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County Borough of Derby.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

YEAR 1909,

BY

Albert E. Brindley, M.D., B.Sc., D.P.H., &c.,

MEDICAL OFFICER OF HEALTH, MEDICAL SUPERINTENDENT OF THE BOROUGH ISOLATION HOSPITAL, AND MEDICAL OFFICER TO THE EDUCATION COMMITTEE.

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PUBLIC HEALTH DEPARTMENT,

FORD STREET, DERBY,

APRIL 5TH, 1910.

TO THE

Chairman and Members of the Sanitary Committee, of the County Borough of Derby.

***

GENTLEMEN,

I beg to submit my Second Annual Report on the Health and Sanitary Condition of your Borough during the year 1909, this being the 33rd Annual Report of your Medical Officer of Health. The vital statistics for the year shew some unsatisfactory features, as well as others of a satisfactory nature. One of the least gratifying of the records is the increased infantile mortality; this is accounted for by the increased number of deaths respectively from Measles, Whooping Cough, and Premature Birth. One of the most satisfactory of the returns is the number of deaths from Typhoid (or Enteric Fever), which is again the lowest recorded. The general death-rate, although a decimal higher than that for 1908, is very satisfactory. It is rather disappointing to have to report that Diphtheria was again very prevalent in the town, although there was some reduction in the number of cases towards the end of the year. Measles and Whooping Cough caused a decided increase in the number of deaths in 1909, as compared with those registered in 1908. Infantile Diarrhœa on the other hand, shewed a satisfactory decrease in the past year; this result is largely attributable to the climatic conditions which prevailed in the months July, August, and September, and is one of the few advantages resulting from a cold and wet season.

Regarding the administrative work of the department, an important addition to the permanent staff was made by the appointment of a whole-time Health Visitor in place of a part-time officer. The duties of the new officer are especially connected with the investigation of cases of Phthisis, Measles, Whooping Cough, Infantile Diarrhœa, and the feeding and care of babies. The four diseases mentioned are far more fatal, both collectively and separately, than any four of the notifiable diseases, and it is hoped that in the future, much good will result in reducing the serious annual loss of life from these four diseases. The work of the Health Visitor is intimately connected with that of the School Nurse on the one hand, and of the two Women Inspectors on the other.

Perhaps the most important question considered by the Sanitary Committee in 1909 was that of the provision of some institutional treatment for cases of Consumption. It is confidently expected that the year 1910 will witness the commencement, in a modest way, of the sanatorium treatment of suitable cases of Phthisis on the Brighton plan.

I would again call attention to the need of some special provision for the isolation of Small-pox, especially of first or earlier cases. The wards in the Infectious Diseases Hospital are now utilised to a greater extent than formerly, and it is consequently impossible to keep a ward vacant for Small-pox patients.

In conclusion, I wish to express my indebtedness to my colleagues and other corporation officials for their valuable and ready help, and to you, gentlemen, for your kind and courteous consideration.

I am, Gentlemen,

Yours obediently,

ALBERT E. BRINDLEY.

MEDICAL OFFICER OF HEALTH.

ERRATA.

Page 23, line 17, for "pages —," read "page 28 to 32."

,, 25, ,, 6, delete "Diphtheria."

,, 75, ,, 34, for "mode of infection" read "mode of disinfection."

,, 80, paragraph on "Water Supply" should follow paragraphs on "Milk Supply."

,, 82, line 26, for "NaC.l" read "NaCl"

,, 91, list of visits paid by Nurse Walls should include "Phthisis 340, Measles and Whooping Cough 96, Diphtheria and Typhoid 18, Infantile Deaths 30, Miscellaneous 33."

County Borough of Derby.

SANITARY COMMITTEE.

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COUNCILLOR R. LAURIE, M.D., J.P., CHAIRMAN.

COUNCILLOR BERRY.
" DOMLEO.
" EATON, DEPUTY CHAIRMAN.
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" LONGDON, J.P.
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COUNCILLOR EATON.
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" NEWBOLD.

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COUNCILLOR HASLAM.

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Assistant Medical Officers.

FREDERICK A. SHARPE, M.B. B.S., D.P.H. (Lond.), &c., Assistant Medica Officer to the Education Committee.
A. MIDDLETON HEWAT, M.B., Ch.B., D.P.H. (Edin.), Resident Medical Officer Infectious Diseases Hospital.

Chief Sanitary Inspector.

W. WILKINSON, Certif. Sany. Inst., F.S.I.A.

Assistant Sanitary Inspectors.

THOMAS TURNER, W. DOLMAN, Certif. Sany. Institute.
FREDK. W. FORD, Certif. Sany. Institute.
HARRY J. MORGAN, Certif. Sany. Institute.
FREDERICK HANSON, Certif. Sany. Institute.
MISS DAVIES, Cert. San. Insp. Board and Sany. Institute.
MISS SMART, Certif. Sany. Institute.

School Nurse.

NURSE A. E. BRIDGER, Certif. C.M.B.

Health Visitor.

NURSE E. WALLS, Certif. San. Inst., Certif. C.M.B.

Chief Clerks.

H. COPE.
HENRY E. DAYKIN.

Clerks.

G. J. GLEESON.
P. W. HEMMINGS.
W. B. NEEDHAM.
H. OGDEN.
H. ROGERS.

CHART SHOWING PRINCIPAL CAUSES OF DEATH, 1909.

Deaths from Infectious Diseases.
Deaths from Other Diseases.

STATISTICAL SUMMARY, 1909.

Population estimated to the middle of 1909	Males ... 63,099	Females ... 66,312	Total ...	129,411
Marriages				967
Annual rate of Persons Married per 1,000 of the population				14.95
Births	Males .. 1,623	Females ... 1,597	Total ...	3,220
Annual rate of Births per 1,000 of the population ...				24.9
Deaths	Males ... 858	Females ... 854	Total ...	1,712
Annual rate of Mortality per 1,000	Males ... 13·6	Females ... 12·9	Total ...	13·3
Excess of Registered Births over Deaths				1,508

Area.—The area of the old Borough is 3,445 acres. The acreage of the portions of Normanton, Osmaston, and Alvaston, and Boulton, added to the Borough, Nov., 1901, is 1,815.

Elevation.—The inhabitants of Derby reside at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 feet, and the lowest at "The Siddals," 142 feet. The elevation at the Market Place is 157 feet.

Houses.—At the Census of 1901 there were 26,625 houses, of these, 24,851 were inhabited, and of the remaining 1,774, there were, on Census night, 995 "in occupation," that is, utilised for business or other purposes but without occupants, whilst 779 were not "in occupation." In addition there were 228 houses in course of erection.

Density.—The mean density of the Borough was equal to 24 persons per acre. The density of the various wards was as follows:—Abbey 34, Arboretum 80, Babington 69, Becket 79, Bridge 25, Castle 76, Dale 20, Derwent 6, Friar Gate 53, King's Mead 86, Litchurch 21, Markeaton 53, Normanton 75, Osmaston 5, Peartree 20, and Rowditch 25 persons per acre.

Annual Rateable Value.—The rateable value of the Borough for 1909 was £534,525 for District Rate purposes, and £559,006 for Poor Rate purposes.

LEGAL SUMMARY.

Local Acts (containing Sanitary Provisions).

The Derby Waterworks Acts, 1848, 1868, 1873.

The Derwent Valley Water Acts, 1899, 1901, 1904, and 1909.

The Derby Improvement Act, 1879, Part IV.

The Derby Corporation Tramways Act, 1899, Part III.

The Derby Corporation Acts, 1877 (Sec. 60), 1901.

Acts Adopted.

Public Health Acts Amendment Act, 1890, Part III., came into operation 20th September, 1899.

Infectious Diseases (Prevention) Act, 1890 (Secs. 7 & 13), came into operation 20th February, 1902.

Public Health Acts Amendment Act, 1890, Part II., came into operation 12th December, 1904.

Notification of Births Act, 1907, came into operation 11th January, 1908.

Public Health Acts Amendment Act, 1907 (Secs. 19, 22, 23, 25, 28, 30, 31, 33, 34-37, 46, 50-58), adopted 1st December, 1909.

Byelaws and Regulations.

1838. Unsound Meat, Nuisances, etc.

1858. Public Baths and Washhouses.

1859. Slaughterhouses.

1859. Nuisances, Snow, Filth, etc.

1877. Water supply.

1885. New Streets and Buildings.

1890. Common Lodging Houses.

1891. Nuisances (additional).

1859. } Height of Rooms.
1886. }

1892. Street Stop Taps.

1898. Dairies, Cowsheds, and Milkshops.

1899. Houses Let in Lodgings.

1904. Public Baths.

1904. Regulations as to Branch Sewers in Main Drainage Area.

1907. Expectorating in Public Places, etc., Banana Skins, etc.

1908. Factory & Workshop Statutory Rules and Regulations.

TABLE I.—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past thirty-two years.

YEAR	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1,000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1878	80,385	1,613	20·1	3,092	38·4	257	3·1	162	2·0	148	296	3·6
1879	80,385	1,970	24·5	3,139	39·4	380	4·7	147	1·8	132	407	5·0
1880	80,385	1,614	20·1	3,050	37·9	233	2·8	140	1·7	145	224	2·7
1881	81,470	1,529	18·9	3,156	38·8	166	2·03	131	1·6	129	287	3·5
1882	82,687	1,533	18·5	2,959	35·7	187	2·2	140	1·6	139	259	3·1
1883	83,922	1,549	18·6	3,074	36·6	144	1·7	146	1·7	146	263	3·1
1884	85,176	1,569	18·4	3,013	35·3	181	2·1	131	1·5	143	259	3·0
1885	86,449	1,591	18·4	3,055	35·3	132	1·5	128	1·3	138	310	3·5
1886	87,741	1,651	18·8	3,069	35·9	166	1·8	154	1·7	148	272	3·1
1887	89,052	1,683	18·9	2,858	32·9	223	2·5	146	1·6	138	247	2·7
1888	90,383	1,550	17·1	2,824	31·2	163	1·8	116	1·2	145	271	2·9
1889	91,733	1,582	17·2	2,906	31·6	133	1·4	99	1·7	147	281	3·0
1890	93,105	1,843	19·8	2,699	28·9	260	2·7	143	1·5	160	326	3·5
1891	94,422	1,765	18·7	2,885	30·6	126	1·4	139	1·5	139	158	1·7
1892	95,528	1,734	18·2	3,038	31·8	174	1·9	140	1·5	171	295	3·1
1893	96,648	1,740	18·1	3,123	32 4	190	2·0	132	1·4	155	281	2·9
1894	97,781	1,468	15·1	2,890	29·6	151	1·6	103	1·1	121	249	2·6
1895	98,927	1,669	16·9	2,909	29·4	178	1·8	105	1·1	158	254	2·6
1896	100,087	1,577	15·8	2,834	28·4	182	1·9	137	1·4	150	240	2·4
1897	101,262	1,656	16·4	2,803	27·7	173	1·8	99	0·98	168	249	2·5
1898	102,448	1,756	17·2	2,860	28·0	235	2·3	133	1·3	169	257	2·6
1899	103,649	1,775	17·2	2,984	28·8	173	1·7	116	1·2	163	244	2·4
1900	104,684	1,854	17·7	2,900	27·7	247	2·4	113	1·1	173	271	2·6
1901	106,076	1,598	15·1	2,939	27·8	189	1·8	99	0·94	155	220	2·8
1902	116,869	1,639	14·1	3,326	28·5	145	1·3	102	0·87	126	264	2·3
1903	118,707	1,596	13·5	3,215	27·1	108	0·9	102	0·86	128	210	1·8
1904	120,449	1,824	15·2	3,282	27·3	167	1·4	121	1·01	143	264	2·2
1905	122,207	1,746	14·3	3,108	25·5	183	1·5	96	0·79	151	254	2·1
1906	123,981	1,733	14·0	3,103	25·1	188	1·6	113	0·92	116	244	2·0
1907	125,774	1,784	14·2	3,152	25·1	219	1·8	121	1·0	120	269	2·2
1908	127,583	1,678	13·2	3,321	26·1	134	1·1	115	0·91	109	223	1·8
1909	129,411	1,712	13·3	3,220	24·9	177	1·4	129	1·0	122	251	2·0

Vital Statistics for the Year 1909.

Estimated Population.—The estimated population of the Borough at the middle of 1909 was 129,411. This total includes the inhabitants living in the parts of the Borough added in the year 1901, and also makes allowance for the probable increase in these districts. The increase in population during the twelve months is thus estimated to be 1,828, which is 320 higher than the excess of births over deaths.

Marriages.—The number of marriages which were solemnized during 1909 was 967; this represents a rate of persons married equal to 14.95 per 1,000 of the population, which is the lowest on record. The following table gives information relating to the marriage rate for the past 12 years:—

Year.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Number of Marriages.	961	961	1025	943	948	957	973	972	981	1005	982	967
Rate.	18·8	18·6	19·6	17·8	16·3	16·1	16·17	16·0	15·9	15·9	15·4	14·95

Birth Rate.—The births registered during the year numbered 3,220, of which there were:—

	Males.	Females.	Total.
Legitimate ...	1,581	1,568	3,149
Illegitimate ...	42	29	71
Grand Total ...			3,220

From these figures it will be seen that the illegitimate births represent 2.2 per cent. of the present total, as compared with 2.8 per cent. in the previous year, and 3.9 in 1907. In the following table is set out the distribution of all births, both legitimate and illegitimate:—

TABLE II.—Relating to Births, Legitimate and Illegitimate.

WARD.	BIRTHS.			Birth Rate per 1,000.	Illegitimate Births per 1,000 Births in 1909.	Total Legitimate and Illegitimate Births registered during the years 1902 to 1909.		
	Legitimate.	Illegitimate	Total			Legitimate.	Illegitimate	Illegitimate per 1,000 Births.
Abbey ...	269	8	227	27·9	29	2303	91	38
Arboretum ...	193	14	207	20·9	68	1546	51	32
Babington ...	144	1	145	15·4	7	1179	38	32
Becket ...	163	1	164	20·4	6	1215	63	50
Bridge ...	128	4	132	23·1	31	915	38	40
Castle ...	202	3	205	23·4	15	1838	84	44
Dale ...	230	0	230	42·1	0	1572	37	23
Derwent ...	164	1	165	27·9	6	1218	34	28
Friargate ...	204	2	206	21·5	10	1711	51	29
Kingsmead ...	151	5	156	19·8	32	1380	98	67
Litchurch ...	167	9	176	18·6	52	1292	67	50
Markeaton ...	220	8	228	28·1	35	1753	75	41
Normanton ...	246	4	250	30·5	16	1916	39	20
Osmaston ...	205	6	211	34·1	29	1582	53	33
Pear Tree ...	285	3	288	36·4	11	1976	42	21
Rowditch ...	156	2	158	17·6	13	1366	66	46
Others ...	22		22			38		
Totals ...	3149	71	3220	24.9	22	24,800	927	37

The births registered during the year numbered 3,220, in which total are included 1,623 boys and 1,597 girls. This represents a birth rate of 24.9 per 1,000, compared with 26.1 last year, and 25.1 in 1907 and 1906; the rate for 1909 is the lowest recorded. For 1905, the rate was 25.6, and in 1904 it was 27.3. It is interesting to compare the yearly increases in population as represented by the difference between registered births and deaths in the early half of the "eighties," and those recorded since the extension of

the Borough in the present decade. The population in the first period was only practically two-thirds what it is to-day, the death-rate was never less than eighteen, and the birth-rate was only once below thirty-five.

Year.	Birth Rate.	Death Rate.	Natural Increase of Population.	Year.	Birth Rate.	Death Rate.	Natural Increase of Population.
1882	35.7	18.5	1426	1902	28.5	14.1	1687
1883	36.6	18.6	1555	1903	27.1	13.5	1619
1884	35.3	18.4	1444	1904	27.3	15.2	1458
1885	35.3	18.4	1464	1905	25.5	14.3	1362
1886	35.9	18.8	1418	1906	25.1	14.0	1370
1887	32.9	18.9	1175	1907	25.1	14.2	1368
				1908	26.1	13.2	1643
				1909	24.9	13.3	1508

In the earlier period the first five years show a fairly constant natural increase, but in 1887, a marked decline in the birth-rate without any corresponding fall in the death-rate resulted in a distinct diminution in the number of individuals added to the population by the excess of births over deaths. In the later period the figures show a progressive decline notwithstanding the increasing population. In the first two years of the later period and in 1908 and 1909 the decline of the birth-rate was not sufficiently pronounced to affect the natural increase owing to the marked decline in the death-rate, in fact it was higher than in any of the years of the first period. The decrease in the birth-rate has been practically ten per 1,000, and the death-rate four per 1,000. The increase of population is of course also assisted by the excess of immigrants over emigrants.

As regards the various wards, the birth-rates, as in previous years, varied between very wide limits, being as low as 15.4 in Babington Ward, and 17.6 in Rowditch Ward, and as high as 42.1 in Dale Ward. Babington Ward had the lowest birth-rate in 1908, and Dale Ward the highest. Almost each year these wards have respectively the lowest and highest birth-rates. Rates of over 30 were also recorded in Abbey, Castle, Normanton, Osmaston, and Pear Tree Wards. Litchurch and Rowditch are wards which almost always have low birth-rates, and in 1908 they had respectively

rates of 20.1 and 20.0. The fact that these various wards occupy fairly constant positions in this table seems to indicate that there is some factor at play other than error creeping in as a result of fewness in numbers.

The number of births which have been divided for the purpose of ascertaining facts relating to illegitimacy now exceeds 25,000, and it will be observed that practically one child in every 26 born in Derby is illegitimate. The rate of illegitimacy is highest in King's Mead Ward as in 1908, not less than one child in fourteen being born with that social stigma attached to it. The wards which show the next highest figures are Becket & Litchurch Wards, rather less than one child in 19 being illegitimate. Rowditch Ward shows the next highest rate of one in 19. The credit for the lowest illegitimate rate as in 1908 belongs to Normanton Ward, whilst a low rate is also recorded in Pear Tree; three other wards, Dale, Derwent, and Friargate Wards have also rates below 30. It is interesting to note that two of the wards which have already been mentioned as having high birth rates, have also low illegitimate rates.

Notification of Births Act, 1907.—This Act was adopted by the Council at a meeting held on December 4th, 1907, and came into operation early in January, 1908. The number of births notified was 3,220. Details of work done under this Act will be found on pages 86, 87 and 88.

I append herewith the usual table relating to the burial of still-born children in the Derby Cemeteries. Such burials equal 8.1 per cent. of the total, which is the lowest percentage on record.

For the particulars contained in the following table, I am indebted to Mr. C. E. Oliver, Clerk to the Derby Burial Board:—

Burials in the Derby Cemeteries during the past 15 years.

Year.	Ordinary Burials.	Burials of Still-born Children.	Total.	Percentage of Burials of Still-born Children to the whole.
1895	1587	210	1797	11·7
1896	1510	218	1728	12·7
1897	1581	182	1763	10·4
1898	1744	178	1922	9·3
1899	1787	193	1980	9·8
1900	1887	195	2082	9·4
1901	1627	246	1873	13·2
1902	1552	217	1769	12·3
1903	1522	184	1706	10·8
1904	1704	154	1858	8·3
1905	1692	161	1853	8·5
1906	1666	171	1837	9·4
1907	1627	155	1782	8·7
1908	1558	163	1721	9·5
1909	1618	152	1770	8·1

Annual Rate of Mortality.—The total number of deaths registered during the year was 1,799, as against 1,773 in 1908, 1,870 in 1907, and 1,832 in 1906; of these deaths 87 were of strangers; and there were three deaths of Derby residents registered outside the Borough, making a net total of 1,712. The net death-rate therefore, from all causes was 13.3 per 1,000, as against 13.9 in 1908, 14.2 in 1907, and 14.0 in 1906. This is an increase of 0.1

Table III.—Infantile Mortality during the Year 1909.

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

CAUSE OF DEATH.		Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–2 Months.	2–3 Months.	3–4 Months.	4–5 Months.	5–6 Months.	6–7 Months.	7–8 Months.	8–9 Months.	9–10 Months.	10–11 Months.	11–12 Months.	Total Deaths under One Year.	Non-Residents.
	Certified	98	18	17	13	146	40	31	32	29	17	17	16	20	17	12	14	391	6
	Uncertified	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
i. Common Infectious Diseases.	Measles	..	..	..	..	..	..	..	..	..	..	2	1	1	2	2	1	9	..
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria : Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	2	2	1	3	2	2	..	2	..	..	2	16	..
	Diarrhœa, all forms	..	..	..	1	1	3	6	3	2	1	2	..	2	1	1	1	23	..
ii. Diarrhœal *Diseases.*	Enteritis, Muco-enteritis, Gastro-enteritis	..	1	..	..	1	2	4	3	2	1	..	..	2	2	1	2	20	..
	Gastritis, Gastro-intestinal Catarrh	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..
	Premature Birth	69	3	6	2	80	4	2	1	1	..	..	..	..	..	..	..	88	1
	Congenital Defects	2	3	..	1	6	2	..	1	1	..	..	..	..	..	..	..	10	..
iii. Wasting Diseases.	Injury at Birth	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3	..
	Want of Breast-milk, Starvation	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	3	..
	Atrophy, Debility, Marasmus	5	2	3	1	11	10	5	4	7	3	3	1	4	2	..	1	51	1
	Tuberculous Meningitis	..	..	..	..	..	1	..	1	..	..	..	1	..	1	1	..	5	..
iv. Tuberculous Diseases.	Tuberculous Peritonitis : Tabes Mesenterica	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2	..
	Other Tuberculous Diseases	..	..	..	..	..	1	3	1	..	..	1	1	1	2	..	1	11	..
	Erysipelas	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	2	..
	Syphilis	..	..	..	1	1	1	..	..	1	..	..	..	1	..	..	..	4	..
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	..	..	..	2	..	..	2	1	..	1	6	..
v. Other Causes.	Convulsions	9	2	2	2	15	8	3	3	6	3	..	3	..	1	2	..	44	1
	Bronchitis	..	2	2	.	4	2	1	4	..	3	3	3	4	3	..	2	29	..
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	..	..	2	2	..	..	3	2	2	2	3	1	2	2	1	20	1
	Suffocation, overlying	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	..
	Other Causes	9	4	4	2	19	2	4	4	4	..	2	3	..	..	1	1	40	2
		98	18	17	13	146	40	31	32	29	17	17	16	20	17	12	14	391	6

over the rate for 1908, which was the lowest death rate recorded in the Borough. In the last eight years the rate has been below 15 on seven occasions, whilst in the other year it was very little over 15. Derby is a working-class community, and if a death-rate of under 15 per 1,000 can be maintained, it will be a source of considerable satisfaction.

Mortality in Age Groups.—The diseases from which individuals die at different age periods show marked variation, and a consideration of these varying contributory factors is of interest.

a. Infancy. In Table III. are set out the causes of death among children under the age of one year. These are further subdivided into the weeks of the first month of life, and figures are given for each month until the age of one year. The deaths of 391 infants were registered during the year, as compared with 359 in the previous year. In the sub-division "Wasting Diseases," no fewer than 155 of these deaths are classified; premature birth and debilitated conditions contributing respectively 88 and 51. The next highest totals are convulsions 44, and bronchitis and pneumonia 49; diarrhœa, which is usually such an important factor in this table, accounts for 23 deaths, whilst the allied diseases, enteritis and gastritis, caused 20 deaths as compared with 17 in the previous year.

