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CITY OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1902.

BY

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MEDICAL OFFICER OF HEALTH,
MEDICAL SUPERINTENDENT OF ISOLATION HOSPITALS.

Nottingham:

THOMAS FORMAN AND SONS, PRINTERS, SHERWOOD STREET.

CITY OF NOTTINGHAM.

1902—1903.

HEALTH COMMITTEE.

COUNCILLOR BLACK, MAYOR.

Chairman:
ALDERMAN MUTCH, M.D.

Vice-Chairman:
ALDERMAN BENTLEY.

ALDERMAN BENNETT.
" JELLEY.
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" DABELL, M.R.C.S.
COUNCILLOR FLEEMAN.
" LLOYD.
" MARLOW.
" PENDLETON.
" ROBERTS, M.B.
" SIM, M.D.
" J. WHITE, SHERIFF.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE OF THE NOTTINGHAM CORPORATION.

GENTLEMEN,

The Report I now submit is the 14th I have had the honour of preparing as Medical Officer of Health for Nottingham.

The vital statistics of the city for the past year are interesting and exceptional in many particulars.

It may be noted at the outset that the census of 1901 is so recent as to afford a quite reliable basis for the estimation of the resident population. Many of the usual rates calculated upon this basis are remarkably low, and some of them the lowest on record.

The birth-rate was equal to only 27·8 per 1000 living, *i.e.*, 0.5 per 1000 below the figure for 1900 and 1901 (28·3), which itself was the lowest previously known.

The general death-rate amounted to 16·6 per 1000. This again is the lowest rate for any full year, the nearest corresponding figure being that of 1894 (16·7). The death-rate from the seven principal epidemic diseases again was far below the rate of any previous year on record, being equal to but half the mean rate of the preceding decennium.

This low mortality was the product of several factors accidentally coincident in point of time.

The deaths from enteric fever and diarrhœa were exceptionally few, and this was doubtless owing to the comparatively high rainfall and low temperature of spring, summer and autumn.

There was a very low mortality from measles and whooping-cough, which was explained by the fact that 1902 was in ordinary cyclical sequence an inter-epidemic year for both these diseases.

And, lastly, the low local death-rates from scarlet fever and diphtheria—though not readily accounted for—had up to the close of the year shewn but little sign of increasing.

Turning now to some salient facts in connection with the work and equipment of the Health Department:—

The first and largest instalment of the much-needed new refuse-destructors at the Eastcroft depôt is now practically completed, the Radford section is well advanced, and the construction of another for the Bulwell district has been definitely arranged.

The abolition of the obsolete pail system is still to come, but, by way of abating to some extent the nuisance inseparable from this system when used for the dense and poor districts of a large city, it has now been decided to replace all wooden pails with others of galvanized steel.

The system of public abattoirs, which you have long ago decided to establish in Nottingham, and which is certainly an essential part of the equipment of a well-ordered modern city, has yet to be begun.

In the early part of the current year the nucleus of a temporary small-pox hospital, in the shape of a 20 bed wooden ward-block with nurses-room and discharging block, was erected at the northern extremity of Bulwell Forest; but it is hardly necessary to add that this cannot be considered an adequate provision for a city of the size and character of Nottingham.

In my annual report for 1901 I drew attention to the fact that the staff of the Health Department had remained practically unchanged, while the population of the city had increased by more than 50,000, and furnished a detailed statement of the additional appointments required to place the department upon a satisfactory modern footing. I will here therefore only ask to be allowed to remind you of these facts.

PHILIP BOOBBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1902, and for the 10 years 1892-1901.

	Estimated Population.	Inhabited Houses.	† Marriages	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year.	Under 5 Years.	
1902	243,191	55,240	2256	6867	4118	1101	1382	666
1901	240,438	53,107	2255	6801	4346	1330	1774	791
1900	237,770	52,537	2153	6731	4555	1314	1811	770
1899	239,384	53,052	2037	6910	4689	1470	1954	802
1898	236,137	52,051	1912	6796	4058	1209	1689	636
1897	232,935	...	1895	6742	4277	1362	1869	587
1896	229,775	...	1749	6758	3987	1136	1709	594
1895	226,659	...	1658	6717	4195	1269	1640	522
1894	223,584	...	1635	6373	3728	1108	1609	547
1893	220,551	...	1638	6612	4061	1145	1569	610
1892	217,550	...	1672	6315	3961	1058	1613	561
Average of the *ten* years 1891-1900.	230,478	...	1860	6675	4185	1240	1724	642

* Retrospective estimate based upon Census Return of April, 1901.

Estimates for years 1891—1899 based upon hypothesis that rate of increase between 1881 and 1891 had continued during succeeding decennium.

† The returns of Marriages, from June 1899 onwards, are for the entire municipal area—the new Parish of Nottingham: prior to this, they did not include those of Bulwell, Basford, and North Wilford.

Rateable Value (for Poor Rate), £1,110,599.

TABLE II.

Nottingham. Annual Rates for 1902, and the 10 years 1892-1901

	Rate per 1000 of Population.		Per 1000 Births. Deaths under 1 year.	Per 1000 of Total Deaths.		
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.	Deaths in Public Institutions.
1902	27·8	16·7	159	267	336	190
1901	28·3	18·1	196	306	408	182
1900	28·3	19·2	196	288	398	169
1899	28·8	19·6	213	313	417	168
1898	28·8	17·2	178	298	416	157
1897	28·9	18·4	202	318	437	137
1896	29·4	17·5	168	278	418	145
1895	29·7	18.5	189	302	391	139
1894	28·6	16·7	174	336	432	147
1893	30·2	18·4	172	282	386	150
1892	29·4	18·4	167	267	407	141
Average of the *ten* years 1892-1901.	29·04	18·20	185	299	411	154

TABLE III.

Schedule A—Nottingham. 1902. Deaths Registered from all causes.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
1	Small-pox														
	(*a*) Vaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(*b*) Unvaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(*c*) No Statement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles	1	3	..	..	..	..	..	..	..	..	..	..	..	4
3	Scarlet Fever	1	12	5	2	1	..	1	1	..	..	..	..	..	23
4	Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza ..	1	1	..	..	2	..	4	3	3	7	3	2	1	27
6	Whooping Cough ..	22	12	3	..	..	..	..	..	..	..	..	..	..	37
7	Diphtheria	6	17	5	2	1	..	..	..	..	..	..	..	..	31
8	Enteric Fever	..	2	3	7	4	4	17	6	4	2	1	..	..	50
9	Asiatic Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Diarrhœa, Dysentery ..	113	15	..	..	..	..	1	..	3	1	3	2	1	139
11	Epidemic Enteritis ..	45	7	..	..	..	..	..	..	1	..	1	1	..	55
12	*Other Allied Diseases* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12A	Chicken Pox	1	..	..	..	..	..	..	..	..	..	..	..	..	1
12B	Mumps	1	..	..	..	..	..	..	..	..	..	..	..	..	1
13	Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Cowpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Syphilis	12	..	..	..	..	..	..	..	..	..	..	..	..	12
19	Gonorrhœa	1	..	..	..	..	..	..	..	..	..	..	..	..	1
20	Phagedæna	3	1	..	1	..	..	..	2	..	..	..	1	..	8
21	Erysipelas	6	1	..	..	..	1	..	2	..	..	2	..	..	12
22	Puerperal Fever	..	..	..	..	..	2	6	..	..	..	..	..	..	8
23	Pyæmia	..	1	..	1	..	1	5	..	2	1	..	..	..	11
24	Infective Endocarditis ..	..	..	..	..	..	..	1	1	1	..	..	..	..	3
25	*Other Allied Diseases* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26	Malarial Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Rheumatic Fever ..	..	..	..	3	1	4	..	1	1	1	2	1	..	14
28	Rheumatism of Heart ..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
29	Tuberculosis of Brain ..	12	16	7	4	..	..	..	1	..	..	..	..	..	40
30	Tuberculosis of Larynx	..	..	..	..	..	1	..	..	1	2	..	..	..	4
31	Phthisis	3	6	9	7	16	34	51	64	55	30	9	2	..	286
32	Abdominal Tuberculosis	22	7	3	1	1	..	2	..	1	1	..	..	..	38
33	General Tuberculosis ..	6	4	4	1	4	2	4	..	..	1	..	..	..	26
34	Other forms Tuberculosis	1	3	1	2	1	1	1	2	..	4	..	..	..	16
35	*Other Infective Disease*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Thrush	1	..	..	..	..	..	..	..	..	..	..	..	..	1
37	Actinomycosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
38	Hydatid Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
39	Scurvy	1	..	..	..	..	..	..	..	..	..	..	..	..	1
40	*Other Diseases due to Altered Food*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	TOTALS	259	108	41	31	31	50	93	83	72	50	22	9	2	851

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													All Ages.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75	85-	
41	Acute Alcoholism ..	..	..	..	..	..	..	2	2	4	1	..	..	..	9
42	Chronic Alcoholism ..	..	..	..	..	..	..	..	12	10	3	..	..	..	25
43	*Chronic Industrial Poisonings*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44	*Other Chronic Poisonings*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45	Osteo-arthritis	..	..	..	..	..	..	..	..	..	..	4	..	..	4
46	Gout	..	..	..	..	..	..	..	..	..	..	1	..	..	1
47	Cancer	..	1	1	1	..	4	8	37	44	51	54	20	2	223
48	Diabetes Mellitus ..	..	..	..	1	1	..	..	3	3	7	5	1	..	21
49	Purpura Hæmorrhagica	1	..	..	..	..	..	..	..	1	..	..	..	..	2
50	Hæmophilia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
51	Anæmia	3	..	..	1	..	1	1	..	2	2	1	..	..	11
52	Lymphadenoma	..	1	1	..	..	1	..	1	..	2	..	..	..	6
53	Premature Birth ..	161	..	..	..	..	..	..	..	..	..	..	..	..	161
54	Injury at Birth	5	..	..	..	..	..	..	..	..	..	..	..	..	5
55	Debility at Birth ..	87	1	..	..	..	..	..	..	..	..	..	..	..	88
56	Atelectasis	23	..	..	..	..	..	..	..	..	..	..	..	..	23
57	*Congenital Defects* ..	13	..	1	..	..	..	..	..	..	..	..	..	..	14
58	Want of Breast Milk ..	16	..	..	..	..	..	..	..	..	..	..	..	..	16
59	Atrophy, Debility, Marasmus	131	7	..	..	..	1	..	..	..	..	..	..	..	139
60	Dentition	7	..	..	..	..	..	..	..	..	..	..	..	..	7
61	Rickets	3	6	1	..	..	..	..	..	..	..	..	..	..	10
62	Old Age, Senile Decay ..	..	..	..	..	..	..	..	..	1	8	42	115	37	203
63	Convulsions	75	14	..	..	..	..	..	..	..	..	1	..	..	90
64	Meningitis	24	20	2	..	1	..	1	6	1	3	..	..	..	58
65	Encephalitis	..	1	..	..	..	..	..	..	2	1	..	..	..	4
66	Apoplexy	..	..	..	..	..	1	2	10	21	43	52	34	1	164
67	Softening of Brain ..	1	..	..	..	..	..	..	..	2	8	5	3	..	19
68	Hemiplegia	..	1	1	..	..	1	1	1	4	7	17	5	2	40
69	Genrl. Paralysis of Insane	..	..	..	..	..	..	4	18	2	7	3	1	..	35
70	Other forms of Insanity	..	..	..	..	..	..	..	..	..	..	..	..	..	..
71	Chorea	..	..	..	..	1	..	..	..	..	..	..	..	..	1
72	Cerebral Tumour ..	..	2	..	1	..	..	2	1	1	1	..	..	..	8
73	Epilepsy	1	1	..	..	3	3	6	3	3	1	4	1	..	26
74	Laryngismus Stridulus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
75	Locomotor Ataxy ..	..	..	..	..	..	..	1	3	2	2	1	..	..	9
76	Paraplegia	..	..	..	.	..	..	..	..	3	2	1	1	..	7
77	*Otherforms, Brain Diseases*	..	..	..	..	..	..	1	4	1	4	1	..	1	12
78	Otitis	1	1	..	..	1	2	1	2	..	..	..	..	..	8
79	Disease of Nose, Epistaxis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80	Diseases of Eye	1	..	..	..	..	..	..	..	..	..	..	..	..	1
81	Pericarditis	..	..	..	..	1	..	..	1	1	..	..	..	..	3
82	Endocarditis	1	..	3	2	9	5	10	12	32	30	35	9	..	148
83	Hypertrophy of Heart ..	..	..	..	..	..	..	..	1	..	3	5	1	..	10
84	Angina Pectoris	..	..	..	..	..	..	1	..	..	2	4	1	..	8
85	Aneurism	..	..	..	..	..	..	..	3	3	3	..	..	..	9
86	Senile Gangrene	..	..	..	..	..	..	..	..	..	..	6	8	1	15
87	Embolism, Thrombosis ..	..	..	..	..	1	..	..	1	1	..	1	..	..	4
88	Phlebitis	..	..	..	..	..	..	..	..	..	..	1	..	..	1
89	Varicose Veins	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	TOTALS	554	56	10	6	18	19	41	121	144	191	244	200	44	1648

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													All Ages.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
90	*Other Diseases, Heart [and Vessels*	2	1	1	2	2	1	6	15	23	39	65	30	4	191
90A	Aortic Schlerosis.. ..	..	..	..	..	..	1	..	1	1	..	1	..	..	4
91	Laryngitis	2	5	4	..	..	..	..	..	2	..	1	..	..	14
92	Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..
93	*Other Diseases, Larynx [and Trachea*	..	..	..	..	..	..	..	..	..	1	..	..	..	1
94	Acute Bronchitis ..	84	25	1	..	1	1	2	8	16	29	46	29	3	245
95	Chronic Bronchitis ..	..	..	..	..	..	..	..	1	9	40	59	32	6	147
96	Lobar Pneumonia ..	44	20	4	1	5	4	17	21	18	22	17	6	1	180
97	Lobular Pneumonia ..	65	36	5	3	1	..	..	..	5	9	5	10	..	139
98	Pneumonia	..	..	..	..	..	..	2	3	2	2	..	5	..	14
99	Emphysema, Asthma ..	..	..	..	..	..	..	2	..	..	1	4	1	1	9
100	Pleurisy	..	3	..	..	1	..	2	1	1	2	1	1	1	13
101	*Other Diseases, Respira- [tory System*	1	..	..	..	..	..	..	..	..	..	1	..	..	2
102	*Diseases of Mouth and Annexa*	1	1	..	..	..	..	..	..	..	..	..	..	..	2
103	Diseases of Pharynx ..	..	2	..	..	..	..	1	..	..	..	..	..	..	3
104	Diseases of Œsophagus	..	..	..	..	..	..	..	..	3	..	..	..	..	3
105	Ulcer of Stomach and Duodenum	2	..	..	..	1	4	2	3	2	1	2	..	..	17
106	Other Diseases of Stomach	12	3	1		..	..	1	1	1	1	1	2	..	23
107	Enteritis	28	5	..	..	..	..	..	..	..	5	..	1	..	39
108	Appendicitis	..	1	1	2	..	..	3	2	..	..	1	..	..	10
109	Obstruction of Intestine	4	..	..	..	4	1	1	2	4	5	3	5	..	29
110	Other Diseases of Intestine	..	..	..	..	..	..	1	..	..	..	..	..	..	1
111	Cirrhosis of Liver ..	..	..	..	..	..	..	1	10	12	23	5	2	..	53
112	Other Diseases of Liver	1	1	1	..	..	..	1	..	4	3	2	..	..	13
113	Peritonitis	1	..	1	..	..	1	3	1	2	1	..	..	..	10
114	*Other Diseases, Digestive System*	..	..	..	..	..	..	1	..	..	1	1	1	..	4
115	*Diseases, Lymphatic System and Glands* ..	..	2	..	..	..	..	..	1	..	..	..	..	..	3
116	Acute Nephritis	3	1	3	1	1	1	5	1	3	3	1	..	..	23
117	Bright's Disease.. ..	..	..	..	..	2	1	4	7	14	18	17	7	1	71
118	Calculus	..	..	..	..	..	1	..	1	..	..	..	..	..	2
119	Diseases of Bladder and Prostate	..	..	..	..	..	1	1	3	2	6	6	10	1	30
120	*Other Diseases, Urinary System*	..	..	..	..	..	..	..	1	1	..	..	..	..	2
121	Diseases of Testis & Penis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
122	Diseases of Ovaries ..	..	..	..	..	..	1	2	1	2	2	..	..	1	9
123	Diseases of Uterus and Appendages	..	..	..	..	..	1	3	5	3	3	1	..	..	16
124	Diseases of Vagina and External Genitals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
125	Diseases of Breast ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
126	Abortion, Miscarriage ..	..	..	..	..	..	..	3	..	..	..	..	..	..	3
127	Puerperal Mania ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
128	Puerperal Convulsions ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
129	Placenta Prævia, Flooding	..	..	..	..	..	2	2	1	..	..	..	..	..	5
	TOTALS	250	106	22	9	18	21	67	90	130	217	240	142	19	1331

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													All Ages
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
130	Puerperal Thrombosis ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
131	*Other Diseases, Pregnancy [and Childbirth*	..	..	..	..	1	1	6	2	..	..	..	..	..	10
132	Arthritis, Ostitis, Periostitis	..	..	..	1	..	..	..	..	1	..	..	..	..	2
133	*Other Diseases, Osseous [System*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
134	Ulcer, Bedsore	..	..	..	..	..	..	..	..	..	..	..	1	..	1
135	Eczema	4	..	..	..	..	..	..	..	..	..	..	..	..	4
136	Pemphigus	1	..	..	..	..	..	..	..	..	..	..	..	..	1
137	*Other Diseases, Integu- [mentary System Accidents and Negligence.*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
138	In Mines and Quarries..	..	..	..	..	..	..	..	1	1	2	..	..	..	4
139	In Vehicular Traffic ..	..	3	1	2	1	..	..	..	1	1	1	..	1	11
140	On Railways	..	..	..	..	..	1	..	2	1	..	1	..	..	5
141	On Ships, Boats, &c. (not drowning)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
142	In Building Operations	..	..	..	..	1	1	..	1	..	1	..	..	..	4
143	By Machinery	..	..	..	..	3	..	..	..	..	..	..	..	..	3
144	By Weapons & Implements	..	..	..	..	..	..	..	..	..	..	..	..	..	..
145	Burns and Scalds ..	2	3	3	3	1	..	..	2	1	..	..	1	..	16
146	Poisons, poisonous vapours	..	..	..	..	..	..	..	..	..	..	..	..	..	..
147	Surgical Narcosis ..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
148	Effects of Electric Shock	..	..	..	..	..	..	..	..	1	..	..	..	..	1
149	Corrosions by Chemicals	..	..	..	..	..	..	..	..	..	..	..	..	..	..
150	Drowning	..	4	1	..	..	..	2	2	1	..	..	..	..	10
151	Suffocation, Overld. in Bed	22	..	..	..	..	..	..	..	..	..	..	..	..	22
152	„ Otherwise ..	2	1	..	..	..	..	..	1	..	..	..	..	..	4
153	Falls not specified ..	2	..	..	..	3	..	3	1	2	1	3	4	1	20
154	Weather Agencies ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155	Otherwise, not stated ..	2	..	..	..	..	..	..	..	1	1	..	..	..	4
156	Homicide	..	..	..	..	..	..	..	1	..	..	..	..	..	1
157	*Suicides.*—By Poison ..	..	..	..	..	..	1	2	3	2	..	1	..	..	9
158	By Asphyxia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
159	By Hanging & Strangulatn	..	..	..	..	..	..	1	2	1	4	1	..	..	9
160	By Drowning	..	..	1	1	..	..	2	..	2	..	..	..	..	6
161	By Shooting	..	..	..	..	..	..	..	1	1	..	..	..	..	2
162	By Cut or Stab	..	..	..	..	..	..	1	2	..	..	..	1	..	4
163	By Precipitation from Elevated Places ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
164	By Crushing	..	..	..	..	..	..	..	..	..	..		..	..	..
165	By other and unspecified methods	..	..	..	..	..	..	..	..	1	..	..	..	..	1
166	Execution	..	..	..	..	..	..	..	..	..	..	..	..	..	..
167	Sudden Death, cause not ascertained	..	..	..	..	..	..	..	..	..	..	..	..	..	..
168	Ill defined and unspecified causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..
169	Starvation	1	..	..	..	..	..	..	..	..	..	..	..	..	1
170	Uncertified	2	..	..	..	..	..	..	..	5	3	4	6	1	21
	Totals, Page 10 ..	38	11	6	7	10	4	19	23	22	13	11	13	3	180
	Totals, Page 9 ..	250	106	22	9	18	21	67	90	130	217	240	142	19	1331
	Totals, Page 8 ..	554	56	10	6	18	19	41	121	144	191	244	200	44	1648
	Totals, Page 7 ..	259	108	41	31	31	50	93	83	72	50	22	9	2	851
	Grand Totals ..	1101	281	79	53	77	94	220	317	368	471	517	364	68	4010

