over 198,000).

CHART No. 1.

GREATER BIRMINGHAM.

DEATH-RATE UNDER 14 PER 1,000 ☐ 14 TO 19 ▒ 19 UPWARDS ■



WARDS IN OLD CITY.

EDGBASTON AND HARBORNE	12·3	ST. PAUL'S	17·6
SALTLEY	12·6	ST. THOMAS'	18·9
BALSALL HEATH	12·8	ST. GEORGE'S	19·7
BORDESLEY	12·8	NECHELLS	20·2
MARKET HALL	13·6	DUDDESTON	21·2
ROTTON PARK	13·8	ST. STEPHEN'S	22·7
ALL SAINTS'	15·2	DERITEND	23·0
ST. MARTIN'S	17·1	ST. BARTHOLOMEW'S	24·2
LADYWOOD	17·6	ST. MARY'S	25·4

If the mortality from diarrhœa and enteritis is deducted from the total mortality, the rate in each ward is as follows :—

Wards.	Total Death-rate less Diarrhœa and Enteritis Death-rate.
Rotton Park	12·3
All Saints'	13·2
Ladywood	15·0
St. Paul's	15·3
St. George's	16·9
St. Stephen's	19·6
St. Mary's	21·8
St. Bartholomew's	20·8
Market Hall	12·7
St. Thomas's	17·0
St. Martin's	15·3
Edgbaston and Harborne	11·5
Deritend	20·0
Bordesley	11.5
Duddeston	18·0
Nechells	17·3
Balsall Heath	11·7
Saltley	11·5
Whole City	15·0

The chart on the opposite page shows the areas in the City where the death-rate was highest during 1911, the darkest colour representing the area with the largest death-rate.

INFANT MORTALITY.

The number of infants who died in the old area of Birmingham was 2,412; in the added area between November 9th and December 31st, it was 115. The infant mortality rates in the old City and in England and Wales since 1871 are set out in the following table, which shows, in addition, the five-yearly averages.

	Birmingham.		England and Wales.	
1871 ...	190		158	
1872 ...	166		150	
1873 ...	181	Average 182	149	Average 153
1874 ...	178		151	
1875 ...	196		158	
1876 ...	160		146	
1877 ...	164		136	
1878 ...	170	„ 164	152	„ 145
1879 ...	150		135	
1880 ...	178		153	
1881 ...	150		130	
1882 ...	165		141	
1883 ...	159	„ 161	137	„ 139
1884 ...	174		147	
1885 ...	157		138	
1886 ...	176		149	
1887 ...	178		145	
1888 ...	154	„ 173	136	„ 145
1889 ...	171		144	
1890 ...	184		151	
1891 ...	171		149	
1892 ...	166		148	
1893 ...	198	„ 176	159	„ 151
1894 ...	164		137	
1895 ...	182		161	
1896 ...	197		148	
1897 ...	214		156	
1898 ...	190	199	160	„ 156
1899 ...	193		163	
1900 ...	199		154	

	Birmingham.		England and Wales.	
1901 ...	188		151	
1902 ...	157		133	
1903 ...	158	Average 171	132	Average 138
1904 ...	195		145	
1905 ...	155		128	
1906 ...	168		132	
1907 ...	147		118	
1908 ...	145	,, 145	120	,, 117
1909 ...	135		109	
1910 ...	130		105	
1911 ...	164		130	

In the next table is shown the infant mortality rate during each quarter of the past ten years, together with certain averages :—

YEAR.	INFANT MORTALITY RATE.					Meteorological Observations (3rd Quarter).	
	Whole Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Mean Temperature of soil (4ft. deep).	Total Rainfall.
1901	188	156	139	268	191	54·8	5·91
1902	157	161	146	143	178	52·8	7·51
1903	158	143	129	171	184	52·0	9·85
1904	195	172	152	274	185	54·1	5·75
1905	155	136	136	200	149	54·1	7·33
1906	168	141	139	259	145	54·0	2·97
1907	147	157	126	124	184	52·2	6·08
1908	145	134	118	184	145	52·9	6·94
1909	135	154	104	145	138	52·3	7·64
1910	130	142	105	107	166	52·3	8·24
Average of ten years	158	150	129	187	166	53·1	6·82
1911	164	129	111	269	149	55·5	3·27
Percentage Increase or Decrease in 1911 ...	+ 5·1	— 14·0	— 14·0	+ 43·9	— 10·2		

It will be noted from the above table how very high the infant mortality was during the third quarter of the year. The general causes of the deaths of infants under one year old in Birmingham are set out below :—

Deaths of Infants under one year old.

Causes of Death.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1901.	1911.
Measles	37	50	47	40	46	81	13	108	7	63
Whooping Cough ...	122	37	210	72	105	63	121	54	95	39
Diarrhœa	327	462	764	364	667	188	364	183	149	538
Enteritis	78	84	92	126	151	116	128	99	125	196
Tuberculous Diseases	98	111	93	75	54	70	58	40	56	51
Premature Birth ...	361	365	377	304	321	318	338	318	331	362
Debility and Marasmus	562	531	569	536	453	458	457	391	335	399
Convulsions	172	119	144	128	98	120	104	79	99	87
Bronchitis, Pneumonia, and Pleurisy ...	409	413	505	380	356	441	335	314	324	285
Suffocation	70	95	96	75	85	78	87	61	87	70
All other causes ...	445	401	405	351	350	367	334	383	329	322
Total	2681	2668	3302	2451	2686	2300	2339	2030	1937	2412

It will be seen that diarrhœa and enteritis cause nearly one-quarter of the whole deaths.

The deaths of infants from various causes and at different ages are set out in the accompanying table. It will be noticed that no less than 696 deaths occurred before the infants reached the age of one month.

Infantile Mortality During the Year 1911.

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

CAUSE OF DEATH.	WEEKS.				Total under 1 Month.	MONTHS.											Total Deaths under One Year.
	0	1	2	3		1	2	3	4	5	6	7	8	9	10	11	
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	1	1	—	3	—	—	1	5	6	8	17	12	10	63
Scarlet Fever	—	—	—	—	—	—	—	—	—	1	—	1	2	—	—	1	5
Diphtheria, Croup	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	3	5
Whooping Cough	—	—	1	—	1	2	2	3	1	4	4	10	3	1	4	4	39
Diarrhœa, all forms	3	2	5	13	23	47	69	63	64	38	59	51	38	30	36	20	538
Enteritis (not Tuberculous) ...	1	2	7	2	12	21	25	25	18	16	15	17	11	13	8	15	196
Gastritis	1	2	1	3	7	6	7	5	3	5	1	2	1	4	2	2	45
Premature Birth	243	36	31	22	332	21	6	1	1	—	—	—	—	1	—	—	362
Congenital Debility & Defects	114	34	36	18	202	32	8	5	5	1	2	—	—	3	—	—	258
Injury at Birth...	12	—	—	—	12	—	—	—	—	—	—	—	—	—	—	—	12
Want of Breast-milk	—	1	1	—	2	6	—	—	—	3	1	—	—	—	—	—	12
Atrophy, Debility, Marasmus	—	—	—	—	—	42	45	29	31	11	15	11	15	11	11	8	229
Tuberculous Meningitis ...	—	—	—	—	—	—	—	—	2	—	3	—	—	1	3	2	11
Tuberculous Peritonitis, Tabes Mesenterica	—	—	—	—	—	4	3	4	2	—	1	1	3	2	3	2	25
Other Tuberculous Diseases ...	—	—	—	—	—	—	1	2	—	1	2	—	4	2	1	2	15
Erysipelas	—	—	1	—	1	—	—	—	—	2	—	—	—	—	—	—	3
Syphilis	—	1	3	1	5	4	2	2	1	1	—	—	—	—	—	2	17
Rickets	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—	1	4
Meningitis (not Tuberculous)...	—	1	—	—	1	6	3	3	3	6	1	2	3	9	4	2	43
Convulsions	16	2	8	4	30	10	9	8	6	5	6	5	2	2	3	1	87
Bronchitis	—	5	7	3	15	19	16	14	9	4	11	12	9	11	8	9	137
Laryngitis	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	3
Pneumonia	—	1	—	2	3	9	12	10	12	12	15	19	16	12	16	12	148
Suffocation, overlaying ...	4	2	8	2	16	20	10	10	3	1	1	2	1	—	—	—	64
Other causes	15	9	6	3	33	10	3	6	3	6	9	6	4	5	3	3	91
	409	98	115	74	696	259	224	190	165	119	152	145	122	125	115	100	2412

The parts of the City in which the mortality rate was highest may be seen from the table which follows :—

Infant Mortality in Wards.

WARDS.	Infantile Mortality Rate per 1,000 Births.							Percentage Increase or Decrease in 1911, compared with the 5 years 1906-1910.
	1905.	1906.	1907.	1908.	1909.	1910.	1911.	
Rotton Park ...	134	136	135	117	116	100	144	+ 19
All Saints' ...	126	166	129	135	111	113	156	+ 19
Ladywood ...	160	157	133	118	128	123	187	+ 42
St. Paul's ...	138	185	158	201	182	180	249	+ 38
St. George's ...	151	161	150	169	166	140	191	+ 22
St. Stephen's ...	177	222	199	214	211	163	200	— 1
St. Mary's ...	201	207	200	208	208	202	299	+ 46
St. Bartholomew's	207	268	198	201	155	201	207	+ 1
Market Hall ...	186	195	199	208	139	148	178	—
St. Thomas's ...	164	199	135	153	157	152	171	+ 8
St. Martin's ...	179	185	160	137	146	148	178	+ 15
Edgbaston and Harborne ...	131	117	100	93	99	74	105	+ 8
Deritend	205	201	179	159	141	177	183	+ 7
Bordesley	131	132	119	107	94	106	126	+ 13
Duddeston ...	171	158	171	174	167	150	177	+ 8
Nechells	161	192	166	171	158	156	178	+ 5
Balsall Heath ...	113	117	98	104	109	86	110	+ 7
Saltley	140	130	125	105	107	99	134	+ 19
City	155	168	147	145	135	130	164	+ 13

Comparative statistics for the old Birmingham area and other large towns are shown below :—

Infantile Mortality in large Towns.

	1911.	Average 1906-1910.	Percentage above or below Average.
London	129	114	+ 13
Liverpool	154	148	+ 4
Manchester	154	146	+ 5
Birmingham	164	145	+ 13
Leeds	158	134	+ 18
Sheffield	140	138	+ 1
Bristol	141	109	+ 29
West Ham	141	127	+ 11
Bradford	138	132	+ 5
Newcastle	136	130	+ 5
Hull	155	136	+ 14
Nottingham	162	152	+ 7
Leicester	132	137	— 4
Stoke-on-Trent	202	165	+ 22
Salford	149	134	+ 11
Portsmouth	126	110	+ 15

In the report for 1910 note was made of the various agencies in operation in Birmingham for the prevention of infantile mortality. Nearly all of these agencies have recognised fully the necessity for increased vigilance during the hot months of the year, and it is probably largely due to the energy which they displayed that the exceptional summer did not produce an even greater mortality. Special reference was made to these in the report on the health of the City of Birmingham for the third quarter of 1911.

At the end of this report will be found a special report, issued in February, on the mortality in St. Stephen's and St. George's wards.

INFECTIOUS DISEASES.

There were 1,287 deaths recorded from the seven principal zymotic diseases during 1911, as compared with 640 in the previous year, 1,140 in 1909, and 1,077 in 1908. In 1906 there were 1,521. The rate of mortality for this group of diseases was 2·45 per thousand of the population, as compared with 1·22 in 1910, and 2·18 in 1909. The following comparative statement shows the deaths from each cause during 1911 and during the ten preceding years :—

Disease.	1911.	Average 1901–1910.	Above or below Average.
Smallpox	1	2	− 1
Measles	305	231	+ 74
Scarlet Fever	62	113	− 51
Diphtheria	70	101	− 31
Whooping Cough	103	233	−130
Typhoid Fever	27	53	− 26
Diarrhœa	719	523	+196

It will be noticed that two of the diseases in the table caused a much higher mortality than usual, namely, measles and diarrhœa. All the other diseases mentioned were less prevalent than they usually are.

SMALLPOX.

One case of this disease occurred during the year. It was that of a woman living in one of the poorest quarters of the town. Although every effort was made to trace the source of infection, nothing could be ascertained connecting her illness with that of any other case of the same disease. The other members of the household were isolated at the Yardley Road Hospital, and every possible precaution was taken to prevent the spread of infection. Happily the measures taken proved successful, no further case of the disease being notified. It may be noted that this is the only case of smallpox which has occurred in the City since the year 1905. In the earlier years of sanitary administration, it was not uncommon for the disease to cause many hundreds of deaths in a single year.

VACCINATION.

The following figures supplied to me by the Vaccination Officers show the number of children vaccinated during the year ending June 30th, 1911 :—

Births returned	14,849
Conscientious objections ...	664 or 4·5% of total.
Died unvaccinated	1,495
Successfully vaccinated ...	10,990 or 82·3% of survivors.
Postponed by medical advice	156 or 1·2% ,,
Removed to other districts ...	181 or 1·4% ,,
Lost sight of	1,097 or 8·2% ,,
Still under notice	218 or 1·6% ,,

In the previous year the percentage of children successfully vaccinated was 83·6.

MEASLES.

The deaths from measles numbered no less than 305, which is amongst the highest figures for this disease in our records. The following statement shows the number of deaths from measles in each quarter as well as in each complete year since 1892 :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
1892	59	172	67	42	340
1893	8	9	8	23	48
1894	77	204	34	1	316
1895	—	1	3	129	133
1896*	203	58	21	28	310
1897	25	96	152	141	414
1898	83	35	25	39	182
1899	36	38	60	62	196

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
1900	46	34	21	29	130
1901	49	90	98	63	300
1902*	66	39	35	49	189
1903	57	68	23	47	195
1904	87	71	25	24	207
1905	41	71	61	66	239
1906	50	72	45	60	227
1907	134	155	26	8	323
1908*	7	6	3	47	63
1909	367	136	22	2	527
1910	—	3	—	38	41
1911	212	81	2	10	305

* 53 weeks.

It will be noticed that the mortality varies enormously from quarter to quarter. All cases of measles coming to the notice of the elementary school teachers are reported to the Public Health Department, and a visit is paid to each house by one of the Health Visitors. Last year no less than 5,229 visits were paid, and even this large number does not, of course, nearly represent the total numbers of families attacked by the disease, inasmuch as only those in which there are school children would come under the teacher's notice. It is our practice in Birmingham to exclude from school attendance both the patient and such other members of the family as have not previously suffered from the disease.

SCARLET FEVER.

For the old City during 1911 the number of cases of scarlet fever notified and corrected for error of diagnosis was 2,258, as compared with 2,709 in 1910.

The distribution of the cases throughout the year is shown in Chart No. 2, which deals with each of the past fourteen years.

The number of deaths due to scarlet fever was 62, the case mortality being 2·7.

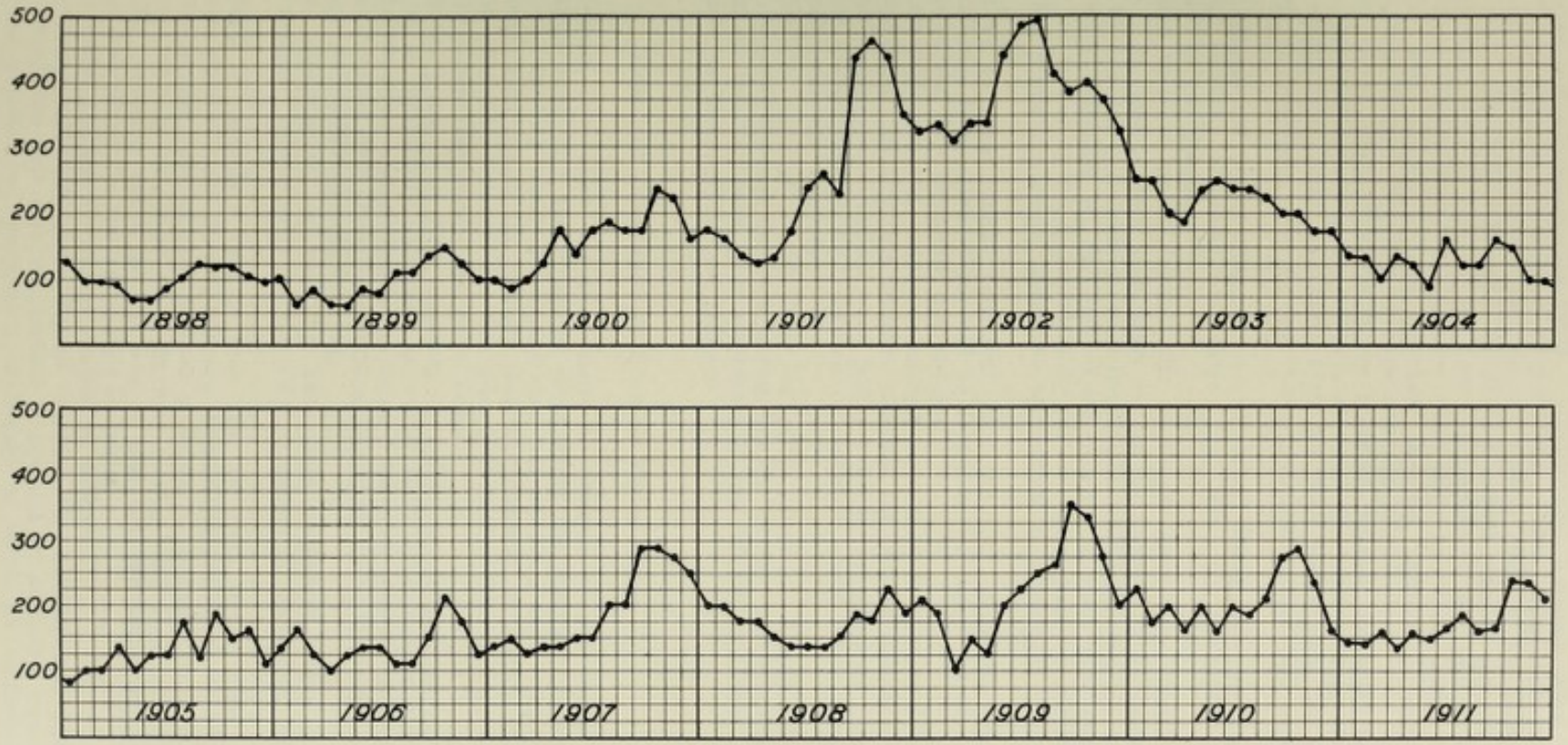
The above figures are equal to a sickness rate and death rate from scarlet fever per 1,000 of the population of 4·30 and 0·12 respectively. The corresponding figures for 1910 were 4·76 and 0·15.

In the following table, the incidence rate for each of the (old) wards and for the (old) City is given for the five years, 1907-1911. It will be noticed that there is a great variation from year to year in the individual wards.

Scarlet Fever Sickness Rates.

Ward.	1907	1908	1909	1910	1911	Means of five years.
Rotton Park	3·96	5·14	4·17	7·42	5·24	5·19
All Saints'	3·69	4·67	7·51	5·49	5·14	5·30
Ladywood	2·82	2·38	1·90	5·34	4·14	3·32
St. Paul's	3·73	3·61	4·98	2·73	2·84	3·58
St. George's	4·48	5·86	7·90	3·45	5·00	5·34
St. Stephen's	6·06	4·77	7·68	3·00	3·34	4·97
St. Mary's	4·33	1·85	5·02	2·78	1·93	3·18
St. Bartholomew's	5·34	2·46	5·12	2·96	1·50	3·48
Market Hall	4·59	1·82	1·94	1·66	1·36	2·27
St. Thomas's	4·38	2·64	2·32	1·87	6·16	3·47
St. Martin's	6·72	3·20	3·48	2·58	4·75	4·15
Edgbaston and Harborne ...	4·88	2·28	4·89	6·57	2·84	4·29
Deritend	3·41	3·96	5·12	1·98	3·39	3·57
Bordesley	4·06	4·18	5·82	5·93	4·91	4·98
Duddeston	6·08	3·79	4·19	5·66	1·48	4·24
Nechells	6·13	4·86	6·62	5·27	2·48	5·07
Balsall Heath	4·25	7·63	4·08	4·32	3·70	4·80
Saltley	4·75	3·91	7·76	6·70	6·81	5·99
Whole City	4·58	4·01	5·11	4·76	4·30	4·55

CHART No. 2.



CASES OF SCARLET FEVER IN FOUR WEEK PERIODS.

Records have been kept of all cases occurring amongst the children of public elementary and other schools, and in a few cases there have been small school outbreaks. During November, in one small "non-provided" school, there were 25 cases, of whom 18 were in the Infants' Department. Careful inspection of all the children was made, and two missed cases in the peeling stage of the disease were found in the class principally affected. At another school (one of the large newer Council schools) there were 32 cases in the first five months of the year, of which 26 were in the Infants' Department. All schools where there had been undue incidence of scarlet fever were visited by the Assistant Medical Officer of Health. In no case has it been deemed necessary to close any day school.

A series of eleven cases of scarlet fever occurred between February 16th and April 8th at a resident institution for children, of which the total number of inmates is 40. The school was closed on April 13th for four weeks and the premises disinfected and re-decorated. No further cases followed when the school was re-opened.

The milk supply of every case of scarlet fever during the year has been ascertained and carefully recorded, and there has been no indication of any "milk-outbreak" of the disease.

Of the 2,258 cases of scarlet fever, 1,752, or 78 per cent., were treated in the City Hospitals. In recent years such cases as can be isolated at home have not been removed to hospital. A greater proportion might with safety be left at home, but there is much reluctance on the part of the parents to take what appears to them in spite of advice to be a considerable risk of the spread of infection, and also to incur the expense of home treatment as opposed to gratuitous treatment in hospital.

Particulars as to cases which were sent into the City Hospitals erroneously diagnosed as suffering from scarlet fever will be found in the reports of the Medical Superintendents of the City Hospitals (pp. 61—68).

Besides these there were 18 instances amongst cases treated in their own homes in which the doctor in charge of the patients informed the Medical Officer of Health that the original diagnosis of scarlet fever had proved to be mistaken. No doubt there were other cases involving such revision of diagnosis about which the Medical Officer of Health was not informed.

In any doubtful case of scarlet fever or other notifiable disease where the practitioner in charge of the case desires a second opinion, he can, on application to the Medical Officer of Health, obtain the assistance of one of the Assistant Medical Officers of Health or Hospital Medical Officers.

Hospital Treatment of Scarlet Fever Cases.

For some years now there has been made an analysis of the annual figures relating to scarlet fever with the object of ascertaining the incidence of secondary cases amongst the families where a primary case has occurred, and comparing the incidence in houses from which the primary case was removed to hospital with that found in houses where the primary case was nursed at home. The enquiry has been continued for 1911, and the results are given below.

As in previous years, it is first necessary to define the terms used. All cases which proved to be erroneously diagnosed as scarlet fever have been excluded from the scope of the enquiry; and all institution cases. All other primary cases occurring during 1911 are included, with their corresponding secondary cases, the latter occurring during 1911 and the earlier months of 1912.

Only cases belonging to the old City have been considered, those belonging to the added districts subsequently to the City extension of November 9th being excluded.

The definition of secondary case is such that in every house where two or more cases have occurred, all except one are treated as secondary to the first case (except that a new case of scarlet fever occurring in a house more than two months after the recovery or return of a previous case is treated as primary).

A susceptible person is taken as one who is said not previously to have had scarlet fever as determined by the Inspector's enquiries.

All persons under the age of 15 are treated as children.

In the following table are given figures showing the number and proportion of houses from which the first case was treated in hospital, or at home, respectively, together with the number and proportion of houses in which no secondary cases occurred, in each of the groups:—

Scarlet Fever Cases treated in Hospital and at home.

		1904	1905	1906	1907	1908	1909	1910	1911	Eight years 1904-11
Total cases	Number of cases	1473	1532	1680	2388	2147	2725	2585	2156	16686
	Number of houses involved ...	1235	1221	1382	1947	1794	2166	2014	1660	13419
	Average number of cases per house	1·19	1·25	1·2	1·2	1·2	1·3	1·3	1·3	1·2
	Number of cases removed to hospital	1253	1334	1431	2077	1861	2133	1883	1650	13622
	Proportion of cases removed to hospital	85%	87·1%	85·2%	87·0%	86·7%	78·3%	72·8%	76·5%	81·6%
	Number of houses in which primary cases only occurred	1042	1018	1165	1665	1478	1744	1620	1337	11069
	Proportion of houses in which primary cases only occurred	84·4%	83·4%	84·3%	85·5%	82·4%	80·5%	80·4%	80·5%	82·5%
Hospital cases	Number of houses from which primary cases went to hospital	1026	1054	1155	1685	1537	1687	1436	1250	10830
	Number of such houses in which no cases followed ...	868	864	979	1456	1249	1327	1137	988	8868
	Proportion of such houses in which no cases followed ...	84·6%	81·9%	84·7%	86·4%	81·2%	78·6%	79·2%	79·0%	81·9%
Home cases	Number of houses in which primary cases were kept at home	190	167	211	237	257	479	578	410	2529
	Number of such houses in which no cases followed ...	174	154	186	209	229	417	483	349	2201
	Proportion of such houses in which no cases followed ...	91·5%	92·2%	88·15%	88·2%	89·1%	87·0%	83·6%	85·1%	87·0%

The following tables indicate in each group the sizes of the houses involved, together with the number of inmates and their character in respect of susceptibility :—

Inmates of the Two Groups of Houses.

	Houses from which 1st Case went to Hospital.									Houses in which 1st Case was kept at Home.								
	1904	1905	1906	1907	1908	1909	1910	1911	Average 1904-11	1904	1905	1906	1907	1908	1909	1910	1911	Average 1904-11
Average number of persons per house ...	4·7	5·8	4·7	6·0	5·8	6·0	5·9	5·9	5·6	5·0	5·0	4·0	3·9	5·0	5·1	5·1	5·1	4·8
Proportion of children to total inmates	41·2%	50·2%	41·0%	49·2%	51·6%	51·2%	51·1%	52·5%	48·5%	39·4%	40·9%	28·8%	38·6%	40·0%	40·7%	41·4%	40·9%	38·8%
Average number of rooms per house	4·6	4·5	4·7	4·7	4·6	4·6	4·7	4·6	4·6	6·3	6·2	6·2	6·1	6·0	5·9	6·0	6·0	6·1
Average number of persons per room ...	1·0	1·3	1·0	1·2	1·3	1·3	1·3	1·3	1·2	0·8	0·8	0·6	0·6	0·8	0·9	0·8	0·8	0·8
Average number of persons per bedroom ...	1·8	2·3	1·8	1·8	2·2	2·3	2·2	2·3	2·1	1·4	1·4	1·2	1·4	1·5	1·6	1·5	1·6	1·4

Susceptible Persons in the Two Groups of Houses.

	1st Case removed to Hospital.									1st Case kept at Home.								
	1904	1905	1906	1907	1908	1909	1910	1911	Average 1904-11	1904	1905	1906	1907	1908	1909	1910	1911	Average 1904-11
Proportion of inmates constituted by susceptible children...	37·3%	31·0%	37·1%	34·1%	30·9%	32·5%	31·8%	33·2%	33·5%	16·8%	20·4%	24·4%	23·0%	17·8%	20·6%	19·9%	19·4%	20·3%
Average number of susceptible children remaining after each instance ...	1·76	1·80	1·76	2·05	2·2	1·9	1·9	2·0	1·9	0·84	1·01	0·90	0·90	1·7	1·1	1·0	1·0	1·1
Average number of susceptible persons (all ages) remaining after each instance...	3·96	4·22	4·18	4·2	4·1	4·4	4·2	4·3	4·2	2·97	3·18	3·2	3·6	3·3	3·5	3·3	3·3	3·3
Proportion of instances in which susceptible children remained	80·8%	82·1%	81·1%	82·8%	80·0%	82·8%	83·3%	83·2%	82·0%	52·1%	51·5%	55·9%	57·4%	50·6%	59·7%	61·4%	58·0%	55·8%
Proportion of instances in which susceptible persons all ages) remained	99·2%	99·5%	98·8%	98·9%	98·9%	99·4%	99·2%	99·1%	99·1%	94·2%	97·0%	92·9%	96·1%	97·2%	97·5%	98·8%	98·0%	96·5%

The figures have been further analysed in order to eliminate the influence of the variation in the number of susceptible persons per house in the two classes of houses. The results for 1911 are as follows :—

Where the primary case was removed to hospital, the number of secondary cases per 1,000 susceptible persons remaining was 75·0.

Where the primary case was treated at home, the number of secondary cases per 1,000 susceptible persons remaining was 71·3.

The actual number of susceptible persons remaining was, for hospital cases, 5,332, and for home cases, 1,346 ; and the corresponding number of secondary cases was, for hospital cases, 400, and for home cases, 96.

The proportion of *total* cases (*i.e.*, primary and secondary) per 1,000 susceptible persons was 251 in houses where the primary case was treated in hospital, and 288 where the primary case remained at home.

Dr. Arnold, formerly Assistant Medical Officer of Health in Manchester, has recently published figures for Manchester cases in which he excludes from the group of secondary cases all cases which have occurred within less than seven days from the date of isolation of the primary case. This method has been applied to the Birmingham figures for 1911. The seven days have been counted from the date of removal where the patient has been removed to hospital, and from the date of receipt of notification where the patient has been isolated at home. When more than one secondary case has occurred in a house, the later secondary cases are excluded if they have developed within seven days of the removal or notification of the case immediately preceding.

On this restricted definition of secondary cases, viz., those occurring after the lapse of seven or more days from the notification or removal of the primary case, the following figures are obtained :—

	Primary Case removed.	Primary Case not removed.
Total number of secondary cases	159	29
No. of houses in which secondary cases occurred	139	25
No. of secondary cases per 1,000 susceptible persons remaining	29·8	21·5
Proportion of houses in which no secondary cases followed	88·9	93·9

It will be seen that these latter figures, as well as those preceding, which are on the same basis as those published in former years, lend support to the view that where the patient can be kept in a room to himself (which is the standard that has been adopted), the results obtained are in the bulk as good when the patient is kept at home as when he is removed to hospital.

The mortality rate for patients isolated in hospital was 3·3%, as compared with 1·6% for those treated at home. It must, however, be remembered that there takes place a process of selection, whereby a greater proportion of mild cases are treated at home than in hospital.

Return Cases of Scarlet Fever.

During 1911 the special investigation into "return cases" has been continued.

In previous reports the definition of a "return case" has been a case of scarlet fever arising in a house within 28 days of the return from hospital of a previous case in the same house, or the release from isolation at home of such case. In the following statistics this definition is maintained.

After excluding from the figures all cases in which the diagnosis of scarlet fever in the "infecting case" or the "return case" proved to be erroneous, the number of return cases occurring in the old City during 1911 was 142. They followed upon the release from isolation of 110 infecting cases and involved 98 houses.

The figures for previous years are given below :—

Year.	Cases Notified.	"Return Cases."	"Infecting Cases."
1907	2,522 ...	52 ...	35
1908	2,275 ...	105 ...	75
1909	2,871 ...	114 ...	101
1910	2,709 ...	133 ...	120
1911	2,258 ...	142 ...	110

[A limit of 8 weeks instead of 28 days is more comprehensive, and probably gives a more accurate idea of the number of cases etiologically connected with the return of former cases.

There were 20 cases arising more than 28 and less than 57 days after the release from isolation of a former case, which makes a total of 162 "return cases" on the 8 weeks basis.

It is to be remembered that a considerable amount of infection must be spread by the "infecting cases" to other households.]

The 142 "return cases" were made up as follows:—

Little Bromwich Hospital	...	89	"return cases,"	from	71	"infecting cases,"	involving	65	houses.
Lodge Road Hospital...	...	46	,,	,,	,,	32	,,	,,	,,	27	,,
Hospitals outside the City	...	3	,,	,,	,,	4	,,	,,	,,	3	,,
Cases Treated at Home	...	4	,,	,,	,,	3	,,	,,	,,	3	,,

Thus 135 "return cases" followed the return of 103 primary cases from the two City hospitals.

This number of "return cases" is equal to 7·7 per cent. of the number of cases admitted to the City hospitals with scarlet fever during 1911. The corresponding percentage of "infecting cases" was 5·9.

The percentage for each hospital reckoned on the number of admissions was as follows:—

	"Return Cases."	"Infecting Cases."
Little Bromwich	6·2% ...	5·0%
Lodge Road	11·0% ...	7·7%

The "return cases" (4) following the release from isolation of cases treated home were equal to a percentage of 0·8% of the cases of scarlet fever treated home and notified during 1911.

The cases are grouped below according to the number of days which elapsed between the return from hospital of the primary case (or release from isolation at home) and the onset of the illness of the "return case":—

After an interval of	No. of Cases.	After an interval of	No. of Cases.
1 day	1	22 days	1
2 days	3	23 ,,	4
3 ,,	7	24 ,,	3
4 ,,	9	25 ,,	1
5 ,,	7	26 ,,	1
6 ,,	8	27 ,,	2
7 ,,	6	28 ,,	1
8 ,,	9	29 ,,	2
9 ,,	6	30 ,,	2
10 ,,	4	31 ,,	2
11 ,,	10	34 ,,	2
12 ,,	6	35 ,,	1
13 ,,	6	37 ,,	1
14 ,,	10	38 ,,	1
15 ,,	7	40 ,,	1
16 ,,	14	42 ,,	1
17 ,,	5	45 ,,	1
18 ,,	6	46 ,,	1
19 ,,	4	48 ,,	1
20 ,,	4	49 ,,	1
21 ,,	1	53 ,,	2

The following table gives the conditions which were found or reported in the "infecting cases" after return from hospital:—

No abnormal condition	14 cases.	Enlargement of tonsils	49 cases.
Nasal discharge	59 ,,	Enlargement of cervical glands	38 ,,
Sore nostrils only	8 ,,	Other skin diseases	3 ,,
Epistaxis	2 ,,	Desquamation	7 ,,
Otorrhœa	11 ,,	Gastro-enteritis	5 ,,
Sores about body or face	8 ,,	Intercurrent infectious diseases	1 ,,
Sore throat	1 ,,	Other complications	5 ,,

The following are the complications from which the "infecting cases" suffered in hospital, from information supplied by the Medical Superintendent:—

No complications	31 cases.	Enlargement of cervical glands	12 cases.
Nasal discharge	37 ,,	Abscess	1 ,,
Sore nostrils only	11 ,,	Nephritis	2 ,,
Otorrhœa	13 ,,	Albuminuria	6 ,,
Sores	17 ,,	Ringworm	6 ,,
Conjunctivitis, etc.	2 ,,	Intercurrent infectious diseases	9 ,,
Adenoids	6 ,,	Other complications	6 ,,

The length of time during which the "infecting cases" were kept isolated is shown below:—

33 to 40 days	9 cases.	71 to 80 days	13 cases.
41 to 50 ,, ...	31 ,,	81 to 90 ,, ...	3 ,,
51 to 60 ,, ...	25 ,,	91 to 100 ,, ...	3 ,,
61 to 70 ,, ...	17 ,,	Over 100 ,, ...	9 ,,

A somewhat important investigation was undertaken by Dr. Higgins during the year as to the prevalence of the diphtheria germ in the throats of patients suffering from scarlet fever, and who were admitted to the City hospitals. Dr. Higgins's report on his investigations is reprinted here.

The Bacillus Diphtheriæ in relation to "Return-Cases" of Scarlet Fever.

Since 1904 Dr. Robertson (1) has conducted an inquiry into the causation of return-cases of scarlet fever in Birmingham, in which the supposed infecting cases have been visited and examined by his Assistant as soon as possible after the occurrence of the return-cases. Amongst other particulars, the complications from which the infecting cases suffered during their stay in hospital, and the abnormal conditions found in them when subsequently examined at home, have been tabulated and recorded. Rhinitis has been found in 185 of the 489 supposed infecting cases examined during 1904-1910 inclusive, a proportion of 38%. Since 1909 the writer has been entrusted with the home examinations of the infecting cases. During this time swabs have been taken from the noses of certain of the infecting cases who were suffering from nasal discharge suggestive of diphtheritic Rhinitis. These swabs gave "positive" results so frequently as to raise the question whether there might not be a connection between the presence of the Loeffler bacillus and the occurrence of the return-cases. For the elucidation of this point, swabs have been taken since 19th December, 1910, from the nose and throat separately of the infecting case whenever a return-case has arisen, as soon as possible after the occurrence of the latter. Systematic bacteriological examination of all cases of scarlet fever during their stay in the City hospitals was undertaken later.

All swabs taken from patients subsequently to their discharge from hospital have been taken by the writer, and have been examined in the pathological laboratory of the University of Birmingham (Professor R. C. T. Leith), chiefly by Dr. C. J. Lewis. The bacteriological examinations made at Little Bromwich Hospital and Lodge Road Hospital (the two City Fever Hospitals) have been performed under the direction of the medical superintendents, Dr. T. W. Beazeley and Dr. H. M. Cargin.

It is not intended in this paper to discuss the subject of return-cases from all points of view, but to give an account of the work that has been done here recently in regard to a possible relation between the occurrence of such cases and the presence of the Bacillus diphtheriæ in the naso-pharynx of the infecting cases.

The question under examination clearly involves a consideration of the frequency of the presence of the Loeffler bacillus in the nasal cavity and throat respectively of normal persons, of those with affections of the naso-pharynx, and of scarlet fever cases. Some account of available records of such observations will therefore be given now.

Non-scarlatinal persons.—The most comprehensive piece of work appears to be that recorded in the "Report on Diphtheria bacilli in well persons" (1902) of a Committee of the Massachusetts Association of Boards of Health (2). In this investigation over four thousand persons in America were examined for this organism in the nose and throat separately, and the results were divided into two groups. In the case of 3,096 persons from communities practically free from diphtheria, mostly school children and inmates of institutions and hospitals, 1·4% of persons showed typical diphtheria bacilli, of which 0·9% had them in the nose and 0·6% in the throat. Fifty-five of these positive cultures were tested and of these five proved to be virulent. In the case of 1,154 persons, almost entirely children in institutions where diphtheria had existed from one to eighteen months previously, the figures were higher: viz., 2·9% of persons, of which 2·1% showed the bacilli in the nose and 1·5% in the throat. Thirty-one of these positive cultures were tested and six found to be virulent. The difference between these two sets of cases is attributed by the Committee to the difference in the prevalence of diphtheria in the communities under examination.

This conclusion is obviously of great importance when the significance of the presence of the

Loeffler bacillus in the naso-pharynx is under consideration. That diphtheria bacilli are frequently to be found in healthy persons who have been exposed to the infection of diphtheria is well known. Graham-Smith (3), 1908, points out that the frequency of this occurrence depends largely upon the intimacy of contact, a larger proportion of carriers, for instance, being found in the members of the families of diphtheria patients than in the less closely connected scholars of diphtheria-infected schools. Seligmann, 1911 (4), in a recent paper has shown that, in general, departments of institutions that have furnished cases of diphtheria will give a correspondingly smaller number of "carriers" than similar departments which have had a greater number of cases (he has dealt mainly with the throats only). Steenmeyer (5) failed to find diphtheria bacilli in the throats of 44 children in a Dutch village which had been free from diphtheria for 10 years, but in the throats of 41 children of Utrecht, there diphtheria was endemic, he found diphtheria bacilli in several. Graham-Smith (6) concludes that virulent diphtheria bacilli are very rarely found in the throats and noses of healthy persons who have not been in immediate or remote contact with cases of diphtheria, but that in 2 to 3% of cases bacilli are to be found differing from ordinary diphtheria bacilli only in their non-virulence to guinea-pigs.

The circumstance of the relative degree of prevalence of diphtheria in the communities from which the subjects of examination are drawn evidently, then, has an influence upon the proportion of persons found with diphtheria bacilli in their nose and throat, and probably partly explains the discrepancies in the further examples which will be given.

Graham-Smith, 1908 (7), collected the results of throat swabbings of healthy school children and hospital patients carried out by Parkes and Beebe, Kober, Denny, Cobbett, Graham-Smith, and Pennington. Amongst 1,717 throats 4 (or 0·2%) showed virulent diphtheria bacilli and 39 (or 2·2%) showed non-virulent diphtheria bacilli.

Eyre and Flashman, 1905 (8), however, have made a similar collection of results (of Cobbett, Berry and Washbourn, Goadby, Kober, Meade, Muller, Parke and Beebe, and the Massachusetts Commission), and state that in over 7,000 cases the Loeffler bacillus is to be found in healthy throats in nearly 7% of cases.

Higher figures are recorded by Hewlett and Murray, 1901 (9), who state that of 385 children admitted to the Victoria Hospital for Children, London in 1900, 58 (or 15%) showed Loeffler bacilli in the throat, of which the three that were tested were found to be non-virulent; and by Louis Parkes, 1903 (10), who found that amongst the children admitted to the Chelsea Hospital for Children 88 out of 814 (or 10%), showed Loeffler bacilli in the throat. In the latter instance the swabs were examined at the then Jenner Institute.

Apart from the Massachusetts report, in which from 1–2% of noses were "positive," the records as to the results of swabbings from normal noses in health have been scanty. Interesting results have, however, been reported in connection with diseases of the nose. Graham-Smith (11) collects cases of chronic membranous rhinitis from various investigators, and states that all the 84 cases showed diphtheria bacilli, of which 76 (or 90%) were virulent. In atrophic rhinitis, also Symes, 1903 (12) found that out of 23 cases (mostly adults) diphtheria bacilli were present in 20. Two of the positive growths were tested on guinea-pigs and killed like typical Loeffler bacilli. In normal noses and other forms of rhinitis he found no diphtheria bacilli. Other investigators (13) also are reported as finding no diphtheria bacilli in normal noses.

We now pass to work done regarding the prevalence of the Loeffler bacillus in scarlet fever. As long ago as 1898, Todd (14) investigated a form of external rhinitis occurring in scarlatinal convalescents, characterised by redness at the external nares passing on to the formation of raw granular surfaces with crust-formation and bleeding, and often associated with spottiness of the face and pustules elsewhere—a condition familiar to all who have had to deal with scarlet fever wards. He found 51 (or 14%) of such cases in 365 cases of scarlet fever at the London Fever Hospital, and on swabbing the nose obtained the diphtheria bacillus in every one of the 51 cases. Several of these were isolated and completely proved to be Loeffler bacilli which could be antagonised by diphtheria antitoxine. He obtained the same organism in the secondary pustules.

Williams, 1901 (15) examined the whole of those of a series of scarlet fever cases who showed rhinorrhœa, however slight, and in 57 (or 40%) out of 141 cases found Loeffler bacilli in the discharge. In 62 cases of scarlatinal otorrhœa also he found 5 (or 8%) with this bacillus. Only a minority of the cultures tested on guinea-pigs were typically virulent.

W. T. G. Pugh, 1902 (16), at the North-Eastern Hospital, London, examined the noses and throats of scarlet fever patients on admission. Out of 415 cases uncomplicated by clinical diphtheria, 17 (or 4%) showed Loeffler bacilli in the throat, and five of these tested on guinea-pigs were all non-virulent. Out of 414 cases uncomplicated by faucial diphtheria or membranous rhinitis, 33 (or 8%) showed Loeffler bacilli in the nose, and six of these tested on guinea-pigs were all non-virulent. In wards where post-scarlatinal diphtheria existed virulent diphtheria bacilli were several times found, and in fibrinous rhinitis occurring during stay in hospital he often found them also.

Garratt and Washbourn, 1899 (17), found that amongst 666 cases of scarlet fever admitted to the London Fever Hospital only 8 (or 1·2%) showed bacilli in the throat morphologically resembling the bacillus diphtheriæ. Their virulence was not tested.

That the proportion of cases showing diphtheria bacilli amongst scarlet fever patients is very variable is shown by the facts quoted by Escherich and Schick, 1912 (18) who state that Sellner found diphtheria bacilli in 2% of his 103 scarlet fever cases. Soerensen in 16% of 1,500 cases (of which only 32 had clinical diphtheria) and Ranke in 53% of his cases.

Before the details are given of the work which we have recently done in Birmingham, it is necessary to define the terms to be used. The term "Primary Case" is to be understood as a case of scarlet fever whose return from hospital has been followed by the occurrence in the same

house of a further case or cases of that disease beginning within 8 weeks of the date of return. The term "Return-Case" is used for such secondary cases, without the assumption being made that they have without exception necessarily been caused by contact with the primary case. The eight weeks' limit has been selected because it has been found that return-cases do arise within this period from the date of return of primary cases, which can be attributed to infection from the latter with as much probability as can those occurring within four weeks, for example.

The term "Positive Swab" is used for one which, when inoculated on solidified blood serum gives a culture, pure or mixed, of bacilli which, stained by Neisser's method, are indistinguishable morphologically from Loeffler's bacillus of diphtheria. A "Negative Swab" is per contra one showing no such bacilli on cultivation.

Account has not been taken of secondary cases occurring after the release from isolation of primary cases which have been isolated in their own homes, no bacteriological information being available in respect of such cases.

The figures have been corrected for errors of diagnosis.

All the cases occurred in the area of the old City prior to the Birmingham City Extension of 9th November, 1911.

From 19th December, 1910, to 8th November, 1911 (during which time 1,509 cases notified as scarlet fever were admitted to hospital), 151 (hospital) return-cases occurred in the City, 89 houses being involved. All of these followed primary cases from the two Birmingham City Hospitals, except in three houses (giving one return-case only), where the arrival of patients from fever hospitals elsewhere was followed by the occurrence of return-cases. The return-cases connected with the City hospitals during this period, therefore, number 128, and occurred in 86 houses, as follows:—

1 house with	6 return-cases.	4 houses each with	3 return-cases.
1 „	5 „	16 „ „	2 „
3 houses each with	4 „	61 „ „	1 return-case.

The number of primary cases who had returned to these 86 houses within eight weeks prior to the date of onset of the return-cases was 98, as follows:—

1 house with	3 primary cases.	75 houses each with	1 primary case
10 houses each with	2 „		

The primary cases were all visited and swabbed as soon as possible after the notification of the return-cases, except in three houses, where swabs were not taken. In almost every case swabs were taken separately from the nose and throat, from the former by rubbing the swab as far into both nasal cavities as the rigid swab-holder would pass from the nostrils, and from the latter by well rubbing on and about the tonsils. Where there was otorrhœa, a swab was taken of this discharge. Only a few of the negative cases were submitted to a further swabbing.

Ninety-five primary cases were swabbed in this way, with the following results:—

Positive swab from nose only	26 cases.
„ „ ear „	1 case.
„ swabs from nose and ear	2 cases.
„ „ „ throat only	2 „
„ „ „ nose and throat	6 „
Total positive	37

As was explained above, in some of the houses involved the occurrence of the return-case was preceded by the return of more than one primary case. The results are, therefore, more usefully given in terms of houses rather than of individual cases. In houses where there was more than one primary case, the result is taken as positive if *any* of the primary cases gave a positive swab, and negative if *none* of them gave a positive swab. On this basis the following figures are obtained:—

No. of houses with positive results	36
„ „ „ negative „	47
„ „ where swabs were not taken	3
	86

i.e., 36 positive out of 83, or 43%.

In three cases only where a negative result was obtained on swabbing primary cases at home, a positive result had been obtained (from the nose) when they were swabbed on discharge from hospital. But in twenty instances (houses) a positive result had been obtained during the stay in hospital, whereas the result at home was subsequently negative; and in two of the three houses, also, where no swab was taken at home. When the figures are examined on the basis of taking as positive any primary case which gave a positive result in hospital, or subsequently to the occurrence of a return-case, the results are:—

No. of houses with positive result	58*
,, ,, negative ,, ...	27
,, where swabs were not taken	1
	86

i.e., 58 positive out of 85, or 68%.

* Of these in nine instances the primary case had Scarlet Fever with Clinical Diphtheria in Hospital.

More fully to appreciate the significance of this high proportion (68%) of primary cases showing the Loeffler bacillus, the results of Dr. Beazeley and Dr. Cargin, who have studied the incidence of this bacillus in cases of scarlet fever treated at the two hospitals, must be examined. In these results (next following) cases admitted with scarlet fever *plus* clinical diphtheria are lumped in with the rest of the scarlet fever cases.

At Little Bromwich Hospital, Dr. Beazeley's figures for cases on admission up to 20th December, 1911, are :—

Nose only positive on admission	194 cases, or	18%
Throat ,, ,, ,, ...	86 ,,	8%
Nose and Throat ,, ,, ...	66 ,,	6%
Total positive on admission	346 ,,	32%
Nose and throat negative on admission	717 ,,	
Total	1,063 cases.	

Dr. Cargin's corresponding figures for Lodge Road Hospital are :—

Total positive on admission (nose or throat) ...	94 cases, or	23%
,, negative ,, (nose and throat) ...	308 ,,	
Total	402 cases.	

Thus for both City hospitals the figures are :—

Total positive on admission (nose or throat) ...	440 cases, or	30%
,, negative ,, (nose and throat) ...	1,025 ,,	
Total	1,465 cases	

At Little Bromwich Hospital no further routine swabbing was done until the patients were discharged, when one swab was taken from the nose of every patient. The results of these swabbings are :—

Nose positive at time of discharge from hospital ...	258 cases, or	21%
,, negative ,, ,, ,, ,, ...	985 ,,	
	1,243 cases.	

This percentage (21%) refers to noses only, and is to be compared with 24%, the proportion of positive noses on admission.

But at Lodge Road Hospital swabs were taken during the patient's stay in hospital whenever any discharge, such as nasal or aural, appeared. By this means a further 78 cases were detected, which were negative on admission, but afterwards gave positive swabs. The results for this hospital thus become :—

Total positive during sojourn in hospital	172, or 43%
,, negative throughout ,, ,, ...	230
	402

The writer is informed by Dr. Cargin and Dr. Beazeley that only bacilli showing polar staining and indistinguishable from Loeffler's bacillus on staining by Neisser's method, have been counted as positive. Their virulence has not been tested.

In the consideration of the significance of these results as a whole, the first question that arises is whether the "positive" organism is identical with the Bacillus diphtheriæ as obtained from cases of diphtheria. The swabs taken from primary cases in their homes have been examined by Dr. Lewis with the swabs sent to the University by medical men for bacteriological diagnosis of diphtheria. Those reported as positive have all presented such appearance after 24 hours' incubation

on serum, with carbol thienin and the Neisser stain, as coming from the naso-pharynx, would in his opinion justify their recognition as Bacillus diphtheriæ (to the exclusion, for instance, of the Bacillus pseudo-diphtheriæ of Hoffmann, the Bacillus coryzæ segmentosus, and the Bacillus septus). Three of the positive cultures selected at random have been tested for virulence by Dr. Lewis for the purpose of this investigation, and all three have behaved as virulent bacillus diphtheriæ. (In one of these three cases the patient had suffered from clinical diphtheria as well as scarlet fever.)

The first instance tested was the nasal culture of a boy, A. M. This boy, aged 13, was discharged from Little Bromwich Hospital on 14th December, 1910, after being in hospital for 94 days with scarlet fever *not* complicated with clinical diphtheria. On 27th December his two brothers fell ill with scarlet fever without any clinical signs of diphtheria (they were not bacteriologically examined). A. M. was found to have a nasal discharge, and the serum culture taken from this on the 3rd January was positive, the polar-staining bacilli being the predominant organism. The throat culture was negative. A pure culture of this bacillus was obtained. Two guinea-pigs of equal size were taken, and one of these was injected with 500 units (= $\frac{1}{2}$ c.c.) of diphtheria antitoxine. Next day 1 c.c. of an emulsion of the pure serum-culture was injected into each animal. The unprotected animal died within 36 hours, and showed post-mortem membranous exudation at the site of injection and enlargement and hyperæmia of the suprarenal glands; the bacillus was recovered in a pure state from the local lesion. The animal which had received the ant-toxine was alive and well on the fourth day.

The second case (S. M.) where the culture was tested had the following history: He was admitted to Lodge Road Hospital with scarlet fever and clinical diphtheria, and was sent home on the 23rd February, 1911, after being in hospital 59 days. Swabs from the nose, ear and throat had been negative on two successive occasions about the time of discharge from hospital. On the 19th March a relative in the same house developed scarlet fever without clinical diphtheria, and gave a positive swab from the nose and a negative swab from the throat. On the 27th March, S. M. was found to have otorrhœa and rhinorrhœa, and swabs were taken from him. Those from the nose and throat were negative, while that from the ear discharge was positive. The bacillus from the latter was isolated in pure culture and treated in the same way as that from A. M. (above), with precisely the same results, it being a virulent strain of Bacillus diphtheriæ.

The history of the third instance in which the virulence test was carried out was as follows: E. G. (aged 17) was discharged from Little Bromwich Hospital on the 30th December, 1911, after being in hospital 44 days with a somewhat severe attack of scarlet fever, complicated by adenitis and various septic sores, but not rhinorrhœa. On the 3rd, 5th, 14th and 21st January, 1912, four other members of the family developed scarlet fever. None of the five was complicated with clinical diphtheria. On the 10th January E. G. was found to have a slight rhinitis, and the swab from his nose was positive, that from the throat being negative. The bacilli were only sparsely present in the culture, but they were successfully isolated in a pure state, and also gave the same results as in the case of A. M. above.

The only reasonable conclusion, then, is that the swabs reported as positive from the primary cases at home contained the true Bacillus diphtheriæ of Loeffler. The bacilli found in the positive cultures in hospital were presumably the same micro-organism. It may be noted that Todd, Williams, and others have found virulent diphtheria bacilli in scarlet fever patients.

High as it is, the proportion (68%) of primary cases from which the Loffler bacillus was obtained either in hospital or subsequently, is probably an understatement; for, in the first place, no subsequent swabs were taken (with some exceptions) from the primary cases at home after the first swabs had been reported as negative; and this work has clearly shown that the bacilli may be present without revealing themselves on a single swabbing, positive swabs having been frequently returned in cases where the previous result from the same patient had been negative. In the next place, seven cases (at the beginning of the inquiry) which gave a negative result on being swabbed at home had not been bacteriologically examined at all while in hospital, and 11 more had only been thus examined once, namely, on discharge. Moreover, whereas at Lodge Road Hospital all rhinorrhœas, otorrhœas, etc., were swabbed immediately on their appearance, with the result that further cases were detected, this was not done at Little Bromwich Hospital, where the majority of the cases were treated. It is to be remembered also that the "return-cases" selected acording to our definition will include a certain proportion of cases which were not really return-cases in the sense of being caused by infection from the patient who had recently returned from hospital.

That to 68% of houses where return-cases occurred there had returned from hospital a patient who at some time during his scarlatinal career had shown the presence of diphtheria bacilli in his naso-pharynx, is a striking result when compared with the records of the percentages amongst scarlet fever cases in general found by various observers of cases showing the same bacillus. For instance, as mentioned before, Pugh, for admissions found 4% in the throat and 8% in the nose, and Garratt and Washbourn 1·2% in the throat, while Soerensen found 16% amongst 1,500 cases (including 32 with clinical diphtheria also). But the contrast is less striking when the Birmingham hospital figures are considered. Here, including clinical "scarlet-diphtherias," we have 30% positive on admission. The writer has no figures available for both hospitals giving the full proportion of patients who harboured the bacillus at any time during their stay in hospital (whether imported by themselves or caught from others in hospital) so as to be able to compare it with the 68%. But in the case of Lodge Road Hospital, where probably nearly all cases infected were detected, 43% of all

cases were positive in hospital, while the diphtheria bacillus was found in 74% of the houses where the return of Lodge Road patients was followed by return-cases. The return-case figures for this hospital, however, are small, there having been only 27 houses with return-cases apparently caused by its discharged patients. The conclusion is that, though the numerical results cannot be said to prove that the infection of a scarlatinal hospital case with the Loeffler bacillus is associated with an increased liability of that patient to cause return-cases, they do suggest that this is the case.

Though realising that the figures are not altogether complete, and that the conclusion from them must be accepted with reserve, the writer has attempted to analyse the Little Bromwich results into a positive and negative group to see if these give differing percentages of cases causing return-cases. The results are that amongst the cases admitted from 1st January to 8th November, 1911, 1,076 patients were swabbed either on admission or discharge, or both, of which 417 gave a positive result and 659 gave only negative results. Of 417 "positive cases," 19 (or 4·6%) produced return-cases, and of the 659 "negative cases," 33 (or 5·0%) did so. But of the 33 negative primary cases, 12 gave positive results when subsequently swabbed at home by the writer. These must, therefore, be transferred to the positive group, and the results become :—

Amongst 429 "positive cases" return cases followed the discharge of 31 (or 7·2%).
„ 647 "negative cases," „ „ „ „ 21 (or 3·2%).

This result, though not conclusive, must be regarded as lending support to the view that infection with the diphtheria bacillus in scarlet fever increases the likelihood of the production of return-cases.

In considering in what manner this might be so, the obvious suggestion is that it is due to the two facts that the bacillus in question is especially to be found in conditions of rhinitis, and that any unhealthy state of the nasal mucous membrane is prone to keep alive the scarlatinal infectiveness of convalescents from scarlet fever—a well-recognised fact. Amongst the 98 primary cases the writer found that no less than 67 (*i.e.*, 68%)* had suffered from rhinitis since return from hospital, as shown by nasal discharge or sore nostrils or by a history of "cold in the head" since return. And of these 67 patients, 50 (or 74%) had exhibited the diphtheria bacillus. Whether the bacillus is the actual cause of the rhinitis it is difficult to say, as it also is in certain other conditions (such as noma) where the presence of this germ is not associated with the usual signs of diphtheria. In the case of the type of rhinitis described in scarlatinal cases by Todd (14), in which he did not fail to find the bacillus in a single one of 51 examples, it very possibly is the cause. Many of the cases of rhinitis showed a condition of the nostrils and face corresponding to Todd's description. Certainly its presence is often associated with great chronicity of the nasal disorder. All the positive cases in this inquiry have been followed up, and the rhinitis with the bacillus has been found to persist for periods of 110 days (still present), 107 days (still present), 98 days, and 83 days, in various cases, though in others it clears up much more quickly.

* The excess of this percentage over that given earlier for previous years is largely due to the fact that a history of "cold in the head" has been accepted alone as evidence of rhinitis.

It is to be noted that the return-cases themselves did not give a much higher proportion of positive results when swabbed on admission than did scarlet fever patients in general.

The figures are :—

No. of return-cases with scarlet fever + clinical diphtheria on admission	4
No. of return-cases without clinical diphtheria but with positive swabs (nose or throat) on admission	30
No. of return-cases without clinical diphtheria and with negative swabs (nose and throat) on admission	62
No. of return-cases without clinical diphtheria not swabbed on admission	*32
	128

i.e., 34 out of 96 were positive on admission (or 35%).

*Of whom six were treated at home.

A point that may be worthy of mention is the frequency with which a nose which is known to be infected with the Loeffler bacillus fails to give evidence of this on a single swab being taken from the nose. Associated with this tendency of the germ to be latent in the nose may be the frequency with which patients, who have been discharged from hospital with apparently clean noses, develop rhinitis subsequently. This unreliability of a single negative result would become of importance in attempts to prevent the spread of infection with this bacillus in hospital wards by isolation of the infected patients.

The results of the writer's swabbings of supposed infecting cases, in which in contrast to 12 instances in which the throat swab was positive the nose swab was positive in 34 cases, illustrate the fallacy of neglecting to swab the nose as well as the throat in investigating the distribution of the diphtheria bacillus.

In conclusion, attention may be drawn to the contrast between the percentage proportion (30%) amongst cases of scarlet fever admitted to the Birmingham City Hospitals of patients with the diphtheria bacillus in the naso-pharynx and results previously published by Pugh and others for other fever hospitals. The results are also much in excess of those of Sellner and of Soerensen, but, on the other hand, are themselves exceeded by those of Ranke, who found 53% positive. The most striking point is the lack of uniformity in the results of the different observers. But on the other hand the results of Parkes and of Hewlett and Murray for admissions to two general children's hospitals in London are not so much in conflict. For while Dr. Beazeley has found for Little Bromwich Hospital that 14·3% of the patients gave positive swabs from the throat on admission, these observers found the same condition in the throats of the children's hospital admissions in 10% and 15% of cases respectively. In view of the probability that the abundance of diphtheria carriers in communities tends to vary in the same direction as the case-incidence of diphtheria, it may be mentioned that the incidence-rate of diphtheria in Birmingham (old City) for 1910 and 1911 was 1·04 and 1·10 respectively per thousand population; and that the percentage rate of post scarlatinal diphtheria in the City Hospitals for 1910 was 0·26% at Little Bromwich Hospital reckoned on 2,274 scarlatinal admissions, and at Lodge Road Hospital, one case amongst 129 admissions. Also bearing upon the degree of prevalence of diphtheria infection in the City Hospital, it should be added that amongst the 131 return-cases dealt with, in four instances the return-case was admitted with clinical diphtheria as well as scarlet fever, and in one other instance two return-cases of scarlet fever without clinical diphtheria in one family were associated wth a case of pure diphtheria occurring in the house at the same time. In addition to this, during the same period, three cases of pure diphtheria followed upon the return from hospital of cases of scarlet fever. In none of the scarlet fever patients whose return was followed by the eight cases of diphtheria above mentioned, had there been any clinical diphtheria; but in six of them the Loeffler bacillus was found in the naso-pharynx of the primary scarlatinal case, the other two cases being negative.

For the sake of completeness, it should be stated that during this enquiry 3 return-cases not included in the statistics occurred in Birmingham following upon the arrival of discharged cases of scarlet fever from fever hospitals outside the City."

In the first of these (from Gloucester) the primary case was found to have the bacilli in the nose and throat, though she had not had clinical diphtheria while in the Gloucester Hospital. The return-case had scarlet fever and clinical diphtheria.

The next was a case of scarlet fever following the return of two cases of scarlet fever from an isolation hospital at St. John's, New Brunswick. One of these two gave a positive swab from the nose, the swab from the throat and both swabs from the other primary case being negative. The return-case was kept at home and no bacteriological information was available.

In the third case (from Coventry) the return-case gave positive swabs from the nose and throat (and had no signs of clinical diphtheria), but the swabs from the primary case were negative. The latter had no signs of diphtheria while in the Coventry Hospital.

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(17) Garratt and Washbourn—*Brit. Med. Journ.*, (1899), I., 893

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From the above report there appears to be no doubt as to the very widespread prevalence of the germ of diphtheria, and at first sight this may tend to alarm the public. It must be remembered, however, that many of the most dangerous germs are prevalent in the normal throat of a large number of people. This is the case with the germ of pneumonia and many others. It would appear that when conditions are favourable the organism becomes virulent and causes disease. There is no known method of testing the virulence of diphtheria organism in a quite satisfactory manner. Dr. Higgins has proved without doubt that in certain of his cases the germ was virulent to guinea-pigs, but it does not follow that the same organism was virulent to the human subject.

The point of great importance is that although diphtheria organism occurred so frequently in the cases of scarlet fever, it apparently did comparatively little damage in the direction of causing the occurrence of what is known as post scarlatinal diphtheria.

No information is available as to the percentage of cases of this organism in the throats of normal people. Dr. Higgins is continuing his investigation of this subject with a view to elucidating the occurrence of this germ so frequently in the throats of scarlet fever patients, and possibly thereby throwing some light on the occurrence of return cases of scarlet fever.

DIPHTHERIA.

The number of patients suffering from diphtheria during 1911 was 573, as compared with 591 in the previous year and 687 in the year 1909. All of these figures are corrected for errors of diagnosis. Seventy deaths occurred during the year, equal to a mortality of 12 per cent., compared with 11 per cent. in the previous year. The sickness-rate per thousand was 1·09 and the death-rate was ·13. The following table gives the number of cases and deaths and the case-mortality and sickness-rates since 1892 :—

Diphtheria.

	Cases notified.	Deaths registered.	Case-mortality per cent.	Sickness Rate per 1,000.
1892	533	102	19	1·10
1893	387	83	21	0·79
1894	406	91	22	0·83
1895	741	214	29	1·50
1896	*1,194	*293	25	2·35
1897	713	160	22	1·41
1898	689	132	19	1·36
1899	720	147	20	1·40
1900	542	77	14	1·05
1901	533	85	16	1·02
1902	*787	*130	17	1·48
1903	884	135	15	1·70
1904	630	115	18	1·21
1905	698	98	14	1·34
1906	817	93	11	1·56
1907	1012	100	10	1·94
1908	*794	*105	13	1·49
1909	687	89	13	1·31
1910	591	64	11	1·13
1911	573	70	12	1·09

*53 weeks.

In the next table will be found the death-rates from diphtheria in Birmingham since the year 1871 :—

Diphtheria Death-rates.

1871	...	·22		1891	...	·09	
1872	...	·25		1892	...	·21	
1873	...	·31	Average	1893	...	·17	Average
1874	...	·21	·23	1894	...	·18	·22
1875	...	·16		1895	...	·43	
1876	...	·16		1896	...	·58	
1877	...	·14		1897	...	·32	
1878	...	·22	Average	1898	...	·26	Average
1879	...	·18	·17	1899	...	·29	·32
1880	...	·13		1900	...	·15	
1881	...	·14		1901	...	·16	
1882	...	·12		1902	...	·24	
1883	...	·11	Average	1903	...	·26	Average
1884	...	·10	·12	1904	...	·22	·21
1885	...	·11		1905	...	·19	
1886	...	·18		1906	...	·18	
1887	...	·13		1907	...	·19	
1888	...	·09	Average	1908	...	·20	Average
1889	...	·12	·13	1909	...	·17	·17
1890	...	·14		1910	...	·12	
				1911	...	·13	

In the whole of England and Wales the death-rate from diphtheria was ·13 per thousand, as against ·13 also in Birmingham. In the largest towns the mortality rates were as follows:—

Diphtheria Death-rates.

London ...	...	...	·14 per 1,000	Bradford	...	...	·17 per 1,000
Liverpool	...	...	·16 ,,	Newcastle	...	...	·14 ,,
Manchester	...	...	·12 ,,	Hull ...	...	...	·08 ,,
Birmingham	...	...	·13 ,,	Nottingham	...	...	·12 ,,
Leeds ...	...	...	·34 ,,	Leicester	...	...	·09 ,,
Sheffield...	...	...	·10 ,,	Stoke-on-Trent ...	...		·38 ,,
Bristol ...	...	...	·11 ,,	Salford ...	...	...	·23 ,,
West Ham	...	...	·17 ,,	Portsmouth	...	...	·31 ,,

As in previous years, the distribution of diphtheria over the City during 1911 was irregular. In some of the poorest class areas the rate was relatively a low one; for example, St. Stephen's, ·61; St. Bartholomew's, ·51; St. Mary's, ·50; while in Edgbaston it was 1·75. In certain of the areas recently added to the City the cases were relatively more numerous than in the more squalid districts in the centre of the City. In the following table is given the sickness-rate from diphtheria for each ward in the City:—

Diphtheria Sickness-rates.

	1907.	1908.	1909.	1910.	1911.	Mean of Five Years.
Rotton Park	1·77	1·48	1·28	1·07	1·07	1·33
All Saints'	2·34	1·70	1·25	1·12	1·15	1·51
Ladywood	2·14	1·61	1·03	1·03	1·21	1·40
St. Paul's	1·59	1·63	1·59	0·79	1·09	1·34
St. George's	3·19	1·59	1·33	0·78	0·74	1·53
St. Stephen's	2·54	1·74	1·45	0·92	0·61	1·45
St. Mary's	2·24	1·43	1·38	1·59	0·50	1·43
St. Bartholomew's	2·04	1·10	1·59	1·17	0·51	1·28
Market Hall	1·23	1·93	1·37	0·71	0·37	1·12
St. Thomas'	2·02	1·20	0·87	1·17	1·60	1·37
St. Martin's	2·45	2·05	1·72	0·96	1·19	1·67
Edgbaston and Harborne ...	1·26	1·43	0·69	1·24	1·75	1·27
Deritend	1·34	1·19	1·69	0·74	1·11	1·21
Bordesley	1·41	1·19	1·16	1·10	1·51	1·27
Duddeston	2·73	1·53	1·43	0·83	0·28	1·36
Nechells	1·61	1·34	1·30	0·74	0·69	1·14
Balsall Heath	1·54	1·42	1·14	1·39	1·24	1·35
Saltley	1·25	1·34	1·19	0·87	0·89	1·11
City	1·84	1·40	1·22	1·04	1·09	1·32

No definite outbreak of an epidemic character occurred, nearly all the cases being sporadic. No evidence occurred during the year that diphtheria was spread by milk.

The total number of cases of Diphtheria removed into the City hospitals was 287. Among these, however, were a certain number from the districts incorporated in the Greater Birmingham area. The mortality amongst the cases treated in the hospitals was 13·2%, while amongst those treated at home, or in some other institution, it was 10·2%. During 1910 the hospital mortality was 9·7, compared with 12·9 for those cases treated at home.

During the year 1,803 swabs were examined by the University of Birmingham in connection with actual or suspected cases of diphtheria. Of these 460 proved to be positive, and 1,343 negative. There were 538 doses of antitoxin supplied, free of charge, to doctors for the benefit of patients suffering from diphtheria in the City, the cost of this supply being approximately £70.

WHOOPING COUGH.

There were 103 deaths registered from whooping cough during the year 1911, as compared with 215 during the previous year. The cases of this disease were less frequent during 1911 than almost any previous year. Ninety-six of the patients who died were under five years of age, no less than 78 of these being under two years old.

TYPHOID FEVER.

There were 104 new cases of typhoid fever reported, as compared with 73 in the previous year, 95 in 1909, and 193 in 1908. The case mortality, sickness rate, and death-rate for each year since 1890 are shown in the folloiwng table:—

	Notified Cases.	Deaths.	Case Mortality.	Sickness Rate.	Death Rate.
1890†	272	59	22%	·66	·14
1891	397	77	19%	·93	·18
1892	260	39	15%	·54	·08
1893	489	94	19%	1·00	·19
1894	511	105	21%	1·04	·21
1895	436	82	19%	·88	·17
1896*	483	108	22%	·95	·21
1897	533	89	17%	1·06	·18
1898	637	113	18%	1·25	·22
1899	779	119	15%	1·52	·23
1900	851	179	21%	1·64	·35
1901	615	111	18%	1·18	·21
1902*	544	100	18%	1·02	·19
1903	348	66	19%	·67	·13
1904	248	36	15%	·48	·07
1905	209	38	18%	·40	·07
1906	191	40	21%	·37	·08
1907	248	48	19%	·47	·09
1908*	193	49	25%	·36	·09
1909	95	22	23%	·18	04
1910	73	24	33%	·14	·05
1911	104	27	26%	·20	·05

† 50 weeks. * 53 weeks.

From the above figures it will be seen that the mortality from this disease has been gradually decreasing. The case mortality has, however, remained relatively a high one; practically one out of every four patients attacked by the disease died last year. In the Greater Birmingham area the mortality rate for 1911 was ·04 per thousand of the population, while in England and Wales it was ·07. The highest rates recorded in the great towns were ·21 in Rotherham, ·23 in Hull, ·24 in Grimsby and in St. Helens, and ·37 in Wigan; while in Hastings, Burton, King's Norton and Bury not a single death occurred from Typhoid Fever.