The investigation of the relationship between feeding and the mortality of infants which was begun in 1899, has been continued, and the results are recorded below:—

The total number of children which have been under observation is now 21,602. There have been registered 25,226 children between November, 1900, and December 1908, the last member of this group attained the age of twelve months in December, 1909. From the total the following deductions must be made—on account of no visit being made, but in respect of whom no death has been registered, or on account of no visit being made owing to death occurring before any information could be obtained, or for the reason that the death could not have been influenced by the manner of feeding, e.g., some congenital defect incompatible with life, or death taking place owing to debility and no food had been given, or in 490 instances the child being prematurely born = 3,624. These deductions leave a net total of 21,602 children who had been under the direct

observation of the women inspectors. Of this number 68 per cent. were breast-fed, 18 per cent. were wholly hand-fed, and the remaining 14 per cent. were partly reared by hand and partly by natural means. The method of feeding has a very important bearing on the probability of a child surviving to the age of one year, as will be seen from the following table:—

Table **IV.**—*Mortality per 1,000 from Certain Diseases among Children who were Breast-fed or Hand-fed, or who were at first Breast-fed and subsequently Hand-fed (Mixed).*

	Breast-fed.		Mixed.		Hand-fed.		All three classes.	
Number of children.	14584		3190		3828		21602	
Disease.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.
Bronchitis and Pneumonia	196	13.5	50	15.6	113	29.6	359	16.6
Diarrhœa and Epidemic Enteritis	100	6.9	62	19.4	197	51.5	359	16.6
Gastritis and Gastro-Enteritis	16	1.1	12	3.8	33	9.0	61	2.8
Marasmus	72	4.9	43	13.5	93	24.3	208	9.6
Atrophy and Debility	107	7.4	20	6.2	107	27.9	234	10.8
Tabes Mesenterica ..	11	0.8	3	0.9	17	4.5	31	1.4
Various Abdominal Tuberculoses ..	14	1.0	8	2.5	18	4.7	40	18.5
All other Tuberculous Diseases	36	2.5	13	4.1	20	5.1	69	3.2
Convulsions	188	12.9	50	15.6	107	28.0	345	15.9
Dentition	15	1.1	11	3.4	12	3.2	38	1.7
Zymotic Diseases other than Diarrhœa ..	69	4.8	34	10.6	39	10.2	142	6.6
All other Diseases ..	155	10.7	24	7.5	91	23.8	270	12.5
Totals	979	67.2	330	103.4	847	221.3	2156	99.8

TABLE V.—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1909.

WARDS.	Population in 1901.	Estimated population in 1909.	Acreage.	Density in persons per acre.	Total Deaths.	Death-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis	Phthisis death rate.	Number of deaths of infants under 1 year.	Deaths of infants under 1 year of age per 1,000 births.
Abbey ...	8,747	9,957	285	35	148	14·9	18	1·9	33	3·4	8	0·8	43	155
Arboretum ...	8 889	9,941	122	80	109	11·0	9	1·0	13	1·4	7	0·7	20	97
Babington .	8,447	9,444	134	70	115	12·2	10	1·1	11	1·2	13	1·4	20	138
Becket ...	7,297	8,125	102	79	114	14·1	9	1·1	12	1·5	7	0·9	25	153
Bridge ...	5,081	5,728	229	25	84	14·7	6	1·0	7	1·3	2	0·4	12	91
Castle ...	7,786	8,762	112	78	142	16·3	32	2·5	27	3·1	8	1·0	40	195
Dale ...	4,785	5,470	269	20	85	10·1	8	1·5	11	2·1	9	1·7	24	105
Derwent ...	4,933	5,573	907	6	57	10·3	11	2·0	12	2·2	1	0·2	9	55
Friargate ...	8,516	9,606	176	54	106	11·1	8	0·8	17	1·8	10	1·1	16	78
King's Mead ...	7,064	7,895	90	88	123	15·6	13	1·6	19	2·5	20	2·6	30	193
Litchurch ...	8,474	9,484	462	21	107	11·3	8	0·8	10	1·1	7	0·8	21	120
Markeaton ..	7,200	8,118	151	53	127	15·7	23	2·8	19	2·4	8	1·1	40	176
Normanton ...	7,225	8,206	106	77	95	11·6	9	1·1	15	1·9	7	0·9	18	72
Osmaston ...	5,429	6,188	1,381	5	78	12·7	11	1·8	16	2·6	4	0·7	17	81
Pear Tree	6,930	7,917	392	20	120	15·2	10	1·3	13	1·7	12	1·6	34	119
Rowditch ...	8,045	8,997	354	25	102	11·4	2	0·2	16	1·8	6	0·7	22	140
*Institutions ..	...	...	...	...	419	...	27	...	47	...	29	...	...	...
Non-Residents	...	...	...	...	87	...		...	4	...	3	...	6	...
†Totals ...	114,848	129,411	5,272	25	1,712	13·3	177	1·4	251	1·93	129	1·0	391	122

*The deaths in Institutions have been relegated to the various Wards.

†Excluding Non-Residents.

The death-rate amongst the breast-fed children is 67.2 per 1,000. as compared with 221.3 per 1,000 among those hand-fed, and 103.4 per 1,000 among those only partly breast-fed. It is important also to note that not only is this marked difference to be seen in the general death-rate but in every classification there is the same result, the death-rate is invariably higher.

Other Ages.—At all other ages there were registered 1,321 deaths, and of these 200 were of children between the ages of 1 and 5, 69 at the age period 5 and under 15, 59 between 15 and 25 years of age, 571 between 25 and 65, and 422 at all ages over 65. In the first of these age periods, zymotic diseases were responsible for a larger number of deaths than in 1908, measles causing 33 deaths as compared with 18 in the previous year. Whooping Cough caused 27 deaths between 1 and 5 years of age, Bronchitis and Pneumonia 18 and 36, were likewise very fatal diseases. Tuberculous diseases other than Phthisis were the cause of 14 deaths, phthisis accounting for only 2 deaths. The age periods 5 to 15, and 15 to 25, are noted for being the healthiest, and on the former the chief contributing diseases were diphtheria 21, and tuberculous disease affecting other organs than the lungs 6; on the latter, phthisis was the most dangerous ailment as no fewer than 24 out of the 59 deaths were assignable to that cause. This is likewise a dangerous disease at the next age period, and in addition heart diseases 99, cancer 64, show a considerable incidence. In the declining years of life, chest ailments 75, heart diseases 62, and cancer 29, are the chief causes of death, whilst the zymotic ailments become practically a negligible quantity.

District Mortality Rates.—In Table V., the various mortality rates which have been recorded in the different wards into which the town is divided are set out. The deaths in public institutions have been relegated to the wards to which the persons belonged before they were removed. On the basis of the general death-rate, the healthiest wards were Dale 10.1; Derwent 10.3; and Friargate 11.1. Castle Ward as in 1908 shews the highest death-rate, viz., 16.3, with Markeaton 15.7, and King's Mead 15.6, the next in order. The high death-rate in each of these wards is in considerable measure contributed to by the high death-rate among children. The infantile mortality in the town as a whole was 109

per 1,000 births, but in Castle Ward it was 195, and in King's Mead Ward 193. The highest infantile mortality rate was in Castle Ward (195). Infantile mortality rates of below 80 are noted in Derwent (55), and Friar Gate Ward (78). These rates emphasise most strongly the waste of infant life which is taking place in the wards just referred to. In King's Mead Ward the phthisis death-rate is as in 1908, more than double that recorded in the town as a whole, and is six times the rate in Bridge Ward. The phthisis rate is also high in Dale (1.7), Pear Tree (1.6), and Babington (1.4) Wards. The highest zymotic rate is recorded in Markeaton Ward (2.8), and this is chiefly due to the heavy incidence of measles and diarrhœa in that ward. Whooping Cough and diarrhœa are chiefly responsible for the high zymotic rate recorded in Castle Ward (2.5).

Inquests.—According to the Registrar's returns, the number of Inquests held by the Borough Coroner during the year ended December 31st, 1909, was 201, being made up by 116 held on males, and 85 on females. There were no unregistered deaths in the Borough; the cause of every death was certified by a medical practitioner or by the Coroner.

Mortuary.—The Coroner's Officer, Mr. John Payne, informs me that the number of dead bodies which were received into the Mortuary during 1909 was 12, and that four post-mortem examinations were conducted in the building during the year.

The Notification of Infectious Diseases.—The total number of cases of infectious diseases notified during 1909, in accordance with the requirements of the Infectious Diseases Notification Acts was 989, as compared with 960 in the previous year, and 1095 in 1907. In addition there were 127 cases of Phthisis notified voluntarily; also 436 cases of Measles, 160 cases of Whooping Cough, 181 cases of Varicella, and 130 cases of Mumps notified by School Teachers.

The highest and lowest weekly incidences were as follows:—

Week ending, 1909.			Cases Notified.
3rd April	... highest number	...	47
14th August	... lowest number	...	7

The following summary gives particulars of these various diseases:

Cases of Infectious Disease notified during 1909.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria.	Continued Fever.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Membranous Croup. (See Diphtheria.)
First ...	284	...	20	240	...	5	19	0	...
Second	268	...	56	163	...	1	42	6	...
Third ...	217	...	53	137	...	5	21	1	...
Fourth...	220	...	81	113	...	2	22	2	...
Year ...	989	...	210	653	...	13	104	9	...

Table VI. gives information respecting the notification of infectious diseases in previous years. It will be observed that the number notified in 1909 was rather more than that for the previous year (960). It may be noted that diphtheria accounts for 66 per cent. of the total cases notified during 1909.

In dealing with these cases the following action was taken :—

	Quarters.				
	First.	Second.	Third.	Fourth.	Totals.
Number of visits made by Inspectors	823	544	434	577	2378
Cases isolated. Borough Hospital :—					
Scarlet Fever	18	35	36	51	140
Diphtheria	119	99	94	64	376
Cases isolated. Royal Infirmary :—					
Diphtheria	1	...	...	...	1
Enteric Fever	3	1	1	2	7
Erysipelas	...	1	...	...	1
Puerperal Fever	...	2	...	...	2
Cases isolated. Children's Hospital					
Enteric Fever...	...	...	2	1	3
Cases willing to be isolated but for which no room could be found ...	4	2	..	7	13
Cases in which isolation was delayed	12	3	...	4	19
Number of rooms disinfected ...	397	317	274	238	1226
,, schools ,, ...	3	2	3	1	9
,, classrooms ,, singly...	10	...	...	60	70

TABLE VI.—Number of cases of Infectious Disease notified in the Borough of Derby during 1909, and in each year since 1881.

DISEASES.	'81	'82	'83	'84	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	190
Small Pox ...	46	15	2	7	...	...	...	20	...	5	...	11	52	3	94	1	1	...	...	1	1	8	48	210	123	...	...	...	..
Scarlet Fever ..	423	770	506	389	232	167	64	756	775	346	318	470	501	513	364	427	432	481	885	602	616	332	185	638	535	290	181	116	21(
Diphtheria ...	6	10	8	...	1	6	27	23	46	81	66	67	50	46	43	45	57	74	60	52	74	63	83	150	271	561	606	670	65
Membranous Croup ...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	..
Enteric & Con. Fever ...	95	113	51	344	57	162	105	163	99	64	66	55	111	104	99	104	125	159	141	125	114	85	64	64	44	71	74	39	1
Typhus Fever	1	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Cholera ...	...	...	...	...	..	...	...	..	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Puerperal Fever	6	6	7	11	2	1	1	3	5	1	8	9	11	7	10	3	3	6	8	7	10	13	14	16	13	11	7	15	9
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	67	52	88	135	138	89	113	128	120	10
Phthisis* ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	105	103	82	111	99	108	12
Totals ...	577	914	574	751	292	336	197	965	925	497	458	612	727	673	610	580	618	720	1094	854	867	645	634	1319	1158	1160	1095	1068	11

In addition to the above, the following cases of Measles were also notified during short periods of voluntary notification :—1884, 513 cases ; 1887, 874 cases ; 1888, 33 cases ; also 34 cases of Scarlet Fever, and 3 cases of Enteric Fever from the annexed areas during 1901.

* Phthisis became a notifiable (voluntarily) disease in July, 1902

HOSPITAL FOR INFECTIOUS DISEASES.

The staff as at present constituted consists of a resident Medical Officer, Matron, two Sisters in Charge, two Assistant Nurses, and nine Probationers; in addition there are Cook, Kitchenmaid, two Housemaids, Between Maid, Laundress and Laundrymaid, four Wardmaids, and Caretaker and his wife. Additional help is given by two men who attend daily for work in the boiler-house and grounds. The Matron (Miss Mould) has by her tact and ability well maintained the good discipline and efficiency of the Nursing and Domestic Staffs during the year.

The admission of diphtheria cases, commenced in 1907, was continued throughout the year, and no fewer than 376 cases were admitted as compared with 218 cases in 1908 and 54 in 1907.

The Bacteriological Laboratory has been utilized very extensively throughout the year, the number of examinations being as follows:—Throat Swabs 5,310, and Sputum Examinations 33; compared with 538 throat swabs and 14 sputum examinations in 1908. Details of these examinations are given on pages —

As a preliminary to the discharge of Diphtheria patients from Hospital, swabbings of the throat were taken in each case, showing the absence of the Klebs-Loeffler Bacillus; two successive negative swabs taken from both throat and nose were required before discharge of the patient was sanctioned.

No case of Smallpox has been admitted during the past year. Fortunately the town has been free from the disease. The need for some special provision for the isolation of Smallpox is again emphasized.

The following statistics have reference to the patients under treatment during the past year:—

	Scarlet Fever.	Diphtheria
Remaining in Hospital, December 31st, 1908 ...	8	30
Admitted during 1909	140	376*
Number discharged during 1909	119	358*
Number who have died in Hospital during 1909	3	14
Remaining under treatment on December 31st, 1909	26	34*

*These figures include "contact" or "carrier" cases.

Scarlet Fever.

NUMBER OF CASES ... 140.

An analysis of the cases of Scarlet Fever shows that—

At ages of	0-5	there were	28	cases admitted.
,,	5-10	,,	62	,,
,,	10-15	,,	35	,,
,,	15 & over	,,	15	,,

Type of Case—

132	were of the	ordinary type.
5	,,	septic type.
3	,,	toxic type.

Three of the above cases were admitted as suffering from diphtheria, while seven cases admitted as scarlet fever were found not to be suffering from that disease. Eight of the cases on admission were found to be suffering from some other disease or injury. The three fatal cases were respectively aged 4, 6 and 7 years, and were of the toxic or septic types.

Complications—

16	cases suffered	from discharging ears.
4	,,	,, noses.
9	,,	Albuminuria and Nephritis.
34	,,	Enlarged Glands.
5	,,	Rheumatism.
3	,,	Tonsillitis.
3	,,	Heart Affection.
2	,,	Pneumonia.

In the majority of cases the complication was not of a serious nature, and in no case did it cause death.

Duration of Stay—

The duration of stay in Hospital of the patients discharged in 1909 averaged 51.2 days. The average number of Scarlet Fever patients in Hospital per day in 1909 was 18.5.

DIPHTHERIA.

NUMBER OF CASES ... 376.

This number includes 69 "contact" or "carrier" cases, i.e., cases shewing the presence of diphtheria bacilli in the throat but no clinical symptoms of the disease. There were therefore 307 cases of true Diphtheria among the 376 cases admitted.

Diphtheria.

Contact and Carrier Cases (69).

Age periods.

0- 5	...	7	cases.
5-10	...	26	,,
10-15	...	28	,,
15-20	...	4	,,
over 20	...	4	,,

It will thus be seen that this precautionary detention in Hospital applied mainly to children, in only eight cases were wage-earners detained in Hospital.

Duration of Stay.

The average duration of stay in Hospital for these cases was 20.8 days, and the average number in Hospital per day was approximately 4.

Antitoxin.

Every "carrier" or "contact" case admitted was given a prophylactic dose of 2,000 units of antitoxin.

Cases of True Diphtheria (307 Cases).

Age.	*Cases.*	*Deaths.*	*Case Mortality.*
0-5 ..	66 ..	3 ..	4.5%
5-10 ..	137 ..	10 ..	7.0%
10-15 ..	56 ..	1 ..	1.8%
15 & over ..	48 ..	0	
	307	14	

Type of the Disease.—Eight of the cases were of the laryngeal type, in the remainder (299) the disease primarily affected the fauces. It will be noticed that the disease was most prevalent and most fatal in children between 5 and 10 years of age.

Approximate time of admission of Diphtheria Cases

On	1st day of illness	8 cases
,,	2nd ,,	89 ,,
,,	3rd ,,	67 ,,
,,	4th ,,	36 ,,
,,	5th ,,	31 ,,
Between 6th & 10th day		56 ,,
After 10th ,,		11 ,,
Day of illness not known		9 ,,

Antitoxin.

In 74 cases antitoxin had been administered before admission. In Hospital an average of 4.400 units was administered to the 307 patients.

Causes of Death.

Toxæmia	... ...	8
Heart Failure	...	6

Paralysis.

Soft Palate	... ...	13 cases	(3 deaths).
Eye	... ...	4 ,,	(0 ,,).
Heart	... ...	8 ,,	(6 ,,).

In several instances more than one organ was affected.

Paralysis. (Time of onset after admission).

	1st week	2nd week	3rd week	4th week	5th week	6th week	7th week
Cases	6	5	1	2	2	3	1

One case in which paralysis occurred was 3 years old, another was 18 years old. All the other cases in which paralysis occurred were between the ages of 5 and 10 years.

Laryngeal Obstruction.

Cases	... ...	8
Tracheotomy	... ...	3
Deaths	... ...	0

All the laryngeal cases were under the age of 5 years, with one exception—a man aged 44 years.

Duration of Stay. (307 Diphtheria cases).

Average stay in Hospital, 30.7 days.
Average number of cases in Hospital per day, 25.8.
Average number of diphtheria and carrier cases in Hospital per day, 29.7.

Other Complications.

Enlarged Glands	...	18 cases.
Antitoxin Rashes	...	14 ,,
Nasal Discharge	...	7 ,,
Albuminuria (severe)	...	3 ,,
Chicken-pox ...	...	3 ,,
Otorrhœa ...	...	2 ,,
Follicular Tonsilitis	...	2 ,,
Scarlet Fever ...	...	2 ,,

Measles, Ringworm, Rheumatism, and Phthisis, one each.

The Laboratory.

The following is a summary of the work done at the Hospital Laboratory during 1909:—

I.—*Throat Swabs.* 5,310 swabs were examined for the presence of diphtheria bacillus, as compared with 538 in 1908. Of these, 652 or 12.2 per cent. gave positive results. An analysis of these swabs is given in detail in the following table, prepared by Dr. A. Middleton Hewat, Resident Medical Officer.

ANALYSIS OF

D—Cases for Diagnosis. C—Cases which have been

School.			January	February	March.	April.	May.	June.
ASHBOURNE ROAD	D	+	..	..	..	..	..	..
		−	1	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	7
BRIGHTON ROAD ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	11
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
CLARENCE ROAD ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
FIRS ESTATE ..	D	+	..	1	..	..	..	..
		−	..	..	7	..	4	21
	C	+	..	..	..	..	..	..
		−	1	..	..	..	7	..
GERARD STREET ..	D	+	1	..	..	..	2	..
		−	30	..	2	4	78	12
	C	+	..	..	4	..	8	..
		−	..	..	24	1	47	..
NOTTINGHAM ROAD	D	+	..	..	..	..	..	..
		−	..	..	4	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
NUN STREET ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	1
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
PEAR TREE	D	+	..	..	..	..	..	..
		−	1	..	..	2	2	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	6
ST. JAMES' ROAD ..	D	+	..	3	..	..	..	..
		−	..	20	..	..	6	7
	C	+	..	4	..	..	..	..
		−	..	94	..	..	13	..
TRAFFIC STREET ..	D	+	..	..	..	..	..	..
		−	1	..	..	..	..	..
	C	+	1	..	..	..	..	..
		−	4	1	..	..	..	..
ALL SAINTS'	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
CANAL STREET ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
CHRIST CHURCH ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
CURZON STREET ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	1
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..

SCHOOL SWABS (Diphtheria).

in contact with a known case of Diphtheria. + Indicates Positive results. — „ Negative „

July.	*August.*	*September.*	*October.*	*November*	*December.*	*Totals.*
..	..	..	..	..	..	..
1	..	1	1	..	..	4
..	..	..	..	..	..	..
..	..	..	..	3	..	10
..	..	..	..	..	4	4
..	..	..	..	8	11	30
..	..	..	..	3	..	3
..	..	..	..	46	9	55
..	..	..	..	..	..	..
1	..	..	..	..	2	3
1	..	..	..	..	..	1
7	..	..	..	..	2	9
..	..	..	..	..	..	1
8	..	..	..	..	..	40
..	..	..	..	3	..	3
..	..	..	..	..	..	8
..	..	..	..	..	..	3
1	..	6	1	..	..	134
1	..	..	..	..	..	13
21	..	..	1	5	..	99
..	..	..	..	..	..	..
..	..	..	..	..	..	4
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	5	..	..	6
..	..	..	..	..	..	..
14	..	..	..	..	..	14
..	..	..	..	..	..	..
..	..	..	..	1	1	7
..	..	..	..	..	..	..
5	..	..	..	..	8	19
..	..	..	..	2	1	6
29	..	12	7	5	7	93
3	..	..	17	1	..	25
12	..	..	..	28	..	147
..	..	..	..	..	..	..
..	..	1	1	..	..	3
..	..	..	..	..	..	1
..	..	6	..	..	..	11
..	..	..	..	..	..	..
..	..	..	1	..	1	2
..	..	1	..	..	..	1
..	..	8	..	..	4	12
..	..	..	..	..	..	..
..	..	..	..	..	..	..
1	..	..	..	..	..	1
6	..	..	..	..	..	6
..	..	1	..	..	..	1
..	..	1	..	..	..	1
..	..	..	..	..	..	..
..	..	5	..	4	..	9
..	..	..	..	..	..	..
1	..	..	3	..	..	5
..	..	..	..	..	..	..
14	..	..	3	..	..	17

School.			January	February	March.	April.	May.	June.
PARLIAMENT ST. ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
PRACTISING	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	22
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. ANDREW'S	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	3
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. CHAD'S ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	3	3
	C	+	..	..	..	..	..	..
		−	..	..	..	..	3	..
ST. DUNSTAN'S	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	5
ST. JAMES' H.G.	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. JOHN'S ..	D	+	..	..	..	..	..	1
		−	..	..	..	..	1	9
	C	+	..	..	..	..	..	..
		−	..	..	..	..	2	..
ST. JOSEPH'S	D	+	..	..	..	..	1	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. LUKE'S ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	1	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. PAUL'S ..	D	+	1	..	..	..	..	1
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. PETER'S	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
ST. THOMAS' ..	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
TRINITY ..	D	+	..	..	..	..	..	..
		−	4	..	..	..	1	2
	C	+	..	..	..	..	..	..
		−	1	..	..	..	..	..
MUNICIPAL SEC.	D	+	..	..	..	..	..	..
		−	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		−	..	..	..	..	1	..