Schedule B.—Nottingham. 1902. Deaths Registered from all causes

No.	Causes of Death.	All Ages.	Under 1	1—5	5—15	15 - 25	25—65	65 & upwards.	In Public Institutions
1	Small-pox	..	..	..	..	..	..	..	..
2	Measles	4	1	3	..	..	..	..	..
3	Scarlet Fever	23	1	12	7	1	2	..	9
4	Typhus Fever	..	..	..	..	..	..	..	..
5	Epidemic Influenza	27	1	1	..	2	17	6	1
6	Whooping-cough	37	22	12	3	..	..	..	..
7	Diphtheria, Membranous Croup	31	6	17	7	1	..	..	6
8	Croup	..	..	..	..	..	..	..	..
9	Enteric Fever	50	..	2	10	8	29	1	19
10	Asiatic Cholera	..	..	..	..	..	..	..	..
11	Diarrhœa, Dysentery	139	113	15	..	..	5	6	5
12	Epidemic or Zymotic Enteritis	55	45	7	..	..	1	2	2
13	Enteritis	39	28	5	..	..	5	1	2
14	*Other continued Fevers*	..	..	..	..	..	..	..	..
15	Erysipelas	12	6	1	..	1	2	2	..
16	Puerperal Septicæmia	8	..	..	..	2	6	..	2
17	*Other septic diseases*	..	..	..	..	..	..	..	..
18	Intermittent Fever and Malarial Cachexia	..	..	..	..	..	..	..	..
19	Tuberculosis of Meninges ..	..	..	..	..	..	..	..	..
20	Tuberculosis of Lungs	..	..	..	..	..	..	..	..
21	Other forms of Tuberculosis ..	16	1	3	3	2	7	..	3
22	Alcoholism	34	..	..	..	..	34	..	5
23	Cancer	223	..	1	2	4	140	76	33
24	Premature Birth	161	161	..	..	..	..	..	2
25	Developmental Diseases	198	197	..	1	..	..	..	3
26	Old Age	203	..	..	..	..	9	194	50
27	Meningitis	58	24	20	2	1	11	..	8
28	Inflammation and Softening of Brain	227	1	2	1	2	102	119	46
29	Organic Diseases of Heart ..	169	1	..	5	15	93	55	40
30	Acute Bronchitis	245	84	25	1	2	55	78	11
31	Chronic Bronchitis	147	..	..	..	..	50	97	30
32	Lobar (Croupous) Pneumonia ..	194	44	20	5	9	87	29	20
33	Lobular (Broncho)Pneumonia ..	139	65	36	8	1	14	15	15
34	Diseases of Stomach	40	14	3	1	5	12	5	4
35	Obstruction of Intestines ..	29	4	..	..	5	12	8	6
36	Cirrhosis of Liver	53	..	..	..	..	46	7	10
37	Nephritis and Bright's Disease ..	94	3	1	4	5	55	26	22
38	Tumours and other Affections of Female Genital Organs ..	25	..	..	..	2	21	2	10
39	Accidents and Diseases of Parturition	20	..	..	..	4	16	..	4
40	Deaths by Accident or Negligence	106	30	11	10	11	32	12	34
41	Deaths by Suicide	32	..	..	2	1	26	3	3
42	Deaths from Ill-defined Causes ..	..	..	..	..	..	..	..	..
43	All other Causes	1172	249	84	60	87	487	205	261
	ALL CAUSES	4010	1101	281	132	171	1376	949	666

TABLE IV.

Nottingham, 1902. Deaths and Death-Rates from certain groups of Diseases.

A. All Ages.	Deaths.	Deaths per 1000 of the *population.*	Deaths per 1000 *total Deaths.*
1. Principal Epidemic Diseases ...	323	1·33	78
2. Pulmonary Diseases	749	3·08	182
3. Tuberculous Diseases	410	1·69	99
B. Infants under 1 year of Age.	Deaths.	Deaths per 1000 *Births.*	Deaths per 1000 *Deaths under 1 year.*
4. Wasting Diseases ...	395*	57·5	358
5. Convulsive Diseases	106	15·4	96

NOTES.

1. Includes Small Pox, Measles, Scarlet Fever, Diphtheria, Whooping-Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhœa.
2. Includes all Respiratory Diseases except Phthisis (Consumption).
3. Includes Phthisis, Scrofula, Tuberculosis, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Wasting, Debility, Inanition, Premature Birth, and Improper Feeding.
5. Includes Infantile Meningitis, Convulsions, and Dentition.

* The increase in this total, as compared with the figures of previous years, is due in great measure to changes in classification.

TABLE V.

Nottingham. Deaths from the Principal Zymotic Diseases in the ten years 1892-1901, and in the Year 1902.

Disease.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	Ten Years, 1892-1901. Annual Average.	Ten Years, 1892-1901. Proportion of Deaths to 1000 Deaths.	1902. Deaths.	1902. Proportion of Deaths to 1000 Deaths.
Small-pox	..	4	4	..	..	..	..	..	..	..	0·8	0·19	..	..
Measles	118	25	134	1	203	49	104	140	45	96	82·3	19·6	4	0·97
Scarlet Fever	43	83	49	50	27	34	33	53	55	11	45·0	10·7	23	5·59
Diphtheria	30	15	22	11	12	21	23	30	28	29	22·3	5·3	31	7·53
Whooping-Cough	117	59	119	33	91	117	59	55	103	96	79·0	18·9	37	8·99
Fevers. Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fevers. Enteric	36	68	61	55	75	45	54	114	75	79	63·3	15·0	50	12·14
Fevers. Simple Continued ..	..	1	..	..	..	1	1	4	1	1	0·8	0·19	..	..
Diarrhœa	158	361	152	444	177	530	385	600	387	361	338·8	81·0	194	47·11
Total	503	616	541	594	585	797	659	996	694	673	632	151·0	339	82·32
Total, London	11,983	13,223	11,549	11,544	14,100	11,525	12,565	11,228	10,136	10,203	11,805	139·5	10,393	125·91
Total, England & Wales	56,032	73,499	52,771	64,901	66,936	67,051	69,714	69,820	64,059	66,531	65,131	117·6	53,795	100·16

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Zymotic Diseases and Phthisis.

(Registrar-General.)

I. NOTTINGHAM.

In five yearly periods, 1856—1890, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate.	DEATH-RATE FROM								
				7 Princp. Zymotic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	"Fever."	Diarrhœa.	Phthisis and other Tuberculous Diseases.
1856—1860	35·8	27·2	209	5·98	0·21	0·80	1·08	0·13	0 76	1·02	2·00	3·22
1861—1865	34·8	24·9	192	3·83	0·09	0·43	0·98	0·12	0·51	0·78	1·09	3·19
1866—1870	31·3	23·8	200	4·34	0·07	0·44	0·73	0·09	0·51	0·92	1·57	2·78
1871—1875	34·1	24·9	192	4·30	0·79	0·31	0·53	0·02	0·26	0·84	1·53	2·42
1876—1880	34·6	21·7	175	3·00	0·00	0·35	0·62	0·03	0·43	0·34	1·06	1·85
1881—1885	36·6	20·9	174	3·22	0·06	0·41	0·77	0·12	0·46	0·31	1·09	1·99
1886—1890	30·4	17·9	168	2·39	0·01	0·42	0·11	0·06	0·45	0·31	1·04	1·52
1891	29·8	19·5	169	2·49	0·00	0·51	0·13	0·09	0·56	0·32	0·84	1·69
1892	29·4	18·4	167	2·33	0·00	0·55	0·19	0·13	0·54	0·16	0·73	1·42
1893	30·2	18·4	172	2·62	0·02	0·11	0·37	0·07	0·27	0·31	1·47	1·81
1894	28·6	16·7	174	2·42	0·01	0·60	0·23	0·08	0·53	0·28	0·60	1·80
1895	29·7	18·5	189	2·64	..	0·00	0·23	0·04	0·14	0·24	1·97	2·10
1896	29·4	17·5	168	2·47	..	0·88	0·11	0·06	0·39	0·34	0·69	1·89
1897	28·9	18·4	202	2·81	..	0·21	0·15	0·09	0·49	0·21	1·66	1·88
1898	28·8	17·2	178	2·37	..	0·44	0·14	0·10	0·25	0·24	1·20	1·82
1899	28·9	20·0	210	3·33	..	0·58	0·23	0·13	0·23	0·48	1·68	1·67
1900	28·3	19·2	196	2·35	..	0·19	0·23	0·12	0·43	0·32	1·08	2·02
1901	28·4	18·5	193	2·86	..	0·41	0·05	0·12	0·42	0·35	1·51	1·80
1902	27·8	16·7	159	1·32	..	0·02	0·10	0·12	0·15	0·21	0·72	1·69

II. ENGLAND AND WALES.

In five yearly periods, 1858—1890, and in single subsequent years.

1858—1860	34·3	22·2	153	4·03	0·22	0·48	0·89	0·37	0·49	0·79	0·78	2·57
1861—1865	35·1	22·6	151	4·22	0·22	0·46	0·98	0·25	0·52	0·92	0·87	2·53
1866—1870	35·3	22·4	159	4·08	0·10	0·43	0·96	0·13	0·55	0·85	1·06	2·45
1871—1875	35·5	22·0	153	3·76	0·41	0·37	0·76	0·12	0·50	0·60	1·00	2·22
1876—1880	35·4	20·8	144	2·94	0·01	0·39	0·68	0·12	0·53	0·38	0·83	2·04
1881—1885	33·4	19·3	139	2·32	0·01	0·41	0·43	0·16	0·46	0·27	0·65	1·82
1886—1890	31·4	18·9	145	2·25	0·01	0·46	0·24	0·17	0·44	0·20	0·66	1·63
1891	31·4	20·2	149	2·70	0·00	0·43	0·17	0·17	0·46	0·16	0·46	1·60
1892	30·5	18·9	148	2·78	0·01	0·46	0·19	0·22	0·45	0·14	0·50	1·47
1893	30·8	19·2	159	3·16	0·05	0·37	0·23	0·31	0·34	0·23	0·95	1·47
1894	29·6	16·6	137	2·25	0·02	0·39	0·16	0·29	0·41	0·16	0·36	1·38
1895	30·3	18·7	161	2·14	0·00	0·38	0·15	0·26	0·32	0·18	0·87	1·40
1896	29·7	17·1	148	2·18	0·02	0·56	0·18	0·29	0·41	0·17	0·55	1·31
1897	29·7	17·4	156	2·15	0·00	0·40	0·14	0·24	0·35	0·16	0·86	1·34
1898	29·4	17·6	161	2·22	0·01	0·41	0·11	0·24	0·31	0·18	0·96	1·32
1899	29·3	18·3	163	2·21	0·01	0·31	0·12	0·29	0·30	0·20	0·98	1·34
1900	28·9	18·3	154	2·00	0·00	0·39	0·12	0·29	0·34	0·17	0·69	1·33
1901	28·5	16·9	151	2·05	0·01	0·27	0·13	0·27	0·30	0·16	0·91	1·30
1902	28·6	16·3	133	1·64	0·08	0·38	0·15	0·23	0·29	0·13	0·38	..

Principal Vital Statistics of the 76 Greater English Towns for 1902 (taken from the Registrar-General's Quarterly Reports and Annual Summary).

Populations estimated to middle of 1902 (from increase during Decennium, 1891-1901).

	Populations estimated to middle of 1902	Birth-Rate.	Recorded Death-Rate.	Corrected Death Rate.	Death-Rates at Age Periods.			Death-Rate from seven principal epidemic diseases.	Percentage of uncertified Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
England & Wales	32,995,614	28·6	16·28	16·28	133	8·3	67·4	1·64	1·8
76 Large Towns ..	14,862,878	30·0	17·41	18·50	145	9·5	71·0	2·12	1·2
London	4,579,110	28·5	17·73	18·64	141	9·8	72.3	2·23	0·3
Croydon	137,917	26·1	13·96	14·32	132	6·0	67·7	1·31	—
Willesden ..	121,611	31·7	13·07	14·02	135	5·9	68·3	2·14	1·8
Hornsey	75,565	20·8	8·58	9·80	84	4·0	51·0	0·63	—
Tottenham ..	106,535	31·6	14·53	15·68	123	7·8	68·0	2·29	0·1
West Ham ..	275,408	34·1	17·08	18·26	149	9·2	73·2	3·20	0·6
East Ham ..	104,023	36·4	11·93	12·73	119	5·7	59·4	2·14	0·8
Leyton	103,479	30·5	11·93	12·28	110	5·9	50·6	1·82	0·8
Walthamstow ..	101,318	33·9	11·54	12·22	115	5·4	61·9	1·20	0·4
Hastings	65,893	18·2	14·45	13·91	112	7·0	62·2	0·82	1·1
Brighton	124,539	24·3	15·81	15·59	125	8·0	62·6	1·26	0·2
Portsmouth ..	191,909	27 1	16·76	17·19	152	8·7	64·6	2·32	1·1
Bournemouth ..	61,628	17·1	12·36	13·05	115	6·6	49·0	0·78	0·4
Southampton ..	107,756	28·8	15·22	15·15	123	7·7	62·4	1·54	—
Reading	73,802	25·8	13·65	14·15	122	6·6	64·8	1·35	2·1
Northampton ..	88,592	25·3	15·23	15·80	138	7·9	66·3	1·58	1·5
Ipswich	67,810	27·7	14·34	14·01	118	6·7	62·3	1·06	1·2
Great Yarmouth..	51,610	27·4	16·89	15·50	143	7·0	67·7	1·71	—
Norwich	113,178	27 9	16·68	15·95	167	7·2	65·6	1·83	0.6
Plymouth.. ..	110,057	27·0	17·00	16·57	155	8·0	65·6	1·78	0·4
Devonport ..	72,307	29.1	15·21	15·96	121	7·9	66·1	1·31	—
Bristol	334,632	27·5	17·36	17·83	131	9·8	67·6	2·82	0·3
Hanley	62,486	35·3	20·01	21·83	174	10·5	82·5	3·84	1·8
Burton-on-Trent..	50,973	26 9	13·72	14·76	114	7·2	68·3	1·12	1·3
Wolverhampton ..	95,712	31·6	16·36	16·94	134	8·2	71·4	1·73	0·4
Walsall	88,338	34·7	15·87	16·82	141	8·3	59·9	2·07	0·9
Handsworth ..	55,491	25·6	10·89	11·98	109	4·9	58·6	0·85	0·3
West Bromwich ..	65,938	34·9	19·17	19·35	162	10·0	69·3	2·80	1·2
Birmingham ..	528,181	31·8	18·62	20·04	157	10·3	73·7	2·53	2·9
Kings Norton ..	60,779	30·1	11·62	12·16	111	5·4	54·7	1·13	1·5
Smethwick ..	56,893	34·1	14·42	15·77	129	7·2	74·5	1·36	3·5
Aston Manor ..	78,481	29·3	13·51	14·99	132	6·8	65·8	2·00	2·8
Coventry	71,475	28·5	14·00	14·02	105	7·2	63·0	1·25	1·9
Leicester	216,389	29·1	14·89	15·90	153	7·2	63·0	1·54	1·5
Grimsby	64,596	30·1	14·71	15·75	145	7·5	61·4	2·03	0·7

Principal Vital Statistics of the 76 Greater English Towns for 1902—*continued.*

	Populations estimated to middle of 1902.	Birth-Rate.	Recorded Death-Rate.	Corrected Death Rate.	Death-Rates at Age Periods.			Death-Rate from seven principal epidemic diseases.	Percentage of uncertified Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
Nottingham ..	**243,191**	27·8	16·67	17·57	159	8·0	72·3	1·32	0·6
Derby	116,982	28·0	13·93	15·02	125	6·9	65·5	1·28	—
Stockport ..	94,422	27·5	18·99	20·50	179	10·2	73·4	1·84	0·4
Birkenhead ..	112,396	32·7	17·72	18·91	148	9·4	70·0	2·27	0·3
Wallasey	56,173	28·1	13·85	15·17	107	7·6	66·8	1·23	1·4
Liverpool	692,495	34·2	22·47	24·04	163	13·4	80·3	3·08	3·7
Bootle	59,776	32·8	19·72	21·79	160	11·6	74·1	3·15	3·2
St. Helens ..	85,986	37·5	20·03	21·71	167	11·1	81·3	2·72	5·5
Wigan	61,573	37·9	20·64	22·79	157	12·3	70·8	3·02	1·6
Warrington ..	65,419	35·7	16·41	17·71	146	8·8	65·3	1·31	5·8
Bolton	171,082	27·2	16·92	19·15	134	10·1	75·8	2·04	0.2
Bury	58,182	20·8	16·39	18·37	130	9·2	80·3	1·44	1·9
Manchester ..	549,170	32·8	19·96	22·30	152	11·8	80·3	1·99	0·8
Salford	224,007	33·8	19·29	21·33	157	11·1	72·7	2·67	0·4
Oldham	138,091	26·1	19·07	21·46	148	11·4	79·3	2·00	0·3
Rochdale	84,057	24·0	18·27	20·21	130	10·7	84·2	1·27	2·7
Burnley	98,383	29·1	19·45	21·96	177	11·1	77·5	3·61	1·4
Blackburn ..	130,318	25·6	16·93	19·15	159	9·2	76·5	1·79	3·8
Preston	113,766	28·9	19·07	20·88	189	9·7	78·7	2·79	4·0
Barrow-in-Furness	58,372	33·1	15·61	17·75	136	8·8	62·8	2·67	3·7
Huddersfield ..	95,000	24·4	17·77	19·09	138	9·6	79·4	1·57	1·5
Halifax	105,932	21·3	15·70	17·04	144	8·1	73·6	1·07	2·6
Bradford	281,771	23·0	15·82	17·49	139	8·8	69·0	1·43	0·7
Leeds	437,037	29·8	17·55	19·16	159	9·5	71·8	1·99	0·4
Sheffield	418,177	33·4	17·07	18·40	150	8·9	73·1	1·69	2·6
Rotherham ..	55,934	35·3	15·64	16·21	139	8·0	64·8	1·75	3·6
York	79,114	28·9	15·54	16·00	116	7·9	71·3	1·35	0·4
Hull	245,449	32·1	17·18	17·60	137	9·6	64·3	2·27	1·8
Middlesbrough ..	93,355	36·0	20·18	21·99	179	11·4	66·4	2·66	3·1
Stockton-on-Tees	51,745	33·1	17·02	17·84	141	9·2	67·7	2·38	2·9
West Hartlepool..	65,161	36·1	15·14	16·62	120	8·4	68·9	1·61	0·6
Sunderland ..	148,007	35·9	19·46	20·07	152	10·6	73·2	1·87	4·0
South Shields ..	103,330	36·5	19·47	20·62	147	11·2	76·3	2·67	5·3
Gateshead ..	113,013	36·7	17·70	18·66	136	9·6	76·3	2·00	4·4
Newcastle-on-Tyne	219,150	32·6	19·88	21·45	139	12·1	76·8	1·75	0·8
Tynemouth ..	52,009	33·7	19·47	18·21	149	10·4	75·5	1·87	1·7
Newport (Mon.)..	68,901	32·8	15·75	17·04	126	9·0	62·8	1·56	0·3
Cardiff	168,909	31·5	16·80	18·28	146	9·8	63·4	2·69	0·1
Rhondda	117,011	41·5	18·69	20·56	178	9·3	72·4	3·02	0·6
Merthyr Tydfil ..	70,568	39·4	23·13	24·50	185	12·7	77·8	2·79	0·4
Swansea	95,059	31·1	16·10	17·28	135	8·6	64·6	1·40	1·2

The City of Nottingham.