During the fourth quarter of 1911 out of 54 cases of typhoid fever 15 gave a history of having consumed shell-fish—in most instances, mussels. During the whole year out of 104 cases 26 appeared to be connected with the eating of shell-fish.

At the present time practically no proper action is being taken to prevent this large sickness rate from mussels typhoid. The Health Committee have on many occasions written to the Local Government Board, pointing out the need for some supervision of the source of supply. The wholesale mussel dealers of Birmingham have agreed not to accept any mussels unless they come from a source in regard to which there is some authoritative certificate to the effect that the source is free from sewage pollution. It is difficult to see what more dealers can do in the matter. It is, however, impossible to be sure that any particular consignment of mussels does actually come from an approved source, and during the year under review it is certain that at least on one occasion mussels said to come from one source really came from another source, and one that was under suspicion. What is needed is that the Local Authorities of the districts from which mussels are despatched should, in the interests of the trade of their district, regulate the gathering, so that shell-fish shall not be taken from polluted sources. There is abundant evidence that a considerable quantity of the mussels grown around our coasts grow in areas which are polluted; indeed, it would almost seem that mussels require for their fattening organic matter of some kind, and that in the cases mentioned sewage is the organic matter which has sustained their growth.

As in former years, the following table is set out to show the close relationship which has existed between the abolition of the old pan-closet and the incidence of typhoid fever.

	No. of Pan-Closets.	Cases of Typhoid Fever.
1901	29,700	615
1902	28,600	544
1903	25,700	348
1904	23,200	248
1905	19,000	209
1906	15,300	191
1907	12,100	248
1908	9,000	193
1909	7,100	95
1910	5,500	73
1911	3,500	104

In 86 cases the Widal test for typhoid fever was made by the University of Birmingham at the expense of the Health Department. In 14 instances the test gave a positive Widal reaction, in 71 instances the result was negative, and one was doubtful. The 104 cases were dealt with as follows: 33 treated at home, 13 at the City Hospital, Lodge Road, and 58 admitted to the general hospitals and infirmaries. In addition to the 104 cases mentioned above, there were 25 cases which were notfied as typhoid fever, and which afterwards proved not to be typhoid fever.

DIARRHŒA AND ENTERITIS.

The occurrence of a severe outbreak of diarrhœa and enteritis was somewhat fully dealt with in the quarterly report for the third quarter of 1911.

The year 1911 was a year of high diarrhœa prevalence. As already explained, the summer was one of phenomenal length, and was recognised as the most pleasant summer we have had for a very long time, on account of its freedom from rain and its genial sunshine. These, however, are both conditions which conduce to diarrhœal disease.

There were 719 deaths registered as due to diarrhœa and 309 to enteritis, as compared with 211 from diarrhœa and 201 from enteritis in 1910. The death-rate from these two diseases was 1·96 per 1000, as against ·78 in the previous year. The number of deaths from diarrhœa and enteritis, together with certain other particulars, will be found in the following table for a number of years:—

	Deaths during each Year.				During 3rd Quarter.			
	Diarrhœa.	Enteritis.	Total.	Death-rate per 1,000.	Mean Temperature.	Mean Temperature of Soil 4ft. deep.	Rainfall in inches.	Days with ·010 or more of rain.
1887	550	60	610	1·46	58·9	—	5·62	31
1888	305	60	365	0·87	55·7	—	9·58	49
1889	465	56	521	1·23	57·6	—	6·62	39
*1890	434	101	535	1·23	58·0	—	7·39	42
1891	320	107	427	0·99	57·3	—	7·27	48
†1892	443	104	547	1·13	57·0	—	9·22	41
1893	828	200	1028	2·11	60·0	—	5·61	46
1894	256	148	404	0·82	54·9	—	7·18	45
1895	605	282	887	1·79	59·6	—	6·45	44
*1896	589	309	898	1·76	57·7	54·6	7·33	47
1897	923	521	1444	2·86	58·3	53·5	7·24	35
1898	668	544	1212	2·37	58·7	54·3	4·50	21
1899	831	580	1411	2·74	61·2	55·9	4·98	34
1900	613	409	1022	1·97	60·2	54·4	5·43	31
1901	792	206	998	1·92	60·7	54·8	5·91	26
*1902	412	122	534	1·01	57·1	52·8	7·51	47
1903	588	136	724	1·39	57·4	52·0	9·85	49
1904	955	155	1110	2·13	58·8	54·1	5·75	31
1905	463	177	640	1·22	58·4	54·1	7·33	34
1906	857	226	1083	2·07	60·9	54·0	2·97	26
1907	237	168	405	0·77	57·5	52·2	6·08	40
*1908	470	210	680	1·27	57·9	52·9	6·94	41
1909	244	173	417	0·80	57·6	52·3	7·63	47
1910	211	201	412	0·78	57·3	52·3	8·24	41
1911	719	309	1028	1·96	63·2	55·5	3·27	30

* 53 weeks. † Enlarged City.

The age at death and the quarter of the year in which the deaths occurred are shown below :—

Deaths from Diarrhœa and Enteritis.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
Under 1 month	3	2	22	8	35
Between 1 and 2 months ...	1	10	53	4	68
„ 2 and 3 „ ...	5	4	77	8	94
„ 3 and 4 „ ...	2	3	75	8	88
„ 4 and 5 „ ...	3	6	69	4	82
„ 5 and 6 „ ...	2	2	46	4	54
„ 6 and 7 „ ...	3	4	63	4	74
„ 7 and 8 „ ...	2	2	56	8	68
„ 8 and 9 „ ...	2	1	41	5	49
„ 9 and 10 „ ...	0	1	41	1	43
„ 10 and 11 „ ...	0	1	40	3	44
„ 11 and 12 „ ...	2	4	25	4	35
Total under 1 year	25	40	608	61	734
Between 1 and 2 years	4	11	102	24	141
„ 2 and 3 „	3	1	19	5	28
„ 3 and 4 „	1	1	12	0	14
„ 4 and 5 „	1	0	1	0	2
Total under 5 years	34	53	742	90	919
Between 5 and 10 years ...	1	2	4	2	9
„ 10 and 15 „ ...	0	0	0	0	0
„ 15 and 20 „ ...	0	0	0	0	0
„ 20 and 25 „ ...	0	0	0	0	0
„ 25 and 35 „ ...	0	0	4	2	6
„ 35 and 45 „ ...	1	1	1	1	4
„ 45 and 55 „ ...	1	0	10	1	12
„ 55 and 65 „ ...	4	3	14	4	25
„ 65 and 75 „ ...	3	2	14	6	25
„ 75 and 85 „ ...	0	2	17	4	23
At 85 years and upwards... ...	0	1	2	2	5
All ages	44	64	808	112	1028

From this table it will be seen that no less than 808 of the deaths occurred during the third quarter. It is interesting to know that during the second quarter only 64 deaths occurred, notwithstanding the fact that April, May, and June were bright, sunny months. A full account of the means taken during the summer to prevent this disease was set out in the quarterly report already referred to, and it is, therefore, unnecessary to repeat it here.

INFLUENZA.

There was no serious outbreak of this disease during 1910. The following table shows the deaths from influenza in each of the past twenty years :—

1892	...	...	...	88	1902	...	...	...	76*
1893	...	...	...	123	1903	...	...	...	63
1894	...	...	...	29	1904	...	...	...	68
1895	...	...	...	121	1905	...	...	...	63
1896	...	...	...	41*	1906	...	...	...	72
1897	...	...	...	59	1907	...	...	...	81
1898	...	...	...	89	1908	...	...	...	158*
1899	...	...	...	150	1909	...	...	...	90
1900	...	...	...	185	1910	...	...	...	68
1901	...	...	...	90	1911	...	...	...	45

*53 weeks.

ERYSIPELAS.

The number of cases of erysipelas and of deaths from this disease are set out below, together with the mortality rate :—

	Cases.	Deaths.	Percentage Mortality.
1900	678	26	3·8
1901	726	23	3·2
1902	762*	30*	3·9
1903	644	22	3·4
1904	597	29	4·9
1905	595	31	5·2
1906	589	23	3·9
1907	599	18	3·0
1908	476*	10*	2·1
1909	507	25	4·9
1910	542	19	3·5
1911	571	18	3·2

*53 weeks.

PUERPERAL FEVER.

The number of cases and deaths from puerperal fever can be seen in the table below :—

	Cases.	Deaths.
1902	35	22
1903	31	21
1904	36	27
1905	40	24
1906	28	19
1907	47	29
1908	17*	8*
1909	26	15
1910	29	23
1911	34	24

*53 weeks.

ACCIDENTS OF CHILDBIRTH.

In addition to the deaths from puerperal fever, twenty-four women died from other conditions associated with pregnancy or childbirth.

MIDWIVES ACT.

On the 9th November fifty-six midwives practising in the areas added to Birmingham were transferred to the Birmingham Midwives' Roll, so that the list as existing on the 31st December, 1911 refers to the midwives for the Greater Birmingham area. In addition to these 56, there were 44 midwives whose names were

on our roll, but who were not visited owing to their addresses being outside the old City boundary, so that through the extension of the City 100 additional midwives were brought under the direct supervision of the Public Health and Housing Committee.

During the year under review (including those added on November 9th) there were 292 midwives who signified their intention to practise midwifery, but at the end of the year 40 of these had discontinued their work as midwives, leaving 252 on the roll. It was found on visiting many of the midwives in the added districts that they had never acted actually as midwives, but were regularly employed as maternity nurses. With a view to avoiding useless inspection, twelve of these asked that their names should be taken off our local roll. Of the 40 mentioned above, certain others had removed from the district, six in number; five had ceased work, two were removed from the midwives' roll, four died, and eleven left after being temporarily employed here.

Of the 292 midwives who notified their intention to practise, three were midwives who had newly come to the district to practise on their own account. In the old Birmingham area there were, on the 31st December, 1911, 192 midwives in actual practice. These midwives attended 9,290 births as compared with 9,439 in 1910, 9,238 in 1909, and 9,244 in 1908. The total number of births registered in the old City area was 14,704, so that the midwives attended 63% of the births in the old City area. In the following table it will be noted that a large number of midwives attended less than fifty births per annum, so that the total remuneration received by them is insufficient to enable them to support themselves:—

	Number of Midwives.			
	1908.	1909.	1910.	1911.
Less than 50 births	96	71	80	76
Between 50 and 100 births ...	42	45	35	38
„ 100 and 150 „ ...	14	12	14	20
„ 150 and 200 „ ...	6	5	11	6
Over 200 births	8	9	5	8
Midwives residing out of City	?	44	44	44
Monthly Nursing only ...	?	8	9	0
Total midwives on roll ...	200	194	198	192

By the rules of the Central Midwives' Board, it is the duty of a midwife to report all conditions of difficulty or danger occurring during confinement. There were 734 such reports received during the year, as against 674 in the previous year, and 540 in 1909. Generally it may be said that the midwives now appreciate their duty and act on the realisation that by promptly reporting they are benefitting their patients as well as enabling their work to be kept under control. The reasons why midwives had to call in medical assistance during 1911 are set out in the table below:—

Delayed or difficult labour	153	Stillbirths	2
Hæmorrhage	73	Diarrhœa	2
Ophthalmia neonatorum	70	Rheumatism	2
Abnormal presentation	68	Asphyxia	2
Lacerated perineum	61	Hysteria	2
Debility of child	51	Scarlet fever	2
High temperature	48	Triplets	1
Adherent or retained placenta, etc. ...	47	Varicose veins	1
Premature birth	20	Phlegmasia alba dolens	1
Abortion	15	Prolapse of uterus	1
Debility of mother	13	Hydramnios	1
Contracted pelvis	10	Dropsy	1
Bronchitis	10	Umbilical hæmorrhage	1
Uterine inertia	10	Child passing blood	1
Prolapse of funis	9	Growth in passage	1
Deformed child	7	Inflamed umbilicus	1
Convulsions	7	Pneumonia	1
Abdominal pain, etc.	5	Thrombosis	1
Skin eruptions, etc.	5	Hernia	1
Exhaustion	4	Excessive sickness	1
Unsatisfactory progress	4	Albuminuria	1
Jaundice	4	Insanity	1
Injury to child	4	Anæmia	1
Twins	3	Constipation	1
Cleft palate and hare-lip	3		

In thirty-nine instances the midwives reported the death of the infant before the arrival of a medical man.

Another rule of the Central Midwives' Board is that a midwife shall record the temperature of the mother. For this purpose booklets were supplied to the Birmingham midwives several years ago. There is an excellent compliance with this rule except in the case of about fifty of the older midwives, who have either bad eyesight, and therefore cannot read a thermometer, and in a few cases of women who cannot either read or write. In the last annual report it was said that this was such a valuable means of control, and gave the midwives such valuable information, that the rule should be made compulsory, and during the year under review this was done.

During the year the following breaches of the Act or rules have been dealt with by the Health Committee :—

January 10th.—Midwife No. 13,049 : Appeared before the Health Committee charged with contravening the rules, and attending midwifery cases whilst herself suffering from septic ulceration of the leg (two puerperal fever cases). The Committee decided to report this midwife to the Central Midwives' Board, and subsequently her certificate was cancelled by the Board, as this was a second offence.

January 24th.—Midwife No. 13,819 : Appeared before the Health Committee charged with failure to advise medical assistance in case of obvious symptoms of puerperal fever. (Warned by Health Committee ; first offence.)

May 23rd.—Midwife No. 14,605 : Appeared before the Health Committee charged with failure to advise medical assistance in cases of ophthalmia neonatorum. (Warned by Health Committee ; first offence.)

June 13th.—Midwife No. 6,201 : Appeared before the Health Committee charged with failure to advise medical assistance in case of ophthalmia neonatorum. (Warned by Health Committee ; first offence.)

July 11th.—Midwife No. 7,736 : Appeared before the Health Committee charged with contravening the rules in case of puerperal fever. The Committee decided to report this midwife to the Central Midwives' Board, but she died before her case was heard.

October 24th.—Midwife No. 950 : Appeared before the Health Committee charged with contravening the rules with regard to case of ophthalmia, and one of puerperal fever. The Committee decided to report this midwife to the Central Midwives' Board, and she was later censured by the Board and put on six months' probation.

December 22nd.—Midwife No. 12,500 : Appeared before the Health Committee charged with neglect of the rules in a case of ophthalmia neonatorum, and as this was not her first appearance on these charges, the Health Committee decided to report her to the Central Midwives' Board, and later her certificate was cancelled.

The following midwives were cautioned in regard to breaches of the rules :—

January 24th.—Midwife No. 1,686 : For not providing herself with the necessary apparatus.

September 5th.—Midwife No. 8,150 : Failing to notify case of ophthalmia.

September 5th.—Midwife No. 237 : Failing to notify case of ophthalmia.

October 27th.—Midwife No. 4,160 : Failure to advise medical assistance in case of abnormal presentation (child stillborn).

November 4th.—Midwife No. 826 : Failing to provide herself with the necessary apparatus.

Mrs. Pickering was tried and convicted at the Assizes (March 22nd) of aiding and abetting in the procuring of abortion, and was sent to prison for 18 months (her certificate was cancelled).

Proceedings were taken against Mrs. Higgs, unregistered midwife, for practising otherwise than under the direction of a qualified medical practitioner.

Twenty-eight midwives were suspended during the year for the following causes :—

(*a*) The occurrence of puerperal fever in 21 instances.
(*b*) The midwife herself suffering from septic ulceration of the leg in two instances.
(*c*) The midwife herself living in a house where there was an infectious disease in three instances.
(*d*) The midwife herself suffering from erysipelas in two instances.

In Birmingham the health visitors visit the majority of the births in the poorer areas of the town, and report any obvious infringement of the rules by the midwife which they may either notice or hear of, and in this way the Department is kept in close contact with the work of each of the midwives. During the year under review, an arrangement was made between the Health Committee and the Board of Management of the Birmingham Hospital for Women to admit cases of puerperal fever recommended by the Health Department, as it was found that many women among the poorer classes resented at such a time, very keenly, being sent to a workhouse infirmary, and, indeed only a very few women could be induced to go to this institution, however good the treatment might be. Among the poorer classes it was found that many women suffering from puerperal fever were being nursed in most shockingly insanitary conditions at a time when the most highly-skilled and constant attention was required. Indeed in many such cases skilled operation is required at once. The only possible way of saving life under certain conditions is the admission of the patient to a hospital in which there is not only the necessary nursing skill, but in which there is special medical skill available. Such conditions exist at the Women's Hospital, and became available because the Hospital Authorities had set aside a ward for septic cases. For the services of the hospital the Health Committee agreed to contribute the sum of £110 per annum for each of the two beds set aside for their use, and to pay £100 to the Medical Board at the hospital for treatment.

Stillbirths.

There were 211 stillbirths reported by midwives, as compared with 212 in the previous year and 262 in 1909. Each of these cases was visited, and the results found at examination are as follows :—

Condition of Child and Presentation	Total Still-births.	Period of Gestation.				
		Full Time.	8 months.	7 months.	6 months.	Under 6 months.
Macerated	81	31	11	24	9	6
Not macerated	130	74	11	21	18	6
Vertex	140	75	16	28	14	7
Breech...	32	16	2	8	6	0
Footling	15	5	2	4	2	2
Transverse	2	1	0	0	1	0
No information	22	8	2	5	4	3

Ophthalmia Neonatorum.

On May 1st, 1911, this disease was made compulsorily notifiable by medical men. Prior to this it was the duty of the midwife to report such cases. From these reports and from the returns of the health visitors fairly accurate information as to the cases of ophthalmia neonatorum occurring in the practice of the midwives in Birmingham was obtained, but no information was forthcoming as to cases in the practice of medical men. Between May 1st and December 31st eighty-three cases were notified by medical practitioners. Among the eighty-three patients none have lost their eyesight entirely. In three instances, however, the eyesight is almost completely gone as a result of this disease If it is possible to continue this work as energetically in the future as during the past year, it is probable that the number of children in blind schools will be materially reduced.

Tuberculosis.

The question of dealing with the prevention of tuberculosis in all its forms has received so much attention officially and from the lay public within the last four or five years that the time appears to be opportune for setting out at some length the main facts in regard to this disease as they relate to Birmingham. The coming into operation of part of the National Insurance Act on July 15th, 1912, adds another reason for detailing the conditions found locally, and at the same time setting out the methods in operation at the present time for the prevention of the disease, and also sketching the methods which appear to be necessary in the immediate future.

Birmingham is very fortunately situated for effectively dealing with the whole question of tuberculosis, in that nearly the whole of its inhabitants live within its boundaries, the population being, therefore, self-contained and self-governed. Speaking generally, the great mass of the population of Birmingham live under better conditions as regards air space than in most other towns. In the older parts of the City a great deal yet remains to be done in the way of educating the masses of the people into a very much higher ideal, both as regards house accommodation and methods of living. By merely changing the habits of a large number of our poorer classes, phthisis mortality will be reduced.

In addition to being particularly well situated as regards its generally healthy arrangement, the City of Birmingham has other advantages in that already a considerable amount of experience has been gained during the last four or five years in an active propaganda against tuberculosis. It may now be said that the consumptives, and, to a certain extent, the general public of Birmingham, are keenly alive to the necessity of something more being done. The Birmingham municipal sanatoria were the first of their kind in this country, and the results of the treatment there generally have been good, and have impressed the people with the necessity for further action.

Birmingham has another claim tor taking upon itself a very active anti-tuberculosis crusade. It was a Birmingham doctor (Dr. Bodington) who first put the treatment of tuberculosis on a sound basis. Dr. Bodington's teaching stands good to-day, although in his day much contumely was heaped on his method.

(1) Mortality from Tuberculosis in Birmingham.

Tuberculosis still remains the greatest single cause of death which we have in Birmingham. It attacks mainly young adults in the prime of life after much has been spent on their training, but before the community has received any return for this expenditure. The disease causes generally a most expensive illness by reason of the fact that the patients suffer from it for several years. A considerable number of bread-winners who are attacked have to leave off work, and thereby bring themselves and their families to the verge of starvation.

In addition to being a fatal and expensive disease, tuberculosis is the greatest cause of crippling. Hunchback, lameness, and other deformities are largely due to it.

The following table shows the number of deaths from various forms of tuberculosis in the old City of Birmingham during the past fifteen years :—

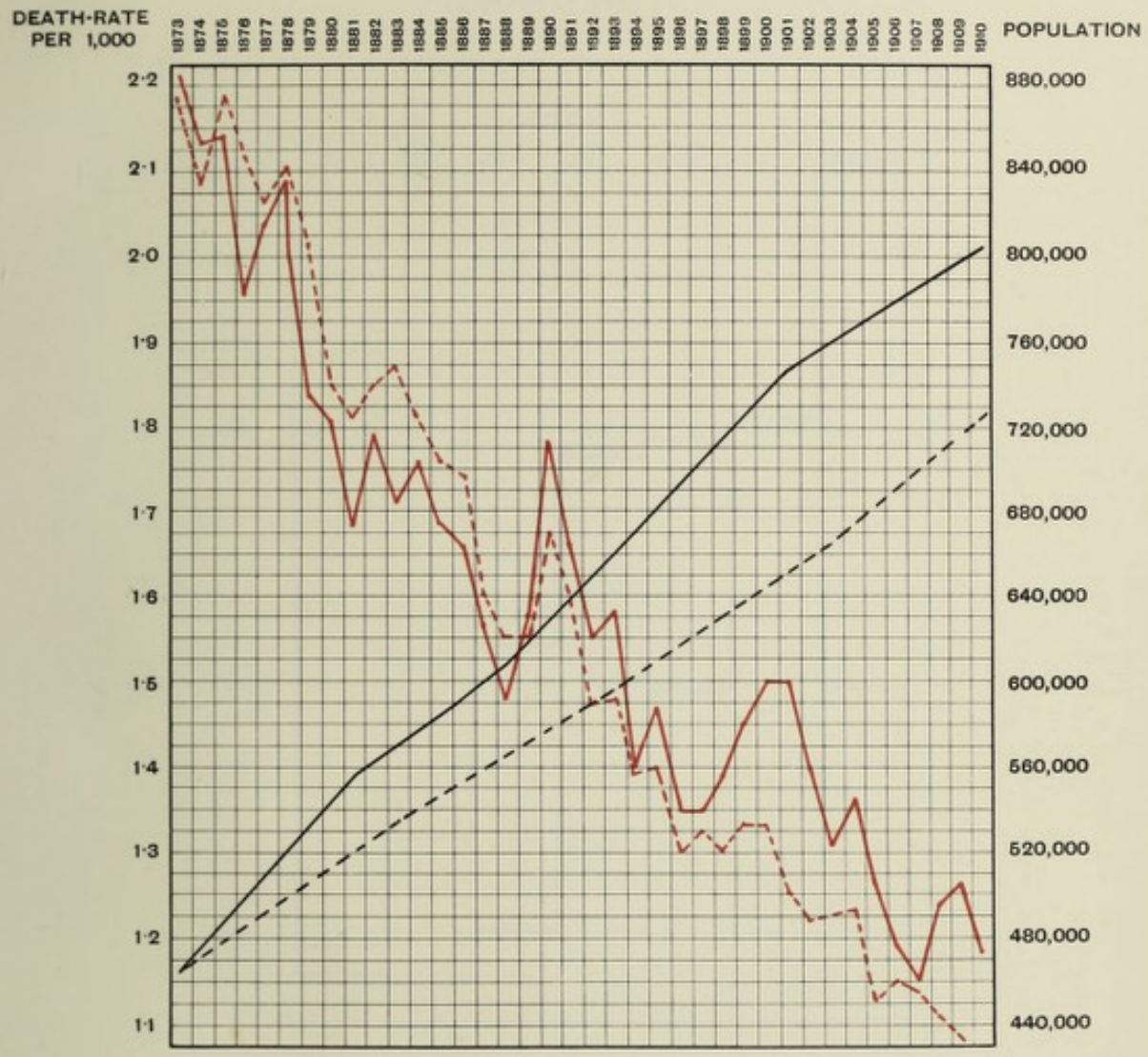
Disease.	1897	1898	1899	1900	1901	1902*	1903	1904	1905	1906	1907	1908*	1909	1910	1911
Abdominal Tuberculosis	57	64	78	104	131	92	113	107	94	68	77	53	48	38	62
Tubercular Meningitis ...	79	102	63	56	88	63	73	73	68	75	73	72	51	76	54
Phthisis ...	679	718	841	847	903	874	754	806	759	672	675	741	751	657	736
Other forms of Tuberculosis	122	70	96	71	83	64	85	85	78	69	97	87	64	75	65
Total deaths...	937	954	1078	1078	1205	1093	1025	1071	999	884	922	953	914	846	917
Mortality rate	1·86	1·87	2·10	2·08	2·31	2·06	1·97	2·05	1·91	1·70	1·76	1·79	1·75	1·61	1·75

*53 weeks.

The history of tuberculosis in Birmingham in the past is worthy of the closest study. It indicates clearly (*a*) that great strides have already been made in the prevention of the disease, and (*b*) that the outlook for the future is most hopeful.

In the following chart is shown the mortality in three Registration Districts which correspond very closely with Greater Birmingham from phthisis, which is the most common form of tuberculosis, together with the yearly increase of population since 1873. The chart indicates that, notwithstanding the enormous increase of population which has taken place, the rate of mortality has diminished in a manner very similar to that which is noted in the rest of England.

CHART No. 3.



PHTHISIS DEATH-RATE 1873-1910 PER 1,000 LIVING.

BIRMINGHAM DISTRICT

ENGLAND AND WALES

POPULATION—BIRMINGHAM DISTRICT

POPULATION—ENGLAND AND WALES

(REDUCED TO SCALE)

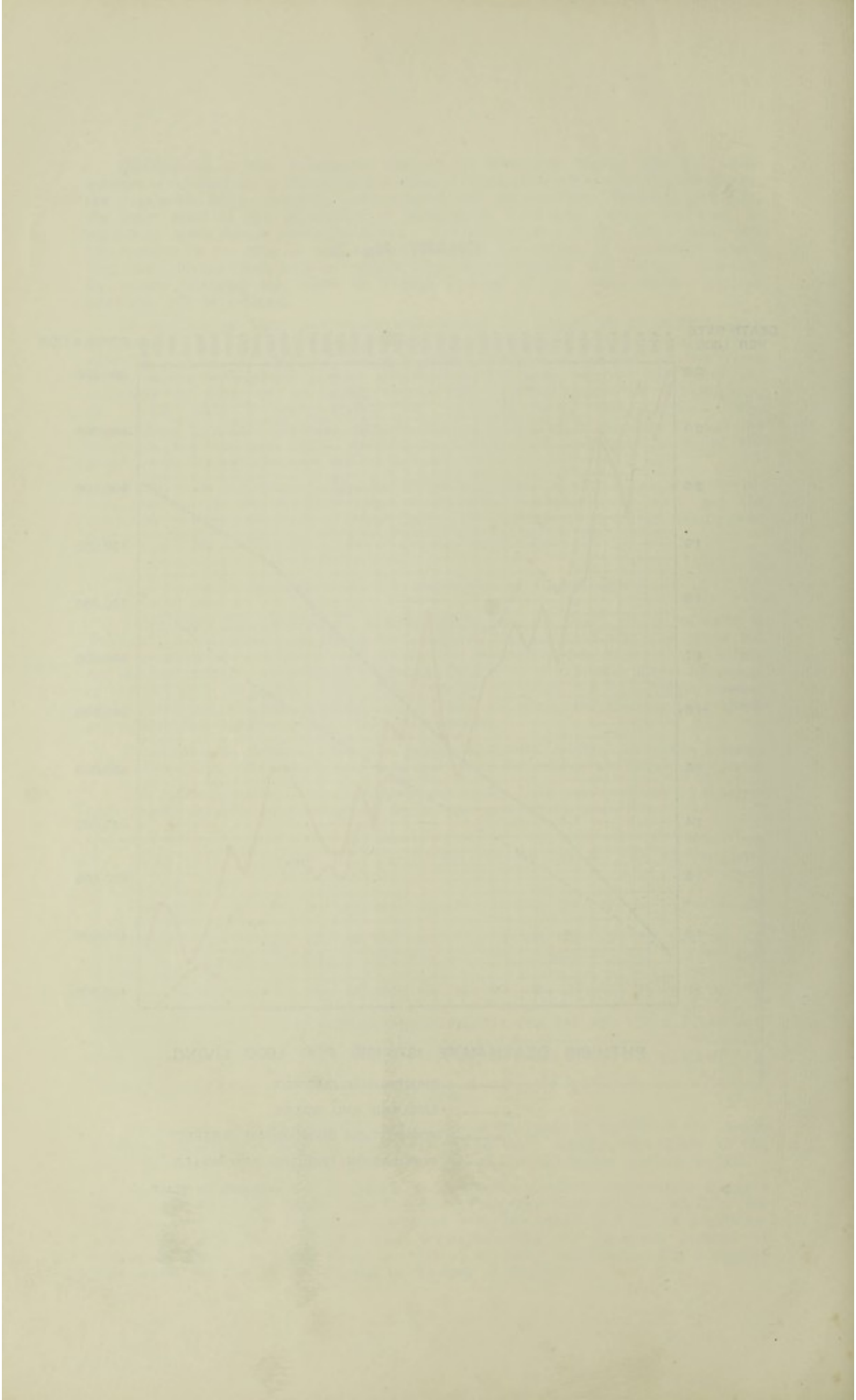
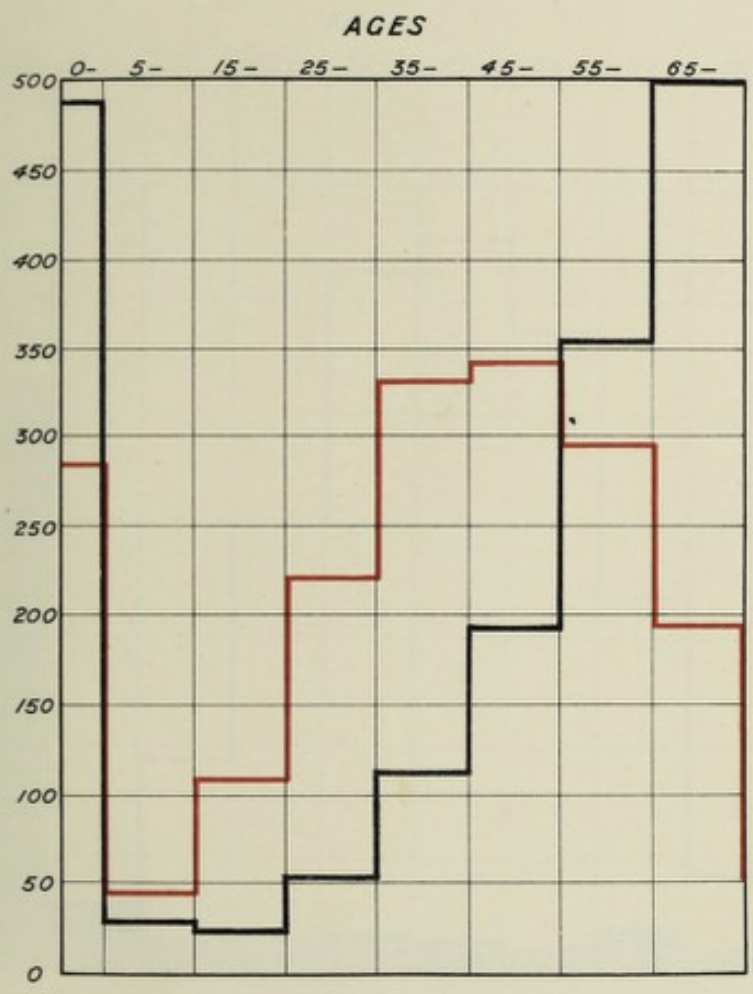


CHART No. 4.



MORTALITY AT AGE-PERIODS

BIRMINGHAM 1901-1910 (AVERAGE).

TUBERCULOSIS PER 100,000 LIVING

ALL CAUSES EXCEPT TUBERCULOSIS

PER 10,000 LIVING

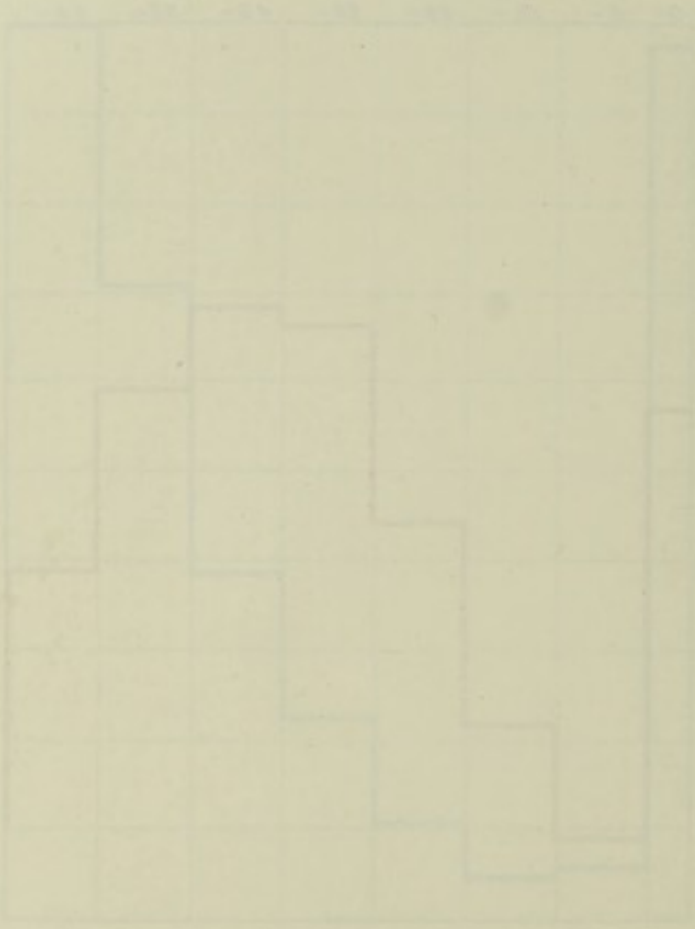
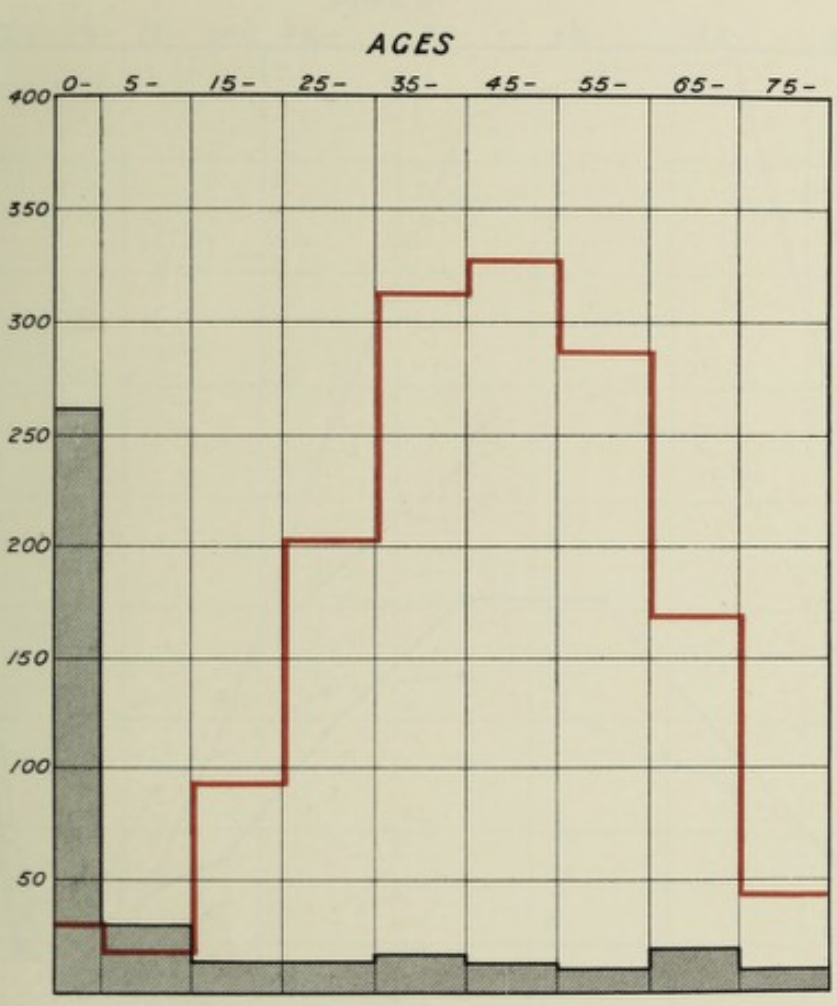


CHART No. 5.



DEATH-RATES AT AGE-PERIODS PER 100,000 LIVING.

BIRMINGHAM 1901-1910 (AVERAGE).

PHTHISIS

OTHR FORMS OF TUBERCULOSIS

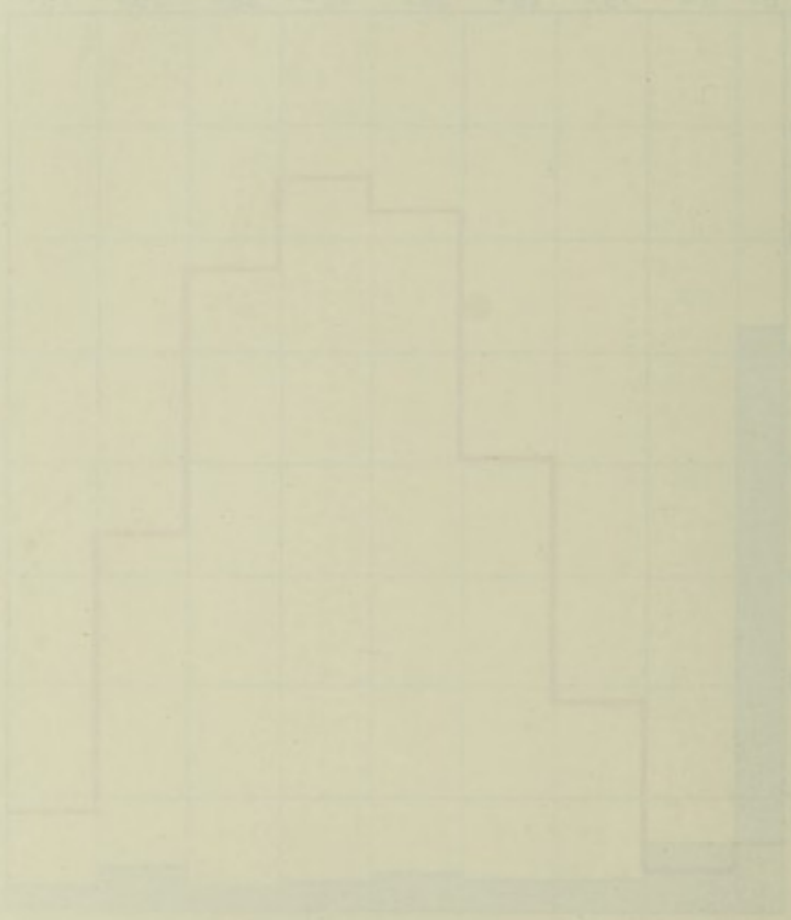
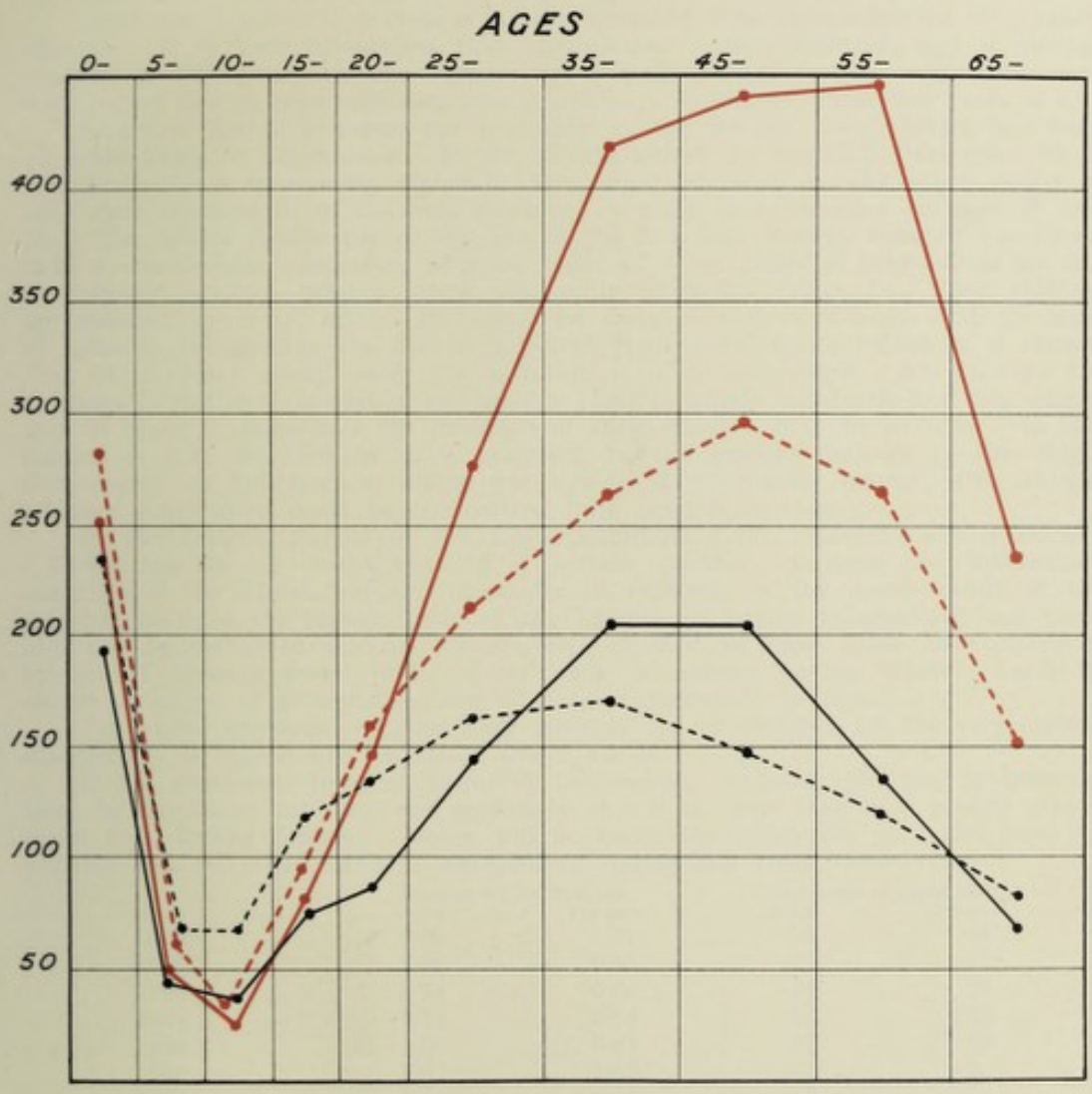


CHART No. 6.



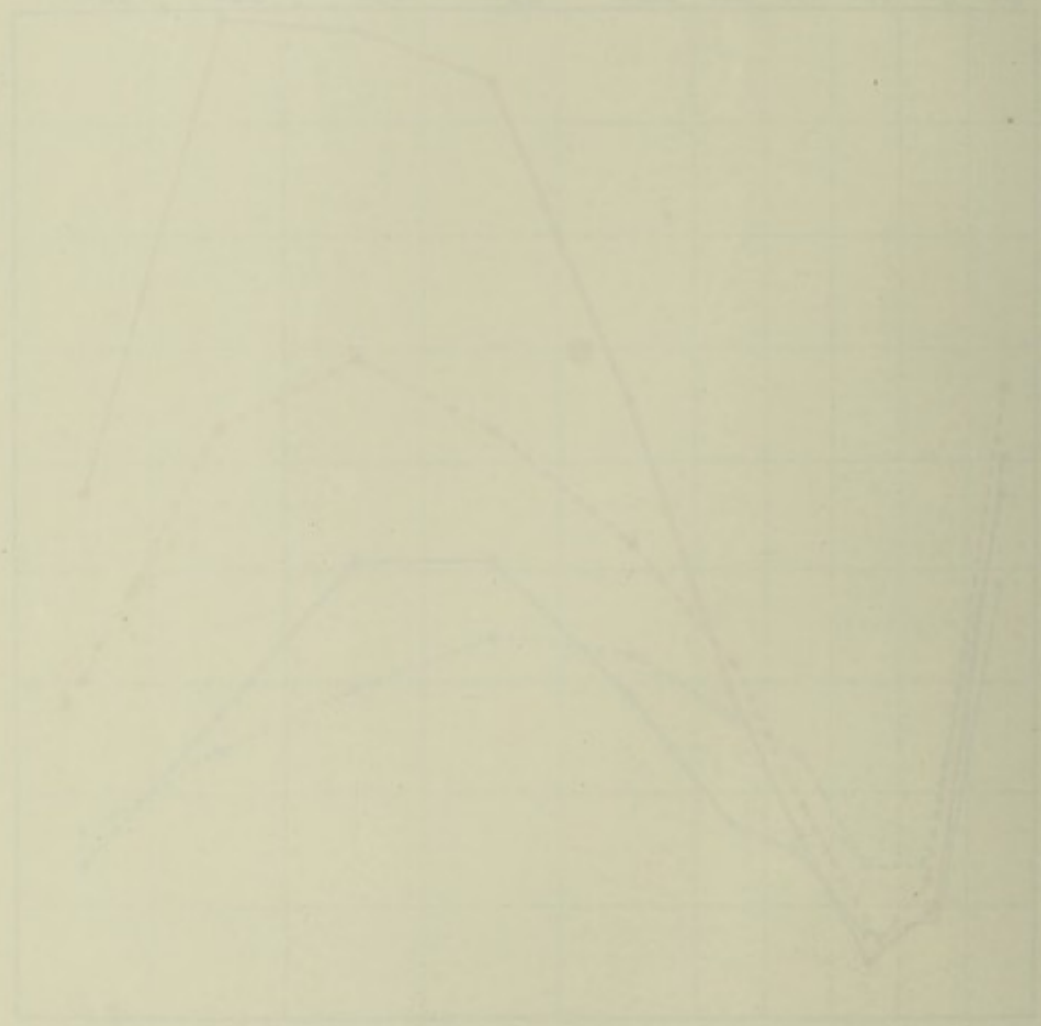
DEATH-RATES FROM TUBERCULOSIS (ALL FORMS)
PER 100,000 LIVING AT VARIOUS AGE-PERIODS.

MALES—BIRMINGHAM (1907-11)

MALES—ENGLAND AND WALES (1905-09)

FEMALES—BIRMINGHAM (1907-11)

FEMALES—ENGLAND AND WALES (1905-09)



(2) Mortality from Tuberculosis at Various Ages.

One of the special features of tuberculosis is that its mortality is particularly heavy during the early part of adult life. This is seen in the next two charts.

In chart No. 4 the mortality in Birmingham at age periods per 100,000 persons living is indicated by a red line; that for other causes of death per 10,000 persons is indicated by a black line. The chart represents the mortality which has occurred in Birmingham during the ten years 1901–1910 inclusive.

As already pointed out, tuberculosis is by far the most common cause of death and prolonged illness between the ages of 15 and 55 years. During the year 1910 there occurred 2,059 deaths of persons between the ages of 15 and 55, and of these no fewer than 583, or 28 per cent., were registered as due to tuberculosis.

Chart No. 4 shows that there is a high mortality from tuberculosis in very young children. It is now established that the disease is not inherited, and a further analysis of the deaths at the various age periods reveals certain suggestive facts with regard to this high mortality among infants and children under five years of age.

In Chart No. 5 is shown the mortality at age periods from phthisis and from all other forms of tuberculosis. It will be noted that the mortality from other forms of tuberculosis is enormously higher at ages under five than at any other period of life, while tuberculosis of the lung (phthisis) is much more common between 15 and 55. The special significance of this lies in the fact that modern research has shown that a considerable proportion of these cases of other forms of tuberculosis are due to infection with a tubercle germ apparently of bovine origin, *i.e.*, these children are infected by cows' milk. It cannot be asserted with confidence that all cases of infantile tuberculosis are due to infection from cows' milk; indeed it is certain that in a great many cases the infection is of human origin. Nevertheless the evidence is sufficient to justify all possible steps to obtain a tubercle-free milk supply and to teach mothers how the infection of their children may be avoided. In this respect it may be well to draw attention to the general findings of the Royal Commission on Tuberculosis, which was appointed to inquire, among other things, whether tuberculosis could be transmitted from animals to man.

In the Interim Report of the Royal Commission on Tuberculosis it is stated: "There can be no doubt that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk. Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis and of fatal tuberculosis in man."

The above quotation suggests very strongly the explanation for the very curious distribution of tuberculosis shown on Chart No. 5.

If the death-rate from all forms of tuberculosis, including phthisis, in Birmingham be calculated for each sex separately, it will be seen that it is greater among males than among females. Below will be found the death-rate per 1,000 from (*a*) phthisis and (*b*) other forms of tuberculosis during the years 1904–1911:—

	Death-rate from Phthisis.		Other forms of Tuberculosis.	
	Males.	Females.	Males.	Females.
1904	2·06	1·07	·58	·44
1905	2·02	0·93	·52	·41
1906	1·74	0·86	·44	·38
1907	1·77	0·84	·53	·42
1908	1·98	0·84	·47	·33
1909	1·87	1·03	·37	·26
1910	1·68	0·86	·43	·29
1911	1·86	0·98	·40	·29

Chart No. 6 shows this distribution graphically for Birmingham and for England and Wales.

It indicates that the male mortality in Birmingham is much higher than in England and Wales at ages over 25 years. It also indicates that the female mortality is smaller in Birmingham than in England and Wales during the early years, although it becomes greater at ages over 35 years.

The tables and chart above mentioned are exceedingly suggestive. It cannot be asserted that males are more susceptible to tuberculosis than females, because we find that in Ireland and in some districts in England the mortality amongst females is as high as it is among males; so that the true explanation of the enormously greater mortality amongst males in Birmingham must be sought in local rather than in general circumstances.

The Registrar-General has during many decades calculated for each census the mortality due to phthisis occurring in individual trades. It is found that such trades as brass-casting, grinding and polishing, *i.e.*, some of our staple industries, bear mortalities many times greater than other occupations. The same may be said of publicans, barmen, and others engaged in the trade of a public-house. There is, therefore, the clearest indication that, locally and nationally, the cause of this high incidence on particular trades should be investigated and steps taken to deal with it. Accurate trade statistics are enormously more difficult to obtain than might be thought in the first instance. A brass-caster or polisher who recognises that his trade is damaging his health frequently leaves it and engages in some other occupation. Should his death occur, his trade is registered not as that of a brass-caster or polisher but as that of a gardener, labourer, or carter, as the case may be.

(3) Mortality from Phthisis in Different Districts.

The distribution of phthisis (tuberculosis of the lungs) over the various wards of the City is indicated in the accompanying map, which shows in dark colour the wards in which the mortality is highest.

The following table shows for each of the old City wards for the past five years, and for each of the added districts for the same years, the mean mortality rate from phthisis. It will be seen that wherever poverty exists tuberculosis co-exists. There is probably a direct connection between poverty and tuberculosis, but there is even more frequently an indirect connection, for the skilled artisan who becomes infected has his earning capacity reduced, and gradually drifts from the better class districts into the smaller houses in the poorer class districts. It may, therefore, be said with truth that tuberculosis is a cause of poverty, and at the same time that poverty is a cause of tuberculosis.

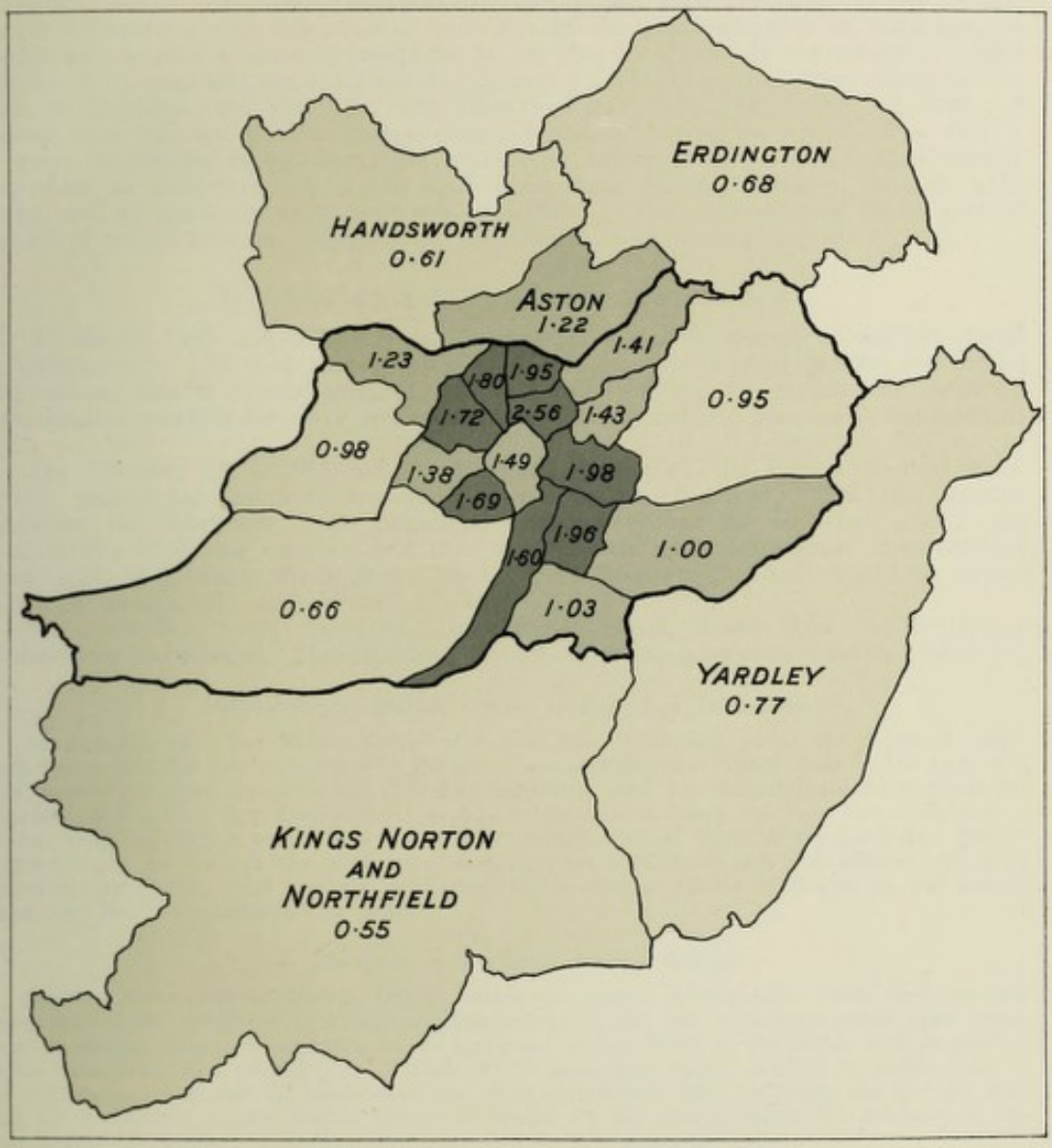
Death-rates per 1,000 *from Phthisis.*

Wards in Old City.	1907.	1908.	1909.	1910.	1911.	Mean of 5 years.	
						Rate.	Above or below City. %
Rotton Park	0·79	1·07	1·19	0·72	1·13	0·98	—23
All Saints'	1·12	1·31	1·16	1·23	1·31	1·23	— 4
Ladywood	1·57	1·45	1·40	0·99	1·51	1·38	+ 8
St. Paul's	1·80	1·63	1·51	2·01	1·67	1·72	+34
St. George's	1·99	1·59	2·08	1·41	1·95	1·80	+41
St. Stephen's	2·02	1·87	1·86	2·17	1·84	1·95	+52
St. Mary's	2·54	2·52	3·07	2·31	2·35	2·56	+100
St. Bartholomew's	1·74	2·02	2·04	2·06	2·06	1·98	+55
Market Hall	1·79	1·82	1·14	0·95	1·73	1·49	+16
St. Thomas'	1·33	1·66	1·74	1·70	2·03	1·69	+32
St. Martin's	1·37	1·88	1·45	1·40	1·92	1·60	+25
Edgbaston and Harborne	0·63	0·85	0·66	0·55	0·62	0·66	—48
Deritend	1·77	2·07	1·88	2·20	1·86	1·96	+53
Bordesley	0·98	0·90	1·18	0·94	1·02	1·00	—22
Duddeston	1·56	1·26	1·29	1·15	1·91	1·43	+12
Nechells	1·52	1·31	1·49	1·21	1·51	1·41	+10
Balsall Heath	0·92	1·32	1·22	0·72	0·96	1·03	—20
Saltley...	0·49	1·17	1·21	0·90	1·00	0·95	—26
Old City	1·22	1·30	1·34	1·15	1·40	1·28	
Aston	1·24	1·35	1·27	1·25	0·99	1·22	
Erdington	0·57	0·81	0·64	0·48	0·89	0·68	
Handsworth	0·49	0·75	0·58	0·58	0·67	0·61	
King's Norton and Northfield ...	0·49	0·66	0·63	0·56	0·40	0·55	
Yardley	0·83	0·87	0·81	0·65	0·70	0·77	

CHART No. 7.

PHTHISIS DEATH-RATE PER 1,000—1907-1911.

UNDER 1·00 | 1·00 TO 1·50 | 1·50 UPWARDS



WARDS IN OLD CITY.

EDGBASTON AND HARBORNE	0·66	MARKET HALL	1·49
SALTLEY	0·95	ST. MARTIN'S	1·60
ROTTON PARK	0·98	ST. THOMAS'	1·69
BORDESLEY	1·00	ST. PAUL'S	1·72
BALSALL HEATH	1·03	ST. GEORGE'S	1·80
ALL SAINTS'	1·23	ST. STEPHEN'S	1·95
LADYWOOD	1·38	DERITEND	1·96
NECHELLS	1·41	ST. BARTHOLOMEW'S	1·98
DUDDESTON	1·43	ST. MARY'S	2·56

(4) Incidence of Tuberculosis.

There is an urgent need for much accurate investigation work in regard to tuberculosis. Any authority enabling such investigations to be undertaken will be amply repaid. For example, in the trades in which it is known that the mortality is high, it is extremely important to ascertain what the incidence of tuberculosis is in the case of the wives and children of men attacked with tuberculosis with a view to ascertaining what part is played by direct infection and what part is played by other means.

Our available information as to the extent of tuberculosis in Birmingham is relatively small, and by no means reliable at the present time. It is known quite definitely that a very large proportion of the human race becomes infected at one period or another with tuberculosis, and that in the great majority of instances the people are in such a state of health as to be able to throw off the infection. This is proved by post-mortem examinations of persons who have died from other causes, such as accidents, old age, etc., who show evidence beyond a shadow of doubt of having been infected at one time or another and of having recovered. This fact is of great importance as indicating the widespread nature of the disease. It is equally important as indicating one of the main lines along which preventive methods have to go, and as justifying us in a general statement to the effect that *by far the greatest number of people who are infected with tuberculosis spontaneously recover.*

(5) Notification of Pulmonary Tuberculosis.

In March, 1905, the voluntary notification of cases of consumption was introduced in Birmingham. At that time a letter was sent to each medical practitioner in the City asking him to report cases of phthisis, and offering in return the ordinary remuneration payable for cases reported under the Infectious Diseases (Notification) Act.

On February 14th, 1907, the Birmingham Branch of the British Medical Association passed the following resolution unanimously :—Resolved : That this Branch expresses its conviction that pulmonary phthisis should be included among the compulsorily notifiable diseases, and that it should be made compulsory that efficient disinfection of premises where death has occurred from such disease should be undertaken by local health authorities.

In December, 1908, the Local Government Board issued their Public Health Tuberculosis Regulations. The important sections in the Regulations are set out below :—

Notifications by Medical Officers of Poor Law Institutions.

Article IV.—(1). The Medical Officer of a Poor Law Institution, within the period of forty-eight hours after his first recognition of the symptoms of Pulmonary Tuberculosis in the case of a poor person who is an inmate of the Poor Law Institution, and who resided immediately before his admission to the Poor Law Institution at a place in the area in which the Poor Law Institution is situate, shall, in relation to the case, enter in a printed copy of Form A the particulars therein required to be set forth in the notification, shall sign the notification, and shall address and, after prepaying the postage, shall post the notification to the Medical Officer of Health for the area in which the Poor Law Institution is situate.

Notifications by District Medical Officers.

Article V.—A District Medical Officer, within the period of forty-eight hours after his first recognition of the symptoms of Pulmonary Tuberculosis in the case of a poor person upon whom he is in medical attendance according to his agreement with a Board of Guardians, shall, in relation to the case, enter in a printed copy of Form B the particulars therein required to be set forth in the notification, shall sign the notification, and shall address and, after prepaying the postage, shall post the notification to the Medical Officer of Health for the area in which the residence of the poor person is situate.

Notifications by Superintending Officers of Poor Law Institutions.

Article VI.—The Superintending Officer of a Poor Law Institution, within the period of forty-eight hours after the departure from the Poor Law Institution of a poor person who has been an inmate of the Poor Law Institution, and in relation to whose case the Medical Officer of the Poor Law Institution has, in pursuance of Article IV., posted a notification to a Medical Officer of Health, shall, according to the best information in the possession of or readily accessible by the Superintending Officer with respect to the actual or intended place of destination of the poor person and his intended address at that place, enter in a printed copy of Form C the particulars therein required to be set forth in the notification, shall sign the notification, and shall address and, after prepaying the postage, shall post the notification to the Medical Officer of Health for the area in which the place is situate.

Notifications by Relieving Officers.

ARTICLE VII.—A Relieving Officer, within a period of forty-eight hours after he has obtained accurate information respecting a change of residence (other than a change of residence by admission to a Poor Law Institution) by a poor person who resides or has resided within the Relief District assigned to the Relieving Officer, and in relation to whose case a District Medical Officer has, in pursuance of Article V., posted a notification to the Medical Officer of Health, shall, in relation to the case, enter in a printed copy of Form D the particulars therein required to be set forth in the notification, shall sign the notification, and shall address and, after prepaying the postage, shall post the notification to the Medical Officer of Health for the area in which the changed residence of the poor person is situate.

Exception and application of enactments, and Special Powers of Councils.

ARTICLE IX.—(1) Nothing in these Regulations shall have effect so as to apply or so as to authorise or require a Medical Officer of Health or a Council, or any other person or authority, directly or indirectly, to put in force with respect to any poor person, in relation to whom a notification in pursuance of these regulations has been posted to a Medical Officer of Health, any enactment which renders the poor person, or a person in charge of the poor person, or any other person, liable to a penalty, or subjects the poor person to any restriction, prohibition, or disability affecting himself, or his employment, occupation, means of livelihood, or residence, on the ground of his suffering from Pulmonary Tuberculosis.

(2) Subject as aforesaid, a Council, on the advice of their Medical Officer of Health, in the case of a poor person in relation to whom a notification in pursuance of these Regulations has been posted to the Medical Officer of Health, may, for the purpose of preventing the spread of infection from Pulmonary Tuberculosis—

(i) take all such measures, or do all such things as are authorised, in any case of infectious disease, or of dangerous infectious disease, by any enactment relating to public health, and as have reference to the destruction and disinfection of infected articles, or the cleansing or disinfecting of premises;

(ii) take all such measures or do all such things as are appropriate and necessary for the safe disposal or destruction of infectious material, produced and discharged, as a result of Pulmonary Tuberculosis; and otherwise for the prevention of the spread of infection from any such material;

(iii) afford or supply all such assistance, facilities, or articles as, within such reasonable limits as the circumstances of the case require and allow, will obviate, or remove, or diminish the risk of infection arising from the conditions affecting the use or occupation of any room, when used or occupied by the poor person as a sleeping apartment; and

(iv) furnish, for the use of the poor person, on loan, or otherwise, any appliance, apparatus, or utensil which will be of assistance for the purpose of any precaution against the spread of infection.

(3) A Council, on the advice of their Medical Officer of Health, may provide and publish or distribute in the form of placards, handbills, or leaflets, suitable summaries of information and instruction respecting Pulmonary Tuberculosis, and the precautions to be taken against the spread of infection from that disease.

On March 22nd, 1911, the Local Government Board issued a second Order, "Regulations as to Tuberculosis (Hospitals)," requiring medical officers of hospitals and other similar institutions to report cases of tuberculosis met with in such hospitals.

Notifications by Medical Officers.

ARTICLE IV.—(1) A Medical Officer of any Hospital, within the period of forty-eight hours after his first recognition of Pulmonary Tuberculosis in a person upon whom he is in medical attendance at the Hospital, shall complete, sign and transmit a notification of the case in the form shown in the Schedule to this Order to the Medical Officer of Health for the area within which the Hospital is situate.

Exception and application of enactments, and Special Powers of Councils.

ARTICLE VII.—(1) Nothing in these Regulations shall have effect so as to apply, or so as to authorise or require a Medical Officer of Health or a Council, or any other person or authority, directly or indirectly, to put in force with respect to any patient in relation to whom a notification in pursuance of these Regulations has been transmitted to a Medical Officer of Health, any enactment which renders the patient, or a person in charge of the patient, or any other person, liable to a penalty, or subjects the patient to any restriction, prohibition, or disability affecting himself, or his employment, occupation or means of livelihood, on the ground of his suffering from Pulmonary Tuberculosis.

(2) Subject as aforesaid, a Council on the advice of their Medical Officer of Health, in the case of a patient in relation to whom a notification in pursuance of these Regulations has been transmitted to the Medical Officer of Health, may—

(i) take the necessary measures to secure the disinfection of infected articles and the cleansing or disinfecting of premises which have been used by the patient;

(ii) take the necessary measures for the safe disposal or destruction of infectious discharges of the patient;

(iii) supply all such reasonable assistance, facilities, and articles as will tend to diminish the risk of infection arising from the conditions affecting the use or occupation of any room, when used, or occupied by the patient as a sleeping apartment;

(iv) furnish, for the use of the patient, on loan or otherwise, any appliance, apparatus, or utensil which may be of assistance in preventing the spread of infection; and

(v) appoint such officers, do such acts and make such arrangements as may be requisite for giving advice and for carrying out the provisions of these Regulations, and of the Public Health (Tuberculosis) Regulations, 1908.

(3) A Council, on the advice of their Medical Officer of Health, may provide and publish or distribute in the form of placards, handbills, or leaflets, suitable summaries of information and instruction respecting Pulmonary Tuberculosis, and the precautions to be taken against the spread of infection from that disease.

On November 15th, 1911, the Local Government Board issued a third Order, "Public Health (Tuberculosis) Regulations, 1911," which require that every medical practitioner shall notify to the Medical Officer of Health persons suffering from pulmonary tuberculosis.

Notification by Medical Practitioners (including School Medical Inspectors).

ARTICLE IV.—(1) Subject as provided in Articles X., XI., and XII. of these Regulations every Medical Practitioner attending on or called in to visit any person shall, within forty-eight hours after first becoming aware that such person is suffering from Pulmonary Tuberculosis, complete, sign and transmit a notification of the case in the form shown in the Schedule A. to these Regulations to the Medical Officer of Health for the area within which the place of residence of the person is situate:

Provided that a Medical Practitioner shall not be required under these Regulations to notify any case of Pulmonary Tuberculosis which has already, to his knowledge, under these Regulations or under the Poor Law Regulations or under the Hospital Regulations, been notified to the Medical Officer of Health for the area within which the place of residence of the patient is situate.

(2) Every Medical Practitioner who is a School Medical Inspector shall within the period of forty-eight hours after he has inspected any children attending a Public Elementary School, complete and sign a notification in the form shown in the Schedule B. to these Regulations of all cases of Pulmonary Tuberculosis of which he became aware during the course of the inspection, and shall transmit the notification to the Medical Officer of Health for the area within which the Public Elementary School is situate.

Duties of Medical Officers of Health.

ARTICLE VII.—(2) Every Medical Officer of Health shall enter in a Register to be kept by him for that purpose the full particulars contained in every notification received by him under these Regulations or under the Poor Law Regulations or under the Hospital Regulations and relating to a patient whose place of residence is situate within the area for which he is Medical Officer of Health. The said Register shall be kept in the custody of the Medical Officer of Health and shall not be open to inspection by any person other than a person specially authorised by resolution of the Council, the Medical Officer of Health for the administrative County within which the area is situate, any School Medical Inspector acting within the area, or an Officer of the Local Government Board or of the Board of Education.

ARTICLE VIII.—Upon the receipt of a notification under these Regulations or under the Poor Law Regulations or under the Hospital Regulations the Medical Officer of Health, or an Officer acting under the instructions of the Medical Officer of Health, shall make such inquiries and take such steps as may appear to him to be necessary or desirable for preventing the spread of infection and for removing conditions favourable to infection.

Special Powers of Councils.

ARTICLE IX.—(1) For the purposes of these Regulations and of the Poor Law Regulations and of the Hospital Regulations a Council, on the advice of their Medical Officer of Health, may supply all such medical or other assistance, and all such facilities and articles as may reasonably be required for the detection of Pulmonary Tuberculosis, and for preventing the spread of infection and for removing conditions favourable to infection, and for that purpose may appoint such officers, do such acts and make such arrangements as may be necessary;

(2) A Council, on the advice of their Medical Officer of Health, may provide and publish or distribute in the form of placards, handbills, or leaflets, suitable summaries of information and instruction respecting Pulmonary Tuberculosis, and the precautions to be taken against the spread of infection from that disease.

Exception and application of Enactments.

ARTICLE XIII.—Nothing in these Regulations shall have effect so as to apply, or so as to authorise or require a Medical Officer of Health or a Council, or any other person or authority, directly or indirectly, to put in force with respect to any patient in relation to whom a notification in pursuance of these Regulations has been transmitted to a Medical Officer of Health, any enactment which renders the patient, or a person in charge of the patient, or any other person, liable to a penalty, or subjects the patient to any restriction, prohibition, or disability affecting himself, or his employment, occupation or means of livelihood, on the ground of his suffering from Pulmonary Tuberculosis.

It is obvious from the above that it is too early yet to be able to give any accurate figures as to the incidence of tuberculosis, as distinguished from deaths, in Birmingham. It will be noticed that since 1905 our means of ascertaining where tuberculosis exists has increased yearly. The actual number of reported cases each year is shown in the table below. In examining this table, however, it must be remembered that the figures prior to November, 1911 relate to the old City area. During the first six months of 1912, 2,447 cases were notified. If this rate is maintained throughout the year, approximately 5,000 cases will be reported.

Notified Cases of Tuberculosis of the Lungs.