July.	*August.*	*September*	*October.*	*November.*	*December.*	*Totals.*
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	1	..	1
1	..	..	..	..	..	1
31	..	..	..	..	..	53
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	3
..	..	..	..	..	..	..
..	..	..	..	..	3	3
..	..	1	..	..	..	1
..	..	3	..	..	1	10
..	..	3	1	..	..	4
..	..	4	1	3	..	11
..	..	..	..	..	..	..
..	..	..	..	5	..	5
..	..	..	..	..	..	..
11	..	7	3	3	..	29
..	..	1	..	..	..	1
..	..	1	..	..	..	1
..	..	2	..	..	..	2
5	..	26	13	5	..	49
..	..	..	..	..	..	1
..	..	..	..	..	..	10
..	..	..	..	..	..	..
..	..	..	12	..	..	14
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	1	..	..	1
..	..	4	1	3	..	9
..	..	..	..	..	..	..
..	..	..	4	..	..	4
..	..	..	..	..	..	2
..	..	1	..	3	..	4
..	..	..	..	..	..	..
..	..	..	..	6	..	6
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	3	..	..	..	3
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	1	1
..	..	..	5	..	3	8
..	..	..	..	..	..	..
..	..	..	..	..	..	7
..	..	..	..	..	..	..
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	1

1909.	HOSPITAL. Diagnosis. +	−	Discharge. +	−	Total	DEPARTMENT AND DOCTORS. Diagnosis. +	−	Contacts. +	−	Disinfecti'n +	−	Total	DEPARTMENT. Schools. +	−	Total	Grand M'thly Total.
January ..	25	31	8	87	**151**	8	37	9	63	0	18	**135**	3	43	**46**	**332**
February ..	24	23	13	121	**181**	18	112	6	130	3	17	**286**	8	115	**123**	**590**
March ..	15	35	10	151	**211**	18	130	4	80	1	36	**269**	4	37	**41**	**521**
April ..	12	26	14	167	**219**	17	102	7	81	2	9	**218**	0	7	**7**	**444**
May ..	19	12	14	180	**225**	8	27	3	91	2	33	**164**	11	169	**180**	**569**
June ..	9	19	4	115	**147**	9	61	2	100	2	20	**194**	2	110	**112**	**453**
July ..	16	9	6	146	**177**	16	39	6	108	0	14	**183**	7	167	**174**	**534**
August ..	9	1	22	95	**127**	8	27	29	72	0	6	**142**	0	0	**0**	**269**
September ..	12	24	14	144	**194**	4	39	1	89	0	10	**143**	9	89	**98**	**435**
October	8	13	31	118	**170**	6	45	4	69	1	15	**140**	2	79	**81**	**391**
November ..	4	7	22	63	**96**	15	46	7	69	4	9	**150**	9	129	**138**	**384**
December ..	10	9	27	122	**168**	10	42	5	65	8	32	**162**	6	52	**58**	**388**
Yearly Totals	**163**	**209**	**185**	**1509**	2066	**137**	**707**	**83**	**1017**	**23**	**219**	2186	**61**	**997**	1058	**5310**

Total swabs in year 5310

Total positive swabs 652

Total negative swabs 4658

Percentage of positives .. 12.27%

Percentage of Positives in departmental contacts 7.54%

Percentage of positives in school swabs 5.76%

Of departmental & doctors' swabs there were :—

(*a*) taken by doctors 433

(*b*) taken by dept. 1753

Of doctor's swabs, positives 94 or 21.7%

Of department swabs, positive 149 or 8.0%

II.—*Sputum Examination.* The number of sputum specimens examined in 1909 for the presence of tubercle bacilli was 33, more than double the number (14) examined in 1908. Thirteen of the 33 specimens gave positive results, while 20 were negative. The specimens were obtained from the following sources:—

(*a*) from general practitioners	28
(*b*) from School Medical Officer	2
(*c*) from Isolation Hospital	3

III.—*Examination of Disinfectants.* The carbolic co-efficients of ten different disinfectants were estimated by the Rideal-Walker method.

IV.—*Milk Examinations.* Thirteen samples of milk were examined bacteriologically for the presence of tubercle bacilli, all with negative results. The percentage of fat in the Hospital milk was estimated daily.

V.—A spleen was examined for suspected anthrax, with negative result.

VI.—*Preparation of Media, etc.* The blood serum and other media were prepared in the laboratory, the swab outfits were also prepared and sterilised.

Hospital Provisioning, 1909.

1909.	Days of treatment.	Average Patients per day.	Cost of Provisioning.	Average Cost per Patient per day.*
			£ s. d.	s. d.
1st Quarter	4005	44·5	218 13 4½	1 1·1
2nd ,,	4516	49·7	215 0 3½	0 11·43
3rd ,,	4066	44·2	205 9 4½	1 0·13
4th ,,	5241	56·9	245 19 9	0 11·27
Totals 1909	17828	48·9	885 2 9½	0 11·92
Totals for 1908	9,104	24·9	669 10 9½	1 5·6

*This includes cost of provisioning staff.

Table VII.—Cases of Infectious Diseases notified by the Teachers in the various Schools within the Borough.

School.	Scarlet Fever.	Measles.	Chicken pox.	Diphtheria.	Mumps.	Whooping Cough.	Sore Throats	Colds.	Ring Worm.	Skin Diseases.
Ashbourne Road..	1	—	—	2	—	—	1	—	—	—
Brighton Road ..	1	51	4	—	2	2	21	—	—	1
Firs Estate	—	9	—	—	—	—	26	—	3	—
Clarence Road ..	—	27	38	9	23	25	9	—	25	1
Gerard Street ..	3	2	40	22	—	—	30	23	—	—
Nuns Street ..	1	8	—	—	—	—	1	—	—	—
Nottingham Road	—	56	36	—	—	22	11	—	1	1
Orchard Street ..	—	6	5	—	—	7	—	—	—	—
Osmaston	—	—	—	—	2	—	1	—	—	—
Pear Tree Council	1	18	—	1	34	13	15	—	—	1
St. James' Road..	9	44	11	33	6	—	90	46	1	—
Traffic Street ..	—	6	2	1	—	—	3	—	—	—
All Saints' ..	—	7	1	—	26	8	2	—	—	—
Canal Street ..	—	—	—	—	—	—	—	—	—	—
Christ Church ..	3	4	—	2	—	—	—	—	—	—
Curzon Street ..	—	3	1	3	5	—	—	—	—	—
Parliament Street	—	1	14	—	—	9	—	—	—	—
Pear Tree Mission	—	14	7	—	—	—	2	—	—	—
Practising ..	—	12	7	—	1	5	—	—	—	—
St. Alkmund's ..	4	8	1	—	3	12	—	—	—	—
St. Andrew's ..	—	1	—	—	—	—	—	—	—	—
St. Anne's ..	—	—	—	—	—	—	1	—	—	—
St. Chad's ..	2	36	3	6	1	16	8	—	—	—
St. Dunstan's ..	—	1	—	—	—	—	—	—	—	—
St. James' Church	1	2	—	1	—	—	—	—	—	—
St. John's ..	—	37	4	—	15	—	31	—	—	—
St. Joseph's ..	1	20	1	—	7	—	—	—	6	—
St. Luke's ..	4	22	4	2	3	7	4	—	13	—
St. Mary's ..	—	—	—	—	—	—	—	—	—	—
St. Paul's ..	—	—	—	—	—	—	2	—	1	—
St. Peter's ..	—	30	—	2	—	21	4	8	—	—
St. Thomas' ..	—	—	—	—	—	13	—	—	4	—
Trinity ..	—	11	2	3	2	—	16	—	1	2
Total ..	31	436	181	87	130	160	278	77	55	6

Notification of Infectious Diseases.—The notification of cases of infectious diseases by the Head Masters and Mistresses to the Medical Officer of Health has continued. In the year under review the number of cases so notified was 1,451, as against 638 and 2,256 in 1908 and 1907 respectively. The enormous difference in these totals is due to the fact that 1907 was a "measles" year, and to the aggregate that disease alone contributed 1,621 cases as against 278 in 1908, and 14 in the year 1906. The number of cases of measles

notified in 1909 was 436. This very fact alone shows the extent to which this disease interferes with school work, and any action, therefore, which can be taken to limit its extension should be taken advantage of; the necessity of notification of first cases has frequently been emphasized The number of Scarlet Fever cases which have been notified was 31 as against 15 in 1908, 24 in 1907, and 29 in 1906; the cases of Chicken-pox were more numerous, while cases of Diphtheria increased from 56 to 87 (See Table VII.)

Mortality from Zymotic Diseases;—

Zymotic Mortality during the past seven years.

Years.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000	1·66	0·9	1·4	1·5	1·6	1·8	1·1	1·4

The total deaths registered as occurring within the Borough from this class of disease was 177, as compared with 134 in 1908 and 220 in 1907. These 177 deaths are equivalent to a death rate of 1.4 per 1,000 of the population. The increase in the number of the total deaths from zymotic diseases is due entirely to the increased numbers of deaths from Measles and Whooping Cough. There was an increase in number of deaths from Measles of 25, and from Whooping Cough of 28 over the respective numbers for 1908. The diseases which are included under this total and which are usually designated the seven principal zymotic diseases are smallpox, measles, scarlet fever, whooping cough, diphtheria, enteric fever, and diarrhœa; those which contributed chiefly to the increased mortality in 1909 were measles (45), whooping cough (43). Each of these diseases will receive separate consideration. The comparison of the mortality with previous years is set out in the above tabulation.

SMALLPOX.

Mortality from Small Pox during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1.000.	0·01	0·02	0·03	0·02	nil.	nil.	nil.	nil.

No case of smallpox was notified during the year 1909, the last case treated in the wards of the Borough Hospital was discharged on September 25th, 1905.

Vaccination:—I am indebted to Mr. A. E. Morgan, the Vaccination Officer of the Derby Union, for the following particulars relating to vaccination for the year 1909, and also for the five preceding years:—

	1904	1905	1906	1907	1908	1909
Births	3318	3129	3143	3188	3309	3145
Deaths of Unvaccinated Children ..	483	330	309	383	264	294
Insusceptible and Postponed Cases	1	24	25	47	48	27
Successfully Vaccinated ..	1394	856	407	497	445	326
Conscientious Objection Certificates ..	218	439	284	363	971	956

The above table, shewing the small proportion of successfully vaccinated children to the total, and the increase in the number of conscientious objection certificates, shews a very unsatisfactory state of things, and one calculated to cause very considerable anxiety as to the results of the next invasion of smallpox, especially in the absence of hospital accommodation for smallpox in the Borough.

SCARLET FEVER.

Cases Notified 210
Deaths 4

Mortality from Scarlet Fever during the past seven years.

Years.	Ten Years' Average	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·11	0·07	0·03	0·09	0·04	0·03	0·015	0·03

The number of cases of scarlet fever notified during 1909 was 210, an increase of 94 upon the number for 1908. As regards the distribution of the disease, it was most prevalent in Markeaton Ward with 40 notified cases, followed by Friargate Ward with 27 cases, and Babington Ward with 16 cases, while the lowest number notified was three in Osmaston Ward. The number of deaths from scarlet fever was four only, giving a mortality rate of 0.03. The four fatal cases occurred in Bridge, Friargate, Derwent and Litchurch Wards. The extreme mildness of the type of the disease is proved by the low case fatality, and the general mortality compares as would be expected, most favourably with the ten years' average in this town, and with that recorded in the great towns (0.11) and in the country as a whole (0.09).

As regards age incidence, the great proportion, 135 out of 210, were children of school age, viz., 5 to 15, whilst of the remaining 75 cases, 51 were attacks of children between the ages of 1 and 5. There were 140 of the cases removed to the Borough Isolation Hospital for treatment. The ages of the four fatal cases were respectively 4 years, 6 years, 7 years, and 60 years.

TABLE VIII.—SCHOOLS AND SCARLET FEVER.

	Average Attendance.	Scarlet Fever Cases.	Incidence per 1000 Attendances.
Ashbourne Road	1641	21	12·8
Brighton Road	808	2	2·5
Clarence Road	506	4	7·9
Firs Estate	1462	4	2·7
Gerard Street	884	4	4·5
Nottingham Road	259	1	3·9
Nun Street	612	6	9·8
Orchard Street	333	0	..
Osmaston	430	0	..
Pear Tree	989	8	8·1
St. James' Road	1708	7	4·1
Traffic Street	983	1	1·0
All Saints'	341	4	11·7
Canal Street	445	1	2·2
Christ Church	455	5	11·0
Curzon Street	323	0	..
Parliament Street	181	0	..
Pear Tree Mission	228	1	4·4
Practising	363	4	11·0
St. Alkmund's	217	7	32·2
St. Andrew's	478	3	6·3
St. Anne's	464	14	30·2
St. Chad's	536	9	16·8
St. Dunstan's	512	1	1·9
St. James' H. G.	875	5	5·7
St. John's	447	3	6·7
St. Joseph's	298	0	..
St. Luke's	579	7	12·1
St. Mary's	422	3	7·1
St. Paul's	529	4	7·6
St. Peter's	327	0	..
St. Thomas'	146	1	6·8
Special	81	0	..

MEASLES.

School Notifications	...	...	436
Deaths	...	...	45

Mortality from Measles during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·32	0·04	0·12	0·37	0·02	0·62	0·15	0·34

There were 45 deaths from measles in 1909, as compared with 20 in the previous year and 80 in 1907. In my opinion the most important preventive feature of a measles epidemic is its relationship to school attendance. The apathy with which parents regard an attack of measles is astonishing, but the fact, if realised, that 45 deaths occurred in one year as compared with 4 from scarlet fever should do much to remove this indifference. The death totals show that 42 of the deaths occurred in children under the age of 5 years, viz., 9 under one year, 33 between 1 year and 5 years of age, and 3 over 5 years of age.

Sex.—24 of the fatal cases were males, and 21 females.

Ward Distribution of the fatal cases:—

Markeaton Ward	..	10
Kings Mead ,,	..	7
Abbey ,,	..	6
Derwent ,,	..	6
Babington ,,	..	3
Dale ,,	..	3
Castle ,,	..	2
Friargate ,,	..	2

Arboretum, Becket, Litchurch, Normanton, Osmaston and Rowditch Wards *one* each.

There were no deaths from measles in Bridge and Pear Tree Wards.

Season.—The seasonal incidence of the fatal cases was as follows:—

1st Quarter	..	25 deaths.
2nd ,,	..	12 ,,
3rd ,,	..	5 ,,
4th ,,	..	3 ,,

Social Circumstances.—After the appointment of the Health Visitor (Nurse Walls), all the fatal cases of measles and whooping cough were subjects of special enquiry by her. Social conditions play a most important part in the causation of death in measles.

House Rentals. In 31 cases investigated, the classes of houses occupied by the relatives of the fatal cases, and the rentals paid, were as follows:—

House Accommodation.	*Cases.*	*Rentals.*
2-roomed House	2	2/6*
3 ,, ,, ...	2	3/-
4 ,, ,, ...	5	3/3
5 ,, ,, ...	4	4/6
6 ,, ,, ...	16	5/6
Over 6 ,, ,, ...	2	7/-

* One of the two-roomed houses was a back-to-back, and another had no through ventilation.

The standard working class house in Derby may be considered to be a six-roomed dwelling, with average rental of 5s. 6d. per week.

The number of **occupants of each house** was as follows:—

7-roomed Houses (2).

Over 14 years.		*Under 14 years.*		*Total.*
5	..	2	..	7
2	..	4	..	6

6-roomed Houses (16).

4	..	1	..	5
4	..	2	..	6
5	..	3	..	8
4	..	2	..	6
3	..	2	..	5

6-roomed Houses—continued.

Over 14 years.	*Under 14 years.*	*Total.*
3 ..	4 ..	7
3 ..	2 ..	5
2 ..	2 ..	4
2 ..	5 ..	7
2 ..	4 ..	6
2 ..	3 ..	5
2 ..	3 ..	5
2 ..	3 ..	5
2 ..	2 ..	4
2 ..	3 ..	5
2 ..	6 ..	8
5-roomed Houses (4).		
5 ..	4 ..	9
3 ..	3 ..	6
2 ..	3 ..	5
2 ..	7 ..	9
4-roomed Houses (5).		
2 ..	2 ..	4
2 ..	3 ..	5
2 ..	3 ..	5
2 ..	3 ..	5
2 ..	3 ..	5
3-roomed Houses (2).		
2 ..	2 ..	4
3 ..	1 ..	4
2-roomed Houses (2).		
2 ..	2 ..	4
2 ..	2 ..	4

It will be noticed that there was little or no overcrowding, so far as numbers are concerned, of the houses. No definite conclusions can therefore be drawn from the above figures regarding social circumstances; investigation as to the cleanliness of houses and persons of the inmates gave negative results.

School Infection. There was definite history of school infection in 41 per cent. of the cases. (Visits to infected households were also very important factors in the spread of the disease).

WHOOPING COUGH.

School Notification	160
Deaths	43

Mortality from Whooping Cough during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·33	0·27	0·23	0·17	0·24	0·18	0·12	0·33

This is another disease which is characterised by epidemics periodically, and is always accompanied by a high rate of fatality, particularly among the very young. So far our preventive measures have done very little in the way of reducing either prevalence or fatality, and it is unfortunately a disease which, with measles, is often regarded as inevitable and one from which all children must sooner or later suffer. No doubt the extensive character of the outbreaks and the extreme susceptibility to attack of children unprotected by a previous attack, have given rise to the idea. The measure on which most reliance for future success must be placed is educational, and circulars are distributed which describe the earliest symptoms of the onset of the disease, and the measures which should be adopted first to prevent its spread when a child is known to be attacked, and secondly, the general lines of treatment which minimise the risk of a fatal issue in case of attack. The fact that the disease is more fatal in early life than in later years is the argument for postponing by every possible effort the year of attack, for every year that this can be avoided increases most considerably an individual's probability of recovery in case he should ultimately sicken from the disease. There were 43 deaths registered from this disease as compared with 15, 23 and 29 respectively, in the three preceding years. All the deaths in 1909 were of children below the age of 5 years, and 16 of them were in children under one year. These deaths, however, do not represent the full toll which childhood pays to whooping cough, for this disease frequently lays the foundation of future lung mischief such as phthisis or pneumonia.

Sex of fatal cases. 18 were males and 25 females.

Ward Distribution. The ward distribution of the fatal cases was as follows:—

Castle Ward	10
Markeaton ,, ...	5
Abbey ,, ...	4
Dale ,, ...	4
Osmaston ,, ...	4
Babington ,, ...	3
Derwent ,, ...	3
Becket ,, ...	2
Normanton ,, ...	2

Arboretum, Bridge, King's Mead, Litchurch, Pear Tree, and Rowditch Wards one death each. Friargate Ward had no death from whooping cough.

Season. The quarterly incidence of the fatal cases was as follows:—

1st Quarter ..	5 deaths
2nd ,, ..	5 ,,
3rd ,, ..	24 ,,
4th ,, ..	9 ,,

Housing. The Health Visitor (Nurse Walls), was able to obtain particulars of the conditions of 41 of the 43 houses in which the deaths took place, as regards accommodation and rental. The following is the summary:—

Houses.		*Cases.*		*Rentals.*
2-roomed	..	6	..	2/6
3 ,,	..	6	..	3/-
4 ,,	..	5	..	3/3
5 ,,	..	1	..	4/6
6 ,,	..	22	..	5/6
Over 6 ,,	..	1	..	7/-

Seven of the houses (2-roomed or 3-roomed) were either back to back or had no through ventilation.

Cleanliness. 13 per cent. of the houses were reported as only moderately clean, the remainder being found clean at the time of the visit of the Health Visitor. The same percentage applied to the personal cleanliness of the inmates.

Number of Inmates of houses:—

7-roomed House—no record.

6-roomed Houses (22).

Over 14 years.		*Under 14 years*		*Total.*
4	..	4	..	8
4	..	4	..	8
3	..	4	..	7
3	..	6	..	9
3	..	4	..	7
2	..	3	..	5
2	..	3	..	5
2	..	2	..	4
2	..	3	..	5
2	..	4	..	6
2	..	2	..	4
2	..	3	..	5
2	..	3	..	5
2	..	2	..	4
2	..	4	..	6
2	..	4	..	6
2	..	2	..	4
2	..	2	..	4
2	..	2	..	4
2	..	2	..	4
2	..	2	..	4
2	..	4	..	6

5-roomed House (1)

2	..	2	..	4

4-roomed Houses (5).

2	..	3	..	5
2	..	4	..	6
2	..	3	..	5
1	..	3	..	4
2	..	1	..	3

3-roomed Houses (6).

Over 14 *years.*		*Under* 14 *years.*		*Total.*
3	..	5	..	8
2	..	4	..	6
2	..	4	..	6
3	..	2	..	5

No records in two cases.

2-roomed Houses (6).

2	..	3	..	5
2	..	4	..	6
2	..	1	..	3
2	..	3	..	5
2	..	2	..	4

No record in one case.

School Influence.—This was apparently as marked as in the case of measles, although the majority of the children who died from whooping cough were under school age. In 40 per cent. of the cases there were histories of school infection, that is, one or more of the other children in the same house who attended school commenced with the disease and infected the younger child with fatal results to the latter. In 16.6 per cent. of the cases, there seemed to have been visits to infected houses; in the remainder the sources of infection were unknown.

DIARRHŒA.

Mortality from Diarrhœa during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·64	0·38	0·68	0·61	0·63	0·34	0·45	0·38

The deaths from diarrhœa, which includes the various epidemic disorders of the intestinal tract in infants numbered 50 as compared with 57, 42 and 78 respectively, in the three preceding years. The mortality rate (per 1,000 of the population) is 0.38, which is rather lower than the rate for 1908, and equals the rate 0.38 per 1,000 of the seventy-six great towns. Forty-four of these deaths were of children under the age of one year, and six under 5 years.

This disease is most fatal to infants, and the returns show that over the age of 5 no persons suffered from a fatal attack of this disease. In addition to the diarrhœa deaths, there were 8 deaths registered due to enteritis. The preventive measures have been fully discussed in previous reports and these have been continued during the year under review.

Sex. 25 of the fatal cases were males, and 25 females.

Ward Distribution. Rowditch Ward alone had no deaths from diarrhœa in 1909. The highest number of deaths (7) occurred in two Wards, viz., Castle and Markeaton, while Dale and Derwent Wards had only one death in each.

Season. Twenty-three of the deaths (nearly one-half) occurred in August (7), and September (16). The summer of 1909 was exceptionally cold and wet, otherwise the total number of deaths would probably have been greater, and the proportionate number occurring in August and September increased.

DIPHTHERIA.