SITE AND POPULATION DATA, & RATEABLE VALUE.

Situation and Soil.—Nottingham lies in lat. 52 deg. 57 min. north, and long. 1 deg. 9 min. west, in the S.W. portion of the county of Notts., and in the watershed of the Trent. It stretches about 7½ miles north from the Trent, and has an average breadth of nearly four miles. It stands for the most part on Bunter sandstone; but on the east the Keuper marls appear; on the north and west, red marl and magnesian limestone of the Permian series; and on the south towards the Trent, and in the valley of the Leen and other small streams, are found the alluvium and gravels of the Trent and its local tributaries.

Area and Altitude.—The city has an area of 10,935 acres, and its altitude varies from about 80 feet (at Trent Bridge) to 425 feet (on Woodborough Road) above ordnance datum (mean water level at Liverpool).

Population: At census of 1881, 186,575; at census of 1891, 213,877; at census of 1901, 239,753.

Average number of persons to each house:—At census of 1881, 4·8; at census of 1891, 4·6; at census of 1901, 4·5.

Average number of persons to an acre, 22.

Rateable Value, £1,110,599 (for Poor Law purposes).

GENERAL VITAL STATISTICS.

Population.—The estimated population of the City of Nottingham at the middle of 1902 amounted to 243,191. This estimate is based as usual upon the assumption that the population has continued to increase since the last census (1901) at the same proportional rate as during the immediately preceding intercensal period.

Some details of the Census Returns issued in the latter part of 1902 are of so much interest and importance from a sanitary and statistical standpoint as to justify their reproduction in this Report. I have therefore extracted them at some length.

Most of the figures speak sufficiently for themselves, but as I have given only one table of separate tenements in the City and County, affording information of the condition of these tenements at one particular period, I append the following paragraph comparing the figures I have furnished (for 1901) with those of 1891. It will be seen that a very well marked local improvement in one direction at least is taking place in the housing of the working classes. This is particularly useful and apposite just now, by way of corrective and antithesis to the undue pessimism which has lately become the fashion in some quarters.

"The total number of separate Tenements in the Administrative County, together with the City and County Borough of Nottingham, which had been 96,450 in 1891, rose to 113,144 in 1901, the increase being equal to 17·3 per cent. Of this total, the Tenements containing five or more rooms increased from 62,642 to 77,122, equal to 23·1 per cent.; while those with fewer than five rooms increased from 33,808 to 36,022, or 6·5 per cent. Stated in another way, the Tenements with five or more rooms were equal to 64·9 per cent. of the Total Tenements in 1891, and increased to 68·2 per cent. at the recent Census, while the percentage of the Tenements with fewer than five rooms declined from 35·1 to 31·8."

1901.

ADMINISTRATIVE COUNTY and the CITY and COUNTY BOROUGH of NOTTINGHAM.

Area; Houses 1901, and Population 1891 and 1901.

Administrative County and County Borough.	Area in Statute Acres.	Houses, 1901.				Population.			
		Inhabited.	Uninhabited.		Building.	1891.	1901.		
			In Occupation.	Not in Occupation.		Persons.	Persons.	Males.	Females.
Administrative County	529,188	59,114	1,390	2,213	744	231,745	274,716	136,403	138,313
County Borough: Nottingham, City of	10,935	52,504	1,817	1,146	323	213,877	239,743	111,695	128,048
Administrative County, together with County Borough	540,123	111,618	3,207	3,359	1,067	445,622	514,459	248,098	266,361

1901.

Registration Districts and Sub-Districts and Civil Parishes.	Area in Statute Acres.		Houses.					Families or Separate Occupiers.	Population.					
	Land and Inland Water.	Inland Water only.	Inhabited.	Inhabited.	Uninhabited.		Building, 1901.		Persons.		Males.		Females.	
					In Occupation.	Not in Occupation.								
			1891.	1901.				1901.	1891.	1901.	1891.	1901.	1891.	1901.
431. Nottingham	10,935	133	45,974	52,504	1,817	1,146	323	53,389	213,877	239,743	98,730	111,695	115,147	128,048
1. Nottingham, South-west	2,870	46	6,842	8,479	675	223	48	8,617	32,072	39,502	14,418	18,132	17,654	21,370
2. Nottingham, South-east	867	53	6,714	7,706	264	191	70	7,909	29,974	33,693	14,368	16,299	15,606	17,394
3. Nottingham, North-east	1,378	—	13,787	14,622	404	286	47	14,927	63,870	66,282	29,499	30,719	34,371	35,563
4. Nottingham, North-west	1,284	8	11,622	13,053	327	227	69	13,265	53,699	58,380	24,168	26,551	29,531	31,829
5. Bulwell	4,541	31	7,009	8,644	147	219	89	8,671	34,262	41,886	16,277	19,994	17,985	21,892

1901.

TOTAL TENEMENTS, and TENEMENTS of less than FIVE ROOMS, distinguishing those Occupied by Various Numbers of Persons, in the City and County Borough of Nottingham.

Urban District.	Rooms in Tenement	Tenements of less than Five Rooms.	Persons per Tenement.											
			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12 or more.
Nottingham, City of (C.B.)	1	481	242	140	46	26	9	11	7	—	—	—	—	—
Total Tenements—53,389.	2	1,795	451	638	349	199	89	53	13	2	1	—	—	—
Tenements of less	3	6,826	466	1,592	1,487	1,196	890	553	349	173	75	31	12	2
than Five Rooms—18,034.	4	8,932	308	1,658	1,966	1,823	1,255	834	535	292	146	79	24	12

CONDITION as to MARRIAGE, and AGES of PERSONS, MALES and FEMALES, in the CITY and COUNTY BOROUGH of NOTTINGHAM, 1901.

	All Ages.	Under 15 Years.	15-	16-	17-	18-	19-	20-	21-	25-	35-	45-	55-	65-	75-	85 and upwards.
NOTTINGHAM, CITY OF																
Unmarried ..	P. 138,212	73,628	5,166	5,188	5,196	5,037	4,919	4,460	13,314	12,047	4,811	2,305	1,269	650	200	22
	M. 64,246	36,391	2,444	2,433	2,367	2,213	2,227	2,021	5,923	4,936	1,714	876	427	208	61	5
	F. 73,966	37,237	2,722	2,755	2,829	2,824	2,692	2,439	7,391	7,111	3,097	1,429	842	442	139	17
Married ..	P. 87,918	..	..	..	11	75	215	493	5,902	25,822	24,614	17,232	9,162	3,612	738	42
	M. 43,345	..	..	..	2	14	46	136	2,369	12,192	12,135	8,938	4,898	2,104	481	30
	F. 44,573	..	..	..	9	61	169	357	3,533	13,630	12,479	8,294	4,264	1,508	257	12
Widowed ..	P. 13,613	..	..	..	..	..	2	4	52	571	1,661	2,765	3,427	3,408	1,531	192
	M. 4,104	..	..	..	..	..	2	—	18	186	488	791	980	1,056	526	57
	F. 9,509	..	..	..	..	..	—	4	34	385	1,173	1,974	2,447	2,352	1,005	135

1901.

The following figures give a summary view of the Occupational statistics for the Administrative County, together with the City and County Borough of Nottingham, showing the proportions of Males and Females over ten Years of age engaged in each Order, and also the proportions Unoccupied:—

	Males.	Females.
Total Population	248,098	266,361
Population under 10 Years of age	57,839	58,547
Population 10 Years of age and upwards	190,259	207,814

		Proportion per 10,000 of each sex 10 Years of age and upwards.	
		Males.	Females.
I.	General or Local Government of the Country	92	12
II.	Defence of the Country	13	—
III.	Professional Occupations and their Subordinate Services	209	200
IV.	Domestic Offices or Services	170	933
V.	Commercial Occupations	352	39
VI.	Conveyance of Men, Goods, and Messages	913	37
VII.	Agriculture	860	23
VIII.	Fishing	1	—
IX.	In and About, and Dealing in the Products of, Mines and Quarries	1,439	2
X.	Metals, Machines, Implements, and Conveyances	749	23
XI.	Precious Metals, Jewels, Watches, Instruments, and Games	65	6
XII.	Building and Works of Construction	753	—
XIII.	Wood, Furniture, Fittings, and Decorations	226	23
XIV.	Brick, Cement, Pottery, and Glass	84	4
XV.	Chemicals, Oil, Grease, Soap, Resin, etc.	61	12
XVI.	Skins, Leather, Hair, and Feathers	64	15
XVII.	Paper, Prints, Books, and Stationery	163	61
XVIII.	Textile Fabrics	841	1,286
XIX.	Dress	258	524
XX.	Food, Tobacco, Drink, and Lodging	675	278
XXI.	Gas, Water, and Electricity Supply, and Sanitary Service	61	—
XXII.	Other, General, and Undefined Workers and Dealers	454	45
XXIII.	Without Specified Occupations or Unoccupied	1,497	6,477

Marriages.—All the marriages which have taken place in Nottingham during the past three years have been registered as belonging to the new Parish of Nottingham. The municipal area, it will be remembered, was unified for all purposes of local government in the Spring of 1899.

The following table gives the numbers of marriages during each quarter of the year in churches, in chapels, and before Registrars respectively :—

Marriages in Year 1902.

	Qr. I.	Qr. II.	Qr. III.	Qr. IV.	Total.
Churches	292	325	386	393	1396
Chapels	16	28	31	20	95
Registrars	164	181	174	246	765
	472	534	591	659	2256

There was an increase of one in the total as compared with the record of 1901, which of course, with an increasing population, means a considerable decline in the marriage rate. This fact, taken in conjunction with the further decline in the birth rate, is certainly not suggestive of growing prosperity.

There was a slight fall in the number of church marriages as compared with the preceding year, a considerable rise in those taking place in chapels (22 per cent.), and a slight rise in those before Registrars.

Births.—There was again (as during 1901) a slight discrepancy between my returns of births and those furnished by the Registrar-General. My figure is 6,874, and that of the Registrar-General 6,867. The difference is insignificant, and as my total is made up of many details which cannot be revised or checked, and all of which are necessary for my purpose, I am constrained as usual to adhere to my own figure at this part of my report. I shall, however, give that of the Registrar-General when making comparison between

Nottingham and other places for which the latter authority furnishes the only available information.

The total shows a slight excess above that for 1901 (6,874 against 6,801), but the increase is entirely due to the fact that the registration year of 1902 contained 53 weeks, as compared with 52 in 1901. When duly corrected for this discrepancy the total falls to 6,743—a very low figure indeed, and only 78 above the mean annual births for the preceding ten years. This number corresponds to an annual rate per 1,000 living of only 27·8, which is by far the lowest reliable rate yet recorded in Nottingham. Less than twenty years ago—in 1884—there were as many as 8,329 births registered during one year, and that, too, with a population greatly below the present figure.

The decline of the country's birth-rate is a matter of national importance of the first degree, and the influence for harm of this decline and its causes, directly and indirectly, physically and morally, upon the nation as a whole is greater and more far reaching than most people are apt to imagine. The race has not lost any part of its natural fertility, as may be seen by the continued high birth-rate of certain sections of the community at the present time, and only the smallest fractional part of the decline is due to such causes as advance in the average age of marriage. The general diminution in the number of births has undoubtedly been brought about by the modern revolt against the old time idea of the prime function of marriage.

The birth-rate of the 76 greater towns of England and Wales during the year was equal to 30·0 per 1,000, and that of London to 28·5. The rate for England and Wales, as a whole, was equal to 28·6 per 1000.

Of the children born in Nottingham during 1902, 3,429 were males and 3,445 females: 192 of the males and 207 of the females were illegitimate. The illegitimate births amounted to 5·80 per cent. of all, a proportion

0·14 per cent. in advance of that for 1901 in Nottingham, and about 1·6 per cent. above that of the country as a whole.

Deaths.—I have once more endeavoured, in compiling my death figures, to include only the deaths of persons whose normal place of residence was within the city. I have already in previous reports explained the difficulty attendant upon the correction for non-residents. I have pointed out that, in endeavouring to make the correction, one must almost necessarily confine oneself to a consideration of deaths in public institutions, and that while it is sufficiently easy to eliminate the deaths of non-residents in public institutions within the city, it is by no means equally easy to ascertain how many Nottingham people have died in such establishments outside. Still, as I have already stated, in the somewhat peculiar circumstances of the City of Nottingham, situated as it is in a wide rural district and containing an exceptionally large number of public institutions many of which exist as much for the benefit of the county as the city, some correction is quite necessary for even approximate accuracy, and the unavoidable errors resulting from the correction are certainly less than would be involved by its omission.

The total number of deaths among persons who could legitimately be reckoned as Nottingham residents amounted to 4,010 during 1902. This total corresponds to a death-rate of 16·5 per 1,000 living, as compared with 16·7 according to the returns of the Registrar-General.

In the Annual Summary of the Registrar-General, dealing with the vital statistics of London and the other large towns, a factor is furnished for each town, by the application of which to its recorded death-rate a figure is found representing what its rate of mortality would have been had the age and sex constitution of its population been identical with that of England and Wales as a whole.

The recorded death-rate of Nottingham for 1892 (16·67) multiplied by this factor (1·054) rises to 17·57.

The deaths of males numbered 2,061, and those of females 1,949. The death-rate among males was equal to 18·2 per 1,000 living, and that among females to 15·0. The corresponding rates for England and Wales are approximately 17·3 and 15·4.

On the list of the 76 great towns containing more than 50,000 inhabitants at the census of 1901, and for which the Registrar-General now furnishes periodical statistics, Nottingham occupies the 39th place from the lowest by its corrected, and 38th by its recorded death-rate. That is, it holds practically the middle place. Six of these towns at one end of the list have corrected rates under 13 (between 9·8 and 12·7) per 1,000, viz: Hornsey, Handsworth, Kings Norton, Walthamstow, Leyton, and East Ham; and four others at the opposite end have corrected rates above 22 (between 22·3 and 24·5) per 1,000, viz: Manchester, Wigan, Liverpool, and Merthyr Tydfil.

If the actual annual death-rate of England and Wales for 1902 be represented by a standard 1,000, the corrected rates of the first six towns above mentioned would range from 602 to 782 in proportion to this standard, the Nottingham rate would stand at 1,079, and the rates of the last four towns on the list would range from 1,370 to 1,505, while the collective rate of the 76 towns taken together would be represented by 1,136, and the rate of England and Wales less the 76 towns by 909.

The deaths of children in Nottingham under 1 year of age, per 1000 born during the year, numbered 159. This rate is the lowest recorded since 1888, and compares very favourably with the rate for 1901 (196), and the mean rate for the past ten years (185). The actual number of deaths under 1 year was 1101, as compared with 1330 during 1901, and of those under 5, 1382, against 1774 the year before. The diminution of infant

mortality was principally apparent under the headings of diarrhœal diseases and other like affections of the intestines, but it was also well marked under those of measles and whooping-cough. The lessened fatality from diarrhœal diseases is explained by the cool and relatively wet spring, summer, and autumn, and that from measles and whooping-cough by the fact that 1902 was a non-epidemic year for these diseases.

The infant mortality in London during the year was equal to a rate of 141 per 1000, and that in the 76 great towns as a whole to one of 145. The lowest rate among these towns was 84, in Hornsey, and the highest 189, in Preston.

The deaths of illegitimate children under 5 years of age in Nottingham during 1902, numbered 89, and were again, as during 1901, almost exactly twice as numerous proportionately as the legitimate.

The death-rate per 1000 living among persons aged between 1 and 60 years, during 1902, was equal to 8·0 in Nottingham, 9·8 in London, 9·5 in the 76 towns, and 8·3 in England and Wales. The rate among persons over 60 years was equal to 72·3 per 1000 in Nottingham and in London, 71·0 in the 76 towns, and 67·4 in England and Wales.

Registration Sub-Districts.—The position and areas of the registration sub-districts of the City are once clearly defined upon the map (p. 56), shewing the distribution of enteric fever cases.

The areas have undergone no alteration during the past year; all local statistics therefore may be compared upon even terms with those of 1901.

I may once more call attention to the fact that, as far as practicable, all deaths and notifications of infectious sickness are now distributed, in this section and the accompanying table, to the districts to which they properly belong, instead of being entered, as formerly,

direct from the sickness and death returns without such correction. The effect of this arrangement is to shew the incidence of infectious sickness and mortality as it would appear in the absence of hospitals and other public institutions.

I have not attempted to form an estimate of the increase which has taken place in each of the sub-district populations since 1901, as, owing to the alterations that have recently been made in the areas of these sub-districts, it would be a very difficult matter to obtain a reliable basis for the formation of such an estimate.