1905	666	1909	1,636
1906	658	1910	1,843
1907	751	1911	2,844
1908	865	1912 (to June 30th)	2,477

In making provision for the treatment of cases of tuberculosis of the lung it is very important to have some idea as to the number who will require such treat ment. The number may be roughly estimated from the partial notification which we already possess, and in this way there is an indication that approximately 3,500 cases will be reported annually. Another method is to calculate from the average duration of the illness of patients. Approximately 1,000 persons die from tuberculosis of the lung in Birmingham every year, and if it is assumed that each patient lives three years in such a condition that tuberculosis can be recognised by his medical attendant, it will give us approximately 3,000 patients at one time in the City suffering from tuberculosis of the lung.

Our present methods of recognising tuberculosis of the lung are relatively crude, and will probably be greatly improved in the near future. It is hoped by the introduction of better methods to be able to recognise cases of tuberculosis at an earlier age, and thereby be able to treat a larger number than are notified at the present time. Dr. Philip, of Edinburgh, who has for a number of years examined the families of notified consumptives, has after much enquiry come to the conclusion that the number of cases which ought to be dealt with is approximately ten times the number of deaths. He asserts confidently that it is dangerous to leave these persons without treatment—the majority of them will recover spontaneously—but he asserts positively that some assistance given at an early stage will prevent a large proportion of these early cases developing tuberculosis in a fatal form later.

If in Birmingham 3,000 consumptives who are in a recognisable stage come to light annually, there will be at any one time from 6,000 to 9,000 consumptives in the City. In any one year, therefore, of the 3,000 cases which will be reported as newly developing the disease it will probably be found necessary to make provision for the treatment of 2,500 per annum, the other 500 being able to make the necessary provision for themselves.

The cases of pulmonary phthisis which occur in Birmingham are notified to the Medical Officer of Health upon the forms, copies of which are given below, and payment is made for these notifications upon the scale prescribed in the various orders under which the notifications are made, viz., 2s. 6d. for cases occurring in private practice and 1s. 0d. for cases in hospital and poor law practice.

FORM A.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

To the Medical Officer of Health —— *No.*.....
for the City of Birmingham.

I hereby give you Notice *that, in my opinion, the poor person who is now an inmate of the Poor Law Institution known as the Birmingham Infirmary, belonging to the Guardians of the Poor, and in relation to whom particulars are appended, is suffering from PULMONARY TUBERCULOSIS.*

Name of Poor Person.....

Residence of Poor Person prior to admission to the above-named Poor Law Institution.....

Age..... .....
Sex.....

Dated *this*.....*day of*.....191 .

(Signed).....
Medical Officer for the above-named Poor Law Institution.

FORM B.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

To the Medical Officer of Health
for the City of Birmingham.

No.....

.....Union.

I hereby give you Notice *that, in my opinion, the poor person in relation to whom particulars are appended, is suffering from PULMONARY TUBERCULOSIS.*

Name of Poor Person.....

Residence .....

Age..... *.....*

Sex.....

Dated *this.....day of.....*191 .

(Signed).....

Medical Officer for the.....District
of the.....Union.

CITY OF BIRMINGHAM.

Public Health (Tuberculosis in Hospitals) Regulations, 1911.

To the Medical Officer of Health,
The Council House, Birmingham.

I hereby give you Notice *that, in my opinion, ...*

.....who is now an $\frac{\textit{in-patient}}{\textit{out-patient}}$ *at the.....*

and in relation to whom particulars are appended, is suffering from PULMONARY TUBERCULOSIS.

Residence prior to attendance at or admission to the above-named Institution *.....*

.....

Age..... *Sex.....*

Dated *this.....day of.....*191 .

(Signed).....

Medical Officer in attendance on the above-named Patient.

I recommend the above Patient for admission to[a] *.....Sanatorium.*

(a) If the Medical Attendant desires the patient to be examined for admission to Yardley Road or Salterley Grange Sanatorium, this should be stated here.

CITY OF BIRMINGHAM.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1911.

To the Medical Officer of Health,
The Council House, Birmingham.

I hereby give you Notice *that, in my opinion,.....*
in relation to whom particulars are appended, is suffering from PULMONARY TUBERCULOSIS.

Residence .....

Age..... *Sex.....*

Dated *this.....day of.....*191 .

Signed.....

Medical Practitioner in attendance on the above-named Patient.

I recommend the above Patient for admission to[a] *.....Sanatorium.*

(a) If the Medical Attendant desires the patient to be examined for admission to Yardley Road or Salterley Grange Sanatorium, this should be stated here.

(6) Diagnosis of Pulmonary Tuberculosis.

The notification of pulmonary tuberculosis naturally depends upon the diagnosis, and the diagnosis of this disease in the early stages, when there is reasonable hope of cure, is unfortunately a matter of considerable, sometimes extreme, difficulty. Post-mortem examination of the lungs of adults who have died of other diseases often reveals healed or quiescent tuberculous foci in the lungs. Such foci were undoubtedly at one time active, and the persons must then have been cases of pulmonary tuberculosis, yet it is generally admitted that the majority of such persons were never recognised clinically to be suffering from tuberculosis of the lungs, and it may reasonably be doubted whether a diagnosis by the ordinary methods of examination was at any time possible. Phthisis is usually a chronic condition, slow in its development, in contrast to the other notifiable infectious diseases, which are of a more acute nature. Clearly, then, there must often be a considerable period in the early stages of the disease when the physical signs can only be recognised by the most expert and practised physician, even though the general symptoms of the patient be quite considerable.

It is to be hoped that practitioners will avail themselves of the assistance given by the test doses of tuberculin in early stages of the disease. Not only do these doses tend, in actual cases, to make physical signs more manifest by the production of the so-called focal reaction, but it is now generally admitted that excessive sensitiveness to tuberculin is a valuable danger signal, and an indication for treatment either with tuberculin or of a general prophylactic nature.

(7) Cases of Pulmonary Tuberculosis in Death Returns.

A certain small number of cases are not brought to the notice of the Medical Officer of Health during the lifetime of the patient, but are discovered in the weekly death returns with which he is supplied. In such cases inquiry is, where possible, made into the case, and the omission is brought to the attention of the medical man who certified the death.

(8) Tuberculosis Visitors.

All notified cases are entered in the register which has been kept by the Medical Officer of Health since the introduction of voluntary notification in 1905. The particulars given upon the notification forms are copied on to cards described below, which are passed on to the Tuberculosis Visitors and finally filed upon the card index system.

There are now eight of these Visitors in the service of the Health Committee. One was appointed in 1905, who dealt with the relatively small number of cases which were notified under the then existing system of voluntary notification. A second Visitor was appointed in 1909 and two more in 1911, in order to deal with the increase of work which followed the introduction of compulsory notification of Poor Law and Hospital cases. Finally the Order of 1911 has necessitated the appointment of four additional Visitors in June, 1912. The staff of Visitors now comprises one male Visitor, who has had a wide experience in this particular work, and seven trained nurses, all of whom are well versed in the treatment of the disease, and some of whom have had experience in a sanatorium.

Two of these Visitors have been appointed to each of the four districts into which the City has been divided, each district being divided approximately equally between the two Visitors.

(9) Duties of Tuberculosis Visitors.

It is the duty of the Tuberculosis Visitors to go to the houses of all notified cases, except when the doctor requests that no visit should be paid, and to fill up for each case one of the cards, of which a specimen is reproduced on the opposite page.

REGISTER No.	DISTRICT	CASE

NAME AND ADDRESS	AGE	OCCUPATION (Last 5 Years)
George ——— *15 Ct. 4 ho. ——— Street*	*15*	*Errand Boy*

MEDICAL ATTENDANT	NOTIFIED	VISITED	FIRST ILL	FAMILY HISTORY AND PROBABLE SOURCE
Dr. ———	*Dec. 1st*	*Dec. 8th*	*2 months ago*	*Father died 4 years ago from Phthisis, aged 40.* *Sister died 6 months ago from Phthisis, aged 17.*

ISOLATION AND DISPOSAL OF SPUTUM	LIVING ROOMS	BEDROOMS	RENT
No separate bed. Sleeps with brother, aged 17 (a healthy boy) *Coughs, but no spitting at present*	*2*	*3*	*4/6*

VENTILATION	LIGHTING	DAMPNESS	CLEANLINESS	DEFECTS
Through	*Fair*	*Nil*	*Rooms neglected*	*Nil*

CONDITIONS AT WORKPLACE	ANY SANATORIUM TREATMENT
Mostly in open air	*Recommended for Yardley Sanatorium*

OTHER INMATES	AGE	OCCUPATION	WORKPLACE OR SCHOOL	HEALTH
Mrs. ——	*43*	*Charwoman*	*—— ——— ——*	*Symptoms of Phthisis*
John ——	*22*	*Iron Moulder*	*—— Loveday Street*	*Has been treated at Yardley Road. Notified Case No. :——*
Fred ——	*17*	*Metal Roller*	*—— Newtown Row*	*Health Good*
Winifred ——	*11*	*School*	*—— —— Street*	*Notified Case No. :——*
Clarice ——	*4*	*———*	*———————*	*Health Good*

DATE.	REMARKS.
Dec. 8th.	*This family is persistently dirty and neglectful.* *Have had instructions several times.*

Upon these cards are given particulars of the personal and family history of the patient, of his occupation and that of other members of the family, of the dwelling as regards type of house, number of rooms, ventilation, and as to the existence of any structural or sanitary defects; further as to the apparent state of health of the patient, the presence or absence of sputum, and the method of disposal if present.

The Visitors inquire whether the patient is under a doctor at the time of visit, and as far as possible what treatment in sanatoria or elsewhere has already been followed. They are also required, when necessary, to give advice as to the disposal of sputum, proper ventilation, proper methods of dusting and cleansing, and as to suitable food for the patient and his family.

They are instructed to urge the patient to continue to take medical advice until such time as he may be admitted to a sanatorium or hospital, and in certain cases to urge the patient to go into the infirmary.

Should any other members of the family appear to need medical attention, they suggest that also, and in cases where they find families with many children in a more or less destitute condition, they bring them to the notice of the Charity Organisation Society, City Aid Society, or similar institutions. Through such agencies many weakly children in consumptive families have been sent away for long or short periods, and great benefit to their health has resulted.

Finally, in cases where they consider disinfection to be necessary, and in all cases where a patient has been removed to a sanatorium or hospital, or the patient has recently died, they arrange for disinfection to be carried out under the power conferred upon the Health Authorities under the Local Government Board orders.

The Tuberculosis Visitors are instructed to re-visit their cases at intervals of two to three months, or more often if necessary, in order to inquire into the progress of the case, and in order to see that their instructions are being carried out. It is very desirable that this should be done, but up to the present, owing to the large number of cases notified, it has been impossible to do so except in a few special cases. Now, however, that the eight Visitors are employed, it is hoped that the arrears will speedily be overtaken, and the cases re-visited as intended.

(10) Assistant Medical Officers and Tubercular Cases.

The Tuberculosis Visitors report daily to the Assistant Medical Officers of their respective districts, to whom they also present at the end of each week their diaries for signature, together with a sheet showing the number of notifications received from their districts, the number of deaths from phthisis, the number of visits paid, the number of disinfections carried out, and the number of nuisances which they have discovered.

The Assistant Medical Officers in supervising the work of the Tuberculosis Visitors pay particular attention to the other members of the family who appear to be ailing, some of whom are examined by them either in their homes or at the Council House, when such persons are unwilling or unable to see a private doctor. In this way a number of cases are discovered and recommended for sanatorium or other treatment. The Medical Officers also endeavour to arrange for the temporary or permanent treatment of cases not under a doctor, either in hospital, through the employers of patients, or through various charitable agencies. This is necessary at present, bearing in mind the inadequacy of the present municipal arrangements for the treatment of the disease.

The Medical Officers also visit patients in certain cases where the Tuberculosis Visitor believes that her advice will not be followed, or where it is desirable to bring further pressure upon a patient to enter the infirmary or a hospital.

(11) The Municipal Sanatoria.

On the forms of notification, except those of poor law cases, there is a space provided in which the doctor may recommend his patient for treatment at one of the municipal sanatoria.

The City possesses two sanatoria, one at Salterley Grange, opened in 1908, which now has accommodation for 48 patients, and one at Yardley Road, where the smallpox hospital has been adapted for the purposes of a sanatorium, which now has accommodation for 57 patients. There are also thirty beds in the City Hospital at West Heath available for the treatment of consumption. The City thus has at the present time 135 beds available for the treatment of the disease.

The procedure adopted at present with regard to those cases recommended for sanatorium treatment is as follows:—Lists of the cases recommended for the various sanatoria are made and a fortnightly examination is held by Dr. Dixon, Medical Superintendent of Yardley Road Sanatorium, of patients taken from these lists, the cases being, as far as possible, examined in order of recommendation. This examination is held at the Tuberculosis Centre in Edmund Street, which is described below.

The Salterley Grange Sanatorium, is used for patients who, after a period of observation at Yardley Road Sanatorium are considered to require a prolonged treatment of several months' duration.

Patients admitted to the other sanatoria remain there, as a rule, for a shorter period, averaging about six weeks, during which they receive treatment upon general sanatorium lines, which is of extreme value, as there conducted, from an educational point of view, and during which the specific treatment with tuberculin is initiated.

A certain number of the beds in Yardley Road Sanatorium have been set aside for the examination and treatment, if such is found necessary, of children who have been in contact with cases of the disease, and specially exposed to infection.

The children admitted to these beds are only detained for a short time, unless they are found to be suffering from the disease, in which case they remain for the ordinary course of treatment. The results obtained have been also very satisfactory.

The number of cases recommended for sanatorium treatment is very large, so large that it has been quite impossible with the existing number of beds to examine and admit patients soon after the recommendation is received. Thus there are at present over 1,200 patients awaiting examination for admission to the sanatoria, and it is to be feared that in many cases this delay will have seriously prejudiced the patient's chance of recovery. The urgent need for increased accommodation is thus clearly demonstrated.

(12) The Tuberculosis Centre.

The City at present rents rooms at 116 Edmund Street, which are used for the examination of cases recommended for sanatorium treatment, for the periodical examination of cases which have been discharged from the sanatoria, and also for purposes of treatment.

Here, under Dr. Dixon's direction, treatment with tuberculin is administered to patients who have been discharged from the various sanatoria, and to certain others who, without previous sanatorium treatment, are considered by Dr. Dixon to be suitable cases.

The results which have been obtained up to the present by tuberculin treatment, both in Birmingham and elsewhere, have been exceedingly encouraging, the attendances amounting to about 500 per week.

(13) The Results of Sanatorium and Tuberculin Treatment.

It is a matter of great difficulty to represent the results of treatment in figures and percentages such as would afford a satisfactory basis of comparison with those of the preceding or succeeding years, or with those of other institutions. The statistics and reports published upon the work done in sanatoria in the past are notoriously unsatisfactory, and even misleading, and, having regard to the nature of the disease, it is not surprising that this should be so.

Annual reports of sanatoria have appeared in which it is stated that a certain proportion of patients have been discharged "cured," but subsequent inquiry into the fate of such cases, especially if they be of the working classes, has shown that a considerable number have relapsed and perhaps died, soon after their return to the conditions of their work and their homes.

Emphasis has already been laid upon the fact that consumption is a chronic disease, which affects, at some time or other, a very large proportion of the population. If it is difficult to say with certainty when the disease begins, it is almost impossible to say with confidence that a patient is cured, or is free from the disease. The most that can be said is that the patient is no longer ill, that the morbid process is arrested.

Such arrested cases have undoubtedly received real benefit from their treatment, and may be regarded as being in the same position with regard to the disease as those others of the general population who harbour the germs of tuberculosis, but do not suffer from consumption. Nevertheless, the fact that the former have once actually suffered renders it likely that they will again break down if they return to conditions similar to those under which they became ill in the first instance, unless some additional safeguard can be provided which will protect them against relapse.

It is believed that such a safeguard is provided by a complete course of tuberculin, and that, if this can be successfully carried out, and if, in addition, the patients will take advantage of the education they have received in the sanatorium and during their tuberculin treatment, they may be confidently expected to live on without further breakdown of health.

It is as yet too early to speak with certainty of the permanency of the effects achieved by sanatorium treatment combined with the use of tuberculin by the intensive method, because the latter has not been used on any very large scale until recent years; but the results already obtained are sufficiently satisfactory to justify the opinion that the combined treatment constitutes a great advance upon the methods previously adopted.

In considering the results of the new treatment, it is necessary to bear in mind two important facts. Firstly, that a considerable number of cases are dealt with which are already so advanced, or which are so rapidly advancing, that they are almost hopeless. They are really unsuitable cases, but it is found impossible to refuse them the chance of life which is afforded by the treatment.

Secondly, that a number of patients who are suitable cases, and who have been under treatment for some time at a sanatorium and afterwards at the Tuberculosis Centre, fail to continue to attend at the latter and to receive the specific tuberculin treatment as long as is considered desirable. The reason why these patients refrain from further attendance is either that they feel so much better that they fail to appreciate the need of further treatment, and will not trouble to come any longer, or that they find it inconvenient to come at the times specified, or that the occasional indisposition caused by the treatment interferes with their work, and so induces them to cease their attendance.

In reports upon the results, therefore, those cases which fail to carry out the whole course of treatment should be considered separately and apart from those who have been able to take full advantage of the opportunities offered.

(14) Cost of Tuberculosis to Birmingham.

It will be seen from the foregoing pages that a considerable amount of work is being done with a view to checking the disease, either by preventing infection or by curing patients, and thus preventing them from remaining infective. The cost of this work for the relatively small proportion of tuberculosis cases dealt with amounts for the year 1911 to nearly £10,000. If other agencies are taken into account, such as our work in dealing with insanitary houses, health visiting, and the charitable agencies in Birmingham, it will be seen that the amount expended in the City is considerable. Against this, however, must be put the enormous loss caused by the long illness from which these consumptives suffer, the loss to the community through the death of many young adults, and through the crippling of children which prevents them from ever becoming self-supporting. It is not difficult to demonstrate that at least a quarter of a million is lost to Birmingham every year by reason of tuberculosis. If everything is taken into consideration, probably the sum is much larger, so that there can be no question as to it being much more economical to prevent the occurrence of the disease than to attempt to deal with it after it occurs. Anybody who has had any experience of visiting the homes of consumptives cannot fail to recognise the wastefulness of allowing the disease to develop.

(15) Tuberculosis and the Milk Supply.

It is pointed out in this report that milk plays an important part in the prevention of tuberculosis, and chart No. 5 indicates that the mortality in young children is largely due to tuberculosis of bovine origin. It will be remembered that several years ago the Health Committee, as a result of careful enquiries into this matter, obtained certain clauses in the Birmingham Corporation Act, 1903, which enable them to take samples of milk and to have these tested bacteriologically for the presence of tubercle bacilli. The operation of testing occupies about four weeks. If the milk then proves to be one containing living tubercle germs, the Veterinary Inspector visits the farm and attempts to localise the infected cow. Occasionally this can be done without real difficulty. In other cases, however, the cow cannot be localised, and samples have to be taken from every cow. By such methods it is possible to pick out the affected cow. Our powers under the Act enable us to require that the affected cow shall then be separated from the rest of the herd, and that her milk shall not be sent into the City for sale. Obviously much more drastic methods are required. For instance, it is found in practice that, even when this very expensive process is carried out, the farmer may comply with the Act and still keep the cow on his premises, and in exceptional cases even milk her and send the milk to a neighbouring town.

To obtain a really good supply of tubercle-free milk for Birmingham, the Health Committee went to considerable trouble in ascertaining the best method of inducing farmers to commence to supply milk from herds that were free from tuberculosis. A full report of these methods was issued, and as a result an offer was made to

farmers within ten miles radius of Birmingham who supply the City with milk that the Corporation would test their herds free of charge at six-monthly intervals on condition that they agreed to get rid of any cows which proved to be tubercular. A description of the work done under the Act of 1903, and also of that done in the direction of obtaining a guaranteed tubercle-free milk supply, will be found in the following pages of this report. A list of farmers who supply guaranteed tubercle-free milk, that is, milk from cows which have been tested by a veterinary inspector to the Corporation, has been sent to all the medical men in the City, and is supplied to enquirers when asked for.

The following is the report on the steps taken to maintain a satisfactory supply of milk for the City, prepared by Mr. John Malcolm, F.R.C.V.S., the Veterinary Superintendent :—

HOLLIDAY STREET WHARF,

BIRMINGHAM.

GENTLEMEN,

DAIRY INSPECTION.

I have pleasure in submitting herewith report on the work done last year in connection with the inspection of cows and cowsheds, and the efforts to minimise tubercle infection in the milk supply.

Inspection of Cows and Cowsheds in the City.

During the year under review the work in connection with the general inspection of cows and cowsheds in the City has very largely increased. This has naturally followed from the extension of the City, and the increase will be at once apparent from the following table :—

	Farmers.	Farms.	Sheds.	Cows.
Birmingham	20	28	66	575
Quinton	9	12	20	132
Other added districts ...	126	136	284	1,946
Greater Birmingham	155	176	370	2,653

Visits of Inspection.

During the year 1,035 visits of inspection have been made to cows and cow sheds. Hitherto it has been the routine practice to visit the sheds monthly, and at such visits to take cognisance of any departure from the normal in the appearance or health of the members of the herds collectively or individually, to make a careful examination of each cow's udder, to note the condition of the cows and cowsheds as regards cleanliness, and of the latter also as regards their state of repair and general compliance with the corporation bye-laws and regulations.

Since the extension of the City much of the Inspectors' attention has necessarily been devoted to a kind of preliminary stocktaking so as to distinguish between those sheds which comply with the City regulations and those in which alterations are necessary. In connection with the latter much time has been given to specifying the alterations required, writing and interviewing thereon dairymen, landlords and agents so as to secure that as many of the requisite alterations as possible shall be effected during the coming summer when the cows are out.

Cowsheds.

There are some excellent sheds in the added districts, and they and the cows in them have been kept commendably clean. The vast majority of the sheds however, do not comply with the City bye-laws in regard to cubic space, and the cost of their adaptation to this standard is practically prohibitive of their immediate alteration. The fact also that many of the owners anticipate their land being used in the near future for building purposes militates against their agreeing readily to

build new sheds or make any drastic alteration in the construction and size of the old sheds. Many of the sheds are very defective as regards drainage, gutters and floor paving, a large number of the gutters in particular being very defective and laid so that they naturally drain towards the cow beds instead of away from them. Needless to say no cows can be kept clean with such gutters and where in use their immediate alteration is being prescribed. The fact that in only a few and then absolutely necessary cases such as those in which the space is under 600 cubic feet per cow is any drastic alteration in respect to space at present being insisted on, makes most of the occupiers agree to have the requisite alterations effected in regard to lighting, ventilation and drainage. Many of the sheds are not being kept adequately clean. In such cases the condition in the future will partly depend upon the alterations to be effected in connection with paving and guttering and partly on the frequency and efficiency of the inspection.

Cows.—As already indicated, on some few farms, the cows are being kept commendably clean, on some others they are passably clean, but on many there is much room for improvement. An effort is being made to improve the latter so as to bring them up to a better standard. The alterations of gutters and bed stands will help naturally to further this. In the meantime with a view to help matters, many of the farmers have been spoken to and written to pointing out the necessity in the interest of a pure milk supply for greater care in maintaining the cleanliness of their dairy stock. Here, as in connection with cowsheds, much necessarily depends upon the maintenance of a frequent and efficient inspection.

Supply of Tubercle-free Milk.

The attempt to minimise the degree of tubercle infection in the milk supply of the City has been continued during the year. The efforts in this direction have proceeded on the lines followed in the two preceding years, viz. :—

(1) The eradication of tuberculosis from particular herds with a view to securing a reliable tubercle free milk supply from tubercle free cows available for public institutions and private individuals desiring such milk.

(2) The effort to reduce the degree of tubercle infection in the general milk supply by the detection and removal from any dairy herd of cows yielding infected milk.

(3) The detection and removal from City dairy herds of cows presenting evidence of clinical tuberculosis.

Freeing Herds from Tuberculosis.

With respect to the first of these a brief summary of the work last year is as follows :—

At the beginning of the year the procedure adopted for the eradication of tuberculous cows in particular herds was in operation in fifteen herds, numbering 607 cows.

In thirteen of these the procedure has been continued successfully. Ten herds formerly freed have been maintained free despite the great difficulty in finding an adequate supply of tubercle-free cows. One large herd that was being freed has been rendered quite free, and this has been secured at the minimum cost entailed by isolation of the infected, no reacters having been disposed of before the routine period of sale when the cows were fat and lactation had ceased. Two herds that were being dealt with by the isolation procedure are still in process of being freed. In both, the elimination of the infected cows is proceeding satisfactorily.

In two herds dealt with in 1910 (namely Nos. 14 and 15 numbering 53 cows) testing was suspended in 1911, but the owners have again expressed a desire to continue the procedure in the new year and it is the intention to do so. In the case of two herds that were tested for the first time as a tentative preliminary to eradication the owners on receiving the results of the test decided not to proceed further in the meantime.

Thus on December 31st, 1911, there were thirteen herds actually being dealt with, numbering 580 cows. This does not include the two herds numbering 21 cows tested but not proceeded with nor the two herds numbering 53 cows tested at the end of 1910 and to be again tested in 1912.

The following list shows the particulars of these herds :—

List of Herds dealt with in 1911.

Herd.	Cows in herds tested 1911.	Cows not to be dealt with after 1911.	Herds being dealt with Dec. 31st, 1911.	Herds free from Tuberculosis.	Herds being freed from Tuberculosis.	Breeding Herds.	Non-breeding Herds.	Mixed-breeding and Non-breeding Herds.
No. 1	56	—	1	1	—	—	1	—
,, 2	90	—	1	1	—	—	—	1
,, 3	52	—	1	1	—	—	1	—
,, 4	42	—	1	1	—	—	1	—
,, 5	14	—	1	1	—	1	—	—
,, 6	23	—	1	1	—	—	1	—
,, 7	14	—	1	1	—	—	1	—
,, 8	32	—	1	1	—	—	—	1
,, 9	86	—	1	1	—	—	—	1
,, 10	32	—	1	1	—	—	—	1
,, 11	28	—	1	1	—	1	—	—
,, 12	78	—	1	—	1	—	—	1
,, 13	33	—	1	—	1	1	—	—
	580	—	13	11	2	3	5	5
,, 16	19	1	—	—	—	—	—	—
,, 17	2	1	—	—	—	—	—	—

Cows tested in 1910 *to be re-tested in* 1912.

No.							Cows.
14	...	...	...	...	...	...	14
15	...	...	...	...	...	...	39

The owners of another two large herds have expressed a desire to have their cows tested in 1912 with a view to their adopting isolation measures for freeing them from tuberculosis.

Difficulty in Buying Tubercle-Free Cows.

The difficulty dairymen experience in buying tubercle-free cows is a very real one, and but for this and the disinclination of the milk buyers to give any commensurate increase in price for the milk of such cows the measures for the eradication of tuberculous cows from dairy herds would have been far more largely adopted. That the dairyman who buys all his cows and has to contend with the difficulty of securing tubercle-free ones should hesitate in setting up a tubercle-free herd is easily understood unless the enhanced price of the milk will warrant his doing so. But that dairy farmers who rear their own cows should hesitate or fail to adopt eradicative measures is only conceivable under the supposition that they are still unconvinced of their benefits. The common assertion that many of the best milkers are reacters is unfortunately true, though, no one can contend that infection with tuberculosis enhances the milk yield. The explanation is that heavy milking diminishes a cow's resistance to infection, and the remedy should be to protect such valuable animals from becoming infected. This can be done by rearing and keeping them apart from others that are not tubercle free, and the demand for tubercle-free cows ought to stimulate breeding farmers.

Cows Tested.

From the tabulated list below it will be seen that 1,084 cows were tested during the year. Of these 805 passed the test and 279 failed to pass it.

No. of Herd.		Tested.		Passed.		Failed.
1	...	109	...	90	...	19
2	...	276	...	204	...	72
3	...	42	...	35	...	7
4	...	73	...	36	...	37
5	...	10	...	10	...	—
6	...	40	...	27	...	13
7	...	19	...	10	...	9

No. of Herd.	Tested.	Passed.	Failed.
8	88	71	17
9	164	111	53
10	71	59	12
11	50	47	3
12	88	75	13
13	33	22	11
14	—	—	—
15	—	—	—
16	19	7	12
17	2	1	1
	1,084	805	279

A number of cows that failed to pass the test gave a doubtful reaction. In the case of doubtful reacters already in the herd the procedure has been to isolate and re-test them after a month and in most cases this has been decisive, but in the case of those being purchased subject to passing the test reacters have been rejected. This is the only safe method with purchases, and even with this care an occasional infected cow may pass owing to a non-reacting effect induced by a previous recent test, or to some other unexplained individual idiosyncrasy.

Extra Cost incurred by Testing Herds.

As formerly the testing of herds, etc., has been partly carried out by the dairyman's own veterinary surgeon by arrangement previously made with your Veterinary Superintendent under the authority of your Committee, and partly by the Corporation Veterinary Inspectors. The extra cost of this procedure last year was £137 2s. 1d., against £137 6s. 10d. in 1910. Of this £24 was for tuberculin, and £113 2s. 1d. for veterinary fees, etc.

Testing Milk sent into City.

With respect to the second line of procedure, viz., the elimination of tubercle infection from the milk supply, the record of work is as follows:—

The system of taking mixed samples of milk has been continued but to a less extent than in 1910, the number of samples taken being 71, as compared with 211 in the preceding year.

Of these, seven samples, or 10 per cent., were returned as containing tubercle bacilli.

The farms from which the infected samples came were subsequently visited and the cows inspected. Individual samples from the suspected cows and mixed samples of the whole herd's milk were again examined. In five of the cases both mixed and individual samples taken at the farms were tubercle free. It was found that in three of these the offending cow had been sold for slaughter in the interval between the time of taking the first samples and visiting the farm. In the fourth case the offending cow had ceased to give milk; in the fifth case the original cause of infection could not be traced, for although in the attempt to discover this the milk of each cow was tested, the herd being a small one, each sample proved free.

In both the other cases the infected cows were found. In one of them the owner had her slaughtered: in the other there were two infected cows, and the owner declining to slaughter or isolate these was prosecuted and fined. On receiving notice of prosecution he had one of the cows slaughtered, after his conviction the other.

Inspection of City Herds.

With respect to the third line of procedure, viz., the removal of clinical cases from City herds is a sequel to efficient inspection.

In the old City the system of monthly inspection secured the removal automatically of such cases without any marked friction. It is too soon to say yet how far it will be equally effective in the extended City. Much will no doubt depend on the efficiency and frequency of the inspection maintained. This is a line in which I feel there is the opportunity for good work being accomplished. The resolution of the Committee to permit the Superintendent to give a quarter value up to £4 of cows killed at his instigation in consequence of their being affected with tuberculosis of the udder can scarcely fail to have a beneficial effect in this connection.

JOHN MALCOLM,
Veterinary Superintendent.

The following table shows the number of samples of milk examined at the University on behalf of the Health Committee during each of the past four years, together with the percentages of milks found to be tubercular each year :—

	From Churns in City.		From Cows in Sheds in Old City.		From Cows outside Old City.		Total Samples.	No. found Tubercular.
	No. of Samples.	No. Tubercular.	No. of Samples.	No. Tubercular.	No. of Samples.	No. Tubercular.		
1907...	141	9	21	3	49	4	211	16 or 8%
1908...	54	7	19	2	29	1	102	10 or 10%
1909...	111	8	4	0	103	7	218	15 or 7%
1910...	228	17	11	0	104	18	343	35 or 10%
1911...	67	8	21	2	36	2	124	12 or 10%
	601	49 or 8%	76	7 or 9%	321	32 or 10%	998	88 or 9%

OTHER CAUSES OF DEATH.

Syphilis.—Twenty-five deaths were recorded as due to this disease, of which 17 were in children under one year of age.

Alcoholism.—Ten deaths were due to alcoholism, a number smaller than that found in previous years. The figures for alcoholism and the closely-related disease, cirrhosis of the liver, are given in the following table :—

	Alcoholism.	Cirrhosis of Liver.	Total.		Alcoholism.	Cirrhosis of Liver.	Total.
1902 ...	24*	95*	119*	1907 ...	20	74	94
1903 ...	31	100	131	1908 ...	24*	59*	83*
1904 ...	32	71	103	1909 ...	19	60	79
1905 ...	19	80	99	1910 ...	19	57	76
1906 ...	21	71	92	1911 ...	10	48	58

* 53 weeks.

When these diseases are taken together it is noted that the year 1911 showed fewer deaths than any preceding year, and that the decline is apparently progressive.

Cancer.—The number of deaths from cancer was 467 as compared with 469 in the previous year, and 424 in 1909. The mortality-rate from this disease during the last ten years is set out in the accompanying table, in which it will be noted that the Birmingham death-rate is less than that in England and Wales. The death-rate last year of ·89 per 1,000 was relatively a high one :—

	Total deaths from Cancer in Birmingham.	Death-rate per 1,000 in Birmingham.	Death-rate per 1,000 in England and Wales.		Total deaths from Cancer in Birmingham.	Death-rate per 1,000 in Birmingham.	Death-rate per 1,000 in England and Wales.
1902	383*	·72	·85	1907	419	·80	·91
1903	413	·79	·87	1908	441*	·83	·93
1904	400	·77	·88	1909	424	·81	·96
1905	437	·84	·89	1910	469	·89	.97
1906	460	·88	·92	1911	467	·89	—

* 53 weeks.

The following table shows how the cancer deaths were distributed among males and females and at different age periods :—

Deaths from Cancer.

	Males.	Females.	Total.
Under 1 year	0	0	0
1 and under 5 years ...	1	0	1
5 „ 10 „ ...	2	1	3
10 „ 15 „ ...	1	0	1
15 „ 20 „ ...	0	2	2
20 „ 25 „ ...	2	0	2
25 „ 35 „ ...	6	5	11
35 „ 45 „ ...	14	38	52
45 „ 55 „ ...	38	66	104
55 „ 65 „ ...	68	62	130
65 „ 75 „ ...	37	71	108
75 „ 85 „ ...	14	33	47
85 and upwards ...	1	5	6
Total	184	283	467

The subjoined table shows the parts of the town in which the cancer mortality was highest, both in 1911 and in the four previous years :—

Death-rate from Cancer.

Wards.	1907.	1908.	1909.	1910.	1911.
Rotton Park ...	·73	·79	·75	·79	·91
All Saints' ...	·64	·71	·65	·73	·77
Ladywood ...	1·01	·85	·78	1·15	·86
St. Paul's ...	1·11	·78	·90	·43	·44
St. George's ...	·55	1·03	·59	·73	·68
St. Stephen's ...	·52	·76	·63	1·06	·85
St. Mary's ...	·45	·92	1·13	·64	·84
St. Bartholomew's	1·04	1·32	1·09	·76	1·03
Market Hall ...	·67	·23	·80	1·19	·99
St. Thomas's ...	·81	·63	1·04	1·11	·92
St. Martin's ...	·79	·85	·79	·74	1·05
Edg. & Harborne	·87	·91	·69	1·01	1·09
Deritend... ...	1·04	·79	·87	1·61	1·02
Bordesley ...	·78	·89	·73	·76	·85
Duddeston ...	·74	·72	·69	1·06	1·00
Nechells	·71	·70	·56	·78	·75
Balsall Heath ...	·90	·82	1·24	·92	·81
Saltley	·57	·72	·50	·64	·84

Premature Birth.—The deaths set down to premature birth numbered 363, and were equal to a rate of ·69 per 1,000. The next table shows how these figures compare with those of previous years :—

	Deaths.	Death-rate per 1,000. Birmingham.	Death-rate per 1,000. England & Wales.		Deaths.	Death-rate per 1,000. Birmingham.	Death-rate per 1,000. England & Wales.
1902	361*	·68	·57	1907	319	·61	·52
1903	365	·70	·57	1908	338*	·63	·53
1904	377	·72	·58	1909	318	·61	·51
1905	304	·58	·55	1910	331	·63	·49
1906	323	·62	·55	1911	363	·69	—

* 53 weeks.

Bronchitis.—This disease is always amongst the commonest causes of death in Birmingham and elsewhere. The mortality from it is usually higher in the large towns than in the country as a whole. The figures for Birmingham and England and Wales are given below :—

Death-rate from Bronchitis.

	Birmingham.	England and Wales.		Birmingham.	England and Wales.
1902 ...	1·91	... 1·32	1907 ...	1·76	... 1·22
1903 ...	1·73	... 1·11	1908 ...	1·73	... 1·10
1904 ...	2·06	... 1·25	1909 ...	1·77	... 1·15
1905 ...	1·68	... 1·14	1910 ...	1·51	... 0·96
1906 ...	1·68	... 1·04	1911 ...	1·51	... —

Pneumonia.—Pneumonia also is more a disease of the towns than of the country districts. In the following figures the rate from pneumonia in Birmingham is shown side by side with that of England and Wales :—

Death-rate from Pneumonia.

	Birmingham.	England and Wales.		Birmingham.	England and Wales.
1902 ...	1·62	... 1·41	1907 ...	1·66	... 1.35
1903 ...	1·48	... 1·22	1908 ...	1·35	... 1·19
1904 ...	1·72	... 1·28	1909 ...	1·46	... 1·30
1905 ...	1·55	... 1·30	1910 ...	1·33	... 1·11
1906 ...	1·47	... 1·22	1911 ...	1·30	... —

It will be seen that last year the figure for Birmingham was considerably better than usual.

Among young children the greater part of the mortality from pneumonia is due to the form known as broncho-pneumonia, while among adults the lobar form is the more common. The deaths last year were as follows :—

Ages.	Lobar Pneumonia.	Lobular Pneumonia.	Pneumonia undefined.
Under 1 year	11 ...	112 ...	25
1 and under 5 years	18 ...	149 ...	48
5 „ 10 „	7 ...	11 ...	12
10 „ 15 „	1 ...	1 ...	2
15 „ 20 „	2 ...	0 ...	3
20 „ 25 „	3 ...	2 ...	9
25 „ 35 „	20 ...	4 ...	22
35 „ 45 „	17 ...	5 ...	24
45 „ 55 „	17 ...	8 ...	24
55 „ 65 „	19 ...	9 ...	29
65 „ 75 „	14 ...	11 ...	19
75 „ 85 „	3 ...	6 ...	9
85 and over	0 ...	0 ...	6

Accidental Suffocation.—There were 80 deaths from this cause, of which 66 were those of infants who were suffocated while in bed with their parents. From the figures below it will be seen that the mortality caused in this way is very excessive in Birmingham as compared with that of England and Wales.

Death-rate from Accidental Suffocation.

	Birmingham.	England and Wales.		Birmingham.	England and Wales
1901 ...	·18	... ·06	1907 ...	·15	... ·05
1902 ...	·14	... ·06	1908 ...	·17	... ·05
1903 ...	·19	... ·06	1909 ...	·12	... ·04
1904 ...	·19	... ·06	1910 ...	·18	... ·04
1905 ...	·16	... ·05	1911 ...	·15	... —
1906 ...	·18	... ·05			

DISINFECTION.

The following statement shows the number of houses and the articles of clothing and bedding disinfected during the year :—

	1906	1907	1908	1909	1910	1911
Houses disinfected after Small-pox	0	0	0	0	0	1
,, ,, ,, Puerperal Fever...	26	33	12	19	25	23
,, ,, ,, Scarlet Fever	1,611	2,258	2,102	2,659	2,585	2,259
,, ,, ,, Diphtheria and Croup	691	972	735	730	607	623
,, ,, ,, Typhoid Fever	172	217	167	102	90	109
,, ,, ,, Phthisis	554	692	724	650	740	1,041
Beds and Mattresses disinfected ...	6,456	8,072	7,776	7,285	7,767	7,522
Sheets, Blankets and Counterpanes disinfected	10,316	12,442	11,837	10,599	11,698	11,723
Pillows and Bolsters disinfected ...	6,970	8,972	8,091	8,728	9,816	9,311
Garments disinfected	10,693	10,310	11,251	8,381	12,528	13,702
Carpets disinfected	2,335	2,858	2,398	1,911	1,985	1,786
Other Articles disinfected	10,529	10,438	9,369	6,523	7,809	7,995

CITY HOSPITALS.

The following table shows the number of patients* admitted to the City Hospitals since they were first opened by the Corporation :—

	Smallpox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.
1874	194	—	—	—
1875	420	20	—	—
1876	11	38	—	—
1877	38	43	—	—
1878	20	424	—	—
1879	4	184	—	—
1880	16	170	—	—
1881	17	333	—	—
1882	105	627	—	—
1883	1090	638	—	—
1884	437	360	—	—
1885	81	204	—	—
1886	2	428	—	—
1887	10	438	—	—
1888	18	528	—	—
1889	0	1801	—	—
1890	0	2525	—	—
1891	44	1225	—	—
1892	24	1131	—	—
1893	963	1339	—	—
1894	2050	1539	—	—
1895	98	2595	—	—
1896	14†	2812	—	—
1897	0	1641	—	—
1898	0	1083	—	—
1899	0	1052	—	—
1900	0	1814	—	—
1901	0	2959	—	229
1902	68	4534	—	119
1903	250	2455	—	14
1904	8	1437	—	119
1905	36	1489	321	109
1906	0	1557	425	121
1907	0	2243	650	153
1908	0	2062	510	110
1909	0	2329	494	46
1910	0	2054	416	12
1911	1	1937	390	18

*In a small percentage of the cases the disease proved not to be that for which the patient was admitted.
†Removed to Aston Smallpox Hospital, by arrangement with the District Council.

The two following reports have been made by the Medical Superintendents upon the work done at Lodge Road and Little Bromwich Hospitals during the year :—

REPORT ON LODGE ROAD HOSPITAL.

City Hospital,

Lodge Road.

Gentlemen,

I have pleasure in submitting to you the following report on the working of this hospital for the year ending 31st December, 1911.

The total number of patients treated during the year amounted to 913, or 212 more than the previous year, the increase being entirely due to the larger number of scarlet fever patients admitted. One hundred and five patients remained in hospital from the year 1910, and are included in the number under treatment. Of the total, 744 were discharged cured, 58 died, and 111 remained in hospital at the close of the year.

The figures for each disease are shown below :—

Disease.	Remaining 31st Dec., 1910.	Admitted during 1911.	Total under Treatment.	Discharged during 1911.	Died 1911.	Per-centage Mortality.	Remaining 31st Dec., 1911.
Typhoid Fever ...	—	18	18	5	3	16·6	10
Diphtheria	49	374	423	353	44	10·4	26
Scarlet Fever ...	56	416	472	386	11	2·3	75

Typhoid Fever.

Only 18 cases of typhoid fever were admitted during the year. For these a smaller ward containing 24 beds was opened and proved very satisfactory.

The following table shows the admissions and deaths for 1911, divided according to age and sex :—

Ages.	Males.		Females.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
10—15 years	1	—	1	—	2	—
15—20 „	2	1	2	1	4	2
20—25 „	5	1	—	—	5	1
25—35 „	4	—	2	—	6	—
35—45 „	1	—	—	—	1	—
Total	13	2	5	1	18	3

The deaths that took place were all due to typhoid fever, and give a percentage mortality of 16·6 on the number of patients admitted. Of the cases that ended fatally, death took place on the 3rd, 5th, and 19th day respectively after admission to hospital.

Below are shown the complications that occurred with deaths :—

Complications of Typhoid Fever.	Number of Cases.	Deaths.
Hæmorrhage and Perforation of Gut ...	1 ...	1
Hæmorrhage	5 ...	—
Relapse	4 ...	—
Pyæmic Abscesses	1 ...	—

The remaining two deaths were due to toxæmia and exhaustion.

The original diagnosis was not confirmed in 3 of the cases admitted. Particulars of these are given below :—

Diagnosis revised to	Number of Cases.	Deaths.
Basic Meningitis	1 ...	—
Pleurisy	1 ...	—
Influenza	1 ...	—

The patient with meningitis was transferred to the Queen's Hospital for further treatment.

The average residence in hospital of those patients who recovered was 59 days, and for those who died 9 days.

A "widal reaction" was performed in all cases admitted, and in many of the patients further "blood examinations" were made.

A "positive" reaction was obtained in 15 cases. Of the three cases in which a revision of diagnosis was made, two gave "negative" results, while one was doubtful. No person contracted the disease in hospital.

Diphtheria.

The number of admissions for the year 1911 was less than the previous year by 46.

The mortality based on the number of patients admitted, is 10·9 per cent., and on the entire number under treatment is 10·4 per cent. If from these are deducted 10 deaths occurring in patients admitted as diphtheria, but who, on admission, were found not to be suffering from this disease, or in which the disease was coincident with other diseases, and 9 other deaths which took place within 24 hours of admission, the death-rate for the cases under treatment becomes 5·8 per cent.

Diphtheria Admissions and Deaths during 1911 *divided according to age and sex.*

Ages.	Males.		Females.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Under 1 year	5	1	3	1	8	2
1— 2 years	10	3	7	2	17	5
2— 3 „	16	3	19	2	35	5
3— 4 „	21	5	12	1	33	6
4— 5 „	18	1	19	3	37	4
5—10 „	75	9	59	7	134	16
10—15 „	27	1	26	1	53	2
15—20 „	7	—	14	—	21	—
20—25 „	3	—	13	—	16	—
25—35 „	4	—	13	1	17	1
35—45 „	3	—	—	—	3	—
Total	189	23	185	18	374	41

Of the 374 patients admitted, 68 were suffering from laryngeal diphtheria, either as a primary infection or by extension from other parts, or as a complication of other diseases.

Tracheotomy was performed in 21 cases with 5 deaths, equivalent to a mortality of 23·8 per cent.

Two cases were intubated with no deaths; in one of these cases tracheotomy was also required.

The next table shows the cause of death amongst the cases of "true diphtheria."

Cause of Death.	Number.
Acute Heart Failure...	16
Vomiting, Gradual Heart Failure...	10
Tracheotomy, Broncho-pneumonia...	2
Tracheotomy, Acute Heart Failure	3

The relation of deaths and recoveries to the duration of illness, previous to admission, is given below :—

Days of Illness previous to admission.

Days.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot'l
Deaths	—	6	5	6	3	4	—	3	1	—	2	1	—	—	—	31
Recoveries	3	38	53	51	25	21	9	10	6	5	3	2	—	1	1	228
Mortality, per cent. ...	—	15·7	9·4	11·7	12·0	19·0	0·0	30·0	16·6	0·0	66·6	50·0	—	0·0	0·0	—

Nine patients died within 24 hours of admission, two of these being "operation cases."

All of the patients suffering from diphtheria with the exception of 50 were treated with antitoxic serum. Of these 6 had serum before admission and did not require further injections, one patient died before serum could be given, while in the remaining 43 cases, this treatment was not indicated. Fourteen other patients known to have had serum before admission required further doses after arrival in hospital.

The total quantity of serum given during the year was 2,532,000 units, an average of about 7,500 units for each patient who received this form of treatment.

In the case of 103 patients or 27·5 per cent. of those admitted as diphtheria, the diagnosis was revised.

The table below shows the errors of diagnosis with deaths, divided according to age and disease :—

Ages.	All Forms of Tonsillitis.	Scarlet Fever.	Measles.	Broncho-Pneumonia.	Other Diseases.	No Disease.	Total.	Deaths.
Under 1 year	3	1	—	1	—	1	6	1
1— 2 years	1	—	1	4	—	—	6	2
2— 3 ,, ...	2	2	1	2	—	—	7	3
3— 4 ,, ...	1	2	1	—	—	—	4	1
4— 5 ,, ...	7	—	2	—	—	—	9	—
5—10 ,, ...	20	3	2	1	2	—	28	2
10—15 ,, ...	10	2	—	—	1	—	13	—
15—20 ,, ...	7	—	—	—	1	—	8	—
20—25 ,, ...	9	—	—	—	—	1	10	—
25—35 ,, ...	7	1	—	—	1	1	10	—
35—45 ,, ...	1	—	—	—	—	1	2	—
Total	68	11	7	8	5	4	103	9

Four deaths were due to malignant scarlet fever, 1 to measles and croup (not diphtheria), 1 to phthisis, 1 to marasmus and broncho-pneumonia, and 2 to broncho-pneumonia without other visible cause.

The average duration of stay of the diphtheria patients in hospital, exclusive of those who died was 31·5 days, and of those who died 10·0 days.

There were no "return" cases of this disease during the year.

The number of cases in which two diseases co-existed at the time of admission is shown below :—

Disease.	Co-existing Disease.	Number.
Diphtheria	+Scarlet Fever	12
,,	+Enteric Fever	1
,,	+Pneumonia	2
,,	+Measles	1
,,	+Summer Diarrhœa	1
,,	+Whooping Cough	1
,,	+Ringworm	11
,,	+Impetigo Contagiosa	5
,,	+Abscesses	13
,,	+Nephritis	1
,,	+Alcoholic Neuritis	1
,,	+Rheumatism	3
,,	+Otorrhœa	10
,,	+Vulvitis	5
,,	+Purulent Conjunctivitis	9
,,	+Mastitis	1

The number in which a second disease was contracted in hospital is as follows :—

Disease.	Developed in Hospital.	Number.
Diphtheria	Scarlet Fever	10
,,	Chicken Pox	2

At the time of the City Extension, provision was made for the accommodation of more diphtheria patients to the extent of 24 beds.

It was found, however, that this was unnecessary and at no time during the year has the main diphtheria block containing 48 beds, been fully occupied.

Scarlet Fever.

The mortality calculated on the number of admissions is 2·4%, calculated on the number of patients treated is 2·3 % .

The subjoined shows the scarlet fever admissions and deaths during 1911, divided according to age and sex :—

Ages.	Males.		Females.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died
Under 1 year	3	—	2	1	5	1
1— 2 years	5	—	10	1	15	1
2— 3 ,, ...	15	1	5	2	20	3
3— 4 ,, ...	16	1	26	1	42	2
4— 5 ,, ...	24	—	25	—	49	—
5—10 ,, ...	105	1	94	1	199	2
10—15 ,, ...	20	—	39	1	59	1
15—20 ,, ...	4	—	6	—	10	—
20—25 ,, ...	3	—	6	—	9	—
25—35 ,, ...	3	—	3	—	6	—
35—45 ,, ...	—	—	1	—	1	—
45—55 ,, ...	—	—	1	—	1	—
Total	198	3	218	7	416	10

The average duration of stay of the scarlet fever patients who recovered was 45·6 days; of those who died, 8·1 days.

The diagnosis of scarlet fever was revised in the case of 18 patients notified as suffering from this disease.

Particulars are given in the following table divided according to age and disease :—

Ages.	Measles.	No Apparent Disease.	Developed Scarlet Fever in Hospital.
Under 1 year	—	2	—
1— 2 years	—	2	—
2— 3 ,, ...	—	1	—
3— 4 ,, ...	—	2	—
4— 5 ,, ...	2	3	1
5—10 ,, ...	—	3	2
10—15 ,, ...	—	2	2
15—20 ,, ...	—	1	—
20—25 ,, ...	—	—	—
Total	2	16	5

The number of cases in which two diseases were co-existent at the time of admission is as follows :—

Disease.	Co-existent Disease.	Number.
Scarlet Fever	+Diphtheria	18
,,	+Ringworm	3
,,	+Whooping Cough	3
,,	+Broncho-pneumonia	5
,,	+Meningitis	1
,,	+Tubercular Abscess	2
,,	+Goitre	1
,,	+Blepharitis	2
,,	+Cleft Palate Operation	1

The number in which a second disease was contracted in hospital is shown below :—

Disease.	Developed in Hospital.	Number.
Scarlet Fever ...	Diphtheria	3
,, ...	Chicken Pox	1
,, ...	Ringworm	2

There were no mortalities amongst these patients.

The following list shows what other complications were present amongst the scarlet fever patients on admission.

Complications.	Number.	Complications.	Number.
Rhinitis	41	Purulent Conjunctivitis	6
Otitis	15	Impetigo Contagiosa	16
Vulvitis	8	Abscess	2
Mastoid Abscess	2	Tabes Mesenterica	1

The next table gives the complications occurring among the scarlet fever patients after their admission :—

Complications.	Number.	Complications.	Number.
Otitis	68	Rheumatism	6
Rhinitis	112	Chorea...	1
Secondary Adenitis	11	Nephritis	12
Vulvitis	10	Conjunctivitis	5
Abscesses	22	Urticaria	1
Presenting Diphtheroid Bacilli	206		

Bacteriological examinations were made of the secretions from the noses and throats of all patients admitted to the scarlet fever wards during the year. When discharges occurred from the nose, throat or ear of any of these patients after their admission, these discharges were also examined. All of the cases which were clean throughout, *i.e.*, having no discharges were also examined before being sent home.

The object in this work was to find what proportion of patients were infected with an organism indistinguishable from that causing diphtheria before and after hospital treatment, and also what was the relation between those presenting this germ and those who, when discharged from hospital infected others with scarlet fever.

Those in whom the organism was found on admission, numbered 96 or 23% of the total scarlet fever patients. One hundred and ten other patients or 26·4% of the total admitted showed this organism at some period after admission to hospital. Two hundred and ten or 50·4% of the admissions remained free from this germ.

It is a significant fact that of all those infected (206) only 3 developed diphtheria, and of these none died.

As most of the "return" cases were apparently infected by patients who had not showed this germ while in hospital, there does not seem to be any connection between "return" cases and this particular organism.

The open-air method in the treatment of scarlet fever has been tried in almost all the severe and septic types of this disease admitted to this institution during the past year. The results have fully justified this apparently heroic treatment, and have convinced the nurses and myself that some lives were saved by this method which would have been lost had the cases been confined in the wards. These patients were kept in the open, often during the entire day, however low the temperature without any untoward result. Further, patients affected with kidney complaints, the result of scarlet fever, treated for a time in the wards with little improvement, have almost invariably rapidly recovered when treated out of doors.

Through lack of shelters these patients were confined to the wards in wet weather, and I would suggest that further facilities be granted for carrying out what certainly appears to be the ideal treatment for these cases.

Measles.

Three cases were admitted during the year, all from public institutions, namely, Children's Hospital, Ear and Throat Hospital, and the Maternity Hospital.

The average duration of stay was 28½ days. There were no complications. All recovered.

Erysipelas.

One patient, a female, age 12 years, was admitted with this disease. She was in hospital seven days and made a good recovery.

Staff.

The Assistant Medical Officer, Dr. Shand, who received a needle prick while doing a post-mortem examination was off duty for a period of 49 days with cellulitis of the hand.

Several of the other members of the staff were off duty for varying periods with different maladies, but happily there were no fatalities amongst them.

The following statement shows the employment, disease, and duration of illness of those off duty :—

Employment.				Disease.	Total days off duty.
1	Assistant Medical Officer			Cellulitis	49
Nurses.		Maids.			
8		1		Diphtheria	300
4		2		Scarlet Fever	213
2		4		Tonsillitis	22
4		4		Rheumatism	60½
2		—		Gastric Ulcer	44
2		—		Influenza	21
—		1		Appendicitis	11
6		5		Minor Maladies	41½
1		2		Constipation	10
1	29	19			772 days.

The maid with appendicitis was transferred to the General Hospital for operation, and made a good recovery.

Works.

Considerable improvement was made in the wooden ward C. The inside walls, which were made up of transverse wooden boards, were stripped off, and were replaced by lath and patent smooth plaster. The floors of the ward which were much grooved and worn by the bed castors were planed, while the flooring of the kitchen, bathrooms and passages was replaced by terazzo.

The floors of the wards B and D were also planed.

A portion of the administrative block, some of the wards, and the porter's lodge were cleaned and painted.

Part of one of the roads cut up by horse traffic was tarred and the surface much improved.

In conclusion, I have again to acknowledge my indebtedness to the various members of the Staff, who carried out their duties in a most praiseworthy manner.

I have also to thank your Committee for their kindness and consideration to the Staff and myself.

I am, Gentlemen,

Your obedient servant,

HERBERT M. CARGIN,
Medical Superintendent.

REPORT ON LITTLE BROMWICH HOSPITAL.

City Hospital,

Little Bromwich.

Gentlemen,

I beg to submit a report on the hospital for the year ending December 31st, 1911.

No structural alteration or addition to the hospital buildings has taken place during the year.

Statistics.

Number remaining in hospital December 31st, 1910	315
Number admitted during the year 1911	1,429
Total under treatment during the year 1911	1,744
Discharged during the year 1911	1,408
Died during the year	46
Remaining in hospital December 31st, 1911	290
	1,744

The average duration of stay in hospital was 65·1 days.

The number of deaths, 46, gives a case mortality rate of 3·2 per cent., as against 3·4 per cent. for the year 1910, based on the number of admissions. Six of the deaths were of patients who did not have scarlet fever, and were due to measles (3), enteritis (1), meningitis (1), and varicella (1); if these cases be deducted, the mortality rate becomes 2·8 per cent. Further, seven of the fatal cases were those of patients suffering from malignant scarlet fever, and dying within 48 hours of admission to hospital. If these seven deaths be excluded, the resulting case mortality rate is 2·3 per cent., as against a mortality rate of 2·6 per cent. for the preceding year.

Complications.

The complications arising in the cases treated during the year are shown in the following table—

Rhinorrhœa	362	Nephritis	22
Adenitis	211	Pneumonia	7
Otorrhœa	202	Meningitis	4
Albuminuria	113	Conjunctivitis	3
Rheumatism	51	Appendicitis	2
Secondary Tonsillitis	47	Jaundice	2
Abscess	42	Pleurisy	1

In addition to the complications shown above, there arose during the year 17 cases of secondary scarlet fever, *i.e.*, cases where a patient develops a secondary attack of scarlet fever or "relapse," while convalescing from the primary attack. The secondary attack is always complementary to the primary attack. Thus, if the first attack be severe, the secondary attack or "relapse" is found to be mild, and *vice versa*. All the 17 cases made a good recovery.

Complications Present on Admission.

In addition to the patients who developed complications while in the hospital, as enumerated in the preceding table, a certain number of cases were admitted suffering from one or more of these complications at the time of admission. The most frequent conditions so existing are shown in the following table :—

172	cases were admitted suffering from Rhinorrhœa.
132	" " " " Adenitis.
28	" " " " Otorrhœa.

The first two complications were usually due to the attack of scarlet fever, the third was often due to a preceding attack of measles, contracted some months or even years before admission to the hospital. Such cases as these form a large percentage of the patients who are detained in hospital beyond the average duration of stay. A case with a discharge from the nose or ear is believed to be a means of spreading scarlet fever, and in attempting to cure such a condition, which may have existed months before the attack of scarlet fever commenced, a patient has often to be kept in hospital for many weeks.

Corrected Diagnosis.

During the year 67 cases who had been certified to be suffering from scarlet fever were found on admission to hospital, not to be suffering from scarlet fever, but from some other condition. An analysis of these cases is given in the following table :—

Corrected Diagnosis.	No. of Cases.	Contracted Scarlet Fever in Hospital.	Died.
Tonsillitis	19	4	0
Measles	7	0	3
German Measles	6	0	0
Urticaria	3	0	0
Dentition	3	0	0
Chronic Discharge from nose or ear	3	0	0
Varicella	2	1	1
Enteritis	1	0	1
Meningitis	1	0	1
Diphtheria	1	0	0
Abscess of Groin	1	1	0
Impetigo	1	0	0
Bronchitis	1	0	0
Empyema	1	0	0
	50	6	6
No definite disease	17	4	0
	67	10	6

In addition to the above list of corrected diagnosis, many patients have been admitted suffering from scarlet fever in addition to some other infectious disease. The chief co-existing infectious diseases were diphtheria, chicken pox, and whooping cough, and the respective numbers of these cases are shown below :—

Scarlet Fever	+Diphtheria	32
"	+Chicken Pox	8
"	+Whooping Cough	6

Cross-Infection.

Cross-infection, *i.e.*, the development within a ward of some disease other than that for which the patients are being treated, is due to the admission into the ward of patients who have been exposed to, and are incubating the second disease, without showing any signs of the second disease at the time of admission. After a varying number of days in the ward, the patient exhibits signs of the second disease, and though he be removed immediately to an isolation ward, the other inmates have been thus exposed to infection, and a certain number of them will develop the second disease.

The actual number of patients who developed a second disease in this way was 43 during the year. Thus 24 patients developed chicken pox, 15 developed German measles, 3 developed whooping cough, and 1 developed diphtheria.

The only way to avoid cross-infection altogether is to isolate each patient for three weeks after admission, in order to give time for any second disease, which a patient may be incubating, to show itself. This method is, of course, only possible in a hospital which is constructed and administered on the "cubicle" system.

Unclean Heads.

During the year 624 patients with unclean heads were admitted, about 43% of the total number of cases admitted. Of these paients 423 were females and 201 were males. A good deal of time and energy is expended by the nurses in dealing with this condition.

Bacteriological Examinations.

During the year systematic examination was made of swabs taken from the throat and nose of patients on admission, and from the nose on discharge, to determine the presence or absence of bacilli indistinguishable from the diphtheria bacillus so frequently found in connection with scarlet fever cases.

The throat was not examined on discharge as the results would not have been reliable in these cases on account of the practice which has been followed of swabbing the throat with antiseptic preparations during the last few days of the patients' stay in hospital.

The result of these examinations, showing the relative frequency of the presence of this organism in 1,063 patients admitted and 1,243 patients discharged, is summarised below :—

On admission—			
Nose and throat positive	66 = 6·2%	} 32·5%	
Nose (only) positive...	194 = 18·2%		
Throat (only) positive	86 = 8·1%		
Nose and throat negative	717 = 67·4%		
Total examined	1,063		
On discharge—			
Nose positive	258 = 20·7%		
Nose negative	985 = 79·3%		
Total examined	1,243		

Health of Staff.

The health of the resident staff, generally, was good throughout the year. Only three cases of scarlet fever and one of diphtheria occurred, and all made a good recovery. The number of Staff who were taken off duty on account of illness and the duration of the illness are shown below :—

1 nurse with scarlet fever	48	days off duty.	
1 nurse with diphtheria	28	,,	
14 nurses with tonsillitis	115	,,	
5 nurses with rheumatism	55	,,	
6 nurses with various minor ailments	19	,,	
2 maids with scarlet fever	95	,,	
8 maids with tonsillitis...	67	,,	
3 maids with various minor ailments	11	,,	
Total 40	Total	438	

In conclusion, I wish to acknowledge my indebtedness to Dr. T. W. Beazeley for his assistance in drawing up this report. Dr. Beazeley, having been appointed Assistant Medical Officer of Health, resigned his post as Medical Superintendent of this hospital on November 15th, and it is almost entirely upon the records kept by him until that date that this report is founded.

I am, Gentlemen,

Your obedient servant,

CLIFFORD BEARDS, M.A., M.B.,

Medical Superintendent

DISEASES OF ANIMALS COMMUNICABLE TO MAN.

Mr. Malcolm, the Veterinary Superintendent, has submitted the following report:

HOLLIDAY STREET WHARF,

BIRMINGHAM.

GENTLEMEN,

I have pleasure in submitting herewith a short report on the occurrence of some of the chief scheduled contagious diseases in animals here during the year 1911.

Glanders and Farcy.—There were two outbreaks affecting nine horses with glanders and farcy last year, as compared with ten cases in 1910, three in 1909, and 100 in 1908. In both outbreaks the affected horses were stabled in buildings where glanders had previously existed, but there is no incriminating evidence against the buildings which had been thoroughly disinfected. The owner of one of the studs has a large London stud as well as his Birmingham stud, and there had been many changes of horses between the two studs, and the Board of Agriculture returns show that glanders still continues prevalent in London. As a matter of fact, five of the seven horses found affected in the Birmingham stud were horses that had been sent here from London. In the other outbreak both the horses affected had been bought in since the former outbreak at the stables, and one was traced to have come from a formerly infected stud.

At the end of the year there was no suspicion of there being any case of glanders in Birmingham, but while glanders continues in London, Birmingham is always liable to have the disease reintroduced. Fortunately, the disease is being rapidly eliminated, even from the London studs as well as in the country generally This is clearly shown by the Board of Agriculture's returns for the last three years, which are as follows:—

In 1909	there were	533	outbreaks,	in which	1,753	animals	were attacked.
1910	,,	355	,,		1,022	,,	
1911	,,	208	,,		501	,,	

At this rate of elimination—and there seems no reason why the rate should not be accelerated rather than decreased—glanders should soon be extinct in Great Britain.

Anthrax.—A considerable number of cases have been submitted as suspected of being affected with anthrax, but only four proved to be cases, and these were all confirmed by the Board of Agriculture. Of these two were in bullocks, one in a heifer and one in a cow. The cow was dead before being sent in from the country. One of the bullocks was found dead in the railway truck on arrival in Birmingham, and the other bullock and the heifer both died within two days of their arrival here. Clearly all were imported from surrounding districts. In each case every care was taken to prevent subsequent infection in man or animals. In one case a butcher ran grave risk. He had a number of wounds on his hand, and had commenced dressing one of the carcases when the inspector intervened, sent the case for examination, and the butcher to have his hands properly attended to. The returns in the country for the last three years are as follows:—

In 1909	there were	1,317	outbreaks	and	1,698	animals	attacked.
1910	,,	1,496	,,		1,776	,,	
1911	,,	907	,,		1,120	,,	

At first sight it would appear from this that there had been a considerable reduction in the prevalence of anthrax, but it is very doubtful whether there has been any actual reduction. It is very probable that the lower returns are in reality due to a greater accuracy in diagnosis obtained under the present Order, which came in force on January 1st, 1911, than was possible under the former Order. Seeing that the leading Government experts hold the view that the majority of cases of anthrax occurring in this country are due to the introduction of infection in imported foods, manure, and other products it is somewhat remarkable that practically no regulations are in force to prohibit the introduction of such infection, whereas extremely stringent regulations have been prescribed for the prevention of anthrax of home origin, which they admit is of so much rarer occurrence.

Foot and Mouth Disease.—During the year there have been five outbreaks of foot and mouth disease in England. In none of these has the source of infection been traced, but there is no question that it had been somehow imported from abroad. Fortunately, none of the outbreaks occurred in Birmingham or surrounding district.

Rabies.—A number of dogs have been submitted as suspected of being affected with rabies, but no really suspicious case occurred, and it is again a pleasure to record that the same holds good for the country generally. This continued immunity from rabies is a tribute to the Board of Agriculture's successful administration of the Rabies Order in preventing the reintroduction of this dangerous disease.

Swine Fever.—This disease of pigs continues practically as prevalent as ever. In Birmingham the majority of cases have been introduced from other parts of the country. During the year the internal organs of 234 dead pigs have been submitted for examination for evidence of swine fever. Of these 14 cases were found affected and confirmed by the Board of Agriculture. The prevalence of this disease in the country generally will be seen from the last three years' returns:—

In 1909	...	there were	1,650	outbreaks.
1910	...	„	1,598	„
1911	...	„	2,466	„

The failure of the Board of Agriculture to reduce the prevalence of this disease is clear evidence that there is still much to be learned respecting its spread. The history of its distribution in recent years goes to prove the accuracy of the view accredited to the late Sir George Brown, Chief Veterinary Officer of the Board of Agriculture, namely, that swine fever would not be eliminated from our herds until a similar stamping out process was followed for swine fever as was prescribed in cattle plague.

Swine Erysipelas and Contagious Pneumonia.—A considerable number of cases of swine erysipelas and contagious pneumonia have again been met with, and although neither disease has been scheduled among the contagious diseases of animals, there is no question that, strictly speaking, they should be included therein.

Parasitic Mange in Horses.—Last year 55 cases of this disease were certified in the City, as compared with 134 in 1910 and 75 in 1909. The number of cases certified, however, does not fully measure the work of eradication and prevention that has been done, and cases are now certified that formerly would have been worked without comment. At one time the mangy horse was a common sight in our streets. Under our present Order his appearance is exceedingly rare, and should become still more rare.

JOHN MALCOLM,
Veterinary Superintendent.

HOUSING OF THE WORKING CLASSES ACTS.

The operative portion of the Housing, Town Planning, etc. Act came into force in 1910. All the work which had been commenced under the previous Act had to be done over again, and this caused considerable delay during 1910 and 1911.

The amount of work done during 1911 by reason of the great change which took place on the enlargement of the City will be noticed in the table appended. The figures there stated do not accurately represent what is being done: as a matter of fact, the work is now going on at even greater rate than in the past.

There can be no difference of opinion as to the great disadvantages under which people are situated who live in the centre of a manufacturing city like Birmingham, where factories producing smoke, dust, and fumes are everywhere intermingled with dwelling-houses. In these areas there are no gardens or green spaces for the children to play in, with a result that the worst conditions of urbanisation are to be found. Every year a record has been made of the large number of people who of their own accord are leaving these central areas and going into better ones. The policy of helping this migration which has been followed in Birmingham during the last ten years will eventually lead to something very much better than the policy which was once advocated of taking these areas and rebuilding on them.

With the town planning powers which at present exist, or which may be greatly extended in the near future, it is possible to look forward to a town where some areas shall be allotted to manufacturing purposes, while others are allotted to residential purposes only. During the year under review two large areas have been scheduled for town planning, and others are in contemplation. It cannot, however, be too frequently pointed out that while it is possible to plan the whole of the suburbs for residential areas, it is even more important to make provision for the extension of the manufactories of Birmingham. Up to the present time no attention has been devoted to this most important question, and after all the very existence of Birmingham depends upon its manufacturing industries.

During the year under review several enquiries were made in regard to occupied and unoccupied houses in various areas of the town, and during the whole year there was ample accommodation in the shape of houses of all sizes in the central areas of the City. In April, 1911, there were 7,931 unoccupied houses, and there was no ward in the City where these preponderated.

The table below gives an outline of the work done during each year since 1903 :—

Date.	Represented.		Rendered Habitable.		Demolished.		Closing Orders.		Demolition Notices.	
	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.	Houses.	Properties.
1903... ...	304	85	155	32	34	19	65	19	51	15
1904... ...	1119	143	242	37	127	33	233	31	36	6
1905... ...	793	98	330	38	230	43	327	41	61	7
1906... ...	596	87	370	49	117	26	199	25	143	13
1907... ...	806	120	262	41	422	64	679	102	157	24
1908... ...	650	79	494	69	257	43	184	24	164	30
1909... ...	521	70	381	54	216	45	220	34	54	9
1910... ...	609	72	277	46	291	59	173	27	41	10
1911... ...	278	49	202	30	163	37	360	51	71	11
Total ...	5676	803	2713	396	1857	369	2440	354	778	125

The following tables indicate the number and situation of the houses dealt with during 1911 :—

Represented, 1911.