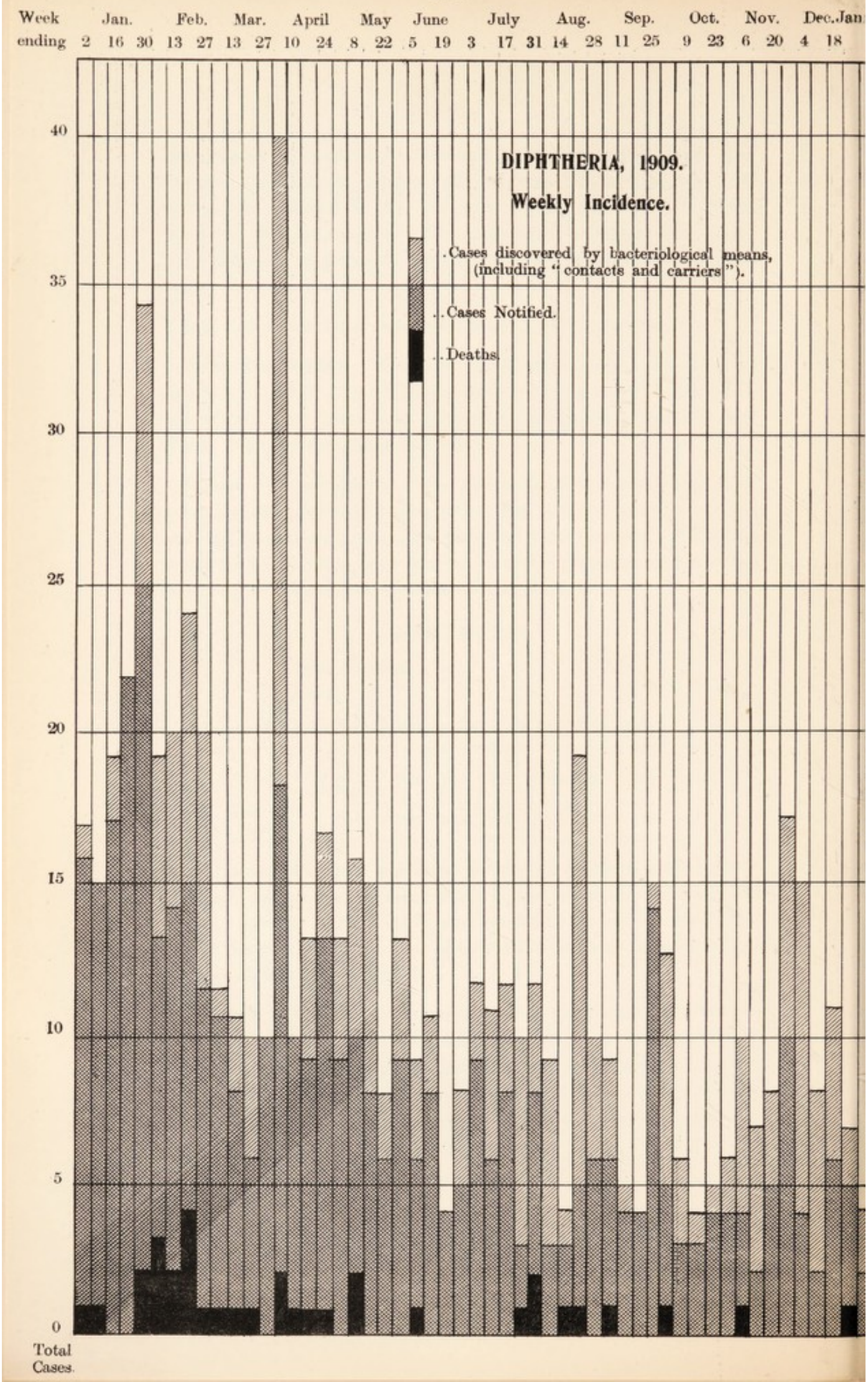
Cases Notified	...	...	653
Deaths	...	...	33

Mortality from Diphtheria during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·2	0·07	0·25	0·19	0·52	0·42	0·28	0·25

Diphtheria was again prevalent within the Borough during 1909, although the number of cases (653) is somewhat smaller than the number notified in 1908 (670), and tended to diminish towards the end of the year. The number of deaths (33) is three fewer than the number of fatal cases in 1908.

Included in the 653 cases are (*a*) 428 cases notified by Medical men in the town on clinical symptoms only; (*b*) 97 cases notified on the results of bacteriological examinations of throat swabs taken by doctors in the town; and (*c*) 128 cases discovered by the Officers of the Health Department in School or in the homes of the people, chiefly the "close contacts" of notified cases.


Week ending
Jan. 2 16 30
Feb. 13 27
Mar. 13 27
April 10 24
May 8 22
June 5 19
July 3 17 31
Aug. 14 28
Sep. 11 25
Oct. 9 23
Nov. 6 20
Dec. 4 18
Jan.
40
35
30
25
20
15
10
5
0
Total Cases.
DIPHTHERIA, 1909.
Weekly Incidence.
Cases discovered by bacteriological means, (including "contacts and carriers").
Cases Notified.
Deaths.

Quarterly Incidence.

First Quarter ..	241 Cases ..	18 Deaths
Second ,, ..	163 ,, ..	6 ,,
Third ,, ..	136 ,, ..	7 ,,
Fourth ,, ..	113 ,, ..	2 ,,

Monthly Incidence.

January ..	98 Cases ..	5 Deaths
February	82 ,, ..	8 ,,
March	58 ,, ..	4 ,,
April	77 ,, ..	4 ,,
May	54 ..	3 ,,
June	35 ,, ..	0 ,,
July	53 ,, ..	3 ,,
August	47 ,, ..	3 ,,
September ..	37 ,, ..	1 ,,
October	26 ,, ..	1 ,,
November ..	45 ,, ..	0 ,,
December ..	41 ,, ..	1 ,,
Totals ..	653	33

Weekly Incidence.—This is indicated in the accompanying chart. The highest number of cases notified in one week was 40 in the week ending April 3rd; and the greatest number of deaths in one week was four in the week ending February 20th.

Ward Distribution:—

Ward.	Cases.	No. Isolated.	Total Deaths.
Abbey	30	19	4
Arboretum ...	74	44	3
Babington ...	54	28	1
Becket	41	24	4
Bridge	30	11	1
Castle	33	19	3
Dale	57	29	0
Derwent	21	9	0
Friar Gate	36	22	3
King's Mead ...	17	10	0
Litchurch ...	21	9	2
Markeaton ...	33	21	0
Normanton ...	56	35	4
Osmaston	59	38	3
Pear Tree	63	46	5
Rowditch	28	12	0
	653	376	33

It will be noted then that all the wards were affected, the greatest number of cases occurring in Arboretum Ward, and the greatest number of deaths in Pear Tree Ward.

Age Periods:—

Under 1 year	..	5	Cases	0	Deaths
1 to 5 years	..	128	,,	11	,,
5 to 15 years	..	418	,,	21	,,
15 to 25 years	..	57	,,	0	,,
25 to 65 years	..	50	,,	1	,,

It will be seen then that the most fatal age of attack is between 1 and 5 years, but most deaths at one age occurred between the ages of 5 and 6 years, viz., 9.

Sex Distribution:—

The numbers shew a preponderance of females, the total, 653, including 289 males and 364 females. Twelve of the fatal cases were males and 21 were females.

Fatality.—The 33 deaths among the 525 notified cases gives a case-mortality of 6.28 per cent.; and a rate per 1,000 of the population of 0.25, as compared with 0.14, the rate for the 76 great towns. There were 36 deaths from Diphtheria in 1908, 52 in 1907, and 64 in 1906.

Infected Households.

In 426	instances	one case only	occurred	in a house	..	426
71	,,	two cases	,,	,,	..	142
17	,,	three ,,	,,	,,	..	51
3	,,	four ,,	,,	,,	..	12
0	,,	five ,,	,,	,,	..	0
1	,,	six ,,	,,	,,	..	6
1	,,	16 ,,	,,	Workhouse Home		16
Totals 519	houses			Cases		653

Second attacks.

7 of the cases had suffered previously from Diphtheria.

Two, eighteen months previously.
One, two years ,,
One, two-and-a-half years previously
Two, four years ,,
One ten years ,,

Occupation.—401 of the 653 cases were school children, i.e., 61.4 per cent., in addition 3 were school teachers. 120 were children below school age. Among the remaining 129 cases, there was no special indication that any particular occupation was a factor in the spread of the disease. It is interesting to note that none of the men employed in the ashpit department (the number of these, including carters and depôt men is over 100), suffered from diphtheria, and in only one instance did diphtheria occur in the household of a man employed in this department. Similarly none of the men employed in cleansing the sewer manholes were attacked by this disease.

School Influence.—The 401 school children attended 32 Public Elementary Schools, and four private Schools. The following table gives the number of cases of diphtheria attending each of the public elementary schools, with the incidence per 1,000 attendances. With the exception of the Special School, every public elementary school had one or more cases of diphtheria among its scholars.

TABLE IX.—SCHOOLS AND DIPHTHERIA.

	Average Attendance.	Diphtheria Cases.	Incidence per 1,000 attendances.
Ashbourne Road	1641	20	12.2
Brighton Road	808	27	33.4
Clarence Road	506	13	25.7
Firs Estate	1462	16	10.9
Gerard Street	884	57	64.5
Nottingham Road	259	9	34.7
Nun Street	612	14	22.9
Orchard Street	333	0	—
Osmaston	430	1	2.3
Pear Tree Council	989	11	11.0
St. James' Road	1708	73	42.7
Traffic Street	983	10	10.0
All Saints'	341	6	17.6
Canal Street	445	5	11.2
Christ Church	455	3	6.6
Curzon Street	323	2	6.2
Parliament Street ..	181	1	5.5
Pear Tree Mission	228	3	13.1
Practising	363	5	13.8
St. Alkmund's	217	1	4.6
St. Andrew's	478	1	2.1
St. Anne's	464	9	19.4
St. Chad's	536	21	39.2
St. Dunstan's	512	27	52.7
St. James' H. G.	875	20	22.9
St. John's	447	7	15.7
St. Joseph's	298	2	6.7
St. Luke's	579	3	5.2
St. Mary's	422	1	2.4
St. Paul's	529	5	9.5
St. Peter's	327	6	18.4
St. Thomas'	146	1	6.8
Special	81	0	—

Schools and Fatal Cases.—Twenty-four of the 33 deaths were those of school children. The schools attended by these children were respectively:—

Gerard Street School	7
St. James' Road Council School ..	4
*Alvaston ,, ..	2
St. Dunstan's ,, ..	2
All Saints', Ashbourne Road, Brighton Road, Clarence Road, Firs Estate, *Old Normanton, St. Chad's, St. Luke's, and Private School one each	9
Total ..	24

* Alvaston School and Old Normanton School are situated outside the district and controlled by the Derby Education Authority.

The relative incidence of diphtheria upon school children was not quite so great in the latter portion of the year as in the earlier months. Of the 369 cases notified from January 1st to May 31st, 240 were school children, or 65 per cent.; while of the 284 cases notified in the last seven months, 168 were school children, or 59 per cent.

Teachers.—The three teachers affected were all females, and were respectively engaged at St. James' Road, Gerard Street, and Firs Estate Schools; all of them Council Schools.

School Buildings and Offices.

No special connection with defects in the construction, arrangement, or cleanliness of schools or offices was discovered. In a few instances minor defects were found and soon remedied.

DEFECTIVE DRAINS AND OTHER NUISANCES.

Obvious nuisances were discovered in 16 houses only. In 8 instances the drains were found to be either defective or choked. Insufficient w.c. accommodation was found in two cases, one house

was overcrowded, w.c. pan defective in two instances, sink waste pipe not disconnected in one house, privy vault defective in another, privy ashpit offensive and rain-water cistern foul in another. In one house the inmates complained of smells from the tub closet which was not defective.

MILK SUPPLY.

In no case could the attack of Diphtheria be traced to the milk supply.

Type of the Disease.

Generally speaking, the disease was of a mild type, but in a few instances it took an insidious and toxic character. In two cases, both fatal, the parents had treated the patients as suffering from mumps; one of these was the subject of a Coroner's enquiry.

Cases of the laryngeal, or "croupy" type, were relatively rare, A few cases were of the "nasal" type.

History of Diptheria in Derby.

The following table shews that Diphtheria has been very prevalent in Derby during the past four years, 1906-7-8-9; it was moderately prevalent in 1905, while the year 1904 shewed a number of cases considerably in excess of the preceding year. The average number of cases notified during the five years 1905-9, was 553.6; while the average number notified during the preceding five years was 84.4. The average annual number of deaths for the last five years was 41.6, and for the preceding five years it was only 14.2.

The four years 1889-1892 shew an average of 19 deaths annually, and the high case-mortality would seem to suggest that many true cases of diphtheria were not recognised at that time. Nevertheless, it will be observed that at no five yearly period has diphtheria been so prevalent as during the quinquennium 1905-9.

DIPHTHERIA IN DERBY, 1881-1909 (inclusive).

Year.	*Cases of Diphtheria Notified.*	*Case Incidence per 1,000 of the Population.*	*Deaths.*	*Case Mortality per cent.*
1881	6	0.08	2	33.3
1882	10	0.13	3	30.0
1883	8	0.10	1	15.5
1884	1	0.02	1	..
1885	1	0.02	0	nil.
1886	6	0.07	2	33.3
1887	27	0.31	7	26.0
1888	23	0.26	7	30.5
1889	46	0.51	19	41.4
1890	81	0.87	20	24.7
1891	66	0.71	17	25.8
1892	67	0.71	20	29.9
1893	50	0.52	6	10.8
1894	46	0.47	5	10.9
1895	43	0.44	6	14.0
1896	45	0.45	10	22.2
1897	57	0.57	9	15.8
1898	74	0.73	9	12.2
1899	60	0.58	8	13.3
1900	52	0.41	7	13.5
1901	74	0.70	20	27.0
1902	63	0.54	12	19.0
1903	83	0.70	3	3.6
1904	150	1.25	29	19.4
1905	277	2.27	23	8.3
1906	562	4.50	64	11.3
1907	606	4.81	52	8.8
1908	670	5.25	36	5.5
1909	653	5.04	33	5.0

Measures taken for Checking the Spread of the Disease.

The routine measures adopted for dealing with diphtheria cases have been fully dealt with in former annual reports, and there is no need to again repeat them. It may be mentioned, however, that during the year 1909 more use was made of—

(1) Hospital Isolation, and of
(2) Bacteriology.

(1) In 1909 the number of cases of Diphtheria removed to Hospital was 376, as compared with 216 in 1908.

(2) Bacteriology was very largely used for the diagnosis of diphtheria during the year, and conversely for the purpose of releasing a diphtheria patient from isolation. The number of throat swabbings examined bacteriologically in 1909 was 5,310, as compared with 538 in 1908. A detailed summary of the work done in the Hospital laboratory is given in the Hospital report.

Co-operation of the Local Medical Men.—A circular letter was sent to every doctor practising in the Borough, calling attention to the continued prevalence of diphtheria in the town, and asking their assistance in applying bacteriology to the recognition of cases of diphtheria, and especially of "close contacts" in the home of a diphtheria case who might spread the infection. The following four queries were put and answers invited as early as possible:—

(1) Are you willing to take a swabbing from the throats of all your diphtheria cases before releasing them from isolation? or

(2) Are you willing for a medical member of the Sanitary staff to take the swab?

(3) Are you willing to take a swabbing of the throats of "close contacts" of your diphtheria patients? or

(4) Are you willing for a medical member of the Sanitary staff to take these swabs?

The communication was considered by a Special Committee of the Derby Medical Society, at which the Medical Officer of Health

attended and explained the principles and procedure he desired. The results were favourable; a summary of the replies received was as follows:—

(*a*)	Affirmative generally	3
(*b*)	,, with reservations	4
(*c*)	,, to questions II. and III.	16
(*d*)	,, ,, I. and IV. ..	12
(*e*)	,, ,, II. and IV. ..	17
(*f*)	,, ,, I. only ..	1
(*g*)	Negative	2
(*h*)	No reply	3
	Total ..	58

This arrangement (made in January, 1909), has worked well, and without friction, although the scepticism of one of the negative medical men caused some little extra trouble at times. Outfits were, of course, provided by the Health Department of the town to all medical men who required them.

Schools.—Special attention was paid to the condition of the throats of school children, and no child from an infected household was allowed to return to School until bacteriological examination of the throat swab shewed the absence of the Klebs-Lœffler bacillus. After the notification of diphtheria in a school child, the school last attended by the patient was at once visited, and all members of the class examined for suspicious symptoms; throat swabbings were taken of all shewing these symptoms, and usually of a dozen or so of the children who sat nearest to the patient, and also of any special playmate. In one instance, swabs were taken of the throats of an entire class, 74 in number, and four of these shewed the presence of Klebs-Lœffler bacilli in their throats. It was not however usually practicable nor necessary to swab entire classes, and equally good results (if not better) were obtained by swabbing the patient's immediate neighbours in the class-room, the patient's special playmates, and any others presenting suspicious symptoms. Also careful enquiry was made as to the absentees from illness, and these visited if thought advisable and throat swabs taken unless

a doctor were in attendance. The following is an instructive example of not only the common results of throat swabbing, but also illustrates a very frequent mode of spread of the infection: a severe case of diphtheria (ultimately fatal) having occurred in a scholar of Gerard Street School, swabbings were taken of the throats of twelve of the nearest neighbours of the patient in the class, of these, no fewer than seven gave positive results; on enlarging the circle and taking swabbings of 24 others, none of these gave positive results. On enquiry, it was elicited that of the seven children whose swabbings were positive, one had been ill in bed two to three weeks previously with throat symptoms, white patches being seen by the mother who did not call in a doctor. This child was in bed three days, and allowed to return to school subsequently, the mother doubtless congratulating herself on having saved a doctor's bill. There can be no doubt that this child was the source of the infection found in the throats of her six class mates, and of that of the fatal case.

A detailed summary of the bacteriological examination of throat swabs of school children is given on pages 28 to 31.

School Notification.—The Head Teachers of all the Public Elementary Schools in the town were notified of the arrangements for excluding the "close contacts" of diphtheria patients (children living in infected households) from attending school until certified free from infection. The teachers also gave considerable assistance in notifying the Health Department of the existence in school children of cases with suspicious throat symptoms, either attending school or absent from this alleged cause.

School Closure.—Gerard Street School was closed from March 31st until the commencement of the Easter holidays, owing to a sudden recrudescence of diphtheria, a large portion of these being Gerard Street scholars.

Antitoxin.—Antitoxin was supplied gratuitously to the medical men practising in Derby. 164 phials, each containing 2,000 units, were supplied in Derby in 1909. In the majority of the cases admitted to the Hospital, the antitoxin had not been previously given.

Removal of Sanitary Defects.—As far as possible, all the sanitary defects mentioned above, were remedied.

Persistence and Spread of the Disease.—As mentioned in the Annual Report for 1908, the chief factors in the spread of the disease in Derby have been the many mild and unrecognised cases which have occurred. As the result of bad trade in the town, it was only natural that parents should from motives of economy, attempt to do without medical advice in such cases, and if school children, send them back to school while still infectious. Fear of the School Attendance authorities at times precipitated the latter. Perhaps also the trade depression in the Borough has resulted in somewhat lowered vitality of school children and others with diminished resisting power to the disease.

In one or two instances the disease was imported from outside, e.g., a sailor (Royal Navy) was found to be suffering from diphtheria on his arrival here; another case had apparently contracted diphtheria while staying at a seaside resort in North Wales, three cases of diphtheria have broken out in the house in which the patient was staying. Bacteriology was practically of the greatest possible assistance in recognizing these above-mentioned mild cases and coinciding fairly constantly with the clinical symptoms or history. If diphtheria bacilli were found on bacteriological examination present in the throat of a person with no apparent signs of diphtheria, enquiry often elicited the fact that at some time recently, this individual had had throat symptoms or been in close contact with someone who had these throat symptoms or diphtheria itself. An unrecognised case of nasal diphtheria was the apparent cause of several cases of diphtheria in one school in the Borough, after recognition and isolation no further cases developed in the class. Another case of nasal diphtheria, however, with offensive nasal discharge, who had been treated for diseased nasal bones, but examination of the discharge shewed the presence of virulent diphtheria bacilli, had not so far as could be judged, either giving the disease to other children living in the same household, or to his neighbours in the same class. Nevertheless this patient was removed to the Hospital and isolated as being potentially dangerous.

ENTERIC FEVER.

Cases Notified	13
Deaths	2

There were 15 cases in all notified during the year, but two of these were cases admitted to the Infirmary from districts outside the Borough and have, therefore, not been included in the figures.

Mortality :—

Percentage Case Mortality	10.3
Mortality per 1,000 of Population ...	0.015
,, ,, (76 great towns)	0.08

Mortality from Enteric Fever during the past seven years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909
Rate per 1,000.	0·14	0·6	0·05	0·08	0·10	0·15	0·031	0.015

Seven of the cases were removed to Hospital (The Derbyshire Royal Infirmary), three were in-patients of the Children's Hospital, one was an in-patient of the Workhouse Infirmary, and two were treated at home.