All the rates given in this section are calculated upon the census population of 1901, and therefore, though not entirely up-to-date, their approximate accuracy is guaranteed.

The birth-rates of Bulwell and S.E. stand out in prominent contrast to those of the other sub-districts, being still comparatively high, at 33·0 and 31·9 per 1000 living respectively.

In N.W. the rate was only 26·2, and in N.E. and S.W. practically equal, at 27·3 and 27·2 per 1000 respectively.

Births in Registration Sub-Districts. 1902.

District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell ..	656	631	47	46	707	677	1384
N.W... ..	719	734	40	38	759	772	1531
N.E.	839	863	58	60	897	913	1810
S.W.	503	525	15	31	518	556	1074
S.E.	516	495	32	32	548	527	1075
Totals ..	3233	3248	192	207	3429	3445	6874

NOTTINGHAM SUB-DISTRICTS.

Summary of Statistics for 1902.

The Deaths and the Notifications are distributed to the Districts to which they properly belong.

	Population.			Births.	Birth Rate.	Deaths.			Death Rates.				DEATHS FROM									Notified Cases of			
	Census.		Approximate Enumeration.			Total.	Under 1 year.	From 7 prin. Epidemic Diseases.	Total per 1000 of population.	Under 1 year per 1000 Births.	From 7 prin. Epidemic Diseases.	From Phthisis.	Small Pox.	Measles.	Scarlet Fever	Diphtheria.	Whooping Cough.	"Fever."	Diarrhœa.	Influenza.	Cancer.	Phthisis.	Small Pox.	Scarlet Fever	Diphtheria.	Enteric Fever.
	1881.	1891.	1901.																						
Bulwell	26,712	34,262	41,888	1384	33·0	675	216	50	16·1	156	1·19	0·95	..	2	8	6	6	6	21	6	26	40	..	294	43	76
N.W.	39,574	53,699	58,388	1531	26·2	939	223	87	16·1	146	1·49	1·32	..	..	5	10	7	15	50	5	52	77	..	177	81	105
N.E.	53,911	63,870	66,274	1810	27·3	1161	306	100	17·5	169	1·51	1·19	..	1	7	8	8	17	59	5	76	79	..	295	51	82
S.W.	26,080	32,072	39,510	1074	27·2	614	177	60	15·5	164	1·52	1·17	..	1	2	5	9	9	34	7	36	37		122	24	77
S.E.	40,295	29,974	33,692	1075	31·9	621	179	43	18·4	166	1·28	1·57	..	..	1	2	7	3	30	4	33	53	..	78	10	35
The whole City	186,572	213,877	239,752	6874	28·7	4010	1101	340	16·7	160	1·42	1·19	..	4	23	31	37	50	194	27	223	286	..	966	209	375

There is once more a very slight discrepancy between the number of births given upon the returns furnished to me by the local registrars and that contained in the Registrar-General's Annual Summary. The local returns gives a total of 6874, and the annual summary one of 6867.

The general death-rates were remarkably low in all the sub-districts except S.E. S.W. had a rate of 15·5. Bulwell and N.W. had the same rate, of 16·1. N.E. had one of 17·5, and S.E. one of 18·4. The latter was, therefore, nearly 3 per 1000 above the lowest of the others, nearly 1 per 1000 below the highest, and no less than 2 per 1000 above their mean.

The infant death rate (per 1000 births during the year) was lowest in N.W., at 146; after this came 156 in Bulwell, then 164 in S.W., 166 in S.E., and 169 in N.E.

The death-rates from the 7 principal epidemic diseases were unusually low, ranging only from 1·19 in Bulwell to 1·52 in S.W. The comparatively small number of deaths from diarrhœa explains the low rate in Bulwell, and the same cause in a lesser degree, together with the fact that measles and whooping-cough were not epidemic during the year, accounts for the diminished epidemic rate elsewhere.

The death-rates from phthisis per 1000 living were as follows:—Bulwell, 0·95; S.W., 1·17; N.E., 1·19; N.W., 1·32; S.E., 1·57.

This is now the third successive year for which I have had to record a specially high death-rate from this class of disease in S.E. The rate in the latter district during 1901 was no less than 2·35 per 1000. The explanation of the special incidence is probably to be found in the following facts:—(1) that the S.E. sub-district as now constituted contains some of the worst slums in the city, and (2) that a large part of it stands upon a porous, foul and water-logged subsoil.

The death-rate per 1000 living from cancerous diseases was once more, as in many former years, higher in N.E. than elsewhere.

It was equal to 1·15 in this district, but did not reach 1 per 1000 in any other division. It amounted to 0·62 in Bulwell, or little more than half the above figure.

The Bulwell sub-district, which now, be it remembered, comprises both Basford and Bulwell, and stretches south and north from New Basford to the northern extremity of the City, and east and west from Mapperley to Cinder Hill, is still from a sanitary standpoint found to compare favourably with the other sub-districts. It had less epidemic sickness, excepting only scarlet fever, its diarrhœa death-rate was remarkably low, and its mortality also from such complaints as cancer and tubercle was far below the average.

GENERAL REPORT.

EPIDEMIC DISEASES.

Owing to the fact, already explained in my Report for 1901, that a more satisfactory method has been devised of classifying the deaths ascribed to diarrhœal diseases, I am now in a position to furnish in detail a return of epidemic diseases which is in practical accord with that of the Registrar-General—so far, that is, as the two returns are comparable. Still, even when the utmost care is exercised in preparing statistics from local death returns, a certain amount of difference is invariably found between such statistics and those furnished by the Registrar-General. This difference is partly to be accounted for by errors on the part of the District-Registrars in transcribing the causes of death, and partly by the difficulty of interpreting aright many of the terms employed by medical men in certifying such causes. Notwithstanding the definite and detailed instructions issued by the Registrar-General, the terms primary and secondary as applied to death causes are still often very loosely used by medical men, and many causes of death are specified which afford only a very imperfect idea of the actual malady to which death was due.

As this indefiniteness is best illustrated in the certification of deaths associated with diarrhœal diseases, I have once more reproduced the Memorandum of Instruction, issued by the Society of Medical Officers of Health at the close of 1900 with regard to such certification, for the information of medical men who have not as yet had their attention sufficiently drawn to the subject.

The Incorporated Society of Medical Officers of Health.

197, HIGH HOLBORN, LONDON, W.C.

Memorandum on Classification of "Diarrhœa" Deaths.

TO MEDICAL OFFICERS OF HEALTH.

The Registrar-General has issued fresh instructions respecting registration of "diarrhœa" deaths to all district registrars of births and deaths, which are as follows:—

"DIARRHŒA.—This should be registered as *the cause of death* only when diarrhœa is written alone, or when it is coupled with some *ill-defined* cause, such as atrophy, debility, marasmus, thrush, convulsions, teething, old age, or senile decay. In addition to deaths ascribed to diarrhœa, deaths from *intestinal* or *enteric catarrh*, from *gastro intestinal* or *gastro-enteric catarrh*, or from *epidemic enteritis* or *zymotic enteritis*, must be *included* under this heading; but deaths from *gastric catarrh*, *gastro-enteritis*, or *enteritis*, must be *excluded* from this heading."

When, however, such terms as *gastric catarrh*, *gastro-enteritis*, *muco-enteritis*, etc , appear in death certificates, medical officers of health should make inquiry of the certifying practitioners as to whether they considered that the illness which had caused the deaths was of the nature of *epidemic* or *zymotic enteritis*. If the reply is in the affirmative, the deaths should be entered under "diarrhœa," and be included in the diarrhœa and zymotic death-rates, and it should be stated when such deaths are so included; but if the illness is found *not* to be of that nature, then the deaths should be entered under the heading "Enteritis," among Diseases of the Digestive System, or under "All other Causes."

Such terms as *cholera*, *dysentery*, *choleraic* or *dysenteric diarrhœa*, etc., should (in the absence of Asiatic Cholera) be included in the diarrhœa and zymotic death-rates.

When *diarrhœa* is coupled with some *well defined* cause of death in death certificates, such as phthisis, tuberculosis, tubercular peritonitis, pneumonia, cancer, syphilis, etc., the death should not be included under "diarrhœa."

A separate column for all deaths certified under the name of *epidemic enteritis* or *zymotic enteritis*, should be included under Specific Febrile Diseases in statistical tables of causes of death.

Attention should not as a rule be paid to the position of the name "diarrhœa" in death certificates as the *primary* or *secondary* cause of death, since this distinction is employed so arbitrarily by different medical practitioners as to be quite worthless for the purpose of classification.

Inasmuch as *uniformity of classification* is the only basis on which reliable and comparable statistics can be founded, the Society most earnestly requests that you will compile your statistics so as to accord with these recommendations.

The Society would ask you to use your influence with the medical men in your district to induce them to comply with the directions of the Royal College of Physicians respecting certification of "diarrhœa" deaths in any way which may appear best to you.

The Society would suggest that much may be done in that direction by letters to or personal interviews with medical practitioners, or by bringing the matter prominently before any medical society there may be in your district.

Copies of a memorandum addressed to Medical Practitioners may be obtained for distribution from the Honorary Secretaries.

November, 1900.

Nottingham, 1902. Temperature, Rainfall, and Seasonal incidence of Epidemic Diseases.

		Thirteen Four-weekly Periods Ending on													
		Jan. 25	Feb. 22	Mar. 22	April 19	May 17	June 14	July 12	Aug. 9	Sept. 6	Oct. 4	Nov. 1	Nov. 29	Dec. 27	Total.
Mean Temperature		41·400	30·950	43·025	41·025	44·475	50·325	58·725	55·100	56·700	52·375	48·150	43·475	41·050	46·67
Rainfall in Inches		2·157	1·008	1·856	1 698	1·256	2·246	0·751	2·679	2·570	1·419	2·016	0·931	1·508	21·524
Onsets of ascertained Cases of	Scarlet Fever	58	76	81	54	63	54	57	98	75	65	111	86	75	966
	Diphtheria	10	16	9	10	8	13	10	18	15	25	22	21	28	205
	Enteric Fever	21	9	14	23	13	26	24	25	36	34	59	50	24	358
Recorded Deaths from	Measles	1	..	..	..	..	1	..	1	..	..	1	..	..	4
	Whooping Cough ..	1	4	2	3	1	1	4	2	2	4	3	3	6	36
	Diarrhœa	6	4	3	8	5	4	7	12	24	68	32	6	8	187

The figures in this table are compiled from the weekly returns, and are therefore subject to some correction; also, as the dates of onset are taken instead of dates of notification in the case of the notifiable diseases, it will be found that the numbers here do not coincide with those of other tables dealing with the same subject, but giving dates of notification instead of dates of onset.

The sections next ensuing deal in detail with the local history, during 1902, of the seven principal epidemic diseases, formerly known as the seven principal zymotic diseases of the Registrar-General's Reports.

Death Rates from the Principal Epidemic Diseases.

(Average) for previous Ten Years, and for 1902.

	Nottingham.		London.		76 Towns.
	10 years. 1892-1901.	1902.	10 years. 1892-1901.	1902.	1902.
Small Pox	0·00	—	... 0·01	0·28	... 0·12
Measles	0·40	0·02	... 0·58	0·51	... 0·49
Scarlet Fever... ...	0·20	0·10	... 0.19	0·12	... 0·19
Diphtheria	0·09	0·12	... 0·50	0·25	... 0·26
Whooping-Cough ...	0·37	0·15	... 0·47	0·40	... 0·37
Enteric Fever ...	0·30	0·21	... 0·14	0·13	... 0·15
Diarrhœa	1·26	0·72	... 0·81	0·54	... 0·54
Total Zymotic Rate	2·62	1·32	... 2·70	2·23	... 2·12

Small-Pox.—Nottingham was happily free from this disease until about the close of the year. The earliest case, that of a gasworks labourer, *æt.* 40, living at Pleasant Row, Hyson Green—a contact with a person from outside, who visited Nottingham while suffering from small-pox—appears to have developed definite symptoms between the 25th and 27th of December, but these symptoms were not recognised as those of Small-pox by the medical man who attended him, and the man was only discovered by me after several persons had become infected through his agency.

The earliest of the secondary cases developed a rash on January 6th of the current year, but, as the history of this case and others which followed it will be given in detail in the Report of 1903, I shall content myself here with a brief outline of the outbreak up to time of writing (April, 1903), and the lessons to be learnt from it.

The outbreak began, as I have stated, in a single, somewhat severe case, probably infected by a visitor from outside the city. This first case was the means of infecting some sixteen persons, apparently by direct contact. The latter were all adult males, and all had practically simultaneous attacks. All had frequented a public house at Hyson Green, to which the first patient had also gone while his eruption was still in active development. Most of them recollected, when their own rashes were in progress, that they had seen a similar eruption on the first man's face, neck and hands. These sixteen secondary cases gave rise, in most instances by easily traceable contact, to about eighteen others.

In addition to this large group there occurred, during January, February, and a few days of March, nine other cases, eight of tramps, and one of a prisoner in Bagthorpe Jail. These persons severally brought the disease with them from Bingham, Loughborough, Leicester, Hinckley, Tamworth, Birmingham, and Chesterfield. The traceable secondary cases from the last group were happily only four in number.

The cases down to this point may be classed as the first section of the current outbreak. They were practically all under control towards the end of February. About this time, however, just when we were congratulating ourselves upon having apparently quenched the outbreak, other scattered cases began to appear among residents in the same (Hyson Green) District. The infection, however, in these also, was speedily traced to a barber on the Radford Road, who had pursued his calling while suffering from a mild attack of the disease. This man not only infected about ten of his customers, but also his brother and his brother's family resident in the same neighbourhood, having actually used the bath in the house of the latter while his attack was in progress. His brother was employed in a village outside Notting-

ham, and going to work while still in an infectious condition, he in turn was the means of conveying the disease to this place. This brings us up to the time of writing in the history of the local outbreak (April, 1903). The facts I have recorded afford a fair sample of the circumstances under which the disease has commonly been propagated, and has had to be dealt with.

One of the principal difficulties encountered in the preventive treatment of small-pox at the present time is due to the effect of vaccination, or rather insufficient vaccination. Vaccination not sufficiently recent or thorough to produce complete immunity from attack, may yet so modify the eruption of small-pox as to render diagnosis extremely difficult, especially to those with small experience of the disease. It may also render an attack so mild as to allow the person affected to pursue his ordinary occupation without intermission, and particularly during the most infectious period, the period of rash; for while most people, even with the mildest of attacks, feel somewhat poorly in the earlier stages—with feverishness, sweating, sickness, back pain, etc.—relief is in all cases experienced on the appearance of rash, and in mild cases there is seldom any illness afterwards. It may be noted that it was as much because of the extreme danger to the public through infection emanating from mild cases, as for any other reason, that inoculation for small-pox was made penal in the last century. While speaking of mild cases, I am reminded of a class which have given rise to a good deal of comment, especially among medical men and the opponents of vaccination during the current outbreak. These are cases mostly of modified mild-small-pox occurring in unvaccinated subjects. The modification and the mildness are of various characters and degrees, but into this purely medical aspect of the subject I cannot, of course, appropriately enter at any length in this Report: suffice it to say that not only mild, but modified and, to some extent, aborting small-pox does undoubtedly occur in

persons who are themselves unvaccinated. It is the modification which constitutes the anomaly, for it is of course open to any one—by good fortune—to have a mild dose of small-pox or any other infectious malady.

The explanation is conceivably a complex one. In the first place it is more than thinkable that the influence of vaccination exerted through successive generations of well-vaccinated parents may produce some degree of immunity against both vaccination and small-pox.

Again, I am strongly of opinion from my observations in Nottingham and elsewhere, that the small-pox propagated by mild and modified cases upon subjects altogether unprotected, is not ordinarily of the same severity as that accruing from examples of the unmitigated type of the disease.

I shall deal in more detail with this subject when reporting upon the outbreak after its close. I only desire at this point to emphasize the fact that the modification is due to vaccination, and vaccination alone, and not, as industriously alleged by the opponents of vaccination, to improved sanitary surroundings or any other outside cause.

Of all the cases above-mentioned, four only were unvaccinated. Three of these were severe, and one comparatively mild, but the skins of all were permanently marked. Of the rest, all had been vaccinated in early youth or infancy, and two re-vaccinated. Five persons over 30 years of age, who had been vaccinated in infancy, had severe attacks. The re-vaccinated persons had attacks of such extreme mildness and modification that the medical men in attendance would not for some time accept the diagnosis of small-pox. In one family at Bulwell there were five contacts, the father and mother, both twice vaccinated, and three unvaccinated children. All the latter contracted the disease, and two severely;

the father and mother escaped. Only one person, up to the present, has contracted the disease within 15 years of vaccination. Up to the present, moreover, there has been no fatal case.

All inspectors, nurses, and other officials in the Hospital and outside, who have to deal with small-pox cases, were re-vaccinated before the commencement of the outbreak. None of these has contracted the disease. There has been also no spread of infection traceable to the indirect agency of our officers, or to the influence of any infected person or thing after coming into our charge, since the outbreak began.

The system employed by us for dealing with cases and contacts is briefly as follows:—Two experienced inspectors of the Health Department are detailed for the regular house visitation required. All cases of small-pox are removed to hospital as soon as discovered. This rule as far as practicable is strictly adhered to. Disinfection of houses and goods is also carried out with the utmost promptitude. All contacts are kept under supervision for 16 days, and, when possible without undue interference with business, they are induced to remain at home, only leaving the house for necessary exercise during this time. All who will consent to vaccination are vaccinated without delay. Catering for infected households is carried out by the two quarantine inspectors or their agents. All contacts who have agreed to submit to these regulations have been guaranteed their maintenance, and in most cases their employers have kept their post open, and also paid the whole or part of their ordinary wages during the quarantine period. I am aware that the system of quarantine—even the limited system here sketched out—is condemned as unnecessary by many high authorities, but, while agreeing that it is likely to be useful only where the outbreak of disease is caught early, I maintain that with the mild and modified form

of small-pox with which we have now frequently to deal, it would be practically impossible to detect all the cases without its aid. As it is, I have found more than one person in a highly infectious condition at work or at large, and I can point to many others taken to hospital in the early stages of attack who would almost certainly have been the means of spreading infection had they not been kept under continual supervision.

The two officers (Inspectors Byrns & Ward) who assist me in the work, have been indefatigable, and have displayed both tact and firmness in the performance of their often very thankless, and always very trying, duties.

I desire also to acknowledge my indebtedness to the medical men of the town for their co-operation with me at all times—frequently at great personal inconvenience to themselves—in endeavouring to check the spread of infection.

The notification of chicken-pox has been put in force in many places, but this has not hitherto been found necessary here. I have nevertheless seen some 50 cases of the disease during the past three months, by way of insuring that small-pox was not being overlooked under another name. Two instances of this mistake indeed did occur almost at the outset, but, by our system of quarantine, I was enabled to visit the patients and rectify the error before any damage had accrued.