Property.	Number of Houses.
Albion Street, Nos. 5-10 and 1 at rear	7
Bacchus Road, Nos. 7 and 8 and rear	4
Bacchus Road, Nos. 113 and 114	2
Barford Street, Nos. 53-57 and 1-3 in 7 Court ...	6
Barford Street, Nos. 59-79 and 9 Court	15
Barford Street, Nos. 83-95 and 11 Court	9
Barford Street, Nos. 97-101 and 1 in 15 Court ...	4
Barford Street, Nos. 103-113	5
Barford Street, Nos. 102-110	5
Barford Street, Nos. 142 and 28 Court	11
Bellbarn Road, Nos. 3, 4 and 5, rear 200	3
Bordesley Street, 8 Court	7
Bolton Road, Nos. 1, 2 and 3, rear 359	3
Bridge Road, Saltley, Nos. 92-96	3
Buck Street, Nos. 1, 2 and 3	3
Blucher Street, Nos. 2-5 and rear	7
Blucher Street, Nos. 1 and 2 rear 69	2
Camden Street, Nos. 166-172	4
Camden Street, unnumbered house in yard at rear 172 ...	1
Cheapside, Nos. 89 and 90 and 1-9 at rear	11
Coleman Street, No. 44 and 4 at rear	5
Coleman Street, unnumbered house opposite No. 3 in 13 Court	1

Property.	Number of Houses
Coventry Road, Nos. 1, 2 and 3 rear 288	3
Factory Road, Nos. 13-23 and rear	8
Frankfort Street and Hospital Street corner	15
Gt. Lister Street, Leicester Square	14
Grosvenor Street West, Nos. 70, 72 and 1 and 2 at rear	4
Holloway Head, 9 Court	7
Hospital Street, Nos. 221 and 2-5 at rear	5
Humpage Road, Nos. 11 and 12	2
Inge Street, Nos. 1 and 2 rear 18 and 19	2
Lancaster Street, Nos. 103 and 5 at rear	6
Meriden Street, Nos. 31, 32 and 1, 2 and 3 at rear	5
Milk Street, 2 Court	5
Moorsom Street, Nos. 40-46 and rear	8
Northwood Street, 13 Court	13
Northwood Street, rear 57	4
Northwood Street, 18 Court	14
Northwood Street, 14 Court	6
Norton Street, No. 41	1
Northumberland Street, Nos. 61, 62 and rear ...	4
Park Road, rear 509	2
Pritchett Street, Nos. 3 and 4 in 27 Court	2
St. James' Place, No. 4	1
St. James' Place, No. 5	1
Sheep Street, Nos. 21, 22, 23 and rear	4
Stoke Street, rear 11	3
Vauxhall Road, Union Terrace	16
Vauxhall Road, Nos. 89-97	5
	278

RENDERED HABITABLE, 1911.

Property.	Number of Houses.
Barford Street, No. 51	1
Barn Street, No. 4 and 2-10 in 1 Court	10
Bellbarn Road, Nos. 1-7 and 9-13 in 53 Court ...	12
Cheapside, Nos. 65, 66 and 1 & 5 at rear	4
Cheapside, Nos. 188, 190 and 1-7 in 34 Court ...	9
Cheapside, No. 3 in 13 Court	1
Darwin Street, Nos. 1-9 in 3 Court	8
Darwin Street, No. 52 and 8 Court	5
Grosvenor Street West, Nos. 50 and 52 and 4 Court	5
Gt. Brook Street, No. 6 Court	9
Gt. Colmore Street, No. 3 Court...	17
Hampton Street, No. 14 in 22 Court	1
Highgate Street, rear of Nos. 8-11	6
High Street, Deritend, 1 unnumbered house in 35 Court	1
Hospital Street, Nos. 1-7 and 9-12 in 26 Court ...	11
Hospital Street, No. 63	1
Irving Street, Nos. 105 and 106 and three unnumbered houses at rear	5
Inkerman Street, No. 134	1
Moseley Road, Nos. 16-22 and rear	14
Moseley Road, Nos. 17 and 18	2
Moseley Street, No. 143 and 17 Court	7
Northumberland Street, Nos. 46-49 and rear	13
Ormond Street, No. 15 and 1 and 2 in 4 Court ...	3
Talbot Street, Nos. 30-34	5
Talfourd Street, No. 69, etc.	8
Tower Street, Nos. 4-6 and two unnumbered houses in 27 Court	5
Upper Gough Street, rear of No. 48	4
Vauxhall Road, No. 21 and 1 at rear	2
Windsor Street, Nos. 171-181, etc.	16
Tennant Street, Nos. 31-37 and 9 houses in 12 Court, Bishopsgate Street	16
	202

Demolished, 1911.

Property.	Number of Houses.
Adderley Street, Nos. 30-31 and rear	6
Alcester Street, Nos. 2 and 3 in 18 Court	2
Barn Street, No. 3 and 1, 11 and 12 in 1 Court ...	4
Bellbarn Road, No. 8 in 53 Court	1
Bishopsgate Street, Nos. 1 and 11 in 12 Court ...	2
Brearley Street, Nos. 9-15 and rear	12
Brearley Street, Nos. 57 and 59 and 21 Court ...	8
Cheapside, No. 98	1
Cheapside, Nos. 2, 3 and 4 in 11 Court	3
Cheapside and Rea Street Corner	4
Cheapside, No. 189	1
Cheapside, Nos. 1 and 2 in 13 Court	2
Darwin Street, Nos. 5 and 10 in 3 Court	2
Darwin Street, No. 54	1
Garrison Lane, No. 245, etc., and rear	13
Grosvenor Street West, No. 3 in 4 Court	1
Gt. Brook Street, Nos. 5, 6 and 7 in 6 Court ...	3
Gt. Colmore Street, Nos. 13 and 14 in 3 Court ...	2
Highgate Street, No. 8 and 12 rear of 8-11	2
High Street, Deritend, Nos. 1, 2, 3 and 4 in 35 Court ...	4
Irving Street, three unnumbered houses rear of Nos. 105 and 106	3
Lancaster Street, Nos. 1-6 in 19 Court	6
Love Lane, Nos. 3, 4, 5 and 3 at rear; and Nos. 1-6 and 1 and 2 in 2 Court, and 1-4 in 1 Court, Oxygen Street	16
Moseley Road, No. 2 in 8 Court	1
Moseley Road, No. 20 and 11 and 4 at rear ...	3
Moseley Street, No. 145, etc., and 18 and 19 Courts	18
Moseley Street, No. 144 and two houses at rear ...	3
Pritchett Street, two unnumbered houses in 28 Court	2
Sherborne Street, rear 19	1
Summer Lane, three unnumbered houses rear 291 ...	3
St. James' Place, Nos. 40-46 and 1-7 at rear ...	14
Talfourd Street, rear of Nos. 65 and 67	2
Tennant Street, Nos. 108 and 109 and rear	4
Tennant Street, Nos. 111 and 112 and rear	4
Tower Street, Nos. 116-119 and rear	6
Windsor Street, No. 169 and 1 at rear...	2
Worcester Street, one unnumbered house in 2 Court	1
	163

Closing Orders Obtained, 1911.

Property.	Number of Houses.
Adderley Street, Nos. 30 and 31	2
Bloomsbury Street, house rear of No. 303	1
Bishopsgate Street, Nos. 1-6 in 5 Court	6
Bolton Road, Nos. 1-3 rear 359	3
Bordesley Street, Nos. 3-9 in 8 Court	7
Brearley Street, Nos. 41, 43 and 1-6 in 17 Court ...	8
Brearley Street, Nos. 27 and 29	2
Brearley Street, Nos. 9-11 and rear	6
Brearley Street, Nos. 13 and 15 and rear	6
Brearley Street, Nos. 71, 73 and rear	6
Bridge Road, Saltley, Nos. 92, 94 and 96	3
Cecil Street, Nos. 91-95 and 1 Court	11
Cecil Street, No. 84, etc., and 2 Court	10
Charles Henry Street, Nos. 26 and 27 Courts ...	10
Cheapside, Nos. 71, 72 and 12 Court	6
Cheapside, Nos. 67-70	4
Coventry Road, Nos. 1-3 rear 288	3
Essington Street, No. 84 and No. 41 Sheepcote Street	2
Gt. Hampton Street, Nos. 1-9 in 14 Court	9

Property.	Number of Houses.
Gt. Hampton Street, Nos. 1-8 and 10-18 in 15 Court	17
Gt. Lister Street, Nos. 2-14 in Leicester Square ...	13
Hurst Street, Nos. 3-18 in 1 Court	16
Humpage Road, Nos. 11 and 12	2
Inge Street, Nos. 1 and 2 rear of Nos. 18 and 19 ...	2
Lancaster Street, No. 103 and rear	6
Moorsom Street, Nos. 40-46 and rear	8
Newtown Row, No. 34 Court	6
Nelson Street, Nos. 85, 87 and 1-10 at rear	12
Norton Street, Nos. 42-46 and rear, and one unnumbered house in Wharf Street	10
Northwood Street, Nos. 1-13 and one unnumbered house in 18 Court	14
Northwood Street, Nos. 4-9 in 14 Court	6
Park Road, Hockley, rear No. 509	2
Pritchett Street, Nos. 12-15 and 1-8 in 3 Court ...	12
Pritchett Street, Nos. 3 and 4 in 27 Court	2
Sandy Lane, house rear No. 8	1
Sheepcote Street, Nos. 34 and 35 and rear	6
Sheepcote Street, Nos. 3 and 4 and 1-13 at rear ...	15
Skinner Lane, Nos. 50 and 51 and 1-6 at rear ...	8
St. James' Place, Nos. 40-47 and 1-7 at rear ...	15
St. James' Place, Nos. 6-11 and rear	12
St. James' Place, No. 4	1
St, James' Place, No. 5	1
Talbot Street, Nos. 30-34	5
Talfourd Street, No. 59 and four unnumbered houses at rear	5
Talfourd Street, Nos. 61-67 and rear	22
Tower Street, Nos. 116-119 and rear	6
Tower Street, No. 41 and rear	7
Vauxhall Road, Nos. 69-77	6
Vauxhall Road, No. 9 in Union Terrace	1
Vauxhall Road, Nos. 10-14 in Union Terrace	6
William Henry Street, Nos. 20-29	10
	360

Demolition Orders Served, 1911.

Property.	Number of Houses.
Barford Street, Nos. 139 and 141	2
Bloomsbury Street, house rear No. 303	1
Bishopsgate Street, Nos. 1-6 in 5 Court	6
Bradford Street, Nos. 1-6 rear No. 331	6
Brearley Street, Nos. 41, 43 and 17 Court	8
Gt. Hampton Street, Nos. 1-6 rear 105A	6
Gt. Hampton Street, Nos. 1-9 in 14 Court	9
Gt. Hampton Street, Nos. 1-8 and 10-18 in 15 Court	17
Gosta Green, seven unnumbered houses in 2 Court ...	7
Hospital Street, Nos. 147-153 and 23 Court	5
Tennant Street, Nos. 111 and 112 and 1 and 2 at rear	4
	71

Housing (Inspection of District) Regulations, September 2nd, 1910.

These regulations require that the inspection under and for the purposes of Sub-section 1 of Section 17 of the Housing, Town Planning, etc., Act, 1909, shall be made by the Medical Officer of Health or by an officer designated by the Local Authority, but coming under his direction and supervision, and requires that the inspection shall for each house deal with the following matters:—(1) the arrangements for preventing the contamination of the water supply; (2) closet accommodation; (3) drainage; (4) the condition of the dwelling house in regard to light, free circulation

of air, dampness, and cleanliness; (5) the paving, drainage, and sanitary condition of the yard or out-houses belonging to or occupied with the dwelling-house; (6) the arrangements for the deposit of refuse and ashes; (7) the existence of any room which would in pursuance of Section 7 of Section 17 of the Act of 1909 be a dwelling-house so dangerous or injurious to health as to be unfit for human habitation; (8) other defects and other matters which may tend to render the house dangerous or injurious to the health of the inhabitants.

In accordance with the above Order the district and assistant inspectors were instructed to make systematic inspection of their districts. The total number of houses inspected was 6,496. Of these, 278 were afterwards represented as unfit for human habitation. In 2,252 other houses defects in one form or another were ascertained, and were dealt with by serving notices under Section 91 or other Sections of the Public Health Acts.

COMMON LODGING HOUSES.

One new common lodging house was registered during 1911 and one was closed as unfit. All the remaining houses were licensed for the year 1911.

These contained beds for 2,572 lodgers. In three lodging houses exclusively used for women there are beds for 93 inmates. This accommodation for women has been supplemented during the year by the provision of a Hostel for working girls. The conditions of this institution are such as do away with the necessity for its registration as a common lodging house.

The large Rowton House for 800 men is also not registered. It has been frequently visited, and is kept in a high standard of efficiency.

The following table shows the work done by the Inspector during the year:—

	1908.	1909.	1910.	1911.
Visits paid by day	4,083	4,009	3,868	3,254
Visits paid by night	510	456	454	421
Windows not thrown open ...	6	18	16	13
Floors requiring cleansing ...	8	23	38	23
Bed-clothes requiring cleansing	209	69	67	111
Bedclothes to be provided ...	443	156	244	77
Means of ventilation provided	137	67	76	47
Repairs to walls, floors, roofs and windows	235	75	84	81
Wash-basins provided ...	34	0	12	4
Sinks provided or repaired ...	12	4	5	8
Water-closets provided ...	27	2	8	9
Water-closets repaired ...	59	37	53	47
Ash-tubs provided	14	7	5	3
Drains repaired	24	8	10	10
Yards paved	0	0	4	6
Fire Buckets provided ...	59	12	34	6
Fire Escapes provided ...	5	1	7	2

HOUSES SUB-LET IN LODGINGS.

There were on December 31st 567 houses on the register as compared with 577 on the previous 31st of December.

There were 3,147 visits paid during the daytime to these houses.

It is felt by all who have a knowledge of these houses that much more definite control is required over them. Everywhere the same difficulty in dealing with the occupants of these houses is felt. Perhaps in Birmingham the conditions are no worse than elsewhere, but they are distinctly bad. The occupants are the most poverty-stricken families in the City. Often they are criminals—more often they are the wastrels of society. What is wanted is (*a*) the provision of a higher standard of accommodation by the landlord, and (*b*) power to enforce greater cleanliness by the tenant and less destruction of property.

Some owners of worn-out old property find it profitable to hand it over to a "landlord" for sub-letting, for in this way they are assured of their rent for a further period of years for houses which would be difficult to let to decent tenants.

CANAL BOATS.

The following is a copy of the report made to the Local Government Board on the work under the Canal Boats Acts :—

HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
January 3rd, 1912.

Gentlemen,—In compliance with Section 3 of the Canal Boats Act, 1884, I present to you the annual report of the work accomplished under the Canal Boats Acts, 1877 and 1884, and the Regulations of the Local Government Board made thereunder for the year ending 31st December, 1911.

Inspector William G. E. Childs has continued as inspector under the above Acts. He combines in his work certain duties connected with the attendance at school of canal-boat children; and in addition to the work under the above Acts he also acts as Inspector of Houses let in lodgings in Birmingham. He has been paid at the rate of £110 10s. 0d. per annum, with uniform and cycle allowance, and his office is at the Council House.

1,062 boats, registered to carry 3,511½ adults, were inspected during the year. The distribution of these inspections among the four quarters of the year is shown as follows :—

1st quarter	292 inspections.	3rd quarter	225 inspections.
2nd „	255 „	4th „	290 „

The following table gives the corresponding figures since 1906 :—

Year.	Number of Boats Inspected.	Number of Adults Boats are registered to carry.	Year.	Number of Boats inspected.	Number of Adults Boats are registered to carry.
1906	1059 ...	3507½	1909	738 ...	2416
1907	1047 ...	3348	1910	1044 ...	3399½
1908	1080 ...	3554½	1911	1062 ...	3511½

The actual numbers carried on the boats inspected during 1911, were 1,524 men, 729 women, and 788 children, making a total of 3,041 persons, equivalent to 2,647 adults.

Of the 1,062 boats inspected, 973, or 91·6%, were found to be in compliance with the Acts and Regulations, but in regard to 89 boats contraventions existed, and notices were served on the owners. On 42 of these boats one contravention existed in each, on 19 boats two contraventions in each, on 20 boats three contraventions in each, and on 8 boats four contraventions in each. The total number of infringements found was, therefore, 172, and these are classified in the following table, which indicates and classifies also the complaints remedied :—

	Brought forward from 1910 to be dealt with.	Number found during 1911.	Notices complied with during 1911.	Carried forward to be dealt with in 1912.
Registration	—	7	6	1
Notification of change of master ...	—	—	—	—
Certificates	1	18	18	1
Marking	4	26	29	1
Overcrowding	—	5	4	1
Separation of the sexes	—	3	3	—
Cleanliness	—	—	—	—
Ventilation	—	—	—	—
Painting of cabins	6	48	51	3
Repairing of cabins	4	46	44	6
Leaky cabins	2	13	12	3
Provision of water cask	—	5	5	—
Removal of bilge water	—	—	—	—
Notification of infectious disease ...	—	—	—	—
Admittance of inspector	—	—	—	—
Using fly boat as ordinary	—	1	1	—
	17	172	173	16

In no case during the year was recourse had to legal proceedings.

The custom of sending letters to owners, drawing attention to the requirements of the notices unfulfilled, has been continued with satisfactory results. As in previous years, compliance was readily made in most cases.

On August 23rd a notification was received of a case of typhoid fever which had been removed from a canal boat berthed in the City. The patient, who was the master of the boat, had contracted the disease during the course of his journeys, and the diagnosis was not established till after his removal to a Birmingham Hospital. The case was fatal, and the diagnosis confirmed *post mortem*. The disinfection by steam of the bedding and the fumigation of the cabin were carried out immediately after notification.

On December 27th a canal boat passed through Birmingham carrying on board a child who had previously been elsewhere notified as suffering from scarlet fever. The information, which had been sent here by the Medical Officer of Health for the place of notification, was transmitted to the place of destination of the boat.

The number of boats on the register on December 31st, 1911, was 419, compared with 402 at the end of 1910. The corresponding figures at the end of 1911, 1910, 1909, 1908, and 1907 respectively were 419, 402, 397, 396, and 391.

On the basis of the figures arrived at in 1909 in the manner explained in the report for that year, the number of boats registered in Birmingham which are now in use or available is about 286. This figure cannot be taken as quite correct.

There have been 24 boats registered in Birmingham during 1911, and seven registrations cancelled, making a net increase of 17 boats. Of the 24 boats registered, 13 were new boats and 11 old boats re-registered, of which three had previously been registered in Birmingham, and are included in the seven registrations cancelled.

Your obedient servant,

T. Shadick Higgins, M.D., B.Sc.

Assistant Medical Officer of Health.

MILKSHOPS.

In addition to the work of prevention of tuberculosis among the cattle and the inspection of cows and cowsheds, visits are paid to dairies and milkshops in the City and to railway stations to see that cleanliness is observed in the handling of milk. A comparative statement of some of the items will be found in the table below :—

	1908	1909	1910	1911
Dairies on the register	12	12	12	10
Milkshops on the register	2,582	2,681	2,812	2,984
Purveyors on the register	506	516	558	509
Dairies registered during the year	0	0	0	0
Milkshops registered	612	678	654	709
Purveyors registered	88	100	90	48
Dairy certificates cancelled	1	0	0	2
Milkshops „ „	491	579	523	537
Purveyors „ „	7	90	48	97
Visits to dairies	32	39	44	34
Visits to milk shops and milk stores ...	3,443	3,479	4,092	4,255
Dirty vessels found at milk shops and milk stores	22	9	6	3
Shops, cellars, and pantries whitewashed ...	77	87	91	101
Lamp oil, fish, tripe and vinegar businesses prohibited	5	1	1	5
Dirty churns found at railway stations ...	1	2	0	0
Cases of infectious disease reported at milk-shops	31	39	45	35

ICE CREAM.

During the autumn of 1910 and the whole of 1911 a good deal of attention has been paid to the conditions under which ice cream is manufactured in Birmingham especially in the Italian quarter of the City in the neighbourhood of Bartholomew Street.

Up till that time the ice cream was being manufactured under very unsatisfactory surroundings. The two chief types of premises used for this purpose in the Italian quarter were (1) the dwelling houses in which the people lived, and (2) rough sheds erected in the common courts which are usual in that quarter.

Such preparation and storage of ice cream is dangerous owing to the risk of contamination of the "cream" with fæcal and other bacteria.

Hardly a single person in the Italian quarter in the City had suitable premises for his ice cream work.

The improvements which have been effected have been brought about by means of the powers given by Sec. 98 of the Birmingham Corporation Act, 1903, which enacts, *inter alia*, that any manufacturer of or dealer in ice cream is liable to a penalty if in the manufacture, sale or storage of such commodity he exposes it to infection or contamination, or omits to take any proper precaution for its due protection from infection or contamination.

The method that has been adopted has been to send letters resembling formal notices to the offending makers, stating that after a certain fixed time proceedings would be taken against them under Section 98 unless the premises were brought into line with certain standards which were suggested in the letter. At the same time they were invited to interview the Medical Officer of Health or his assistant in regard to any proposed alterations.

The ideal scheme that was suggested in each case was that the buildings used for the manufacture or storage of ice cream should be situated in a private yard, and not in a common court, and that the buildings were to be of brick, stone or of other suitable material. It was suggested that the buildings should in each case comprise the following:—

(*a*) Boiling room for the process of preparing the "cream" from the milk and other ingredients used.

(*b*) Cooling room; separate room in which the hot mixture is placed in vessels to cool.

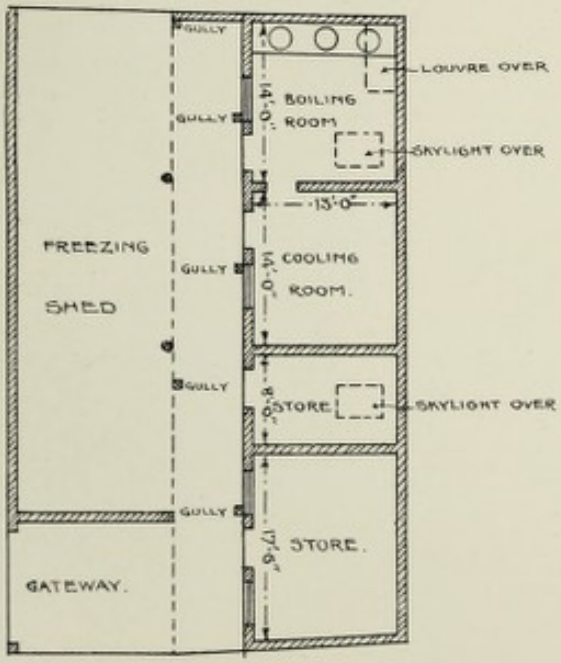
(*c*) Freezing room or shed. For this purpose a covered part of the yard has been suggested, or a large room open on one side.

Besides the above, storage room for salt, etc., is required, and also a suitable water supply and sinks.

A certain number of premises (about a dozen), after the necessary alterations had been completed, have been passed as suitable for the manufacture of ice cream, but the majority of the ice cream makers were using premises which, by reason of their situation in common courts or for other reasons, could not be suitably converted. To meet the necessities of these people, the landlord of a number of houses occupied by them has erected a factory on a vacant piece of land in Banbury Street. The scheme of this factory is shown in fig. 1 and plan 1. Most of the tenants pay one shilling per week for the privilege of manufacturing in this factory.

Besides this, three of the larger Italian manufacturers of ice cream have also erected ice cream factories, where not only do they make their own ice-cream, but they also allow other Italians to do the same for a weekly rental. Two of these factories are illustrated in the accompanying plans and photographs. One of them, situated at 39 Duddeston Row, Birmingham, is shown in fig. 2 and plan 2. The other, at 19 Bartholomew Street, is illustrated by fig. 3 and plan 3. The interior of the boiling room of the latter premises is shown in fig. 4, which illustrates well the kind of boiling accommodation which is favoured by the Italians. The vessels shown are of copper, and consist of an outer boiler containing water and an inner floating vessel in which the milk and other ingredients are boiled.

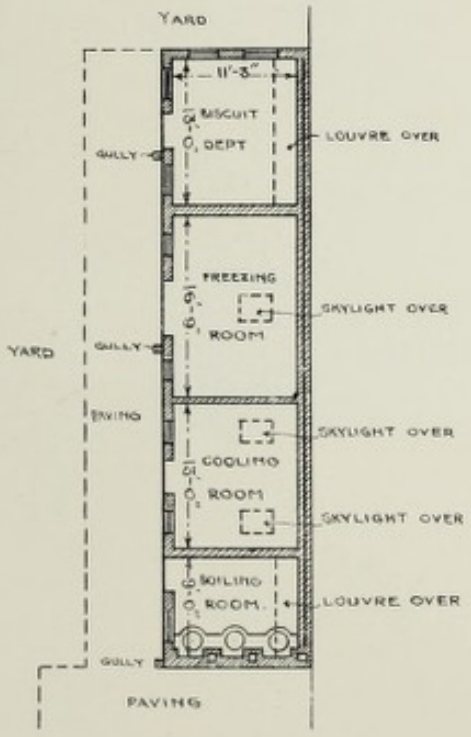
FIG. 1.



PLAN OF ICE CREAM FACTORY
BANBURY STREET,
BIRMINGHAM.

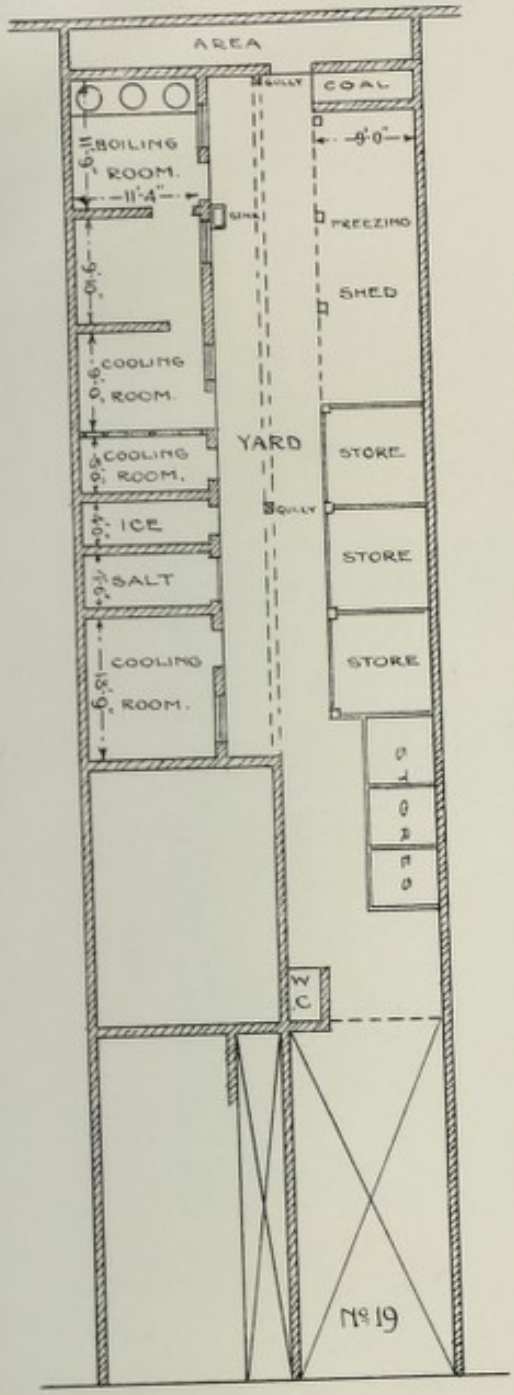
PLAN 1.

FIG. 2.



PLAN OF ICE CREAM FACTORY
No 39 DUDDESTON ROW
BIRMINGHAM.

PLAN 2.



PLAN OF ICE CREAM FACTORY
Nº 19 BARTHOLOMEW ST
BIRMINGHAM.

PLAN 3.

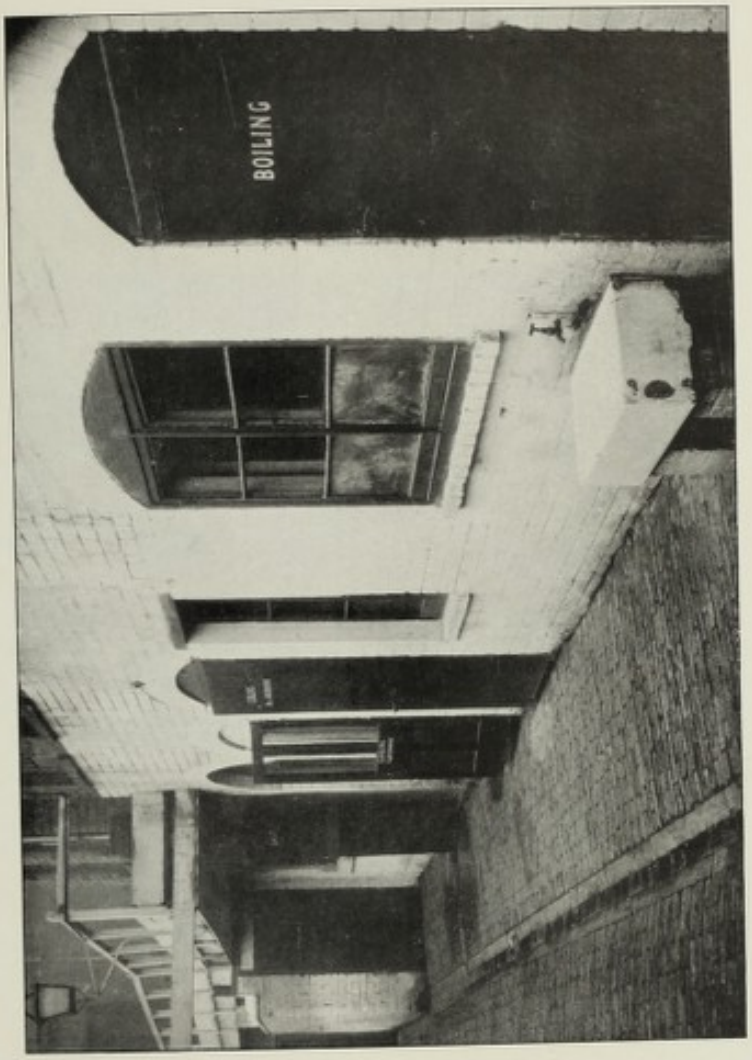


FIG. 3.

FIG. 4.

All the above described premises have been built with brick with concrete floors sloped to channels and gullies in the yards; the interior of the walls has been plastered and whitewashed; the yards have been paved with blue brick.

At the Banbury Street and Bartholomew Street factories the numerous tenants are given accommodation for storage of tools, etc., under their own keys.

In the work of inducing the Italians to comply with Section 98 by making the considerable alterations described, it was necessary to prosecute in only one case.

The work is being continued during 1912, and the Italians are falling into line well.

The difficulty which the possession of the good premises does not remove is the risk of contamination which the ice cream runs by reason of the dirty hands and, in some cases, the filthy habits of the workpeople.

Another difficulty is the practice of working up of stale "cream" into ice cream for sale. Last year a manufacturer was prosecuted and fined under the unsound food sections of the Public Health Act, 1875, as amended, for this practice.

INSPECTION OF MEAT, FISH, FRUIT, ETC.

There were formerly, in addition to the public abattoir, 186 other private slaughter houses where cattle and pigs or pigs alone are slaughtered.

The extension of the City added 81 private slaughter houses.

For the work of inspection there are now eight highly-qualified and experienced inspectors, exclusive of one who devotes practically the whole of his time to work under the Contagious Diseases of Animals Acts.

During the year 11,455 visits were paid to the slaughter-houses, as compared with 11,689 in the previous year. The number of seizures of unsound meat or fish during the year was 14, as compared with 13 in 1910. Three prosecutions were instituted during the year.

The following tabular statement gives the work done in this department:—

	1908	1909	1910	1911
Bad Meat.				
Voluntarily surrendered ...	3,659 lots	3,937 lots	4,177 lots	4,932 lots
Seized by Inspectors	19 lots	14 lots	5 lots	11 lots
Weight destroyed	303 tons	352 tons	307 tons	394 tons
Persons prosecuted	5	3	2	1
Penalties inflicted	£14	£40	£15	£20
Bad Fish, Poultry, etc.				
Voluntarily surrendered ...	1,519 lots	1,460 lots	1,422 lots	1,518 lots
Seized	12 lots	6 lots	8 lots	3 lots
Weight destroyed	141 tons	103 tons	118 tons	174 tons
Persons prosecuted	0	1	2	2
Penalties inflicted	£0	£0 10s. 0d.	£1 10s. 0d.	£10
Bad Fruit.				
Weight destroyed	24 tons	15 tons	9 tons	16 tons

FACTORIES AND WORKSHOPS.

The following tables show the work done during the year under the Factory and Workshop Act :—

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)	1133	101	—
Workshops (including Workshop Laundries)	7281	202	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	669	18	—
Total	9083	321	—
Revisits paid	3399	—	—

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	1335	1335	—	—
Want of ventilation	55	55	—	—
Overcrowding	6	6	—	—
Want of Drainage of floors	11	11	—	—
Other Nuisances	852	850	—	—
Sanitary accommodation—				
Insufficient	137	137	—	—
Unsuitable or defective	1274	1261	—	—
Not separate for sexes	106	106	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ...	—	—	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report) ...	—	—	—	—
Total	3776	3761	—	—

III.—Home Work.

NATURE OF WORK.	Outworkers' Lists, Section 107.									Outwork in Unwholesome Premises, Section 108.			Outwork in Infected Premises, Sections 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending Lists.	Prosecutions.							
	Sending twice in the year			Sending once in the year.				Failing to keep or permit inspection of Lists	Failing to send Lists.	Instances.	Notices served	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110)
	Lists.	Outworkers.		Lists.	Outworkers.										
		Contractors.	Workmen.		Contractors.	Workmen.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Wearing Apparel—(1) making, etc.	384	909	1640	23	38	111	—	—	1	—	—	—	—	6	—
(2) cleaning and washing ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Household linen	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lace, lace curtains and nets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Curtains and furniture hangings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and upholstery	4	47	5	—	—	—	—	—	—	—	—	—	—	—	—
Electro-plate	44	261	114	5	10	13	—	—	—	—	—	—	—	—	—
File making	2	6	—	—	—	—	—	—	—	—	—	—	—	—	—
Brass and brass articles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fur pulling	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cables and chains	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anchors and grapnels	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cart gear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locks, latches and keys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Artificial flowers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nets, other than wire nets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tents	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sacks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Racquet and tennis balls	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—
Paper bags and boxes	50	1	400	10	—	48	—	—	—	—	—	—	—	—	—
Brush making	14	—	272	2	—	8	—	—	—	—	—	—	—	—	—
Pea picking	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feather sorting	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—
Carding, etc., of buttons, etc.	56	27	2183	9	4	102	—	—	—	—	—	—	—	—	—
Stuffed toys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Basket making	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	554	1251	4614	49	52	282	630	—	1	—	—	—	—	19	—

IV.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year	6811

V.—Other Matters.

		Number.
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ...		13
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector ...	332
	Reports (of action taken) sent to H.M. Inspector ...	242
Other		4
Underground bakehouses (s. 101) :—		
Certificates granted during the year		—
In use at the end of the year		13

BLACK SMOKE NUISANCES.

Four inspectors devote the whole of their time to the prevention of black smoke. A summary of the work done during the year 1911 and previous ten years is set out in the table below :—

Year.	Number of Observations.	Average number of minutes of black smoke per observation.	Offences reported	Cautionary letters sent.	Police Court proceedings.	Total amount of fines.			Total amount of costs.			Average fine		
						£	s.	d.	£	s.	d.	£	s.	d.
1901 ...	15808	1·34	116	80	35	15	2	6	14	4	0	0	8	7
1902 ...	13445	1·26	139	89	50	33	15	0	19	8	6	0	13	6
1903 ...	16705	1·27	151	71	80	49	7	6	36	15	6	0	13	2
1904 ...	13186	1·39	231	117	98	77	10	0	37	17	6	0	15	10
1905 ...	10034	1·95	250	128	109	69	10	0	41	0	0	0	16	2
1906 ...	8229	2·27	251	116	115	82	15	0	41	19	6	0	17	1
1907 ...	7934	2·29	275	119	116	89	0	0	41	0	8	0	18	11
1908 ...	7125	2·47	243	108	111	66	12	6	38	12	6	0	14	6
1909 ...	9216	2·24	247	80	94	67	15	0	33	6	0	0	17	7
1910 ...	9945	1·99	218	79	75	45	2	6	27	0	0	0	13	11
1911 ...	10686	2·18	258	81	109	117	5	0	37	3	6	1	1	9

GENERAL SANITARY WORK.

It is somewhat difficult to give an idea of the work accomplished during the year 1911. The figures given in the table on the next page relate to the old City for the whole of the year 1911 and to the added areas for the period November 9th to December 31st.

The table indicates the variety of duties which are undertaken—frequently the items recorded are of very unequal value. The investigation of one case of infectious illness may occupy what is equal to the whole time of one man for one day, while in another case a few minutes will suffice. Similar conditions are found in nearly all the varieties of work which a sanitary inspector undertakes. No method exists for recording such individual work.

GENERAL SANITARY INSPECTORS' WORK.	QUARTERS.				YEAR.
	First.	Second.	Third.	Fourth.	
No. OF VISITS PAID:—					
Infectious Diseases	1,915	1,752	1,703	3,643	9,013
Nuisances or Complaints	3,129	3,262	3,572	3,660	13,623
Work Ordered	2,560	2,155	1,926	2,863	9,504
Work in Progress	3,754	3,023	3,028	3,221	13,026
Inspection of Dirty Courts	531	418	291	292	1,532
House to House Inspection	2,339	1,264	1,112	1,781	6,496
Smoke or Water Tests	355	268	283	365	1,271
Offensive Trades...	45	103	25	15	188
Ice Cream	310	798	608	49	1,765
Shop Hours and Seats	49	1	—	9,984	10,034
Owners or Agents	569	467	414	569	2,019
Other purposes	836	659	1,102	1,140	3,737
NUISANCES, ETC., REPORTED:—					
Houses to be disinfected after Small Pox ...	—	—	1	—	1
,, ,, ,, Scarlet Fever ...	480	466	460	853	2,259
,, ,, ,, Diphtheria ...	166	151	111	195	623
,, ,, ,, Typhoid Fever...	20	13	21	55	109
Houses to be cleansed	542	394	261	334	1,531
Houses to be repaired	2,156	1,797	995	1,920	6,868
Houses to be provided with better ventilation...	65	226	84	238	613
Houses to be provided with separate water supply	28	61	17	15	121
Cases of overcrowding to be remedied ...	6	4	4	7	21
Houses to be provided with Damp Courses	269	189	20	160	638
Water to be removed from Cellars	119	53	75	92	339
Spouting to be repaired or disconnected ...	807	336	199	554	1,896
Rain Water Cisterns to be disconnected or abolished	237	48	44	87	416
Ashpit Privies to be converted to Water Closets	4	5	13	98	120
Pan Prives to be converted to Water Closets ...	351	917	484	291	2,043
Privies and Closets to be limewashed ...	288	312	335	365	1,300
Water Closets to be repaired or reconstructed ...	655	516	579	656	2,406
Additional Water Closets to be provided ...	13	31	49	10	103
Ashplaces to be repaired or limewashed ...	287	237	231	307	1,062
Ash Tubs to be provided	385	498	713	1,103	2,699
Soilpipes to be repaired or removed... ...	18	23	14	48	103
Urinals to be put in order or closed ...	25	30	29	20	104
Drains to be relaid or repaired	231	209	162	287	889
Drains to be opened and cleansed	1,003	1,041	1,128	733	3,905
Gully Traps to be provided	516	699	419	525	2,159
Interception Traps to be provided on main drains	44	42	75	37	198
Premises to be supplied with additional drains	159	226	113	189	687
Drains in cellars to be disconnected or abolished	28	21	4	18	71
Sink Bend Pipes to be repaired or affixed	41	59	39	86	225
Sanitary Sinks to be provided	403	334	232	327	1,296
Yards to be paved	16	52	8	26	102
Yards to be repaired	278	105	112	326	821
Courts or Yards to be cleansed by Tenants	134	65	46	32	277
Wash Houses to be repaired or limewashed ...	358	255	271	373	1,257
Keeping of fowls to be discontinued ...	15	10	32	29	86
Nuisances from swine and swine styes abated ...	—	12	9	1	22
Accumulations of rubbish, manure, etc., to be removed	57	45	68	42	212
Manure receptacles to be provided or repaired	20	23	20	10	73
Dangerous premises to be reported to City Surveyor's Department	82	52	82	81	297
Defective Fittings to be reported to Water Department	188	172	208	190	758
Miscellaneous	85	47	19	53	204

HEALTH VISITORS' WORK.

As already stated in regard to the general work of Sanitary Inspectors, it is very difficult from a statistical record to give an adequate idea of the work done by the Staff of Health Visitors.

This is rendered for 1911 the more difficult, as the number of visitors have varied, and the area dealt with was largely increased on November 9th. It is thought better, therefore, in the present report to give the subjoined statistical table for what it is worth with a statement that few departments of municipal work are doing better or more fundamental work in raising the living conditions of the poorest of the community than are the Health Visitors of Birmingham. They have undoubtedly had a powerful influence in educating those who are ignorant of the common requirements of health, and therefore of assisting in the reduction of death-rate and in the general health of the City.

	QUARTERS.				YEAR.
	First.	Second.	Third.	Fourth.	
PRIMARY VISITS :—					
Systematic	252	130	187	181	750
Births	2,210	2,998	2,545	2,537	10,290
Diarrhœa Deaths	23	46	606	119	794
Measles	4,235	597	24	373	5,229
Chicken Pox	162	185	124	505	976
Whooping Cough	129	110	135	668	1,042
Mumps	152	93	46	135	426
Vermin :—					
(*a*) Head	328	345	348	394	1,415
(*b*) Body	106	85	104	296	591
(*c*) Head and Body	21	39	40	57	157
Ringworm :—					
(*a*) Scalp	97	138	60	112	407
(*b*) Elsewhere	54	85	26	58	223
(*c*) Scalp and Elsewhere	7	8	7	8	30
Scabies	25	37	15	37	114
Unclassified School Cases	972	640	353	1,137	3,102
Special Inquiries	17	—	—	—	17
Other Visits (not included in above) ...	778	859	6,494	1,108	9,239
Total of Primary Visits ...	9,568	6,395	11,114	7,725	34,802
Revisits	4,007	4,251	4,116	4,256	16,630
GRAND TOTAL	13,575	10,646	15,230	11,981	51,432

CLEANSING OF VERMINOUS CHILDREN.

During the year 1911 much attention was paid by the Health Visitors to the subject of lessening amongst school children the amount of vermin (both of head and body).

These cases are reported to the Public Health Department from the Elementary Council Schools, mainly by the school teachers, school nurses or attendance officers; but also the Health Visitors hear of them in other ways, *e.g.*, when paying home visits, or when upon visiting the schools they are asked to make an examination of a few specially dirty children, or systematically of a whole class, or even occasionally of a whole school.

The method of procedure has been as follows: When a verminous case reported or detected is not previously well known to the Health Visitor, a visit to the home is made, the child is examined there, or at school, as the circumstances require, and the parent (mother) is instructed verbally and by means of a leaflet. [If there is great poverty, the necessary disinfectant and soap for treating and cleansing the child may be supplied from the Public Health Department.]

If upon re-examination the child is found to be free from vermin, a formal printed letter to that effect is sent to the school.

If, however, in spite of home visits, the children remain persistently verminous, then procedure is taken under the Children Act (Section 122), as indicated in the 1910 Report, viz., the children are examined by the Health Visitors *at school*, and if found verminous, a first warning (printed) notice is filled in by the Health Visitors, and delivered by the School Attendance Officer at the home of the parent (*i.e.*, the father) or guardian, requiring him "to cleanse properly the person and clothing of the child within 24 hours."

Often the mere sending of this first warning notice has a marked effect, and upon re-examination at school the children are found clean and free from vermin.

If, on the contrary, they are still found to be verminous, then their names are given to the Cleansing Station Attendant, who fetches them from school, takes them to the Cleansing Station (where their heads and bodies are thoroughly cleansed and freed from vermin, and their clothing disinfected by steam), and takes them back again *to school*.

Though the Children Act does not actually require it, a second notice is then sent by post to the parent (father), stating that the child has been duly cleansed, and that if he allows the child to get into such a condition that it is again necessary to proceed under the Section (122, Children Act), then he will be rendered liable on summary conviction to a penalty.

Where, after this, the children become again badly verminous (and there are no extenuating circumstances), and where prosecution seems the only advisable course, then the Education Department is informed, and a summons is served on the parent (father).

During the year 1911 there were eleven prosecutions, the parent in each case being convicted and fined (with or without costs), with alternative of 7 or 14 days' imprisonment.

The spread of the knowledge of these prosecutions seems to be having a deterrent effect amongst other parents of dirty children.

Unfortunately, the children made clean at the Cleansing Station often return to homes where the adult inmates and the bedding are still badly verminous, and so become re-infested.

In such instances the cleansing at an adult Cleansing Station of every other member of the family, and the destruction of their verminous mattresses, etc., seems the best method of preventing a recurrence of the evil.

The following table shows the number of cases dealt with during 1911 :—

(I.) *Of the total cases reported from the schools and also seen by the Health Visitors at the schools and detected by them in the homes* :—

Primary Visits paid to the homes on account of Head Vermin	1,415
,, ,, ,, ,, ,, Body Vermin	591
,, ,, ,, ,, ,, Head and Body Vermin	157
Total (Homes)	2,163
First Warning Notices delivered at home of "Parent"	939
Cases compulsorily cleansed at Cleansing Station	373
Prosecution cases	11

(II.) *Verminous cases reported from schools were approximately as follows* :—

1,531 (Children)	for Head Vermin.
591 ,,	,, Body Vermin.
301 ,,	,, Head and Body Vermin.
250 ,,	,, Nits (head).
2,673	Total (Children).

Of these—

2,202	were cleansed without first warning notice being sent (the Health Visitors having visited the homes).
153	were cleansed after receipt of first warning notice.
157	compulsorily cleansed at Cleansing Station.
161	compulsory cleansing postponed on account of (*a*) absence or removal from school; (*b*) scabies, measles, and other infectious diseases; (*c*) deferred till 1912, etc.
2,673	

TABLE I.

Vital Statistics of Whole District during 1911 *and previous Years.*

Year.	Population estimated to middle of each year.	Births.		Deaths Under 1 year of Age.		Total Deaths Registered at all Ages.		Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in the District.	Deaths of Residents registered beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1901	522,270	16,735	32·2	3,150	188	10,357	19·9	1,802	302	347	10,402	20·0
1902	522,533	†17,103	32·2	†2,681	157	†9,577	18·0	†2,082	†312	†407	†9,672	18·2
1903	522,796	16,866	32·4	2,668	158	9,056	17·4	1,916	321	388	9,123	17·5
1904	523,059	16,902	32·4	3,302	195	10,235	19·6	2,008	332	437	10,340	19·8
1905	523,323	15,795	30·3	2,451	155	8,588	16·4	1,838	362	492	8,718	16·7
1906	523,586	16,016	30·7	2,686	168	9,067	17·4	1,923	380	485	9,172	17·5
1907	523,850	15,619	29·9	2,300	147	8,744	18·6	2,054	397	532	8,879	17·0
1908	524,114	†16,141	30·3	†2,339	145	†8,855	16·6	†2,205	†401	†538	†8,992	16·9
1909	524,378	14,985	28·6	2,030	135	8,583	16·4	2,086	433	541	8,691	16·6
1910	525,762	14,898	28·4	1,937	130	7,693	14·7	2,038	446	530	7,777	14·8
Averages for years 1901-1910	523,567	16,106	30·7	2,554	158	9,075	17·5	1,995	369	470	9,177	17·5
1911	526,030	14,704	28·0	2,412	164	8,685	16·6	2,087	468	675	8,892	17·0

*Rates in columns 4, 8, and 13 calculated per 1,000 of estimated population. † 53 weeks.

Total population at all ages at Census of 1911, 525,960 (from Preliminary Report of Census). Area of District in acres, 13,477. Number of Families or Separate Occupiers, 111,680.

TABLE II.

Vital Statistics of Separate Localities in 1911 *and previous years.*

Year.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.
Wards.	Rotton Park.			All Saints'.			Ladywood.			St. Paul's.			St. George's.			St. Stephen's.		
1902	46,088	677	14·4	41,834	659	15·5	25,128	444	17·3	15,552	289	18·2	20,434	449	21·6	23,720	640	26·5
1903	46,887	650	13·9	42,101	662	15·7	25,253	448	17·8	15,561	299	19·2	20,412	425	20·8	23,768	499	21·0
1904	47,658	821	17·2	43,033	769	17·9	25,284	509	20·1	15,669	336	21·5	20,425	439	21·5	23,615	582	24·7
1905	48,530	680	14·0	42,232	618	14·6	24,842	413	16·6	15,543	244	15·7	20,350	383	18·8	23,284	465	20·0
1906	49,393	668	13·5	42,513	726	17·1	24,704	419	17·0	15,088	280	18·6	20,451	405	19·8	23,035	540	23·4
1907	50,788	676	13·3	43,959	618	14·1	24,815	390	15·7	14,483	247	17·1	20,080	388	19·3	23,275	494	21·2
1908	50,618	645	12·7	43,575	681	15·6	24,802	394	15·9	14,112	252	17·9	19,452	430	22·1	22,432	517	23·1
1909	49,421	656	13·3	43,257	611	14·1	24,253	410	16·9	13,249	237	17·9	18,741	386	20·6	22,024	512	23·2
1910	49,659	556	11·2	43,903	580	13·2	24,369	356	14·6	13,901	214	15·4	19,139	301	15·7	21,670	405	18·7
1911	48,567	670	13·8	42,774	650	15·2	23,200	409	17·6	13,742	242	17·6	19,004	374	19·7	21,232	483	22·7
Wards.	St. Mary's.			St. Bartholomew's.			Market Hall.			St. Thomas'.			St. Martin's.			Edgb. & Harborne.		
1902	15,993	405	24·8	26,876	678	24·6	9,570	165	16·9	18,586	381	20·1	24,097	499	20·3	31,200	390	12·3
1903	16,248	375	23·1	26,572	647	24·4	9,483	154	16·3	18,559	347	18·7	24,019	404	16·8	31,311	380	12·1
1904	15,859	382	24·1	25,801	741	28·7	9,163	162	17·7	18,764	338	18·0	24,469	461	18·8	31,287	399	12·7
1905	15,551	325	20·9	24,762	571	23·1	9,049	154	17·0	18,563	315	17·0	24,662	395	16·0	31,002	345	11·1
1906	13,891	316	22·8	24,666	570	23·1	9,451	152	16·1	18,088	376	20·8	23,928	422	17·6	32,781	382	11·7
1907	13,386	287	21·4	23,043	543	23·6	8,930	153	17·1	17,361	317	18·3	24,116	396	16·4	33,215	394	11·9
1908	11,929	309	25·9	22,759	542	23·8	8,815	141	16·0	17,439	310	17·8	23,450	375	16·0	32,896	362	11·0
1909	12,357	312	25 2	22,039	513	23·3	8,774	128	14·6	17,252	322	18·7	22,702	381	16·8	33,104	361	10·9
1910	12,569	268	21·3	22,303	469	21·0	8,409	94	11·2	17,106	287	16·8	22,835	325	14·2	34,699	365	10·5
1911	11,917	303	25·4	21,407	519	24·2	8,095	110	13·6	16,258	307	18·9	21,891	375	17·1	33,797	414	12·3
Wards.	Deritend.			Bordesley.			Duddeston.			Nechells.			Balsall Heath.			Saltley.		
1902	24,516	507	20·3	55,606	761	13·4	23,773	517	21·3	33,384	636	18·7	39,025	589	14·8	44,185	679	15·1
1903	24,077	517	21·5	56,825	758	13·3	23,541	463	19·7	33,710	570	16·9	39,359	531	13·5	45,427	714	15·7
1904	24,157	532	22.0	55,596	843	15·2	23,451	538	22·9	33,346	765	22·9	40,140	595	14·8	46,761	784	16·8
1905	23,723	489	20.6	58,464	782	13·4	23,395	469	20·1	32,827	588	17·9	40,412	517	12·8	47,318	641	13·5
1906	23,770	537	22·6	59,818	800	13·4	22,926	428	18·7	33,696	672	19·9	40,956	505	12·3	50,796	683	13·4
1907	23,180	493	21·3	61,032	791	12·9	23,049	478	20·7	32,314	662	20·5	40,269	548	13·6	53,524	694	13·0
1908	22,746	473	20·8	62,018	778	12·5	22,174	461	20·8	32,741	673	20·6	40,260	550	13·7	53,914	732	13·6
1909	21,863	443	20·3	62,004	737	11·9	21,701	441	20·3	32,218	619	19·2	40,274	564	14·0	55,562	684	12·3
1910	21,769	430	19·8	62,891	695	11·1	21,739	369	17·0	32,251	561	17·4	40,309	473	11·8	61,043	673	11·0
1911	21,557	495	23·0	63,529	815	12·8	20,936	444	21·2	31,868	644	20·2	39,532	503	12·8	61,837	780	12·6

Note.—The inmates of large Institutions are not included in the Ward populations, and the deaths amongst them have been referred, as far as possible, to the Wards in which the deceased persons had previously resided. The populations are estimated from the number of occupied houses.

TABLE III.

Cases of Infectious Disease notified during the Year 1911, *classified according to ages, wards, and institutions.*

DISEASE.	AGES.													WARDS.																		Institutions.	City.
	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and up.	Rotton Park.	All Saints'.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas'.	St. Martin's.	Edgbaston and Harborne.	Deritend.	Bordesley.	Duddeston.	Nechells.	Balsall Heath.	Saltley.		
Smallpox	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Scarlet Fever...	20	608	1076	332	81	46	62	30	2	1	...	...	...	254	220	96	39	95	71	23	32	11	100	104	96	73	312	31	79	146	421	55	2258
Diphtheria	5	196	218	66	30	18	20	14	3	2	1	...	...	52	49	28	15	14	13	6	11	3	26	26	59	24	96	6	22	49	55	19	573
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	...	1	10	9	17	17	29	12	7	1	1	...	...	6	8	4	2	7	14	1	9	2	2	8	2	4	9	1	8	7	7	3	104
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	2	6	19	7	...	...	...	...	...	1	4	1	2	1	2	1	2	...	1	2	1	1	4	2	7	1	1	...	34
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	11	22	25	18	24	41	60	91	130	83	51	15	...	39	49	34	16	30	31	16	38	4	12	10	31	11	57	47	54	24	58	10	571
Ophthalmia Neonatorum ...	83	...	...	...	...	...	...	...	...	...	...	...	...	9	8	3	4	4	3	1	3	...	1	2	6	3	18	2	6	5	5	...	83
Cerebro-Spinal Meningitis ...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
TOTALS	119	827	1329	426	154	128	190	154	143	87	53	15	...	361	338	166	78	151	134	48	96	20	142	152	195	116	496	89	176	233	547	87	3625

TABLE IV.

Deaths registered in or belonging to the City of Birmingham during the year ending December 30th, 1911.

DISEASES.	AGES.												Males	Females	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Small Pox—																
(a) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b) Unvaccinated	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
(c) No Statement	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	63	224	17	1	—	—	—	—	—	—	—	—	—	169	136	305
Scarlet Fever	5	35	15	4	—	—	—	2	1	—	—	—	—	22	40	62
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Influenza	—	2	—	1	—	2	1	7	9	7	11	4	1	26	19	45
Whooping Cough	39	57	6	1	—	—	—	—	—	—	—	—	—	49	54	103
Diphtheria, Membranous Croup ...	5	38	22	4	—	—	1	—	—	—	—	—	—	43	27	70
Enteric Fever	—	—	3	1	4	4	5	6	3	1	—	—	—	13	14	27
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa, Dysentery	363	82	3	—	—	—	2	1	4	9	7	11	3	244	241	485
Epidemic Enteritis	175	53	1	—	—	—	1	—	—	1	1	2	—	119	115	234
Epidemic Cerebro-Spinal Meningitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Varicella	3	—	1	—	—	—	—	—	—	—	—	—	—	1	3	4
Epidemic Rose-rash	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mumps	—	—	1	1	—	—	—	—	—	—	—	—	—	1	1	2
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glanders, Farcy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax, Splenic Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cowpox, Acc. of Vaccination	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	17	4	—	—	—	—	—	1	2	1	—	—	—	13	12	25
Gonorrhœa	—	—	—	—	—	—	—	1	2	1	—	1	—	5	—	5
Phagedæna	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	3	1	—	—	—	—	—	1	2	3	5	3	—	8	10	18
Puerperal Fever	—	—	—	—	—	4	13	7	—	—	—	—	—	—	24	24
Pyæmia, Septicæmia	4	—	—	—	1	—	1	—	—	1	—	—	—	2	5	7
Infective Endocarditis	—	—	—	1	1	2	1	—	—	2	—	—	—	3	4	7
Cancrum Oris	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Stomatitis	3	—	—	—	—	—	—	—	—	—	—	—	—	2	1	3
Carbuncle	—	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2
Cellulitis	—	2	1	—	—	1	1	—	1	3	1	1	—	7	4	11
Malarial Fever	—	—	—	1	—	—	—	2	—	—	—	—	—	2	1	3
Rheumatic Fever	—	—	2	1	3	1	1	1	2	3	—	—	—	5	9	14
Rheumatism of Heart	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of Brain	11	29	5	4	—	3	1	1	—	—	—	—	—	31	23	54
Tuberculosis of Larynx	—	—	—	—	—	1	—	3	3	1	—	—	—	6	2	8
Phthisis	4	12	7	11	43	68	157	186	141	77	27	2	1	471	265	736
Abdominal Tuberculosis	25	24	4	2	2	—	1	2	2	—	—	—	—	31	31	62
General Tuberculosis	10	10	2	1	3	1	1	2	2	—	1	—	—	17	16	33
Other forms of Tuberculosis	1	2	2	1	1	3	2	2	4	3	3	—	—	16	8	24
Thrush	4	—	—	—	—	—	—	—	—	—	—	—	—	1	3	4
Actinomycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydatid Diseases	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Scurvy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ptomaine Poisoning	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Acute Alcoholism	—	—	—	—	—	—	1	—	2	1	—	—	—	2	2	4
Chronic Alcoholism	—	—	—	—	—	—	—	3	1	2	—	—	—	3	3	6
Lead Poisoning	—	—	—	—	—	—	—	1	1	1	—	—	—	3	—	3
Osteo-arthritis Rheumatoid-arthritis ...	—	—	1	1	1	—	—	2	1	10	9	4	—	9	20	29
Gout	—	—	—	—	—	—	—	3	1	2	4	—	—	10	—	10
Cancer	—	1	3	1	2	2	11	52	104	130	108	47	6	184	283	467
Diabetes Mellitus	—	—	—	2	2	—	2	2	5	19	13	1	—	26	20	46
Purpura Hæmorrhagica	1	—	—	—	—	2	—	2	—	—	—	—	—	2	3	5
Hæmophilia	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Anæmia, Leucocythæmia	3	—	1	1	—	1	3	7	2	3	2	2	—	9	16	25
Lymphadenoma, Hodgkin's Disease ...	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1
Premature Birth	362	1	—	—	—	—	—	—	—	—	—	—	—	211	152	363
Injury at Birth	14	—	—	—	—	—	—	—	—	—	—	—	—	10	4	14
Debility at Birth	173	2	—	—	—	—	—	—	—	—	—	—	—	95	80	175
Atelectasis	32	—	—	—	—	—	—	—	—	—	—	—	—	18	14	32
Congenital Defects	51	—	3	—	1	—	—	—	—	—	—	—	—	30	25	55
Want of Breast Milk	15	2	—	—	—	—	—	—	—	—	—	—	—	9	8	17

TABLE IV.—*continued.*

DISEASES.	AGES.													Males	Females	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Atrophy, Debility, Marasmus ...	226	63	—	—	—	—	—	—	—	—	—	—	—	150	139	289
Dentition	4	9	—	—	—	—	—	—	—	—	—	—	—	9	4	13
Rickets	4	9	2	—	—	—	—	—	—	—	—	—	—	9	6	15
Old Age, Senile Decay	—	—	—	—	—	—	—	—	2	13	114	236	62	188	239	427
Convulsions	87	21	1	1	—	—	1	—	1	—	—	—	—	60	52	112
Meningitis	43	48	12	2	4	2	4	10	2	3	1	—	—	63	68	131
Encephalitis	2	1	3	—	2	—	1	1	—	—	—	—	—	6	4	10
Apoplexy	—	—	—	—	—	1	2	1	14	10	16	11	2	29	28	57
Softening of Brain	—	—	1	—	—	—	1	2	2	7	12	12	3	24	16	40
Hemiplegia	—	—	—	—	—	—	—	—	6	24	12	11	2	25	30	55
General Paralysis of Insane ...	—	—	—	—	—	1	1	8	8	2	—	—	—	15	5	20
Other forms of Insanity ...	—	—	—	—	—	—	1	—	2	2	2	1	—	5	3	8
Chorea	—	—	1	—	2	—	—	1	1	—	—	—	—	—	5	5
Cerebral Tumour	—	—	3	—	—	4	3	2	7	1	—	—	—	11	9	20
Epilepsy	—	1	2	—	1	3	6	7	5	10	4	—	1	19	21	40
Laryngismus Stridulus	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Locomotor Ataxy	—	—	—	—	—	—	—	2	3	2	2	1	—	9	1	10
Paraplegia, Diseases of Cord ...	—	1	—	1	—	—	1	7	9	7	8	2	—	21	15	36
Cerebral Congestion	—	—	—	—	—	—	—	—	—	1	1	—	—	—	2	2
Cerebral Effusion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-Spinal Meningitis ...	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Neuritis	—	—	—	—	—	—	—	11	3	1	—	—	—	2	13	15
Other Diseases of Brain or Nerves ...	1	—	—	—	—	1	—	1	2	1	1	4	—	4	7	11
Otitis, Mastoid Disease	3	4	1	2	2	1	2	1	1	2	1	—	—	9	11	20
Disease of Nose, Epistaxis ...	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
Diseases of Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pericarditis...	—	1	2	2	4	—	—	2	3	2	1	1	—	8	10	18
Endocarditis, Valvular Disease ...	—	—	8	11	10	8	17	24	35	33	31	9	—	75	111	186
Hypertrophy of Heart	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Angina Pectoris	—	—	—	—	—	—	—	1	3	2	1	1	—	6	2	8
Aneurism	—	—	—	—	—	—	1	1	3	1	1	1	—	7	1	8
Senile Gangrene	—	—	—	—	—	—	—	—	—	1	7	12	1	12	9	21
Embolism, Thrombosis	—	—	—	—	—	—	1	4	6	13	15	7	4	12	38	50
Phlebitis	—	—	—	—	—	—	1	—	—	—	—	1	—	2	—	2
Varicose Veins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cardiac Dilatation	—	1	—	—	—	—	—	1	3	9	9	1	—	10	14	24
Heart Disease (not defined) ...	10	4	8	8	7	3	14	46	70	102	115	44	9	198	242	440
Other Diseases of Heart	—	—	1	—	—	—	—	4	8	14	13	5	—	22	23	45
Atheroma	—	—	—	—	—	—	—	—	—	3	—	2	—	4	1	5
Arterio-sclerosis	—	—	—	—	—	—	—	3	2	4	7	8	—	14	10	24
Cerebral Hæmorrhage	1	—	—	—	—	—	2	10	49	85	81	34	3	120	145	265
Other Diseases of Blood Vessels ...	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1	2
Laryngitis	3	3	—	—	—	—	—	1	—	—	—	—	—	5	2	7
Croup	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Acute Bronchitis	136	66	1	—	—	1	1	5	14	21	23	6	1	139	136	275
Chronic Bronchitis	1	—	2	1	1	2	7	36	57	124	153	108	24	250	266	516
Lobar Pneumonia...	11	18	7	1	2	3	20	17	17	19	14	3	—	89	43	132
Lobular Pneumonia	112	149	11	1	—	2	4	5	8	9	11	6	—	166	152	318
Pneumonia (not defined) ...	25	48	12	2	3	9	22	24	24	29	19	9	6	134	98	232
Emphysema, Asthma	—	—	—	—	—	—	—	—	—	4	4	—	—	8	—	8
Pleurisy	—	4	—	—	—	2	3	5	5	2	4	—	—	16	9	25
Fibroid Phthisis	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1
Bronchiectasis	—	—	1	—	—	—	1	3	1	3	—	—	—	6	3	9
Other Diseases, Respiratory System ...	1	—	—	—	—	—	—	1	—	2	—	1	—	3	2	5
Quinsy	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1
Diseases of Pharynx	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Diseases of Æsophagus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer of Stomach and Duodenum ...	1	—	—	—	1	2	8	13	9	6	2	—	—	21	21	42
Other Diseases of Stomach ...	44	8	—	1	—	—	2	3	6	10	8	6	1	42	47	89
Enteritis	196	50	5	—	—	—	3	3	8	15	17	10	2	150	159	309
Appendicitis	—	2	10	4	4	—	3	6	3	4	3	—	—	23	16	39
Obstruction of Intestine ...	4	1	—	—	—	—	2	3	9	14	7	4	1	20	25	45
Other Diseases of Intestine ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver	—	—	—	—	—	—	4	7	18	13	5	1	—	21	27	48
Other Diseases of Liver	—	2	2	1	—	—	1	2	3	13	7	3	1	15	20	35

TABLE IV.—*continued.*

DISEASES.	AGES.													Males	Females	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Peritonitis	1	1	2	1	—	—	3	—	3	—	4	1	—	3	13	16
Other Diseases of Digestive System	1	1	—	—	—	—	1	1	1	1	2	—	—	6	2	8
Diseases, Lymphatic System Ductless Glands	—	1	—	—	—	—	—	—	1	2	2	—	—	4	2	6
Acute Nephritis	1	7	1	3	—	3	7	9	18	19	15	6	—	49	40	89
Bright's Disease	—	1	—	1	1	2	7	20	22	26	23	4	—	55	52	107
Calculus	—	—	—	—	—	—	1	—	—	1	—	1	—	2	1	3
Diseases of Bladder and Prostrate	—	—	—	—	—	—	1	1	1	8	8	4	—	22	1	23
Other Diseases, Urinary System ...	—	—	—	—	—	2	1	—	—	2	—	—	—	2	3	5
Diseases of Testis and Penis ...	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Diseases of Ovaries	—	—	—	—	1	—	—	1	—	—	—	1	—	—	3	3
Diseases of Uterus Appendages ...	—	—	—	—	—	2	3	3	2	2	—	1	—	—	13	13
Diseases of Vagina External Genitals	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Abortion, Miscarriage	—	—	—	—	—	1	1	1	—	—	—	—	—	—	3	3
Puerperal Mania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Convulsions	—	—	—	—	—	—	2	2	—	—	—	—	—	—	4	4
Placenta Praevia, Flooding ...	—	—	—	—	—	—	3	3	—	—	—	—	—	—	6	6
Puerperal Thrombosis	—	—	—	—	—	—	3	—	—	—	—	—	—	—	3	3
" Parturition "	—	—	—	—	—	—	—	3	—	—	—	—	—	—	3	3
Other Diseases, Pregnancy and Childbirth	—	—	—	—	—	—	4	1	—	—	—	—	—	—	5	5
Arthritis, Ostitis, Periostitis ...	2	1	—	—	1	—	1	—	—	—	1	—	—	3	3	6
Other Diseases, Osseous System ...	—	2	—	2	1	—	1	—	—	1	1	1	—	4	5	9
Ulcer, Bedsore	—	1	—	—	—	—	—	—	—	—	1	1	1	1	3	4
Eczema	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pemphigus	5	—	—	—	—	—	—	—	—	—	—	—	—	1	4	5
Other Diseases, Integumentary System	2	2	—	—	—	—	—	1	—	1	—	—	—	4	2	6
By Accidents or Negligence :—																
In Mines and Quarries	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	1
In Vehicular Traffic	—	7	3	—	2	3	1	2	3	3	1	3	—	16	12	28
On Railways	—	—	—	—	—	1	1	1	1	—	—	—	—	4	—	4
On Ships, Boats, etc.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
In Building Operations	—	—	—	—	—	—	—	1	1	1	—	—	—	3	—	3
By Machinery	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
By Weapons and Implements ...	—	—	—	—	1	—	—	1	—	—	—	—	—	2	—	2
Burns and Scalds	5	23	8	2	2	—	—	1	2	—	2	1	—	13	33	46
Poisons, Poisonous Vapours ...	—	—	—	—	—	—	—	1	—	—	1	1	—	3	—	3
Surgical Narcosis	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Effects of Electric Shock ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Corrosion by Chemicals	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Drowning	—	1	6	3	3	—	—	2	5	2	2	—	—	19	5	24
Suffocation, Overlaid in Bed ...	64	2	—	—	—	—	—	—	—	—	—	—	—	38	28	66
,, Otherwise	6	1	—	1	—	—	—	1	3	2	—	—	—	6	8	14
Falls not specified	2	4	1	1	1	—	3	2	3	7	9	7	1	20	21	41
Weather Agencies...	1	2	1	—	—	—	—	1	—	—	—	—	—	5	—	5
Otherwise, not stated	10	—	—	1	—	—	—	1	—	2	2	2	—	11	7	18
Homicide	—	—	1	—	—	—	—	2	—	—	—	—	—	3	—	3
Suicides :—																
By Poison	—	—	—	—	—	2	3	7	5	—	3	—	—	10	10	20
By Asphyxia	—	—	—	—	—	—	—	1	—	1	—	—	—	1	1	2
By Hanging and Strangulation ...	—	—	—	1	—	1	1	3	7	10	—	—	—	20	3	23
By Drowning	—	—	—	—	1	—	3	1	3	5	1	—	—	8	6	14
By Shooting	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1
By Cut or Stab	—	—	—	—	—	—	3	3	1	1	2	1	—	8	3	11
By Precipitation from Elevated Places	—	—	—	—	—	—	—	1	—	1	—	—	—	1	1	2
By Crushing	—	—	—	—	—	—	—	1	2	—	1	—	—	4	—	4
By other and unspecified methods	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Execution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sudden death, cause not ascertained...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-defined and unspecified causes ...	6	—	—	1	1	—	—	2	2	3	—	—	—	8	7	15
Grand Totals	2412	1154	221	95	123	157	401	665	817	1027	1009	675	136	4556	4336	8892

TABLE V. *Births and Deaths Registered in, or belonging to, each Ward during the Year ending December 30th, 1911.*

Causes of Death.	Rotton Park.	All Saints'.	Ladywood	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas'.	St. Martin's.	Edgbaston and Harborne.	Deritend.	Bordesley.	Duddeston.	Nechells.	Balsall Heath.	Saltley.	Not Located.	City.
Smallpox	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Measles	20	22	11	9	18	20	9	23	1	13	24	8	16	35	15	28	11	19	3	305
Scarlet Fever	8	6	...	2	1	4	...	1	1	3	1	4	1	10	...	4	1	15	...	62
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	3	2	3	1	1	3	1	1	...	...	5	2	1	8	1	1	3	6	3	45
Whooping Cough	8	13	1	4	4	6	2	...	...	3	...	6	5	10	1	16	12	8	4	103
Diphtheria, Membranous Croup	3	6	3	1	1	3	...	4	...	2	2	11	6	10	1	4	5	5	3	70
Croup	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Enteric Fever	1	...	2	...	2	4	...	2	2	1	...	1	1	2	1	3	3	2	...	27
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa, Dysentery	24	43	30	17	18	31	19	41	6	11	23	7	34	51	27	52	13	34	4	485
Epidemic or Zymotic Enteritis	2	23	2	9	19	20	15	12	...	6	8	8	14	9	23	29	14	21	...	234
Enteritis	48	19	28	6	16	16	9	21	1	13	9	10	16	22	16	13	13	15	18	309
Other Continued Fevers	...	...	...	1	...	...	1	1	...	1	...	...	...	1	...	...	...	...	1	6
Erysipelas	1	2	3	1	...	...	...	1	...	...	1	...	1	2	1	...	4	1	...	18
Puerperal Fever	1	1	...	1	...	2	...	1	...	1	2	...	2	5	1	4	2	1	...	24
Other Septic Diseases	3	2	2	...	...	2	1	...	...	2	1	1	...	6	1	3	2	3	2	31
Intermittent Fever and Malarial Cachexia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Meninges	5	9	7	3	2	2	2	3	...	1	2	...	1	6	1	4	1	4	1	54
Tuberculosis of Lungs	55	56	35	23	37	39	28	44	14	33	42	21	40	65	40	48	38	62	16	736
Abdominal Tuberculosis	7	3	2	6	3	2	1	5	...	2	3	3	2	6	1	9	1	6	...	62
Other Forms of Tuberculosis	5	5	5	4	2	2	2	5	...	3	1	3	3	3	2	10	2	6	2	65
Alcoholism	1	1	...	...	...	...	...	...	...	3	...	1	...	...	2	...	2	...	...	10
Cancer	44	33	20	6	13	18	10	22	8	15	23	37	22	54	21	24	32	52	13	467
Premature Birth	30	31	19	6	15	30	16	16	6	7	19	19	21	37	11	26	20	32	2	363
Congenital Defects	25	16	12	7	13	9	10	13	1	4	12	8	19	23	20	22	7	32	23	276
Developmental Diseases	29	25	7	14	12	26	10	30	4	18	18	5	24	17	20	19	13	32	11	334
Old Age	20	27	15	7	13	9	14	22	3	13	16	28	19	55	26	25	32	34	49	427
Meningitis	10	15	5	3	4	7	9	4	2	3	2	3	5	9	8	16	6	19	1	131
Convulsions	5	7	6	2	6	11	4	8	3	3	...	4	6	3	12	6	7	19	...	112
Diseases of Heart	50	40	36	18	35	32	18	29	10	18	28	43	45	75	37	48	60	63	36	721
Cerebral Hæmorrhage	26	20	7	10	7	10	12	9	2	7	14	9	14	26	11	28	20	21	12	265
Bronchitis	49	47	39	26	28	57	32	58	10	18	25	31	53	63	46	54	37	71	47	791
Pneumonia	41	51	24	14	36	44	25	51	10	46	20	26	29	61	36	47	39	62	20	682
Diseases of Stomach	4	8	8	3	6	5	14	6	1	5	5	5	9	16	3	11	10	10	2	131
Obstruction of Intestines	4	4	1	...	3	1	1	2	1	1	5	3	...	2	4	3	5	3	2	45
Cirrhosis of Liver	2	5	...	2	2	2	1	2	1	1	4	2	3	7	2	1	9	2	...	48
Nephritis and Bright's Disease	26	10	10	3	6	7	4	7	4	3	10	18	15	23	7	9	14	16	4	196
Tumours and other Affections of Female Genital Organs	...	...	1	...	...	...	2	2	...	1	2	...	2	1	...	1	1	3	...	16
Accidents and Diseases of Parturition	2	3	...	3	...	2	...	2	1	...	...	3	1	3	1	1	1	1	...	24
Accidents or Negligence	11	22	10	10	12	29	10	22	4	10	8	9	10	18	8	28	6	26	5	258
Suicides	5	7	3	...	4	1	...	6	...	5	4	7	4	3	1	7	8	11	1	77
Ill-defined Causes	2	...	1	...	1	...	...	...	1	2	...	1	...	...	...	1	...	1	5	15
All other Causes	90	66	51	20	34	27	21	41	13	29	36	67	51	68	36	39	49	62	65	865
Total Deaths	670	650	409	242	374	483	303	519	110	307	375	414	495	815	444	644	503	780	355	8892
Deaths Under One Year	185	189	127	84	121	151	103	145	18	81	94	66	133	194	127	210	101	227	56	2412
Births	1283	1214	680	337	635	755	345	700	101	473	527	629	728	1545	718	1180	921	1699	234	14704

TABLE VI.