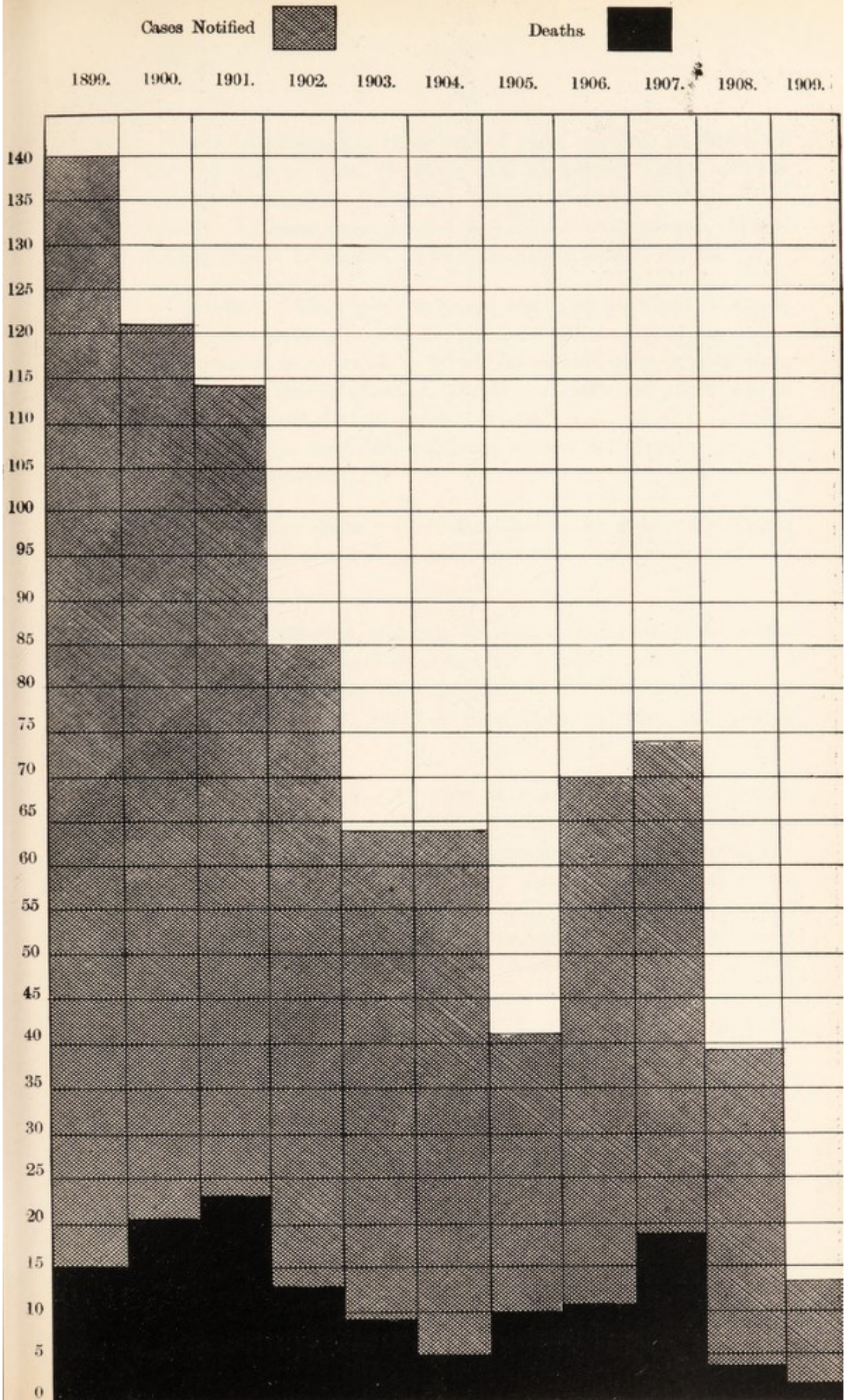
The number of cases notified is the smallest recorded, and is no fewer than 69 below the average for the preceding 10 years; the small mortality rate is also very gratifying. In 1908, there were 39 cases notified with 4 deaths, case mortality 10.3; in 1907, 74 cases notified with 18 deaths, a case mortality of 24.3; in 1906 there were 70 cases, deaths 11, and case mortality 15.7 per cent.

Age and Sex Distribution :—

There were males and females.

Age Periods.	0-5 yrs.	5-15 yrs.	15-25 yrs.	25-65 yrs.
Cases ...	0.1	4	5	3
Deaths ...	0	1	1	0

ENTERIC FEVER IN DERBY, 1899—1909.



Ward Distribution.—There were 3 cases notified in Rowditch Ward, 2 each in Dale, Derwent, and Markeaton Wards, and one each in Babington, Friargate, King's Mead, and Normanton Wards. No cases were notified in Abbey, Arboretum, Becket, Bridge, Castle, Litchurch, Osmaston, and Pear Tree Wards.

Causation.—As in previous years, the cases have been classified in groups according to probable cause or the absence of any ascertained source of infection. It will be noticed that in most cases there was no clue to infection, and in the other four cases, two of which were attributed to personal infection and two to possible infection through food, the suggested sources of infection were extremely problematical.

A satisfactory feature is the fact that in no case was a serious sanitary defect found in connection with the residence of the patient.

Blood Examination.—In only six instances was the blood of suspected typhoid patients examined for Widal's reaction. In two cases positive reactions were obtained, of the remaining four cases negative results were found in three instances, while one gave a doubtful reaction.

Special Precautions.—A "Typhoid Pail" is provided for the reception of the excreta of patients treated at home. These are periodically removed, the contents cremated at the destructor, and cleansed. When a case occurs in a house provided with a tub closet, the latter is removed and burnt in the destructor, a new tub being substituted. The seats of all sanitary conveniences connected with typhoid infected houses are cleansed and disinfected with chloros.

Table X.—An Analysis of the Cases of Enteric Fever notified during the year 1909.

A—*Cases associated with a previous case.*

Progressive No.	Age	Sex	Sanitary Conveniences. W.C.	Pail.	Privy.	Privy Cesspool.	Nuisances.	Remarks.
682	14	F.	1	..	..	..	.. ..	Brother died in house eight years ago.
946	7	M.	..	1	..	..	.. ..	All family had "influenza" three or four months ago, patient not been well since.

B—*Cases possibly associated with some Article of Diet.*

26	41	M.	1	..	..	..	.. ..	Fresh uncooked vegetable eaten
734	12	F.	1	..	..	..	.. ..	Drank water from waterfall in Wales.

C—*Cases in which no suggestion as to Infection was made.*

14	20	M.	1	..	..	..	.. ..	Travels about country to various towns
24	20	M.	..	..	..	..	.. ..	Inmate of Union Workhouse (a vagrant).
81	28	M.	1	..	..	..	.. ..	
235	30	F.	1	..	..	..	.. ..	
442	15	M.	1	..	..	..	.. ..	Father works in Hide and Skin Yard.
735	15	M.	1	..	..	..	.. ..	
738	13	M.	1	..	..	..	.. ..	
784	18	M.	..	1	..	..	.. ..	H.M. Prison.
859	10	F.	1	..	..	..	.. ..	

PUERPERAL FEVER.

Cases Notified	9
Deaths	7

There were seven deaths registered as due to this disease, compared with seven deaths in 15 cases in 1908, one death in seven cases in 1907, three deaths among 11 notified cases in 1906, and four deaths among 13 cases in 1905. The cases notified were two each from Abbey, Arboretum, and Pear Tree Wards, and one each from Becket, Friargate, and Markeaton Wards. In addition to the nine cases officially notified, there were three fatal cases (two of these died in the Derbyshire Royal Infirmary), certified as dying from Puerperal Septicæmia. There were also three cases (one fatal) of a doubtful nature; one of them was originally notified as puerperal fever, but the certificate was subsequently withdrawn, the mother and child suffering from specific disease. Three of the nine cases formally notified were fatal, one primipara, and two multiparæ; the former had a ruptured perinæum which had been neglected, one of the others had adherent placenta after delivery, and the other had a foul ulcer of the leg. The midwife who attended one of the fatal cases was reported to the Central Midwives' Board in the following circumstances: A primipara attended by her had rigors on the third day, but no doctor was sent for until the following day, when the patients' condition was very bad indeed. On examination, the doctor found a large sloughing tear of the perinæum. The midwive's case was sub-judice at the end of the year.

The usual precautionary measures have been continued, they include disinfection of the clothing of the midwife in attendance on the case, and also disinfection of the midwife's residence. In cases of puerperal fever, a note of enquiry is usually forwarded to the medical man in charge, asking for particulars relating to the case, and in accordance with the reply received, the midwife is instructed to refrain from attending other cases for varying periods.

Midwives' Act, 1902.—In accordance with the requirements of the Midwives' Act, 59 women, who were registered as midwives, gave notice of their intention to practise within the boundaries of the Borough. 28 of these were women who were admitted to the

roll on account of their having been in bona-fide practice for 12 months prior to July 31st, 1902. 18 of them were connected with the Royal Nursing Institution.

157 notices were received from midwives stating that they had had to send for medical assistance as compared with 122 in 1908.

135 notifications of still births were received, and most of them visited by women inspectors.

1 letter was forwarded to the Central Midwives' Board intimating change of address.

4 letters were written to midwives on account of failure to notify births, 6 letters *re* unsatisfactory condition of bag, etc., and five letters for various other reasons.

The whole of the midwives have been regularly inspected by Miss Davies. The record books and outfits were examined, and such failures to comply with the rules of the Midwives' Board as were discovered, were reported to the Medical Officer of Health. In the case of minor defects, a letter was forwarded to the midwife concerned, specifically stating the rules which had not been observed, and requesting future compliance. In cases of failure at the next visit, or in the case of more gross negligence, the midwife was requested to attend at the Health Office for personal interview. 12 midwives in all were thus interviewed, as compared with eight in 1908. Six of these were subsequently interviewed and censured or cautioned by the local supervising authority.

Bronchitis and Pneumonia.—These two diseases were responsible for no fewer than 241 of the 1,712 deaths registered during 1909. Bronchitis was ascribed as the cause in 145 instances, and pneumonia in 96. The corresponding figures for 1908 were 142 and 67 respectively. Of the 145 deaths due to bronchitis, 29 occurred in children under one year of age, while 65, nearly 45 per cent., occurred in persons of 65 and upwards. The 96 pneumonia deaths include 20 under one year, 36 between 1 and 5 years, 25 between 25 and 65, and only 10 at 65 and upwards. Compared with 1908, the chief increase in the number of pneumonia deaths was between the ages of 1 and 5, viz., 36, as compared with 14 in 1908.

The general direction which preventive measures should take would appear to be in the case of bronchitis, greater care with regard to exposure and clothing of young children and elderly persons, etc., the education of the public with respect to the possibly infectious nature of pneumonia, and to the fact that persons with impaired constitutions, whether the result of defective home hygiene or pernicious habits, are those upon whom the pneumococcus can most readily exhibit its pathological effects. As a corollary those conditions which tend to improve physique should be encouraged. The ventilation of workrooms and places where people congregate is of great importance. Since dust in excessive amount interferes with the efficient working of the respiratory tract, it would appear desirable that dustless streets should be aimed at, and the least dust-raising methods of scavenging should be adopted. In the case of a person attacked it is obvious that careful disposal of the infected sputum is most desirable.

Influenza.—The only information relating to the prevalence of influenza is to be gleaned from the death returns, and these shew that there were 14 deaths ascribed to this disease as compared with 34 in the previous year, and 23 in the year 1907. The largest number of deaths, 7, was registered in the age period 25-65. There were no deaths of children under one year of age as compared with 2 in 1908. The largest number of deaths, 6, was registered in Castle Ward.

Cancer.—Cancer or some variety of malignant disease was held responsible for 96 deaths as compared with 107 in 1908, 114 in 1907, and 92 in 1906. There were no deaths from this disease below the age of 5 years, one between 5 and 25, whilst the following two age periods had respectively totals of 64 and 29. Friargate and Normanton Wards with 9 deaths each showed the highest ward mortalities. In Osmaston Ward there were only two deaths from this disease.

Violence.—There were 55 deaths attributed to violence as compared with 56 in 1908 and 1907. 47 of these cases were accidents, and 8 were cases of suicide. These totals compare with 45 and 11 respectively, in the previous year. Eleven of the cases of accident were of children under the age of 5 years, and 14 occurred amongst

people aged from 25 to 65, this, of course, being the period of activity when risks, whether occupational or otherwise, are most common. All the cases of self-inflicted death occurred also at this age period.

Other Diseases.—There were 188 deaths from heart diseases, compared with 187 in 1908; of these 161 were over the age of 25. The highest number was 19 in Castle Ward, followed by 18 in Bridge Ward and 17 in Litchurch Ward. Of the 23 deaths from alcoholism and cirrhosis of the liver, there were none below the age of 25. Of the 88 deaths registered as due to prematurity, ten occurred in Markeaton Ward. There were eight deaths attributable to "accidents of parturition," the same number as in 1908.

TUBERCULOUS DISEASES.

Deaths from Phthisis	129
Deaths from other Tuberculous Diseases	47
Cases of Phthisis Notified	127

These diseases are classified under two headings, namely, (1) phthisis, or tuberculosis of the lungs, and (2) "other tuberculous diseases," which include tabes mesenterica, tuberculous meningitis, scrofula, and others. The total number of deaths from tuberculous diseases is therefore 176. In the report for 1906, the importance of phthisis in the annual statistical survey was fully discussed, as well as the measures which have been adopted in this Borough for its prevention.

The deaths from phthisis numbered 129 as against 115 in 1908, and 121 in the previous year, and 113 in 1906; compared as death-rates, these figures represent respectively 0.99, 0.90, 0.96, and 0.89 per 1,000 of the population—a slight increase for 1909.

A reference to Table I. will show that the phthisis mortality of the last ten years has been slightly under 1, whilst in the preceding ten years the rate was slightly under 1.4, this reduction represents a decline of over 25 per cent., which must be regarded as highly satisfactory.

The ages at death of these phthisis cases is practically the same as has been noted in the past. Two cases under five years of age

were registered, four between 5 and 15, 24 between 15 and 25, whilst between 25 and 65 there were 94 deaths; there were only 5 deaths at ages over 65.

As regards "other tuberculous diseases," the heaviest mortality is observed among children under the age of 5 years, who contributed 32 out of the 47 deaths (18 of the 32 were under one year of age); whilst at all ages over 5 there were 15 deaths. A subdivision of the deaths under one, shows that of the 18 deaths, the localisation of the infection was in the brain and lining membrane in 5 instances, and in the abdomen in 2; the remaining 11 shewed a distribution over the rest of the organs of the body.

Notification.—The number of cases of phthisis notified was 127, while the number of deaths was two more than this. It is probable then that not more than one-third (at a moderate estimate), of the cases existing in the Borough are notified under our present voluntary system. It will be obvious, therefore, that more information as to the existence of these cases is necessary, and earlier notification of those cases usually notified also, if we are to carry out successfully our campaign against consumption and all its allies.

The number of cases of phthisis notified by the Poor Law Medical Officers under the New Tuberculosis Order (referred to in the Annual Report for 1908), was 63. 26 notifications of changes of address were received from the Master of the Workhouse and from the Relieving Officers. There were 120 notified cases of Phthisis under observation at the end of the year. Of the 129 fatal cases of phthisis, 55 had been notified either voluntarily or under the Tuberculosis Order (i.e., 43 per cent.) The remaining 74 fatal cases had not been previously notified.

The following list shews the time between notification and death of these 55 cases:—

No. of Cases.

1 notified 2 days after death
2 ,, same day as ,,
1 ,, 1 day before death.
1 ,, 3 days ,, ,,
2 ,, 4 ,, ,, ,,

No. of Cases.

1	notified	5	days	before	death.
2	,,	7	,,	,,	,,
1	,,	12	,,	,,	,,
2	,,	13	,,	,,	,,
1	,,	14	,,	,,	,,
1	,,	17	,,	,,	,,
1	,,	20	,,	,,	,,
1	,,	22	,,	,,	,,
1	,,	25	,,	,,	,,
1	,,	27	,,	,,	,,
1	,,	34	,,	,,	,,
2	,,	38	,,	,,	,,
1	,,	41	,,	,,	,,
2	,,	47	,,	,,	,,
1	,,	53	,,	,,	,,
1	,,	58	,,	,,	,,
1	,,	59	,,	,,	,,
1	,,	65	,,	,,	,,
1	,,	66	,,	,,	,,
1	,,	68	,,	,,	,,
1	,,	84	,,	,,	,,
1	,,	101	,,	,,	,,
1	,,	150	,,	,,	,,
1	,,	160	,,	,,	,,
1	,,	162	,,	,,	,,
1	,,	165	,,	,,	,,
1	,,	185	,,	,,	,,
1	,,	223	,,	,,	,,
1	,,	267	,,	,,	,,
1	,,	307	,,	,,	,,
1	,,	451	,,	,,	,,
1	,,	577	,,	,,	,,
1	,,	595	,,	,,	,,
1	,,	627	,,	,,	,,
1	,,	669	,,	,,	,,
1	,,	684	,,	,,	,,
1	,,	877	,,	,,	,,

No. of Cases.

1 notified 885 days before death.
1 ,, 993 ,, ,, ,,
1 ,, 1035 ,, ,, ,,
1 ,, 1172 ,, ,, ,,
1 ,, 1178 ,, ,, ,,
1 ,, 1586 ,, ,, ,,
1 ,, 1641 ,, ,, ,,

From this table it will be seen that 27 or 50 per cent. of the 55 fatal cases notified died within two months of notification.

Phthisis Notifications.

Year.	Private Practitioners.	Institutions.	PoorLaw Cases.	Others.	Total.
July 1st to Dec. 31st, 1902	35	16	5	..	56
1903	35	62	8	..	105
1904	37	56	10	..	103
1905	32	41	9	..	82
1906	43	62	6	..	111
1907	46	33	19	1	99
1908	49	22	37	..	108
1909	50	27	50	..	127

The total notifications received are rather more than the number received in previous years, except 1906. The number reported by private practitioners is higher than in any previous year. The ward distribution of the cases was as follows:—

	Cases Notified.	Deaths.		Cases Notified.	Deaths
Abbey ..	8	8	King's Mead ..	13	20
Arboretum ..	4	7	Litchurch ..	9	7
Babington ..	7	13	Markeaton ..	6	8
Becket ..	7	7	Normanton ..	7	7
Bridge ..	14	2	Osmaston ..	4	4
Castle ..	8	8	Pear Tree ..	11	12
Dale ..	7	9	Rowditch ..	10	6
Derwent ..	5	1		—	—
Friargate ..	7	10	Totals ..	127	129

The largest number of cases was thus reported from Bridge and King's Mead Wards; the deaths were also highest in King's Mead, Babington, and Pear Tree Wards. There is a constant variation in the actual totals as observed from year to year, and practically the only constant feature—as has been previously observed—is the unenviable position which King's Mead Ward occupies.

The age incidence of persons attacked and notified in 1909 is shown in the subjoined table, the deaths registered at the same age period are inserted for comparison.

	All ages.	0-15	15-25	25-45	45-65	65 upwards.
Males ...	67	7	7	37	16	0
Females ...	60	7	9	33	10	1
Total ...	127	14	16	70	26	1
Deaths ...	129	6	24	94		5

The notification of males shews a decrease of 7 compared with 1908, whilst the number of females increased from 34 to 60.

The number of specimens of sputum sent for bacteriological examination was 30, of which 10 showed the presence of the tubercle bacilli.

Enquiries have been made into the *occupations* followed by the patients, and the information thus obtained has been tabulated in the subjoined table. The totals vary from year to year, and they show no striking incidence on any particular trade. The textile workers contributed 5 cases as against 6 last year, labourers 12 as against 33, and the various workers in wood, stone, and metal 16 as against 14 in the previous tabulation. Children and persons engaged in domestic work contributed 13 and 34 respectively, as compared with 12 and 23 in the previous report.

Textile Workers.

Wire Coverer	1
Lace Hands	2
Mill Hand—Paper	1
Tape Worker	1
Total	5

Labourers.

General	7
Colour Works Labourers	2
Others	3
Total	12

Indoor Occupations.

Printers	2
Dressmakers	2
Clerks	4
Various	5
Total	13

Workers in Wood, Stone, and Metal.

Iron Moulders	2
Stonemason	1
Fitters	3
Pattern Makers	2
Joiner and Wood Sawyer	2
Foundry Labourers	2
Various	5
Total	16

Domestic Duties.

Housewives and Domestic Servants	34

Children.

School	9
Others	4
	13

Various Occupations.

Polishers	2
Hawkers	2
Soldiers	2
Boatman	1
Butcher	1
Fireman	1
Leather Workers	2
Draymen	4
Publicans	2
Rag Gatherer	1
Collectors	3
House Painters	2
Photographer	1
Cattle Drover	1
Car Driver	1
Groom	1
Total	27
No record	7
Grand Total	127

Causation.—As in previous years, a rough etiological classification of the main factors which have caused (as in Series 1), or predisposed to (Series 2 to 5), consumption, has been attempted. In several of the latter cases, more than one factor has predisposed to the disease, *e.g.*, a case with bad family history, occupation a stonemason, habits intemperate, might be classed under any one of the three Series, 2, 3, and 5. There can be no doubt that habits of intemperance induce a predisposition to consumption, and where there has been a distinct history of drunkenness as a prominent feature, such cases have been classed in Series 5 ("Personal Habits.")

Series 1.—**Probably direct infection.**

Case 2.—Nursed son who had Pulmonary Hæmorrhage.
Case 13.—Mother died of Phthisis.
Case 38.—Sister died of Phthisis.
Case 45.—Father and Uncle died of Phthisis.
Case 61.—Two sisters ill with Phthisis in same house.
Case 64.—Father, two brothers, and two sisters died of Phthisis.
Case 72.—Father died of Phthisis.
Case 77.—Father and Aunt died of Phthisis.
Case 82.—Wife died of Phthisis.
Case 87.—Mother died of Phthisis.
Case 97.—Daughter died of Phthisis eight weeks before notification.
Case 113.—Brother died of Phthisis.
Case 118.—Father and Mother died of Phthisis.
Case 120.—Father and sister died of "consumption of the throat."
Case 140.—Mother and two brothers died of Phthisis.
Case 141.—Father and two brothers died of Phthisis.
Case 153.—Brother died of Phthisis three months before notification of this case.
Case 167.—Father, mother, and brother died of Phthisis.
Case 173.—Father died of Phthisis, patient had a hard life, insufficient food.

Series 2.—**Family History.**

Case 9.—Uncle died of Phthisis, patient has Spinal Disease.
Case 38.—Sister died of Phthisis.
Case 95.—Uncle died of Phthisis.
Case 105.—Uncle and two aunts died of Phthisis.
Case 109 (?)—Father died of Pleurisy and Meningitis following Influenza and Pneumonia.

Series 3.—**Occupation.**

Case 22.—Stonemason, Brother (a stonemason) died of Phthisis.
Case 73.—Soldier. Dysentery and hard life in South Africa.
Case 111.—Electric Fitter. Had Lead Poisoning.
Case 161.—Works at Paint Works. Started with Bronchitis.
Case 108.—Soldier. Had hard life in Canada.
Case 175.—Labourer at Chemical Works. Had Pneumonia.

Series 4.—**Following Illness.**

Case 4.—Weak chest from birth. Bronchitis three years ago.
Case 5.—Following Pneumonia.
Case 11.—'Continued Fever," and hard life in South Africa.
Case 15.—Heart Disease. Successive Colds. Hard life.
Case 50.—Abscess in neck. Moderate drinker.
Case 51.—Ill for years.
Case 60.—Following measles. Phthisis in father's family.
Case 71.—Severe Hæmorrhage from Lungs.
Case 78.—Successive "Colds."
Case 86.—Rheumatic Fever and "Colds."
Case 114.—Following Influenza. Father and two brothers died of Phthisis.
Case 103.— ,, "Chronic Bronchitis."
Case 150.— ,, Injury to spine.
Case 152.— ,, Pneumonia
Case 158.—Tuberculous Abscesses Wrist.
Case 162.—Following Influenza and Bronchitis.
Case 168.—Successive attacks of Bronchitis.
Case 170.—Neglected Miscarriage. Not well since.
Case 171.—Suffered from Bronchitis for some years.
Case 172.—Had Chronic Bronchitis.
Case 143.—Neglected Miscarriage.
Case 145.—Neglected "Colds."
Case 146.—Frequent attacks of Bronchitis.
Case 99.—Suffered from Bright's Disease and Bronchitis.
Case 107.—Pneumonia and Bronchial Catarrh.
Case 110.—Successive "Colds."
Case 117.—Not well after accident.
Case 126.—Had Enteric Fever during South African War.
Case 129.—Illness following Confinement.
Case 137.—Successive Colds.
Case 139.—Following Influenza.
Case 135.—Always delicate. Kidney trouble.
Case 134.—Following Measles, Whooping Cough, and Pneumonia.