Small-pox was prevalent during 1902 in 41 of the 76 great towns of England and Wales. It accounted for 1,314 deaths in London, 1,240 being in the first half of the year. It caused 302 deaths in the 8 large towns around London proper (from Croydon to Walthamstow), and 225 of these were in Tottenham and West Ham. It occasioned 10, 22, and 33 deaths respectively in Merthyr Tydfil, Swansea, and Liverpool, but less than 10 in each of the other 29 great towns affected in England and

Wales. These, however, included places as widely separated as Plymouth and Hastings, Southampton and Tynemouth. It caused 1 death in Edinboro', 43 in Glasgow, and 1 in Belfast.

This short epitome will convey some idea of the generalness of the current outbreak in the United Kingdom. It takes no account of the distribution of the disease in the rural and minor urban districts, but some notion of this may be formed from our own (somewhat unfortunate) experience in Nottinghamshire.

Vaccination.—The accompanying table shows at a glance what a very gratifying advance has recently taken place in the practice of vaccination in Nottingham. The small-pox outbreak is of course the friend in disguise through whose influence the improvement has come about. The statistics, though quite reliable so far as they go, are not always for regular annual periods; but they are the best I can furnish, and I am much indebted to Mr. Muncaster Howard, the Clerk to the Guardians, for giving me access to the data as soon as they become available.

Vaccination in Nottingham Union. Summary of Statistics, 1883—1902.

	Births.	Percentage.			Certified as Insusceptible of Vaccination.	Had Small-Pox.	Certificates granted to "Conscientious Objectors."
		Successfully Vaccinated.	Died Unvaccinated.	Not finally accounted for.			
Average of 5 yrs. 1883–88 ...	6194	74·3	12·4	13·0	10	...	...
1889	5398	67·3	12·0	12·1	12	...	...
1890	5084	69·8	11·7	14·0	11	...	...
1891	5033	67·1	12·0	16·0	8	...	...
1892	5142	63·8	12·0	16·2	15	...	...
1893	5193	64·4	13·4	17·7	24	...	...
1894 1st half-year	2632	62·5	12·7	11·2	9	...	...
1895 do.	2758	43·1	14·2	15·3	11	...	...
1896 do.	2728	29·4	11·7	16·4	3	...	...
†1896–97 ...	5313	18·97	15·60	52·88	3	...	...
†1897–98 ...	5391	23·05	17·23	30·47	4	...	684
‡1898–99 ...	5857	42·4	15·5	10·2	28	...	543
§†1899–1900 ...	6904	50·8	15·13	7·5	15	...	682
†1900–1901 ...	6699	57·83	14·73	10·7	21	...	1146
Jan. to Dec., 1901	6827	65.13	13·90	0·07	51	...	718
1902 1st half-year	3336	69·87	11·66	0·30	85	...	183

† June of first year to July of second.

‡ Including Returns of Basford, Bulwell, and North Wilford for April, May, and June, 1899.

§ First Twelve Month's Return from New Parish of Nottingham.

It will be seen that the proportion of children born in Nottingham who are successfully vaccinated (within from 7 to 13 months of the end of the period during which they were born) has risen in six years from 18·97 per cent. to 69·87 per cent.—*i.e.*, the percentage of successful vaccinations have gone back almost to the old figure of the eighties and early nineties.

Perhaps one of the best points brought out by the most recent figures—those for the first half of 1902—is the diminishing vogue of "conscientious objection" to vaccination. It seems, indeed, to many of us altogether inconsistent with modern ideas of the respective obligations and claims of parents and children, that any father should be held in law to have the right to deny his child the protection which vaccination affords against the hideous possibilities of small-pox.

Measles.—This disease was conspicuous by its (practical) absence, so far as Nottingham was concerned, during 1902. There were only 4 deaths certified as due to it in the whole City throughout the year—2 in Bulwell in the first and second quarters respectively, 1

Deaths from Measles, during each of the Four Quarters of 1902, in the Registration Sub-Districts of the City.

District	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell.. ..	1	1	..	..	2
N.W...	..	..	..	..	..
N.E.	..	..	1	..	1
S.W.	..	..	..	1	1
S.E.	..	..	..	..	..
Totals	1	1	1	1	4

in North-east in the third quarter, and 1 also in South-west in the fourth quarter. With the single exception of 1895, there is no year on record in which the annual

deaths from this cause fell to so low a figure as during 1902. The number in 1901 was 96, and the annual average for the ten years ended with 1900 was 92·9. The number of deaths from measles in London during 1902 was 2,361, and the death rate 0·51. The number and rate in the 76 great towns were respectively 7,441, and 0·49.

Scarlet Fever.—The number of cases and reputed cases of scarlet fever notified in the City during 1902 was 966. The numbers during each of the three immediately preceding years respectively were 913, 1,394, and 2,580, and the average annual number during the ten years ending with 1899 was 1,165. The number of separate houses in which cases occurred during 1902 was 854. The severity and consequent fatality of the disease underwent a slight increase as compared with the previous year, but the actual number of deaths was only 23—the lowest annual total, excepting that of 1901, since 1886—and the case mortality 2·1 per cent. The case mortality of 1901 was only 1·2 per cent.—by far the lowest on record. Of the total 966 cases, 495, or 52 per cent., were admitted to Bagthorpe Hospital. Among those admitted to hospital there were 8 deaths, 2 of males and 6 of females, giving a case death-rate (*a*) for males, of 0·82 per cent., (*b*) for females, of 2·4 per cent., and (*c*) for both sexes, of 1·61 per cent. There were 471 (or 48 per cent.) of all the cases notified nursed at home. No less than 15 of these proved fatal. The case mortality, or proportion of deaths to cases, among those nursed at home, therefore, was equal to 3·2 per cent., or almost exactly double the hospital rate.

The cases and deaths distributed in the usual age periods were as follows:—0-1 year, 5 cases and 1 death; 1-5 years, 290 cases and 12 deaths; 5-15 years, 517 cases and 7 deaths; 15-25 years, 122 cases and 1 death; 25-35 years, 30 cases and 1 death; 35-45 years, 1 fatal

case; 45-55 years, 1 non-fatal case. If we compare the above analysis with that for 1901, we see at once that the increase of fatality affected all but one of the age periods (see table, page 65), but was most marked in the first two. If we group these together, we find that the fatality, under 5 years, was 4·4 per cent. in 1902, as compared with 1·9 per cent. in 1901. In the 5-15 years' period the increase was appreciable, but very slight; but there was one death in each of the three succeeding periods, as compared with a total absence of fatality in the corresponding groups of 1901.

Notifications of Scarlet Fever, during each of the Four Quarters of 1902, in the Registration Sub-Districts of the City.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	103	66	77	45	291
N.W...	34	23	55	62	174
N.E.	56	46	68	122	292
S.W.	27	22	33	37	119
S.E.	12	26	15	24	77
Totals	232	183	248	290	953

The local and seasonal distribution of the disease in Nottingham during 1902 was, as usual, comparatively even, as the accompanying table will show; but Bulwell and N.E.—and especially Bulwell—suffered more and S.E. less, both actually and relatively to their populations, than the N.W. and S.W. sub-districts. No division was free from the disease during any one of the quarterly periods. The average of the total quarterly numbers of cases was 238, and the widest departures from this average were 183 for the second quarter, and 290 for the last.

The death rate from scarlet fever in Nottingham during 1902 per 1000 of the population was equal to 0·10, or 100 per million. The corresponding rate for 1901 was 0·05, or 50 per million, and the average rate for the ten years ended with 1900 was 0·21, or 210 per million. The rate in London for 1902 was 0·12, and

for the preceding 10 years 0·19. The rate in the newly grouped 76 towns for 1902 was 0·19; the decennial average of these towns taken together cannot yet be given.

Diphtheria.—Nottingham, after many years of comparative immunity, is now beginning to be seriously affected by Diphtheria. Its near neighbours, Leicester and Sheffield, in common with most other large centres of population throughout the country, have suffered severely for some years past, but Nottingham, for some reason hitherto undiscovered, has remained comparatively free from it. Atmospheric humidity is in this country generally considered as favourable to the prevalence of diphtheria, and this meteorological condition has certainly characterized the two years, or rather 18 months, during which the disease has shewn a tendency to local extension. Another concurrent phenomenon, or rather antecedent (to outbreaks of true diphtheria), which is of almost invariable occurrence, especially in dense populations, is the prevalence of so-called simple sore throat. Throat affections of this character have been peculiarly prevalent in Nottingham for the past 18 months, and have seriously interfered with the work of many of the Public Elementary Schools in the City during this period.

The value of the bacteriological test in cases of reputed diphtheria is inestimable, and Dr. Jacob's work at the City Laboratory during the past 12 months has amply justified the establishment of the latter, and also his own appointment as Bacteriologist to the City.

The total number of reputed cases of diphtheria notified in Nottingham during 1902 was 209. Four of these notifications were subsequently withdrawn, leaving a net total of 205. The total for 1901 was 113, and that for 1900, 116. The average annual number for the 10 years ending with 1899 was 79.

The distribution of the disease in the City was once more very general, but N.W., as last year, suffered most from its inroads, and then Bulwell. Both these had attack-rates of over 1 per 1,000 of population, and both suffered most towards the end of the year. After them, in diminishing sequence, came N.E., S.W., and S.E. The quarterly totals of cases shew a tendency to a rapid increase of the disease towards the end of the year, a tendency which, unfortunately, has shewn no sign of abatement during the current year.

Notifications of Diphtheria, during each of the Four Quarters of 1902, in the Registration Sub-Districts of the City.

Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	3	5	12	22	42
N.W.	12	11	20	37	80
N.E.	16	9	16	9	50
S.W.	3	6	6	8	23
S.E.	3	3	1	3	10
Totals	37	34	55	79	205

The distribution of the cases in the usual age-periods was as follows:—0-1 year, 4 fatal cases; 1-5 years, 52 cases and 19 deaths; 5-15 years, 99 cases and 7 deaths; 25-35 years, 16 non-fatal cases; 35-45 years, 7 non-fatal cases; 45-55 years, 3 non-fatal cases.

The proportion of deaths to cases under 1 year is always high, and even the hundred-per-cent. mortality here shewn is not altogether exceptional for true diphtheria in infants under 1.

Although the number of cases in the next age-period has increased by 17 as compared with the total of 1901, the case mortality in this period remains almost exactly the same as in the latter year (36 per cent.). This is a high rate of fatality.

In the 5-15 years group, the 7 deaths to 99 cases give a distinctly low rate. The same may also be said of the one death to 28 cases in the 15-25 years group, or, to include the remaining cases at higher ages, the 1 death to 54 cases at ages ranging from 15-55 years, for there was no death above the 15-25 years period (see table, page 65).

The 50 deaths from diphtheria in Nottingham during 1902 were equal to a death-rate of 0·12 per 1,000 living. The rates for 1901 and 1900 were (strangely enough) identical with this, but the average rate for the 10 years ended with 1899 was only 0·08.

The death-rate from diphtheria in London during 1902 was equal to 0·25 per 1,000, as compared with 0·50 for the preceding 10 years. The rate in the newly-grouped 76 great towns of England and Wales during 1902 was equal to 0·26 per 1,000. The 10 years' average rate for these towns is not yet available, but the average diphtheria death-rate for the old group of 33 great towns in the 10 years ended with 1900 was 0·34 per 1,000.

The highest individual death-rate from diphtheria in any of the great towns during 1902 was that of Hanley, at 1·28 per 1000; the lowest, that of South Shields, at 0·06 per 1000.

Whooping-Cough.—The year 1902 was a sub-epidemic period for whooping-cough in Nottingham. The number of deaths ascribed to it was 37, as compared with 96 in 1901, and an annual average of 87 for the preceding ten years. Although the disease caused a comparatively small mortality during the year, it interfered somewhat seriously with the work of no less than 16 of the public elementary schools of the City.

All parts of the City were visited by it at some period of the year. It was fatal for the most part to a slight degree in all districts except S.W. during the first

two quarters, and in all but Bulwell in the last two. The largest quarterly number of deaths was 7 in S.W. in the last quarter, but there were as many as 4 deaths in one quarter in Bulwell, N.E., and S.E., during the first, third, and fourth quarters respectively.

Deaths from Whooping-Cough, during each of the Four Quarters of 1902, in the Registration Sub-Districts of the City.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	4	2	..	..	6
N.W...	2	2	1	2	7
N.E.	1	2	4	1	8
S.W.	..	..	2	7	9
S.E.	1	1	1	4	7
Totals	8	7	8	14	37

The death-rate per 1000 living from whooping-cough in Nottingham during 1902 was equal to 0·15, as compared with 0·42 in 1901, and an annual average of 0·37 for the ten years 1892–1901.

The death rate from whooping-cough in London was 0·40 in 1902, and averaged 0·47 during the preceding ten years.

The rate for the 76 great towns taken together was 0·37 during 1902.

Enteric Fever.—The number of notifications of enteric fever received by me during 1902 was only 375, as compared with 535 during 1901, the reduction being equal to 28 per cent. The number of deaths showed an even greater diminution (37 per cent.) as compared with those of the previous year, being only 50 as against 79.

The explanation of this diminution, as I have already stated, is to be found in the comparatively cold and wet summer and autumn of 1902. The total amount of the rainfall was not exceptionally large, but the rain was continuous, and associated with a low temperature. The enteric fever of Nottingham is principally endemic, confined to its poorer neighbourhoods, and dependent for its spread upon direct excremental pollution of the physical surroundings of domestic life; and a cold and wet season, in the first place, is not favourable to the development of the enteric fever virus, and, in the second, keeps down two of the most active agents for its propagation, flies and dust. The surest sign of endemicity is persistent recurrence in certain localities, and this, with slight variations, is the most striking feature in the history of the disease as we know it, topographically, in Nottingham.

A study of the spot-map which accompanies this section, side by side with the maps for other years, is specially instructive and interesting. Three facts stand out with remarkable prominence. The first is, that the disease has very much the same distribution as in other recent years; the second, that it shows much less tendency to local concentration than in other years; and the third, that where this tendency is in any degree manifested, those spots are selected which have been similarly visited on former occasions.

The districts affected were as follows:—Bulwell, Old and New Basford, Carrington, Old and New Radford, and Lenton, the whole area to the east of Mansfield Road from St. Andrew's Church and Hunger Hill southward to Sneinton, the Meadows and the lower part of Wilford Road on its western side. The areas which remained either entirely or relatively free were:—The Park, the central business portion of the town around the Market Place, and the whole district north of this as far as New Basford, the good neigh-

bourhoods bordering the Mapperley and Woodborough Roads and extending to the N. and N.E. of these to the City boundaries, excepting only the poorer parts of Carrington already mentioned.

I have frequently expressed my opinion as to the part played by the pail-closets and privies of Nottingham in the propagation of its endemic enteric fever, and in my special report for 1901 I gave it as my opinion that the remarkable concentration of cases in Old and New Radford was in some measure due to the particularly defective system of night-soil scavenging which obtained in that district, together with the co-existent accessory causes inseparable from an old, poor, and dense neighbourhood almost exclusively furnished with dry closets. The special defect in the scavenging system to which I refer consists in the removal of the contents of closet pails without the proper cleansing of the pails, and the distribution of the latter in a foul and often an infected condition to houses other than those from which they had immediately come. This method of scavenging had arisen through lack of accommodation and cleansing plant at the wharves, but the substitution of steel pails for those of wood hitherto in use, which is now taking place, together with the completion of the new Refuse Destructors and other accessory plant at the wharves, will probably obviate all risk of trouble from this source in the future, unless indeed it should arise again through fault of the scavengers themselves.

I am not of course contending that all the enteric fever which occurs in Nottingham is due to endemic causes, but only that endemicity explains the principal part at least of the excessive amount of the disease in the town. Shell-fish, milk, water, and other foods and drinks produce outbreaks elsewhere which as a rule can be traced to their respective causes without much difficulty, and which as a rule also—except in the case

of permanently infected water—subside as quickly as they arise, but with us the disease is practically always present, and always hangs about the poorer neighbourhoods of the city, recrudescing at the period of seasonal rise year after year in the same localities.

A careful watch is kept for any indications of food outbreaks, but they are seldom forthcoming. During 1902 there were indeed 4 small groups of cases (some 46 altogether) in which, from the simultaneity of onsets and other suggestive facts, a food origin seemed probable, but such cases are only a very insignificant fraction of the whole number which come to my knowledge.

There were 29 cases with a definite history of an antecedent diet of raw shell-fish within the incubation period, but I am not inclined to think that Nottingham has suffered much of late from the importation of typhoid infected food of this class. The absolute freedom during the past year of entire districts like those of the Park, the Forest, and Mapperley and Woodboro' roads, in which large quantities of probably all qualities of raw shell-fish are consumed, certainly seems to imply that this source of infection cannot have been locally very common.

The ratio of incidence of enteric fever cases upon houses furnished with pail-closets, midden-privies, and w.c.'s respectively, has been as follows during the past three years:—

1900.					
Houses with pail-closets	-	-	1 case in	92	houses.
,, ,, midden-privies	-	1	,,	20	,,
,, ,, water-closets	-	- 1	,,	407	,,
1901.					
Houses with pail-closets	-	-	1 case in	84	houses.
,, ,, midden-privies	-	1	,,	12	,,
,, ,, water-closets	-	- 1	,,	255	,,
1902.					
Houses with pail-closets	-	-	1 case in	129	houses.
,, ,, midden-privies	-	1	,,	21	,,
,, ,, water-closets	-	- 1	,,	294	,,

The number of pail-closets in the City at the close of the year was 37,617, of midden-privies 300, and of w.c.'s 12,343.

I have not, intentionally at any rate, dealt with waste-water-closets in these tables, as I have been unable to ascertain the exact number existent in the City at the present time, but I am disposed to think, from the greater proportion of cases to w.c. houses in the Tables for 1901 and 1902, that some of these insanitary closets have been here returned as simple w.c.'s.

I have prepared to accompany this section the usual map, chart, and tables; and as these for the most part explain themselves, I shall touch only upon the salient facts they are intended to bring out.

Nottingham, 1902. Enteric Fever. Cases and Deaths in Weekly Periods.

Week ending	January. 4	11	18	25	February. 1	8	15	22	March. 1	8	15	22	29	April. 5	12	19	26	May. 3	10	17	24	31	June. 7	14	21	28	
Cases	12	11	12	9	2	3	2	3	1	4	3	1	6	3	11	4	8	1	4	1	5	1	4	5	10	10	=136'
Deaths	..	..	2	..	1	1	..	1	..	2	..	1	1	..	2	2	..	1	..	..	..	..	..	..	1	1	= 16'

Week ending	July. 5	12	19	26	August. 2	9	16	23	30	September. 6	13	20	27	October. 4	11	18	25	November. 1	8	15	22	29	December. 6	13	20	27	
Cases	5	6	5	6	3	7	9	3	5	13	10	15	3	10	11	17	9	9	16	10	17	15	11	10	2	6	=233*
Deaths	1	..	1	..	..	..	..	1	1	..	..	3	4	2	1	1	1	1	1	1	3	2	6	3	2	..	.= 35*

* Figures made up from weekly returns, without correction.

The seasonal incidence of cases and deaths was somewhat more normal than in 1901. There were 69 cases and 9 deaths in the first quarter, 67 cases and 7 deaths in the second quarter, 90 cases and 13 deaths in the third quarter, and 143 cases and 22 deaths in the fourth quarter.