Deaths under 1 year Registered in, or belonging to, each Ward during the Year ending December 30th, 1911.

Causes of Death.	Rotton Park.	All Saints'.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas'.	St. Martin's.	Edgbaston and Harborne.	Deritend.	Bordesley.	Duddeston	Nechells.	Balsall Heath.	Saltley.	Not Located.	City.
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	5	2	5	4	3	7	4	5	...	3	6	2	2	6	3	3	...	3	...	63
Scarlet Fever	...	1	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	1	...	5
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	4	2	1	1	3	4	...	...	...	1	...	2	...	6	...	8	3	4	...	39
Diphtheria, Membranous Croup	...	...	...	...	...	1	...	...	...	...	1	1	...	1	...	...	...	1	...	5
Croup	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa, Dysentery	21	29	23	13	14	17	16	33	3	10	15	5	25	43	21	40	8	26	1	363
Epidemic or Zymotic Enteritis	2	19	2	4	15	14	14	7	...	4	5	7	8	7	17	22	11	17	...	175
Enteritis	33	15	24	5	12	7	6	11	1	10	6	4	9	12	8	9	8	9	7	196
Other continued Fevers	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	3
Erysipelas	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	3
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases	1	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	7
Intermittent Fever and Malarial Cachexia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Meninges	1	...	2	1	1	...	...	...	...	...	...	...	1	2	1	2	...	...	...	11
Tuberculosis of Lungs	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	4
Abdominal Tuberculosis	4	1	1	4	...	...	...	...	...	2	1	1	...	...	1	6	...	4	...	25
Other Forms of Tuberculosis	...	2	1	1	...	1	...	...	...	1	...	...	...	1	...	4	...	...	...	11
Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cancer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	30	31	19	6	15	30	16	16	6	7	19	18	21	37	11	26	20	32	2	362
Congenital Defects	25	14	12	6	11	8	10	13	1	4	12	8	19	23	20	22	7	32	23	270
Developmental Diseases	21	20	5	14	8	16	10	25	3	14	13	3	16	14	8	13	12	24	10	249
Old Age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	3	2	1	2	1	3	2	2	...	2	...	...	1	4	5	6	2	7	...	43
Convulsions	5	6	6	1	6	6	3	4	2	3	...	3	5	2	10	4	7	14	...	87
Diseases of Heart	1	2	...	...	...	...	...	...	...	...	...	...	2	...	1	...	1	3	...	10
Cerebral Hæmorrhage	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Bronchitis	7	13	6	6	7	12	7	8	2	3	6	3	7	12	3	13	5	17	...	137
Pneumonia	11	9	6	6	13	7	2	7	...	10	1	2	10	12	12	9	12	16	3	148
Diseases of Stomach	...	...	3	1	2	2	8	4	...	3	2	1	...	8	1	6	2	2	...	45
Obstruction of Intestines	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tumours and other Affections of Female Genital Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Accidents and Diseases of Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Accidents or Negligence	4	9	3	5	6	14	4	7	...	2	4	1	5	2	2	9	1	10	1	89
Suicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ill-defined Causes	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	2	6
All Other Causes	4	9	4	3	4	1	...	1	...	1	2	3	2	2	1	5	...	2	5	49
Deaths under one year	185	189	127	84	121	151	103	145	18	81	94	66	133	194	127	210	101	227	56	2412

TABLE VII.

Comparison of Prevalence of Sickness and Death from Infectious Diseases.

(Rates calculated per 1,000 persons on the population estimated to the middle of each year.)

Year.	Smallpox.		Scarlet Fever.		Diphtheria, Membranous Croup.		Typhus Fever.		Typhoid Fever.		Puerperal Fever.		Erysipelas.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths
*1891	0·11	0·02	3·42	0·21	0·48	?	...	...	0·93	0·18	0·03	0·01	0·86	0·03
1892	0·06	...	2·94	0·14	1·10	0·21	...	...	0·54	0·08	0·08	0·05	1·18	0·07
1893	2·01	0·14	3·31	0·14	0·79	0·17	0·01	...	1·00	0·19	0·11	0·08	1·75	0·05
1894	4·22	0·35	3·64	0·15	0·83	0·18	...	...	1·04	0·21	0·09	0·04	1·57	0·03
1895	0·20	0·02	6·00	0·27	1·50	0·43	...	...	0·88	0·17	0·05	0·03	1·65	0·04
1896	0·03	0·01	6·65	0·32	2·35	0·58	...	...	0·95	0·21	0·06	0·04	1·54	0·04
1897	...	...	3·81	0·19	1·41	0·32	0·00	0·00	1·06	0·18	0·03	0·02	1·16	0·04
1898	...	...	2·60	0·09	1·36	0·26	...	...	1·25	0·22	0·05	0·03	1·25	0·03
1899	...	...	2·44	0·06	1·40	0·29	...	...	1·52	0·23	0·06	0·03	1·23	0·04
1900	0·00	...	3·98	0·18	1·05	0·15	...	...	1·64	0·35	0·08	0·05	1·31	0·05
1901	...	...	6·36	0·30	1·02	0·16	...	...	1·18	0·21	0·06	0·05	1·39	0·04
1902	0·13	0·01	9·50	0·55	1·48	0·24	...	...	1·02	0·19	0·07	0·04	1·43	0·06
1903	0·48	0·02	5·44	0·28	1·70	0·26	...	...	0·67	0·13	0·06	0·04	1·24	0·04
1904	0·02	...	3·18	0·12	1·21	0·22	...	...	0·48	0·07	0·07	0·05	1·15	0·06
1905	0·07	0·00	3·23	0·10	1·34	0·19	...	...	0·40	0·07	0·08	0·05	1·14	0·06
1906	...	...	3·47	0·10	1·56	0·18	...	...	0·37	0·08	0·05	0·04	1·13	0·04
1907	...	...	4·83	0·18	1·94	0·19	...	...	0·47	0·09	0·09	0·06	1·15	0·03
1908	...	...	4·27	0·14	1·49	0·20	...	...	0·36	0·09	0·03	0·02	0·89	0·02
1909	...	...	5·49	0·20	1·31	0·17	...	...	0·18	0·04	0·05	0·03	0·97	0·05
1910	...	...	5·17	0·16	1·13	0·12	...	...	0·14	0·05	0·06	0·04	1·03	0·04
1911	0·00	0·00	4·30	0·12	1·09	0·13	...	...	0·20	0·05	0·06	0·05	1·09	0·03

* Prior to enlargement of City.

TABLE VIII.

Number of Cases Reported under the Infectious Disease (Notification) Act, 1889, during each Week of the Year, 1911.

Week. Number.	Week. Date of ending.	Smallpox.	Scarlet Fever.	Diphtheria.	Typhus Fever.	Typhoid Fever.	Simple Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Ophthalmia Neonatorum.	Cerebro-Spinal Meningitis.	Total.
	1911.													
1	January 7th	...	23	12	...	...	...	...	1	...	14	...	...	50
2	,, 14th	...	33	12	...	1	...	...	1	...	7	...	...	54
3	,, 21st	...	47	15	...	1	...	...	2	...	8	...	...	73
4	,, 28th	...	43	11	...	2	...	...	...	...	12	...	...	68
5	February 4th	...	39	19	...	1	...	...	...	...	10	...	...	69
6	,, 11th	...	39	14	...	1	...	...	...	...	10	...	...	64
7	,, 18th	...	33	15	...	1	...	...	2	...	10	...	...	61
8	,, 25th	...	29	9	...	2	...	...	1	...	9	...	...	50
9	March 4th	...	43	19	...	3	...	...	...	...	6	...	...	71
10	,, 11th	...	42	20	...	1	...	...	...	...	12	...	...	75
11	,, 18th	...	36	9	...	1	...	...	1	...	7	...	...	54
12	,, 25th	...	40	12	...	2	...	...	...	...	11	...	...	65
13	April 1st	...	32	13	...	1	...	...	...	...	7	...	...	53
14	,, 8th	...	30	14	...	1	...	...	...	...	14	...	...	59
15	,, 15th	...	27	19	...	2	...	...	...	...	7	...	...	55
16	,, 22nd	...	42	12	...	1	...	...	1	...	12	...	...	68
17	,, 29th	...	26	10	...	3	...	...	...	...	10	...	...	49
18	May 6th	...	36	10	...	2	...	...	3	...	10	1	...	62
19	,, 13th	...	47	12	...	...	...	...	...	...	8	2	...	69
20	,, 20th	...	49	22	...	1	...	...	1	...	7	1	...	81
21	,, 27th	...	50	7	...	...	...	...	1	...	9	...	...	67
22	June 3rd	...	42	16	...	2	...	...	...	...	8	1	...	69
23	,, 10th	...	34	9	...	1	...	...	1	...	10	...	...	55
24	,, 17th	...	27	6	...	1	...	...	1	...	10	1	...	46
25	,, 24th	...	34	4	...	1	...	...	...	...	6	1	...	46
26	July 1st	...	43	9	...	...	...	...	1	...	14	2	...	69
27	,, 8th	1	51	8	...	2	...	...	...	...	7	...	...	69
28	,, 15th	...	39	14	...	...	...	...	1	...	7	1	...	62
29	,, 22nd	...	54	8	...	2	...	...	...	...	5	1	...	70
30	,, 29th	...	48	11	...	3	...	...	1	...	10	9	...	82
31	August 5th	...	50	10	...	1	...	...	...	...	10	2	...	73
32	,, 12th	...	30	6	...	...	...	...	...	...	4	5	...	45
33	,, 19th	...	35	15	...	4	...	...	1	...	9	...	...	64
34	,, 26th	...	40	4	...	1	...	...	...	...	11	4	...	60
35	September 2nd	...	33	3	...	1	...	...	1	...	15	2	...	55
36	,, 9th	...	55	11	...	1	...	...	...	...	14	4	...	85
37	,, 16th	...	34	8	...	2	...	...	1	...	7	6	...	58
38	,, 23rd	...	40	8	...	...	...	...	1	...	9	3	...	61
39	,, 30th	...	40	10	...	5	...	...	...	...	16	2	...	73
40	October 7th	...	58	14	...	2	...	...	1	...	11	7	...	93
41	,, 14th	...	71	9	...	1	...	...	1	...	9	4	...	95
42	,, 21st	...	69	11	...	3	...	...	1	...	21	2	...	107
43	,, 28th	...	49	12	...	6	...	...	...	...	14	2	...	83
44	November 4th	...	54	15	...	10	...	...	...	...	16	4	...	99
45	,, 11th	...	48	7	...	3	...	...	2	...	24	1	...	85
46	,, 18th	...	67	6	...	5	...	...	4	...	26	2	...	110
47	,, 25th	...	59	9	...	8	...	...	...	...	13	2	...	91
48	December 2nd	...	58	7	...	2	...	...	...	...	6	2	...	75
49	,, 9th	...	59	11	...	5	...	...	...	...	20	4	...	99
50	,, 16th	...	55	8	...	2	...	...	1	...	22	1	...	89
51	,, 23th	...	51	9	...	3	...	...	1	...	7	1	1	73
52	,, 30th	...	45	9	...	...	...	...	...	...	10	3	...	67
	Totals ...	1	2258	573	...	104	...	...	34	...	571	83	1	3625

TABLE IX.

Temperature of the Air and Ground, Rainfall, Sunshine, and Wind, in each Month of the Year 1911.
Observed at the Birmingham and Midland Institute Observatory, Edgbaston,
by Mr. Alfred Cresswell.

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.		Maximum at 1 foot deep.	Maximum at 4 feet deep.							
	1911.	Above or below the previous highest. *	1911.	Above or below the previous lowest. *	1911.	Above or below the average. *			1911.	Above or below the average. *	1911.	Above or below the average. *		1911.	Above or below the average.
Jan....	54·6	— 3·4	26·2	+ 15·4	38·6	+ 0·8	42·8	45·0	32	— 3	0·86	— 0·97	6	9313	— 835
Feb.	54·7	— 7·2	21·6	+ 13·6	40·7	+ 2·5	43·9	43·9	46	— 5	1·49	— 0·07	13	10370	+ 879
Mar.	57·7	— 8·9	30·8	+ 11·8	40·3	— 0·6	45·0	44·1	63	— 25	1·85	+ 0·04	16	12731	+2405
Apr.	62·9	— 17·9	26·7	— 0·2	45·4	+ 0·1	47·3	45·0	106	— 7	0·88	— 0·67	12	11551	+2216
May...	74·8	— 3·8	40·6	+ 9·6	55·7	+ 4·5	56·0	49·2	163	+ 24	0·71	— 1·40	6	8148	— 988
June	80·6	— 2·2	40·9	+ 3·3	58·4	— 0·4	60·0	51·9	160	+ 15	1·78	— 0·35	13	8976	+ 705
July	88·5	+ 0·5	45·6	+ 6·1	65·7	+ 5·8	65·9	56·0	224	+ 81	0·37	— 1·80	6	8062	— 244
Aug.	93·9	+ 4·7	49·0	+ 7·8	65·6	+ 6·4	64·3	57·2	188	+ 47	1·44	— 1·44	15	8073	— 536
Sept.	88·5	— 2·1	39·8	+ 6·8	58·2	+ 2·6	61·7	56·7	160	+ 50	1·46	— 0·27	9	7986	+ 52
Oct....	72·2	— 4·3	31·1	+ 3·2	49·1	+ 0·6	52·5	54·6	62	— 7	1·92	— 0·89	17	9238	+ 203
Nov.;	55·7	— 5·9	30·1	+ 10·1	42·1	— 0·7	47·9	51·0	53	+ 18	2·60	+ 0·40	21	11527	+2346
Dec.	51·1	— 4·9	31·9	+ 17·5	41·6	+ 1·0	45·8	47·6	45	+ 18	4·90	+ 2·37	24	11227	+1013

* In the twenty-four years 1887-1910.

TABLE X.

Temperature and Rainfall in each Month and Year from 1901 *to* 1911.

Month.	MEAN TEMPERATURE. (From Maximum and Minimum Readings.)											
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Average for 24 years 1887-1910	1911
	°	°	°	°	°	°	°	°	°	°	°	°
Jan.	37·4	40·2	39·1	38·8	37·9	40·6	38·1	36·0	38·0	37·8	37·8	38·6
Feb.	35·4	34·1	43·9	37·1	40·7	37·1	37·0	41·4	36·8	40·5	38·2	40·7
Mar.	38·6	44·6	44·0	39·7	43·9	40·8	44·1	39·0	37·6	43·1	40·9	40·3
Apr.	47·4	45·4	43·3	47·7	44·4	45·2	45·4	40·9	48·4	45·1	45·3	45·4
May	52·7	47·8	51·6	51·6	51·0	50·6	50·9	54·9	52·0	52·1	51·2	55·7
June	56·7	56·5	54·8	56·0	58·7	57·6	54·1	57·3	53·2	58·8	58·8	58·4
July	64·5	58·3	59·5	63·3	63·3	61·4	57·3	60·7	58·5	57·6	59·9	65·7
Aug.	60·5	57·5	57·2	59·1	57·9	63·4	57·8	58·3	60·6	59·0	59·2	65·6
Sept.	57·0	55·4	55·4	53·9	54·0	57·9	57·3	54·6	53·6	55·2	55·6	58·2
Oct.	49·3	49·2	50·4	49·7	44·7	50·9	49·5	53·2	50·3	50·7	48·5	49·1
Nov.	40·5	43·9	43·4	41·6	40·6	44·8	43·9	45·4	40·8	37·9	42·8	42·1
Dec.	37·5	39·5	37·5	38·4	40·0	37·5	39·5	38·7	38·9	42·8	40·6	41·6
Year	48·1	47·7	48·3	48·0	48·1	49·0	47·9	48·3	47·4	48·4	47·9	50·1

Month.	TOTAL RAINFALL.											
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Average for 24 years 1887-1910	1911
Jan.	1·37	1·02	1·97	2·92	0·95	3·85	0·90	0·81	0·96	2·22	1·83	0·86
Feb.	1·34	1·60	1·41	3·80	0·68	2·04	1·09	1·21	0·68	2·92	1·56	1·49
Mar.	1·76	1·59	4·63	1·54	3·52	1·13	1·01	3·05	2·95	0·69	1·81	1·85
Apr.	1·95	2·49	1·64	1·12	2·30	1·32	1·93	2·34	1·84	2·22	1·55	0·88
May	1·11	2·95	2·67	2·25	0·28	2·78	3·93	3·01	1·68	1·66	2·11	0·71
June	1·84	2·40	1·66	0·46	2·00	2·86	2·57	3·22	3·42	1·47	2·14	1·78
July	3·13	1·59	2·14	2·50	1·91	0·89	2·90	2·22	3·22	2·41	2·17	0·37
Aug.	2·13	4·43	5·16	1·85	4·40	0·89	2·28	2·39	1·86	4·89	2·88	1·44
Sept.	0·65	1·49	2·55	1·40	1·01	1·18	0·90	2·33	2·55	0·93	1·73	1·46
Oct.	1·84	2·33	6·55	0·88	1·34	4·86	5·80	2·01	3·45	2·21	2·81	1·92
Nov.	1·23	2·23	1·65	1·37	3·04	2·58	2·07	1·84	0·79	3·97	2·19	2·60
Dec.	4·29	1·86	1·80	1·81	0·83	2·14	3·43	2·06	4·30	5·51	2·53	4·90
Year	22·64	25·98	33·83	21·94	22·30	26·56	28·86	26·51	27·73	31·14	25·33	20·25

TABLE XI.

Analysis of Corporation Water Supply by the City Analyst.

Date of Receipt of Sample.	PLACE WHERE TAKEN.	Parts per 100,000.								Appearance in 2ft. Tube.			
		Total Solid Matter.	Free Ammonia.	Albuminoid or Organic Ammonia.	Nitrogen in Nitrates.	Oxygen Consumed in 3 hours, at 27° C. (80° F.)	Chlorine in Chlorides.	Hardness (as $CaCO_3$).	Alkalinity (as $CaCO_3$)	Turbidity.*	Red.†	Yellow.†	Blue.†
1911,	CORPORATION WATER,												
Jan. 17	13 Rotton Park Road ...	6·4	·000	·006	0	·16	0·9	3·0	2·5	0	0·6	3·2	0
,, 17	38 Factory Road	6·2	·001	·006	0	·17	0·9	2·9	2·5	0	0·4	3·2	0
,, 17	9 Court, Frankfort Street ...	6·0	·001	·007	0	·17	0·9	3·0	2·5	0	0·6	3·2	0·2
Feb. 14	52 Francis Road	5·6	·000	·004	0	·18	0·9	3·0	2·2	0	0·6	3·2	0
,, 14	Back 27 Anderton Street ...	5·6	·000	·004	0	·17	0·9	3·1	2·2	0	0·6	3·2	0·2
,, 14	Back 17 Freeman Road ...	5·8	·000	·005	0	·17	0·9	3·1	2·2	0	0·6	3·2	0·2
Mar. 20	16 Nigel Road	6·0	·000	·008	0	·16	0·9	3·0	2·2	0	0·6	2·4	0·2
,, 21	20 Summer Road	5·8	·000	·007	0	·15	0·9	3·2	2·3	0	0·4	2·2	0·2
April 19	69 Lichfield Road	6·0	·000	·004	0	·15	0·8	3·2	2·2	0	0·2	2·2	0
,, 19	213 Green Lane	5·8	·001	·003	0	·14	0·9	3·4	2·2	0	0·2	2·4	0
,, 19	157 Warren Road	5·6	·000	·003	0	·14	0·9	3·2	2·2	0	0·2	2·2	0
May 16	129 Lordswood Road ...	6·4	·000	·003	0	·13	1·0	3·0	2·1	0	0·4	2·2	0·2
,, 16	59 Wyndcliffe Road ...	6·2	·000	·003	0	·13	0·9	3·0	2·2	0	0·4	2·2	0·2
,, 16	101 Duddeston Mill Road ...	6·4	·000	·003	0	·13	0·9	2·9	2·2	0	0·4	2·2	0·2
June 12	66 Lordswood Road ...	5·6	·000	·003	0	·11	0·9	3·1	2·2	0	0	1·4	0
,, 12	58 Armoury Road	5·6	·000	·003	0	·11	0·9	3·1	2·1	0	0	1·4	0
,, 12	144 Scholefield Street ...	16·4	·000	·004	0·1	·08	1·8	9·5	7·0	¼	0	1·0	0·2
July 10	51 Station Road	5·8	·000	·001	0	·09	0·9	3·0	2·3	0	0	1·4	0
,, 10	35 Glover's Road	5·6	·000	·002	0	·10	0·9	3·1	2·2	0	0	1·6	0
,, 10	103 Bloomsbury Street ...	6·2	·000	·002	0	·09	0·9	3·1	2·2	0	0	1·4	0
Aug. 17	33 Serpentine Road ; ...	6·2	·000	·001	0	·08	1·0	2·9	2·1	0	0	1·2	0
,, 17	6 Stratford Terrace, Bolton Road	6·2	·000	·002	0	·09	1·0	3·0	2·1	0	0	1·2	0
,, 17	114 Great Lister Street ...	6·2	·000	·002	0	·09	1·0	3·0	2·2	0	0	1·2	0
Sept. 19	88 Metchley Lane	6·2	·000	·002	0	·09	0·9	3·0	2·2	0	0·2	1·6	0
,, 19	37 Baker Street	6·0	·000	·003	0	·10	0·9	2·9	2·1	0	0·2	1·6	0
,, 19	222 Heneage Street	6·4	·000	·003	0	·09	0·9	2·9	2·2	0	0·2	1·6	0
Oct. 16	12 Woodbourne Road ...	6·4	·001	·004	0	·13	0·9	3·1	2·3	0	0·2	2·4	0
,, 16	45 Tennyson Road	6·4	·000	·006	0	·12	0·9	3·1	2·3	0	0·2	2·6	0
,, 16	24 Cato Street	6·6	·000	·004	0	·13	0·9	3·1	2·3	0	0·2	2·4	0
Nov. 13	Brooklyn, Willow Avenue ...	6·8	·001	·005	0	·13	0·9	3·0	2·3	0	0·6	3·0	0
,, 13	78 Carlton Road	6·4	·000	·003	0	·14	0·9	2·9	2·1	0	0·6	3·0	0
,, 13	30 Cranby Street	6·2	·001	·003	0	·13	0·9	2·9	2·2	0	0·6	3·0	0
Dec. 11	3 St. Augustine's Road ...	6·1	·000	·003	0	·15	0·9	3·0	2·3	0	0·4	2·8	0
,, 11	75 Jenkins Street	6·4	·000	·003	0	·15	0·9	3·2	2·3	0	0·4	2·8	0
,, 11	17 Oxford Street	6·4	·000	·004	0	·16	0·9	3·2	2·3	0	0·4	2·8	0
	SOUTH STAFFORDSHIRE Co.'s WATER.												
May 16	Fire Station, Bissell Street, Quinton	35·6	·000	·001	0·6	·03	2·6	17·7	15·0	0	0	0·6	0·8
June 12	Hagley Road, Quinton ...	35·6	·001	·008	0·5	·06	2·5	17·5	15·2	3	1·2	2·6	1·8
July 10	Ridge Acre Lane, Quinton ...	31·8	·001	·006	0·44	·04	2·4	16·3	14·3	¼	0	1·2	0·6
Aug. 17	The Rectory, Quinton ...	33·8	·001	·007	0·5	·05	2·5	16·1	14·7	0	0	0·8	0·6
Sept. 19	New Road, Quinton ...	36·6	·000	·006	0·6	·04	2·5	17·4	15·2	2½	0·6	1·4	1·0
Oct. 16	Post Office, Quinton ...	30·4	·000	·016	0·3	·08	2·6	17·2	12·2	12	2·4	4·8	3·2
Nov. 13	Rate Office, Quinton ...	33·6	·001	·008	0·6	·03	2·4	16·4	14·8	0	0	0·8	0·8
Dec. 11	Hagley Road, Quinton ...	33·2	·000	·003	0·6	·07	2·4	16·4	14·6	½	0·2	1·0	1·0

* "0" indicates "clear," "1" indicates "very slightly turbid."

† The colour is expressed in tintometer units. Red with an equal amount of yellow forms *orange*, yellow with an equal amount of blue forms *green*, and equal amounts of the three colours indicate *grey*.

TABLE XII.

Return for the Period 1st July, 1910, to 30th June, 1911, respecting the Vaccination of Children whose Births were Registered in the City during the said period.

	Number of Births Returned in the "Birth List Sheets" as Registered.	Number of these Births duly entered in Columns I., II., IV., and V. of the "Vaccination Register" (Birth List Sheets), viz.:					Number of these Births which remained unentered in the "Vaccination Register" on account (as shown by Report Book) of			Number of these Births remaining neither duly entered in the "Vaccination Register" (cols. 3, 4, 5, 6 and 7 of this Return) nor temporarily accounted for in the "Report Book" (cols. 8, 9 and 10 of this Return).
		Col. I.	Col. II.		Col. IV.	Col. V.				
		"Successfully Vaccinated."	"Insusceptible of Vaccination."	Had Smallpox.	"Number in respect of whom Certificates of conscientious objection have been received."	"Dead, Unvaccinated."	Postponement by Medical Certificate.	Removal to Districts the Vaccination Officer of which has been duly apprised.	Removal to places unknown or which cannot be reached; and cases not having been found.	
1	2	3	4	5	6	7	8	9	10	11
Birmingham Parish	7,006	5,370	13	—	172	810	42	83	502	14
Aston Union (within the City) ...	6,274	4,371	30	—	346	601	98	71	558	199
King's Norton Union (within the City)	1,569	1,249	5	—	146	84	16	27	37	5
Total	14,849	10,990	48	—	664	1,495	156	181	1,097	218

1911.

REPORT

ON THE

HEALTH

OF THE

BOROUGH OF ASTON MANOR,

BY

WILLIAM H. WHITEHOUSE,
M.D., D.P.H.

BIRMINGHAM:
HUDSON AND SON, PRINTERS, EDMUND STREET AND LIVERY STREET.

1911.

Borough of Aston Manor.

Keston House,
Aston Road,
Birmingham,
November 15th, 1911.

In accordance with the requirements of the Local Government Board, I have prepared the following report on the Health and Sanitary Administration of the Borough of Aston Manor from January 1st to November 8th, 1911.

Corresponding particulars for previous years will be found on reference to my Annual Report for 1910. On several matters such as Site, Sub-soil, and Elevation; General Housing Accommodation; Sewers and Sewer Treatment; Hospital Accommodation, etc., there is nothing new to report for the current year.

W. H. WHITEHOUSE,
Medical Officer of Health.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

January 1st to November 8th, 1911.

Area and Population.

Area	959 acres
Population according to Census, 1911	75,042

Births.

No. of Births registered, (*i.e.*, 881 males; 888 females)	1,769
Birth-rate for period under review	27·6

Deaths.

No. of Deaths registered (*i.e.*, 537 males; 473 females)	1,010
Death-rate for period under review	15·7

189 of the 1,010 deaths occurred in institutions outside the Borough.

Infantile Mortality.

Deaths under one year of age	299
Infantile Mortality-rate for period under review	169

The causes of the Infantile deaths are shewn on an appended table.

Infectious Diseases.

Cases of Infectious Diseases Notified in each Month of 1911.

1911.	Jan.	Feb.	Mar.	April	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Total.
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	7	7	4	3	3	3	2	1	3	9	1	43
Membranous Croup	1	—	—	1	—	—	1	1	—	—	—	4
Erysipelas	7	6	8	5	2	2	4	6	12	9	2	63
Scarlet Fever	17	16	13	33	10	13	41	27	34	47	23	274
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid Fever	1	1	—	2	1	1	2	—	1	3	—	12
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—
Simple Continued Fever	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—
Totals	33	30	25	44	16	19	50	35	50	68	26	396

For ages of these cases see Government Table No. II. attached.

No. of notices to School Teachers	372
Houses fumigated	334
Bedding ordered for disinfection	352
Houses or parts stripped and limewashed	264
Cases of Scarlet Fever removed to Hospital	223
Applications for Anti-toxin for use in Diphtheria cases	18

Deaths from Infectious Diseases.

These are shown in the schedule appended to this report.

School Closure for Measles and Whooping Cough.

All the Public Elementary Schools had to be closed in turn in the early part of the year on account of the prevalence of these diseases.

Seven Principal Zymotic Diseases.

No. of Deaths	224
Death-rate for period under review	3·4

Public Health (Tuberculosis) Regulations.

Forms A received	18
„ B „	17
„ C „	4
„ D „	—

Public Health (Tuberculosis in Hospitals) Regulations, 1911.

There are no institutions receiving or treating tuberculosis cases in Aston Manor. One such institution, situated on the boundary between Aston Manor and Birmingham has been regarded for the purposes of these regulations as being in the City. 109 notifications under the regulations have been received from outside districts, principally from Birmingham in connection with the institution referred to, and the Lady Health Visitor here has made 182 visits in connection with such cases, leaving suitable literature for perusal by patients and contacts, and disinfection has been carried out where necessary.

Notification of Births Act.

1,611 notifications under this Act were received, and the Lady Health Visitor made 1,013 visits in connection with it.

Scarlet Fever Hospital.

Cases in Hospital, January 1st, 1911	66
Cases admitted since	306
Cases discharged since	300
Cases died since	7
Cases in Hospital, November 9th, 1911	65

The 306 cases admitted came from the following districts :—

223 Aston Manor.
42 Erdington.
1 Castle Bromwich.
40 Sutton Coldfield.
— Workhouse.

Smallpox Hospital.

This Hospital has not been used during 1911.

General Sanitary Administration.

No. of Preliminary Notices served for abatement of nuisances	1,064
„ Statutory Notices „ „ „ „	39
„ Preliminary Notices remaining uncomplied with	65
„ Statuory Notices „ „ „ „	4

Closet Accommodation.

198 W.C.'s have been substituted for privy-middens during 1911, and 13 new W.C.'s erected.

Smoke Nuisance.

No. of observations	274
No. of chimneys emitting dense black smoke over 12 minutes in the hour... ...	4
No. of notices served	1
No. of summonses	—

Systematic House to House Inspection.

The following streets have been systematically inspected, and notices served for the abatement of all nuisances discovered :—

Thomas Street	48	houses.
Powell Street	52	,,
Pool Street	43	,,
Cheshire Street	30	,,
Phillips Street (part)	102	,,
	275	,,

Dairies, Cowsheds, and Milkshops.

No. of Dairymen and Purveyors of milk on register	465
No. of Cowkeepers on register	—
Notices served to cleanse milkshops	27

Common Lodging Houses.

There are no common lodging houses registered in Aston Manor, nor any houses let in lodgings.

Slaughterhouses.

The number of registered slaughterhouses is 28, of which 23 are in regular use.

New Buildings.

No plans for new houses have been approved during 1911, and no new houses have been erected.

Plans for 44 other buildings have been approved, and 20 such buildings have been erected.

Unsound Food.

The following have been voluntarily surrendered and destroyed :—

1 pig (diseased).
5 hams (tainted and improperly cured).
1 carcase of beef.

Water Supply.

Water is supplied by the City of Birmingham.

TABLE I.

Vital Statistics of Whole District during 1911 *and previous years.*

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.		Transferable Deaths. of Residents not registered in the District.	Nett Deaths belonging to the District.			
							Under 1 Year of age.		At all Ages.	
		Number.	Rate.	Number.	Rate.		Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1906	82,288	2,270	27·6	1,053	12·8	173	355	156	1,226	14·9
1907	83,266	2,128	25·5	935	11·2	218	260	122	1,153	13·8
1908	84,256	2,198	26·0	930	11·0	208	275	125	1,138	13·5
1909	85,257	2,039	23·9	972	11·4	216	251	120	1,188	13·9
1910	86,269	1,998	23·2	824	9·5	201	210	109	1,025	11·9
1911 (Jan. 1st to Nov. 8th.)	75,042 (Census)	1,769	27·6	821	12·8	189	209	169	1,010	15·7

TABLE II.

Cases of Infectious Disease notified during the year 1911 *(January 1st to November 8th.)*

Notifiable Disease.	Number of Cases Notified.							
	At all Ages.	At Ages—Years.						
		Under 1.	1 to 5.	5 to 15.	15 to 25.	26 to 45.	45 to 65.	65 and upwards.
Smallpox	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—
Diphtheria (including Membranous Croup)	47	—	20	18	5	4	—	—
Erysipelas	63	2	2	8	10	15	17	9
Scarlet Fever	274	4	90	151	20	9	—	—
Typhus Fever	—	—	—	—	—	—	—	—
Enteric Fever	12	—	—	1	3	7	1	—
Relapsing Fever	—	—	—	—	—	—	—	—
Continued Fever	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—
Phthisis (Under Tuberculosis Regulations, 1908)	23	—	—	—	5	17	1	—
Phthisis (Under Tuberculosis Regulations, 1911)	109	—	—	5	26	62	16	—
Phthisis (Others ... ...)	—	—	—	—	—	—	—	—
Totals	528	6	112	183	69	114	35	9

TABLE III.

Causes of, and ages at Death during 1911 (*January 1st to November 8th*).

DISEASES.	AGES.													All Ages.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
Smallpox—														
(*a*) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Unvaccinated ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) No statement ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	6	29	3	—	—	—	—	—	—	—	—	—	—	38
Scarlet Fever	—	6	—	—	—	—	—	—	—	—	—	—	—	6
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Influenza ...	—	—	—	—	1	—	—	—	1	2	—	—	—	4
Whooping Cough	6	9	—	—	—	—	—	—	—	—	—	—	—	15
Diphtheria	—	6	—	—	—	—	—	—	—	—	—	—	—	6
Enteric Fever	—	—	—	—	1	—	1	1	—	—	—	—	—	3
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa, Dysentery ...	73	10	—	—	—	—	1	—	—	—	—	—	—	84
Epidemic Enteritis ...	56	5	1	—	1	—	—	—	1	1	2	1	—	68
Other Allied Diseases ...	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glanders	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cowpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	1	1	—	—	—	—	—	—	—	—	—	—	—	2
Gonorrhœa	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Phagedæna	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Puerperal Fever	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Pyæmia	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Infective Endocarditis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Allied Diseases ...	—	—	—	—	—	—	—	1	—	—	—	1	—	2
Malarial Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rheumatic Fever	—	—	—	1	—	1	—	—	—	—	—	—	—	2
Rheumatism of Heart ...	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Tuberculosis of Brain ...	4	3	—	—	—	—	—	1	1	—	—	—	—	9
Tuberculosis of Larynx ...	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Phthisis	—	—	—	—	2	8	13	20	14	7	1	—	—	65
Abdominal Tuberculosis ...	—	1	1	—	—	—	—	—	—	—	—	—	—	2
General Tuberculosis ...	2	1	—	—	1	—	1	—	—	—	—	—	—	5
Other forms Tuberculosis	3	—	—	—	—	—	2	—	1	—	—	—	—	6
Other Infective Diseases ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thrush	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Actinomycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydatid Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scurvy	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases due to Altered Food	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Alcoholism	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chronic do.	—	—	—	—	—	—	—	—	1	—	1	—	—	2
Chronic Industrial Pois'ning	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Other Chronic Poisonings	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Osteo-arthritis	—	—	—	—	—	—	—	—	—	1	1	—	—	2
Gout	—	—	—	—	—	—	—	—	—	1	—	—	—	1
Cancer	—	—	1	—	2	1	3	8	12	15	16	4	—	62
Diabetes Mellitus	—	—	—	—	—	—	1	2	—	1	—	1	—	5
Purpura Hæmorrhagica ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hæmophilia	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anæmia	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Lymphadenoma	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Premature Birth	35	—	—	—	—	—	—	—	—	—	—	—	—	35
Injury at Birth	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Debility at Birth	12	—	—	—	—	—	—	—	—	—	—	—	—	12
Atelectasis	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Congenital Defects ...	8	1	—	—	—	—	—	—	—	—	—	—	—	9
Want of Breast Milk ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Atrophy, Debility, Marasmus	31	3	—	—	—	—	1	—	—	—	—	—	—	35
Dentition	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets	1	3	—	—	—	—	—	—	—	—	—	—	—	4
Old Age, Senile Decay ...	—	—	—	—	—	—	—	—	—	1	16	30	14	61
Convulsions	11	1	—	—	—	—	—	—	—	—	—	—	—	12

TABLE III.—*continued*

DISEASES.	AGES.													All Ages.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
Meningitis	—	14	1	1	—	2	—	—	—	—	—	—	—	18
Encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apoplexy	—	—	—	—	—	—	—	—	—	1	2	3	—	6
Softening of Brain	—	—	—	—	—	—	—	—	—	3	4	1	—	8
Hemiplegia	—	—	—	—	—	—	—	—	1	1	1	—	—	3
General Paralysis of Insane	—	—	—	—	—	—	2	1	1	—	—	—	—	4
Other forms of Insanity ...	—	—	—	—	—	—	—	—	—	—	1	1	—	2
Chorea	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebral Tumour	—	—	1	1	—	—	—	—	—	—	—	—	—	2
Epilepsy	—	—	—	—	—	—	—	1	2	1	1	—	—	5
Laryngismus Stridulus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locomotor Ataxy	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paraplegia		—	—	—	—	—	1	—	—	2	2	1	—	6
Other forms, Brain Diseases	—	—	—	—	—	—	—	1	—	—	1	—	—	2
Otitis	—	1	1	1	—	—	—	—	—	—	—	—	—	3
Disease of Nose, Epistaxis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pericarditis...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Endocarditis	—	—	1	—	1	—	3	4	3	6	4	4	—	26
Hypertrophy of Heart ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Angina Pectoris		—	—	—	—	—	—	—	—	—	—	—	—	—
Aneurism	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Senile Gangrene	—	—	—	—	—	—	—	—	—	—	—	2	—	2
Embolism, Thrombosis ...	—	—	—	—	—	—	—	1	—	1	—	2	—	4
Phlebitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Varicose Veins	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases, Heart and Vessels	—	—	—	—	—	—	—	—	—	—	1	2	—	3
Cardiac Dilatation... ...	—	—	—	—	—	—	—	—	2	7	10	3	—	22
Cerebral Hæmorrhage ...	—	—	—	—	—	—	—	—	1	2	—	—	—	3
Fatty Degen. Heart ...	3	—	1	—	—	—	3	4	4	3	14	5	2	39
Laryngitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Croup	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases, Larynx and Trachea	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Bronchitis	9	5	—	—	—	—	—	1	3	3	—	2	—	23
Chronic Bronchitis ...	—	—	—	—	—	—	—	—	3	16	19	12	2	52
Lobar Pneumonia	—	1	—	—	—	—	—	3	—	1	1	—	—	6
Lobular Pneumonia ...	10	9	4	1	—	—	1	1	1	1	1	—	—	29
Pneumonia	2	2	1	1	3	1	1	4	2	5	5	1	—	28
Emphysema, Asthma ...	—	—	—	—	—	—	4	—	—	1	—	—	—	5
Pleurisy	—	—	—	1	—	—	1	—	1	2	—	—	—	5
Other Diseases, Respiratory System	—	—	—	—	—	—	—	—	—	1	1	—	—	2
Diseases of Mouth and Annexa	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Pharynx ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Œsophagus ...		—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer of Stomach and Duodenum	—	—	—	—	—	—	—	2	2	—	—	—	—	4
Other Diseases of Stomach	5	1	—	—	—	—	—	—	1	1	1	—	—	9
Enteritis	9	2	—	—	—	1	—	1	1	—	1	2	—	17
Appendicitis	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Obstruction of Intestine ...	1	—	—	—	—	—	—	—	1	2	1	—	—	5
Other Diseases of Intestine	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver	—	—	—	—	—	—	—	—	2	2	—	—	—	4
Other Diseases of Liver ...	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Peritonitis	—	—	—	—	—	—	—	—	2	—	—	—	—	2
Other Diseases, Digestive System	—	—	—	—	—	—	2	—	1	1	—	—	—	4
Diseases, Lymphatic System and Glands	—	—	—	—	—	—	—	—	—	1	1	—	—	2
Acute Nephritis	—	2	—	1	—	—	2	1	—	1	—	—	—	7
Bright's Disease	—	—	—	1	—	—	—	3	6	8	1	2	—	21
Calculus	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Bladder and Prostate	—	—	—	—	—	—	—	—	—	1	1	2	—	4
Other Diseases, Urinary System	—	—	—	—	—	—	—	—	—	—	2	—	—	2

TABLE III.—*continued*)

DISEASES.	AGES.													All Ages.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
Diseases of Testis and Penis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Ovaries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Uterus and Appendages	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Vagina and External Genitals	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Abortion, Miscarriage ...	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Puerperal Mania	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Convulsions ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Placenta Prævia, Flooding	—	—	—	—	—	1	1	1	—	—	—	—	—	3
Puerperal Thrombosis ...	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Other Diseases, Pregnancy and Childbirth	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Arthritis, Ostitis, Periostitis	—	1	1	—	—	—	—	—	—	—	—	—	—	2
Other Diseases, Osseous System	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer, Bedsore	—	1	—	—	—	—	—	—	1	—	—	—	—	2
Eczema	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pemphigus	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Other Diseases, Integumentary System	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Accidents and Negligence—														
In Mines and Quarries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Vehicular Traffic ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
On Railways	—	—	—	—	—	—	—	—	—	—	—	—	—	—
On Ships, Boats, &c., not drowning)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Building Operations	—	—	—	—	—	—	—	—	—	1	—	—	—	1
By Machinery	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Weapons and Implements	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burns and Scalds ...	—	2	1	—	1	—	—	—	—	—	—	—	—	4
Poisons, Poisonous Vapours	—	—	—	—	1	—	1	1	—	1	—	—	—	4
Surgical Narcosis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Effects of Electric Shock	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Corrosions by Chemicals	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Drowning	—	—	2	—	—	—	—	—	1	1	—	—	—	4
Suffocation, Overlaid in Bed	4	—	—	—	—	—	—	—	—	—	—	—	—	4
Suffocation, Otherwise ...	4	—	—	—	—	—	—	—	—	—	—	—	—	4
Falls not specified ...	—	—	—	—	—	—	1	2	2	—	2	—	—	7
Weather Agencies ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Otherwise, not stated ...	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Homicide	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suicides—														
By Poison	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Asphyxia	—	—	—	—	—	—	—	—	—	1	—	—	—	1
By Hanging and Strangulation	—	—	—	—	1	—	—	—	1	—	—	—	—	2
By Drowning	—	—	—	—	—	—	—	1	2	1	—	—	—	4
By Shooting	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Cut or Stab	—	—	—	—	—	—	1	1	—	—	—	—	—	2
By Precipitation from Elevated Places ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Crushing	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By other and unspecified methods	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Execution	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sudden Death, cause not ascertained	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-defined and unspecified causes	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Totals	299	121	20	9	15	18	51	71	81	108	117	82	18	1010

TABLE IV.

Infant Mortality.

Nett Deaths from stated causes at various Ages under 1 *Year of Age,*

1911 (*January* 1*st to November* 8*th*).

CAUSE OF DEATH.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
All causes (Certified ...	33	17	11	8	69	74	66	46	42	297
All causes (Uncertified ...	—	—	—	1	1	1	—	—	—	2
Smallpox	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	2	4	6
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup ...	—	—	—	—	—	—	—	—	—	—
Whooping Cough ...	—	—	—	—	—	1	4	2	1	8
Diarrhœa	—	—	—	—	—	18	22	14	15	69
Enteritis	—	—	—	—	—	20	20	11	11	62
Tuberculous Meningitis ...	—	—	—	—	—	—	2	1	1	4
Abdominal Tuberculosis	—	—	—	—	—	—	—	—	—	—
Other Tuberculous Diseases	—	—	—	—	—	2	1	—	—	3
Congenital Malformations	1	2	2	3	8	1	—	—	—	9
Premature Birth ...	21	6	1	3	31	5	1	1	—	38
Atrophy, Debility, and Marasmus	9	3	4	1	17	12	5	2	—	36
Atelectasis	2	—	—	—	2	—	—	—	—	2
Injury at Birth	—	—	—	—	—	—	—	—	—	—
Erysipelas...	—	—	—	—	—	—	—	—	—	—
Syphilis	...	—	—	—	—	—	—	—	—	—
Rickets	—	—	—	—	—	—	—	1	—	1
Meningitis (*not Tuberculous*)	—	—	—	—	—	—	—	—	—	—
Convulsions	—	1	1	—	2	4	3	3	1	13
Gastritis	—	—	—	—	—	2	3	—	1	6
Laryngitis...	—	—	—	—	—	—	—	—	—	—
Bronchitis...	—	2	—	—	2	3	1	—	4	10
Pneumonia (all forms) ...	—	—	—	—	—	2	1	5	4	12
Suffocation, overlying ...	—	—	—	—	—	4	1	—	—	5
Other causes	—	3	3	2	8	1	2	4	—	15
	33	17	11	9	70	75	66	46	42	299

Nett Births in the year { legitimate 1739
illegitimate 30

1.—Inspection of Factories, Workshops and Workplaces, including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries)	27	29	—
Workshops ... ... (Including Workshop Laundries)	112	39	...
Workplaces ... ... (Other than Outworker's premises included in Part 3 of this Report	4	...	—
Total	143	68	—

2.—Defects Found in Factories, Workshops, and Workplaces.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts :—				
Want of cleanliness	3	5	—	—
Want of ventilation	—	...	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	9	9	—	—
Sanitary accommodation (insufficient	12	2	—	—
Sanitary accommodation (unsuitable or defective	12	7	—	—
Sanitary accommodation (not separate for sexes	9	4	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101).	—	—	—	—
Breach of Special Sanitary requirements for bakehouses (ss. 97 to 100)	28	28	—	—
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this Report.)	—	—	—	—
Total	73	55	—	—

3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LIST, No. 107.						
	Lists received from Employers.				Addresses of Outworkers.		Inspections of Outworkers' Premises.
	Sending twice in the year.		Sending once in the year.		Received from other Councils.	Forwarded to other Councils.	
	Lists.	Workmen.	Lists.	Workmen.			
Wearing apparel, making, &c.	2	4	4	198	56	139	402
Carding, &c., of buttons, &c.	2	88			146	28	
Paper bags and boxes ...					14		
Brush-making					10		
Electro-plate					14		
Total	4	92	4	198	240	167	402

4.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year.

Bakers	57
Dressmaking, millinery, &c.	45
Laundries	9
Tailoring	20
Others	98
Total number of workshops on register	229

5.—Other Matters.

Matters notified to H.M. Inspector of Factories.

Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector ...	35
	Reports (of action taken) sent to H.M. Inspector	34

1911.

REPORT

ON THE

HEALTH

OF THE

URBAN DISTRICT OF ERDINGTON,

BY

A. BOSTOCK HILL, M.Sc., M.D., D.P.H.CAMB.
Medical Officer of Health.

BIRMINGHAM:
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1911.

Erdington Urban District Council.

14 Temple Street,

Birmingham,

22nd November, 1911.

1. I beg herewith to present my report on the sanitary condition of the Erdington district for the period from January 1st to November 8th, 1911.

Area.

2. The area of the district was 4,630 acres.

Population.

3. As regards population, owing to the fact that the census was taken at the beginning of the second quarter of the year, I am adopting the figure of 32,500 as the gross population of the district. This figure includes the inmates of public institutions in the district, and omitting those, the figure for the district proper is 30,500.

Births.

4. Six hundred and six births—315 males and 291 females—have been registered during the period and calculated on the population given above, the birth-rate appears as 23.48, a figure below those of the two previous years. If, however, the rate be calculated according to column 5 in Table I., then it is 20.57.

5. The number of illegitimate births was 63.

Deaths.

6. Seven hundred and fifty eight deaths, namely, 389 males and 369 females, were registered. The bulk of these deaths have nothing to do with Erdington as the majority occurred in inmates of the workhouse of Aston Parish, situated in the district, belonging to Aston Manor and Birmingham. On the other hand, 25 occurred in residents not registered in the district. The number of deaths therefore to be debited to the district proper, is 311, and for the period this gives us a rate of 12·05 per 1,000, the highest rate registered during the past ten years.

7. The following table shows at a glance the birth, death and zymotic death-rates for the period in 1911 compared with those of the previous ten years:—

Rate.	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Birth ...	31·79	25·48	25·79	25·4	24·1	25·76	26·69	25·90	27·03	24·95	23·48
Death ...	11·12	9·81	11·10	10·8	9·85	10·52	8·78	8·72	10·46	8·76	12·05
Zymotic	1·05	0·73	1·17	1·7	0·57	0·73	0·52	0·72	0·63	0·73	1·51

Infant Mortality.

8. Of the 311 deaths belonging to the district, 66 occurred in children under one year of age, giving a percentage to the total deaths of 21·2, and a rate of infant mortality of 124 per 1,000 registered births.

9. The following are the causes of death in children under one year of age:—Diarrhœa, 19; enteritis, 3; premature birth, 14; congenital defects, 2; marasmus, 7; meningitis, 2; convulsions, 5; pneumonia, 7; suffocation, 1; measles, 2; abdominal tuberculosis, 1; other tuberculous diseases, 1; other causes, 2.

10. The fact to be noticed in connection with infant mortality is the great increase in deaths from diarrhœa, which occurred in the third quarter of the year, due, of course, to the extraordinary heat prevalent in that quarter. With the exception of diarrhœa only two deaths occurred from zymotic disease, namely, measles.

11. Acting on my advice, the Council in the early part of the year decided to adopt the Notification of Births Act, but owing to the fact that the district would shortly be amalgamated with Birmingham, the necessary legal steps for putting the Order in force were not taken.

12. The figures stated above give the mortality of the district proper, but if we take all cases of infants dying, including the large number of infants of mothers who go into the workhouse to be confined, not belonging to the district, the figure would be 139.

Zymotic Diseases.

13. Thirty-nine deaths have been registered from the seven principal zymotic diseases, namely:—Measles, 8; diphtheria, 2; diarrhœa, 27; typhoid fever, 2. This gives us a zymotic death-rate of 1·51, almost exactly double that for the year 1910.

Smallpox.

14. No case of smallpox occurred during the period.

Scarlet Fever.

15. Only 63 cases of this disease were notified and not a single death occurred. The number of cases is considerably below the average.

16. It is interesting to note how the case mortality from scarlet fever has been lowered of late years. In 1909 it was 1·5 per cent; 1910, 0·68 per cent.; and this year it is nil.

Measles.

17. Measles was due according to its usual routine to become prevalent, and as a result of its prevalence eight deaths occurred in the district. As far as was possible with a non-notifiable disease, efforts were taken to diminish the mortality.

Diphtheria.

18. I am pleased to be able to report that there has been a marked fall in the incidence of this disease. Altogether 35 cases were notified during the period, of which only two proved fatal.

19. Anti-toxin has been supplied by the Council in all cases for which there was a demand.

20. A large number of swabs, under the County Council scheme have been taken by the practitioners, and this has been very useful in judging of the fitness of convalescents to return to school.

Typhoid Fever.

21. Only five cases of this disease were notified in the whole district, of which one was reported from the workhouse, taken there from an outside district for treatment. Of the four cases notified in the district all were more or less peculiar and I am bound to say I have doubts whether at all events in all the cases they were really typhoid fever. In each case on an inspection of the premises it was found that the water was supplied by the Birmingham Corporation, and there were no serious sanitary defects discovered.

Whooping Cough.

22. This disease was apparently but little prevalent as not a single death was registered from it.

Diarrhœa.

23. Twenty-seven deaths were registered as due to this disease. The County Council Health Visitor gave what aid she could at the time in endeavouring to combat the diarrhœal mortality, by advising as to the feeding and care of infants.

Influenza.

24. Five deaths were registered as due to this disease.

Phthisis.

25. There has been an increased mortality from phthisis, the number of deaths being 26. The percentage of phthisis deaths to total deaths was 8·3, a figure larger than in the two previous years. In every case where phthisis has been known, that is notified under the Hospital Orders or by the Poor Law Authorities, or in other ways, the County Council Health Visitor has visited the house and advised on the steps to be taken. This has been in addition to disinfection, which was looked after by the sanitary department.

Cancer.

26. There has again been a rise in the number of deaths from cancer, the number being 29, compared with 25 in the whole of the previous year.

An Account of Enquiries made as to Conditions injurious to Health, and of the Proceedings Advised; also an Account of the Supervision Exercised over Places and Houses which the Sanitary Authority have Power to Regulate, with the Action taken in Regard to Offensive Trades.

Notification.

27. One hundred and thirty-four cases of Notifiable Infectious Diseases, and 17 cases of phthisis have been notified, the cost of notification being £15 11s. 0d.

Isolation.

28. Thirty-two cases of scarlet fever were isolated, and one of diphtheria. This latter was isolated owing to particular circumstances, with the consent of the Aston Isolation Hospital authorities, and with the consent of the Chairman of the Erdington District Council. In many instances, in a district such as Erdington, it has been found practicable and proper to isolate cases at home.

Water Supply.

29. Twelve samples of water have been analysed by me during the period, including samples from the City of Birmingham mains, and one of a well in Leamington Road.

30. There is hardly a private well existing in the district at the present time, the whole of the supply being practically from the mains.

Overcrowding.

31. There has been nothing serious in the way of overcrowding because houses are plentiful in the district. In five cases, however, what was considered to be overcrowding was found during inspection, and in these instances the overcrowding was remedied.

Offensive Trades.

32. There is no trade of this description carried on in the district.

Schools.

33. Great attention has been given to the inspection of the schools in relation to the spread of disease. The inspection under the administrative Provisions Act, was in the hands of the County Council, and both the Assistant Medical Officer and the School Nurse made many inspections at the schools, keeping in touch with cases notified by the teachers, as suffering or suspected to be suffering from infectious diseases or skin affections.

Public Scavenging.

34. I am pleased to be able to report that as in the past, this has been excellently carried out. All ash-bins and ash-pits have been regularly emptied each week and very few complaints have been received. Nearly every house in the district is supplied with a water closet, and of the few remaining privies and ashpits, nine were abolished during the period under review.

Systematic Inspection of the District.

35. Careful systematic inspection has been undertaken during the period so that 651 houses have been inspected. In this way 466 defects were found, showing the importance of such inspection. It is only fair however, to add that these were in nearly every case minor defects and it was unnecessary to take proceedings under the Housing and Town Planning Act in a single case. It may be further added that this was the result of previous action. Seven houses previously closed have been demolished and three previously closed, were repaired and re-opened, proper supplies of water being made available.

Cowsheds and Milkshops.

36. The cowsheds and milkshops have all been inspected at regular intervals, and efforts have been made to improve their condition as circumstances permit. They are fairly up to the level of such buildings in similar districts, but in the majority of instances they cannot be considered satisfactory in the light of modern hygienic requirements. One new cowshed has been built.

Factories and Workshops.

37. Two new ones have been added during the period, and these with those previously existing, have been regularly inspected, and found to be well maintained, both as regards ventilation and cleanliness.

Conclusion.

38. It is a matter for regret that the vital statistics are less satisfactory than of recent years, but this cannot in any way be regarded as evidence of a lowering of sanitary condition.

Yours faithfully,

A. BOSTOCK HILL, M.Sc., M.D.,

Medical Officer of Health.

TABLE I.

Vital Statistics of Whole District during 1911 *and previous years.*

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of age.		At all ages.	
			Number.	Rate.	Number.	Rate.	of Non-Residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1906	24,413	629	—	—	667	27·32	422	12	68	108	257	10·52
1907	26,633	711	—	—	753	28·26	530	16	44	61	234	8·78
1908	28,560	754	—	—	745	25·58	508	16	47	69	254	8·72
1909	29,720	804	—	—	796	26·78	500	21	52	74	312	10·46
1910	31,500	786	—	—	739	23·46	471	14	60	89	276	8·76
1911 Jan. 1st to Nov. 8th.	30,500	606	531	20·57	758	26·76	472	25	66	124	311	12·05

TABLE III.

Causes of and Ages at Death during the year 1911 *(Jan. 1st to Nov. 8th).*

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents," whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
	All Ages.	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 and upwards.	
Enteric Fever	2	—	—	—	—	—	—	1	1	2
Measles	8	2	1	3	2	—	—	—	—	1
Diphtheria and Croup	2	—	—	2	—	—	—	—	—	—
Influenza	5	—	—	—	—	1	—	3	1	—
Erysipelas	1	—	—	—	—	—	—	—	1	2
Actinomycosis	1	—	—	—	—	—	1	—	—	—
Phthisis (Pulmonary Tuberculosis)	26	—	—	—	2	4	13	7	—	67
Tuberculous Meningitis	3	—	2	1	—	—	—	—	—	—
Other Tuberculous Diseases	5	1	1	—	—	2	1	—	—	27
Rheumatic Fever	2	—	—	—	—	1	—	1	—	—
Cancer, malignant disease	29	—	—	—	—	1	3	15	10	46
Bronchitis	16	—	1	—	1	—	—	3	11	68
Broncho-Pneumonia	7	3	3	—	—	—	—	—	1	4
Pneumonia (all other forms)	13	4	1	2	—	—	1	3	2	9
Other Diseases of Respiratory Organs	1	—	—	—	1	—	—	—	—	4
Diarrhœa and Enteritis	27	22	2	3	—	—	—	—	—	15
Appendicitis and Typhlitis	5	—	—	—	2	—	1	2	—	1
Alcoholism	1	—	—	—	—	—	—	1	—	1
Cirrhosis of Liver	1	—	—	—	—	—	1	—	—	1
Nephritis and Bright's Disease	8	—	—	—	—	—	1	3	4	2
Puerperal Fever	1	—	—	—	—	—	1	—	—	4
Other Accidents and Diseases of Pregnancy and Parturition	2	—	—	—	—	—	2	—	—	—
Congenital Debility and Malformation, including Premature Birth	23	23	—	—	—	—	—	—	—	18
Violent Deaths, excluding Suicide	13	2	—	1	—	1	5	2	2	6
Suicides	2	—	—	—	—	—	—	2	—	—
Other Defined Diseases	96	3	1	2	4	2	4	29	51	201
Diseases ill-defined or unknown	11	6	—	1	—	1	1	—	2	9
	311	66	12	15	12	13	35	72	86	488

TABLE II.

Cases of Infectious Disease Notified (Jan. 1st to Nov. 8th, 1911).

Notifiable Disease.	Number of Cases Notified.								Total Cases Notified in each Locality.						Total Cases Removed to Hospital.
	At all Ages.	At Ages—Years.							Bromford.	Fentham	Moor End.	Short Heath.	Witton.	Public Institutions.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.							
Diphtheria (including Membranous Croup)	35	—	5	22	4	4	—	—	8	9	7	10	—	1	1
Erysipelas	27	—	—	—	2	12	8	5	1	2	4	8	3	9	—
Scarlet Fever	63	—	12	40	6	5	—	—	6	28	6	18	4	1	32
Enteric Fever	5	—	—	1	1	1	1	1	1	1	1	1	—	1	—
Continued Fever	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—
Puerperal Fever	3	—	—	—	1	2	—	—	—	1	—	—	—	2	—
Phthisis (Under Tuberculosis Regulations, 1908)	3	—	—	—	2	—	—	1	—	—	—	3	—	—	—
Phthisis (Under Tuberculosis Regulations, 1911)	14	—	—	—	2	10	2	—	—	—	—	—	—	—	—
Phthisis (Others ... ...)	—	—	—	—	—	—	—	—	—	5	1	2	6	—	—
Totals	151	—	17	63	18	35	11	7	16	47	19	42	13	14	33

Isolation Hospital:—Aston Manor Joint Hospital, partly in Erdington and Perry Barr Urban Districts.

TABLE IV.

Infant Mortality.

Nett Deaths from stated causes at various Ages under 1 *Year of Age* (*Jan.* 1*st to Nov.* 8*th*, 1911).

Cause of Death.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
Measles	—	—	—	—	—	1	—	—	1	2
Diarrhœa	—	2	—	—	2	6	3	5	3	19
Enteritis	—	—	1	—	1	—	—	1	1	3
Abdominal Tuberculosis	—	—	—	—	—	—	—	1	—	1
Other Tuberculous Diseases ...	—	—	—	—	—	—	1	—	—	1
Congenital Malformations	—	—	1	—	1	—	1	—	—	2
Premature Birth	12	—	1	—	13	1	—	—	—	14
Atrophy, Debility and Marasmus ...	2	1	1	1	5	1	1	—	—	7
Meningitis (not Tuberculous) ...	—	—	—	—	—	—	1	1	—	2
Convulsions	3	—	1	—	4	1	—	—	—	5
Pneumonia (all forms)	—	—	—	—	—	—	—	3	4	7
Suffocation, overlying	—	—	—	—	—	—	1	—	—	1
Other causes	1	—	1	—	2	—	—	—	—	2
	18	3	6	1	28	10	8	11	9	66

Nett Births in the year—legitimate, 518; illegitimate, 13.

TABLE V.

Water.

Results of Analysis expressed in parts per 100,000.

Number of Water.	Locality.	Date.	Free and Saline Ammonia.	Organic Ammonia.	Chlorine in Chlorides.	Nitrogen in Nitrates and Nitrites.	Oxygen absorbed in Four Hours at 80° F.	Total Solid Matter.
	Birmingham Waterworks Water.	1911.						
1	Bromford Ward ...	Jan. 19	0·001	0·004	0·9	0	0·20	8
2	Moor End Ward ...	Feb. 16	trace	0·004	0·9	0	0·13	10
3	Short Heath Ward ...	Mar. 27	0·004	0·010	0·9	0	0·20	8
4	Moor End Ward ...	Apr. 24	0·001	0·004	0·8	0	0·18	8
5	Fentham Ward ...	May 11	trace	0·006	0·9	0	0·14	7
6	Moor End Ward ...	June 21	0·001	0·006	2·6	0·11	0·017	34
8	Short Heath Ward ...	July 6	0·001	0·008	0·9	0	0·081	6
9	Moor End Ward ...	July 29	0·001	0·003	3·0	0·66	0·018	36
10	Bromford Ward ...	Aug. 10	0·001	0·012	1·0	0	0·096	6
11	Do. ...	Sept. 14	trace	0·006	1·1	0	0·078	9
12	Do. ...	Oct. 19	0	0·006	1·05	0	0·129	7
	Well Water.							
7	Leamington Road ...	June 27	0·001	0·005	3·85	1·10	—	56

TABLE VI.

Summary of Sanitary Work done in the Inspector of Nuisances' Department
(Jan. 1st to Nov. 8th, 1911).

	Inspections and Observations made.	Formal Notices by Authority	Nuisances abated after Notice.
Dwelling Houses and Schools—			
Foul Conditions	1604	3	361
Structural Defects	1506	5	532
Overcrowding	14	—	5
Unfit for Habitation	31	—	10
Dairies and Milkshops	143	—	13
Cow Sheds	98	—	9
Bakehouses	12	—	5
Slaughter Houses	61	—	1
Ashpits and Privies	74	—	43
Deposits of Refuse and Manure	39	1	25
Water-closets	456	—	151
House Drainage—			
Defective Traps	117	—	54
No Disconnection	60	—	25
Other Faults	561	6	172
Water Supply	12	—	1
Pigsties	62	—	13
Animals improperly kept	73	—	15
Smoke Nuisances	47	5	5
Other Nuisances	190	3	99
TOTALS	5160	23	1539

Samples of Water taken for Analysis 12

PRECAUTIONS AGAINST INFECTIOUS DISEASE.

Lots of Infected Bedding Stoved or Destroyed 101
Houses Disinfected after Infectious Disease 108
Schools ditto ditto ditto 1

(Signed) WALTER BROWN,
Inspector of Nuisances.

TABLE VII.

Factory and Workshop Act, 1901. Extract from Register.