Series 5.—**Personal Habits.**

Case 26.—Heavy Drinker. Neglected himself.
Case 37.—Heavy drinker and smoker. Uncle died of Phthisis.
Case 48.—Heavy drinker. Son and daughter died of Phthisis.
Case 102.—Lead Poisoning from diachylon pills taken to procure miscarriage.
Case 133.—Heavy drinker. Enteric Fever followed by Pleurisy.
Case 155.—Heavy drinker.—Neglected Colds.
Case 156.—Heavy drinker. Bronchitis and neglected Colds.
Case 165.—Hard life and insufficient food.
Case 174.—Heavy drinker. Neglected himself.

Series 6.—**No record as to causation.**

Cases 2, 3, 6, 8, 14, 17, 19, 20, 24, 30, 38, 41, 42, 44, 47, 51, 56, 57, 66, 70, 74, 75, 76, 88, 91, 92, 96, 98, 101, 112, 125, 128, 136, 137, 138, 142, 144, 147, 157, 163, 166, 168.

Housing. The conditions of 72 houses occupied by notified cases of phthisis were investigated by Nurse Walls, after commencing her duties as Health Visitor in Derby (30th August). The results of the enquiries were as follows:—

Houses.	*Cases.*	*Rentals (average).*
2-*roomed*	5 ..	2/-
3 ,, ...	10 ..	3/-
4 ,, ...	15 ..	4/-
5 ,, ...	5 ..	4/6
6 ,, ...	30 ..	5/-
Over 6 *rooms* ..	8 ..	5/6

Four of the houses were "back to back," and seven others had no through ventilation.

Instances of more than one case in the same house :—

Two other cases in house.

Case No. 61 Two Sisters.
,, 73. Females aged 10 and 7 years respectively

One other case in the house.

Case No. 37—Son, 18 years.
,, 48—Female, 12 years.
,, 97—Female.
,, 109—Male, 12 years.
,, 147—Female, 9 years.
,, 153—Male, 14 years.
,, 161—Male, 10 years.

There were therefore 83 cases of Phthisis living in the 72 houses.

Number of occupants. Details :—

Two-roomed Houses (5).

	Over 14 years.	*Under 14 years.*	*Total.*
(1)	2	2	4
(2)	1	—	1
(3)	2	—	2
(4)	2	2	4
(5)	2	2	4

Three-roomed Houses (10).

(1)	3	6	9
(2)	2	5	7
(3)	3	—	3
(4)	3	3	6
(5)	3	—	3
(6)	3	—	3
(7)	2	1	3
(8)	1	2	3
(9)	3	4	7
(10)	2	3	5

Four-roomed Houses (15).

(1)	2	3	5
(2)	2	1	3
(3)	4	1	5
(4)	3	4	7
(5)	4	—	4
(6)	4	—	4
(7)	2	—	2
(8)	2	—	2
(9)	3	3	6
(10)	2	2	4
(11)	3	—	3
(12)	3	—	3
(13)	2	1	3
(14)	2	2	4
(15)	3	2	5

Five-roomed Houses (5).

	Over 14 *years.*	*Under* 14 *years.*	*Total.*
(1)	1	—	1
(2)	2	2	4
(3)	4	—	4
(4)	3	—	3
(5)	4	—	4

Six-roomed Houses (30).

(1)	2	2	4
(2)	3	5	8
(3)	5	1	6
(4)	7	1	8
(5)	3	—	3
(6)	2	—	2
(7)	3	1	4
(8)	2	—	2
(9)	3	3	6
(10)	3	4	7
(11)	4	—	4
(12)	2	2	4
(13)	2	2	4
(14)	3	—	3
(15)	2	8	10
(16)	7	—	7
(17)	2	4	6
(18)	2	2	4
(19)	3	—	3
(20)	3	—	3
(21)	4	—	4
(22)	5	1	6
(23)	2	2	4
(24)	3	2	5
(25)	7	—	7
(26)	2	2	4
(27)	3	—	3
(28)	7	—	7
(29)	3	—	3
(30)	3	—	3

	Over 14 *years.*	*Under* 14 *years.*	*Total.*
Over Six rooms (8).			
(1)	2	1	3
(2)	2	1	3
(3)	4	2	6
(4)	4	—	4
(5)	6	2	8
(6)	5	—	5
(7)	8	1	9

No record obtainable concerning one house.

The greatest number of persons per room in each class of house is therefore :—

2-*roomed houses*		2	persons	per	room.
3	,, ,,	3	,,	,,	
4	,, ,,	1.57	,,	,,	
5	,, ,,	0.8	,,	,,	
6	,, ,,	1.66	,,	,,	

Cases with separate bedroom .. 41

,, ,, No ,, ,, .. 42 (three had separate bed).

Administrative Procedure.—On recipt of notification, the Health Visitor is instructed to visit the case. The duties of the latter are two-fold. (1) enquiry; (2) instruction. Enquiry is made into the patient's history, occupation, habits, etc., these are duly recorded. Instruction is given both verbally and by handbills as to dealing with the sputa, and the importance of fresh air, etc.

Spittoons and pocket flasks are provided by the Health Department, and loaned to such patients as need them.

Disinfection.—After removal of the patient from a dwelling-house, whether by death, by removal to Hospital, or by changing address, endeavour is made to obtain consent for disinfection of the house. A formal letter is first sent, and if this fails, a visit from the Health Visitor follows. In most cases consent is obtained. The mode of infection is formaldehyde spray and wet cleansing. In some cases chloros spray is used for the floors, woodwork, etc., of houses in which deaths from phthisis have occurred.

Institutional Treatment.—At the September meeting of the Sanitary Committee, attention was drawn to the large number of deaths from phthisis in the mortality returns, and to the need for some provision for dealing with many of the cases notified within the Borough. As a result, the Chairman and Medical Officer of Health were instructed to visit Brighton and examine and report on the methods of isolating phthisis in that town. This was done and the following report drawn up and issued to the members of the Town Council:—

PUBLIC HEALTH DEPARTMENT,
FORD STREET, DERBY,
8th NOVEMBER, 1909.

Treatment of Cases of Phthisis (Consumption).

The Brighton Method.

In accordance with the instructions of the Sanitary Committee, of September 20th, we visited Brighton on October 22nd, with a view of investigating the methods adopted in that town for the isolation of consumptive patients.

The Medical Officer of Health of Brighton afforded us every information as to the procedure adopted in this town for the treatment of these cases, accompanied us to the Isolation Hospital and demonstrated the details of the methods, accommodation, etc.

During the last seven years, 890 consumptive cases have been treated in special wards at the Brighton Isolation Hospital. The accommodation provided at this Institution is as follows:—

Scarlet Fever	... ...	68 beds.
Consumption	... ...	56 ,,
Diphtheria	... ...	22 ,,
Isolation	... .	14 ,,

The estimated population of Brighton is 130,000, probably about 1,500 more than that estimated for Derby. No trouble has arisen from "crossed infection" through treating these patients on the

same site as Scarlet Fever and Diphtheria cases. The patients are selected in accordance with one or other of the following conditions:—

(*a*) Whether the patient has at home a separate bed or bedroom.

(*b*) Size of house and number of occupants in the same.

(*c*) Occupation; men employed in dusty trades having preference.

(*d*) The stage of the disease; patients who are confined to bed are not usually admitted, preference being given to early cases.

(*e*) Patients who have been treated at the Workhouse are not admitted.

The Advantages of Stay in the Hospital.

Many of the patients who were not fit for work on admission were rendered able to resume work on discharge. Some cases have gone out apparently cured. One of the chief objects, however, of treatment in the Hospital is the *teaching of the patient*; the latter while in the Hospital being brought to realise the value of good ventilation, the destruction of sputum, etc., and on his return home he carries out these precautionary methods.

Conditions in Derby.

During the past ten years there have been no fewer than 1,098 deaths from Phthisis or Consumption of the Lungs in Derby; while there have been in addition 560 deaths from Tuberculosis (or consumption) of other organs, making a total of 1,658 deaths from these diseases, an average of over 165 per annum. It is interesting to compare the deaths of the chief notifiable and non-notifiable deaths in Derby during the same period (ten years). In this time Measles has caused 326 deaths, Whooping Cough 266, Diphtheria 260, Enteric Fever (Typhoid) 128, Scarlet Fever 103, and Small-pox only 7, the total number of deaths from all these last mentioned diseases being but 1,090; so that Consumption and its allies have caused oved 50 per cent. more deaths than these latter diseases combined. In other words, Consumption is far and away the most fatal infectious disease known in this town. It should be mentioned, however, that the deaths from Consumption and its allies do not represent all the evils that result from its ravages. In addition, Tuberculosis causes such disfiguring diseases as lupus, white swelling of the joints, enlarged glands (or struma), bone diseases, deformities of the spine, etc.

It is known that in the early stages Consumption is a very curable disease; during the residence of your present Medical Officer of Health in the Manchester Royal Infirmary for two years, during which time he had the opportunity of seeing almost every post-mortem examination made in that period (the number being between 400 and 500), it was found that nearly 40 per cent. of the cases examined (i.e., cases that had died from other diseases, accident, operation, poison, etc.), showed evidence of former Phthisis. These cases had at some time or other suffered from Phthisis, had been cured naturally and subsequently had died from other causes. It may be taken, therefore, that there is urgent need for the employment of all available preventative measures for dealing with Consumptive cases.

Financial Loss.

It has been estimated that the financial loss due to Phthisis sickness and deaths, incurred by one Friendly Society alone (Manchester Unity Oddfellows) during the years 1893-7 was half-a-million pounds sterling. Also anyone acquainted with Poor Law administration will know the great cost of dealing with cases of Consumption.

Voluntary Notification.

In Derby a system of voluntary notification has been in vogue since 1902, and 664 cases had been notified to this Department at the end of 1908. This number does not represent anything like the total number of cases that are in existence in the town at the present time, for the total number of cases notified in one year rarely equals the number of deaths for that particular period. The experience of Brighton has shown that, following the introduction of hospital treatment of these cases, the number voluntarily notified has greatly increased, that is to say, cases have been notified with the object of obtaining the advantages of hospital treatment

At the present time there are 153 cases of Phthisis under observation in the Borough, and nearly one-half would be benefited by sanatorium treatment; 54 per cent. of these cases are unprovided with separate beds; in 32 per cent. there are families of five or more children in the same household.

Recommendations.

We therefore earnestly recommend steps be taken for dealing with a certain number of Consumptive Cases on the present Hospital site, utilising the field in which the wooden structure at present existing stands. The latter building might be adapted for dealing with Consumptive cases of one sex, and another pavilion be erected on similar lines for the other sex, two open-air shelters be provided, and a small house (corrugated iron) be erected for the necessary nursing and domestic staff. The staff theoretically necessary if the above pavilion were filled would be a Charge Nurse, three Probationers, and two Ward Maids. It is hoped, however, that with the disappearance of Diphtheria, in an epidemic form, some of our present staff might be available. Further, since the majority of the patients will not be seriously ill, considerable help may be expected from them, in fact a certain amount of work is part of the treatment.

The two great principles which should be borne in mind in dealing with these cases are:—

1.—*Prevention.* By removing cases which are a source of danger to others in the same household away to the Hospital.

2.—*Educational.* To educate these people as to the best known means of prevention, so that they will, when they leave the Hospital, carry out measures which they have been taught, for their own personal safety, and for that of the public at large.

Cure. In a certain number of cases the disease will be permanently arrested. We are convinced that many cases are at the present time contracting the disease, others becoming incurable from lack of proper food and hygienic surroundings owing to bad trade, etc., who could be cured by the above-mentioned means.

A suggestion might be made, that if a fund be subscribed during the coming winter for the relief of the unemployed, some of this money might be utilized for laying out the grounds, making footpaths, and, if possible, providing a separate entrance for these patients.

ROBT. LAURIE, M.D.,
Chairman Sanitary Committee.

A. E. BRINDLEY, M.D., D.P.H.,
Medical Officer of Health.

It is to be hoped that steps will be taken in 1910 to provide some accommodation on a portion of the site near the Infectious Diseases Hospital for the treatment of suitable cases of phthisis.

Cases Treated at the Derby Royal Infirmary.—A certain number of cases of phthisis are treated on open-air principles at this Institution. The number treated during the year ended September 28th, 1909, was 52, with the following results:—

Relieved	38
Unrelieved ...	2
Died	2
In House	10
Total ...	52

WATER SUPPLY.

The following recent result of an analysis of a sample of the water to be supplied to the Borough by the Derwent Valley Water Board is of interest and is compared with an analysis of a sample of the water now being supplied to the town. The relative difference in the hardness of the two waters is very great, the Derwent Valley water being upland surface water is naturally soft, while the present Derby supply derived from the filter tunnels is very hard. As was mentioned in the Annual Report for 1908, the first instalment of 3¼ million gallons per day from the Derwent Valley is expected in the year 1912.

MILK SUPPLY.

The farms, dairies, and milkshops within the Borough have been visited and systematically inspected as often as practicable, and structural improvements effected in some cases. Special efforts continue to be made to bring the farms and farm dairies up to the modern standard. It need hardly be stated that much remains to be done in improving the conditions which surround the production, transit, and storage of milk in the town. Special legislation on the question of a pure milk supply is anticipated and awaited with interest.

Examination of Milk for Tuberculosis.—Four samples of milk were sent to Professor Delépine for examination as to the presence or absence of tubercle bacilli by inoculation methods. All of them were reported "as found not to cause tuberculosis."

Result of Analysis of sample of water received from E. Sandeman, Esq., Engineer, Derwent Valley Water Board, on March 4th, 1910.

	Taken from River Derwent, just below junction of River Derwent and Westend.	Derby Water. High Service Filters.
Colour	Pale green, clear	.. Faint Blue colour.
Suspended Matter	Traces	.. Quite clear
Smell	nil	.. —
Hardness before boiling (total) ..	1.5°	.. 25.2
,, after ,, (permanent)	1.5°	.. ..
	Grains per gallon.	*Grains per Gallon.*
Total dissolved solids	4.9	.. 22.9
Loss on Ignition (Organic matter, &c.)	.7	.. 2.24
Mineral Matter	4.2	.. 20.66
Chlorine, equal to	.89	.. ..
Chloride of Sodium	1.47	.. 1.40
Lead, Copper and Iron	Nil.	.. ..
Nitrogen as Saline Ammonia ..	.0011	.. .0012
,, ,, Albuminoid Ammonia ..	.0028	.. .0027
,, ,, Nitrates	Nil.	.. ..
,, ,, Nitrates	.0235	.. .42
Oxygen absorbed by Organic matter at 27°C. in 15 minutes	.0420	..80°F. .0112
Oxygen absorbed by Organic matter at 27°C. in 4 hours	.1008	..80°F. .0201

Microscopical Examination.—The suspended solids consisted chiefly of vegetable debris and silicious matter, together with spores and a few infusoria.

The suspended matter is flocculent and settles readily, leaving the water bright and clear.

The water is very soft and free from any evidence of animal pollution; it would form a good supply for potable and general domestic purposes.

Well Water.—Analysis of a sample of water obtained from a well supplying two houses in the Borough shewed evidence of pollution; this well was closed and town's water substituted. The chemical analysis of the well water shewed the following results:—

Appearance	Turbid.		
Sediment	Reddish.		
Free and Saline Ammonia ..	0.008	parts per	100,000
Albuminoid	0.013	,,	,,
Total solids	131.0	,,	,,
(*a*) non-volatile	72.0	,,	,,
(*b*) volatile	59.0		,,
(I.) Suspended solids ..	4.0	,,	,,
(II.) Dissolved ,, ..	127.0	,,	,,
(*a*) non-volatile ..	66.0		,,
(*b*) volatile	61.0	,,	,,
Calcium (Ca.O.)	28.9		,,
Magnesium (Mg. O.)	3.15	,,	,,
Sulphate (SO.3)	24.04	,,	,,
Nitrates (NO.3)	20.33	,,	,,
Chlorine	5.2	,,	,,
Equivalent to NaC.1 ..	8.58		
Total Hardness	36.0		
(*a*) Permanent	35.		
(*b*) Temporary ..	1.		
Oxygen absorbed in 3 hours at 37°C.	0.049		
Iron	trace.		

THE SPECIAL DRAINAGE COMMITTEE.

This Committee, which is responsible for the construction and management of the Sewage Works is constituted as follows :—

Alderman Robotham (Chairman).
Councillor Slater (Deputy-Chairman).
Alderman Sir Thos. Roe, M.P.
,, Winter.
Councillor Druitt.
,, Hardy.
,, Hill.
,, Laurie.
,, Russell (L.)
,, Surtees.
,, Young.

The Chemical Laboratory.

This laboratory which is situated in the buildings of the Health Department, was used during the year chiefly for sewage analysis. Periodical examinations were made of

(*a*) The tank effluent.

(*b*) The effluents from the various filters.

(*c*) The final effluent.

In addition, samples of water taken from various wells within the Borough were analysed, also samples of the water from the river and streams within the precincts of the town.

Laboratory at the Sewage Works.—It was decided, late in the year, by the Special Drainage Committee to have the building previously used as a drawing office and general office by the Resident Engineer, fitted up as a laboratory. This building is one which lends itself very readily for the purpose, and the need for a laboratory on the spot is obvious.

During the last two months of the year we had the very valuable assistance in the Chemical Laboratory of Mr. G. Erskine Pool, B.Sc. (Lond.)

MAIN DRAINAGE AND SEWAGE DISPOSAL.

(For the following particulars I am indebted to Mr. J. Ward, Borough Engineer).

It appears that nothing worthy of being called a system of drainage existed previously to 1842.

In 1842, the portion of the Borough on the West side of the river was drained by means of shallow sewers into three open brookcourses, and the portion on the East side of the river directly into the Derwent. The great floods of 1842 led to a report in 1843 by Mr. John Roe, A.I.C.E., of the Sewers Office, Hatton Garden, London, on the brookcourses and general drainage of the town of Derby.

In 1843, Mr. Samuel Harpur, Town Surveyor of Derby, laid out a scheme of sewerage for the Borough, and superintended the construction of the sewers up to 1852. The main outfalls of these sewers were directly into the River Derwent at the Morledge, Canal Street, and Meadow Road. In 1877, an extension of the Borough took place, and, amongst other districts, Litchurch was added. The Litchurch Local Board had carried out a system of sewers in 1870-1, designed by Mr. George Stevenson, and also some small tanks for temporarily dealing with the sewage, until a comprehensive scheme for dealing with the sewage of Derby and Litchurch could be carried out.

These tanks were continued in action as settling tanks for a long time, but they practically did no good, being altogether too small for the volume of sewage flowing through them, and they were finally abandoned in 1901, and are at the present time being dismantled by the Highways Committee.

The question of the proper disposal and treatment of the sewage has been considered from time to time by the Corporation. In 1879, Mr. Clement Dunscombe, then Borough Engineer, reported upon a scheme for dealing with the sewage on alternative sites (*a*) between Boulton and Aston, (*b*) near Spondon, (*c*) near Elvaston Castle. In 1886, Mr. James Mansergh reported upon a scheme for dealing with the sewage on alternative sites (*a*) between Boulton and Aston, (*b*) Sinfin Moor, (*c*) near Chaddesden Sidings.

In 1894, Messrs. Bramwell & Harris reported, and suggested dealing with the sewage on a site at Spondon

In 1900, Mr. James Mansergh again reported, and suggested taking all the sewage by means of new intercepting sewers, to a site at Spondon adjoining the Midland Railway, and this Scheme was adopted by the Derby Corporation and included in the Derby Corporation Act, 1901.

The new intercepting sewers collect all the sewage which previously discharged into the rivers and brookcourses by picking up the old sewers at the points of their discharge into such waterways.

The Disposal Works at Spondon consist of a Pumping Station, with main and storm pumps, boiler house, sludge pumps, etc.; six open septic tanks, each with three divisions; thirty continuous filters, each 100ft. diameter, with revolving distributors, the filtering material being clinker and granite 6′ 6″ deep; six separator tanks, each 28′ square, on the upward flow principle (the separator tanks are for the purpose of precipitating the humus from the general filter effluent before its final discharge into the river, and these tanks are placed alongside the effluent culvert adjoining the river); six storm water beds, having a total area of about 5¼ acres; together with a laboratory and four cottages for the enginemaa and fireman. The sludge is disposed of on several acres of land trenched out for its reception. The old sewers were picked up and the sewage began to be delivered at the new works in April, 1907.

The average dry weather flow of sewage is about five million gallons per 24 hours. The intercepting sewers were commenced about September, 1902, and the last connections were made about the end of the year 1908.

The filling of the continuous filters has been carried out as follows: The first 18 beds are filled entirely for a depth of 6′ 6″ with hard selected furnace clinker of various sizes and not graded in any way, except that all dust and small pieces (say less than a walnut in size) were kept out. The second instalment of filters, 12 in number, were filled with clean broken granite, the top layer, 1′ 3″ in depth, being broken to 1″ to ½″ gauge, and the bottom, 5′ 3″ in depth, 2″ to 1″ gauge, making a total depth of 6′ 6″.

The total area of land acquired by the Corporation for sewage purposes at Spondon is about 218 acres, of which about 155 acres is let to tenants, and the remaining 63 acres is taken up by the Pumping Station Buildings, Cottages, tanks, filters, and sludge trenches. The total cost of the scheme including land, easements, sewers, disposal works, Engineers' commission, etc., has been about £325,000. The consulting engineers for the entire scheme were Messrs. James Mansergh & Son; Mr. James McKie, M.I.C.E., Resident Engineer, supervised the construction of the whole of the works.

REPORT ON THE WORK OF THE WOMEN SANITARY INSPECTORS.

Miss Davies, Senior Woman Inspector, reports as follows:—

A full account of the working of the Notification of Births Act was given in the report for 1908.

The provisions of the Act have again been carried out without any friction. Only a very small number of births were not notified, and on enquiry into the reason it was found that there had not been any wilful neglect, the section relating to the Notification of Births within 36 hours has been fully explained in each case.

Approximately, 1,130 births were notified by doctors, 2,150 by Midwives. We have recommended medical advice to be sought in 103 instances either for the mother or infant, or another member of the family; attention is not always restricted to the mother and latest baby, the condition of older children under school age is also noted. Never, under any circumstances, is the doctor's advice interfered with, though it is often necessary to urge the mother to persevere with the treatment prescribed.

During the year we came across 174 cases in which the eyes needed some attention, 30 of them of a very serious nature and needing prompt medical attention; these are revisited as frequently as possible; but for the Notification of Births Act, these cases would be very much worse, before medical attention was sought, and irreparable harm done. Our visits are not only restricted to the poorer people, but we make it a rule, never to enter without first

obtaining permission. We endeavour to pay at least one visit to all births; no hard and fast line of procedure can be made, as each case has to be taken on its own merits. At times it requires a good deal of tact to make suggestions where the general treatment is not all that one could desire. Among the points we particularly direct our attention to are:—

(*a*)—**Feeding**, especially breast-feeding, and advising the mother as to the most suitable diet to enable her to continue nursing her child. The danger of giving drugs and alcohol unless advised by a doctor, and the risks of giving the various mixtures sold as "comforters and soothers" is made as clear as possible.