The most noticeable facts brought out by the table of cases and deaths (male and female) in age-periods, are (1) the extraordinary excess of the female case mortality above the male in all except the 35-45 and 56-75 age-periods, and (2) the generally low death-rate

among males. The total case mortality works out at 1 death to 10·1 cases for males, and 1 death to 5·9 cases for females. The average male death-rate in this country is about 1 death in 5·85 cases, and the average female rate 1 death in about 5·32 cases. The higher death-rate among females was noticeable among the small group admitted to the Isolation Hospital, as well as in the total

NOTTINGHAM, 1902.
Enteric Fever. Cases and Deaths (distinguishing Males and Females) in Age Periods.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.	
Cases	Male ..	..	14	47	42	43	23	14	7	2	..	192	375*
	Female ..	1	5	53	45	42	18	9	8	2	..	183	
Deaths	Male ..	..	1	4	2	6	4	1	..	1	..	19	50*
	Female ..	..	1	6	6	11	2	3	2	..	..	31	
Average Cases to One Death. Nottingham, 1902.												All Ages.	
Male ..	..	..	14·0	11·7	21·0	7·2	5·7	14·0	..	2·0	..	10·1	7·5
Female	..	..	5·0	8·8	7·5	3·8	9·0	3·0	4·0	..	..	5·9	

* Both these totals include a few unverified cases.

number of patients. Particulars of the former will be found in the hospital report.

There is again this year (as in 1901) a slight difference between the numbers of deaths from enteric fever returned respectively by the Registrar-General and myself. The Registrar-General gives 52, as compared with my total of 50 deaths from this cause. The larger figure corresponds with a rate of 0·214 per 1000 of population, the smaller with one of 0·205, or 214 and 205 per million respectively.

The death-rate of London from enteric fever during 1902 was 0·15, and its average rate for the preceding ten years 0·14 per 1000. The average rate for the 76 great towns during 1902 was 0·15, but the rates of individual towns ranged from 0·02 in Hastings to 0·48 in Ipswich.

ENTERIC FEVER.—Cases and Deaths, Male and Female, during each of the Four Quarters of the Year in Registration Sub-Districts.

		First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Bulwell ...	Cases	4	2	9	7	16	14	16	11	79	Cases	Bulwell
	Deaths	1	...	...	1	2	2	...	1	7	Deaths	
N.W. ...	Cases	14	9	13	12	6	15	17	17	103	Cases	N.W.
	Deaths	...	1	1	1	1	3	3	4	14	Deaths	
N.E. ...	Cases	11	7	5	2	8	7	23	20	83	Cases	N.E.
	Deaths	3	1	2	2	...	2	4	3	17	Deaths	
S.W. ...	Cases	2	5	9	7	10	8	16	19	76	Cases	S.W.
	Deaths	...	2	...	...	...	2	2	3	9	Deaths	
S.E. ...	Cases	5	7	2	3	2	4	5	6	34	Cases	S.E.
	Deaths	...	...	...	...	...	1	1	1	3	Deaths	

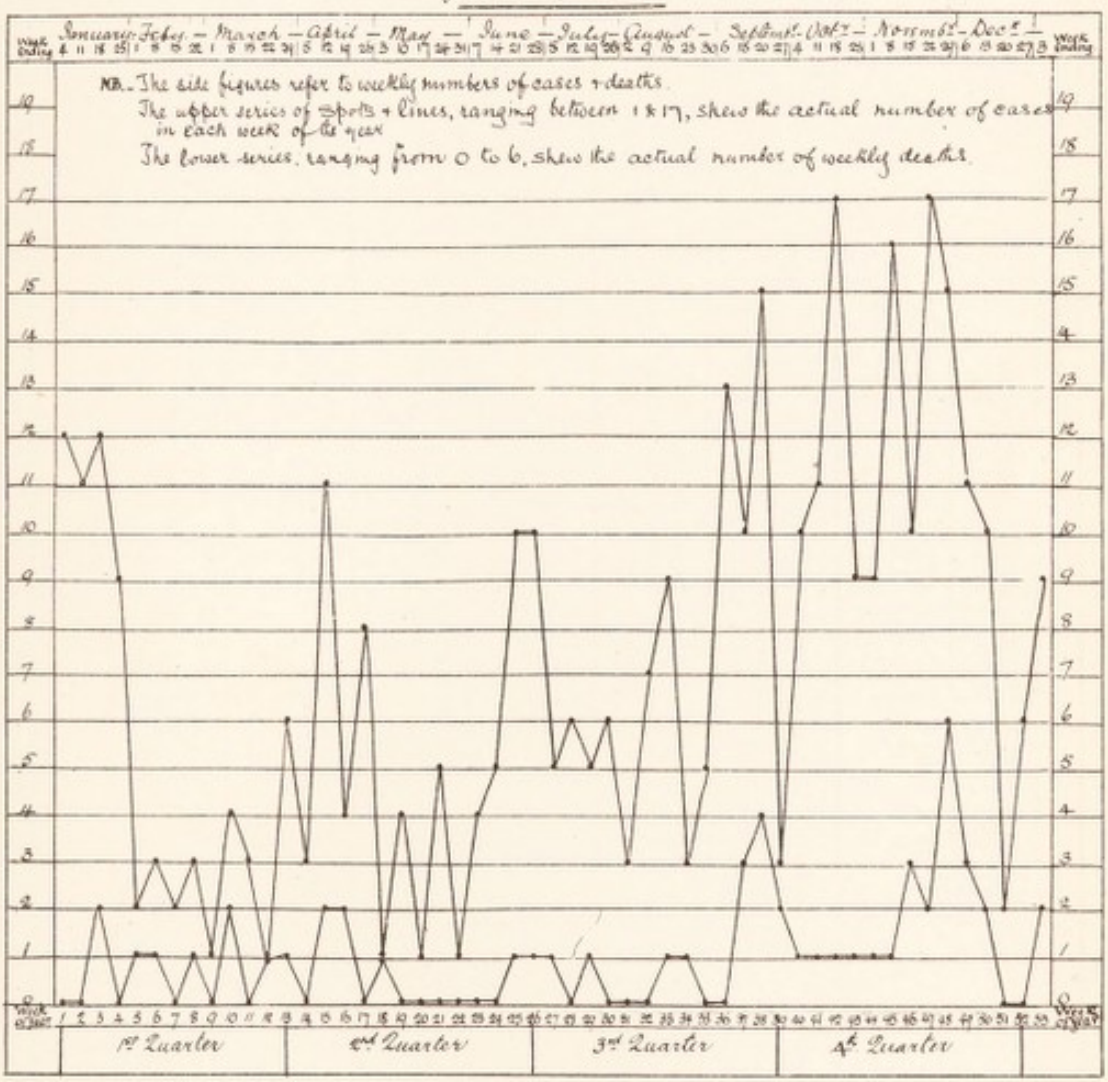
NOTTINGHAM, 1898-1902. ENTERIC FEVER. Onsets of Cases, with Mean Temperature of Air, and Rainfall, in Four-Weekly Periods.

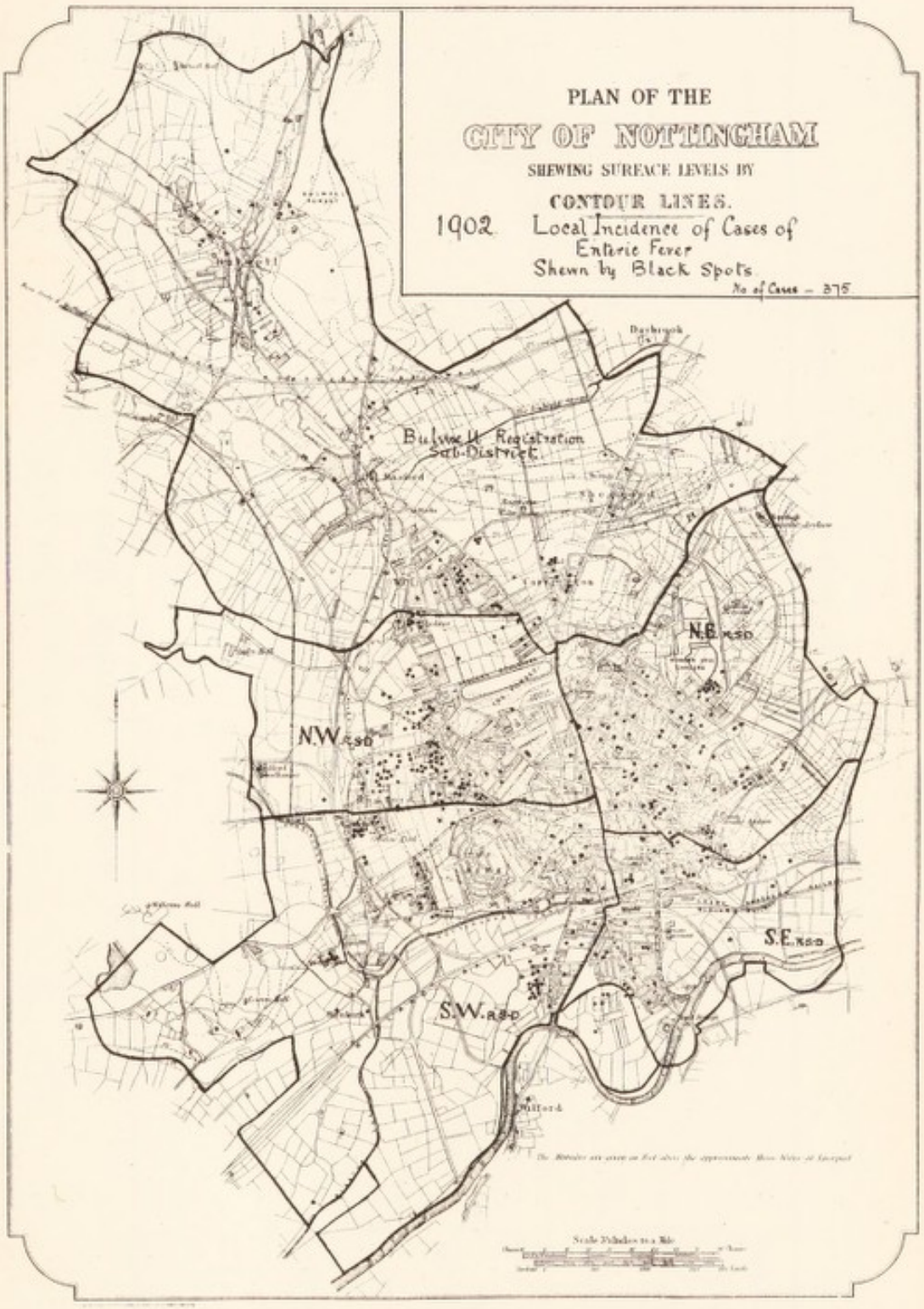
		FOUR-WEEKLY PERIODS ENDING												
		Jan. 29.	Feb. 26.	March 26.	April 23.	May 21.	June 18.	July 16.	Aug. 13.	Sept. 10.	Oct. 8.	Nov. 5.	Dec. 3.	Dec. 31.	
1898.	Mean Temperature	42·4	40·6	40·1	45·0	48·6	53·4	58·7	60·5	63 8	57·2	51·6	44·3	45·1	..
	Rainfall in Inches	0·76	0·87	0·68	1·84	2·27	1·04	2·17	2·01	1·36	0·46	2·97	1·56	1·63	19·62
	Cases of Enteric Fever	40	56	29	27	14	13	14	24	41	57	53	27	18	413
		Jan. 28.	Feb. 25.	March 25.	April 22.	May 20.	June 17.	July 15.	Aug. 12.	Sept. 9.	Oct. 7.	Nov. 4.	Dec. 2.	Dec. 30.	
1899.	Mean Temperature	40·6	40·1	40·0	44 8	48·0	58·1	60·9	62·8	60 0	54·8	47·4	46·5	35·6	..
	Rainfall in Inches	2·61	1 52	0·30	1·96	2·12	1·21	2 90	0·70	0·81	3·50	2·30	0·8	2·2	22·93
	Cases of Enteric Fever	23	44	26	10	16	14	16	29	76	89	132	104	46	626
		Jan. 27.	Feb. 24.	March 24.	April 21.	May 19.	June 16.	July 14.	Aug. 11.	Sept. 8.	Oct. 6.	Nov. 3.	Dec. 1.	Dec. 29.	
1900.	Mean Temperature	39·0	34·175	38·325	41·725	46·075	53·825	57·55	60·75	55·35	53·00	48·225	42·775	43·725	47·269
	Rainfall in Inches	3·386	2·732	1·288	1·068	1·452	3 353	1·201	4·300	1·049	1·710	1·255	2·024	2·005	26·823
	Cases of Enteric Fever	21	30	15	21	17	28	12	36	61	70	83	69	38	501
		Jan. 26.	Feb. 23.	March 23.	April 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.	
1901.	Mean Temperature	37·025	33·875	39·4	40·425	49·05	54·5	58·6	62·5	57·225	52·7	45·975	38·425	35·25	46·534
	Rainfall in Inches	2·418	1·162	1·621	1·995	0·483	0·825	1·760	2·280	1·173	1·205	1·439	1·669	3·371	21·401
	Cases of Enteric Fever	42	32	35	46	23	18	13	32	81	74	53	35	36	520
		Jan. 25.	Feb. 22.	March 22.	April 19.	May 17.	June 14.	July 12.	Aug. 9.	Sept. 6.	Oct. 4.	Nov. 1.	Nov. 29.	Dec. 27.	
1902.	Mean Temperature	41·400	30·950	43·025	41·025	44·475	50.325	58·725	55 100	56·700	52·375	48·150	43·475	41 050	46 67
	Rainfall in Inches	2·157	1·008	1·856	1·698	1·255	2.246	0·751	2·679	2·570	1·419	2·016	0 931	1 508	21·524
	Cases of Enteric Fever	44	10	9	24	14	15	31	21	30	38	46	58	29	369

Nottingham 1902.

Enteric Fever.

Weekly numbers of cases & deaths.




PLAN OF THE
CITY OF NOTTINGHAM
SHEWING SURFACE LEVELS BY
CONTOUR LINES.
1902 Local Incidence of Cases of Enteric Fever Shewn by Black Spots
No of Cases - 375
Bulwell Registration Sub-District
N.E. R.S.D.
N.W. R.S.D.
S.E. R.S.D.
S.W. R.S.D.
Basford

Nottingham, 1889-1902.

GENERAL ENTERIC FEVER DATA.

Year.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Population ..	208,826	211,695	214,606	217,550	220,551	223,584	226,659	229,775	232,935	236,139	239,384	237,770	240,438	243,191
Cases of Enteric Fever	367	337	375	198	479	334	422	444	428	423	607	505*	535	375
Attack or Case rate	1·75	1·59	1·74	0·91	2·17	1·49	1·86	1·93	1·83	1·79	2·53	2·12	2·22	1·54
Deaths from Enteric Fever ..	66	58	70	36	68	61	55	75	45	53	114	75	79	50
Death-rate from Enteric Fever..	0·31	0·27	0·33	0·15	0·31	0·28	0·24	0·34	0·21	0·22	0·48	0·33	0.329	0·21
Mean air temperature ..	47·2	47·3	50·4	45·5	49·0	47·9	47·0	48·2	48·1	49·2	48·3	47·269	46·534	46·67
Rainfall in inches	25·606	17·698	25·889	21·579	20·165	20·252	20·753	22·992	23·726	19·750	22·635	26·823	21·401	21·524
Death-rates from Enteric Fever in great towns..	0·20	0·19	0·20	0·15	0·24	0·19	0·20	0·19	0·18	0·20	0·22	0·20	0·17	0·15

* Number obtained from Weekly Returns of Notifications without subsequent correction.

Diarrhœa.—By a careful observation of the rules for the classification of diarrhœa deaths laid down in the Memorandum on the subject issued at the end of 1900 by the Society of Medical Officers of Health, and reproduced on page 32 of this report, Medical Officers of Health and other statists are now in a position to prepare statistics of diarrhœa mortality which are more or less evenly comparable with those issued by the Registrar-General. Still, even with the exercise of all possible care in preparing one's figures under this heading, a certain amount of discrepancy between the totals furnished respectively by local statists and the latter authority appears to be unavoidable. For example, notwithstanding the fact that my diarrhœa death figures have been prepared with the strictest possible observance of the rules for their classification laid down by the Registrar-General, and, presumably, from certificates identical with those furnished to him, my total of diarrhœa deaths works out at 194, as compared with his 178.

While adopting this method of classification for the sake of uniformity, we must not lose sight of the fact that a large proportion of the deaths ascribed to enteritis and gastro-enteritis, which by this method are now excluded from the epidemic diarrhœa list, are due to the same essential causes as the latter. The majority of them (80 per cent. during the past two years) are of infants, and occur at the same season of the year as those definitely certified as due to epidemic diarrhœa.

As I have already stated, the total number of diarrhœa deaths, as above computed, amounted to 194. Of these, 158 were of infants under one year, and this number was very evenly divided up between the four quarters of the first year of life, a slight majority only falling to the third quarter.

Of the total deaths under 1 year, 83 were of males, and 75 of females. I am unable to give the exact par-

ticulars of the character of the food administered in these cases, but we may take it that, as on former occasions, the vast majority of the infant deaths were those of the hand-fed.

Professor Delépine gives it as his opinion that direct fæcal contamination of milk and other foods of hand-fed children is the cause of their diarrhœa. Professor Klein also considers that he has isolated the particular fœcal organism which is the cause of the disease.

If these authorities are right, it is not difficult to understand the high rate which obtains in the poorer neighbourhoods of Nottingham. It is, moreover, an extremely significant fact that in this City the local incidence of enteric fever, and of epidemic diarrhœa, are largely identical.

I have already given it as my opinion that the comparatively low death-rate from enteric fever during 1902 was due to the relatively cool and wet summer of that year. Flies and dust, two of the most active agents in the propagation of endemic enteric fever, were greatly reduced by these meteorological factors. What is true of enteric fever in this regard is equally, or even to a greater extent, true of epidemic diarrhœa.

It must not, however, be thought that Dr. Ballard's theories with regard to the relation of the deep earth temperature to diarrhœa prevalence and mortality is, therefore, completely out of court. The table of earth temperatures and diarrhœa mortality for 1902, which accompanies this section, shews indeed that there is still a very close relation between them.

The only point in connection with his theory upon which I should be disposed to differ seriously from this distinguished observer is his "commencing temperature."

Dr. Ballard gave 56° as the temperature 4 feet below the surface at which outbreaks of summer diarrhœa seriously commence, but this certainly is not true for all localities, and does not hold good for Nottingham.

The danger-point temperature of the 4 ft. thermometer in this district is approximately 58°. The records for past years as well as those for 1902 make this abundantly plain. There were, however, only 3 weeks during 1902 in which the average 4 ft. temperature reached 58°, as compared with 9 in 1901. It must be borne in mind that, once started, an outbreak of diarrhœa will often continue, though in a continually diminishing degree, for some weeks after the temperature has fallen below what I have called the danger-point. This fact was well illustrated during 1902 between September 15 and the beginning of November.