No. in Register.	Nature of work carried on.	Nature and amount of moving power.	Cubic capacity.	No. of persons that may be employed.	No. of persons employed.					Water-closet Accommodation		Means of lighting.	Means of warming.	Means of ventilation.	Means of escape from fire.	REMARKS.
					Men.	Women.	Young persons.	Children.	Total.	Men.	Women.					
1	Baking Bread and Confectionery	Nil	2088	8	—	—	—	—	—	1	—	Gas and by windows ...	Nil	Windows & ventilating gratings	doorway	not in use at present
2	ditto	,,	2945	11	5	—	1	—	6	1	—	Gas, windows and skylight	,,	Windows and skylights	door at each end	fair
3	ditto	,,	2230	8	4	—	1	—	4	1	—	Gas and windows ...	,,	Windows & ventilating gratings	doorway	fair condition
4	ditto	,,	3800	15	4	—	—	—	4	1	—	Windows and skylights...	,,	Windows & ventilating gratings	two doorways	
5	ditto	,,	936	3	1	—	—	—	1	1	—	Window	,,	Windows & ventilating gratings	doorway	ceiling limewashed
6	ditto	,,	5170	20	3	—	—	—	3	1	—	Windows	,,	Windows & ventilating gratings	ditto	ceiling, walls & floor cleansed
7	ditto	,,	960	3	3	—	—	—	3	1	—	Windows and skylights...	,,	Windows and skylights	ditto	fair condition
8	ditto	,,	1620	6	3	—	—	—	3	1	—	Windows and skylights ...	,,	Windows, skylights & gratings ...	ditto	not in use
9	ditto	,,	1089	4	1	—	—	—	1	1	—	Windows	,,	Windows and gratings	ditto	ditto
10	ditto	Stream power	4600	18	6	—	—	—	6	1	—	Windows and gratings ...	,,	Windows and gratings	ditto	ditto
11	ditto	Nil	1050	4	1	—	—	—	1	1	—	Windows and gas ...	,,	Windows and gratings	ditto	ditto
12	Bakehouse (not used at present)	,,	1330	5	—	—	—	—	—	1	—	Window	Fireplace	Windows and gratings	ditto	floor re-laid and ventilation improved
13	Baking Bread	,,	1146	4	1	—	—	—	1	1	—	Window and fanlight ...	Nil.	Windows and gratings	ditto	fair condition
14	Baking	,,	2242	8	2	—	—	—	2	1	—	Windows and gas ...	,,	Skylight and gratings	ditto	good condition
15	ditto	,,	1460	5	—	—	—	—	—	1	—	Gas, window, and doors	,,	Skylight and gratings	ditto	ditto
16	Farrier and Wheelwright ...	,,	4620	18	4	—	—	—	4	1	—	Gas, window and doors	,,	Windows, gratings & doorways ...	ditto	not in use
	ditto	,,	6097	24	3	—	—	—	3	—	—	Gas, windows and doors	,,	Windows, gratings & doorways ...	doorways	ditto
	ditto	,,	1904	7	1	—	—	—	1	—	—	Gas, windows and doors...	,,	Windows, gratings & doorways ...	ditto	ditto
17	Farriers	,,	10962	43	6	—	—	—	6	1	—	Windows, gas & skylights	,,	Skylights and doorway ...	ditto	fair condition
18	ditto	,,	2426	9	2	—	—	—	2	1	—	Skylight and windows ...	,,	Skylights and doorway ...	doorway	ditto
	ditto	,,	1516	6	1	—	—	—	1	—	—	Skylight and windows	,,	Skylights and doorway ...	ditto	ditto
19	Bicycle Making	,,	1170	4	1	—	—	—	1	1	—	Windows	,,	Windows and doorway ...	ditto	fair condition, drains re-laid
20	ditto	,,	5692	22	2	—	—	—	2	1	—	Glass roof and gas ...	Coal stove	Skylight and doorways ...	door at each end	fair condition
21	Saw Mill	8-h.p. steam engine	19890	79	3	—	—	—	3	1	—	Skylight and doorways	Nil	Doorways	doorways	ditto
22	Laundrying	Nil	1539	25	—	8	—	—	8	—	1	Windows and gas ...	Fireplaces and stoves	Windows and fireplaces ...	wood staircases inside house	limewashed
	ditto	,,	1410	—	—	—	—	—	—	—	—					ditto
	ditto	,,	669	—	—	—	—	—	—	—	—					ditto
	ditto	,,	1336	—	—	—	—	—	—	—	—					ditto
	ditto	,,	1336	—	—	—	—	—	—	—	—					fair condition
23	ditto	8-h.p. steam engine	10540	42	—	—	6	—	6	1	3	Skylight, gas & windows ...	Steam	Windows and fans	doorways	ditto
	ditto	,,	14400	57	1	6	5	—	12	—	—					ditto
	ditto	,,	27750	111	—	19	24	—	43	—	—					ditto
	ditto	,,	10237	40	—	2	6	—	8	—	—					
24	Printing	2½-h.p. gas engine	1689	6	4	—	—	—	4	1	—	Windows and gas ...	Fireplace	Windows and fireplace	wood inside staircase	ditto
			1050	4	1	—	—	—	—	—	—					
			1889	7	1	—	—	—	—	—	—					
25	ditto	Nil	1396	5	1	—	—	—	1	1	—	Window	,,	Window and fireplace	doorways	ditto
26	Carpentry and Joinery	,,	4410	17	2	—	—	—	2	1	—	Windows	Oil stoves	Windows and doorway	doorways	ditto
27	Carpentry & Joinery & Plumbing	,,	4041	16	4	—	—	—	—	4	—	Skylights and windows	Nil	Windows and doorway ...	wood staircase outside	ditto
			4056	16	3	—	—	—	3	—	—	Skylights and windows				
28	Carpentry and Joinery	Nil	20160	80	2	—	—	—	2							
			14910	59	3	—	—	—	3	1	—	Skylights and windows...	Nil	Windows and doorways ...	doorways	fair condition
			5577	22	1	—	—	—	1							

TABLE VII.—*continued.*

No. in Register.	Nature of work carried on.	Nature and amount of moving power.	Cubic capacity	No. of person that may be employed	No. of persons employed: Men.	Women.	Young persons.	Children	Total.	Water-closet Accom'dation: Men.	Women.	Means of lighting.	Means of warming.	Means of ventilation	Means of escape from fire.	REMARKS.
29	Carpentry and Joinery	Nil	4056	16	4	—	—	—	4	1	—					not in use at present
			1596	6	3	—	—	—	3	1	—	Window and doorway ...	Coal stove	Windows and doorways ...		ditto
30	Cabinet making	,,	1890	7	2	—	—	—	2	2	—					
			1420	5	1	—	—	—	1	—	—	Windows and gas ...	Fireplace	Windows and fireplace	wood stairs & door	fair condition
31	Plumbing and Gasfitting ...	,,	3375	13	3	—	3	—	6	1	—		Nil	Doorways	staircase	ditto
			3712	14	2	—	2	—	4	—	—	Windows	Coal stove		doorway	ditto
32	Tailoring	,,	1167	4	1	2	1	—	4	1	—	Windows and gas ...	Fireplace	Windows and fireplace	door & staircase	ditto
33	Shoemaking	,,	1512	6							—	Window, fanlight & gas	Gas	Doorway	doorway	not in use at present
34	ditto	,,	494	2	2	—	—	—	2	1	—	Windows and gas ...	,,	Iron grating and fanlight ...	ditto	fair
35	ditto	,,	1248	4	2	—	—	—	2	1	—	Windows and gas ...	Oil stove	Fanlight	ditto	ditto
36	Millinery	,,	1188	4	—	2	—	—	2	—	1	Window	Fireplace	Window, fanlight & fireplace ...	ditto	fair condition
												Windows and gas ...	Fireplaces	Windows and fireplaces ...	ditto	ditto
37	ditto	,,	1104	4	—	2	2	—	4	—	—	Windows and gas ...	,,	Windows and fireplaces ...	door & staircase	additional w.c. provided, etc.
			1817	7	—	2	5	—	7	—	—	Windows and gas ...	,,	Windows and fireplaces ...	ditto	fair condition ditto
			1579	6	—	1	1	—	2	—	1	Windows and gas ...	,,	Windows and fireplaces ...	ditto	
38	Dressmaking	,,	1350	5	—	3	2	—	5	—	1	Windows and gas ...	,,	Windows and fireplaces ...	staircase	fair
39	Dressmaking and Millinery ...	,,	2907	11	—	8	—	—	8	—	1	Windows and gas ...	Fireplace	Windows and fireplaces ...	ditto	fair condition
40	Sausage-skin Manufactory ...	,,	4851	18	1	—	—	—	1	1	—	Windows, gas & louvres	Coal stove	Skylight and louvres	doorway	ditto
41	Clock Material Manufactory ...	Gas engine	2998	12	2	3	—	—	5	1	1	Windows and skylights...	,,	Windows	ditto	ditto
42	Watch and Clock Repairer ...	Nil	1031	4	2	—	—	—	2	1	—	Windows and skylights...	,,	Door and Window	wood stairs outside	ditto
43	Shoemaking	,,	506	2	2	—	—	—	2	1	—	Windows and skylights...	,,	Windows & ventilation bricks...	doorway	not in use
44	Baking, etc.	,,	2410	9	3	—	—	—	3	1	—	Windows and doors ...	Gas	Windows & ventilation bricks...	ditto	new premises
45	ditto	,,	2771	11	4	—	—	—	4	1	—	Windows and doors ...	,	Windows and doors	ditto	ditto
46	Carpentry and Joinery	,,	2342	9	2	—	—	—	2	1	—	Windows and doors ...	Oil stove	Windows and doors	ditto	fair condition
47	Baking, etc.	,,	4000	16	4	—	—	—	4	1	—	Windows and doors ...	Gas & ovens	Windows and doors ...	ditto	new premises
48	Harness Making	,,	1197	4	2	—	—	—	2	1	—	Windows and doors ...	Fireplace	Windows and doors	ditto	fair condition
49	Dressmaking	,,	1250	5	—	2	2	—	4	—	1	Windows	,,	Windows and doors	wooden staircase	not in use
50	Millinery	,,	1657	6	—	—	4	—	4	—	—	Windows	,,	Windows and doors	ditto	fair condition
51	ditto	,,	1046	4	—	2	2	—	4	—	1	Windows	,,	Windows and doors	ditto	ditto
52	Boot Repairing	,,	1188	4	1	—	—	—	1	1	—	Windows	,,	Windows and doors	doorway	ditto
53	ditto	,,	1484	5	3	—	—	—	3	1	—	Windows	Fireplace & oil stove	Windows and doors	ditto	ditto
	ditto	,,	1567	6	1	—	—	—	1	—	—	Windows	,,	Windows and doors	ditto	ditto
54	Cabinet Making	,,	5494	21	3	—	—	—	3	1	—	Windows and doors ...	Nil	Windows, skylight, lift & doors ...	lift, doors & st'case	ditto
	ditto	,,	1639	6	—	1	—	—	1	—	—	Windows and doors ...	,,	Windows, skylight, lift & doors ...	ditto	ditto
55	Tailoring	,,	1276	5	1	—	1	—	2	1	1	Window	Fireplace	Window and door	staircase inside	ditto
56	Dressmaking	,,	1334	5	—	4	—	1	5	—	—	Window	,,	Window and door	ditto	ditto
	ditto	,,	564	2	—	1	—	—	1	—	1	Window	,,	Window and door	ditto	ditto
57	ditto	,,	1111	4	—	2	—	—	2	—	—	Window and oil lamps ...	,,	Window and fireplace	ditto	ditto
58	ditto	,,	756	3	—	1	—	—	1	—	1	Window and oil lamps	,,	Window and fireplace	ditto	ditto
59	ditto	,,	1250	5	—	1	—	—	1	—	1	Window and gas ...	,,	Window and fireplace	ditto	ditto
60	ditto	,,	1338	5	—	1	—	—	1	—	1	Window and gas ...	,,	Window and fireplace	ditto	ditto

TABLE VII.—*continued.*

No. in Register.	Nature of work carried on.	Nature and amount of moving power.	Cubic capacity.	No. of persons that may be employed.	No. of persons employed.					Water-closet Accom'dation		Means of lighting.	Means of warming.	Means of ventilation	Means of escape from fire.	REMARKS.
					Men.	Women.	Young persons.	Children.	Total.	Men.	Women.					
61	Boot and Shoe Repairing ...	Nil	1430	5	3	—	—	—	3	1	1	Window and gas ...	Nil	Fanlight and perforated zinc & doorways	doorway	ditto
62	ditto ditto	,,	2550	10	2	—	—	—	2	1	—	Window and gas ...	Oil stove	Fanlight and perforated zinc & doorways	ditto	ditto
63	Boot and Shoe Repairing ...	,,	921	3	1	—	—	—	1	1	—	Window and gas ...	Gas	Fireplace and window	doorway	new premises
64	ditto	,,	824	3	1	—	—	—	1	2	—	Window and gas ...	Fireplace	Fireplace and window	ditto	ditto
65	Dressmaking and Millinery ...	,,	2412	9	—	5	2	—	7	—	1	Window and gas ...	,,	Fireplace and window	staircase	fair condition
			1542	6	—	1	—	—	1	—	—					
66	Motor and Cycle Works ...	Gas engine	4266	17	2	—	2	—	4	1	—	Window and gas ...	Gas stove	Windows and doorways ...	doorways	ditto
			12960	51	2	—	—	—	2	—	—					
67	Dressmaking	Nil	1609	6	—	2	—	—	2	—	1	Window and gas ...	Fireplace	Windows and fireplace	staircase	ditto
68	ditto	,,	1030	4	—	3	—	—	3	—	2	Window and gas ...	,,	Windows and fireplace	ditto	fair condition
69	Cabinet Making	,,	1335	5	1	—	—	—	1	—	—	Windows, gas & oil lamp	,,	Windows and fireplace	ditto	ditto
			961	3	—	—	—	—	—	—	—					
70	Watch and Clock Repairing ...	,,	1042	4	2	—	1	—	3	1	—	Window and gas ...	,,	Windows and fireplace	ditto	ditto
71	Hand Laundry	,,	1771	7	—	—	—	—	—	—	—					
			1001	4	—	—	—	—	—	—	—	Window and gas ...	,,	Windows and firepkace ...	ditto	new premises
			1540	6	1	4	1	—	6	1	1					
			1210	4	—	—	—	—	—	—	—					
			1296	5	—	—	—	—	—	—	—					
			1728	6	—	—	—	—	—	—	—					
72	Cycle Repairing	,,	1048	4	1	—	—	—	1	1	—	Window and gas ...	,,	Windows and fireplace	ditto	fair condition
73	Tailoring	,,	1506	6	1	1	—	—	2	1	—	Window and gas ...	,,	Windows and fireplace	ditto	ditto
74	Dressmaking	,,	2361	9	—	2	2	—	4	—	2	Window and gas ...	,,	Windows and fireplace	ditto	ditto
75	ditto	,,	1840	7	—	3	2	—	5	—	1	Window and gas ...	,,	Windows and fireplace ...	ditto	ditto
76	Millinery	,,	1488	5	—	2	1	—	3	—	1	Window and gas ...	,,	Windows and fireplace	doorway	ditto
77	Dressmaking	,,	1221	4	—	2	1	—	3	—	1	Window and gas ...	,,	Windows and fireplace	staircase	ditto
78	Carpentry and Joinery	,,	2320	9	2	—	—	—	2	1	—	Window and gas ...	Nil	Doorways	doorways	only used occasionally
79	Dressmaking	,,	528	2	—	2	—	—	2	—	1	Window and gas ...	Fireplace	Window and fireplace	staircase	fair condition
80	Millinery	,,	1270	5	—	2	3	—	5	—	1	Window and gas ...	,,	Window and fireplace	ditto	ditto
81	Dressmaking	,,	1068	4	—	2	2	—	4	—	1	Window and gas ...	,,	Window and fireplace	ditto	ditto
82	ditto	,,	1785	9	—	7	2	—	9	—	2	Window and gas ...	,,	Window and fireplace	ditto	ditto
83	ditto	,,	1728	6	—	5	—	—	5	—	1	Window and gas ...	,,	Window and fireplace	staircase	good condition
84	Boot repairing	,,	1089	4	1	—	—	—	1	1	1	Window and gas ...	,,	Window and fireplace ...	doorway	ditto
85	Blouse making	,,	1403	5	—	2	—	—	2	—	1	Window and gas ...	,,	Window and fireplace	doorway	ditto
86	ditto	,,	1405	5	—	2	2	—	4	—	1	Window and gas ...	,,	Window and fireplace	doorway	ditto

TABLE VIII.

Factories, Workshops, Laundries, Workplaces, and Home Work.

1.—Inspections: Including Inspections made by Sanitary Inspector or Inspectors of Nuisances.

Premises.	Number of		
	Inspections	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	21	2	—
Workshops (including Workshop Laundries)	123	4	—
Workplaces	—	—	—
Total	144	6	—

2.—Defects Found.

Particulars.	Number of		
	Found.	Remedied.	Prosecutions.
Want of Cleanliness	2	2	—
Other Nuisances	11	11	—
Insufficient Sanitary Accommodation	1	1	—
Unsuitable or Defective Sanitary Accommodation	2	2	—
Sanitary Accommodation not separate for Sexes	—	—	—
Total	16	16	—

3.—Home Work.

Nature of Work.	Addresses of Out-workers.		Inspection of Out-workers' premises.
	Received from other Councils.	Forwarded to other Councils.	
Wearing Apparel—Making, etc.	27	—	43
,, Cleaning and Washing	—	—	—
Paper Bags and Boxes	—	—	—
Total	27	—	43

4.—Registered Workshops.

Total number of Workshops on Register 84

TABLE IX.

Systematic House-to-House Inspection.

No. of Houses inspected	651

Nuisances and Defects Remedied.

Obstructed or Defective Drains	85
Defective or Broken w.c.'s	97
Dirty Houses or parts thereof	11
Defective Floors, Ceilings, Walls, etc.	52
Defective Sinks	9
Defective Spouting and Roofs	42
Defective Yard and Entry Paving	82
Overcrowding	—
Animals and Poultry kept so as to be a nuisance	16
Houses without efficient Ventilation (windows made to open, etc.)	—
Other Nuisances	72
Total	466

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

HEALTH

OF THE

URBAN DISTRICT OF HANDSWORTH
(STAFFS.)

For the Period January 1st to November 8th, 1911.

BIRMINGHAM:
Hudson and Son, Printers, Edmund Street and Livery Street.

1911.

Members of the Health Committee.

Councillor	David Rose, Chairman.	Councillor	H. J. Odell.
,,	S. Adkins.	,,	C. Retallack.
,,	James N. Brindley.	,,	G. Blakeman Welch.
,,	George Johnson, B.A.	,,	F. Baildon Wright.

Health Officials.

Medical Officer of Health	William Sisam, M.D., B.Sc., D.P.H.
Inspector of Nuisances	Albert Hodges, Certif. San. Inst.
Assistant Inspectors	Frank W. Asman, Certif. San. Inst.
	Ernest J. B. Bibbs, Certif. San. Inst.
Health Visitor	Georgina S. Thompson, Assoc. San. Inst.
Clerks	Percy Jarrett.
	Harold Keeley.
Superintendent of Cleansing Department	C. H. Whitworth.
Clerk of Cleansing Department	Walter Osman.

STATISTICAL SUMMARY, 1911.

Area	3,667 Acres.
Population	69,010
Birth-rate	21·0
Recorded Death-rate	10·7
Infantile Mortality	95
Zymotic Death-rate	1·1
Tuberculosis (all forms) Death-rate	0·91
Phthisis Death-rate	0·56

PUBLIC HEALTH ACTS ADOPTED IN THE DISTRICT :—

The Infectious Diseases Prevention Act, 1890.

Parts 1 and 5 Public Health Acts Amendment Act, 1890.

Notification of Births Act, 1907.

Public Health Acts Amendment Act, 1907, Parts 1 to 6, excepting Sections 18, 19, 21, 28, 48, 67.

Handsworth Urban District Council.

Health Department,

Council House,

Handsworth.

TO THE CHAIRMAN AND MEMBERS OF THE URBAN DISTRICT COUNCIL OF HANDSWORTH, IN THE COUNTY OF STAFFORD.

Gentlemen,

The General Order of the Local Government Board of December 13th, 1910, provides that if a Medical Officer of Health shall resign or be removed before the thirty-first of December in any year, he shall make to the Council a report for so much of the year as shall have expired when he ceased to hold office. In compliance with this Order, I beg to submit my report upon the health of the district for the period from January 1st to November 8th, 1911.

The preliminary census returns for 1911 shew that the population of Handsworth had been over-estimated during the preceding four or five years, consequently the birth-rates and death-rates recorded were lower than the true rates. This must be borne in mind when comparing the vital statistics of the period under report, which are based upon the census figures, with those of preceding years. Infant mortality is calculated upon the number of registered births, and not upon estimated population, and is, therefore, free from this source of error.

Even when due allowance is made for erroneous estimation of population, the mortality rates of 1911 are considerably higher than those of 1910—by far the healthiest year on record; but they compare favourably with the rates of preceding years, and cannot be regarded as unsatisfactory.

I am, Gentlemen,

Your obedient Servant,

W. SISAM.

Annual Report of the Medical Officer of Health

to the Urban District Council of Handsworth, Staffordshire, for the period from January 1st, 1911, to November 8th, 1911.

Population.

The preliminary returns of the census of 1911 give the population of Handsworth as 68,618, and on this basis the Registrar-General has estimated the population at the middle of the year at 69,010. The latter figure has been adopted for the purposes of this report.

The census enumerations of the separate Wards are not yet available, but the populations at the middle of the year were assumed to be as follows:—

Ward.	Population.
Birchfield	16,050
Heathfield	9,490
Murdock	12,220
Sandwell	17,600
Soho	13,650
Total	69,010

Births.

During the period under report 1,233 births were registered as occurring in the district, and to these must be added nine infants born of Handsworth mothers in public institutions outside the district—a total of 1,242.

The males numbered 648 and the females 594. The equivalent annual birth-rate is 21·0.

For purposes of comparison, Table I. appended gives the estimated population, birth-rate, death-rate, and infant mortality of this and preceding years.

The births were distributed in the various wards as follows:—

Ward.	No. of Births.	Rate per 1,000 of Population.
Birchfield	300	21·8
Heathfield	117	14·4
Murdock	291	27·8
Sandwell	356	23·6
Soho	178	15·2

Notification of Births Act, 1907.

This Act, which was adopted in Handsworth in May, 1908, provides for the notification to the Medical Officer of Health of all births within thirty-six hours of their occurrence. During 1911 the Act was complied with in 94·8 per cent. of births, as compared with 94·4 per cent. in 1910, 94·1 per cent. in 1909, and 90 per cent. in 1908. Enquiries were made into all cases of omission to notify, and it was found that the large majority were due to ignorance of the existence of the Act. No defaulters were prosecuted.

It may be of interest to record that 69·5 per cent. of the births notified during 1911 were attended by medical practitioners.

The infants visited by the Health Visitor during the period under report numbered 382, and to these a total of 2,003 visits were paid.

The methods of feeding adopted up to the ninth month of age were as follows:

Entirely breast-fed	... 316, or 82·7 %	Both breast and bottle-fed	25, or 6·5 %
Entirely bottle-fed	... 33, or 8·6 %	Not fed (died shortly after birth)	5, or 1·3 %
		Removed from the district	3, or ·8 %

Deaths.

Six hundred and thirty-two deaths of Handsworth residents were registered during the portion of 1911 under report. Of these 522 occurred in the district and 110 in other districts. The equivalent annual death-rate is 10·7. Corrected for age and sex composition of the population—more favourable in Handsworth, as in most towns, than in the country as a whole—the rate becomes increased to 11·7.

Coroners' inquests were held in 31 cases, while five of the deaths were not certified.

The deaths were distributed among the Wards as follows:—

WARD.	No. of Deaths.	Death Rate per 1,000 of Population.
Birchfield	132	9·6
Heathfield	83	10·2
Murdock	156	14·9
Sandwell	133	8·8
Soho	124	10·6

Four of the deaths in public institutions could not be allocated to wards, and are omitted from the above table.

Infant Mortality.

The number of deaths at ages under one year was 118, which gives a mortality of 95 per 1,000 births registered. A lower rate has been recorded for four previous years only, viz., 1905, 1908, 1909 and 1910—years in which the climatic conditions were exceptionally favourable to infant life, whereas the summer of 1911 was the hottest and driest recorded in this country, and consequently liable to be attended with a large excess of infant deaths.

The Ward statistics are as follows:—

WARD	No. of Infant Deaths.	Infant Mortality.
Birchfield ...	26	86
Heathfield	10	85
Murdock	48	164
Sandwell	20	56
Soho	14	78

Enquiry was made into the methods of feeding in the case of the 118 infants who died during the year. Of these 23 died soon after birth, and 8 could not be traced, the parents having left the district. Of the remaining 87, 30, or 34·4 per cent. had been entirely breast-fed, 42, or 48·2 per cent., had been entirely bottle-fed, and 15, or 17·2 per cent., had been partially breast and partially bottle-fed.

Infectious Diseases.

The seven chief Infectious Diseases caused 65 deaths, giving an equivalent annual zymotic death-rate of 1·1 per 1,000 of the estimated population.

The following table compares the rate of the period under report with those of former years:—

Year.	Zymotic Death Rate.	Year.	Zymotic Death Rate.
1902	0·92	1907	0·75
1903	0·85	1908	0·87
1904	1·31	1909	1·05
1905	0·63	1910	0·39
1906	1·56	1911	1·10

Smallpox.

No case has been notified in the district since 1904.

Vaccination.

A total of 998 infants were vaccinated during the period under report.

Measles.

This disease was epidemic during the first five months of the year, and was directly or indirectly responsible for seventeen deaths, as compared with none in 1910 and eighteen in 1909.

The notification of this disease is not compulsory, but the head teachers and attendance officers notify cases among elementary school children which come to their knowledge. Four hundred and thirty-two cases were so notified, and the homes of all these were visited either by the Medical Officer or the Lady Health Visitor, and appropriate advice given as to preventive measures and general care of the patients.

Scarlet Fever.

Since the autumn of 1908 this disease has been unduly prevalent in Handsworth, but in 1911 it showed well marked signs of abating, and on *a priori* grounds comparative immunity during the next three or four years may be expected. The cases notified numbered 281, as compared with 390 during the corresponding period of 1910, and 456 during the whole of 1910. Four deaths were due to scarlet fever, the fatality rate, therefore, being 1·4 per cent. of cases.

The equivalent annual sickness rate per 1,000 of the population is 4·7 and the death-rate ·06.

The cases occurred in 214 houses.

In	1	instance	6 cases	occurred in one house.
,,	2	instances	5 ,,	,,
,,	2	,,	4 ,,	,,
,,	4	,,	3 ,,	,,
,,	40	,,	2 ,,	,,
,,	165	,,	1 case ,,	,,

The distribution of the cases among the five Wards is given in Table II.

In 149 of the cases notified removal to hospital was declined Of the other 132 cases 75 only were removed; the remainder were found capable of proper isolation and treatment at home.

There were twelve return cases arising from eight infecting cases, and occurring at intervals of from four to twenty-eight days after the discharge of the latter from hospital.

There was no marked incidence of the disease in any public elementary school, but towards the close of the period under review a small outbreak of extremely mild cases arose among the scholars of one of the secondary schools.

During investigation of the notified cases various sanitary defects, chiefly of a trivial nature, were detected in the homes, but no connection could be traced between these and the incidence or severity of the disease. Neither was there reason to suspect the milk supply of being the vehicle of infection in any case, and so far as could be ascertained personal infection was the chief if not the sole factor in the spread of the disease.

As formerly, all school children convalescent from scarlet fever were examined by the Medical Officer before being permitted to return to school.

Diphtheria.

The notified cases numbered 79, and the deaths 8, the case mortality being therefore 10·1 per cent. The annual sickness rate and the annual death-rate equal 1·3 and ·13 respectively per 1,000 of the population. The 79 cases occurred in 70 different houses. The ward distribution of the disease will be found in Table II.

Upon the passing of the Bill for the extension of the boundaries of the City of Birmingham, arrangements were made with the Corporation for the admission into the City Hospitals of cases of diphtheria from Handsworth, and up to November 9th four cases were accordingly admitted into Lodge Road Hospital. Prior to this arrangement no facilities for hospital treatment of the disease were available, other than those provided by certain of the voluntary hospitals of Birmingham which admit cases when operative treatment is required. One such case was admitted to the Children's Hospital during the period under report, and one was admitted to the General Hospital and afterwards transferred to the City Hospital, Lodge Road.

In 39 of the 79 cases notified bacteriological examination of material from the throat or nose was made for diagnostic purposes; the result was positive in 37 cases and negative in 2 cases.

Specimens from a further 98 cases of sore throat were submitted by medical practitioners for bacteriological examination, and 4 positive and 94 negative results were obtained. None of these cases was notified as diphtheria.

Of the 70 primary cases of the disease, 36 occurred among elementary school children, and 4 among children attending secondary or private schools. With the exception of four small outbreaks in different elementary schools, involving six, four, three and three cases respectively, the school cases were scattered as regards both time and place. No complaint could be made of the sanitary condition of 61 of the 70 infected houses, and in the remaining 9 the defects were not such as to suggest a causal relationship to the disease.

In connection with attempts to detect mild unrecognised cases and "carrier" cases of diphtheria among school children, 584 specimens of material from the nose or throat of 446 children were submitted by the Medical Officer for bacteriological examination.

By this means 14 mild cases and 12 "carriers" were discovered, while 6 convalescent children were found to be still harbouring diphtheria bacilli, and, therefore, unfit to return to school. The bacteriological examinations were conducted at the University of Birmingham by arrangement with the Staffordshire County Council.

Whooping Cough.

Three deaths only were due to whooping cough as against 11 in 1910, and 14 in 1909. The same system of notification by teachers and attendance officers obtains with this disease as with measles. Twenty-one cases only were notified, all of which were duly visited.

Enteric Fever.

Four cases, occurring in four separate houses, were notified. There was one fatality. One case was removed to the Queen's Hospital, Birmingham, the remainder treated at home.

In one case oysters had been eaten a fortnight or so before the onset of illness, and might possibly have been the vehicle of infection; in the other cases no source could be traced. All the houses were supplied with Birmingham Corporation water only, and provided with water-closets and satisfactory drainage. All four patients worked outside the district.

Diarrhœa and Enteritis.

Diarrhœa caused 32 deaths and enteritis 15. The figures for the past ten years are as follows:—

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Deaths	12	35	46	30	66	26	29	31	18	47
Death-rate	0·21	0·6	0·74	0·46	0·99	0·37	0·41	0·43	0·24	0·78

Of the total deaths from this group of diseases 33 occurred among infants under one year of age, 4 between the ages of one and five, and the remaining 10 at ages over 45.

Considering that the climatic conditions, heat and drought, which conduce to the prevalence of diarrhœal diseases, were more pronounced in 1911 than in any previous year on record, the mortality cannot be considered excessive. As in former years, special preventive measures were carried out during the summer months. These were chiefly directed towards the maintenance of cleanliness of houses and yards in the poorer quarters of the district, together with the search for cases of infantile diarrhœa. On the latter being found, immediate medical treatment was recommended where it was not already provided, and efficient disinfection of all clothing soiled with the excreta of the affected children was advised and disinfectant supplied.

Erysipelas.

Forty cases were notified, but no fatality occurred.

Puerperal Fever.

Although no case of this disease was notified, the deaths of two Handsworth women from this cause were registered during the period under report. The discrepancy is due to the fact that both deaths occurred in public institutions outside the district; in one case confinement took place at home, and the patient was afterwards removed to hospital; the other patient was confined and contracted the disease away from home.

Prior to the absorption of Handsworth into the City of Birmingham the Midwives Act was administered by the Staffordshire County Council.

Tuberculosis (all forms).

Fifty-four deaths were due to this class of disease. The following table compares the mortality from all forms of tuberculosis, and from phthisis (tuberculosis of the lung) alone during the past ten years:—

	Death-rate per 1,000 of the Estimated Population.	
	All Forms of Tuberculosis.	Phthisis.
1902	1·23	0·97
1903	1·24	0·86
1904	0·89	0·35
1905	0·89	0·67
1906	0·86	0·60
1907	0·84	0·49
1908	0·93	0·75
1909	0·93	0·58
1910	0·77	0·58
1911	0·91	0·56

Under the Public Health Tuberculosis Regulations of 1908, which apply to Poor Law patients, 20 cases of phthisis were notified, and under the regulations of 1911, which apply to hospital and dispensary patients, 44 cases were notified. It has been the practice for the Medical Officer to visit the homes of notified cases in the first instance, and to give appropriate instructions for precautionary measures to be taken to prevent the spread of the disease, and for the sanitary inspectors to re-visit from time to time in order to ensure that the instructions were followed.

Disinfectants were supplied in most cases, and in many the rooms occupied by the patients were thoroughly disinfected by the staff of the Health Department.

Five cases in an early stage of the disease were sent by the Health Committee for sanatorium treatment; four to the Mount Sanatorium, Fairfield, near Bromsgrove, and one case to Bourne Castle Sanatorium, Belbroughton. The period of treatment varied between six and sixteen weeks, and all patients greatly improved in general health while in one case all signs and symptoms of the disease disappeared.

For many years it has been customary in Handsworth to offer to disinfect rooms and bedding after death from tuberculosis, and in a large majority of instances the offer has been accepted.

Cancer.

Fifty-four deaths were registered as due to cancer or allied forms of malignant disease. The equivalent annual death-rate is 0·91, as compared with 0·90 in 1910; 0·70 in 1909; 0·95 in 1908; 0·86 in 1907, and an average of 0·68 for the ten years 1897-1906.

GENERAL SANITARY MATTERS.

Refuse and Sewage Disposal.—The whole of the District is sewered, with the exception of the rural area and an area overlying colliery workings and liable to subsidence.

The bulk of the houses are provided with water-closets, and only 228 privy middens now remain.

The sewers are in connection with the outfall sewers of the Birmingham Tame and Rea District Drainage Board, of which Board Handsworth was a constituent Authority.

The collection and disposal of domestic refuse has been undertaken by the District Council.

The movable ashbins numbered 8,917 and the ashpits 6,162. These have been emptied once a week as far as possible.

The few remaining privy middens were emptied on application, the contents being taken to farms.

The refuse collected from ashpits and ashbins was dealt with at the Council's destructor. About 12,518 tons of domestic refuse were burnt during 1911, and in addition 97 tons of trade refuse.

The Superintendent of the Cleansing Department reports that 707 applications for cleansing ashpits were received, and that 787 privy-middens were emptied and cleansed during the period under report; while 539,335 ashbins and ashpits were emptied.

Water Supply.—The district is supplied by the Birmingham Corporation Water Department. The water, originally liable to have a plumbo-solvent action, is now specially treated.

A few wells still exist.

House-to-House Inspection.—During the period under review a house-to-house inspection has been made in the following roads, viz.:—

Salisbury Road.	Finch Road.
Hatfield Road.	Archibald Road.
Johnstone Street.	Lime Grove.
James Street.	Frances Road.
Roland Road.	Lozells Road.
Leonard Road.	Mayfield Road.
Wilson Road.	Gordon Road.
New Inn Road.	Birchfield Road (portion of).

This area embraces much of the smaller house property and some of the larger house property in Heathfield Ward.

In this way 861 houses were inspected and many insanitary conditions discovered and remedied. The following is a summary of the results of the inspection :—

Privies	7	Defective Traps and Drains ...	12
Ashpits, Dry	418	Ashbins	229
Ashpits, Covered	411	Waste-water Flush Closets... ...	—
Ashpits, Uncovered	14	Lip-traps on Drains...	66
Ashpits over 20 square feet in area	66	Bell-traps on Drains	1
Wet Ashpits	7	Houses supplied with Well Water	—
Outdoor Water-closets	742	Number of Wells	—
Indoor Water-closets	95	Back-to-back Houses	15
Ventilation Pipe under 3in. diameter	7		

Nuisances.—During the period under report 8,880 inspections and observations were made for the discovery and abatement of nuisances within the District, 2,229 informal and 170 statutory notices were sent out and were in 2,236 cases followed by the abatement of the nuisances, leaving 93 on the books on November 9th.

Four summonses were taken out for the abatement of nuisances. In two cases the summonses were withdrawn on the necessary work being done, and on payment of the costs. In the other two cases abatement orders were made, and the defendants ordered to pay the costs.

The necessary work is in progress at the time of writing.

The whole of the other work was executed in a satisfactory manner without recourse to legal proceedings.

In 115 cases privies were converted into water-closets, and 291 deep wet ashpits were filled up after notice had been served on the owners.

Slaughter-houses.—The 11 slaughter-houses in the district have been inspected on 401 occasions, frequent inspections having been made while slaughtering was taking place. In 18 cases notices were served to abate nuisances. One slaughter-house is void.

In 3 cases the drains were taken up and properly relaid; the floors in 3 cases were repaved with bricks set in cement, and offensive accumulations were removed in 12 cases. In one case the slaughter-house was thoroughly overhauled and larger fasting pens provided separate from the slaughter-house.

No diseased meat was found; consequently no seizures were made.

Food and Drugs.—The Sale of Food and Drugs Acts have been administered by the Staffordshire County Council.

Bakehouses.—The 43 bakehouses registered in the district were inspected on 161 occasions, and in 15 cases notices to cleanse and limewash and to abate nuisances were served. One bakehouse was rebuilt and proper ventilation and lighting provided. The ventilation in 3 cases was improved.

Five bakehouses are at present void.

Common Lodging Houses.—None in the district.

Houses Let in Lodgings.—Of these there are practically none in the district, and no bye-laws respecting them have been framed.

Offensive Trades.—No offensive trades are established in the district.

Schools.—All the public elementary schools were visited during the year. No grave sanitary defects were found. All the schools are supplied with Birmingham Corporation water.

Pollution of Rivers and Streams.—Pollution of the River Tame was again evident from time to time. Assurances were received from the Staffordshire County Council that every effort was being made to push forward the purification schemes referred to in previous reports.

Workrooms and Workshops.—The 239 workrooms and workshops registered in the district were visited on 352 occasions. Notices to cleanse and limewash were served in 22 cases, and notices to abate nuisances were given in 16 cases. In 3 cases privies were converted into water-closets; in 2 cases separate accommodation for the sexes was provided; and in 1 case further closet accommodation was provided; in 5 cases drains were opened, repaired and properly trapped; in 2 cases the ventilation was improved; in 2 cases floors were drained, and 1 case of overcrowding was abated. There are 9 "domestic workshops" in the district, in which are carried on the following trades:—4 dressmakers, 3 laundries, 1 tailor and 1 picture frame maker. Section 22 of the Public Health Acts (Amendment) Act, 1890, was in force in the district. The standard of "sufficiency and suitability" of sanitary accommodation adopted was that of the Sanitary Accommodation Order of February 4th, 1903.

Housing Accommodation and Housing Improvement.—There is ample housing accommodation for working class people who are prepared to pay a weekly rental of from 5/6 to 7/6, inclusive of rates; but there are comparatively few houses at less than the former figure. Generally speaking, the working class dwellings, though not built very substantially, are of good type, and the houses and their surroundings are kept clean.

Houses of the back-to-back type number about 620, all erected prior to 1874.

There are no enclosed courts in the district. With few exceptions the courts and yards are paved.

Action taken under the Housing of the Working Classes Acts.—Routine inspection of dwellings under the Housing and Towns Planning Act, 1909, has been carried out by the chief Sanitary Inspector, under the direction of the Medical Officer of Health. The following are the details of the results of inspection from January 1st to November 8th, 1911:—

No. of houses inspected under Section 17 of the Housing and Towns Planning Act, 1909	237
No. of houses considered to be unfit for habitation	20
No. of houses represented to the Health Committee as unfit for habitation	3
No. of closing orders made	0
No. of houses rendered habitable without closing orders ...	12
No. of houses voluntarily demolished by owners	8

The defects which rendered the 20 houses noted above unfit for habitation were principally dampness and general dilapidation.

Demolition orders were made in the case of a block of seven houses on which closing orders were made in 1910, and these were duly demolished by the owners.

The Building Bye-laws in force in the district demanded a minimum open space at the rear of buildings of 200 square feet, free from any erection and a minimum distance across such space varying between 15 feet in the case of single-storied houses and 25 feet for three-storied houses.

The supervision of the erection of new houses has been undertaken by the Surveyor's Department.

THE MILK SUPPLY.

Cowsheds and Dairies.—The premises of the 11 registered cowkeepers have been inspected on 179 occasions, and in nine cases notices to abate nuisances have been served.

In two cases the sheds have been properly ventilated, paved and drained, and the drains in one case have been relaid, properly trapped and ventilated, and in six cases offensive accumulations have been removed. One cowshed has been partly rebuilt and enlarged to give increased air space to animals kept there.

Six cowsheds have been void during part of the year.

The premises of the 271 milkshops and dairies on the register were inspected on 291 occasions, and found in a satisfactory state, with the exception of two, where it was necessary to cleanse the premises thoroughly.

SUMMARY OF SANITARY WORK

DONE IN THE INSPECTOR OF NUISANCES DEPARTMENT DURING THE YEAR, 1911.

		Number of		Abatement Notices.		Nuisances Abated after Notice by	
		Inspections and Observations made.	Defects found.	Informal by Inspector.	Formal by Authority.	Inspector.	Authority.
Dwelling-houses and Schools	Foul Conditions	451	165	165	8	142	6
	Structural Defects	721	292	292	14	279	12
	Over-crowding	68	13	13	6	7	6
	Unfit for Habitation	51	15	15	—	15	—
	Lodging Houses	—	—	—	—	—	—
	Dairies and Milkshops	291	2	2	—	2	—
	Cowsheds	179	9	9	—	9	—
	Bakehouses	161	15	15	—	15	—
	Slaughter-houses	401	18	18	1	17	1
	Canal Boats	—	—	—	—	—	—
	Ashpits and Privies§	2132	442	442	39	367	35
	Deposits of Refuse and Manure	301	116	116	12	103	12
	Water-closets	1265	338	338	22	309	22
House Drainage	Defective Traps	379	150	150	18	132	18
	No Disconnection	172	24	24	3	21	3
	Other Faults	1401	407	407	30	370	28
	Water Supply	45	12	12	—	6	—
	Pigsties	—	—	—	—	—	—
	Animals improperly kept	191	40	40	2	35	2
	Offensive Trades	—	—	—	—	—	—
	Smoke Nuisances	48	6	6	1	5	1
	Other Nuisances	423	165	165	14	142	14
	Totals	8880	2229	2229	170	1976	160

PRECAUTIONS AGAINST INFECTIOUS DISEASE.

Lots of Infected Bedding Disinfected or Destroyed	2589
Houses Disinfected after Infectious Disease	350

(Signed) ALBERT HODGES, A.R.S.I.,

November, 1911. Inspector of Nuisances.

SURVEYOR'S REPORT RESPECTING NEW BUILDINGS, ETC.

During the period January 1st to November 8th, 1911, 92 plans were submitted, of which 84 representing 148 houses, 47 alterations, and including 7 additions to factories and 3 to schools, were approved.

The number of houses passed for occupation was 225.

Forty licenses to erect temporary buildings, including three Picture Palaces, were granted.

No prosecution has been instituted during the year.

During the previous year, 90 plans were submitted, of which 82, representing 341 houses, 30 alterations, and additions to Somerset Road Church were approved.

The number of houses passed for occupation was 299.

TABLE I.

Vital Statistics of Whole District during 1911 *and previous years.*

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of age.		At all ages.	
			Number.	Rate.	Number.	Rate.	of Non-Residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1900	50,000	1,275		25·5	586	11·7	—	46	179	140	632	12·6
1901	53,000	1,402		26·4	671	12·7	—	57	183	129	728	13·7
1902	56,141	1,392		24·8	563	10·2	—	63	150	108	626	11·1
1903	59,000	1,451		24·6	576	9·8	—	66	148	102	642	10·8
1904	61,500	1,436		23·4	670	10·9	—	84	192	133	754	12·2
1905	65,249	1,483		23·0	583	9·0	1	75	119	80	657	10·1
1906	66,276	1,500		22·6	663	10·0	—	77	181	120	740	11·1
1907	69,122	1,516		21·9	626	9·0	—	67	153	100	693	10·0
1908	70,518	1,570		22·2	675	9·5	—	88	142	90	763	10·8
1909	71,935	1,446		20·1	645	8·9	—	92	119	82	737	10·2
1910	72,964	1,421		19·4	560	7·6	—	83	113	79	643	8·8
1911 Jan 1st to Nov. 8th.	69,010	1,233	1242	21·0	525	8·8	3	110	118	95	632	10·7

TABLE II.

Cases of Infectious Disease notified during the Year 1911 (*January 1st to November 8th*).

Notifiable Disease.	Number of Cases Notified.								Total Cases Notified in each Ward of the District.					Total Cases Remov'd to Hospit'l.
	At all Ages.	At Ages—Years							Birchfield.	Heathfield.	Murdock	Sandwell.	Soho.	
		Under 1	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.						
Diphtheria (including Membranous croup)	79	1	18	47	7	6	—	—	26	8	12	27	6	5
Erysipelas	40	—	1	4	5	10	15	5	9	6	10	8	7	—
Scarlet Fever...	281	2	68	185	14	10	2	—	61	28	47	75	70	75
Enteric Fever	4	—	—	—	2	2	—	—	—	—	1	1	2	—
Phthisis (Under Tuberculosis Regulations, 1908)	20	—	—	2	2	9	5	2	2	1	11	5	1	—
Phthisis (Under Tuberculosis Regulations, 1911)	44	—	—	1	11	27	5	—	9	4	10	14	7	—*
Totals	468	3	87	239	41	64	27	7	107	47	91	130	93	80

Isolation Hospitals—West Bromwich Borough Infectious Hospital: Total available beds, 70; number of diseases that can be concurrently treated, 1; City of Birmingham Infectious Hospital, Lodge Road: total available beds, 253; number of diseases that can be concurrently treated, 3.

* Five cases received Sanatorium treatment.

TABLE III.

Deaths registered during the period from January 1st, to November 8th, 1911.

DISEASES.	AGES.													Males	Females.	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85			
Smallpox—																
(*a*) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Unvaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) No Statement	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	6	9	2	—	—	—	—	—	—	—	—	—	—	7	10	17
Scarlet Fever	—	—	2	1	—	—	1	—	—	—	—	—	—	3	1	4
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Influenza	—	—	—	—	—	—	1	1	2	2	1	1	—	3	5	8
Whooping Cough	1	2	—	—	—	—	—	—	—	—	—	—	—	2	1	3
Diphtheria, Membranous Croup	1	3	3	1	—	—	—	—	—	—	—	—	—	5	3	8
Enteric Fever	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	1
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa, Dysentry	20	3	—	—	—	—	—	—	1	2	—	1	—	22	5	27
Epidemic Enteritis	5	—	—	—	—	—	—	—	—	—	—	—	—	2	3	5
Epidemic Cerebro-Spinal Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Rose-rash	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glanders, Farcy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax, Splenic Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cowpox, Acc. of Vaccination	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gonorrhœa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Phagedæna	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	1	1	—	—	—	—	—	—	2	2
Pyæmia, Septicæmia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infective Endocarditis ...	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Cancrum Oris	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stomatitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carbuncle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cellulitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malarial Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rheumatic Fever	—	—	2	—	—	2	1	—	—	—	—	—	—	2	3	5
Rheumatism of Heart ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of Brain	—	4	—	2	1	—	—	—	—	—	—	—	—	3	4	7
Tuberculosis of Larynx ...	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	1
Phthisis	1	—	—	—	—	2	12	8	6	2	2	—	—	19	14	33
Abdominal Tuberculosis ...	1	2	—	1	—	—	—	—	—	—	—	—	—	3	1	4
General Tuberculosis	1	—	—	—	—	2	1	—	—	—	—	—	—	—	4	4
Other forms of Tuberculosis ...	1	1	—	1	1	—	—	—	1	—	—	—	—	1	4	5
Thrush	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Actinomycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydatid Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scurvy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ptomaine Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Alcoholism	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Chronic Alcoholism	—	—	—	—	—	—	—	2	—	—	—	—	—	1	1	2
Lead Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Osteo-arthritis Rheumatoid-arthritis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gout	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cancer	—	—	—	—	—	—	4	4	15	12	13	5	1	24	30	54
Diabetes Mellitus	—	—	—	—	—	—	1	2	—	2	—	—	1	2	4	6
Purpura Hæmorrhagica ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hæmophilia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anæmia, Leucocythæmia ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lymphadenoma, Hodgkin's Disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Premature Birth	19	—	—	—	—	—	—	—	—	—	—	—	—	12	7	19
Injury at Birth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Debility at Birth	4	—	—	—	—	—	—	—	—	—	—	—	—	3	1	4
Atelectasis	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Congenital Defects	4	1	—	—	—	—	—	—	—	—	—	—	—	5	—	5
Want of Breast Milk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Atrophy, Debility, Marasmus ...	13	—	—	—	—	—	—	—	—	—	—	—	—	10	3	13

TABLE III.—*continued.*

DISEASES.	AGES.													Males	Females	Persons
	0-	1-	5-	10-	15-	20-	25-	35-	45	55-	65-	75-	85-			
Dentition	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Old age, Senile Decay ...	—	—	—	—	—	—	—	—	—	—	10	29	11	22	28	50
Convulsions	6	—	—	—	—	—	—	—	—	—	—	—	—	3	3	6
Meningitis	2	3	2	1	—	—	—	—	—	—	—	—	—	7	1	8
Encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apoplexy	—	—	—	—	—	—	—	—	1	1	1	7	—	7	3	10
Softening of Brain	—	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2
Hemiplegia	—	—	—	—	—	—	—	—	—	2	2	1	—	2	3	5
General Paralysis of Insane ...	—	—	—	—	—	—	—	1	1	—	1	—	—	3	—	3
Other forms of Insanity ...	—	—	—	—	—	—	—	—	—	2	1	—	—	1	2	3
Chorea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebral Tumour	—	—	—	1	—	—	—	—	1	—	—	—	—	—	2	2
Epilepsy	—	—	—	—	—	—	1	—	1	—	1	—	—	3	—	3
Laryngismus Stridulus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locomotor Ataxy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paraplegia, Diseases of Cord	—	—	—	—	—	—	—	—	—	1	2	1	—	2	2	4
Cerebral Congestion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebral Effusion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-Spinal Meningitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Neuritis	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Other Diseases of Brain or Nerves...	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	1
Otitis, Mastoid Disease ...	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Disease of Nose, Epistaxis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pericarditis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Endocarditis, Valvular Disease	—	1	—	2	3	2	3	3	6	5	1	2	—	11	17	28
Hypertrophy of Heart ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Angina Pectoris	1	—	—	—	—	—	—	—	1	2	—	—	—	3	1	4
Aneurism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Senile Gangrene	—	—	—	—	—	—	—	—	—	—	1	—	1	1	1	2
Embolism, Thrombosis ...	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1	2
Phlebitis	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1
Varicose Veins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cardiac Dilatation	—	—	—	—	—	—	—	—	—	1	—	—	1	2	—	2
Heart Disease (not defined) ...	—	—	—	—	—	—	2	1	3	—	4	2	—	7	5	12
Other Diseases of Heart ...	2	—	1	—	—	—	—	—	2	3	5	—	1	10	4	14
Atheroma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Cerebral Hæmorrhage	1	—	—	—	—	—	—	1	2	3	12	6	—	12	13	25
Other Diseases of Blood Vessels	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Laryngitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Croup	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Bronchitis	7	1	—	—	—	—	1	—	—	—	1	—	—	4	6	10
Chronic Bronchitis	—	—	—	—	—	—	—	2	2	3	9	4	1	9	12	21
Lobar Pneumonia	—	—	—	—	1	1	—	1	—	1	1	—	—	3	2	5
Lobular Pneumonia	7	4	—	—	—	—	—	—	—	2	2	3	—	6	12	18
Pneumonia (not defined) ...	—	1	1	1	1	1	2	—	—	7	3	4	—	13	8	21
Emphysema, Asthma	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Pleurisy	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Fibroid Phthisis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bronchiectasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases, Respiratory System	—	1	—	—	—	—	—	—	—	—	1	—	—	2	—	2
Quinsy	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Diseases of Pharynx	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Œsophagus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer of Stomach & Duodenum	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2	2
Other Diseases of Stomach ...	2	—	—	—	—	—	—	—	—	—	1	1	—	2	2	4
Enteritis	8	1	—	—	—	—	—	—	1	1	2	2	—	5	10	15
Appendicitis	—	1	—	—	—	—	2	1	—	—	—	—	—	2	2	4
Obstruction of Intestine ...	1	—	—	—	1	—	—	1	1	—	2	2	—	3	5	8
Other Diseases of Intestine ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver	—	—	—	—	—	—	—	1	1	1	2	—	—	2	3	5
Other Diseases of Liver ...	—	—	—	—	—	—	—	1	—	4	1	1	—	2	5	7
Peritonitis	—	—	—	—	—	—	1	1	1	1	—	—	—	1	3	4
Other Diseases of Digestive System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE III.—*continued.*

DISEASES.	AGES.													Males	Females.	Persons
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Diseases, Lymphatic System & Ductless Glands	—	—	—	—	—	1	1	—	—	1	1	1	—	2	3	5
Acute Nephritis	—	—	—	—	—	—	—	—	—	—	2	—	—	1	1	2
Bright's Disease	—	—	1	—	—	—	1	2	4	6	6	1	—	15	6	21
Calculus	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Diseases of Bladder and Prostate	—	—	—	—	—	—	—	—	—	—	2	1	—	3	—	3
Other Diseases, Urinary System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Testis and Penis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Ovaries	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1
Diseases of Uterus and Appendages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Vagina and External Genitals	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Abortion, Miscarriage	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Mania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Convulsions ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Placenta Prævia, Flooding ...	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Puerperal Thrombosis	—	—	—	—	—	—	1	1	—	—	—	—	—	—	2	2
" Parturition "	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1
Other Diseases, Pregnancy and Childbirth	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2	2
Arthritis, Ostitis, Periostitis ...	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
Other Diseases, Osseous System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer, Bedsore	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	1
Eczema	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pemphigus	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	1
Other Diseases, Integumentary System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Accidents or Negligence—																
In Mines and Quarries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Vehicular Traffic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
On Railways	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
On Ships, Boats, etc. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Building Operations ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Machinery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Weapons and Implements	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burns and Scalds	—	2	—	—	—	—	—	—	—	—	—	1	—	1	2	3
Poisons, Poisonous Vapours...	—	—	—	—	—	—	1	—	—	—	—	—	1	1	1	2
Surgical Narcosis	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	1
Effects of Electric Shock ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Corrosion by Chemicals ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Drowning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suffocation, Overlaid in Bed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, Otherwise ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Falls not specified	—	—	—	—	1	1	—	—	—	1	1	2	—	3	3	6
Weather Agencies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Otherwise, not stated ...	—	—	—	—	—	—	2	—	—	—	—	—	—	2	—	2
Homicide	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1
Suicides—																
By Poison	—	—	—	—	—	—	—	1	—	1	—	—	—	1	1	2
By Asphyxia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Hanging & Strangulation	—	—	—	—	—	—	1	—	1	—	—	—	—	1	1	2
By Drowning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Shooting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Cut or Stab	—	—	—	—	—	—	—	1	—	—	—	1	—	—	2	2
By Precipitation from Elevated Places	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
By Crushing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By other and unspecified methods	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Execution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sudden Death, cause not ascertained	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-defined & unspecified causes	2	—	—	—	—	—	—	—	—	4	1	—	—	3	4	7
Totals	118	41	14	11	11	13	47	41	57	79	101	81	18	325	307	632

TABLE IV.

Infant Mortality.

1911. *Nett Deaths from stated causes at various Ages under 1 Year of Age.*

Cause of Death.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
All causes (Certified	27	4	5	4	40	27	21	16	13	117
All causes (Uncertified	1	—	—	—	1	—	—	—	—	1
Smallpox	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	1	1	4	6
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup	—	—	—	—	—	1	—	—	—	1
Whooping Cough	—	—	—	—	—	—	1	—	—	1
Diarrhœa	—	1	1	—	2	9	6	4	4	25
Enteritis	—	—	—	—	—	2	3	3	—	8
Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	—
Abdominal Tuberculosis	—	—	—	—	—	—	—	1	—	1
Other Tuberculous Diseases ...	—	—	—	—	—	1	2	—	—	3
Congenital Malformations ...	2	1	—	—	3	—	1	—	—	4
Premature Birth	17	1	—	—	18	1	—	—	—	19
Atrophy, Debility and Marasmus ...	2	—	4	2	8	5	3	1	—	17
Atelectasis	2	—	—	—	2	—	—	—	—	2
Injury at Birth	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	—	—	—	—	—
Rickets	—	—	—	—	—	—	—	—	—	—
Meningitis (not Tuberculous) ...	—	—	—	—	—	—	—	—	2	2
Convulsions	2	—	—	—	2	3	—	1	—	6
Gastritis	—	—	—	—	—	1	—	1	—	2
Laryngitis	—	—	—	—	—	—	—	—	—	—
Bronchitis	—	1	—	—	1	2	3	—	1	7
Pneumonia (all forms)	—	—	—	1	1	2	—	2	2	7
Suffocation, overlying	—	—	—	—	—	—	—	—	—	—
Other Causes	3	—	—	1	4	—	1	2	—	7
	28	4	5	4	41	27	21	16	13	118

Nett Births in the year—legitimate, 1,226; illegitimate, 16.

TABLE V.—*Notifications of Infectious Diseases.*

	Compulsory from March 1st, 1890.																					
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911*
Popuplation	31,000	33,100	34,650	36,500	38,000	39,500	40,600	41,600	43,500	47,000	50,000	53,000	56,141	59,000	61,500	65,249	66,276	69,122	70,518	71,935	72,964	
Smallpox ...	—	—	1	42	106	7	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—
Scarlatina ...	208	120	239	196	101	179	304	216	88	155	185	251	361	361	256	127	234	216	420	432	456	281
Diphtheria ...	50	19	20	15	19	28	98	46	29	50	50	59	55	43	55	32	57	76	95	88	66	79
Membranous Croup ...	—	2	—	1	—	3	3	2	2	1	—	1	3	3	4	1	2	2	—	5	1	—
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid ,,	20	21	5	10	19	27	25	25	31	48	36	28	24	20	19	10	11	20	13	13	6	4
Continued ,,	—	—	—	—	—	—	—	1	—	—	—	2	—	—	—	—	1	1	—	—	—	—
Relapsing ,,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal ,,	1	—	—	2	4	4	2	2	4	4	3	3	3	3	1	1	2	2	—	1	1	—
Cholera ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas ...	8	8	22	20	27	23	36	15	24	31	23	32	20	32	38	37	43	50	42	45	37	40
Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—	78	248	103	—	—	—	—	—	—	—
Totals ...	287	170	287	286	276	271	468	307	178	289	297	376	544	711	477	208	350	367	570	584	567	404

Chickenpox was added to the "Notifiable Diseases" in this District during the period June 1st, 1902—June 1st, 1904.

* January 1st to November 8th, 1911.

TABLE VI.

Showing number of Cases of Disease notified per 1,000 *of the population.*

Disease.	Average 5 years 1891–5	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	*1911.
Smallpox	0·83	—	—	—	—	—	—	—	0·02	0·01	—	—	—	—	—	—	—
Scarlatina	4·57	7·48	5·19	2·02	3·30	3·70	4·73	6·42	6·12	4·16	1·99	3·53	3·13	5·95	6·00	6·24	4·76
Diphtheria	0·53	2·41	1·13	0·67	1·06	1·00	1·11	0·98	0·73	0·89	0·49	0·86	1·10	1·34	1·23	0·90	1·33
Membranous Croup ...	0·03	0·07	0·04	0·04	0·02	—	0·02	0·05	0·05	0·06	0·01	0·03	0·03	—	0·06	0·01	—
Typhus Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid „	0.44	0·61	0·60	0·71	1·02	0·72	0·53	0·42	0·34	0·31	0·15	0·16	0·29	0·18	0·18	0·08	0·06
Continued „	—	—	0·02	—	—	—	0·04	—	—	—	—	0·01	0·01	—	—	—	—
Relapsing „	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal „	0·05	0·05	0·04	0·09	0·09	0·06	0·06	0·05	0·05	0·01	0·01	0·03	0·03	—	0·01	0·01	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	0·54	0·89	0·36	0·88	0·66	0·46	0·60	0·35	0·54	0·62	0·55	0·64	0·73	0·59	0·62	0·50	0·67
Chickenpox	—	—	—	—	—	—	—	1·38	4·06	1·67	—	—	—	—	—	—	—
Totals	7·00	11·52	7·38	4·41	6·15	5·94	7·09	9·65	11·91	7·73	3·18	5·26	5·32	8·06	8·11	7·77	6·85

*Equivalent annual rates calculated upon notifications from January 1st to November 8th, 1911.

TABLE VII.

Birth-rates, Death-rates and Infantile Mortality in the various Wards of Handsworth for each of the years 1902–1911.

	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.*
Birchfield Ward.										
Birth-rate ...	28·2	25·4	26·07	22·8	24·4	23·9	24·2	20·2	21·2	21·8
Death-rate ...	8·9	10·0	12·02	9·4	11·8	8·9	10·06	8·8	8·3	9·6
Infantile M'tality	95	92	128	70	141	80	78	85	80	86
Heathfield Ward.										
Birth-rate ...	18·5	15·6	15·8	17·7	15·8	15·2	15·2	13·2	14·0	14·4
Death-rate ...	11·0	9·71	9·5	9·1	11·8	11·2	11·4	9·5	8·0	10·2
Infantile M'tality	102	98	111	77	151	93	98	98	43	85
Murdock Ward.										
Birth-rate ...	30·5	30·6	29·0	27·4	27·7	28·9	30·1	25·5	24·3	27·8
Death-rate ...	13·9	13·8	16·3	12·9	13·0	12·4	13·9	13·5	10·4	14·9
Infantile M'tality	122	145	181	102	130	109	110	102	120	164
Sandwell Ward.										
Birth-rate ...	26·1	30·5	25·2	25·6	25·6	24·2	23·09	22·2	20·9	23·6
Death-rate ...	10·9	11·03	11·58	9·5	10·6	9·6	8·8	9·7	7·4	8·8
Infantile M'tality	104	84	129	67	103	118	74	66	49	56
Soho Ward.										
Birth-rate ...	19·0	18·4	18·3	18·0	15·9	14·3	15·7	15·9	14·8	15·2
Death-rate ...	10·9	9·8	11·53	9·4	8·6	8·5	10·8	10·0	10·2	10·6
Infantile M'tality	104	89	89	96	77	92	101	76	92	78

* January 1st to November 8th.

TABLE VIII.

THE ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, IN CONNECTION WITH FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

I.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES, INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.	Number of	
	Inspections.	Written Notices.
Workshops (Including Workshop Laundries)	352	38
Total	352	38

II.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars.	Number of Defects	
	Found.	Remedied.
Want of cleanliness	22	22
Want of ventilation	2	2
Overcrowding	1	1
Want of drainage of floors	2	2
Other nuisances	5	5
Sanitary accommodation — insufficient	1	1
Sanitary accommodation — unsuitable or defective ...	3	3
Sanitary accommodation — not separate for sexes ...	2	2
Total	38	38

III.—HOME WORK.

Nature of Work.	Outworker's Lists, Section 107. Sending twice in the year.		Outwork in Unwholesome Premises, Section 108.		Outwork in Infected Premises, Sections 109, 110.	
	Lists.	Workmen.	Instances.	Notices served.	Instances.	Orders made (S. 110).
Wearing Apparel— Making, etc.	2	8	—	—	—	—
Paper Bags and Boxes	2	12	—	—	1	1
Brush Making	2	4	—	—	—	—
Carding, etc., of Buttons, etc.	—	—	1	1	—	—
Total	6	24	1	1	1	1

IV.—Registered Workshops.

Miscellaneous Trades	239
Workshop Bakehouses	43
Total number of Workshops on Register	282

V.—Other Matters.

Class.		Number.
Matters notified to H.M. Inspector of Factories :—		
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Acts (s. 5)	Notified by H.M. Inspector...	6
	Reports (of action taken) sent to H.M. Inspector ...	6

1911.

(January 1st to November 8th.)

REPORT

ON THE

HEALTH

OF THE

URBAN DISTRICT OF KING'S NORTON AND NORTHFIELD,

BY

REGINALD GREEN, M.D., D.Hy., D.P.H.,
Medical Officer of Health.

BIRMINGHAM:
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1912.

King's Norton Urban District Council.

Water Supply.

The year 1911 was a trying one in regard to water supply, owing to the prolonged drought, which lasted for a great part of the summer. Fortunately the urban parts of the King's Norton district were not at all affected, as the Corporation supply was ample at all times and of excellent quality. In the rural areas, however, it was a different matter, and many of the shallow wells gave out during the summer, and water had to be carried for long distances.

The drought was so severe that practically all the ponds were dried up, and water had to be carried for animals in the fields.

There were sunk three wells, nine were cleansed or repaired, and eight were closed as polluted. The number of old houses newly supplied from the Corporation mains was 31, which leaves about 440 houses with a well supply, which could be supplied with the City water.

The number of samples of water sent for analysis was 29.

In 23 instances waste of water was reported to the water department.

A complaint was received from Moseley that some of the inmates of a certain house were suffering from lead poisoning, which might be due to the water.

A chemical examination was made of the water, which had stood all night in the lead pipe leading from the cistern, and a trace of lead was found.

The family was advised not to use water from the cistern for drinking purposes.

Drains and Sewers.

There was little change during the period in the drainage arrangements of the district. A number of the houses in the New Road, Rubery, have been connected with the sewer and water-closets put in to replace the foul middens previously existing there. No less than 1,245 drains were tested by the department, of which 299 were defective, many in relation to outbreaks of infectious diseases, which in the lay mind are chiefly caused by defective drains or sewers.

There were 795 drains laid or relaid and 1,273 cleansed.

The number of insanitary sinks, etc., rectified was 474, brick sinks being replaced by stoneware ones in 111 houses.

There were seven dumbwells put into order in the country districts, and 57 rainwater pipes disconnected from drains.

River Pollution.

There were 51 visits of inspection made to the streams in the district liable to pollution. A number of complaints were received about the condition of the Rea in its lower parts, and considerable fouling with oil was found on several occasions in the Wychall district.

Strong complaints were made to the responsible parties who promised to put in an additional grid to intercept the oil, which was done with good effect.

The dry and hot season naturally exaggerated the nuisance caused by pollution of the streams of the district.

Complaints were also received of the smell from the brook below the Cocoa Works at Stirchley. This stream was full of a whitish fungoid growth, which it was said when the stream was low gave out a foul smell.

This condition has now been abated by the firm, who now run their hot water into their reservoir, instead of into the stream.

No change has taken place so far in the pollution of the stream near Woodbrooke, and in the drainage arrangements of the part of the district in the Cole Valley.

The slop drainage of parts of the Wythall district has been under consideration, but so far no action has been taken.

Refuse Removal.

During the period there were 73 privies or pan closets converted to water-closets, 9 privies altered, and 46 repaired.

There were 21 additional water-closets provided, 1,261 repaired, and 33 supplied with proper flushing apparatus.

The removal of ordinary house refuse was carried out in a very satisfactory manner, and there were very few complaints from householders, notwithstanding the very hot summer.

On notices from the department, 309 new ashbins were provided.

An owner in King's Norton was ordered in court to pay the costs incurred by the Council in altering two privies to w.c.'s, and in providing four dustbins.

Housing of the People.

The staff inspected 6,447 houses, in addition to 491 special inspections upon complaint. Repairs of various sorts were carried out in 1,055 houses, and in 524 the eaves' gutters were put right.

There were 612 houses cleansed or limewashed. Three houses were closed and demolished. Two of these were very old cottages in the Bournville district.

In Hawthorn Place, King's Heath, extensive improvements have been carried out. One obstructive dwelling was demolished, new windows were put in to one house, the yard properly paved, and the outhouses put in proper order.

By order of the Council, all the sites for projected buildings were inspected by the Medical Officer of Health.

The yards and passages of 529 houses were properly paved during the period. This is a great boon to the residents in "dirty" weather, no uncommon thing in this country.

Plans were passed for the erection of 371 buildings, of which 147 were in Selly Oak, 80 in Stirchley, and 43 in King's Norton Ward.

Food and Drugs Act.

The inspector took 169 samples in the period (ten months,) compared with 209 in 1910 and 220 in 1909. Of these 93 were milk and 45 butter.

TABLE I.

Samples Taken.

Substance.	No. of Samples.	No. Adulterated.	Substance.	No. of Samples.	No. Adulterated.
Milk	93	3	Cheese	1	—
Separated Milk	1	—	Pepper	11	—
Condensed Milk	—	—	Coffee	7	—
Butter ...	45	3	Lard	11	1
Margarine ...	—	—			
			Total ...	169	7

TABLE II.

List of Prosecutions.—Foods and Drugs.

Samples	Result of Analysis.		Result of Prosecution.
New Milk ...	Deficient in non-fatty solids to the extent of	14·1%	Defendant fined £2 and costs.
New Milk ...	Deficient in non-fatty solids to the extent of	7·6%	,, £2 ,,
Butter ...	Contained foreign fat to the extent of	77·5%	,, £1 ,,
Butter—delivered to purchaser in an unlabelled wrapper ...	Contained foreign fat		,, £1 ,,
New Milk ...	Deficient in non-fatty solids to the extent of	16·6%	,, £1 ,,

Other Offences.

Offence.	Result of Prosecution.
Exposing for sale 17¾lbs. (five pieces) of unsound meat	Defendant fined £10 and costs.
Depositing for the purposes of sale, four cooked Cowheels and two pieces of Pickled Beef in an unwholesome condition	Defendant fined £10 and costs.
Failure to convert two privies to water-closets after notice from Council ... (Work carried out by Council.)	Defendant ordered to pay the costs incurred by the Council in carrying out the work and the cost of the summons.
Failure to provide four dust receptacles ... ... (Work carried out by Council.)	Defendant ordered to pay the costs incurred by the Council in providing the dust receptacles and the costs of the summons.

Milk.

Of the 93 samples three were returned as being deficient in non-fatty solids. In one case the sample showed a deficiency of 14·1, in another of 7·6, and in a third of 16·6 per cent.

In the first two cases fines were imposed of £2 and costs and in the third of £1 and costs.

In February and May 18 samples were taken, and 11 in April.

The average of fat in the milk was 3·7, and of other solids it was 8·6 per cent. The non-fatty solids were in one month only below the standard, that being in April, the fats always being high.

TABLE III.

Samples of Milk taken during 1911 *(Part).*

Month.	No. of Samples taken.	No. reported adulterated.	Action Taken.		Composition as per Analyst's Certificate.*		Seasonal Variations of Composition of Pure Milk (Average).		Remarks.
			Vendors Prosecuted.	Vendors Warned.	Fat (Standard 3%).	Solids not Fat (Standard 8·5%).	Fat	Solids not Fat.	
January ...	13	—	—	—	4·7	8·8	3·88	8·96	
February	18	—	—	—	3·4	8·8	3·81	8·97	
March ...	8	—	—	—	3·7	8·9	3·73	8·94	
April ...	11	2	2	—	3·5	8·2	3·71	8·94	Two cases of deficiency in non-fatty solids occurred this month.
May ...	18	1	1	—	3·5	8·5	3·64	8·95	One case of deficiency in non-fatty solids occurred this month.
June ...	—	—	—	—	—	—	3·54	8·89	
July ...	7	—	—	—	3·4	8·7	3·64	8·80	
August ...	10	—	—	—	3·8	8·6	3·82	8·75	
September	8	—	—	—	3·6	8·8	3·89	8·87	
October ...	—	—	—	—	—	—	4·03	8·97	
November	—	—	—	—	—	—	4·04	8·94	
December	—	—	—	—	—	—	4·08	8·97	
	93	3	3	—	Average 3·7	Average 8·6	Average 3·82	Average 8·91	

* Supplied by courtesy of County Analyst.

Butter.

Of the 45 specimens of butter analysed three were found to contain foreign fat, and were in reality margarine.

In two cases which were taken to court, the defendants were fined £1 and costs.

Other Substances.

Eleven samples of pepper and seven of coffee were analysed and found genuine. Of 11 specimens of lard one was not genuine.

Slaughter-Houses.

The number of visits of inspection to the slaughter houses of the district was 313, and 47 defects were discovered and put right.

As in former years, special inspections were made of butchers' and fish shops late on Saturday nights, especially in the more populous districts. A disused slaughter-house in King's Heath was allowed to be re-opened by the butcher. Although within the prescribed distance of a dwelling house, it was an excellent building for the purpose, and the owner promised to carry out certain necessary alterations in the premises.

Meat Inspection.

There was condemned as unfit for food 2,489¾ lbs. of meat; rather less than half the quantity destroyed in 1910.

Of this total 1,202¾ lbs. were beef or beef offal, 289 lbs. mutton, and 998 lbs. pork. One whole carcase of beef was condemned because of hydræmia and extreme emaciation.

Three sheep carcases were destroyed on account of decomposition, and five pigs with general tuberculosis.

Other reasons for destruction of parts of carcases were fluke, local tubercle, abscesses and cysts.

A butcher in King's Norton was fined £10 and costs for exposing for sale five pieces of unsound meat, and for depositing for the purposes of sale four cooked cowheels and two pieces of pickled beef was fined an additional £10 and costs at the same time.

Summary of the Meat Condemned—Whole Carcases.