(*b*)—**Clothing.** Without a doubt the mortality of young infants from the various chest complaints is greatly due to the way in which a child is clothed. It is not only among the poorer classes that one finds so many errors in this respect, many people in moderate circumstances preferring to use "what they have always used," usually a calico shirt, which is no protection whatever to baby's chest and arms.

(*c*)—**Cleanliness.** The great need of cleanliness of the child and its surroundings as a point in the formation of its character is also emphasized, in addition to the absolute necessity of cleanliness with regard to its health.

We endeavour to visit most births a second time, and it is often from the second visit that we derive the greatest pleasure, the mother usually realizing that we go as friends to assist her by our advice. Unfortunately we are not able to revisit as frequently as we wish to. The mothers need constant sympathy and encouragement to meet the ever-recurring difficulties that attend the early months, or even years, of an infant life. Happily the number of really neglectful mothers is small, comparatively speaking, but these need to be constantly looked up. Cases where the mothers are apathetic are most difficult to deal with, and any case of wilful neglect is at once reported to the proper authorities.

We had at the end of the year, the way opened up to commence a "Mothers' and Babies' Welcome," on a small scale. Through the kindness of ladies in the town, rooms, together with heating apparatus, etc., have been placed at our disposal for an afternoon each week. At the "Welcome," babies are to be weighed, and advice given on feeding, clothing, and general management. These are early days, but we are hoping to develop this branch of the work as time goes on. We have often felt whilst visiting that an institution of this kind was needed, and we hope that in time it will become more well known and appreciated.

The number of visits paid were somewhat smaller this year. 13 days and 26 half-days were spent in the schools assisting the Medical Officer of Health and the Assistant Medical Officer of Health.

INSPECTION OF WORKROOMS.

At the end of the year, there were 208 workrooms and workplaces on the register, where women are employed. 29 of these were notified during 1909. All have been inspected, 36 were found to require cleansing, 10 were overcrowded, and 8 were found to have defective or insufficient ventilation. In two instances, rooms (without any heating apparatus) were provided with stoves, four gas irons were found to be improperly fixed or defective. In eight instances the sanitary accommodation was either unsuitable or defective, and in five cases not separate for the sexes. With few exceptions, all these defects have been remedied, and in only nine instances has it been found necessary to serve official notices, verbal notices having been sufficient in the other cases. A verbal notice of a defect is given by courtesy, and if not complied with on re-inspection, an official notice is served. This method sometimes necessitates extra work, but the opportunity is thus given for the occupier or owner to remedy with as little friction as possible.

Generally speaking, they were in a fairly satisfactory condition; in most instances the ventilation provided is not sufficiently used. In all, 271 visits have been paid; as will be generally understood, part of the inspection of workrooms is done by inspectors employed by the Home Office, and part by inspectors employed by the Local Authority, thus a certain amount of overlapping at times is unavoidable.

INSPECTION OF OUT-WORKERS.

Lists have been received from the various firms employing out-workers twice during the year, also from other Councils who have factories in their district employing outworkers in this Borough. The greater part of the homework in Derby is confined to the making and finishing or repairing of wearing apparel, and the repairing of laces and nets. The condition of the homes of the out-workers is on the whole good, the reason being, as I have before stated, that the work is more pleasant on the whole than the homework of most other towns, and more skill is required, therefore the class of people who take in the work are relatively better. 24 verbal notices and 14 written notices were served during the year, chiefly for dirty conditions of the house. As in the case of the workshops, an opportunity is always given the occupier to abate the nuisance without a formal notice.

INSPECTION OF MIDWIVES.

During the past year, 58 midwives notified their intention to practice. 28 of these are women who have been admitted to the roll on the ground of having been in bona-fide practice as midwives for 12 months previous to the 31st of July, 1902. In order to obtain admission to the roll a certificate to the effect that the applicant had to the personal knowledge of the person signing been in bona fide practice as a midwife for at least 12 months prior to the 31st of July, 1902. No bona fide midwife was admitted to the roll after 1905.

In spite of the provisions of the Act for untrained women, there are a great number of unregistered women practising in various parts of the country.

In Derby we have been able, owing to the information we obtain when we visit a birth, to ascertain how many of these women we have; there are 14 in various parts of the town, not more than 3 of these have practices worth speaking of. It is gratifying to note that there has been no falling off in the number of women notifying their intention to practice up to the present time. But the outlook is rather serious in other parts of the country.

The Section 1, Sub-section 2 of the Midwives Act deals with the unregistered women, for it says that after the 1st of April, 1910, no woman shall habitually or for gain attend women in child-birth, otherwise than under the direction of a qualified practitioner, unless she is certified under this Act.

All midwives (with the exception of those practising in public institutions), have had their outfits and place of residence inspected systematically, they are improving, the rules are fairly well kept, but a few need very constant supervision. As a result of these visits, it was found that in certain cases various infringements of the rules had taken place. 12 midwives were interviewed by the Medical Officer of Health; of these, 6 were subsequently interviewed by the Midwives' Sub-Committee. 13 letters have been sent for sending a wrong or insufficient address, 6 for non-compliance with the rules (unsatisfactory bags and appliances, etc.), 4 for failing to notify a birth within 36 hours, and 5 for various other matters.

Great importance is attached to the notification of still births. Of these 135 were reported, in most cases an enquiry was made with reference to the circumstances of the case. Enquiries have also been made of the midwife in attendance in some instances. 157 records of having sent for medical aid have been received as compared with 122 of 1908, and 65 of 1907.

STATISTICS FOR THE YEAR 1909.

Number of children under observation born during 1908 ..		3225
,, ,, ,, who survived ..		2898
Survivors ;		
Of these the number of Breast-fed children were	2022	
Of these the number of Breast-fed with some other addition ..	451	
Of these the number of Hand-fed children	465	
The number of children for which we have no record	274	owing to removals or not being visited
	3212	

Among the *Deaths* of infants under 1 year during 1909	147	were Breast-fed.
,, ,, ,, ,,	59	had breast with some addition.
,, ,, ,, ,,	81	were entirely hand-fed.
,, ,, ,, ,,	of 120	we have no record of feeding; the majority of these cases of the infant having died early.
	3819	

	Breast Fed.	*Hand Fed.*	*Mixed Feeding.*	*No Record.*	
Living ..	2022	465	451	274	Living
Dead ..	147	81	59	120	Dead.

Visits paid from Jan. 1st to Dec. 31st, 1909.

	Miss Davies	*Miss Radford*	*Miss Brown*	H.V. *Nurse Walls*	H.V. *Nurse Cash*	*Miss Smart*	*Total.*
Births ..	1062	772	192	20	..	784	2830
R. V. Births ..	658	547	157	368	809	371	2910
Stillbirths ..	67	5	7	..	..	18	97
Deaths ..	112	52	32	..	..	76	272
Phthisis ..	17	7	24	..	251	4	303
Workrooms ..	204	24	13	..	..	30	271
Outworkers ..	174	44	119	..	..	190	527
Measles ..	5	44	39	..	..	..	88
Schools ..	5	..	..	..	..	..	5
Schools with Doctor	26	18	2	..	..	..	46
Puerperal Fever ..	8	4	..	1	..	..	13
Midwives ..	90	1	..	3	..	..	94
Special ..	32	46	3	..	..	3	84
Enquiry for C.M.B.	2	..	..	..	..	..	2
Diphtheria ..	..	..	..	..	..	4	4
Unsuccessful ..	373	255	114	90	420	376	1628
	2835	1819	702	482	1480	1856	9174

The following are the tables of action taken and work done, which are required to be forwarded to Secretary of State.

1.—INSPECTIONS.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	138	8 & 9 Verbal.	0
Workshops (including Workshop Laundries)	854	58 & 109 Verbal.	0
Work Places (other than out-workers' premises)	0	0	0
Total	992	64 & 118 Verbal.	0

2.—DEFECTS FOUND.

Particulars.	Number of Defects			Number of Prosecutions
	Found	Remedied.	Referred to H.M. Inspector	
Nuisances under the P.H. Acts—				
Want of Cleanliness ..	64	43	0	0
Want of Ventilation ..	22	18	0	0
Overcrowding	12	12	0	0
Want of Drainage of floors	2	2	0	0
Other Nuisances	55	45	0	0
Sanitary Accommodation—				
Insufficient	7	7	0	0
Unsuitable or Defective ..	42	35	0	0
Not separate for sexes ..	7	7	0	0
Offences under the F. & W. Act—				
Illegal occupation of underground bakehouse (S. 101)	0	0	0	0
Breach of Special Sanitary requirements for Bakehouses (SS. 97 to 100)	0	0	0	0
Other Offences	0	0	0	0
Total	211	169	0	0

3.—HOME WORK.

	Nature of Work.		
	Making Wearing Apparel.	Making Lace and Net.	Total.
Twice a year—			
Lists	44	10	54
Contractor's Outworkers ..	3	0	3
Workmen	294	815	1109
Once a year— ..			
Lists	8	1	9
Workmen	38	10	48
Addresses of Out-workers—			
Received from other Councils	5	0	5
Forwarded to other Councils	27	0	27
Outwork in Unwholesome Premises—			
Instances	109	2	111
Notices Served	25	2	27
Inspection of Premises ..	553	17	570
Notices served to remedy Defects	0	0	0
Outwork in Infected Premises	0	0	0

4.—REGISTERED WORKSHOPS.

Total number of workshops on Register .. 1224

5.—OTHER MATTERS.

Notified to H.M. Inspector of Factories :—

Failure to affix Abstract (S. 133) 0

Action taken in matters referred to H.M. Inspector as remediable under the Public Health Acts but not under the Factory & Workshops Act (S. 5)

- Notified by H.M. Inspector 86
- Reports sent to H.M. Inspector 74

Complaint returned as "No action necessary" 0

Underground Bakehouses (S.101)

Certificates granted during the year 0

In use at the end of the year 0

Workshops.—The following table classifies the Workshops in the Borough in each Inspectorial District, and the number of visits made to each :—

LIST OF WORKSHOPS.

No. on Register. Inspectorial Districts.				Trade.	No. of Inspections. Inspectorial Districts.			
A.	B.	C.	W'm'n		A.	B.	C.	W'm'n
4	..	..	..	Aerated Water..	7	..	..	..
..	..	1	..	Artificial Limb	..	..	1	..
1	..	..	..	,, Teeth	..	..	..	..
..	..	1	..	Asphalte	..	..	4	..
2	1	1	..	Basket Making	9	1	..	..
1	1	..	..	Beer Bottling	..	2	..	..
..	1	1	..	Bicycle	..	3	5	..
..	2	6	..	Blacksmiths	..	3	..	..
2	..	..	..	Blind Making	16	..	..	..
..	..	8	..	Boot Making	..	..	7	..
19	9	8	..	,, Repairing	35	11	..	..
1	..	..	..	Brush Making	..	..	..	..
3	5	1	..	Cabinet Making	..	13	1	..
1	3	2	..	Coach Building	..	3	1	..
1	..	..	..	Clog Making	..	..	..	..
2	..	1	..	Coffin Making	..	..	..	..
3	..	..	..	Confectionery	18	..	..	126
2	..	1	95	Dressmaking	34	..	2	5
1	..	..	2	Drug Packers	..	..	..	..
..	..	1	..	Drysaltery	..	..	..	..
1	1	..	..	Dyers	4	1	..	..
1	1	..	..	French Polishing	..	2	..	..
..	1	..	..	Fruit Preserving	..	1	..	..
2	..	3	..	Furniture Making	..	..	3	..
..	..	1	..	,, Polishing	..	..	..	..
..	1	..	..	Gun Repairing	..	3	..	..
1	..	..	..	Hairdressing	..	..	..	..
1	..	..	..	Ice Cream Powder	..	..	..	..
10	..	2	..	Jewellers	28	..	..	..
7	3	1	..	Joiners	15	5	1	..
..	..	1	..	Lace Making	..	..	..	..
..	1	..	..	Lamp	..	1	..	..
..	1	..	6	Laundry	..	1	..	8
1	..	..	..	Lemon Curd Making	..	..	..	..
..	..	1	..	Leather Curriers	..	..	..	..
..	1	..	..	Leather Lace	..	4	..	..
..	2	..	..	Locksmiths	..	4	..	..
..	3	..	..	Malting	..	3	..	..
..	3	..	44	Millinery	..	5	..	62
1	..	..	..	Musical Instruments	17	..	..	..
..	..	..	1	Net Mender	..	..	..	3
..	..	1	..	Painter, &c.	..	..	..	..
..	..	2	..	Paper Bag Making	..	..	..	..
4	1	3	4	Photography	17	2	5	8
3	..	..	3	Pickling	1	..	..	2
2	1	..	..	Picture Framing	..	2	..	..
..	..	..	2	Pinafore Makers	..	..	..	2
..	1	..	..	Pipe Clay	..	1	..	..
6	2	5	..	Plumbers	3	6	..	..
..	2	..	..	Rag Sorting	..	28	..	..
..	..	..	1	Restaurant Kitchen	..	..	..	1

LIST OF WORKSHOPS—continued.

1	..	..	..	Rope Making	..	..	..	..
3	3	2	..	Saddlery	13	3	..	..
1	..	..	..	Sewing Machines	6	..	..	..
6	2	..	..	Shoe-smiths	..	3	..	..
..	..	1	..	Sign Writing	..	..	6	..
..	3	..	..	Spa Turning	..	4	..	..
1	..	..	..	Stone Masons	..	..	..	..
..	1	..	..	Stove and Grate	..	1	..	..
..	..	..	1	Straw Hat Makers	..	..	..	1
1	1	..	..	Surgical Bandage Making ..	..	1	..	..
45	11	12	43	Tailoring	128	21	2	51
..	..	1	..	Tarpaulin Making	..	..	..	..
..	..	1	1	Tea Packing	..	..	1	..
..	..	1	1	Tent Making	..	..	..	..
..	..	2	..	Tin Plate	..	..	1	..
4	3	1	..	Tinsmiths	..	3	..	..
1	..	..	1	Tobacco Packing	..	..	..	1
3	1	2	..	Upholsterery	..	1	1	..
2	..	1	..	Umbrella	..	..	..	..
1	..	..	..	Watch Repairing	..	..	..	..
1	4	3	..	Wheelwrights	23	12	..	..
..	1	..	..	Weighing Machines	..	1	..	..
..	..	..	1	Wholesale Stationery Packers	..	..	..	1
				Bakehouses	See Special Report			
153	77	79	206	Totals.	374	155	41	271

HOUSING OF THE WORKING CLASSES.

Seven houses were dealt with under Part II. of the Housing of the Working Classes Act; details are tabulated below:—

Address of Property.	Number of Houses Concerned.	Action Taken.
House back of No. 5. Goodwin Street ...	1	House closed.
1, 2, 3, and 4, Back Leaper Street ...	4	Houses made habitable.
1, and 2, in Court 6, John Street ...	2	Houses unoccupied.

TABLE XI.—Showing the means of the Meteorological Observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1909.

1909.	Thermometers.				Rainfall in inches.		Greatest fall in 24 hours.		No. of Rainy days, 1909.
	Dry Bulb.	Wet Bulb.	Shade Temperature. Maximum.	Shade Temperature. Minimum.	Infirmary Grounds 1909.	1908.	Amount in inches.	Date.	
January ...	36·0	34·6	51·5	21·2	1·21	1·16	·29	7th.	15
February...	35·6	33·5	53·7	22·9	0·61	1·35	·27	10th.	9
March ..	38·3	36·3	57·8	17·1	3·09	2·41	·65	6th.	20
April ...	49·3	44·9	57·8	38·3	1·47	2·35	·39	19th.	14
May ...	54·4	48·8	62·3	41·8	1·82	2·27	·56	24th.	12
June ...	54·8	50·8	61·3	47·4	2·17	1·54	·62	24th.	15
July ...	60·7	55·9	66·9	51·8	3·07	2·51	1·07	27th.	20
August ..	61·9	57·8	70·0	51·6	2·38	4·02	·75	17th.	13
September	53·9	51·8	60·3	47·7	2·34	1·54	·39	28th.	19
October ...	50·5	48·4	57·2	45·0	3·26	1·07	·30	10th & 24th.	24
November	40·5	39·1	47·1	35·7	0·43	1·67	·09	27th.	14
December	38·1	37·4	43·4	33·5	4·10	1·60	·62	2nd.	25

The highest mean shade temperatures were registered during the month of August. The greatest variation between the maximum and minimum temperature was observed during the month of March. March was the coldest month, and most rain fell during the months of October and December. The greatest number of rainy days was observed in December and October. The heaviest amount of rainfall in twenty-four hours was on the 27th July, when 1.07 inches fell. The nearest approach to this was on 17th August, when 0.75 inches fell.

Sanitary Inspector's Report, 1909.

Ford Street Stables.

(Administered under the direction of the Plant & Stores Committee).

Number of Horses at beginning of year ...	57	
Bought during the year	10	
	—	67
Disposed of		7
Inspector's Department	40	
Surveyor's Department	15	
Police and Fire Department	5	
		60

Privy and Ashpit Cleansing.

Night-work—Privies Cleansed	4784
,, Ashpits Cleansed	2769
,, Privy Cesspools Cleansed	417
Day-work—Dry Ashpits Cleansed	497

Refuse Collected.

Night-work—Loads, Excreta only	4938
,, ,, Ashes and Excreta	2391
,, ,, Ashes only	2156
Day-work— ,, Ashes, etc.	26087
Offal and Trade Refuse carted by Producers—Loads ...	1108
	36680

Refuse Disposal

Disposed of as Manure—By Boats, 259 loads.
By Customers' own carts, 516 tons, 3 cwts.
Delivered to Farmers from pits, 2269 cart loads

Deposited on Tips, 6,411 cart loads.

Burned in the Destructors, 22,941 tons, 18 cwts.

Extracted from Refuse and Sold, 12 tons, 13 cwts., 1 qr. Scrap Iron.
86 tons, 0 cwts., 0 qrs. Tins.
7 cwts., 2 qrs. Waste Paper.
2 cwts., 1 qr. Rag Clippings.
48 dozen Bottles.
30 dozen Jars.

Cost, calculated on Wages only

		Average No. of Men, including hired.	Loads.	Wages only, including hired men.
Collection	Day	46·94	26,087 @ 2/3·40	£2,978 11 4
	Night	25·54	9,485 @ 3/4·57	£1,603 8 8
Disposal—Chester Depot		42·11	28,000 @ 1/9·74	£2,536 17 0½

Bakehouses.

Bakehouses in occupation, commencement of year		99
Empty places re-occupied	6	
New Bakehouses built and occupied	4	
Bakehouses re-entered on Register	2	
	—	111
Unoccupied at commencement of year	44	
Add occupied places since vacated	10	
Deduct re-occupied	6	
Deduct demolished	4	
	—	10
Total unoccupied at end of year	44	
Total occupied Bakehouses in the Borough		101
Visits to unoccupied Bakehouses	166	
Visits to occupied Bakehouses	429	
	——	595

Sanitary Work:—

Defects found	... 98
Remedied	...109

(including 14 from 1908).

Complaints not cleared, but carried forward—6.

The following eight nuisances included in those reported remedied above, were dealt with on receipt of Notice from His Majesty's Inspector of Factories:—

Limewash	5
Drainage Items	3

Canal Boats.

1. Inspector and Salary. Chief Inspector and Assistant. No salary allocated.

Address: Sanitary Offices, 16, Ford Street, Derby.

2. Boats Inspected, 50. Visits to Canal, 97.

3. Infringements of Acts and Regulations.

a.—Registration ...	0	*b.*—Change of Master ...	0
c.—No Certificate on Board	1	*d.*—Absence of Marking...	0
e.—Overcrowding ...	1	*f.*—Separation of Sexes ...	1
g.—Cleanliness ...	0	*h.*—Ventilation ...	0
i.—Painting	2	*j.*—Provision of Water Casks	0
k.—Removal of Bilge Water	0	*l.*—Notification of Infectious Diseases ...	0
m.—Admittance of Inspector	0		
n.—Boats found in bad repair ...	2		

4. Legal Proceedings, None.

5. Other steps taken: Two caution forms sent, and complaints cleared.

6. Cases of Infectious Disease dealt with, None.

7. Detention of Boats for cleansing and disinfection, None.

8. Number of Boats on Derby Register at end of year, 1909, 20.

9. Number of Boats registered during the year, 1909, None.

Common Lodging Houses

Two houses have been registered, three transferred to new tenants, and two closed during the year.

The present accommodation provided is:—

20 registered houses, having 140 sleeping rooms, with convenience for 673 adult persons and 29 children.

Visits of Inspection	995
Notices given, verbal and written	207
Breaches of Bye-Laws remedied	230

Houses Let in Lodgings.

On Register at beginning of year, 1909 ...	31	
Added during 1909	8	
	—	39
Closed during 1909		4
		—
On Register at end of year		35
Visits of Inspection		1491
Notices Served		225
Contraventions of Bye-laws remedied ...		288

Dairies, Cowsheds, and Milkshops.

Registered as Cowkeepers within the Borough:—

On Register, January, 1909	24	
New Registrations	6	
	—	30
Removed from Register	1	
Leaving on Register		29
Inspector's Visits	151	

Registered as Dairymen and Purveyors within the Borough:—

On Register, January, 1909	418	
New Registrations	106	
	—	524

Removed from Register	105	
Leaving on Register		419
Inspector's Visits		1769
Notices Served		434
Nuisances Abated		430
Registered Purveyors who live outside the Borough:—		
On Register, January, 1909	159	
New Registrations	2	
Total on Register		161

Diseases of Animals Acts.

(Administered under the direction of the Markets Committee).

During the past year there has been no diminution in the amount of work done under these Acts, in fact the tendency year by year is to increase the demand for supervision, and extend the scope of operations, without making the slightest provision for carrying out the extra duties imposed.

Anthrax.

An outbreak of Anthrax occurred in the County, the origin of which was not discovered. Suspicion rested upon offals bought in one of our Hide and Skin Markets, but diligent inquiry failed to find any trace of the disease present or past within the Borough, and fortunately the outbreak did not extend beyond the one centre.

Sheep Scab.

The special order relating to this disease, and the compulsory dipping of all sheep, still remains in force, requiring continuous attendance in the Cattle Markets during the dipping period, for purposes of supervision, and the issue of licenses. The keeping of records, issuing of notices to owners and other authorities concerned, entails a heavy amount of correspondence and clerical work, but I am pleased to say the Order is producing good results, and farmers, dealers and others, as they realise the necessity for the restrictions, and the benefits accruing, more readily comply with the requirements.

Swine Fever

The Borough has for some years now been under the restrictions of the Swine Fever Movement Order, but this year we were in addition placed under the Infected Areas provisions. Several outbreaks of the disease occurred in the County, the origin of which was traced to pigs which had passed through the Borough, either from the Markets or private pig keepers and dealers, but in spite of careful inquiry the responsibility could not be brought home to any individual.

During the first half of the year there were fourteen outbreaks of Swine Fever reported in the town, with 131 pigs in contact. The Officers of the Board of Agriculture were promptly on the scene, and acting in conjunction with them, every possible action was taken to prevent spread of infection.