The neighbourhoods principally affected were those situated in the low lying parts of the N.E. and S.E. districts, those in fact upon which the incidence has been heaviest for some years past.

NOTTINGHAM, 1902.
Weekly Deaths from Diarrhœa in Registration Sub-Districts.

	Week ending																			
	July				August					Sept.				October				Nov.		
	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	
Bulwell	..	..	..	..	..	..	..	..	2	1	1	2	2	2	1	1	1	..	1	— 14
N.W.	1	..	..	1	2	..	..	1	..	2	3	5	2	3	7	2	3	2	..	— 34
N.E.	1	1	..	..	2	1	1	1	1	4	8	12	2	3	4	1	..	1	..	— 43
S.W.	..	..	1	..	1	..	..	1	1	1	1	5	4	3	1	..	1	1	1	— 22
S.E.	..	1	1	2	1	..	2	1	1	4	2	2	2	4	1	3	2	..	..	— 29
	2	2	2	3	6	1	3	4	5	12	15	26	12	15	14	7	7	4	2	— 142

The death-rate per 1000 living in Nottingham during 1902 was equal (according to the Registrar-General's estimate) to 0·72, as compared with 1·51 during 1901 and an average rate of 1·17 for the ten years ended with 1900. The diarrhœa death-rate in London and in the 76 great towns during 1902 was identical at 0·54 per 1000, and the average rate in London during the 10 years ended with 1901 was 0·81.

School Closure and Exclusion of Children from School on account of Infectious Disease.

St. George's Church Schools were closed from Sept. 29th for a period of 14 days owing to the prevalence of measles, and again for a further 7 days from Oct. 13th, for the same cause.

Large numbers of children were excluded also from 38 Board Schools and 6 National Schools, without the actual closure of the Schools, at various times during the year, on account of infectious sickness of different kinds among the children in attendance and their families.

Certificates in respect of all absentees from Public Elementary Schools on account of infectious diseases, were regularly (and gratuitously) furnished by me to the Board of Education up to the date of expiry of the old Code.

1897.

	WEEK ENDING												
	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14	Aug. 21	Aug. 28	Sept. 4	Sept. 11	Sept. 18	Sept. 25	Oct. 2
Earth Temperature 1 ft. below surface of ground	59·9	62·7	63·3	63·8	64·9	63·1	61·6	59·2	57·4	53·7	55·0	53·1	53·6
Earth Temperature 4 ft. below surface of ground	57·6	57·8	58·8	59·5	60·3	61·0	60·6	60·0	59·3	57·7	56·7	55·9	55·3
Deaths from Diarrhœa ..	4	5	15	40	88	95	81	57	29	23	12	8	5

1898.

	WEEK ENDING																	
	July 9	July 16	July 23	July 30	Aug. 6	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29	Nov. 5	Nov. 12
Earth Temperature 1 ft. below surface ..	59·8	60·6	61·8	60·9	60·9	59·4	62·8	62·2	58·7	63·2	61·4	58·7	53·4	54·7	51·7	52·3	52·4	49·4	47·1
Earth Temperature 4 ft. below surface ..	56·3	56·9	57·7	58·2	58·4	58·3	59·1	59·8	59·4	59·4	60·3	59·9	58·5	56·9	56·2	54·8	54·4	53·6	51·8
Deathsfrom Diarrhœa	5	2	2	9	8	14	13	28	34	39	53	41	27	15	11	9	6	3	5

1899.

	WEEK ENDING																	
	July 8	July 15	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30	Oct. 7	Oct. 14	Oct. 21	Oct. 28	Nov. 4
Earth Temperature 1 ft. below surface ..	59·8	64·7	66·1	62·7	65·7	63·0	63·8	65·4	62·8	62·1	59·0	54·8	51·2	49·2	47·0	45·3	47·0	48·2
Earth Temperature 4 ft. below surface ..	57·1	58·5	60·4	60·9	61·1	61·5	61·4	61·5	62·0	61·3	60·8	59·7	57·5	55·3	53·4	51·8	50·4	50·6
Deaths from Diarrhœa	6	18	29	33	55	55	54	61	46	37	40	25	19	11	5	3	4	3

1900.

	WEEK ENDING																		
	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3	Nov. 10
Earth Temperature 1 ft. below surface ..	60·1	62·6	64·4	67·8	63·6	59·2	62·7	62·7	59·4	57·9	56·5	57·1	56·6	52·2	53·1	48·6	48·2	48·6	49·1
Earth Temperature 4 ft. below surface ..	56·5	57·1	59·4	61·7	62·8	61·1	60·4	61·2	60·4	59·6	58·7	58·0	57·7	56·6	55·2	53·9	52·2	51·3	51·3
Deaths from Diarrhœa	..	7	7	19	32	27	22	30	33	31	16	20	17	9	10	5	8	5	2

1901.

	WEEK ENDING																		
	July 6	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26	Nov. 2	Nov. 9
Earth Temperature 1 ft. below surface ..	61·0	64·1	66·6	64·9	64·5	63·3	62·4	62·3	59·9	57·4	57·6	56·4	57·3	56·4	51·0	50·5	46·0	46·4	42·9
Earth Temperature 4 ft. below surface ..	55·9	57·4	58·9	60·5	60·5	60·8	60·9	60·7	60·5	59·2	58·4	57·8	57·5	57·4	56·0	54·6	52·7	51·2	49·8
Deaths from Diarrhœa	5	4	15	34	40	46	36	41	28	22	8	7	8	5	2	5	3	1	3

1902.

	WEEK ENDING																		
	July 5	July 12	July 19	July 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30	Sept. 6	Sept. 13	Sept. 20	Sept. 27	Oct. 4	Oct. 11	Oct. 18	Oct. 25	Nov. 1	Nov. 8
Earth Temperature 1 ft. below surface ..	62·3	61·7	62·0	58·4	58·2	57·7	57·5	58·3	58·3	58.7	57·0	53·5	54·0	52·0	49·7	50·0	48·0	48·9	47·9
Earth Temperature 4 ft. below surface ..	56·7	57·6	58·0	58·0	57·6	57·2	55·9	57·2	57·3	57·7	58·0	56·6	55·6	54·9	53·6	52·4	51·4	50·8	50·3
Deaths from Diarrhœa	2	2	2	3	6	1	3	4	5	12	15	26	12	15	14	7	7	4	2

Tables giving the cases and deaths, in age-periods, of the notifiable infectious diseases, the ratio of deaths to cases, and the deaths from the non-notifiable infectious diseases, which have occurred in Nottingham during 1902 and other recent years. Further Notification Tables will be found under the special sections dealing separately with notifiable infectious diseases.

1897.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	9	152	291	55	9	1	..	..	..	..	517
Deaths..	1	21	10	2	..	..	..	..	..	..	34
Diphtheria *Cases*..	2	25	21	17	7	3	..	..	..	..	75
Deaths..	2	13	5	1	..	..	..	..	..	..	21
Enteric Fever *Cases*..	..	41	136	116	73	38	18	4	1	1	428
Deaths..	..	7	9	11	7	6	4	1	..	..	45

1898.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	14	267	549	70	20	9	2	..	..	..	931
Deaths..	5	20	7	..	..	..	..	..	..	..	32
Diphtheria *Cases*..	3	33	27	10	7	2	3	..	..	..	85
Deaths..	3	16	4	..	..	..	..	..	..	..	23
Enteric Fever *Cases*..	2	45	130	95	80	39	22	7	3	..	423
Deaths..	1	7	8	11	13	6	5	1	2	..	54

1899.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	29	742	1525	220	49	9	6	..	..	..	2580
Deaths..	2	29	16	4	1	..	1	..	..	..	53
Diphtheria *Cases*..	3	43	51	25	8	8	3	..	1	..	142
Deaths..	3	14	9	1	1	1	1	..	..	..	30
Enteric Fever *Cases*..	..	33	170	180	119	63	31	10	6	1	613
Deaths..	..	1	18	38	27	20	4	3	2	1	114

1900.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	15	393	779	165	34	6	..	2	..	..	1394
Deaths..	1	34	18	1	1	..	..	..	..	..	55
Diphtheria *Cases*..	1	26	45	25	10	6	1	2	..	..	116
Deaths..	1	16	8	..	..	..	1	2	..	..	28
Enteric Fever *Cases*..	1	33	138	150	110	53	16	10	1	..	512
Deaths..	..	8	9	20	16	12	6	4	..	..	75

1901.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	15	255	500	114	27	6	1	..	..	..	918
Deaths..	..	5	6	..	..	..	..	..	..	..	11
Diphtheria *Cases*..	1	42	38	24	6	3	1	..	..	..	115
Deaths..	..	15	13	..	1	..	..	..	..	..	29
Enteric Fever *Cases*..	7	43	169	141	96	47	25	2	5	..	535
Deaths..	2	3	15	21	16	9	12	1	4	..	83

1902.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	5	290	517	122	30	1	1	..	..	..	966
Deaths..	1	12	7	1	1	1	..	..	..	..	23
Diphtheria *Cases*..	4	52	99	28	16	7	3	..	..	..	209
Deaths..	4	19	7	1	..	..	..	..	..	..	31
Enteric Fever *Cases*..	1	19	100	87	85	41	23	15	4	..	375
Deaths..	..	2	10	8	17	6	4	2	1	..	50

Nottingham. Notification Data up to the end of 1902.

	Scarlet Fever *			Enteric Fever †			Small Pox. *			Diphtheria. ‡			Deaths from Non-Notifiable Zymotic Diseases.			
	Deaths.	Known cases.	Ratio of known cases to Deaths.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Measles.	Whooping Cough.	Diarrhœa.	TOTAL.
1881	353	..	..	61	..	..	4	..	..	7	..	..	34	88	202	324
1882	280	1029	3·7	71	68	1·0	51	446	8·7	21	..	..	133	73	225	431
1883	59	428	7·3	73	159	2·2	2	23	11·5	34	125	3·7	14	76	168	258
1884	37	384	10·4	68	218	3·2	..	11	..	39	113	2·9	145	129	377	651
1885	31	390	12·6	44	326	7·4	2	10	5·0	28	85	3 0	112	116	163	391
1886	13	351	27·0	61	317	5·2	2	12	6·0	10	68	6·8	175	90	328	593
1887	22	615	28·0	74	411	5·6	..	2	..	10	50	5·0	58	153	315	526
1888	25	643	25·7	89	426	4·8	12	59	4·9	34	152	4·5	115	81	157	353
1889	32	1047	32·7	66	395	5·9	..	..	..	11	66	6 0	86	153	263	502
1890	33	984	29·8	58	348	6·0	..	..	..	16	64	4·0	52	47	185	284
1891	28	895	31·9	70	396	5·6	..	..	..	21	103	4·9	110	121	180	411
1892	43	1163	27·0	36	205	5 6	..	..	..	30	76	2·5	118	117	158	393
1893	82	1511	18·4	68	490	7·2	5	53	10·6	15	81	5·4	25	59	358	442
1894	51	1164	22·8	62	363	5·8	4	59	15·8	18	56	3·1	134	118	134	386
1895	51	1250	24·5	55	461	8·3	..	3	..	11	47	4·2	1	33	444	478
1896	27	731	27·1	75	478	6·4	..	..	..	12	60	5·0	203	91	175	469
1897	34	517	15·2	45	428	9·5	..	..	..	21	75	3·6	49	117	530	696
1898	32	931	29·1	54	423	7·8	..	..	..	23	85	3·7	104	59	385	548
1899	53	2500	47·2	114	613	5·4	..	..	..	30	142	4·7	140	54	600	792
1900	55	1394	25·3	75	505	6·7	..	..	..	28	116	4·1	45	103	387	535
1901	11	918	83·5	79	535	6·8	..	7	..	29	115	3·97	96	96	361	553
1902	23	966	42·0	50	375	7·5	..	..	..	31	209	6 74	4	37	194	235

* Notification of Small-Pox and Scarlet Fever, from February, 1882.
† Notification of Enteric Fever and Typhus, from June, 1883.
‡ Notification of Diphtheria, from August, 1885.

GENERAL DISEASES, etc.

Notwithstanding the recent alterations in the form of Table III.—which furnishes a record, under death-causes and in age-periods, of all deaths occurring during the year (pp. 7 to 11)—I shall continue to deal with death-causes and even groups of death-causes under this heading in such a way as to allow of comparison with the records of other past years. As before, however, only those diseases and death-causes will find mention which appear to call for special mention.

The deaths certified as due to **syphilis** were only 12 in number, and all were those of infants under one year, suffering from the congenital form of the disease. The total for 1901 was 20, and 18 of these were of infants in the first year of life. There was only one death attributed directly to **gonorrhœa**, and this again was that of an infant infected at birth by its mother. There were, however, 32 deaths referred to diseases of the bladder and urethra, the majority of which were probably traceable to this disease either directly or indirectly. It is almost unnecessary to add that it is useless to look to death returns for a reliable record of the mortality from either syphilis or gonorrhœa.

The deaths attributed to **Erysipelas, Puerperal Septicæmia**, and **Septicæmia** numbered, respectively, 12, 8 and 14, as compared with 7, 9 and 7, during 1901.

The total, however, is identical with that of 1900, and 5 and 6 respectively below the figures for the two preceding years.

Acute Rheumatism, and **Rheumatism of the Heart** were the certified cause of sixteen deaths. The average annual number for the preceding ten years was 15. Such numbers as these, however, certainly do not represent the entire fatality from acute rheumatism in Nottingham.

Phthisis and other **Tuberculous Diseases.**

The gross number of deaths attributed to tuberculous disease of all kinds during 1902, without correction, amounted to 410, as compared with 433 and 481 respectively in 1901 and 1900, and an annual average of 436 for the ten years 1892—1901. The comparative uniformity of the annual toll paid to the tubercle fiend, and that, notwithstanding the presence or absence in successive years of various potent influences for good or ill to the unfortunate sufferers from its attack, is a very striking fact. The range in the annual totals during the ten years ended with 1901 was only between 401 (1899) and 481 (1900). The first three years of the series had totals, respectively, of 417, 449, and 405, and the last of 401, 481, and 433.

The most powerful influence during recent years in augmenting the annual mortality from tuberculous diseases (and especially phthisis) has been epidemic influenza. During 1890, when it was pandemic and terribly fatal in most parts of the globe, the deaths from tuberculous diseases in Nottingham reached a record total of 555.

This disease was present during 1902, but in a very much less degree than in 1900. In 1902 it was credited directly with 27 deaths, whereas 94 were ascribed to it in 1900. The deaths directly attributed to it from time to time, be it understood, serve only as a guide to relative degrees of prevalence; they do not represent its actual mortality. This must be sought for under various headings, of which tubercle is only one.

The deaths from tuberculosis during 1902, classified according to the parts of the body affected by the disease were as follows:—

Tuberculosis of brain, 40 deaths, 12 under 1 year, 16 between 1 and 5 years, and 11 between 5 and 15 years of age; tuberculosis of larynx, 4 deaths between 20 and 65 years of age; tuberculosis of lungs

(phthisis), 286 deaths, occurring in every age-period except the 85 years and upwards, but 220, or 77 per cent., between the 20th and 55th year of life; tuberculosis of abdomen (bowels and other viscera) 38 deaths, 22 under 1 year, 7 between 1 and 5 years, and 3 between 5 and 10 years of age; general tuberculosis, 26 deaths, 14 under 10 years, and all but one under 25 years of age.

NOTTINGHAM. 1902.

All Reputed Tuberculous Diseases. Deaths of Males and Females in Age-periods.

	Under 1 year	1–5 yrs.	5–10 yrs.	10–15 yrs.	15–20 yrs.	20–25 yrs.	25–35 yrs.	35–45 yrs.	45–55 yrs.	55–65 yrs.	65–75 yrs.	75–85 yrs.	Totals
Male ..	22	17	12	9	6	20	32	37	36	31	5	1	228
Female ..	23	19	11	6	16	18	26	30	21	7	4	1	182
Totals ..	45	36	23	15	22	38	58	67	57	38	9	2	410

I here produce, for the first time, tables showing the death rates from tuberculosis (*a*) among occupied and unoccupied males and females under and over 15 years respectively, and (*b*) among males and females engaged in various occupations.

The figures are too small at present to justify any very general conclusion, but if these records are continued for a few years, the mass of statistical information thus accumulated will be of much higher value.

Taking the figures as they stand at present, but considering only cases of fairly large numbers, they show the following among other interesting facts:—

(1) That the general death rate of the district from tuberculous diseases may be estimated as approximately equal to 1·68 per 1000.

(2) That employed males over 15 suffer more than twice as much from tubercle as unemployed.

(3) That in the case of females no such difference is apparent.

NOTTINGHAM, 1902 TUBERCULOSIS AND OCCUPATION. POPULATION, DEATHS, AND DEATH-RATES (M. & F.).