Beef	1	Hydræmia and emaciation.	Pork	5	Miliary and generalised tuberculosis.
Mutton	3	Inflammation and decomposition.			

Reasons for Partial Condemnation.

Fluke.	Pericarditis.
Localised Tuberculosis.	Cysts.
Abscesses.	Decomposition.

Total Weight of Condemned Meat.

	lbs.	ton	cwt.	qrs.	lbs.
Beef	1,064¾				
Beef offal	138				
Mutton	289				
Pork (including offal) ...	998				
Total weight	2,489¾ =	1	2	—	25¾

Dairies and Cowsheds.

The register contained 170 dairy farms, one less than in 1910, and this number included 256 cowsheds.

The farms surveyed to date were 166, with 246 sheds.

During the year informal notices were sent in regard to alterations in 14 sheds, and the works were carried out in all of them.

Twelve sheds, accommodating 90 cows, were reconstructed, and one shed was closed.

Twelve samples of water were taken from farm wells for analysis, three of these wells being condemned, and afterwards cleansed.

The sanitary improvements carried out at farms included privies converted, pigsties drained, yards paved and drained, and manure heaps removed.

Pig-keeping in cowsheds was stopped in two instances.

All the farms where butter is made, but no milk is sold, to the number of 35, were surveyed.

So far only six of these farms have been brought up-to-date.

Milk Production.

The veterinary surgeon of the Council during the six months from April visited 37 farms, a list of which is given in his report, making in all 52 inspections.

Although he found several cases of probable generalised tubercle amongst the cows examined, he found no definite case of tubercle of the udder, and no cases were reported to me by the farmers of the district.

The officer complains of the habit of farmers in stopping up the openings into the cowsheds, and of the uncleanly ways of milk dealers.

Smoke Nuisances.

The complaints of nuisance from the emission of black smoke were not at all numerous, and it was found necessary to take only nine observations.

Complaints were received of a nuisance from the fumes emitted from a laundry chimney in the Bournville district, and several visits were made to the premises.

Owing to the laundry lying much lower than the affected house, the laundry chimney only reached the height of the windows, and it was not possible to raise the chimney.

I am informed that the laundry will shortly be moved to another site.

Canal Boats.

Of 43 boats inspected, nine contravened the regulations to a greater or less extent. The cabins on these boats held 119½ people, and 85½ were found occupying the same, including ten women and five children. Five boats were not properly marked, and one was overcrowded.

Factories and Workshops.

There were 302 factories and workshops on the register, compared with 326 in 1910.

This list includes 45 bakehouses, as to 48 in the last year. The bakehouses were inspected on 135 occasions, and 32 contraventions were reported and remedied. There were fewer blacksmiths, milliners and shoemakers on the list.

The staff paid 218 visits to these various places, and eight written notices were sent out.

The defects found were 69, of which 35 were want of cleanliness, four other nuisances, and three in connection with closet supply.

All were remedied save one, two being referred to H.M. Inspector of Factories.

Factories and Workshops.

Workshops on the Register (S. 131) :—

Bakehouses	45	Workplaces	18
Blacksmiths	14	Miscellaneous	134
Dressmakers	28		
Laundries	7	Total	302
Milliners	19		
Shoemakers	37		

TABLE IV.

Factories and Workshops Act.

I.—Inspection.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances and Health Visitor.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	25	2	None.
Workshops (including Workshop Laundries)	160	6	
Workplaces	15	—	
Homeworkers' Premises	18	—	
Total	218	8	—

II.—Defects Found.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Want of Cleanliness	35	35	—	
Want of Ventilation	—	—	—	
Overcrowding	—	—	—	
Want of Drainage of Floors	—	—	—	
Other Nuisances	4	4	—	
*Sanitary Accommodations:				
Insufficient...	—	—	—	None.
Unsuitable or Defective	1	1	—	
Not separate for Sexes	2	1	2	
Breaches of S.S. 97-100	—	—	—	
Other Offences	27	27	—	
Total	69	68	2	—

* Section 22 of P. H. A.'s Amendment Act, 1890, adopted.

III.—Home Work.

Nature of Work.	Out-workers' List, Section 107.						Number of Inspections of Out-workers' premises.
	List received from Employers.				Numbers of Addresses of Out-workers received from other Councils.	Numbers of Addresses of Out-workers forwarded to other Councils.	
	Twice in the year.		Once in the year.				
	Lists.	Out-workers.	Lists.	Out-workers.			
Wearing Apparel—							
(1) Making, etc.	2	14	—	—	14	1	5
(2) Cleaning and Washing ...	—	—	—	—	—	—	—
Lace, Lace Curtains and Nets	—	—	—	—	—	—	—
Furniture and Upholstery ...	—	—	—	—	—	—	—
Fur Pulling	—	—	—	—	—	—	—
Umbrellas	—	—	—	—	—	—	—
Carding, etc., of Buttons, etc. ...	2	2	—	—	2	—	1
Paper Bags and Boxes ...	2	2	—	—	2	—	1
Brush Making	2	26	—	—	26	—	10
Stuffed Toys	—	—	—	—	—	—	—
File Making	—	—	—	—	—	—	—
Electro Plate	2	1	—	—	1	—	1
Cables and Chains	—	—	—	—	—	—	—
Anchors and Grapnels	—	—	—	—	—	—	—
Cart Gear	—	—	—	—	—	—	—
Locks, Latches and Keys ...	—	—	—	—	—	—	—
Pin and Hairpin Making ...	2	2	—	—	2	—	—
Total	12	47	—	—	47	1	18

Home-Workers.

Twelve lists of out-workers were received from other Councils, embracing 47 persons. Of these 14 made wearing apparel and 26 made brushes.

The address of one out-worker was sent to another Council.

There were 18 inspections of out-workers' premises by the Health Visitor.

Work of Health Visitor.

As in 1910, a large part of this work was in connection with the prevention of the spread of diphtheria in the schools. There were 930 swabs taken in addition to the examining of 207 children's throats. No less than 262 visits to schools were paid. She visited the homes of 988 children in connection with non-notifiable diseases, and advised the parents where necessary. In addition to 17 calls about diphtheria cases and 16 about skin complaints, she enquired into 135 cases of other illnesses and made 1,573 other visits.

TABLE V.

Visits made and Work done.

Swabs taken	930
Throats examined	207
Phthisis Patients	5
Non-notifiable Diseases	988
Skin Diseases	16
Diphtheria	17
House to House	43
Births	244
Workshops and Workpeople	19
Schools	262
School Children—Eyes Tested	20
Other Illnesses	135
Various Visits	1,573

TABLE VI.

Bacterial Examinations.

Ward.	Swabs Taken.		
	At Homes.	In Schools.	Total.
King's Norton	18	73	91
Northfield	26	3	29
Selly Oak	17	5	22
King's Heath	48	231	279
Moseley	—	—	—
Stirchley	79	316	395
Total	188	628	816

Population.

The original estimate of the population of the district, calculated on the increase in the preceding ten year period, was at the middle of the year 87,732, compared with 84,673 in the middle of 1910.

The population at the census taken on April 1st, 1911, was 81,163, the increase for the ten years being, therefore, 24,041, compared with an increase of 28,822 for the previous decennium. The estimate at the middle of 1911 on the census figures was 86,764, which is 5,968 below the estimate based on the increase of the ten year period ending April, 1901. The estimated population in the Council handbook was 91,759, and my own estimate at the middle of the year was about 84,000.

In the recent census return the populations of the old wards are not shown, but only those of the new wards of Greater Birmingham.

The population of these Wards was on April 1st, 1911, as follows :—

	No. of Families.	Population.	Males.	Females.
King's Norton	4,335	20,178	9,400	10,778
Northfield	1,680	9,029	4,346	4,683
Moseley and King's Heath	5,632	24,885	10,571	14,314
Selly Oak	5,080	25,103	11,991	13,112
Total	16,727	79,195	36,308	42,887

From these figures it is seen that the average size of families was 4·7 persons, as to 4·9 at the last census. The females were more numerous than the men in all the wards, this being specially marked in the Moseley and King's Heath Ward.

This is largely due to the number of domestic servants in these areas.

Births and Birth Rates.

There were registered 1,597 births, of which 876 were males and 721 females, equal to a rate of 22·76 per 1,000 per annum.

The rate in 1910 was 21·23, for the five-year period 1907-11 was 23·22, and for the previous quinquennium, 27·46 per 1,000.

The quarterly rates were 21·4 in the first, 22·6 in the second, and 23·7 in the third quarter.

The vital rates for the period under consideration extending from January 1st to November 8th, 1911, are, of course, not comparable with rates for a full year, but have to be given.

In the wards the highest rate as usual was in Selly Oak, with 26·8 per 1,000, followed by Stirchley, 26·6, and King's Heath, 26·2.

The rate in Moseley, was 8·5 as to 10·1 in 1910.

Notification of Births Act.

The number of births notified was 1,454, compared with 1,597 registered births.

This proportion is similar to that of 1910, and shows that notwithstanding the notices sent out a certain proportion of evasions of the Act still occurs. This is chiefly in the homes of the well-to-do, where a medical man is in attendance.

The largest proportion of non-notified cases was again in King's Norton, Moseley, Stirchley and Beoley Wards.

Notification of Births Act.

Ward.	Births.	
	Registered.	Notified.
King's Norton	113	84
Northfield...	128	117
Beoley	14	7
Selly Oak	573	557
King's Heath	309	307
Moseley	98	67
Stirchley	362	315
Totals	1,597	1,454

Work of County Health Missioner.

The Missioner paid 2,659 visits in the period, gave 11 addresses to mothers and 5 to girls, on various health matters.

Of the new births investigated, there were 454 infants naturally fed, 49 partially and 144 artificially nourished, cow's milk being generally used in the latter cases.

Boat-shaped bottles were used in 134 homes, long-tubed bottles in 49, and spoon feeding in 10.

The hot, dry summer entailed a lot of extra work on the Health Visitors, as frequent visits had to be made to the homes of delicate babies, in addition to a house-to-house visitation in the poorer parts of the town in search of infants with diarrhœa, and to give instruction as to its prevention. It is gratifying to think that no breast-fed child died from diarrhœal diseases.

Enquiries were made into 93 deaths of infants under one year of age, and into 14 deaths from 1-2 years.

There were 15 illegitimate births reported and 26 still births investigated.

There is little doubt but that some of the latter are due to drug taking by the mothers.

The Missioner found that the mothers were becoming much more educated in matters of hygiene and not so averse to the ever-open window as formerly. She finds that fire-guards are now in general use in the homes.

Many mothers are still prejudiced against the separate cot for the baby, as they think that the infant will starve from cold.

There were three fatal cases of over-laying during the period, but no direct blame could be attached to the parents in these cases.

TABLE VII.

Various Vital Rates for last Ten Years.

	10 years' average.	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911 (part).
Birth Rate	25·34	30·14	27·54	28·4	25·62	25·6	24·45	24·54	23·13	21·23	22·76
		Five Years' Average 27·46					Five Years' Average 23·22				
Death Rate	10·22	11·25	10·24	11·02	9·62	9·97	10·78	10·78	10·34	8·55	9·64
		Five Years' Average 10·42					Five Years' Average 10·02				
Zymotic Death Rate	0·83	1·1	0·75	0·78	0·73	0·82	0·75	0·82	1·04	0·59	0·96
		Five Years' Average 0·84					Five Years' Average 0·83				
Infant Death Rate per 1,000 live births	94·5	109	98	102	91	105	105	86	73	69	107
		Five Years' Average 101·00					Five Years' Average 88·00				

Deaths and Deaths Rates.

The deaths registered were 677, of which 330 were males and 347 were females. This equals an annual death rate of 9·64 per 1,000, compared with 8·55 in 1910, and 10·34 in 1909.

The five years' average 1907-11 was 10·02; for the preceding period it was 10·42.

The quarterly rates for the first three quarters were 7·6, 9·6 and 9·9 per 1,000 respectively.

At ages under one year there were 170 deaths; 1-2 years, 36 deaths; at 2-5 years, 23 deaths; at 25-45 years, 67 deaths; at 45-65 years, 129 deaths; and over 65 years, 196 persons died.

The ward death rates varied from 11·1 in Stirchley, 10·5 in King's Heath, 10·1 in Northfield, and 9·9 in Selly Oak, to 7·8 in King's Norton, and 6·0 in Moseley.

The rate in Beoley was 18·2 per 1,000, but this is of no statistical value, as the population is so minute.

The reason of the death rate being higher than in 1910 was the occurrence of the diarrhœa epidemic connected with the hot, dry summer.

TABLE VIII.

Quarterly Birth and Death Rates.

(From the Registrar-General's Summary.)

	First Quarter.	Second Quarter.	Third Quarter.
Birth Rate	21·4	22·6	23·7
Death Rate	7·6	9·6	9·9
Zymotic Death Rate	0·42	1·0	3·0
Infantile Death Rate per 1,000 live births ...	79	78	155

Infantile Mortality.

There were 170 deaths of infants certified, equal to a death rate of 107 per 1,000 live births.

The rate in 1910 was only 69·5 per 1,000; in the last five years it averaged 88·0, and in the preceding period 101·0.

Of the total deaths 105 were of males and 65 of females, giving death rates of respectively 120 and 90 per 1,000 live births.

In 1910 there were more than twice as many deaths of males as of females at this age period.

From measles and whooping cough there were ten deaths of infants, all being males, except one. In practically all the other diseases male deaths predominated.

There were 41 deaths that took place within one week of birth, chiefly from premature birth, congenital defects, and wasting.

Under one month there were 61 deaths, 89 under three months, and 116 under six months.

Epidemic diarrhœa and enteritis caused 51 deaths, 32 males and 19 females, which occurred largely at ages from 3-12 months.

There were 17 deaths from congenital malformations, 12 males and 5 females, 20 from premature birth, and 27 from marasmus.

Convulsions caused 6 deaths, pneumonia 12, and bronchitis 2.

One death was certified from tuberculosis, and one from syphilis.

There were three deaths from overlaying, one male and two females.

The quarterly rates were very low in the first two quarters, being 79 and 78 respectively, but in the third quarter, owing to the diarrhœal epidemic, the rate was 155 per 1,000 live births. The increase from 1910 was largely due to the climatic conditions, which affected inimically the infant population of the country generally. The ward death rates showed slight variation, there being 58 infant deaths in Selly Oak, and 45 in Stirchley, with a correspondingly high number of births.

TABLE IX.

Infantile Mortality in weeks and months during the year 1911 (*Jan. 1st to Nov. 8th*).

Cause of Death.	Males.	Females.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—
Chickenpox	—	—	—	—	—	—	—	—	—	—	—	—
Measles	5	5	—	—	—	—	—	—	1	1	3	5
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	1	4	—	—	1	1	2	1	2	—	—	5
Diarrhœa	32	19	—	—	—	1	1	10	14	17	9	51
Enteritis	1	1	—	—	—	—	—	2	—	—	—	2
Tuberculous Meningitis	—	1	—	—	—	—	—	1	—	—	—	1
Abdominal Tuberculosis	—	—	—	—	—	—	—	—	—	—	—	—
Other Tuberculous Diseases	—	—	—	—	—	—	—	—	—	—	—	—
Congenital Malformations	12	5	12	—	—	1	13	3	—	1	—	17
Premature Birth	17	13	22	3	2	2	29	—	1	—	—	30
Atrophy, Debility and Marasmus	20	7	4	3	2	1	10	8	6	1	2	27
Atelectasis	—	—	—	—	—	—	—	—	—	—	—	—
Injury at Birth	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	1	—	—	—	—	—	—	1	—	—	—	1
Rickets	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis (not tuberculous)	1	1	1	—	—	—	1	—	—	—	1	2
Convulsions	4	2	—	—	—	—	—	1	1	3	1	6
Gastritis	1	1	—	—	—	—	—	—	—	1	1	2
Laryngitis	—	—	—	—	—	—	—	—	—	—	—	—
Bronchitis	2	2	—	—	—	—	—	—	2	—	—	2
Pneumonia (all forms)	8	4	—	1	—	—	1	1	—	6	4	12
Suffocation, overlying	1	2	1	—	—	1	3	—	—	1	—	3
Other Causes	4	—	1	—	1	—	1	—	—	1	1	4
All Causes — Certified	104	58	39	7	5	6	57	28	26	30	21	162
All Causes — Uncertified	6	2	2	—	1	1	4	—	1	2	1	8
Grand totals	110	60	41	7	6	7	61	28	27	32	22	170

TABLE X.

Various Rates in Wards for Years 1907–10 and 1911 (*up to Nov. 8th*).

Ward.	Birth Rate.					Zymotic Death Rate.					Total Death Rate.				
	1907.	1908.	1909.	1910.	1911.	1907	1908.	1909.	1910.	1911.	1907.	1908.	1909.	1910.	1911.
King's Norton	18·05	27·34	19·29	19·2	16·0	0·28	0·55	0·38	0·73	0·57	11·14	10·7	9·6	7·8	8·0
Northfield ...	26·87	28·74	24·52	20·1	24·2	1·16	0·54	0·86	0·65	0·95	11·48	9·8	11·3	8·0	10·3
Selly Oak ...	33·57	31·24	31·25	27·4	26·8	1·15	0·82	1·75	0·89	1·6	13·17	11·1	11·7	10·4	10·1
King's Heath	26·91	29·75	24·7	25·6	26·1	1·01	0·92	1·06	0·52	1·4	12·12	15·1	10·7	9·9	10·7
Moseley ...	10·64	10·0	8·83	10·1	8·5	0·16	0·48	0·54	0·07	0·3	7·37	8·3	7·7	7·0	6·2
Stirchley ...	24·03	20·25	25·7	24·5	26·6	0·55	1·45	0·9	0·51	2·3	9·28	10·8	11·5	7·0	11·3
Beoley ...	35·4	30·1	35·4	23·0	29·0	0·0	0·0	0·0	1·8	4·1	12·4	12·4	16·0	12·4	18·5

Zymotic Deaths and Death Rates.

There were 97 deaths from zymotic diseases, including 28 deaths returned as enteritis, of children under two years of age. There seems little doubt but that these deaths should be included in the zymotic rate, when comparing the ward death rates, but in comparing with other districts of the country, these deaths have been excluded.

The death rate per 1,000 per annum was 0·96, compared with a rate of 0·59 in 1910. The rate for the quinquennium 1902-6 was 0·84, and for the last similar period 0·83 per 1,000. The quarterly rates were 0·42 in the first, 1·0 in the second, and 3·0 in the third.

The ward rates (excluding Beoley) varied from 0·3 in Moseley and 0·57 in King's Norton to 1·6 in Selly Oak and 2·3 in Stirchley.

Of the total deaths only 12 were due to notifiable diseases.

TABLE XI.

Zymotic Deaths and Death Rates in Wards.

Ward.	Smallpox.	Scarlet Fever.	Diphtheria.	Measles.	Pertussis, or Whooping Cough.	Diarrhœa and Enteritis (under 2 years of age).	Enteric or Typhoid Fever.	Total.	Rate per 1,000.
King's Norton ...	—	—	1	—	—	3	—	4	0·57
Northfield	—	—	—	—	2	3	—	5	0·95
Beoley	—	—	1	—	—	1	—	2	4·1
Selly Oak	—	1	1	8	—	25	—	35	1·6
King's Heath ...	—	2	3	—	3	8	—	16	1·4
Moseley	—	—	—	—	—	4	—	4	0·3
Stirchley	—	1	2	10	1	17	—	31	2·3
Rubery Asylum ...	—	—	—	—	—	—	—	—	—
West Heath Fever Hospital ...	—	—	—	—	—	—	—	—	—
Totals	—	4	8	18	6	61	—	97	0·96*

* Excluding deaths from Enteritis.

Measles.

Measles was seriously epidemic during the period, and caused altogether 18 deaths, 14 males and 4 females.

These deaths were distributed over two wards only, 10 being in Stirchley and 8 in Selly Oak.

There were five deaths at ages under one year, six between one and two years, and six from two to five years of age.

There were closed altogether, for periods of from three weeks upwards, ten

infant schools, in addition to a number of class exclusions which were tried in several instances with moderate success. Large numbers of handbills of precautions were circulated throughout the affected districts, and visits paid to the homes of the children with the disease.

This disease, under the present urban conditions of most of the district, is now epidemic every two years, there having been no less than 33 deaths in the year 1909, 18 in 1907, and 20 in 1905.

Notification seems of little use in checking this disease, but hospital isolation for severe cases would undoubtedly lower the mortality rate.

Whooping Cough.

Of the six deaths certified two were males and four females, all but one being under one year of age.

There were three deaths in King's Heath, two in Northfield, and one in Stirchley. This was one of the "lean" years of the disease, as in 1910 there were 15 deaths.

One country school was closed because of this complaint.

Epidemic Diarrhœa.

Associated with the hot dry summer, this disease was exceedingly prevalent in the district in common with other parts of the country.

There were 61 deaths from diarrhœa and enteritis in children under two years of age, and 67 deaths from these complaints at all ages.

There were 35 males and 32 females who succumbed.

In Selly Oak Ward there were 25 deaths, 17 in Stirchley, and 8 in King's Heath.

The epidemic started in the week ending August 5th, when there were six deaths, there being six deaths in the week ending August 19th, 13 in the following week, 15 in the week ending September 2nd, and six in the week ending September 9th.

The epidemic languished on until the end of September, when cooler weather brought it to an end. No less than 51 of the deaths were of children under one year of age, and all these were infants artificially fed.

Great efforts were made from the incipience of the outbreak to warn parents of the great danger of infection, and to give special encouragement to breast-feeding at this particular season.

House-to-house visitations were made throughout the working-class areas by the visitors, and handbills of precautions were widely circulated. For this purpose a new handbill was drawn up telling people what to do when a child had symptoms of diarrhœa before a medical man could be called in.

Inspections were made by myself and the inspector in the poorer parts of the district, and the scavenging was specially attended to by the Surveyor's department.

TABLE XII.

Various Rates per 1,000.

Estimated Population, 81,515.		Annual Rates per 1,000.
Births	1,580	22·76
Deaths	673	9·64
Factor	1·0466	10·08 (Corrected Death Rate)
Infant Deaths	170	107 (per 1,000 live births)
Diarrhoea ,, ...	38	0·54
Enteritis ,, ...	29	0·41
Smallpox ,, ...	Nil	Nil
Measles ,, ...	18	0·25
Scarlet Fever ,, ...	4	0·05
Diphtheria ,, ...	8	0·11
Whooping Cough Deaths ...	6	0·08
Enteric Fever ,, ...	Nil	Nil
Phthisis ,, ...	27	0·38
Cancer ,, ...	56	0·79

Cancer.

There were certified 54 deaths from cancer, 17 males and 37 females.

Two deaths took place at ages of from 15-20 years; 7 from 35-45; 16 from 45-65 and 29 at ages over 65.

The proportion of males and females deaths was similar to 1910.

Heart Disease.

Diseases of the heart caused 83 deaths, 49 males and 34 females. Of these 32 were certified as endocarditis or valvular disease, and 35 as heart disease.

Deaths occurred at all age periods over five, the majority being adults over 50 years of age. Most of these deaths were due in the first case to rheumatic affections.

Respiratory Diseases.

Acute bronchitis caused 13 deaths, seven males and six females, and the chronic form 16 deaths, five males and 11 females. Pneumonia was certified in 45 instances, 24 males and 21 females. Lobar pneumonia caused nine deaths, and lobular pneumonia 22 deaths, 18 of which were of children.

There were three deaths from emphysema and one from pleurisy.

Senile Decay.

Old age was the registered cause of death in 53 instances, 18 males and 35 females, all being over 65 years of age, and 14 over 85.

The number was relatively greater than in 1910. One death was certified as being due to "senile decay, accelerated by falling downstairs."

Tuberculosis.

Only 40 deaths were returned as being due to the invasion of the Tubercle Bacillus, compared with 76 in 1910 (whole) a remarkable difference even when allowance is made for the shorter period dealt with.

In 6 instances the coverings of the brain were attacked, in 27 the lungs, in 4 the abdominal glands, and 2 were generalised attacks.

Pulmonary Tuberculosis.

Of the 27 deaths from this disease 13 were males and 14 females, and deaths took place at ages from 15 years upwards. The number of deaths compares very favourably with those for any year since 1903, and possibly longer. The average number of deaths for the seven years 1904-10 was 45.

This favourable result has doubtless been brought about by the open-air treatment at West Heath Hospital, which has lengthened the lives of a large number of residents of the district, and has probably cured a proportion of early cases.

TABLE XIII.

Ward Births and Deaths, and Deaths in Public Institutions, 1911 (*Jan. 1st to Nov. 8th*).

Wards.	Estimated Population.	Births.	Rate per 1,000.	Deaths at Ages.								Total.	Death Rate per 1,000.	Death Rate in 1910.
				0-1	1-2	2-5	5-15	15-25	25-45	45-65	65 up			
King's Norton ...	8,173	112	16·0	15	6	2	2	2	7	10	12	56	7·8	7·8
Northfield... ...	6,107	127	24·2	12	1	3	—	1	6	9	22	54	10·1	8·0
Beoley	565	14	29·0	—	—	1	2	—	—	3	3	9	18·2	12·4
Selly Oak ...	24,695	569	26·8	58	11	7	10	10	23	39	57	215	9·9	10·4
King's Heath ...	13,374	309	26·2	31	4	3	7	2	12	26	38	123	10·5	9·9
Moseley	13,167	96	8·5	9	2	1	—	3	4	21	30	70	6·0	7·0
Stirchley	15,434	353	26·6	45	12	6	9	8	15	21	34	150	11·1	7·0
Gen. Hosp., B'ham	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Queen's Hos. B'ham	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Children's Hosp....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
County Asylums	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Various	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	81,515	1,580	22·76	170	36	23	30	26	67	129	196	677	9·64	8·55

Notification of Consumption.

Both voluntary notification and notification by the Union Medical Officers was in force during the period, and on May 1st, by a special order of the Local Government Board, it was made obligatory for all hospital doctors to notify cases of the disease.

Altogether there were notified 108 cases, compared with 68 in the previous year. From the Union officers 14 cases were notified, relating to which 11 notifications were under Form A, 6 under Form B, and 4 under Form C.

Of the reported cases 35 were from Selly Oak Ward, 24 from King's Heath, nine each from King's Norton and Northfield, and six from Moseley.

One case was notified of an infant aged one year, whose mother and brother were under treatment. This case was under observation, but the disease was found not to be phthisis.

There were 13 cases, chiefly found by medical inspection of children at school age, most of them being pre-tubercular, or very early cases.

Between the ages of 15 and 25 years there were 27 cases, from 25 to 45 years 61 cases, and 11 from 45 to 65.

A large proportion of all the notified cases were treated at the West Heath open-air block, for longer or shorter times, and towards the end of the period this treatment was followed up by the injection of tuberculin. After leaving the hospital the patients attended at the Health Office twice weekly for injections.

TABLE XIV.

Notification of Consumption.

(1.) Public Health (Tuberculosis) Regulations, 1908.

Notifications Received (*Jan. 1st to Nov. 8th*).

No. of Cases Notified.	Notifications under Form A.	Notifications under Form B.	Notifications under Form C.	Notifications under Form D.
14	11	6	4	—

(2.) Total Cases Notified from the Wards and at Ages, including Voluntary Notifications.

Ward.	Years.						
	1-5	5-15	15-25	25-45	45-65	65 up	Totals.
King's Norton	—	3	1	5	—	—	9
Northfield	—	—	2	7	—	—	9
Selly Oak	—	—	3	26	6	—	35
King's Heath	—	3	12	8	1	—	24
Moseley	—	—	1	4	1	—	6
Stirchley	1	7	2	9	2	—	21
Infirmary, Selly Oak	—	—	—	2	1	1	4
Totals	1	13	21	61	11	1	108

Deaths from Various Causes.

Two deaths were attributed to rheumatic fever; seven to diabetes; 17 to apoplexy; four to general paralysis; three to locomotor ataxy, and five to other diseases of the spinal cord.

There were 18 deaths from Bright's disease, and six from puerperal complications.

Accidents.

Accidents were the cause of 27 deaths, four being in railway traffic, five from burns and scalds, five from drowning, and four from falls.

Three deaths were put down to sunstroke.

Suicides.

There were six suicides, three males and three females.
One was from poison, two by hanging, and three by drowning.

Deaths in Public Institutions.

Excluding the deaths at West Heath Hospital, dealt with elsewhere, there were 266 deaths in the institutions of the district, most of them being of non-residents.

In the Union Infirmary there were 207 deaths, 48 of whom were from this district, including 24 from phthisis, 33 from heart diseases, 52 from old age, 18 from respiratory diseases, and from cancer, and 12 from apoplexy. Erysipelas was the cause of three deaths, and enteritis of two.

At Rubery Asylums there were 50 deaths 23 from heart disease, six from phthisis, and four from epilepsy.

In Moseley Hall there were two deaths, in St. Paul's Convent three, and four at Monyhull Colony.

There were 52 deaths of residents from the district which took place at institutions outside. These latter institutions include the County Asylums and the General Hospitals in the City.

TABLE XV.

Causes of Death in Public Institutions.

	Union Infirmary.	Rubery Asylum.	Moseley Hall.	St. Paul's Convent.	Monyhull Colony.	Totals.
Enteritis (and Colitis) ...	2	1	—	—	—	3
Erysipelas	3	—	—	—	—	3
Diabetes	1	—	—	—	—	1
Nephritis	8	1	1	—	1	11
Accidents	3	1	—	—	—	4
Phthisis	24	6	—	—	—	30
Other Tubercular Diseases ...	2	1	—	—	—	3
Cancer	18	1	—	—	—	19
Heart Diseases	33	23	—	—	—	56
Alcoholism	4	—	—	—	—	4
Apoplexy	12	1	—	—	—	13
Epilepsy	1	4	—	—	—	5
Bronchitis	8	2	—	1	—	11
Pneumonia	10	2	—	—	1	13
Senile Decay	52	3	—	1	—	56
Marasmus, Debility	1	—	—	—	—	1
Various Diseases	25	4	1	1	2	33
Totals	207	50	2	3	4	266

TABLE XVI.

Deaths in whole District during the Years 1904–11 *from the following Diseases.*

Causes of Death.	Years.							
	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911 (part).
Phthisis	40	42	46	37	52	51	48	27
Other Tubercular Diseases ...	24	16	19	17	18	21	29	13
Cancer	52	45	41	59	56	73	64	56
Marasmus and Debility ...	26	29	26	62	40	32	23	27
Respiratory Diseases— (Bronchitis, Pneumonia, Pleurisy, etc.)	109	98	105	143	136	157	94	80

Infectious Disease Notification Act.

The notifications received under this Act were 438, of which 221 were cases of scarlet fever, 161 cases of diphtheria, five of typhoid fever, and 49 of erysipelas.

TABLE XVII.

Infectious Cases Notified in Districts.

Disease.	Selly Oak.	Bournbrook.	Selly Park and Ten Acres.	Bournville.	Stirchley.	Cotteridge.	King's Norton.	Northfield.	Moseley.	King's Heath.	California.	Rubery District.	Bartley Green District.	West Heath.	Holly Wood.	Beoley.	Selly Oak Infirmary.	Rubery Hill Asylum.	Moseley Hall Convalescent Home.	Woodlands Cripples' Home.	Totals.
Scarlet Fever ...	12	25	18	24	19	24	14	13	22	48	—	1	—	—	—	—	—	—	1	—	221
Diphtheria and Membranous Croup ...	—	7	8	10	36	18	9	14	4	45	—	—	2	—	—	1	—	—	7	—	161
Typhoid Fever ...	—	—	2	—	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	5
Erysipelas ...	2	15	2	2	9	2	1	1	3	4	—	—	—	—	—	—	5	3	—	—	49
Puerperal Fever	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Smallpox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Totals	14	47	30	36	67	44	24	28	29	98	—	1	3	—	—	1	5	3	8	—	438

Smallpox.

No case of smallpox was reported in the district, the last case of this disease having occurred in the year 1905.

A case was notified in the City during the summer, but there was no further spread.

Enteric or Typhoid Fever.

Five cases of typhoid fever were notified; the same number as in 1910.

All the cases reported were male adults.

Two cases were notified in Selly Park district about the same time of the year.

The homes were a distance away from each other, and the men themselves had no apparent connection in any way; both were employed in the City.

There were two cases in Stirchley district; one case at Woodgate had been infected by relations, whom he had visited in the Bromsgrove district.

The source of contagion could not be traced in the other instances.

There have been no deaths from typhoid for three clear years, a record in the history of the district.

Puerperal Fever.

One case of this disease was reported in Stirchley Ward, and this case was a fatal one. The patient, who was attended by a doctor, had been waited upon by a relative, who had no knowledge of aseptic nursing.

A fatal case occurred in a resident from this district at the County Asylum.

Erysipelas.

There were 49 cases of erysipelas reported, nine more than for the whole of 1910.

In Bournbrook there were 15, in Stirchley nine, and four in King's Heath.

In Selly Oak Infirmary there were five cases, and three at Rubery Asylums.

Three deaths were caused by the disease, all of them of non-residents, in the Infirmary.

Scarlet Fever.

Notifications were received of 221 cases of Scarlet Fever, 107 males and 114 females.

One patient was under one year of age, four were under two years, 42 from two to five years, and 159 from five to fifteen years.

Sixteen adults were attacked.

There were only four deaths, equal to the low rate of 1·8 per cent., the same rate as in 1910.

This is the smallest number of cases and deaths for some years. The male case mortality was 0·9 per 100, and the female rate 2·6.

Cases were reported in all the wards.

In King's Heath there were 48 cases, 25 in Bournbrook, 24 in Cotteridge, 22 in Moseley, and 19 in Stirchley.

No cases occurred in the Bartley Green area, and only one in Moseley Hall.

In 19 infected households there were two cases, in nine there were three cases, and in two there were four. The size of families attacked varied from 20 families with three members, 42 with four, and 42 with six, to one family with ten, and one with 12 members.

Of 168 houses infected, 107 were six-room houses, three only had three rooms, and two had 11 rooms.

Of the reported cases, 160, or 72·4 per cent., were removed to hospital.

TABLE XVIII.

Scarlet Fever Cases and Deaths at Various Ages.

	Males.	Females.	All Ages.	0-1.	1-2.	2-5.	5-15.	15-25.	25-45.
Cases	107	114	221	1	3	42	159	9	7
Deaths	1	3	4	—	1	—	3	—	—
Per cent.	0·9	2·6	1·8	—	33·3	—	1·8	—	—

Diphtheria.

There were notified 161 cases of diphtheria, 88 males and 73 females, the largest number ever dealt with in the annual report of the district. This is now the fourth year of the epidemic, and it seems probable that the disease will be much less prevalent during the ensuing years.

The fatality was very low, there being only eight deaths, compared with 20 in 1910, and 30 in 1909. This is a death rate of only 5·0 per cent. The male death rate was slightly higher than the female one.

Of the total cases 119 were at ages between 5-15 years, 24 adults being attacked.

The most cases were reported from King's Heath with 45, Stirchley having 36, compared with 59 in 1910.

There were no cases in Selly Oak proper, seven only in Bournbrook, and eight in Selly Park.

As usual, Bournville suffered with 10 cases, none of which were connected with the infant school there.

There were in Cotteridge 18 cases, 14 in Northfield, and nine in King's Norton.

Two cases occurred in Bartley Green district, and one in Beoley, the latter, which was a fatal case, being infected on the south coast.

TABLE XIX.

Diphtheria Cases and Deaths at Age Periods.

	Males.	Females.	All Ages.	0-1	1-2	2-5	5-15	15-25	25-45
Cases	88	73	161	—	2	16	119	18	6
Deaths	5	3	8	—	1	1	6	—	—
Per cent.	5·6	4·1	5·0	—	5·0	6·2	5·0	—	—

TABLE XX.

Infectious Diseases, Notifications and Deaths since 1895.

Disease.		Years.																
		1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Smallpox	Cases	7	—	—	—	—	—	—	6	10	3	1	—	—	—	—	—	—
	Deaths	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Scarlet Fever ...	Cases	142	306	312	151	88	126	186	524	399	352	239	226	437	500	602	319	221
	Deaths	5	5	11	5	2	3	3	16	16	4	4	7	12	12	15	6	4
Death rate, per cent.		3·5	1·6	3·5	3·3	2·2	2·3	1·6	3·0	4·0	1·1	1·6	3·1	2·7	2·4	2·5	1·8	1·8
Hospital Cases		129	278	286	106	61	114	162	460	351	308	199	189	387	434	495	246	160
Percentage removed		90·	90·	91·	70·	70·	90·	87·	87·	88·	86·	83·2	83·6	88	86·	82·	77·	72·4
Diphtheria ...	Cases	31	59	92	38	126	85	111	73	48	30	40	40	59	120	113	152	161
	Deaths	10	16	12	6	17	12	12	13	5	6	6	5	8	21	30	20	8
Death rate, per cent.		32·2	27·1	13	15·8	13·5	14·1	10·8	17·8	10·4	20	15	12·5	13·5	17·5	26·5	13·1	5·0
Membranous Croup Cases ...		—	3	1	—	3	6	—	—	—	—	—	—	—	—	—	—	—
Typhus Fever ...	Cases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Deaths	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Estimated Population		34,127	38,117	42,700	48,500	52,076	54,958	57,120	60,779	63,717	66,667	69,630	72,608	75,600	78,608	81,632	84,673	81,515
Typhoid Fever ...	Cases	8	6	15	27	45	45	37	26	12	10	11	11	12	19	4	5	5
	Deaths	—	3	1	2	6	12	—	7	1	2	—	1	5	6	—	—	—
Death rate, per cent.		—	50	6·6	8·4	13·3	26·6	—	27	8·3	18·2	—	9·1	41·7	31·5	—	—	—
Puerperal Fever	Cases	1	4	2	2	—	2	5	7	5	4	5	2	4	2	2	—	1
	Deaths	—	2	—	1	—	—	—	5	—	3	5	—	1	1	2	—	2
Erysipelas... ...	Cases	37	34	41	27	29	47	66	61	42	41	70	69	60	57	46	40	49
	Deaths	1	—	—	—	—	—	—	—	2	4	—	2	4	2	1	2	—
Measles	Deaths	1	7	12	16	1	22	12	4	7	6	20	6	18	3	33	—	18
Whooping Cough	Deaths	12	13	13	4	7	7	33	17	6	18	10	17	12	8	4	15	6
Diarrhœa & Dysentery	Deaths	2	—	16	19	16	12	17	13	12	16	11	20	2	15	3	9	67

• Including Enteritis.

Bacterial Examinations.

There were taken and sent to Worcester for bacterial examination 816 swabs, 188 of which were taken at the homes and 628 in schools.

In King's Heath there were taken 279 swabs, 48 at the homes and 231 in schools.

In Stirchley Ward 395 swabs were taken, 316 in schools and 79 at the homes.

The "home" swabs were taken from children with doubtful sore throats, and from "carriers" discovered in the schools, and excluded until showing a negative swab.

In Stirchley and King's Heath a number of whole classes were swabbed, and a fair number of "carriers" found.

In addition to the swabs taken by us, there was a very large number taken by the medical men of the district, who have taken full advantage of bacterial diagnosis.

This no doubt accounts for the number of cases notified, and for the small death rate.

Epidemic Polio Myelitis.

This disease, which has recently been prevalent in certain parts of the country, more especially in Devon and Cornwall, made its appearance in the Midlands during the year. One or two cases having been unofficially reported to me, a letter was sent out to all the medical men in the district asking them if they would inform me of any cases that had come under their notice.

In answer to this, there were 17 cases in all reported, eight males and nine females.

Of these one was under one year of age, seven were between one and five years, eight from five to 15 years, and one over 15 years.

Three fatal cases occurred, all females, and aged respectively two, five and 26 years.

The cases were distributed throughout the district, there being two in Selly Oak, three in Bournbrook, two in Bournville, three in Stirchley, two in King's Heath, one in Cotteridge, three in King's Norton, and one in Wythall.

They were all single cases per house, with one exception, in King's Norton, where three cases occurred, in addition to one possible mild case. The first case occurred in Stirchley, in an adult, about the end of February, this patient dying from exhaustion after an illness of seven months.

The second case in June and the third case on August 3rd were in Stirchley, but none of these cases were in the same part of the ward.

During August three more cases occurred, two in Bournbrook and one in Bournville.

On September 1st there were two cases, one in King's Heath and one at King's Norton. On September 3rd three cases began their illness, one in Bournville, one in King's Heath, and one at Wythall. Five more cases cropped up in September, and the last one on October 11th.

Except for the three family cases in King's Norton, no possible history of infection could be traced.

Seven affected children attended school, but all went to different schools, except the members of the one family in King's Norton.

It has been suggested that the infection is carried by dust, and is more prevalent in hot, dry summers.

It has been proved that the disease can be inoculated from animal to animal, but so far it has not been found possible to identify the germ or to grow it in artificial culture.

WEST HEATH HOSPITAL.

During the period there were admitted 160 cases of scarlet fever, 114 of diphtheria, 78 of phthisis, and five of other diseases, a total of 357 patients.

There were discharged 322 patients, 164 scarlet fever, 96 diphtheria, and 57 consumption cases.

TABLE XXI.

West Heath Hospital Returns.

Year.	Number of Cases.	Scarlet Fever.	Smallpox.	Diphtheria.	Number of Deaths.	Balsall Heath.	Harborne.	Edgbaston.	Birmingham.	Droitwich.	Bromsgrove.	Barnt Green.	Tardebigge.	Bellbroughton.	Stoke Prior.	Redditch.	Hagley.	Alvechurch.	Billesley Common.	Hopwood.	Quinton.	Smethwick.	Bentley.	Clent.	Halesowen.	Weatheroak Hill.	Lickey End.	Stourbridge.	St. Paul's Convent Branch, near Horsefair, Bristol St., Birmingham.
1889	156	156	—	—	3	66	9	1	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1890	371	371	—	—	13	153	48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1891	163	156	7	—	*a*3	63	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1892	106	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1893	256	243	13	—	*b*1	—	—	—	—	7	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1894	180	146	34	—	*c*5	—	—	—	—	—	4	—	1	2	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1895	147	136	11	—	*d*5	—	—	—	—	1	3	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—	—	—
1896	288	288	—	—	4	—	—	—	2	—	6	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—
1897	306	306	—	—	9	—	—	—	—	—	1	—	4	—	—	2	—	3	—	1	4	1	2	2	1	1	—	—	—
1898	127	127	—	—	5	—	—	—	—	—	1	—	—	—	—	1	2	—	—	—	—	—	—	11	2	—	1	3	—
1899	63	63	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
1900	119	119	—	—	2	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	3	—	—	—	—	—
1901	163	163	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1902	462	462	—	—	15	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1903	353	352	—	1	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1904	308	305	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1905	216	199	—	16	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1906	209	189	—	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1907	418	387	—	31	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—
1908	495	433	—	60	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1909	550	495	—	55	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1910	333	246	—	86	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1911	357	160	—	114	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	6146	5608	65	385	178	282	72	1	14	8	21	1	5	2	14	6	3	4	2	1	5	2	2	17	4	1	1	3	1

a 2 Scarlet Fever, 1 Smallpox. *b* Scarlet Fever. *c* Scarlet Fever, 4 Smallpox. *d* Scarlet Fever. *e* Scarlet Fever.
Smallpox now treated at Hollywood.

Scarlet Fever.

The 160 cases of this disease comprised 83 males and 77 females. There were three deaths, one male and two females, equal to a death rate of 1·8 per cent.

There were 32 patients admitted who were under five years of age, 83 from five to ten years, and 13 from 10 to 15 years.

The percentage of cases removed of the total notified was 72·4 per cent., as to 77 per cent. in 1910.

This increase of home treatment is a distinct advantage, and has been officially encouraged in recent years.

The average stay in hospital of the scarlet fever patients was eight weeks, compared with about seven weeks in previous years.

There were 55 removals from Selly Oak Ward, 40 from Stirchley, and 42 from King's Heath. Only seven patients came from Moseley.

Diphtheria.

Of the 114 cases of diphtheria admitted, 64 were males and 50 females. There were five deaths, two males and three females, the death-rate being less than five per cent., which was the rate in the district generally. There were 51 patients between the ages of five and ten and 34 between 10 and 15 years.

There were discharged 96 patients.

The average stay of the patients in hospital was 42 days, about double the detention of previous years. Notwithstanding this precaution, there were two patients discharged who apparently infected other children in the home, these being the first "return" diphtheria cases for many years.

Consumption.

The open-air block, which at the beginning of the year took in 20 patients, was altered later to take in 30 cases.

They admitted 78 patients, 32 males and 46 females, during the period and discharged 57.

The average stay of the patients was 89 days, varying from two days to 273.

At the outset patients were kept in, as a rule, for three months, but towards the end of the summer a period of sfx weeks was fixed in most cases.

The treatment by the injection of tuberculin was begun at the hospital, on similar lines to that in the City, and was continued after discharge at the health office, where a clinic was established.

Good work has been done in this department, and although many cures may not have been brought about, the lives of numerous persons were lengthened and made more cheerful, in addition to the educative effect on the patients and their friends.

TABLE XXII.

Articles and Houses Disinfected.

Houses	420	
Flock and Feather Beds	343	
Mattresses	96	
Bolsters	430	
Pillows	740	
Blankets...	537	
Counterpanes	335	
Cushions...	8	
Rugs	26	
Carpets	3	
Articles of Clothing	595	
Various Articles	3	
Bedding destroyed	10	lots
Various articles destroyed	18	
Total	3,564	

VETERINARY SURGEON'S FINAL REPORT TO MEDICAL OFFICER OF HEALTH, KING'S NORTON & NORTHFIELD URBAN DISTRICT COUNCIL.

November 8th, 1911.

I beg herewith to submit that since the date of my last report in April I have visited during the six months :—

Bell's Farm	Ladsworth Hall Farm
Broad Lane Farm	Mass House Farm
Bank Top Farm	Maypole
Church Farm	Millpool Hill
Dawberry Fields	Oakham Cottage
Druids Lane	Paddocks, Wythall
Digbeth	Slade Pool Farm
Ford House Farm	South Hill
Grimes Pit Farm	Slade Pool
Haunch Farm	Tunnel Cottages
Hay Green Farm	Tessal Farm
Hawkesley	Homestead
Highter's Heath	Vicarage Farm
Holly Bank	Woodthorpe
Halcrest	Warstock
Ivy House Farm	Yew Tree Farm, Northfield
Inkford Brook Farm	Weoley Park Farm
Kingswood House	West Heath Farm
Longbridge.	

Total ... ... 37 farms.

I have made a total of fifty-two visits to farms for the purposes of inspection, and although I have detected a number of cases of suspicious generalized tuberculosis, I have not found a definite case of tuberculosis of the udder.

In my opinion there is an urgent necessity for improvement in methods of cleanliness adopted on most farms in the process of milking.

Ventilation appears to be an objectionable feature in cowhouses to most farmers, and the inlets are frequently found obstructed by hay, etc. In my experience when cows get accustomed to the 800 cubic feet and the regulation ventilation, etc., they do not give a reduced quantity of milk, which must be better in quality in accordance with the improved health of the animal kept under these hygienic conditions.

The present law requires amending in regard to tuberculosis in dairy cows, so that a cow in any stage of the disease should be declared unfit to yield milk for human consumption, and no cow should be registered as fit to milk unless having passed the tuberculin test, and can therefore be certified free from the disease. Testing should be systematically carried on at *all* registered dairy farms annually, at the expense of the authorities, and a public registration list placed in a convenient position where any person interested could examine it, and so determine the most reliable source to obtain tubercle-free milk.

It is with great regret I relinquish my duties as veterinary inspector of cows and cowsheds, as it is a branch of my work in which I have been keenly interested, and I wish to tender my thanks to all those officials who have so kindly assisted me in that work, and who have made it at all times more of a pleasurable duty than an arduous labour.

(Signed) F. J. TAYLOR, M.R.C.V.S.

TABLE A.

Cases of Infectious Disease notified during the Year 1911 (*up to Nov. 8th*).

Notifiable Disease.	Cases Notified in Whole District.								Total Cases Notified in each Locality.							Number of Cases Removed to Hospital from each Locality.						
	At all Ages.	At Ages – Years							Selly Oak.	King's Norton.	Northfield.	Beoley.	Stirchley.	Moseley.	King's Heath.	Selly Oak.	King's Norton.	Northfield.	Beoley.	Stirchley.	Moseley.	King's Heath.
		0-1	1-5	5-15	15-25	25-45	45-65	65 and up														
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	161	—	18	119	18	6	—	—	21	9	16	1	58	11	45	13	7	12	—	45	9	25
Membranous Croup	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	49	1	1	—	1	15	17	14	24	4	1	—	13	3	4	—	—	—	—	—	—	—
Scarlet Fever	221	1	45	159	9	7	—	—	75	15	13	—	47	23	48	55	7	9	—	40	7	42
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever	5	—	—	—	—	—	5	—	2	—	1	—	2	—	—	—	—	—	—	—	—	—
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	1	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Phthisis — Under Tuberculosis Regulations, 1908	17	—	—	—	2	9	5	1	14	—	—	—	—	2	1	1	—	—	—	1	2	1
Phthisis — Under Tuberculosis Regulations, 1911	38	—	—	1	10	23	4	—	15	2	3	1	5	3	9	8	2	—	1	2	—	2
Phthisis — Voluntary	57	—	1	12	10	31	3	—	13	6	5	—	16	2	15	11	3	4	—	14	2	11
Totals	550	3	65	291	50	91	35	15	164	36	39	2	142	44	123	88	19	25	1	102	20	81

TABLE B.

Vital Statistics of Whole District during 1911 (*Part*) *and previous Years.*

Year	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 Year of Age		At all Ages.	
			Number.	Rate.	Number.	Rate.	Of Non-residents regist'ed in the District.	Of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1906	72,608	1,859	1,859	25·6	973	13·3	249	33	196	105	724	9·97
1907	75,600	1,849	1,849	24·45	982	13·0	229	62	195	105	815	10·78
1908	78,608	1,929	1,929	24·54	1,038	13·2	238	48	167	86	848	10·78
1909	81,632	1,886	1,886	23·13	1,017	12·4	286	63	139	73	844	10·34
1910	84,673	1,798	1,798	21.23	872	12·9	212	64	125	69	724	8·55
1911 (part)	81,515	1,597	1,569	22·36	905	12·9	228	52	170	107	677	9·64

TABLE C.

Causes of and Ages at Death during the Year 1911 (*Part*).

Causes of Death.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards	
All Causes (Certified	660	162	37	22	30	26	65	123	195	269
All Causes (Uncertified	17	18	—	—	—	—	2	6	1	5
Enteric Fever	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—
Measles	18	5	6	6	1	—	—	—	—	—
Scarlet Fever	4	—	1	—	3	—	—	—	—	3
Whooping Cough	6	5	1	—	—	—	—	—	—	—
Diphtheria and Croup	8	—	1	1	6	—	—	—	—	5
Influenza	2	—	—	—	—	—	—	1	1	1
Erysipelas	—	—	—	—	—	—	—	—	—	3
Cerebro-Spinal Fever	1	—	—	—	—	—	1	—	—	—
Phthisis (Pulmonary Tuberculosis) ...	27	—	—	—	—	7	10	8	2	30
Tuberculosis Meningitis	6	1	4	1	—	—	—	—	—	—
Other Tuberculous Diseases	7	—	1	—	2	2	2	—	—	3
Rheumatic Fever	2	—	—	—	2	—	—	—	—	—
Cancer, Malignant Disease	54	—	—	—	—	2	7	16	29	19
Bronchitis	29	1	—	2	—	—	—	9	17	11
Broncho-Pneumonia	22	7	7	2	2	—	—	1	3	2
Pneumonia (all other forms)	23	5	2	—	2	1	6	5	2	11
Other Diseases of the Respiratory Organs	6	—	—	—	—	—	2	3	1	2
Diarrhœa and Enteritis	67	55	6	1	2	—	—	2	1	4
Appendicitis and Typhlitis	2	—	—	—	1	—	—	—	1	1
Alcoholism	—	—	—	—	—	—	—	—	—	2
Cirrhosis of Liver	1	—	—	—	—	—	—	1	—	2
Nephritis and Bright's Disease ...	18	—	1	1	—	—	3	5	8	11
Puerperal Fever	1	—	—	—	—	—	1	—	—	—
Other Accidents and Diseases of Pregnancy and Parturition	5	—	—	—	—	—	5	—	—	2
Congenital Debility and Malformation, including Premature Birth	72	68	1	3	—	—	—	—	—	2
Violent Deaths, excluding Suicide ...	27	5	2	2	2	1	4	8	3	5
Suicides	6	—	—	—	—	—	2	4	—	—
Other Defined Diseases	260	18	4	3	6	13	24	65	127	155
Diseases ill-defined or unknown	3	—	—	—	1	—	—	1	1	—

SCHEDULE A.

Deaths registered from all causes, 1911. (*Jan. 1st to Nov. 8th.*)

DISEASES.	AGES.													Males	Females	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85			
Smallpox—																
(*a*) Vaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Unvaccinated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) No Statement	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	5	12	1	—	—	—	—	—	—	—	—	—	—	14	4	18
Scarlet Fever	—	1	3	—	—	—	—	—	—	—	—	—	—	1	3	4
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Influenza	—	—	—	—	—	—	—	—	1	—	—	1	—	2	—	2
Whooping Cough	5	1	—	—	—	—	—	—	—	—	—	—	—	2	4	6
Diphtheria, Membranous Croup	—	2	6	—	—	—	—	—	—	—	—	—	—	5	3	8
Enteric Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa, Dysentery	19	3	—	—	—	—	—	—	—	—	—	1	—	15	8	23
Epidemic Enteritis	12	3	—	—	—	—	—	—	—	—	—	—	—	5	10	15
Epidemic Cerebro-Spinal Meningitis	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic Rose-rash	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glanders, Farcy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax, Splenic Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cowpox, Acc. of Vaccination	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gonorrhœa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Phagedæna	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	2
Pyæmia, Septicæmia	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1
Infective Endocarditis ...	—	—	—	—	1	—	—	—	1	—	—	—	—	—	2	2
Cancrum Oris	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stomatitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carbuncle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cellulitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malarial Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rheumatic Fever	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2	2
Rheumatism of Heart ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of Brain	1	5	—	—	—	—	—	—	—	—	—	—	—	5	1	6
Tuberculosis of Larynx ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Phthisis	—	—	—	—	3	4	6	4	7	1	2	—	—	13	14	27
Abdominal Tuberculosis ...	—	1	—	2	—	—	—	1	—	—	—	—	—	2	2	4
General Tuberculosis	—	—	1	—	—	—	1	—	—	—	—	—	—	2	—	2
Other forms of Tuberculosis ...	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	1
Thrush	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Actinomycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydatid Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scurvy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ptomaine Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Alcoholism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chronic Alcoholism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lead Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Osteo-arthritis Rheumatoid-arthritis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gout	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cancer	—	—	—	—	2	—	—	7	4	12	20	8	1	17	37	54
Diabetes Mellitus	—	—	—	—	—	1	—	1	—	2	3	—	—	5	2	7
Purpura Hæmorrhagica ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hæmophilia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anæmia, Leucocythæmia ...	—	—	—	—	—	1	—	1	—	—	1	—	—	2	1	3
Lymphadenoma, Hodgkin's Disease	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Premature Birth	29	—	—	—	—	—	—	—	—	—	—	—	—	16	13	29
Injury at Birth	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Debility at Birth	6	—	—	—	—	—	—	—	—	—	—	—	—	4	2	6
Atelectasis	6	—	—	—	—	—	—	—	—	—	—	—	—	5	1	6
Congenital Defects	10	3	—	—	—	—	—	—	—	—	—	—	—	8	5	13
Want of Breast Milk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Atrophy, Debility, Marasmus ...	18	—	—	—	—	—	—	—	—	—	—	—	—	14	4	18

SCHEDULE A.—*continued.*

DISEASES.	AGES.													Males	Females.	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Dentition	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1	2
Rickets	—	3	—	—	—	—	—	—	—	—	—	—	—	1	2	3
Old Age, Senile Decay ...	—	—	—	—	—	—	—	—	—	—	9	30	14	18	35	53
Convulsions	7	—	—	—	—	—	—	—	—	—	—	—	—	5	2	7
Meningitis	2	2	—	1	1	—	—	—	—	—	—	—	—	3	3	6
Encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apoplexy	—	—	—	—	—	—	—	—	3	5	4	4	1	6	11	17
Softening of Brain	—	—	—	—	—	—	—	—	—	—	2	1	—	2	1	3
Hemiplegia	—	—	—	—	—	—	—	—	—	—	2	—	—	1	1	2
General Paralysis of Insane ...	—	—	—	—	—	—	—	—	4	—	—	—	—	4	—	4
Other forms of Insanity ...	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1
Chorea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebral Tumour	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
Epilepsy	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Laryngismus Stridulus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locomotor Ataxy	—	—	—	—	—	—	—	—	3	—	—	—	—	2	1	3
Paraplegia, Diseases of Cord	1	—	1	—	—	—	—	1	—	1	1	—	—	2	3	5
Cerebral Congestion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebral Effusion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-Spinal Meningitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Neuritis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases of Brain or Nerves...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Otitis, Mastoid Disease ...	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Disease of Nose, Epistaxis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pericarditis	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Endocarditis, Valvular Disease	—	—	—	1	4	1	2	3	1	6	7	7	—	13	19	32
Hypertrophy of Heart ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Angina Pectoris	—	—	—	—	—	—	—	—	—	1	2	—	—	2	1	3
Aneurism	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Senile Gangrene	—	—	—	—	—	—	—	—	—	—	—	2	—	1	1	2
Embolism, Thrombosis ...	—	—	—	—	—	—	—	—	—	—	1	1	1	2	1	3
Phlebitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Varicose Veins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cardiac Dilatation	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1
Heart Disease (not defined) ...	—	—	1	—	1	1	2	1	6	7	9	6	1	21	14	35
Other Diseases of Heart ...	—	—	—	—	—	—	—	—	—	1	—	1	—	—	2	2
Atheroma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	2	1	2	—	3	2	5
Cerebral Hæmorrhage	—	—	—	—	—	1	—	2	1	—	2	1	—	3	4	7
Other Diseases of Blood Vessels	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Laryngitis	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Croup	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Bronchitis	1	2	—	—	—	—	—	—	1	4	1	3	[1	7	6	13
Chronic Bronchitis	—	—	—	—	—	—	—	—	—	4	8	4	—	5	11	16
Lobar Pneumonia	—	—	2	—	1	—	1	2	2	—	—	1	—	6	3	9
Lobular Pneumonia	7	9	2	—	—	—	—	—	1	—	3	—	—	12	10	22
Pneumonia (not defined) ...	5	2	—	—	—	—	1	2	1	2	1	—	—	6	8	14
Emphysema, Asthma	—	—	—	—	—	—	—	—	2	—	1	—	—	1	2	3
Pleurisy	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Fibroid Phthisis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bronchiectasis	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
Other Diseases, Respiratory System	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Quinsy	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1
Diseases of Pharynx	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Œsophagus ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer of Stomach & Duodenum	—	—	—	—	—	—	—	1	2	—	—	—	—	1	2	3
Other Diseases of Stomach ...	2	—	—	—	—	—	1	—	1	1	1	—	—	1	5	6
Enteritis	24	1	1	1	—	—	—	—	1	1	—	—	—	15	14	29
Appendicitis	—	—	1	—	—	—	—	—	—	—	1	—	—	—	2	2
Obstruction of Intestine ...	1	—	—	—	—	—	—	—	1	3	1	1	—	2	5	7
Other Diseases of Intestine ...	1	—	—	—	—	—	—	—	—	1	—	—	—	—	2	2
Cirrhosis of Liver	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Other Diseases of Liver ...	—	—	—	—	—	—	—	1	1	—	1	1	—	—	4	4
Peritonitis	—	—	—	—	—	—	—	—	—	1	—	1	—	2	—	2
Other Diseases of Digestive System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

SCHEDULE A.—*continued.*

DISEASES.	AGES.													Males	Females.	Persons.
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-			
Diseases, Lymphatic System & Ductless Glands	—	—	—	—	—	—	—	1	—	1	—	—	—	—	2	2
Acute Nephritis	—	1	—	—	—	—	—	—	—	1	—	—	—	2	—	2
Bright's Disease	—	1	—	—	—	—	1	2	2	2	5	3	—	7	9	16
Calculus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Bladder and Prostate	—	—	—	—	—	—	—	—	1	1	1	1	—	2	2	4
Other Diseases, Urinary System	—	—	—	—	—	—	—	—	1	1	—	—	—	2	—	2
Diseases of Testis and Penis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Ovaries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Uterus and Appendages	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
Diseases of Vagina and External Genitals	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Abortion, Miscarriage	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Puerperal Mania	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Puerperal Convulsions ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Placenta Prævia, Flooding ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Thrombosis	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	2
" Parturition "	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	2
Other Diseases, Pregnancy and Childbirth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arthritis, Ostitis, Periostitis ...	—	—	—	—	1	—	—	—	1	—	1	1	—	2	2	4
Other Diseases, Osseous System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer, Bedsore	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eczema	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Pemphigus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases, Integumentary System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Accidents or Negligence—																
In Mines and Quarries ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Vehicular Traffic	—	—	—	—	—	—	2	—	—	2	—	—	—	4	—	4
On Railways	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	1
On Ships, Boats, etc. ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
In Building Operations ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Machinery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Weapons and Implements	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burns and Scalds	1	2	—	—	—	—	—	—	—	2	—	—	—	2	3	5
Poisons, Poisonous Vapours...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Surgical Narcosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Effects of Electric Shock ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Corrosion by Chemicals ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Drowning	1	—	—	2	—	—	—	1	—	1	—	—	—	5	—	5
Suffocation, Overlaid in Bed	3	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3
,, Otherwise ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Falls not specified	—	—	—	—	—	—	—	—	1	1	1	1	—	1	3	4
Weather Agencies	—	2	—	—	—	—	—	—	1	—	—	—	—	1	2	3
Otherwise, not stated ...	—	—	—	—	1	—	—	—	—	—	1	—	—	1	1	2
Homicide	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suicides—																
By Poison	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
By Asphyxia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Hanging & Strangulation	—	—	—	—	—	—	—	—	—	2	—	—	—	1	1	2
By Drowning	—	—	—	—	—	—	—	2	1	—	—	—	—	2	1	3
By Shooting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Cut or Stab	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Precipitation from Elevated Places	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By Crushing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
By other and unspecified methods	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Execution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sudden Death, cause not ascertained	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-defined & unspecified causes	—	—	1	—	—	—	—	—	—	1	—	1	—	1	2	3
Totals	170	59	21	9	17	9	29	38	56	73	93	84	19	330	347	677

TABLE XXIII.

Surveyor's Report on Buildings, &c.

Period from January 1st to November 8th, 1911.

Ward.	Houses.	New Roads.	Public Buildings.	Factories, Workshops, Warehouses, etc.	Alterations, Additions, and Various.
Moseley—					
Moor Green	11	—	1	—	8
Wake Green	11	—	—	—	6
King's Heath—					
East	7	—	—	—	6
West	36	—	—	1	4
Northfield	24	—	1	1	1
Rednal and Rubery	2	—	2	—	9
Selly Oak—					
East	—	—	2	1	5
West	147	—	2	—	6
Stirchley—					
North	17	—	—	11	8
South	63	—	—	—	2
King's Norton	43	—	—	—	4
Bartley Green	1	—	—	—	—
Beoley and Wythall	9	—	—	—	—
Totals	371	—	8	14	59

AMBROSE W. CROSS, C.E.,
Engineer and Surveyor.

CHIEF SANITARY INSPECTOR'S ANNUAL STATISTICS

for the year 1911 (*up to Nov. 8th*)

To the Health Committee.

Prevention of Infectious Disease under direction of Medical Officer of Health	No. of cases enquired into	549
	No. of houses disinfected and cleansed	420
	No. of patients removed to hospital ...	336
	Lots of bedding, clothing, etc., disinfected or destroyed	3,144
	No. of visits to schools	41
Houses and Premises	No. inspected (house to house) ...	6,447
	No. inspected upon complaint ...	491
	No. of defective yards paved	529
	No. of defective eaves gutters rectified	524
	No. repaired	1,055
	No. cleansed and lime-washed ...	612
	No. demolished, unfit for human habitation	3
Insanitary Sinks	No. of abolished	96
	No. of glazed sanitary sinks provided	111
Work in progress	No. of visits made thereto	3,922
Overcrowding	No. of cases abated	5
Drains	No. of tested	1,245
	No. laid or relaid	795
	No. cleansed, trapped and ventilated	1,273
	No. of found defective	299
	No. of insanitary lavatories, sinks and urinals rectified	474
	No. of dumb wells rectified	7
	No. of rainwater pipes disconnected ...	57
Courts and Terraces	No. of visits made thereto	365
	No. of passages paved	15
Water Closets	No. of additional w.c.'s provided ...	21
	No. repaired, ventilated, etc.	1,261
	No. supplied with flushing apparatus	33
	No. of limewashed	352
Privies and Ashpits	No. converted to w.c.'s	73
	No. converted to pail-closets ...	9
	No. repaired	46
	No. of privy pans provided... ...	8
	No. of privies and ashpits abolished	40
Dust Receptacles (portable)... ...	No. of new dust receptacles provided	309
Smoke Nuisances	No. of observations taken	9
Water Supply	No. of wells sunk	3
	No. of wells cleansed and repaired ...	9
	No. of wells closed as polluted ...	8
	No. of houses supplied from waterworks	31
	No. of samples of water sent for analysis	29
	No. of wastes reported to Water Department	23
River Pollution	No. of inspections made	51
Slaughter Houses	No. inspected	313
	No. of contraventions found and remedied ... ...] ...	47
Bakehouses	No. inspected	135
	No. of contraventions found and remedied	32

Sanitary Inspector's Statement.—Health Committee—(continued.)

Workshops	No. inspected	65
	No. of contraventions found and remedied	15
	No. of insanitary conditions dealt with as nuisances	4
	No. employing " young persons," etc., reported to Medical Officer of Health	2
Dairies and Cowsheds	No. of inspections made	511
	No. of contraventions of Acts, Orders and Bye-laws dealt with	207
	No. of infected milk supplies reported by Inspector	—
Food	No. of seizures as unfit for consumption	3
	No. of requests from Traders for inspection	27
	No. of surrenders	27
Food and Drugs Act...	No. of samples taken for analysis ...	169
	No. of samples certified genuine ...	162
	No. of samples certified adulterated ...	7
Animals kept so as to be a nuisance ...	No. of cases abated	45
Accumulation of Offensive Refuse ...	No. of removals	908
Meeting of Owners	No. of appointments kept	1,125
Legal Proceedings	No. of cases taken	9
	No. of convictions obtained ...	9
	No. of cases withdrawn or dismissed ...	—
Letters	No. written	756
Informal Notices	No. served	375
Statutory Notices	No. served	213

Inspection of Canal Boats.

Boats inspected	43
Boats contravening the Acts and Regulations	9
Contraventions	9
Persons for which the cabins were registered	119½
Persons occupying the cabins	85½
Women on the Boats	10
Children on the Boats (between the ages of 5 and 12)	3
Children on the Boats (under 5 years of age)	2

Details of Contraventions—

Not carrying Certificates of Registration	2
Boats not properly marked	5
Boats overcrowded	1

Complaint notes were served in each case, and all duly returned with report of contraventions remedied.

Workshops and Workplaces.

There are 326 workshops and workplaces on the Register, trades being as follows :—

Artificial Stone Makers	1
Bakers	45
Belt Makers	1
Blacksmiths	14
Boat Builders	2
Cabinet Makers	8
Carpenters and Joiners	27
Confectioners	6
Cycle Makers	6
Dressmakers	28
Jewellers	2
Knitting	1
Lamp Maker	2
Laundries	7
Leather Sorting	1
Milliners	19
Nail Makers	13
Piano Repairing	2
Pill Manufacturers	1
Plumbers	8
Printers	1
Saddlers	7
Scuttle Makers	2
Shoemakers	37
Spectacle Makers	1
Stone Masons	8
Sheet Metal Rollers	1
Tailors	7
Vacuum Cleaner Manufacturers	1
Watch Makers	2
Wheelwrights	10
Whip Makers	1
Wicker Workers	1
Wood Turners	1
Workplaces	18
Miscellaneous	10
Total	302

Cowsheds and Dairies.

No. of Dairy Farms on Register	170
„ Cowsheds pertaining to them	256
„ Farms surveyed to date	166
„ Cowsheds pertaining to them	246
„ Farms in respect of which " informal notices " have been served to date during year	7
Carried forward	845

Brought forward	845
No. of Cowsheds pertaining to them	14
„ Farms upon which works have been completed according to notices to date	7
„ Cowsheds pertaining to same	14

Details of improvements effected during the year :—

New Sheds and Sheds Reconstructed—

No. of Sheds reconstructed (accommodation for 90 cows) ...	12

Sheds Closed or Demolished—

No. of Sheds closed (accommodation for 12 cows)	1

Ventilation, including Air-Space—

No. of Sheds provided with additional air-space (by removal of loft, etc.)	2
„ Notices served to reduce number of cows in sheds ...	1
„ Sheds provided with means of ventilation	12

Lighting—

No. of Sheds provided with windows	12
„ Sheds provided with aditional windows	1

Drainage—

No. of Shed floors paved and proper channels constructed	12
„ Drains repaired and altered...	13
„ New drains reconstructed	21
„ Gullies removed from interior of sheds	7

Water Supply—

No. of Samples of water taken for analysis	12
„ Samples condemned	3
„ Wells closed	—
„ Wells cleansed...	3
„ Cases of water laid on from public mains	1

Sanitary Improvements at Farms—

No. of New Wells sunk	—
„ Privies converted to w.c.'s	2
„ Privies converted to pan-closets	4
„ Pigsties paved and drained	7
„ Yards paved and drained	6
„ Yards levelled (to prevent collection of farm drainage)	3
„ Dairies, drainage, etc., remedied	4
„ Accumulations of manure removed	17
„ Cowsheds cleansed and limewashed, under notice (verbal)	256
„ Cases of pig-keeping in cowsheds stopped	2

Butter Farms—

No. of in District	35
„ Cowsheds pertaining to them	64
„ Farms surveyed to date	35
„ Cowsheds pertaining to same	64
„ Farms upon which works have been completed according to notices to date during the year...	6
„ Cowsheds pertaining to same	12

ARTHUR E. BONHAM,

Chief Sanitary Inspector.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

HEALTH

OF THE

RURAL DISTRICT OF YARDLEY,

For the Period January 1st to November 8th,

1911.

BIRMINGHAM:
Hudson and Son, Printers, Edmund Street and Livery Street.

1912.

Yardley Rural District.

REPORT FOR PERIOD: JANUARY 1st TO NOVEMBER 8th, 1911.

Population.

I estimate the population to have been 60,000 at the middle of the year 1911.

Birth Rate.