As the majority of the diseased animals were found upon, or traceable to, the Siddals Allotment gardens, special attention was directed to this neighbourhood, and as the place has for years had a bad reputation as a haunt of disease and rats, it was decided that exceptional treatment was necessary.

Every pigsty was constructed of wood, badly paved, and with little or no drainage, forming a particularly happy breeding ground for rats. So soon as the disease in the Borough and County had been got under, negotiations were opened up for the removal of restrictions on the district at large, but this was only done after the making of a Special Order applicable to the Siddals Allotments, and any other place to which it may be applied by an Inspector of the Board, or of the Local Authority.

It was at first suggested that pig keeping on the Siddals should be entirely prohibited, but after full consideration by the Markets Committee, my suggestion was adopted, that all wooden sties should be abolished, and pigs allowed to be kept only in places built of solid brickwork, with concrete floors, and provided with proper means of drainage. As a considerable number of pigs still remained on the gardens, it was only possible to insist upon brick buildings before fresh animals were brought upon the premises. This course has been taken since the Special Order came into force on 29th August, 1909, and will be continued until all insanitary

wooden erections are replaced with brick structures, which cannot have other than a beneficial effect, and tend to keep the Borough free from this disease, the presence of which causes serious loss to owners, farmers, dealers, butchers, the revenue of our Market, and greatly increases the cost in an important branch of our general food supply.

Some little idea of the amount of supervision necessary may be gathered from the fact that I have had to report to the Local Authority with particulars of eighty-nine breaches of the Swine Fever Order or Regulations, and to institute proceedings in one case where the offence was repeated after official caution.

Whilst I am not in favour of continual Police Court proceedings, there can be no doubt that a too mild enforcement of these Orders and requirements very materially and unnecessarily increases the work and worry of your Officers.

In addition to the extra labour entailed by this special outbreak, the order for weekly cleansing and disinfection of pig dealers' premises, carts, and appliances still remains in force, and has been carefully administered during the year by Inspector Turner.

Removal of Nuisances

It has only been necessary to ask the Committee for authority to take legal proceedings in eight instances, the serving of Statutory Notice being effective in every case but one, which still remains in hand subject to further investigation, and no Police Court proceedings have been taken.

The happy result of being able to report the abatement of 9,793 nuisances, as set out in the special table, without compulsory proceedings, speaks well for the tact, judgment, and ability of the District and Special Inspectors, whose assistance in this direction it is a pleasure to acknowledge.

Particulars of Nuisances occurring in connection with inspections made under notices from His Majesty's Inspector of Factories, relating to Workshops, have been supplied to the Medical Officer of Health.

Conversion of Privies to W C.'s.

The following figures indicate the progress made in this important branch of sanitary work, during the past seven years, since the inclusion of the added areas.

Year.	*Tub Closets.*	*Privies with Ashpits.*	*Privies with Cesspools.*
1901	4,723	5,645	1,147
1908	4,042	2,867	683

From the table "Nuisances Abated," it will be seen that a further reduction has been made during 1909, by the substitution of 502 Water Closets.

NUISANCES ABATED.

		A	B	C	X	Total.
Ashpits	Demolished	102	37	92	...	231
Drains	Cleansed and Repaired (or Soil Pipes)	173	285	201	...	659
	Disconnected from Sinks	...	18	1	...	19
	Provided (or Soil Pipes)	243	120	275	...	638
	Re-laid and New	522	231	345	...	1098
	Removed from Inside Houses	31	41	21	...	93
	Waste Pipes Repaired, Renewed, &c.	63	111	45	...	219
	Soil Pipes Removed from inside Houses	1	7	2	...	10
	Brick Replaced by Salt-glazed Pipes	...	21	54	...	75
	Inlets Trapped and Inspection Chambers Provided or Repaired	580	561	527	...	1668
	Soil Pipes and Drains Ventilated	125	138	103	...	366
Houses	Cleansed	49	23	13	...	85
	Cellars Cleansed and Limewashed	26	19	7	...	52
	Damp Coursed and made Dry	36	15	3	...	54
	Overcrowding Prevented	1	1	...	...	2
	Ash Bins provided	159	120	172	...	451
	Dangerous Walls or Buildings Repaired	...	3	5	...	8
	Paving of Yards and Passages ,,	278	147	266	...	691
	Roofs, Floors, &c. ,,	38	41	55	...	134
	Spouting Repaired, Disconnected or Provided	76	124	85	...	285
	Rooms Ventilated	...	8	...	...	8
Privies	Cleansed and Repaired, or new Tubs Provided	347	171	171	...	689
	Converted to W.C.'s	169	120	213	...	502
	Demolished	5	...	3	...	8
Urinals	Erected	1	5	2	...	8
	Removed	...	...	2	...	2
	Repaired or Cleansed	5	2	...	...	7
Water	Soft Water Tanks Cleansed or Repaired and Pumps Repaired	54	73	29	...	156
	Disused Wells Filled in	13	14	22	...	49
	Covers of Tanks or Wells Repaired	...	5	1	...	6
W.C.'s	Cleansed or Repaired	46	...	2	...	48
	Flushing Water Laid on	6	5	...	...	11
	Flushing Tank provided	...	1	...	...	1
	Additional Provided	4	1	8	...	13
	Lead Safes provided	...	14	...	...	14
	Fittings Repaired	35	52	11	2	100
	Ventilated	...	2	5	...	7
Bakehouses,	Contraventions Remedied	...	...	...	109	109
Common Lodging-houses	,, ,,	...	...	...	230	230
Dairies, Cowsheds and Milkshops	,, ,,	...	...	...	430	430
Factories and Workshops	,, ,,	78	7	13	...	98
Houses Let in Lodgings	,, ,,	...	...	...	288	288
Offensive Trades	,, ,,	...	...	...	9	9
Smoke Nuisances	,, ,,	1	...	...	...	1
Accumulations of Manure, &c., removed, and Premises Cleansed		12	17	4	...	33
Fowls or Animals removed		3	1	5	...	9
Manure Pits or Cesspools removed or repaired		6	18	7	...	31
Stagnant Water removed or Sewage from Cellar		10	...	6	...	16
Stables Drained or Paved, Drains removed from inside, &c.		4	12	...	...	16
Swill Boiling discontinued		2	...	...	...	2
Sinks Provided		...	36	...	...	36
Extra Water Services provided		...	12	...	...	12
Ice Cream		..	..	...	6	6
		3304	2639	2776	1074	9793

Ice Cream Premises.

Number of places on Books, January, 1909 ...		282
Added during year	44	
Struck off the list	51	
On Books at end of year		275
Notices Served	6	
Nuisances Abated	6	
Inspector's Visits		380

In addition to the notices served, several verbal cautions were given, as to general cleanliness and care, which were invariably promptly complied with.

POLICE COURT PROCEEDINGS.

No. of Cases	Complaint.	Results.	Total Costs. £ s. d.
1	Selling Milk deficient in Fat to extent of 4·7 %	Fined 2s. 6d. & Costs	1 1 6
1	Selling Milk deficient in solids not Fat to extent of 1·9 %	Withdrawn	—
1	Selling adulterated Rum. 5 parts added Water ...	Heard twice and dismissed. Notice produced... ...	—
1	Exposing for Sale unsound Rabbits	Fined 10s. and Costs	1 9 0
1	Being in possession of unsound Rabbits	Withdrawn	—
1	Selling adulterated Butter .	To pay Costs ...	1 11 6
1	Delivering Margarine in unmarked wrapper	Fined 5s. and Costs	
1	Bringing three unmarked Pigs into Market	Fined 5s. and Costs	0 19 6
1	Selling Milk deficient in Fat to extent of 9 %	Adjourned for three weeks. Defendant ill	—

See special notes to Food and Drugs Table.

Registered Slaughter-houses.

In use at end of 1909:—

In hands of private holders	45
Corporation houses let to private tenants	16
Corporation houses used as public	2
Corporation houses standing empty	3
Private houses standing empty	2
Private licenses lapsed	5
	73
Visits of Inspection	7582

One Corporation house used for Tripe dressing.

One Corporation house used for Fat dressing.

Special report was made in 1908 on the sanitary condition and accommodation of slaughter-houses, and the alterations and additions then enumerated and agreed to are being proceeded with.

During the year five private slaughter-houses have been closed, and the premises used for other purposes.

UNSOUND FOOD.

Condemned and Destroyed.

2 Calves.	125 lbs. Halibut.
2 Pigs.	48 lbs. Kidneys (Beasts')
420 Rabbits	32 lbs. Kidneys (Hogs')
1048 lbs. Beef.	2 lbs. Lobster.
902 lbs. Cod Fish.	1286 lbs. Lungs, Liver, etc.
174 lbs. Cat Fish.	408 lbs. Mutton.
378 lbs. Codling.	9779 lbs. Mussels.
140 lbs. Colefish.	934 lbs. Mackerel.
372 lbs. Cockles.	1400 lbs. Plaice.
30½ lbs. Chitterlings.	224 lbs. Prawns.
84 lbs. Cod Livers.	14 lbs. Shrimps.
518 lbs. Fish Fillets.	365 lbs. Strawberries.
336 lbs. Findon Codling.	110 lbs. Smelts.
1988 lbs. Gooseberries.	660 lbs. Sprats.
1170 lbs. Herrings.	254 lbs. Tomatoes.
168 lbs. Haddock.	30 lbs Veal.
362 lbs. Hake.	60 lbs. Watercress.

Food and Drugs Acts.

Samples submitted to the Borough Analyst (Mr. Otto Hehner).

Samples.	Article.	Genuine.	Adulterated.
5	Brandy	5	—
29	Butter	28	1
4	Gin	4	—
59	Milk	57	2
1	Rice	—	1
5	Rum	4	1
7	Whiskey	7	—
110		105	5

4.54% of Samples tested were adulterated.

A table is appended from which it will be seen that for some years the adulteration in **Spirits** has far exceeded that found in general samples. A glance at the last column also shows the considerable improvement obtained, but it is to be feared that the salutary provisions of the Acts are now made of no effect as regards spirits, owing to the loose interpretation recently put upon the section as to giving notice to the purchaser, that the article he is buying is reduced in quality and value.

The Food and Drugs Acts are for the purpose of protecting purchasers from fraud, and the sale of poisonous or deleterious substances, but so long as a seller can protect himself from prosecution by exhibiting a notice disclaiming liability for the quality of the article he sells, so long will the administration and intent of the Acts be a farce, and the public will suffer.

The only way in which true protection can be secured, for seller and purchaser alike, is by labelling the article sold with an exact statement of the quantity and quality of its ingredients, and for such statement to constitute a warranty, everything sold otherwise to be deemed pure and genuine, and without admixture, or the extraction of any necessary ingredient.

	Total Samples.		*Spirits only.*		
Year.	*Total samples purchased.*	*Total samples adulterated.*	*Samples purchased.*	*Samples adulterated.*	*Rate per cent of total adulteration.*
1899	56	4	29	4	100%
1900	(*) 63	4	7	2	50%
1901	55	10	32	6	60%
1902	110	11	51	10	90.90%
1903	110	11	63	8	72.72%
1904	(*)102	3	32	2	66.66%
1905	115	15	39	5	33.33%
1906	110	10	16	3	30.00%
1907	122	10	32	3	30.00%
1908	111	18	28	7	38.88%
1909	110	5	21	1	20.00%

(*) *Arsenical Beers not counted in these figures.*

Offensive Trades.

The following are the offensive trades carried on within the Borough, and subject to inspection:—

Bone Boiling	1
Gut Scraping	1
Hide and Skin Marts	2
Parchment Making	1
Skin Curing	1
Soap Boiling	1
Tallow Melting	1
Tripe Boiling	7
Varnish Making	1
*Marine Stores	2
	18

Visits, 99.
Notices, 10.
Defects remedied, 19.

*It has been decided, that where bones, skins, or matters likely to be especially offensive, are accumulated, such businesses should be regarded as offensive trades, hence these have been included.

WILLIAM WILKINSON,
Chief Sanitary Inspector.

Borough Surveyor's Report, 1909.

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Manholes constructed during 1909.

Bromley Street	1	Sacheveral Street ...	1
Shelton Terrace ...	6	Sherwood Street ...	1
Normanton Recreation Ground	7	Dickenson Street ...	1
		Chambers Street ...	1
Stenson Lane Improvement	1	Siddals Road	2
Leaper Street	1	Loudoun Street ...	1
Whitecross Street ...	2	Strutt Street	1
Spa Lane	1	Chandos Pole Street ...	1
Curzon Street	1	Canal Street	1.
Hartington Street ...	3	Lodge Lane	1
Drewry Lane	2	Litchurch Lane ...	1
Eagle Street	2	Parliament Street ...	1
Exeter Street	1		—
Sitwell Street	2		47
Cæsar Street	1		—
Stores Road	1		

Sewers Cleaned out during 1909.

	Loads		Loads
Dickenson Street ...	1	Robert Street	1
Whitecross Street ...	1	Sherwood Street ...	2
Trinity Street	2	Exeter Street	12
Full Street	10	Thorntree Lane ...	1
London Road	24	Erasmus Street	4
Derwent Street ...	16	Vale Street	2
Park Street	6	Darwin Terrace ...	7
Cattle Market	2	Market Place	2
Payne Street	2	Mansfield Road ...	2
Cæsar Street	9	Copeland Street ...	1
Noel Street	1	Roman Road	1
Holcombe Street ...	3	Exeter Place	3
Nottingham Road ...	4	Old Chester Road ...	1
Osmaston Road ...	19	Brighton Road	4
Derwent Row	6	Keys Street	2
Graham Street	3		—
Market Place	2		198
Meadow Road	42		—

Manholes Cleaned out during 1909.

	Loads.
Trinity Street	1
Mill Hill Road	2
George Street	1
Degge Street	1
Cotton Lane	1
Exeter Street	1
	7

New Sewers laid during 1909.

Stores Road (extended) ...	9″
Strutt Street (extended) ...	12″
Depôt Street (extended) ...	12″

Water used during 1909.

	Gallons.
Sewer Flushing	5,841,325
Court Flushing	762,332
Street Watering	7,501,200
Steam Rolling	1,186,370
Cabstands, Bridges, and Wood Paving	196,000
Footways	42,400
Total ...	15,529,627

Disinfectant Powder used during 1909, Two Tons.

Disinfectant Fluid used during 1909, 1,248 Gallons.

River Dredging during 1909, 91 Tons.

Markeaton Brook Cleaning during 1909, 183 Tons.

JOHN WARD,

Borough Surveyor.

Appendix I.

COUNTY BOROUGH OF DERBY.

Vital Statistics of Whole District during 1909 and previous years.

Year.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions.	Deaths of Non-residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond Dist.	Nett Deaths at all ages belonging to the Dist.	
				Under One Year of Age.		At all Ages.						
		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.
1899.	103,649	2,984	28·8	488	163	1,856	18·0	310	81	nil.	1,775	17·2
1900.	104,684	2,900	27·7	504	173	1,932	18·5	342	78	...	1,854	17·7
1901.	106,076	2,939	27·8	455	155	1,673	15·8	304	75	...	1,598	15·1
1902.	116,869	3,326	28·5	417	126	1,698	14·6	290	59	...	1,639	14·1
1903.	118,707	3,215	27·1	411	128	1,671	14·1	309	75	...	1,596	13·5
1904.	120,449	3,282	27·3	467	143	1,905	15·9	346	81	...	1,824	15·2
1905.	122,207	3,108	25·5	471	152	1,823	15·0	336	79	2	1,746	14·3
1906.	123,981	3,103	25·1	359	116	1,829	14·7	370	99	3	1,733	14·0
1907.	125,774	3,152	25·1	384	122	1,870	14·9	400	88	2	1,784	14·2
1908.	127,583	3,321	26·1	367	111	1,777	14·0	426	99	4	1,678	13·15
Averages for years 1899-1908.	116,898	3,133	26·8	432	138	1,803	15·4	343	81	...	1,723	14·8
1909.	129,411	3,220	24·9	397	124	1,799	13·91	419	87	3	1,712	13·3

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

Note.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

Area of District in acres (exclusive of area covered by water) 5,272 acres.

Total population at all ages	114,848	At Census of 1901.
Number of inhabited houses	24,851	
Average number of persons per house	4·7	

Vital Statistics of separate Localities in 1909 and previous years.

Columns for each ward: a. Population estimated to middle of each year; b. Births registered; c. Deaths at all Ages; d. Deaths under 1 year.

Names of Localities / Year	Whole District	Abbey Ward	Arboretum Ward	Babington Ward	Becket Ward	Bridge Ward	Castle Ward	Dale Ward	Derwent Ward	Friar Gate Ward	King's Mead Ward	Litchurch Ward	Markeaton Ward	Normanton Ward	Osmaston Ward	Peartree Ward	Rowditch Ward	Deaths in Institutions not belonging to Wards	Strangers
1899	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1900	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1901	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1902	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1903	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1904	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1905	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1906	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1907	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1908	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Averages, 7 Years 1902 to 1908	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1909	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Note re-arrangement of Ward Boundaries for 1902. It is impossible to group the old arrangement so as to render them statistically comparable with the new arrangement.

Appendix III.

COUNTY BOROUGH OF DERBY.

Cases of Infectious Disease Notified during the Year 1909.

Notifiable Disease.	Cases notified in whole District							Total Cases Notified in each Locality.														No. of Cases removed to Hospital from each Locality.													
	At all Ages.	At Ages—Years.						Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent. (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch (W)	Total.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.																														
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup) ...	653	5	123	418	57	50	...	30	74	54	41	30	33	57	21	36	17	21	33	56	59	63	28	19	44	28	24	11	19	29	9	22	10	9	21	35	38	46	12	376
Erysipelas...	104	4	4	6	12	67	11	5	6	7	7	5	11	7	9	4	5	9	7	8	2	6	6	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Scarlet Fever	210	3	51	135	14	7	...	14	15	16	10	12	4	12	7	27	10	8	40	11	3	13	8	11	12	10	8	8	2	3	3	16	7	6	35	7	...	8	4	140
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	13	...	1	4	5	3	...	...	...	1	...	...	...	2	2	1	1	...	2	1	...	...	3	...	...	1	...	...	...	2	1	1	1	...	2	1	...	...	1	10
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever... ...	9	...	...	...	1	8	...	2	2	...	1	...	...	...	...	1	...	...	1	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis ... ... (Voluntary Notification)	127	...	3	11	15	96	2	8	4	7	7	14	8	7	5	7	13	9	6	7	4	11	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1116	12	182	574	104	231	13	59	101	85	66	61	56	85	44	76	46	47	89	83	68	95	55	32	56	39	32	19	22	34	13	39	18	15	58	43	38	54	17	529

(I) Derbyshire Royal Infirmary for treatment of Enteric Fever cases.
(H) Derby Borough Isolation Hospital for treatment of Diphtheria and Scarlet Fever cases.

COUNTY BOROUGH OF DERBY.

Appendix IV.

Causes of, and Ages at, Death during 1909.

Causes of Death.	Deaths in or belonging to whole District at subjoined Ages.							Deaths in or belonging to Localities (at all Ages).															Total Deaths in Public Institutions in the District.	Strangers.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upward.	Abbey Ward.	Arboretum Ward.	Babington Ward.	Becket Ward.	Bridge Ward.	Castle Ward.	Dale Ward.	Derwent Ward.	Friargate Ward.	King's Mead Ward.	Litchurch Ward.	Markeaton Ward.	Normanton Ward.	Osmaston Ward.	Peur Tree Ward.	Rowditch Ward.		
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	45	9	33	3	...	...	...	6	1	3	1	...	2	3	6	2	7	1	10	1	1	...	1	2	...
Scarlet Fever	4	...	1	2	...	1	...	...	...	...	...	1	...	...	1	1	...	1	...	...	...	...	...	3	...
Whooping-cough	43	16	27	...	...	...	...	4	1	3	2	1	10	4	3	...	1	1	5	2	4	1	1	1	...
Diphtheria and Membranous Croup	33	...	11	21	...	1	...	4	3		4	1	3	...	...	3	...	2	...	4	3	5	...	15	...
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever (Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever (Enteric	2	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...
Fever (Other continued	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	14	...	1		1	5	7	...	1	...	1	...	2	1	1	...	1	1	2	...	2	...	2	3	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	50	44	6	...	...	...	...	4	3	3	2	3	7	1	1	2	5	3	7	2	3	4	...	5	...
Enteritis	8		3	1	...	2	2	1	...	...	...	1	...	1	...	...	...	1	...	...	1	1	2	2	1
Gastritis	4	...	...	...	-	2	2	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...
Puerperal Fever	7	...	...	...	...	7	...	1	1	...	1	...	...	1	...	1	...	1	1	...	...	...	...	3	...
Erysipelas	3	2	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Phthisis (Pulmonary Tuberculosis)	129	...	2	4	24	94	5	8	7	13	7	2	8	9	1	10	20	7	8	7	4	12	6	29	3
Other Tuberculous Diseases	47	18	14	6	...	9	...	4	2	3	3	4	9	...	...	2	4	1	3	7	1	1	3	11	2
Cancer, Malignant Disease	96		...	1	2	64	29	4	5	8	5	7	8	7	6	9	3	8	6	9	2	4	5	23	9
Bronchitis	145	29	18	...	1	32	65	18	8	8	9	4	16	7	8	9	11	7	10	7	6	8	9	21	...
Pneumonia	96	20	38	1	4	25	10	14	5	3	3	3	9	4	3	7	8	3	9	5	8	5	7	22	3
Pleurisy	2	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	...
Other Diseases of Respiratory Organs	8	...	1	...	...	7	...	1	...	...	...	...	...	...	1	1	...	...	...	3	2	...	...	3	1
Alcoholism, Cirrhosis of Liver	23	...	...	...	...	19	4	1	2	2	2	1	1	...	...	2	3	4	...	3	...	2	...	4	1
Venereal Diseases	5	4	...	...	...	1	...	...	...	...	...	...	1	...	...	1	1	1	...	...	...	...	1	5	1
Premature Birth	88	88	...	...	...	...	...	9	4	4	4	4	3	6	3	4	9	7	10	3	3	10	5	3	...
Diseases and Accidents of Parturition	8	...	...	...	...	8	...	1	2	...	1	...	...	...	...	...	...	2	2	...	...	...	...	1	...
Heart Diseases	188	6	2	8	11	99	62	9	12	11	12	18	19	10	3	12	10	17	11	12	8	11	13	34	3
Accidents	47	5	6	6	4	14	12	2	2	2	4	3	3	1	5	3	1	2	3	3	5	5	3	31	13
Suicides	8	...	...	...	...	8	...	...	1	1	1	...	...	...	1	1	...	...	1	1	...	1	...	3	1
Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other causes	609	150	39	15	11	170	224	56	48	50	51	30	39	29	14	36	39	37	38	25	25	49	43	192	49
All causes	1712	391	200	69	59	571	422	148	109	115	114	84	142	85	57	106	123	107	127	95	78	120	102	419	87
Non-Residents	87	6	7	7	8	51	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

INDEX.

—:—