The births registered during the period from January 1st to November 8th were 1,208, of which 18 were illegitimate. Of these 8 have been transferred to other districts, and 1 birth in an outside district has been transferred to Yardley, so that the net total for the district is 1,201. This is equivalent to a birth-rate of 24·4 per 1,000 of the population.

Death Rate.

The deaths registered during the same time numbered 482, representing an annual death-rate of 9·8 per 1,000. After transferring 67 deaths of non-residents to other districts and 94 deaths of residents, which occurred in outside districts, the net total of deaths for the district is 509. This gives an annual death-rate of 10·3 per 1,000 of the population for the period.

Infant Mortality.

The deaths of infants under 1 year of age numbered 98, which is equivalent to an infantile mortality rate of 81·1 per 1,000 births. In view of the very hot weather, I consider is a highly satisfactory rate, and would again draw attention to the splendid work done by Mrs. Allen, the District Health Visitor, and the ladies of the Yardley Infant Health Society.

Zymotic Diseases.

1. Small Pox.—No case was notified during the period.

2. Measles.—There were 9 deaths from measles, 7 of which were among children under 2 years old. This disease was prevalent all over the district in the first half of the year, and was the cause of some schools being closed. The death-rate is equivalent to 0·18 per 1,000 of the population.

3. Scarlet Fever.—The number of cases notified was 244, and there were only 2 deaths registered from this disease. This is equal to an annual death-rate of 0·04 per 1,000 of the population, and a fatality rate of 0·8 per cent. of cases notified—both very low rates.

4. Diphtheria.—There were 135 cases of this disease notified during the period, and 8 deaths among these cases. The deaths represent an annual rate of 0·16 per 1,000 of the population, and a fatality rate of 5·9 per cent. of notified cases—figures which compare favourably with the previous years: 0·17 and 7 per cent.

6. Fevers: Enteric and Puerperal.—There were 8 cases of enteric fever notified, and no death from this disease. There was 1 case of puerperal fever notified, and no death of a resident in the district registered from this cause. Ten deaths from puerperal fever of non-residents occurred in public institutions, but were transferred to their own districts.

7. Diarrhœa.—This disease was more prevalent than for some years owing to the very hot summer, and there were 36 deaths registered as due to diarrhœa and enteritis. Of these, 31 occurred in infants under 12 months.

The total number of deaths from the principal zymotic diseases, including diarrhœa, was 55, representing a zymotic annual death-rate of 1·1 per 1,000 of the population.

The deaths from phthisis numbered 34, which represents an annual death-rate of 0·69 per 1,000; while the deaths from cancer numbered 44, equivalent to a death-rate of 0·89 per 1,000 of the population. These figures are moderately low.

Taking into consideration the low death-rate, zymotic rate, and infantile mortality rate, the sanitary condition of the district has been well maintained, and the district may be looked upon as a very healthy one.

House to house inspection has been carried on, and the supervision of drains, milk shops, and cow sheds well attended to. Work under the Food and Drugs Act, and the Factory and Workshop Act has also been satisfactory.

In concluding, I would respectfully urge our present authority to establish a refuse destructor in this district.

A. M. NEVIN, M.B., C.M., D.P.H.,

Medical Officer of Health.

TABLE I.

Vital Statistics of Whole District during 1911 (*Jan. 1st to Nov. 8th*) *and previous years.*

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of age.		At all ages.	
			Number.	Rate.	Number.	Rate.	of Non-Residents registered in the District.	of Residents not registered in the District.	Number	Rate per 1,000 Nett Births.	Number.	Rate.
1906	46,720	1,210	—	25·9	560	11·9	12	70	183	151·0	618	13·2
1907	52,750	1,410	—	26·7	527	10·0	18	73	124	88·0	582	11·3
1908	57,630	1,394	—	24·1	539	9·3	14	66	140	100·0	601	10·4
1909	60,500	1,395	—	23·1	560	9·3	18	84	124	89·0	626	10·3
1910	63,000	1,387	—	22·0	512	8·1	26	70	102	73·5	556	8·8
1911	60,000	1,208	1,201	24·4	482	9·8	67	94	98	81·1	509	10·3

TABLE II.

Cases of Infectious Disease notified during 1911 (*Jan. 1st to Nov. 8th*).

Notifiable Diseases.	At all Ages.	At Ages - Years.							Total Cases removed to Hospital.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	
Diphtheria (including Membranous croup) ...	135	—	38	72	14	11	—	—	1
Erysipelas	43	—	1	3	2	8	22	7	—
Scarlet Fever	244	3	62	157	14	8	—	—	126
Enteric Fever	8	—	1	2	—	3	2	—	3
Puerperal Fever	1	—	—	—	—	1	—	—	—
Phthisis (Under Tuberculosis Regulations, 1908	2	—	—	—	1	1	—	—	—
Phthisis (Under Tuberculosis Regulations, 1911	43	—	—	10	11	19	3	—	—
Totals	476	3	102	244	42	51	27	7	130

TABLE III.

Causes of, and Ages at Death during 1911 (*Jan. 1st to Nov. 8th*).

Causes of Death.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards	
All Causes—Uncertified	12	3	—	2	—	—	—	4	3	—
Measles	9	2	5	2	—	—	—	—	—	—
Scarlet Fever	2	—	1	—	1	—	—	—	—	—
Whooping Cough	3	1	1	1	—	—	—	—	—	—
Diphtheria and Croup	8	—	—	3	4	1	—	—	—	—
Influenza	3	—	—	—	—	—	—	2	1	—
Phthisis (Pulmonary Tuberculosis) ...	34	—	—	—	—	9	18	7	—	1
Tuberculous Meningitis	4	—	2	—	—	1	1	—	—	—
Other Tuberculous Diseases	13	2	1	2	2	2	2	2	—	2
Rheumatic Fever	2	—	—	—	2	—	—	—	—	—
Cancer, malignant disease	44	—	—	—	1	—	4	21	18	21
Bronchitis	41	4	3	—	1	—	—	7	26	—
Broncho-Pneumonia	16	6	7	1	—	—	1	—	1	—
Pneumonia (all other forms) ...	28	2	5	1	—	2	5	7	6	2
Other Diseases of Respiratory Organs	1	1	—	—	—	—	—	—	—	—
Diarrhœa and Enteritis	36	31	2	1	—	—	1	—	1	1
Appendicitis and Typhlitis	4	—	—	—	—	2	1	1	—	2
Cirrhosis of Liver	6	—	—	—	—	—	2	2	2	—
Nephritis and Bright's Disease ...	21	2	—	1	1	—	—	8	9	—
Puerperal Fever	—	—	—	—	—	—	—	—	—	10
Other Accidents and Diseases of Pregnancy and Parturition	1	—	—	—	—	—	1	—	—	—
Congenital Debility and Malformation, including Premature Birth ...	37	35	2	—	—	—	—	—	—	3
Violent Deaths, excluding Suicide ...	9	1	—	2	2	—	2	1	1	—
Suicides	6	—	—	—	—	—	3	2	1	—
Heart Diseases...	39	—	—	—	4	3	6	8	18	1
Senile Decay	30	—	—	—	—	—	—	—	30	—
Other Defined Diseases	101	9	4	1	4	3	16	23	41	11
Diseases ill-defined or unknown ...	11	2	—	—	—	—	—	5	4	1
	509	98	33	15	22	23	63	96	159	55

TABLE IV.

Infant Mortality.

Nett Deaths from stated causes at various Ages under 1 year of age (Jan. 1st to Nov. 8th), 1911.

Cause of Death.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under 1 year.
Measles	—	—	1	—	1	—	—	—	1	2
Whooping Cough	—	—	—	—	—	—	—	1	—	1
Diarrhœa	—	—	—	—	—	7	9	8	—	24
Enteritis	—	—	—	—	—	2	2	1	2	7
Abdominal Tuberculosis	—	—	—	—	—	—	—	—	1	1
Other Tuberculous Diseases ...	—	—	—	—	—	1	—	—	—	1
Congenital Malformations	1	—	—	—	1	1	—	—	—	2
Premature Birth	9	2	1	2	14	1	—	—	—	15
Atrophy, Debility and Marasmus	4	2	4	2	12	4	1	1	—	18
Atelectasis	—	—	—	1	1	—	—	—	—	1
Meningitis (not Tuberculous) ...	—	—	—	—	—	—	1	1	—	2
Convulsions	2	—	—	—	2	1	—	—	2	5
Bronchitis	—	—	1	—	1	1	—	1	1	4
Pneumonia (all forms)	—	—	—	—	—	3	1	2	2	8
Suffocation, overlying	1	—	—	—	1	—	—	—	—	1
Other causes...	1	—	—	—	1	3	—	1	1	6
	18	4	7	5	34	24	14	16	10	98

Nett Births in the year—legitimate, 1,182 ; illegitimate, 19.
Nett Deaths in the year of legitimate infants, 95 ; illegitimate infants, 3.

REPORT OF THE SANITARY INSPECTOR FOR THE PERIOD, JANUARY 1st TO NOVEMBER 8th, 1911.

Nuisances.

739 various nuisances were found ; of which 730 were abated, leaving 9 on the books.

331 notices (of which 18 were statutory notices and 313 preliminary notices), were issued to secure the abatement of the above nuisances. In addition, 943 special letters and circulars were sent out. 71 complaints of various nuisances were received. All these were enquired into and action taken where necessary.

2,232 inspections and visits were made during the year, in dealing with the various matters. The nuisances dealt with are classified as follows :

Houses or parts of houses disinfected	333
Ditto cleansed	16
Ditto repaired	50
Ditto put in habitable condition	1
Ditto supplied with tap water	8
Wells closed	2
Drains, sinks, and W.C's repaired	144
Spoutings repaired	23
Yards paved or repaired	31
Ashpits reconstructed...	38
Ashpit privies converted to W.C.'s	4
Water removed from cellars	2
Offensive accumulations removed	8
Cases of overcrowding remedied	4

Nuisances from animals removed	12
Reports to Water Department	6
Smoke nuisances removed	1
Bakehouses cleansed	3
Workshops cleansed	1
Milkshops cleansed	33
Slaughterhouses cleansed	2
Cowsheds provided with means of lighting and ventilation ...	3
Total	730

Infectious Diseases.

476 cases of infectious diseases were reported to the Medical Officer of Health during the period under review. They consisted of:

244 of Scarlet Fever	45 of Phthisis
135 of Diphtheria	8 of Enteric Fever
43 of Erysipelas	1 of Puerperal Fever.

Visits were made to the infected houses. Disinfectants were supplied where necessary, and bedding, etc., disinfected, after removal or recovery of the patients.

Water Supply.

8 samples of water from wells were sent to the County Analyst for analysis, 3 of which were polluted and unfit for use. In each instance the wells were closed, and tap water laid on to the premises from the Birmingham water mains.

Dairies, Cowsheds, and Milk Shops.

These have all been inspected, and found to be generally satisfactory, and notices were given to cleanse and limewash the sheds where necessary.

Slaughter Houses and Butcher's Shops.

Frequent visits were made to these premises during the year, and the sanitary condition of each one has been well maintained.

Unsound Food.

The carcase of a sheep, one piece of beef, weighing 28lbs., and the organs of a pig were condemned as being unfit for food and destroyed. The total weight of meat destroyed during the year was 3 qrs., 14lbs. No prosecutions were taken in regard to the above, but in one case the butcher was requested to appear before the Health Committee, and was cautioned.

Factories and Workshops.

The workshops, including bakehouses, were periodically inspected. 3 bakehouses and 1 workshop were limewashed and cleansed after notice had been given. 35 inspections were also made of outworkers' premises.

Food and Drugs Acts.

73 samples of food and drugs, consisting of 46 of milk, 15 of butter, 3 of margarine, 1 each of lard and vinegar, 4 of lime water, and 3 of camphorated oil, were procured under the above Acts, and submitted to the Public Analyst, and with two exceptions were found to be genuine. 2 samples of milk were found to be deficient in fat to the extent of 26·6 per cent. and 25 per cent. respectively.

In one case the vendor appeared before the Health Committee and was cautioned, and in the other legal proceedings were taken and a conviction obtained.

Canal Boats.

19 canal boats were inspected while passing along the canals in the district, and all were found clean and in good condition.

No case of infectious diseases was found on any of the boats.

ERNEST MANTELL,
Sanitary Inspector.

City of Birmingham.

PUBLIC HEALTH AND HOUSING DEPARTMENT.

REPORT

ON

INFANT MORTALITY,

IN

St. George's and St. Stephen's Wards.

BIRMINGHAM:
HUDSON AND SON, PRINTERS, EDMUND STREET AND LIVERY STREET.
1912.

City of Birmingham.

PUBLIC HEALTH AND HOUSING DEPARTMENT.

The Council House,
Birmingham,
February, 1912.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND HOUSING COMMITTEE.

Gentlemen,

I beg herewith to submit a report by Dr. Jessie Duncan on her work in connection with the Prevention of Infant Mortality in one of the most squalid districts of the City with a population of about 40,000 persons.

Some years ago your Committee decided to pay special attention to this area (formerly known as St. Stephen's and St. George's Wards) with a view to attempting by educational means to prevent more than one-fifth of all the infants born dying before the age of one year was reached. For this purpose the services of a Lady Doctor and two Health Visitors were wholly employed in the work.

The material these ladies have to deal with is about as bad as it can be—ignorance, poverty and carelessness being everywhere in evidence The mothers of more than half the infants are employed in factories.

Statistical results of this work must be slow; on the whole they are encouraging. In 1910 the infant mortality in St. Stephen's Ward was 20 per cent. lower than in the preceding five years, while that for the City as a whole was only 13 per cent. lower. In St. George's, in 1910, it was 12 per cent. lower than in the preceding five years.

During 1911, the year of great and long continued heat, when the infant mortality rate in the whole City was raised 13 per cent above the average of the preceding five years, the mortality in St. Stephen's was below the average in that ward by one per cent. In St. George's it was 22 per cent. above the average of the five preceding years. In many of the other wards during 1911 the infant mortality rate was very much higher than the average of the preceding five years, *e.g.*, in St. Paul's it was 36 per. cent above; in Ladywood, 42 per cent. above; and in St. Mary's, 46 per cent. above.

On the whole I think these figures justify the present special expenditure on this object—about £500 per annum. But apart altogether from statistics, the evidence we have from inspection of the district, and the visitation of houses, more than confirms what these few general figures prove.

The method adopted in this area appears to be the most hopeful yet tried, and I am anxious to extend it in a modified form to some other districts.

Very much on the same lines Voluntary Associations are worked in some other areas of the City.

They are as follows:—

(1) The Birmingham Infants' Health Society deals with all babies born in St. Bartholomew's Ward—a district in which poverty is great. This work was commenced in 1908.

(2) The Settlement Guild of Mothers deals with babies born in St. Mary's Ward—which is one of the worst in the City so far as infant mortality is concerned. The Guild commenced its operations in 1909.

(3) The Maternity Hospital has a consultation for infants born at the Maternity Hospital, and, therefore, drawn from any area in the City. A working arrangement exists to prevent overlapping.

(4) The Yardley Infants' Health Society has consultations, started in April, 1909, at Hay Mills and Greet.

(5) The Selly Oak Maternity Provident Society, Mothers' Parlour and Babies' Welcome, started in 1905, deals with babies in that district.

I feel that by limiting Dr. Duncan to the present area we are not getting the maximum of good from her services, and, therefore, suggest that three additional centres be established for Infant Consultations one day each week, and that an additional visitor be attached to each.

Dr. Duncan would then have two mornings each week to visit in the present area the infants of very poor people brought to her notice by the visitors. The two visitors would continue as at present.

In each of these proposed areas Dr. Duncan would be able to visit one forenoon per week, and have an Infant Consultation on one afternoon per week.

The ordinary Health Visitors, who are already overburdened with work of various kinds, would be able to transfer to the proposed Special Visitor all cases of infants from poor class homes near the Consultation who were failing in health from defective feeding or management.

The additional expense of such a scheme would be for three extra visitors during first year, £290; for hire of rooms (half-day per week), say, £30; total, £320.

The areas most needing such advice are:—

(1) Deritend, with a centre somewhere near the lower end of Darwin Street.

(2) Nechells, with a centre somewhere in Great Lister Street.

(3) Part of Ladywood and St. Thomas', with a centre probably at the proposed Tuberculosis Centre in Broad Street.

I am, Gentlemen,

Your obedient Servant,

JOHN ROBERTSON.

REPORT ON THE PREVENTION OF INFANTILE MORTALITY.

PUBLIC HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
BIRMINGHAM.
Feb. 12*th*, 1912.

TO JOHN ROBERTSON, ESQ., M.D., B.Sc.,
MEDICAL OFFICER OF HEALTH,
BIRMINGHAM.

SIR,

INFANT MORTALITY IN ST. GEORGE'S AND ST. STEPHEN'S WARDS.

Early information regarding the births in this district is obtained by means of the "Notification of Births Act."

About the end of the first week after birth the children are visited. At this visit information is obtained regarding the mother's previous pregnancies, employment before and after marriage, husband's wages, rental, etc.

Visits are paid by the Health Visitors (one Visitor for each Ward) every week for the first five weeks, and every month afterwards till the end of the first year.

At these visits the value and importance of breast feeding are urged, and the mothers are advised as to times of feeding, etc.

When nursing is found to be impossible, advice is given suitable to each particular case.

No help is given in the shape of money or kind—the visits being paid solely in the interests of the baby's health. When the family is found to be very poor, the various charitable agencies in the City are communicated with.

If the Health Visitor finds at any of these visits that the child is ailing, or is being unsuitably fed, the case is reported to me. I then visit and, if necessary, take over the case altogether.

In this way the sickly children are kept under constant observation.

These visits are never resented, and the women are grateful for the advice given.

"Infant Consultations" are held twice weekly in the district in a room rented for the purpose. All the mothers are invited, but the careless women and the mothers of ailing children are specially urged to come.

The good effect of these "Consultations" has been most marked, both on the mother and the child. For these visits many of the women make a special effort to be tidy, and to have the child's body, and clothing in a clean condition. During the year there were 2,292 attendances.

Altogether 580 women have brought their children;
5 attended 20 times and over.
60 „ 10 to 20 times;
98 „ 5 to 10 times;
256 „ 2 to 5 times;
105 „ once only;
39 „ „ when the child was twelve months old;
17 were new cases brought for the first time during the last week of the year.

Of the 105 who attended only once, a large number had left the district after the first visit, and could not be traced. Many of the women had resumed factory work, and had no opportunity of bringing the child again. In some of the cases where the mother was at work an afternoon was specially taken off for the purpose of bringing the baby to the "Consultation."

During the prevalence of epidemic diarrhœa (third quarter, 1911) special visits were made to these children to see if by any means the mortality-rate from this disease could be diminished.

The Health Visitors were instructed to do house-to-house visiting, including those houses where the children were over one year of age.

Leaflets dealing with the prevention of diarrhœa were distributed freely. Printed advice, however, is almost useless unless the instructions are gone over and explained to the women.

The seriousness of the disease was emphasised and warnings given about lack of cleanliness, long-tube bottles, comforters, and the care of the milk.

The Health Visitors often held "meetings" of mothers in the courts and yards, and the information was in this way handed on from one to the other. I paid special visits to each baby in the district who was bottle-fed, and gave the mother detailed instructions as to the preparation of the milk and feeding of the infant. I also impressed upon her what to do, in the event of diarrhœa occurring, until a doctor could be called in.

All ailing children in addition had frequent and in some cases, daily visits.

By these means there is no doubt that the women were made fully alive to the dangers of the disease. Messages were frequently left at the Consultation Room during the summer asking that visits might be paid.

The following is an account of the work done amongst the children born in 1911, compared with those born in 1910, 1909, and 1908.

The figures given here were made up immediately after the close of the year to which they apply, and in certain instances had to be modified a little when the results of the year's work were finally tabulated.

	1911.	1910.	1909.	1908.	Total.
Total number of children born ...	1,525	1,473	1,500	1,495	5,993
Number notified under "Notification of Births Act"	1,480	1,434	1,398	1,299	5,611
Legitimate Births	1,504	1,449	1,475	1,470	5,898
Illegitimate Births	21	24	25	25	95
Number of confinements attended by Doctor only	283	323	288	288	1,182
Number of confinements attended by a Doctor and Midwife	33	39	37	20	129
Number of confinements attended by a Midwife only	1,059	1,042	1,109	1,147	4,357
Number of confinements in institutions	150	69	66	40	325

Cases Excluded from Subsequent Visiting.

	1911.	1910.	1909.	1908.	Total.
Still births	32	44	44	39	159
Dead at first visit	51	47	45	53	196
Died during first month...	24	12	8	10	54
Better class houses	31	33	37	36	137

Deaths of Children who were Born and Died during the Year.

	1911.	1910.	1909.	1908.	Total
Number of these deaths under 1 week	39	39	44	35	157
,, ,, between 1 and 4 weeks ...	34	23	36	21	114
,, ,, ,, 1 ,, 2 months ...	16	15	21	30	82
,, ,, ,, 2 ,, 3 ,, ...	15	9	24	26	74
,, ,, ,, 3 ,, 6 ,, ...	36	30	37	36	139
,, ,, ,, 6 ,, 9 ,, ...	16	13	10	22	61
,, ,, ,, 9 ,, 12 ,, ...	2	5	—	3	10
Total	158	134	172	173	637

Number of Deaths from the following causes.

	1911.	1910.	1909.	1908.	Total.
Prematurely and Congenital defects	61	60	78	51	250
Epidemic Enteritis	44	19	24	49	136
Marasmus	14	11	35	24	84
Bronchitis and Broncho-pneumonia	11	22	16	12	61
Overlaying	15	13	7	11	46
Convulsions	2	4	6	10	22
Meningitis	3	—	1	4	8
Whooping Cough	2	2	4	4	12
Other causes	6	3	1	8	18

Employment of Mothers.

	1911.	1910.	1909.	1908.	Total.
At work before confinement	706	796	729	735	2966
Not at work	839	842	771	803	3255
Premature Births among the former	39	36	48	33	156
Premature Births among the latter	31	30	32	32	125

CHILDREN BORN IN 1910 AND KEPT UNDER OBSERVATION.

The following are the statistics obtained in regard to children born during the year 1910, and who at the end of 1911 had all been kept under observation, either for a whole year or till the time of their death.

The total number of children born alive in St. George's and St. Stephen's Wards in the year 1910 was 1,483, while 42 still births were recorded. Of these 1,483 children 18 were excluded from visiting because the families they belonged to were in distinctly better circumstances than the others; 177 were lost sight of during the year, and could not be traced at the end of twelve months, while twelve others were wrong addresses and were never found.

This leaves 1,276 infants who were kept under observation, and of these 200 died, giving an infant mortality rate of 157 per 1,000 births. In 1909 the mortality rate was 174 per 1,000, while in 1908 it was 198 per 1,000.

Taking the whole of the births registered in St. George's and St. Stephen's Wards, and the deaths registered under one year of age, the infant mortality rates for the past eight years are as follows:—

	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
St. George's	213	151	161	150	169	166	140	191
St. Stephen's	232	177	222	199	214	211	163	200

Enquiry has again been made as in the two preceding years into the effect of the industrial employment on the part of the mother upon the health of the child.

Of the 1,276 mothers 731 were industrially employed before or after confinement, either in a factory or elsewhere, while 545 were not so employed.

The mortality amongst their babies is shown in the following table, together with the corresponding rates for 1909 and 1908:—

	Births.	Deaths.	Infant Mortality per 1,000.		
			1910.	1909.	1908.
Mothers employed in factory	495	83	168	194	186
Employed at home or elsewhere ...	236	29	123	147	200
Total employed	731	112	153	179	190
Not employed	545	88	161	169	207
Grand Total	1276	200	157	174	198

The mortality amongst the children born in 1910 of all mothers employed either before or after confinement was at the rate of 153 per 1,000 births, while amongst those not industrially employed, either before or after confinement, it was 161 per 1,000 births.

In this district, therefore, where such a large proportion of women go to work, the mortality amongst the children of the working mothers is less than that of the women who stay at home.

This was the conclusion which was arrived at in 1908, the mortality amongst the children of employed women being 190 per 1,000 births, and amongst those of the women who were not employed it was 207 per 1,000 births.

In 1909 the mortality rate amongst the infants of the employed women was 10 per 1,000 above that of the infants whose mothers were not industrially employed.

It would appear from these figures that in this district at any rate, factory work has not such an injurious effect on the child as one would imagine. This probably means that there are many other factors at work besides the industrial employment of the mother. From my own observations amongst these women, I have come to the conclusion that it is not the child of the working mother who has the worst chance.

The woman who is thrifty and energetic, and wishes to supplement her husband's earnings, goes to work, and the additional money has an important influence on the prevention of the poverty which is one of the greatest causes of infantile mortality.

Very often (except, of course, in the better class houses) the mother who stays at home is indolent and lazy, neither keeping her home in a comfortable condition, nor attending properly to the wants of her child. The woman who lives in furnished apartments (of which there are many in this district), and moves from one house to another, never goes to work even when in extreme poverty.

In the next table the health of the infants who lived through one complete year of life, in relation to the employment of the mother, is shown :—

HEALTH OF SURVIVING INFANTS AT THE AGE OF 12 MONTHS.

	In Good Health.		In Fair Condition.		In Poor Health.	
	1910	1909	1910	1909	1910	1909
Mother employed in factory	59%	58%	29%	28%	12%	14%
Employed at home or elsewhere	58%	55%	31%	30%	11%	15%
Total Employed	59%	57%	29%	28%	12%	15%
Not employed	69%	63%	23%	24%	8%	13%
Grand Total	63%	59%	27%	27%	10%	14%

The mothers who were not industrially employed had a somewhat larger percentage of children in good health, viz., 69%, against 59%. The same was observed in last year's figures. The cause of this may be the fact that a greater number of these women were able to suckle their children.

A somewhat large number of the children were in fair or poor health when the mother was at work, probably for the same reason.

Of the 1,276 mothers included in the inquiry 681 were employed industrially during pregnancy, and 595 were not so employed.

These, with the corresponding figures for 1909 and 1908, are given in the following table :—

	1908.	1909.	1910.	Total.
Employed during pregnancy ...	611 or 50·4%	689 or 53·6%	681 or 53·4%	1981 or 52·5%
Not employed during pregnancy	601 or 49·6%	596 or 46·4%	595 or 46·6%	1792 or 47·5%

That is to say, more than half of these women were employed during pregnancy.

Of the 1,276 mothers 445 were industrially employed after their confinement, and during the life of the baby. This is equal to 34·9% of the total number of mothers. It will be noted that the number of mothers employed during pregnancy is larger than the number employed afterwards.

The following is the list of the different occupations followed by the women employed before or after confinement :—

OCCUPATION OF MOTHERS.

Press Work	142	Foot Stamping	10
Charing	100	Paper Box Making	9
Small Shop	49	Laundry	9
Carding	34	French Polishing	7
Brass Work	33	Warehouse Work	7
Pen Grinding	28	Cycle Polishing	7
Soldering	25	Hand Burnishing	7
Silver and Gold Polishing	24	Hawking	6
Lathe Work	16	Electro-plate Polishing	5
Scratch Brushing	14	Power Press	5
Capstan Lathe	13	Lacquerers	5
Machine Work	12	Miscellaneous	153
Japanning	11		

The 1,276 women had had 4,494 children born alive prior to the year 1910. Certain particulars regarding their previous confinements are given in the following table :—

	Employed before or after recent Confinement.			Not Employed.	Total.
	In Factory.	At Home or elsewhere.	Total Employed.		
Total number of mothers	495	236	731	545	1276
Children born alive per 100 mothers	230	510	320	395	352
Children now living ,, ,,	150	360	218	309	257
Died in 1st year, per 1,000 born	268	207	239	201	220
Miscarriages and stillbirths per 100 mothers	30	54	38	42	40
No previous confinement	30	9	23	7	16

The women who were not employed had somewhat larger families than those who worked in a factory. The women who carried on work at home or went out charing had the largest families of all. It is probably for this reason that these women do some work at home in order to supplement the income as the family increases.

The following table shows the infantile mortality rate among the babies previously born to the women who had a baby in 1910 :—

INFANTILE MORTALITY RATE PER 1,000.

	Babies born 1910	Babies born previously.
Mothers employed in a factory	168	268
Employed at home or elsewhere	123	207
Employed industrially	153	239
Not employed industrially	161	201
Grand Total	157	220

The figures in the second column apply to 4,494 babies, and amongst this large number the mortality where the mothers worked in a factory was higher than where the women worked at home, or were not industrially employed.

Some very interesting figures are obtained by studying the infantile mortality in relation to the age of the mother:—

MORTALITY OF CHILDREN ACCORDING TO MOTHER'S AGE.

	Under 25 years			25-35 years			35 and over.		
	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.
Industrially employed	216	42	194	356	45	126	159	25	157
Not ,,	65	12	185	341	54	158	139	22	158
Total ...	281	54	192	697	99	142	298	47	158

The highest mortality was amongst the children of those mothers under 25 years of age. The reason of this may be that the younger women, as a rule, are more ignorant than the older women, and are more likely to rely on the advice of the grandmother or neighbours. Amongst these women the death-rate was higher in the children of those who were employed than amongst those who remained at home. In the children of the women over 25 years of age the death-rate was higher when the mother was not industrially employed.

Of the women under 25 years 77 per cent. were industrially employed, against 51 per cent. of those aged 25—35 years, and 53 per cent. of those aged 35 or more.

In previous reports it has been noted that poverty appears to have a most marked influence on the infant's chance of life. This was again very apparent as will be seen from the following table:—

INFANTILE MORTALITY AND WAGES OF FATHER.

	Father out of work or earning less than £1 per week.		Father earning £1 per week or over.	
	Infantile Mortality.		Infantile Mortality.	
	1910	1909	1910	1909
Mother employed in factory	203	235	123	146
Employed at home or elsewhere	187	176	53	120
Total Employed	198	217	99	137
Not employed	191	199	150	154
Total	196	211	127	146

These figures show how very excessive the infant mortality is in the very poor families, compared with those which are a little better off, the infantile mortality rate being no less than 196 in the former, against 127 in the latter, an excess of more than 50 per cent.

In order to discover whether breast-feeding is *per se* sufficient to counteract the adverse influence exerted by extreme poverty, the following table has been constructed. For this Table the babies who died without taking any food at all are excluded both as births and as deaths.

INFANT MORTALITY RATE AND POVERTY IN RELATION TO METHODS OF FEEDING.

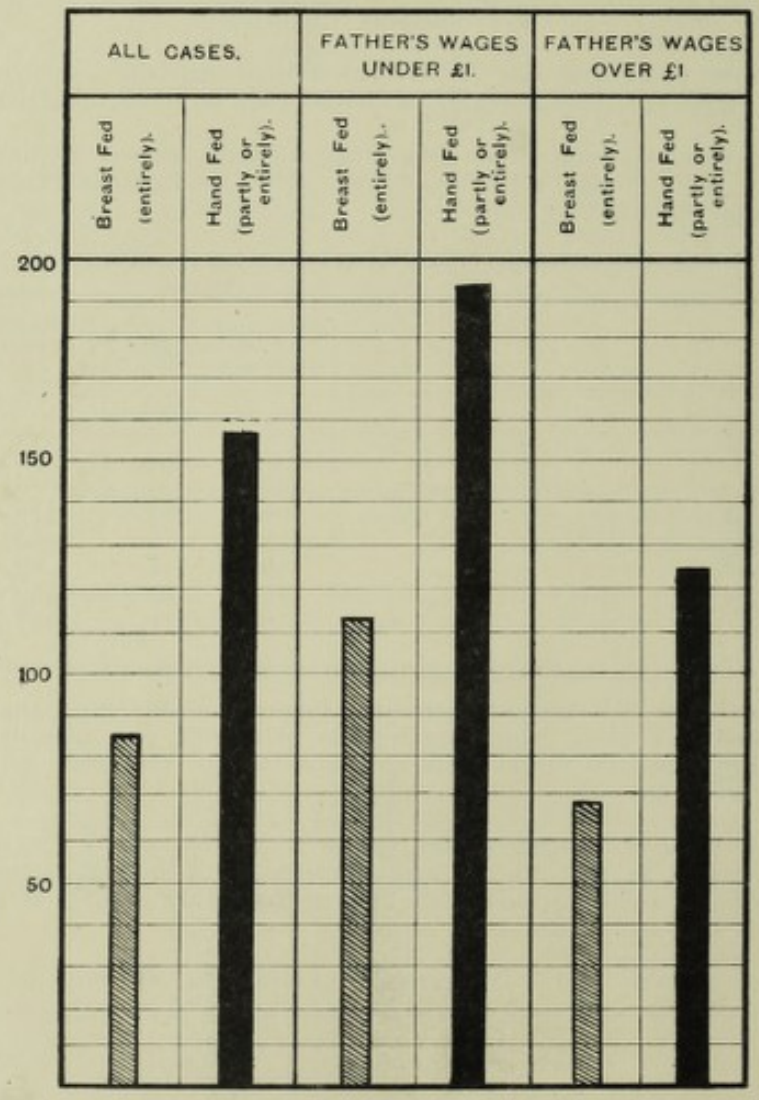
	Father out of work or earning less than £1 per week.	Father earning £1 per week or more.	ALL CASES.
Baby fed at breast	112	69	85
Fed by hand (partly or entirely)	194	125	160
Total	151	89	116

Two facts stand out very distinctly from the above figures. One is that breast-fed babies have a far better chance of living than those fed by hand, whether in very poor families or in those a little better off. The mortality is indeed almost twice as high among the hand-fed as among the breast-fed.

The other striking fact is that notwithstanding the enormous value of breast-feeding it cannot counteract the influences associated with great poverty. Thus the breast-fed infants in poor houses died at the rate of 112 per 1,000, against only 69 per 1,000 in better class houses, an excess of 62 per cent., apparently due to poverty. Among the bottle-fed babies in the poorest homes the rate was 194 against 125 in the better homes, an excess of 55 per cent., so that the excess of mortality occasioned by poverty was even greater among the breast-fed than among the hand-fed.

These facts are shown in a graphic manner on the chart inserted below.

INFANT MORTALITY IN RELATION TO FEEDING AND POVERTY.



The next two tables indicate the influence of poverty as well as employment and the method of feeding upon the health of the children who survived the first year of life :—

HEALTH OF SURVIVORS AND WAGES OF FATHERS.

	Father's Wages less than £1.			Father's Wages £1 or more.		
	Good.	Fair.	Puny.	Good.	Fair.	Puny.
A						
Factory ...	53%	31%	16%	66%	26%	8%
Home or elsewhere ...	42%	38%	20%	74%	23%	3%
Total employed	49%	35%	16%	69%	25%	6%
Not employed	56%	32%	12%	74%	20%	6%
Total ...	51%	33%	16%	72%	22%	6%
B	Good.	Fair.	Puny.	Good.	Fair.	Puny.
Breast-fed ...	59%	29%	12%	79%	18%	3%
Partly artificial	43%	35%	22%	56%	31%	13%
Entirely artificial	33%	67%	—	61%	30%	9%
Total ...	51%	33%	16%	72%	22%	6%

As in last year's report it is seen from Table A that the poverty in the home has a marked influence on the health of the children who survived the first year; the percentage in good health being 72 per cent. in the homes where the father's wages were over 20 – per week, and 51 per cent. where the earnings were less than 20/– per week. In the poor homes the percentage of children in good health was slightly higher where the mother was not employed, and the same is seen in the better class homes.

It is frequently stated that if the child is breast-fed it does not matter whether the home is poor or not—breast-feeding being all that is necessary for the good health of the child. (Table B.) From the above figures it is quite apparent that other factors are at work besides the feeding. Amongst the breast-fed children in the good homes, 79 per cent. were in good health at the end of the first year, and in the poor homes only 59 per cent. were in good health.

INFANT MORTALITY AND RENTAL OF HOUSES. MORTALITY RATE PER 1,000.

	Rent under 5/- per week.	Rent 5/- per week and over.
Employed	169	79
Not employed	173	135
Total	171	111

The infantile mortality rate in the houses under 5/– is much greater than in those of 5/– per week and upwards.

In both classes (under and over 5/–) the infantile mortality rate is highest amongst the women who are not employed industrially. In the poorest houses the difference is only four per 1,000.

An examination of the figures on which the above table is based shows that, if the rental of the house is taken as an index of the poverty, the mothers who go to work are decidedly poorer than the mothers who stay at home.

An enquiry into the manner in which the babies were fed during each of the first six months of their life gives some very interesting figures :—

HOW THE BABIES WERE FED.

	Babies who lived one year.				Babies who died.	
	Mother industrially employed after confinement.					
	In Factory.	At Home or elsewhere.	Total employed.	Not employed.	Total employed.	Not employed.
	%	%	%	%	%	%
BREAST ONLY—						
1st month ...	92	93	92	94	90	87
2nd ,, ...	64	81	70	87	33	71
3rd ,, ...	27	72	44	83	14	63
4th ,, ...	19	68	37	81	8	62
5th ,, ...	14	68	34	80	9	58
6th ,, ...	12	64	32	79	12	61
BREAST PARTLY—						
1st month ...	2	1	2	1	4	1
2nd ,, ...	27	9	20	3	49	11
3rd ,, ...	61	14	44	5	44	5
4th ,, ...	66	15	47	5	51	4
5th ,, ...	70	16	50	5	45	2
6th ,, ...	71	17	51	5	42	3
ARTIFICIAL—						
1st month ...	6	6	6	5	6	12
2nd ,, ...	9	10	10	10	18	18
3rd ,, ...	12	14	12	12	42	32
4th ,, ...	15	17	16	14	41	34
5th ,, ...	16	16	16	15	46	40
6th ,, ...	17	19	17	16	46	36

Where the mothers worked in a factory the percentage of breast-feeding decreased greatly month by month. This was not nearly so marked when the mother was employed at home.

Amongst non-working mothers the percentage who breast-fed their children till they were six months old was 79·1 (1909, 76·1 ; 1908, 75·1).

This increase in the number of children who were breast-fed till six months of age is satisfactory. Formerly many of the women were of the opinion that their breast milk did not "satisfy" the baby. These mothers are urged to bring their children to the consultation, so that they may see by the weight of the baby whether the breast milk is sufficient for its needs or not. Amongst the factory workers there was a decrease in breast-feeding from 92 per cent. in the first month to 12 per cent. in the sixth month. Amongst the mothers who went to work in a factory 71 per cent. of them were able to feed the child partly at the breast, which shows that milk had to be supplemented, not because it was deficient, but because the mother was away from home during the day.

In the next table the infantile mortality among breast-fed and hand-fed children at each successive month of life is shown both in the poorer and in the rather better class houses :—

INFANT MORTALITY DURING EACH OF THE FIRST SIX MONTHS.

	Father's Wages under £1.	Father's Wages over £1.	Total.
BREAST-FED—			
1st month	144	82	100
2nd ,, ...	96	53	71
3rd ,, ...	80	42	56
4th ,, ...	62	37	46
5th ,, ...	49	34	39
6th ,, ...	50	33	39
HAND-FED, PARTIALLY OR ENTIRELY— ...			
1st month	259	170	198
2nd ,, ...	246	180	210
3rd ,, ...	166	130	148
4th ,, ...	138	108	123
5th ,, ...	118	99	108
6th ,, ...	100	73	86

Taking the breast-fed children, the infantile mortality in each month of life, as shown by the above figures, is far greater amongst those whose fathers are earning less than £1 per week. This is evident during the whole of the first six months, but is most marked in the first four.

Amongst the artificially fed also the mortality was greater in the poor homes. This again was most apparent during the earlier months.

In each month of life the mortality was far greater amongst the artificially-fed children. The mortality at the sixth month amongst the hand-fed was almost as great as in the first month amongst the breast-fed.

These figures show that breast milk is undoubtedly the best food for the child, but also that a very important factor to be taken into consideration is the condition of the home.

As before, as many of the children as possible were weighed at the age of twelve months. Those who had been classed as good weighed on an average 19¾ lbs. (1909, 19¾ lbs.); those classed as fair, 16¾ lbs. (1909, 16¾ lbs.), and those classed as unsatisfactory 13¾ lbs. (1909, 14¼ lbs.).

If the children are divided into those whose mothers were industrially employed and those mothers who were not, there is scarcely any difference in the average weight of the two classes.

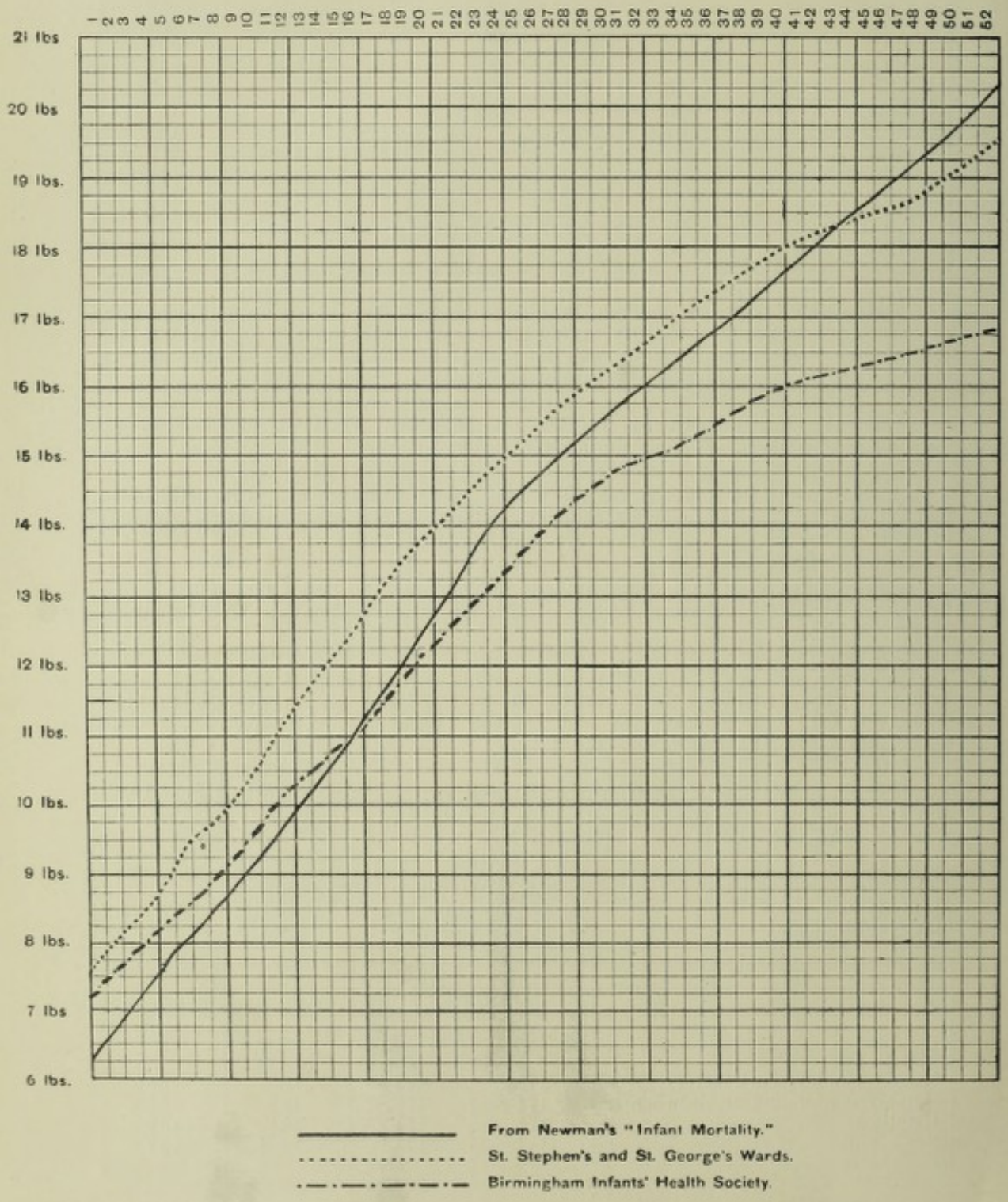
If the same children are divided into those whose fathers earned £1 per week or more and those whose fathers earned less than £1 per week, there is a very marked difference :—

	Father out of work or earning less than £1.		Father earning £1 or more.	
	1910	1909	1910	1909
Mother employed in a factory ...	17¾	17½	18½	18¼
Employed at home or elsewhere ...	17½	17¾	18¾	18¼
Employed	17¾	17½	18½	18¼
Not employed	18	17½	19	18½

The weights in the two classes are seen to be slightly better than for last year.

From the weighings of all the infants who have been weighed during the course of my three years' work in this district, a curve has been constructed to show the average weight of a baby in a poor-class district at different periods during the first year of life. Alongside the curve for this district will be found the one published by Newman in "Infant Mortality" and one constructed by the Birmingham Infants' Health Society.

AVERAGE WEIGHT OF BABIES FROM BIRTH TO ONE YEAR OLD.



The Birmingham curves relate to children who were not suffering from any obvious disease, but all of whom were from poor-class homes.

It is not always easy to determine how much of the wrong treatment of infants is due to ignorance or wilful neglect on the part of the mother. From personal observation I am of the opinion that ignorance is the greater factor.

The only remedy for this is education of the mother. This is not by any means an easy task to accomplish, and the women are not always ready to change their ways or habits.

The ordinary factory girl, too, knows little or nothing about the management of a home when she marries.

To my mind there is no doubt that the women in this district are improving, and I have noticed that during the last twelve months they are more willing to be taught, and look out more eagerly for one's visits.

There is not nearly so much trouble experienced now in getting rid of the long-tube bottle, and the women are beginning to realise how much more easily the boat-shaped bottle is kept clean.

To ensure that the children are healthy we must look to the mother during pregnancy, for it is certain that the child of a half-starved woman does not enter life with a fair and proper chance.

After birth the state of the mother's health will affect the child.

Breast Milk in Women who are Below the Poverty Line.

During the course of my work it was felt desirable to obtain information as to whether certain conditions in the infant were due to poor quality or insufficiency of breast-milk in the case of the infants whose mothers were below the poverty line.

Unfortunately no information is available in the literature I have been able to consult on the subject.

The opportunity, however, presented itself recently of obtaining reliable specimens of human milk under varying conditions from the nursing mothers in the poor class district I am working in. Altogether 136 samples of milk have been obtained from fifteen mothers. Each sample represented part of the whole content of the breast which had not been emptied for some hours. For this purpose the breast was emptied slowly and as completely as the ordinary breast-pump allowed. The sample was completely mixed, and a portion sufficient for chemical analysis was sent to J. F. Liverseege, Esq., F.I.C., the City Analyst, for analysis; the main results are set out in the appended tables, and are summarised here.

By means of a breast-pump it is not possible to get out as much from the human breast as is done by an infant under the same conditions. The average amount exhausted by the breast-pump was 42·5 c.c., while the amount taken by the infant, calculated from its weight before and after being suckled, was 60·9 c.c.

It is well known that the composition of human milk varies at different stages of suckling. In the case of bovines, where this point has been tested with great accuracy under many varying conditions, it is found that the amount of fat varies 1·7 per cent. to 4·08 per cent.

The process of emptying the mammary gland by means of a breast-pump is more or less artificial, while that of a mother suckling her infant is physiological. I feel, therefore, that too much importance must not be attached to the result obtained, if it is intended to get an accurate idea of the amount and composition of milk taken by a healthy infant from its mother's breast.

The table shows that the amount of milk obtained by the breast-pump, and also of that obtained by a healthy infant is an extraordinarily variable quantity.

In the case of the artificially-emptied breast, the amount varied from 7 c.c. to 147 c.c. No samples were obtained at the earliest period of lactation, as will be seen in the table below :—

Period of Lactation.	No. of Samples.	Average Quantity.
In 1st month of lactation	8	27·6 c.c.
„ 2nd „ „	13	33·0 „
„ 3rd „ „	20	40·3 „
„ 4th „ „	19	48·7 „
„ 5th „ „	17	50·8 „
„ 6th „ „	19	48·9 „
„ 7th „ „	12	41·0 „
„ 8th „ „	11	48·2 „
„ 9th „ „	7	52·2 „
Over 9th „ „	10	74·6 „

From the first month of lactation till the 9th the quantity of milk exhausted from the breast increased steadily.

In the case of the naturally-emptied breast the results were as follows :—

Period of Lactation.	No. of Samples.	Average Quantity.
In 1st month of lactation	2	49·7 c.c.
„ 2nd „ „	2	59·8 „
„ 3rd „ „	1	61·6 „
„ 4th „ „	1	64·7 „
„ 5th „ „	2	60·4 „
„ 6th „ „	2	71·6 „
„ 7th „ „	2	72·8 „
„ 8th „ „	1	86·6 „
„ 9th „ „	3	90·0 „
Over 9th „ „	1	114·6 „

The interval since the last time of emptying the breast varied from 1½ to 5 hours.

	No. of Samples.	Average Quantity.
Emptied under 2 hours	3	34·0 c.c.
„ at 2 to 3 „	52	37·8 „
„ „ 3 „ 4 „	61	55·5 „
„ „ 4 „ 5 „	15	44·0 „
„ „ 5 „ 6 „	4	48·5 „

These figures may not be quite accurate, as the mothers' statements as to the time of the baby's last feed had to be relied upon entirely.

As regards the results of analysis it was found that the proteid in 57 samples of milk averaged 1·19 per cent. It varied from ·7 to 1·9.

Lactose was estimated in 57 samples. It averaged 7·2 per cent., and varied from 6·6 per cent. to 7·6 per cent.

The ash was estimated in 61 instances, and was found to vary from ·2 per cent. to ·3 per cent.

The solids-not-fat in these specimens of human milk were very constant in amount. The total amount in each of the 136 specimens is shown in the table. The average amount was 8·4 per cent., while the variation in the amount was from 7·7 per cent. as a minimum to 9·3 per cent. as a maximum.

In this investigation there is nothing to show that the milk of the women who were less robust in health was poorer than that of the stronger women.

The age of the mother and the number of pregnancies had apparently no appreciable influence on the composition of the milk.

Like the total amount of milk, the fat varied not only in the same woman at different times within a very wide range, but also as between one woman and another. No very definite explanation can be seen for this wide variation, as far as these results go. So far as the period of lactation is concerned, the results were as follows:—

	No. of Samples.	Range of Fat.	Average amount of Fat.
1st month of lactation ...	8	1·8 to 4·2	2·8%
2nd ,, ,, ...	13	1·5 ,, 4·7	3·4%
3rd ,, ,, ...	20	1·5 ,, 4·9	3·1%
4th ,, ,, ...	19	·7 ,, 4·5	2·9%
5th ,, ,, ...	17	1·4 ,, 5·6	3·0%
6th ,, ,, ...	19	1·5 ,, 5·7	3·3%
7th ,, ,, ...	12	1·9 ,, 4·6	3·1%
8th ,, ,, ...	11	1·1 ,, 5·4	1·8%
9th ,, ,, ...	7	1·4 ,, 4·4	2·8%
Over 9th ,, ,, ...	10	1·4 ,, 5·7	3·0%

From the above figures it would appear that the percentage of fat does not increase as the child gets older.

As to the interval since the last feed, the figures are as follows:—

	No. of Samples.	Range of Fat.	Average amount of Fat.
1 and under 2 hours	3	2·3 to 5·6	3·6%
2 ,, 3 ,, ...	50	1·4 ,, 5·5	3·4%
3 ,, 4 ,, ...	60	1·1 ,, 5·7	3·0%
4 ,, 5 ,, ...	14	·7 ,, 3·9	2·5%
5 ,, 6 ,, ...	4	2·6 ,, 4·8	3·6%

The average percentage of fat and the relative quantity of milk were as follows (all mothers):—

Average % of Fat.	Quantity of Milk.	Interval since Mother's last Meal.
1·5 to 2·5%	43 c.c.	3·5 hours
2·5 ,, 3·5%	48 ,,	3·4 ,,
3·5 ,, 4·5%	40 ,,	3·54 ,,
4·5 ,, 5·5%	36 ,,	2·44 ,,
5·5% and over	33 ,,	2·4 ,,

From the above table it will be seen that when the average quantity of milk obtained from the breast was small (36 c.c. and under) the average percentage of fat was high (4·5% and over)—that is to say, a concentrated milk gave a high fat percentage.

The percentage of fat was also found to be high when there was a short interval since the mother's last meal.

The average quantity of fat in the milk yielded by each of fifteen mothers and the average quantity of milk emptied from the breast are shown in the next table :—

Index No. of Mother.	No. of Observations.	Percentage of Fat.	Average Quantity.
1	13	4·1	39 c.c.
2	7	2·2	51 ,,
3	7	2·5	42 ,,
4	7	2·6	66 ,,
5	8	2·3	100·1 ,,
6	7	2·9	26·4 ,,
7	5	3·9	47·2 ,,
8	8	4·4	43·2 ,,
9	15	2·8	41·6 ,,
10	9	3·2	40·2 ,,
11	10	3·7	44·1 ,,
12	12	2·6	44 ,,
13	12	3·5	41 ,,
14	5	3·1	35·4 ,,
15	10	3·6	47·2 ,,

As has already been said, all the samples of milk were taken from women who were in a more or less poverty-stricken condition, and who were receiving one substantial meal during five days a week.

The milks do not represent therefore average samples, but rather an average of samples from underfed women.

While the mothers were being fed the percentage of fat in nearly all cases increased, and it diminished when the meals were discontinued.

The mothers themselves gained weight and improved very much in health and appearance during the time.

I have paid many unexpected visits to their homes, and have found that many of the women were only having tea and bread and lard for breakfast and supper. In some cases the diet was even poorer.

While the mothers were having the meals the baby's weight curve also improved coincidently with the increase in the fat of the milk.

In ten out of the fifteen cases the weight curve fell away from the normal line when the meals were stopped.

A practical point of importance from these investigations is that the percentage of fat of the milk is of the greatest value to the child.

It is to be noted also that the fat is the only constituent of the milk which is influenced to any appreciable extent by an increase in the diet of the mother.

Appended is a table showing the results of analysis of the specimens of milk from the fifteen mothers.

I remain,

Yours obediently,

JESSIE G. DUNCAN, M.B., Ch.B.

APPENDIX.

(1) Baby born November 6th, 1910.

Mother, æt. 38 ; ten children born alive ; four died during first year ; woman's health is not good ; does washing at home ; husband makes cheap jewellery at home, but work is poorly paid and scarce ; house miserably furnished. Rent, 4/3. Woman has never before suckled any of her children for nine months ; child small but healthy at twelve months.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Nov. 28, 1910 ...	18 c.c.	2 hrs.	9·1	3·3	·3	—	—
Dec. 21 ...	40 ,,	3 hrs.	8·9	4·0	·2	1·2	7·5
Jan. 19, 1911 ...	31 ,,	2 hrs.	8·9	4·9	·2	1·4	7·3
Feb. 2 ...	22 ,,	2½ hrs.	8·2	4·7	·2	1·2	6·8
,, 16 ...	45 ,,	2 hrs. 10 min.	8·6	3·9	·2	1·3	7·1
Mar. 10 ...	15 ,,	1½ hrs.	8·7	5·6	·2	—	—
,, 23 ...	52 ,,	2½ hrs.	8·2	5·5	—	—	—
April 6 ...	41 ,,	2¾ hrs.	8·6	4·3	—	—	—
,, 21 ...	57 ,,	2¼ hrs.	8·4	3·0	—	—	—
May 8 ...	18 ,,	2 hrs.	8·8	3·8	—	—	—
June 14 ...	75 ,,	3¼ hrs.	8·8	2·7	—	—	—
July 10 ...	53 ,,	2½ hrs.	8·4	4·2	—	—	—
Aug. 18 ...	50 ,,	3 hrs.	8·1	4·0	—	—	—

(2) Baby born May 18th, 1910.

Mother, æt. 32 ; seven children born alive ; three have died under one year ; woman's health is not good ; she does washing and cleaning ; husband has chronic rheumatism and his work is irregular in consequence ; child was in good health at twelve months, and weighed 21½ lbs. Rent, 4/–.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids not-Fat	Fat.	Ash.	Proteid.	Lactose.
Nov. 28, 1910 ...	50 c.c.	3 hrs.	8·6	2·1	·2	1·1	7·3
Dec 12 ...	51 ,,	3 hrs.	8·4	1·9	·2	1·1	7·1
Jan. 9, 1911 ...	55 ,,	3 hrs.	8·3	1·8	·2	1·1	7·0
,, 25 ...	55 ,,	3 hrs.	8·7	1·6	·2	1·0	7·5
Feb. 15 ...	51 ,,	4 hrs.	8·7	2·3	·2	1·1	7·4
Mar. 10 ...	73 ,,	4 hrs.	8·5	2·7	·2	1·1	7·2
,, 24 ...	25 ,,	3 hrs.	8·4	3·3	·2	1·2	7·0

(3) Baby born February 14th, 1911.

Mother, æt. 34 ; nine children born alive ; six have died ; woman worked as a brass polisher till two months before confinement, and resumed six months after ; baby premature (7 months) ; husband is a bicycle worker, and at time of observation was only earning 14/– per week ; family lived in lodgings. Rent, 2/6 per week.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
April 7, 1911 ...	21 c.c.	2½ hrs.	8·3	3·2	·2	1·0	7·1
,, 28 ...	44 ,,	3 hrs.	8·2	1·6	·2	1·1	6·9
May 10 ...	51 ,,	3 hrs.	8·2	3·7	—	—	—
,, 19 ...	46 ,,	2 hrs.	8·4	1·8	—	—	—
,, 26 ...	42 ,,	2½ hrs.	8·2	2·0	—	—	—
June 27 ...	59 ,,	3 hrs.	8·3	2·6	—	—	—
Aug. 2 ...	37 ,,	2½ hrs.	8·4	2·8	—	—	—

(4) Baby born November 3rd, 1910.

Mother, æt. 23; not a strong woman; has tapeworm; three children born alive; one died under one year; husband has phthisis, but is able to do a little work as a polisher, earning about 14/- per week. Rent, 4/3. House clean and comfortable; baby 22 lbs. at twelve months old.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Nov. 28, 1910 ...	40 c.c.	2 hrs.	8·6	4·2	·3	1·4	6·9
Dec. 12 ...	30 ,,	2 hrs.	8·2	5·1	·2	1·3	6·7
Jan. 9, 1911 ...	53 ,,	2 hrs.	8·7	1·9	·2	1·2	7·3
,, 25 ...	60 ,,	2½ hrs.	8·4	2·8	·2	1·1	7·1
Feb. 15 ...	93 ,,	2½ hrs.	8.7	1.9	·2	1·1	7·4
Mar. 10 ...	75 ,,	2 hrs.	8·6	1·4	·2	1·0	7·4
Sept. 12 ...	110 ,,	3 hrs.	8·4	1·4	—	—	—

(5) Baby born November 5th, 1910.

Mother, æt. 26; three children, all alive; woman healthy, has done no factory work for past twelve months; husband is a labourer, but work is very irregular (17/-). Rent, 4/6. House clean.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid	Lactose.
Dec. 1, 1910 ...	35 c.c.	2 hrs.	9·0	1·8	·2	1·3	7·5
,, 21 ...	30 ,,	2 hrs.	8·7	4·3	·2	1·3	7·2
Jan. 19, 1911 ...	51 ,,	1¾ hrs.	8·8	3·0	·2	1·3	7·3
Feb. 2 ...	60 ,,	3½ hrs.	8·7	4·8	·2	1·2	7·3
Aug. 31 ...	60 ,,	3¼ hrs.	8·0	5·7	—	—	—

(6) Baby born March 2nd, 1911.

Mother, æt. 25; three children; one died; woman is anæmic and unhealthy looking; has done no factory work for eighteen months; husband not satisfactory; is a hawker, but earns only a few shillings per week. Rent, 4/6. Child died when three months old; found dead in bed with mother.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose
Mar. 27, 1911 ...	30 c.c.	2½ hrs.	9·3	2·1	—	—	—
Apr. 10 ...	29 ,,	5 hrs.	8·6	3·2	·2	1·1	7·3
,, 25 ...	29 ,,	3½ hrs	8·8	1·8	·2	1·5	7·1
May 3 ...	17 ,,	4½ hrs.	8·9	3·0	—	—	—
,, 12 ...	12 ,,	3 hrs.	7·9	4·2	—	—	—
,, 17 ...	43 ,,	4½ hrs.	9·1	2·1	—	—	—
,, 24 ...	25 ,,	4½ hrs.	8·9	3·9	—	—	—

(7) Baby born June 23rd, 1910.

Mother, æt. 31; two children both alive; woman not strong, but improved very much while she was having meals; does washing at home; husband (labourer) out of work; although family were wretchedly poor the house was always clean and tidy. Rent, 4/3.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Nov. 28, 1910 ...	40 c.c.	3 hrs.	8·6	2·0	·2	1·1	7·3
Dec. 12 ...	55 ,,	3 hrs.	8·5	2·9	·2	1·1	7·2
Jan. 9, 1911 ...	50 ,,	3 hrs.	8·0	2·4	·2	1·0	6·8
,, 25 ...	149 ,,	3½ hrs.	8·5	1·1	·2	·7	7·6
Feb. 15 ...	136 ,,	3 hrs.	8.6	3·2	·2	1·1	7·3
Mar. 10 ...	114 ,,	4 hrs.	8·7	1·4	·2	·9	7·6
,, 24 ...	95 ,,	3 hrs.	8·7	3·0	·2	—	—
Apr. 7 ...	152 ,,	3¼ hrs.	8·8	2·2	—	1·0	7·6

(8) Baby born November 27th, 1910.

Mother, æt. 25; five children born alive; two died; woman not strong; has bronchitis during the winter months; husband (polisher) on short time; only earning about 10/– per week. Rent, 3/9.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Mar. 1, 1911 ...	45 c.c.	3 hrs.	8·5	3·5	·2	1·1	7·2
,, 16 ...	53 ,,	3 hrs.	8·2	3·8	·2	1·0	7·0
,, 31 ...	36 ,,	3½ hrs.	8·7	3·8	—	—	—
Apr. 12 ...	60 ,,	3 hrs. 20 min.	8·5	3·7	—	—	—
May 5 ...	55 ,,	3 hrs.	8·6	3·7	—	—	—
,, 15 ...	35 ,,	5 hrs.	8·3	4·8	—	—	—
,, 22 ...	34 ,,	3 hrs.	8·7	5·0	—	—	—
July 12 ...	28 ,,	2 hrs.	8·7	5.4	—	—	—

(9) Baby born December 19th, 1910.

Mother, æt. 36; five children, all alive; woman does button carding and washing at home; house clean and tidy; husband (labourer) was out of work during the whole time the woman was under observation. Rent, 4/–.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Jan. 5, 1911 ...	20 c.c.	2 hrs.	8·8	3·5	·3	1·5	7·0
,, 18 ...	30 ,,	2 hrs.	8·4	2·8	·2	1·3	7·3
Feb. 1 ...	17 ,,	2½ hrs.	8·1	2·9	·2	1·3	6·6
Mar. 1 ...	35 ,,	3 hrs.	8·2	2·6	·2	·9	7·1
,, 16 ...	65 ,,	3¾ hrs.	8·6	1·5	·2	·9	7·5
,, 31 ...	46 ,,	3 hrs.	8·2	2·9	—	—	—
Apr. 12 ...	89 ,,	3½ hrs.	8·2	2·6	—	—	—
May 5 ...	65 ,,	3 hrs.	8·3	3·1	—	—	—
,, 15 ...	59 ,,	3¼ hrs.	8·1	3·2	—	—	—
,, 22 ...	53 ,,	4 hrs.	8·3	2·6	—	—	—
June 27 ...	48 ,,	4 hrs.	8·3	2·4	—	—	—
July 12 ...	25 ,,	2½ hrs.	8·5	2·9	—	—	—
,, 26 ...	19 ,,	3 hrs.	7·7	3·5	—	—	—
Aug. 26 ...	20 ,,	4 hrs.	8·3	3·3	—	—	—
Sept. 12 ...	33 ,,	4 hrs.	8·4	2·5	—	—	—

(10) Baby born November 28th, 1910.

Mother, æt. 23; two children born alive; one died; woman's health fairly good; husband (labourer) out of work; family starving; woman has done no factory work for three years. Rent, 3/9.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat	Fat.	Ash.	Proteid.	Lactose
Mar. 1, 1911 ...	47 c.c.	2½ hrs.	8·9	3·4	·2	1·2	7·5
,, 16 ...	35 ,,	2½ hrs.	8·7	4·5	·2	1·1	7·4
,, 31 ...	40 ,,	3 hrs.	8·5	3·0	—	—	—
Apr. 12 ...	35 ,,	2½ hrs.	8·8	4·0	—	—	—
May 5 ...	77 ,,	3 hrs	8·2	3·1	—	—	—
,, 15 ...	18 ,,	3 hrs.	8·1	3·8	—	—	—
,, 22 ...	35 ,,	2 hrs.	8·5	1·5	—	—	—
July 12 ...	10 ,,	2½ hrs.	—	—	—	—	—
Oct. 6 ...	65 ,,	5 hrs.	8·4	2·6	—	—	—

(11) Baby born October 17th, 1910.

Mother, æt. 42 ; nine born alive ; one died ; woman healthy ; has done no factory work for some years ; husband has bronchitis, and his work is irregular in consequence. Woman has not suckled any of her previous children for nine months ; house fairly comfortable. Rent, 5/6.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Dec. 8, 1910 ...	25 c.c.	3 hrs.	9·1	3·5	·3	1·8	7·0
Jan. 12, 1911 ...	65 ,,	5 hrs.	8·8	4·2	·3	1·2	7·3
,, 26 ...	60 ,,	2 hrs.	8·5	3·6	·2	1·2	7·1
Feb. 16 ...	37 ,,	3½ hrs.	8·6	3·7	·2	1·3	7·1
Mar. 10 ...	75 ,,	3½ hrs.	8·7	2·2	·2	1·2	7·3
,, 23 ...	55 ,,	2½ hrs.	8·7	4·6	—	—	—
Apr. 6 ...	53 ,,	4 hrs.	8·1	3·1	—	—	—
,, 21 ...	27 ,,	2$\frac{20}{60}$ hrs.	8·6	4·4	—	—	—
May 8 ...	37 ,,	3 hrs.	8·2	4·6	—	—	—
June 14 ...	7 ,,	4 hrs.	—	—	—	—	—

(12) Baby born November 15th, 1910.

Mother, æt. 29 ; four children born alive ; two died ; woman does washing at home ; husband has phthisis, and was in sanatorium while the woman was under observation ; very poor, but respectable people. Rent, 4/–.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat	Fat.	Ash	Proteid.	Lactose.
Dec. 8, 1910 ...	30 c.c.	2 hrs.	8·9	2·5	·3	1·5	7·1
Jan. 12, 1911 ...	35 ,,	2¾ hrs.	8·6	3·7	·3	—	—
,, 26 ...	65 ,,	2¾ hrs.	8·9	3·1	·2	1·5	7·2
Feb. 16 ...	27 ,,	2¾ hrs.	8·5	2·2	·3	1·1	7·1
Mar. 10 ...	35 ,,	2$\frac{20}{60}$ hrs.	8·7	2·2	·2	1·2	7·2
,, 23 ...	33 ,,	3¾ hrs.	8·3	2·4	—	—	—
Apr. 6 ...	50 ,,	2½ hrs.	8·6	2·8	—	—	—
,, 21 ...	69 ,,	3½ hrs.	8·5	2·4	—	—	—
May 8 ...	65 ,,	3½ hrs.	8·7	2·5	—	—	—
June 14 ...	50 ,,	3$\frac{20}{60}$ hrs.	8·7	3·3	—	—	—
July 10 ...	7 ,,	3½ hrs.	—	—	—	—	—
Aug. 31 ...	63 ,,	3¼ hrs.	8·6	2·2	—	—	—

(13) Baby born October 19th, 1910.

Mother, æt. 38 ; thirteen children born alive ; eight died ; woman delicate, does washing at home ; children all puny ; husband hawker, wages very irregular ; not very satisfactory people.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Dec. 8, 1910 ...	32 c.c.	2 hrs.	8·6	4·7	·2	1·3	7·1
Jan. 13, 1911 ...	10 ,,	2 hrs.	—	—	·2	—	—
Feb. 7 ...	48 ,,	2¼ hrs.	8·4	3·9	·2	1·1	7·1
,, 28 ...	42 ,,	2$\frac{5}{60}$ hrs.	8·1	4·9	·2	1·0	6·9
Mar. 14 ...	57 ,,	3½ hrs.	8·6	2·3	·2	1·9	7·5
,, 28 ...	42 ,,	3 hrs.	8·5	3·5	—	—	—
Apr. 10 ...	50 ,,	4¼ hrs.	8·6	2·0	—	—	—
,, 25 ...	50 ,,	3½ hrs.	8·6	2·9	—	—	—
May 12 ...	30 ,,	3 hrs.	8·3	4·3	—	—	—
,, 25 ...	45 ,,	3 hrs.	8·5	3·0	—	—	—
July 10 ...	40 ,,	2½ hrs.	8·1	4·4	—	—	—
Aug. 18 ...	53 ,,	4 hrs.	8·5	3·4	—	—	—

(14) Baby born January 31st, 1911.

Mother, æt. 25; prumpera; woman anæmic and unhealthy; husband a hawker, but only earns a few shillings per week; live with woman's parents; woman worked as a press worker till a week before confinement, and resumed 4½ months afterwards.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid	Lactose.
Apr. 10, 1911 ...	27 c.c.	2½ hrs.	9·2	3·0	·3	1·5	7·4
,, 25 ...	21 ,,	2½ hrs.	8·1	5·4	·2	1·1	6·8
May 3 ...	73 ,,	3¾ hrs.	8·7	2·2	—	—	—
,, 17 ...	35 ,,	2 hrs.	8·2	4·4	—	—	—
,, 25 ...	21 ,,	4½ hrs.	8·7	·7	—	—	—

(15) Baby born April 2nd, 1911.

Mother, æt. 29; one miscarriage; six born alive; one died; brass polisher till eighteen months ago; woman healthy; husband (labourer) out of work. Rent, 3/9. Child healthy.

Date.	Quantity of Milk.	Interval since Baby's last feed.	Solids-not-Fat.	Fat.	Ash.	Proteid.	Lactose.
Apr. 28, 1911 ...	20 c.c.	1½ hrs.	9·0	2·3	·2	1·3	7·5
May 10 ...	39 ,,	2 hrs.	8·6	1·5	—	—	—
,, 19 ...	67 ,,	3 hrs.	8·6	2·6	—	—	—
,, 26 ...	35 ,,	2 hrs.	8·4	4·5	—	—	—
June 27 ...	50 ,,	3 hrs.	8·6	2·8	—	—	—
July 26 ...	49 ,,	3 hrs.	8·4	3·7	—	—	—
Aug. 2 ...	68 ,,	3 hrs.	8·6	3·8	—	—	—
,, 25 ...	43 ,,	3½ hrs.	8·5	2·9	—	—	—
Sept. 12 ...	49 ,,	2½ hrs.	8·6	3·9	—	—	—
Oct. 6 ...	54 ,,	3½ hrs.	8·6	2·6	—	—	—