	POPULATION.				FIRST QUARTER.						SECOND QUARTER.						THIRD QUARTER.						FOURTH QUARTER.						ENTIRE YEAR, 1902.					
					Males.		Females.		Totals, both sexes.		Males.		Females.		Totals, both sexes.		Males.		Females.		Totals, both sexes.		Males.		Females.		Totals, both sexes.		Males.		Females.			
	Males.	Females, Un-Married.	Females, Married.	Females, Totals.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Total Deaths.	Total Death Rate.
Municipal, Parish, and County Officers	196	29	14	43	..	..	..	..	..	..	..	..	..	..	..	..	1	20·41	..	..	1	16·74	..	..	..	..	..	..	1	5·10	..	..	1	4·18
Musicians	157	146	39	185	..	..	..	..	..	..	..	..	..	..	..	..	1	25·48	..	..	1	11·70	..	..	..	..	..	..	1	6·37	..	..	1	2·93
Domestic Indoor Servants	304	7029	531	7560	..	..	..	..	..	..	..	1	·53	1	·52	..	..	..	..	..	..	..	..	1	·53	1	·52	..	..	2	·26	2	·26
Launderers	56	628	454	1082	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	77·44	..	..	1	3·52	1	17·86	..	..	1	·88
Commercial Travellers	534	2	..	2	..	..	..	..	..	..	1	7·49	..	..	1	7·46	2	14·98	..	..	2	14·92	..	..	..	..	..	..	3	22·47	..	..	3	22·38
Auctioneers	106	..	..	..	1	37·56	..	..	1	37·56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	9·39	..	..	1	9·39
Commercial or Business Clerks	1821	383	6	389	1	2·20	1	10·29	2	3·62	1	2·20	..	..	1	1·81	3	6·60	..	..	3	5·43	2	4·40	..	..	2	3·62	7	3·84	1	2·57	8	3·62
Insurance Agents	281	..	..	..	1	14·23	..	..	1	14·04	1	14·24	..	..	1	14·24	..	..	..	..	..	..	..	..	..	..	..	..	2	7·12	..	..	2	7·12
Railway Officials or Clerks	552	..	..	..	..	..	..	..	..	..	1	7·25	..	..	1	7·25	..	..	..	..	..	..	..	..	..	..	..	..	1	1·81	..	..	1	1·81
Coachmen, Grooms, Cabmen	714	..	..	..	1	5·60	..	..	1	5·60	..	..	..	..	..	..	1	5·61	..	..	1	5·60	..	..	..	..	..	..	1	1·401	..	..	1	1·401
Omnibus Conductors	42	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	95·24	..	..	1	95·24	..	..	..	..	..	..	1	23·81	..	..	1	23·81
Warehousemen	108	2	1	3	..	..	..	..	..	..	1	37·05	..	..	1	36·04	..	..	..	..	..	..	..	..	..	..	..	..	1	9·25	..	..	1	9·01
Messengers, Porters, Watchmen	1305	310	..	310	1	3·07	..	..	1	2·48	..	..	..	..	..	..	1	3·07	..	..	1	2·48	..	..	..	..	..	..	2	1·54	..	..	2	1·24
Coal Workers, below ground	2638	..	..	..	1	1·52	..	..	1	1·52	4	6·07	..	..	4	6·07	6	9·09	..	..	6	9·09	2	3·03	..	..	2	3·03	13	4·95	..	..	3	4·95
Coal Workers, above ground	1555	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2·58	..	..	1	2·58	2	5·16	..	..	2	5·16	3	1·93	..	..	3	1·93
Coal and Coke Merchants and Dealers	286	2	13	15	..	..	..	..	..	..	1	13·99	..	..	1	13·99	..	..	..	..	..	..	1	13·47	..	..	1	13·47	4	10·24	1	..	4	13·47
Blacksmiths	857	..	4	4	1	4·7	..	..	1	4·65	1	4·67	..	..	1	4·65	1	4·67	..	..	1	4·65	3	14·00	..	..	3	13·936	6	7·002	..	..	6	6·97
Machine Makers, undefined	815	17	2	19	1	4·94	..	..	1	4·80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1·23	..	..	1	1·199
Needle and Pin Makers	37	1	1	2	..	..	..	..	..	..	1	108·12	..	..	1	103·20	..	..	..	..	..	..	..	..	..	..	..	..	1	27·03	..	..	1	25·65
Watch Makers	111	..	1	1	..	..	..	..	..	..	1	36·03	..	..	1	35·716	..	..	..	..	..	..	..	..	..	..	..	..	1	9·01	..	..	1	8·93
Carpenters, Joiners	1813	..	..	..	1	2·21	..	..	1	2·21	2	4·42	..	..	2	4·42	2	4·42	..	..	2	4·42	1	2·21	..	..	1	2·21	6	3·31	..	..	6	3·31
Bricklayers	1107	..	..	..	2	7·23	..	..	2	7·23	1	3·61	..	..	1	3·61	1	3·61	..	..	1	3·61	1	3·61	..	..	1	3·61	5	4·52	..	..	5	4·52
Masons	296	..	1	1	1	13·5	..	..	1	13·5	1	13·5	1	..	2	6·7	..	..	..	..	..	..	1	13·5	..	..	1	13·47	4	10·24	1	..	4	13·47
Painters, Decorators, Glaziers	934	..	3	3	..	..	..	..	..	..	2	8·56	..	..	2	8·544	3	12·84	..	..	3	12·80	1	4·28	..	..	1	4·27	6	6·42	..	..	6	6·39
Well and Mine Sinkers	67	..	..	..	..	..	..	..	..	..	1	59·72	..	..	1	59·72	..	..	..	..	..	..	..	..	..	..	..	..	1	14·93	..	..	1	14·93
Cabinet Workers	395	..	1	1	2	20·26	..	..	2	20·20	..	..	..	..	..	..	1	10·13	..	..	1	10·10	1	10·13	..	..	1	10·10	4	10·126	..	..	4	10·10
Upholsterers	134	104	18	122	1	29·9	..	..	1	15·63	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	7·46	..	..	1	3·91
Wood Turners	220	1	..	1	..	..	..	..	..	..	1	33·32	..	..	1	33·06	..	..	..	..	..	..	..	..	..	..	..	..	1	4·54	..	..	1	4·52
Chemists and Druggists	144	40	5	45	..	..	..	..	..	..	..	..	..	..	..	..	2	55·55	..	..	2	42·34	..	..	..	..	..	..	2	13·88	..	..	2	10·59
Furriers and Skinners	68	2	..	2	1	58·84	..	..	1	57·16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	14·71	..	..	1	14·29
Saddlers, Harness and Whip Makers	184	3	5	8	1	21·74	..	..	1	20·84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	10·87	..	..	2	10·42
Stationery Manufacturers	19	29	3	32	1	210·52	..	..	1	78·4	..	..	..	..	..	..	..	..	..	..	..	..	1	21·74	..	..	1	20·84	2	52·60	..	..	1	19·6
Paper Box, Paper Bag-Makers	69	254	98	352	1	57·97	..	..	1	9·50	..	..	1	11·37	1	9·50	..	..	..	..	..	..	..	..	..	..	..	..	1	14·50	1	2·84	2	4·75
Newspaper Agents	101	10	23	33	..	..	..	..	..	..	..	..	..	..	..	..	1	39·6	..	..	1	22·85	..	..	..	..	..	..	1	9·90	..	..	1	7·46
Cotton Winders	22	255	100	355	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	11·27	1	10·61	..	..	..	..	..	..	..	..	1	2·82	1	2·65
Silk—Undefined Processes	33	20	3	23	1	130·16	..	..	1	71·44	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	30·04	..	..	1	17·86
Hosiery Manufacturers	2304	2563	864	3427	1	1·74	1	1·17	2	1·40	4	6·96	..	..	2	1·40	1	1·74	..	..	1	·70	1	1·74	..	..	1	·70	7	3·04	1	·29	8	1·036
Lace Manufacturers	4271	5224	2871	8095	2	1·87	6	2·86	8	2·58	3	2·83	4	1·98	7	2·09	1	0·93	3	1·43	4	1·19	3	2·83	4	1·98	7	2·09	9	2·12	17	2·10	26	2·10
Textile Dyers	184	4	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	43·48	..	..	2	42·10	2	10·88	..	..	2	10·52
Milliners	4	351	72	423	..	..	2	18·92	2	18·75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4·73	2	4·69
Tailors	765	355	131	486	1	5·23	..	..	1	3·20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1·31	..	..	1	·80
Dressmakers	19	2126	624	2750	..	..	1	1·45	1	1·44	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2·90	2	2·88	..	..	3	1·09	3	1·08
Boot and Shoe Makers	946	101	26	127	3	12·68	1	31·40	4	14·91	..	..	1	31·40	1	3·73	2	8·46	..	..	2	7·45	2	8·46	..	..	2	7·45	7	9·39	2	15·7	9	8·39
Butchers	983	11	29	40	..	..	..	..	..	..	1	4·08	..	..	1	3·92	..	..	..	..	..	..	..	..	..	..	..	..	1	1·02	..	..	1	·98
Fishmongers	234	6	16	22	1	17·86	..	..	1	16·26	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4·46	..	..	1	4·07
Bakers, Confectioners	346	117	81	198	..	..	..	..	..	..	1	16·27	..	..	1	8·96	1	16·27	..	..	1	8·96	1	16·27	..	..	1	8·96	3	12·20	..	..	3	6·76
Grocers, Tea, Coffee, and Chocolate Dealers	1230	155	320	478	1	3·25	..	..	1	2·25	..	..	..	..	..	..	..	..	1	8·36	1	2·49	1	3·25	..	..	1	2·25	2	1·62	1	2·09	3	1·866
Tobacco Manufacturers	276	1052	141	1193	..	..	1	3·35	1	2·74	..	..	..	..	..	..	..	..	..	..	..	..	1	9·35	1	2·74	..	..	1	1·71	..	..	1	1·36
Brewers	330	1	..	1	1	12·12	..	..	1	12·08	..	..	..	..	..	..	2	24·24	..	..	2	24·16	..	..	..	..	..	..	3	9·09	..	..	3	9·06
Inn and Hotel Keepers, Publicans, Beer Sellers	585	18	132	150	..	..	..	..	..	..	..	..	..	..	..	..	1	6·84	..	..	1	5·44	..	..	..	..	..	..	1	1·71	..	..	1	1·36
Inn, Hotel, and Eating House Servants	99	110	11	121	..	..	1	33·06	1	18·18	..	..	1	33·06	1	18·18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gasworks Service	401	..	..	..	1	9·98	..	..	1	9·98	..	..	..	..	..	..	..	..	..	..	..	..	1	9·98	..	..	1	9·98	2	4·99	..	..	2	4·99
Chimney Sweepers	104	..	..	..	..	..	..	..	..	..	1	38·46	..	..	1	38·46	..	..	..	..	..	..	..	..	..	..	..	..	1	9·62	..	..	1	9·62
General Shopkeepers and Dealers	205	137	92	229	1	19·52	..	..	1	16·81	..	..	..	..	..	..	..	..	..	..	..	..	1	19·52	..	..	1	16·81	2	9·76	..	..	2	8·49
Costermongers, Hawkers, Street Sellers	416	12	49	61	2	19·24	..	..	1	16·77	..	..	1	77·48	..	..	..	..	..	..	..	..	2	19·24	..	..	2	16·78	4	9·62	1	16·37	5	10·48
General Labourers	2172	..	..	..	2	3·68	..	..	..	..	3	5·53	..	..	3	5·53	5	9·22	..	..	5	9·22	3	5·53	..	..	3	5·53	13	5·99	..	..	13	5·99
Engine Drivers and Stokers (not Railway)	1760	..	..	..	..	..	..	..	..	..	1	2·27	..	..	1	2·27	..	..	..	..	..	..	..	..	..	..	..	..	1	0·57	..	..	1	0·57
Artizans, Mechanics	177	1	1	2	4	90·4	..	..	4	89·4	5	113·0	..	..	5	111·75	2	45·2	..	..	2	44·70	1	22·6	..	..	1	22·35	12	67·8	..	..	12	67·05
Machinists, Machine Workers	24	70	9	79	..	..	1	50·64	1	38·85	..	..	2	101·28	2	77·70	..	..	1	50·64	1	38·85	..	..	2	101·28	2	77·70	..	..	6	75·95	6	58·26
Pensioners	100	1	3	4	1	40·0	..	..	1	38·44	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	10·0	..	..	1	9·61
Unoccupied	43176	49475	47074	96549	18	1·67	15) 19)	1·41	52	1·97	9	·83	16) 15)	1·28	40	1·21	10	·93	10) 11)	·87	31	·94	17	1·57	19) 18)	1·53	54	1·64	54	1·25	60) 63)	1·27	177	1·34

(4) That the death rate from tuberculous diseases among males is higher than that among females in the ratio of 1·71 to 1·24 (the respective death rates per 1000 living of either sex).

(5) That of the occupations with over 500 workers the following have rates above 2·0 per 1000:—

(*a*)	Commercial Travellers	(22·38)
(*b*)	Commercial Clerks	(3·62)
(*c*)	Coal Miners below ground	(4·95)
(*d*)	Blacksmiths	(6·97)
(*e*)	Carpenters and Joiners	(3·31)
(*f*)	Bricklayers	(4·52)
(*g*)	Painters and Decorators	(6·39)
(*h*)	Lacemakers	(2·10)
(*i*)	Boot and Shoe Makers	(8·39)
(*j*)	General Labourers	(5·99)

And the following have rates of less than 2·0 per 1000:

(*k*)	Domestic Indoor Servants	(0·26)
(*l*)	Railway Officials	(1·81)
(*m*)	Coachmen, Grooms, Cabmen	(1·40)
(*n*)	Messengers, Porters, Watchmen	(1·24)
(*o*)	Coal Workers above ground	(1·93)
(*p*)	Machine Makers	(1·20)
(*q*)	Launderers and Laundresses	(0·88)
(*r*)	Hosiery Makers	(1·39)
(*s*)	Tailors	(0·80)
(*t*)	Dressmakers	(1·08)
(*u*)	Butchers	(0·98)
(*v*)	Grocers, &c.	(1·86)
(*w*)	Tobacco Workers	(1·37)
(*x*)	Public House, Inn, and Hotel Keepers	(1·36)
(*y*)	Engine Drivers	(0·57)

I desire to acknowledge my indebtedness to Dr. Thos. Aldous Clinch for his assistance in compiling the tables which accompany this section.

In concluding, I may advert once more to the subject of the voluntary notification of phthisis. This has been in force for several years in many towns of the

United Kingdom, in most cases with much advantage to the community, and has already been approved by the Medico-Chirurgical Society of Nottingham. Its adoption here would do no harm to anyone, would afford us valuable information, and place us also in a position to give much useful advice and assistance to sufferers and their friends.

Table of Deaths from Tuberculosis, showing proportion of deaths to population in males and females, with and without occupations and below and above the fifteenth birthday respectively.

		1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Whole Year.	
	Population.	No. of Deaths.	Deaths per 1000 per annum.	No. of Deaths.	Deaths per 1000 per annum.	No. of Deaths.	Deaths per 1000 per annum.	No. of Deaths.	Deaths per 1000 per annum.	No. of Deaths	Deaths per 1000 per annum.
MALES.											
EMPLOYED.											
Under 15 ..	3,410	1	1·17	..	..	..	..	..	..	1	·2933
Over 15 ..	77,463	40	2·27	41	2·12	42	2·17	34	1·76	157	2·03
Total ..	80,873	41	2·03	41	2·03	42	2·08	34	1·68	158	1·95
UNEMPLOYED											
Under 15 ..	38,753	17	1·75	9	·93	9	·93	15	1·5	50	1·29
Over 15 ..	4,423	1	·90	..	..	1	·90	2	1·81	4	·90
Total ..	43,176	18	1·67	9	·83	10	·93	17	1·57	54	1·25
Grand Total	124,049	59	1·80	50	1·61	52	1·68	51	1·65	212	1·709
FEMALES.											
EMPLOYED											
Under 15 ..	2,493	..	..	..	..	..	..	..	..	..	..
Over 15 ..	34,134	14	1·64	12	1·41	6	·70	10	1·17	42	1·23
Total ..	36,627	14	1·53	12	1·31	6	·66	10	1·09	42	1·14
UNEMPLOYED											
Under 15 ..	40,408	14	1·39	13	1·29	7	·69	16	1·58	50	1·24
Over 15 ..	56,146	20	1·42	18	1·28	14	1·00	21	1·49	73	1·3
Total ..	96,554	34	1·41	31	1·28	21	·87	37	1·53	123	1·27
Grand Total	133,181	48	1·44	43	1·29	27	1·17	47	1·41	165	1·24

General Death-rate from Tuberculosis 1·68.

ACTUAL TUBERCULOUS DISEASES.

Deaths and Death-rates in Age-periods.

Age-period	0—1	1—5	5—10	10—15	15—20	20—25	25—35	35—45	45—55	55—65	65—75	75—85
Number of Deaths..	35	32	22	12	20	30	61	61	53	38	9	3 ..
Death-rate per 1000 living in each period per annum.	6·2	1·61	·91	·50	·77	1·24	1·59	1·96	2·37	2·74	1·17	1·22 ..

Alcoholism, Acute and Chronic, was credited during 1902 with 34 deaths, as compared with 21 during 1901, and an annual average of 19 for the preceding five years. The deaths from cirrhosis of the liver numbered 53. A large majority of these are due to alcohol. The total for 1901 was 40, and the annua average of the preceding five years 33. Even the somewhat increased numbers for 1902 are far below the truth, but it is a curious fact that an increase should simultaneously occur under each of those headings to which we specially refer for deaths due to alcoholic excesses.

Cancer, or (for statistical purposes) some form of malignant new growth, was the certified cause of 223 deaths, as compared with 202 in 1901, and 195, 225, and 203 in the three immediately preceding years respectively. There is thus once more, as in several other recent years, a slight advance, to a greater extent than can be accounted for by the growth of population, in the mortality from this terrible group of causes. The total for 1902 is equal to 5·4 per cent. of all deaths for the year. It is scarcely too much to say that notwithstanding all recent research, with all the aids of up-to-date scientific medicine at its command—the Committee of the Cancer Research Fund is just publishing its first Annual Report—we are still as much in the dark as ever as to the cause or causes of malignant new growths.

The deaths in age-periods will be found as usual in Table III. (pp. 7–11). One hundred and thirty-six, or nearly two-thirds of the deaths, were those of females.

The deaths from **Diabetes mellitus** are returned as 21, which number accords very closely with the average of other recent years. The mean annual number for 1899–1901, for instance, was 20·3.

Premature Birth was given as the death cause in 161 cases, as compared with an annual average of 144 for the preceding three years.

Debility at Birth and Lung-Collapse were certified in 111 cases, as compared with 146 the year before.

Congenital Defects declined from 26 and 30 respectively in 1901 and 1900 to 14 in 1902.

Want of Breast-Milk, Atrophy, Debility, and Marasmus, are death causes the numerical roll of which it is difficult to compare from year to year. Accidental variations connected with methods of classification are extremely liable to interfere with accuracy.

According to the new general mortality table (No. III., pp. 7–11), adopted for the first time last year, the aggregate of deaths directly ascribed to these causes amounted to 155, as compared with 134 in 1901, and annual average of rather more than 200 for the five years ended with 1900.

Old Age was given as the cause of 203 deaths between 50 and 100 years of age, and 194 of these occurred between 65 and 100. The total for 1901 was 175, and the annual average for the preceding five years, 170.

Infantile Convulsions were certified as the primary death-cause in 90 instances. The number in 1901 was 106, and the range between 1896 and 1900 was from 123 to 104.

Simple Meningitis was the ostensible death-cause in 58 cases, 44 of which were before the end of the fifth year. Although many of these deaths are probably due to tuberculous disease, the annual numbers show comparatively little variation from year to year. During 1901 they amounted to 86, but for the preceding five years they averaged 59, and ranged only from 53 to 65.

Apoplexy, Softening of the Brain, &c., were certified in 223 cases, a number very closely in agreement with the average of many years past.

General Paralysis of the Insane and other Forms of Insanity were given as the causes of 35 deaths. The number during 1901 was 38, and the annual average of the preceding five years, 36. The close correspondence of these yearly figures is very striking.

Epilepsy was given as the death-cause in 26 instances, as against 17 in 1901, and an annual average of 18 for the five years ended with 1900.

Locomotor Ataxy and other like Diseases of the Spinal Cord caused apparently some 16 deaths, as compared with 25 the year before, and a quinquennial average of 17.

Organic Heart-Diseases were given in 390 instances, as against 378 in 1901, and a five years' average of 375.

Bronchitis, Pneumonia, and Pleurisy, &c., were certified as the death-causes in 749 cases. The number for 1901 was 685, and the annual average for the five years ended with 1900 was 769.

The somewhat extensive range of variations observed in the yearly totals (*e.g.*, from 685 to 879 during the five years) is, I believe, in great measure to be explained by the respective absence and presence of epidemic influenza during the years to which the records belong. I may mention that during 1890 and 1891, when epidemic influenza caused such wide-spread distress and mortality throughout the greater part of the world, the deaths from bronchitis, pneumonia, and pleurisy in Nottingham numbered respectively 899 and 944—the record figures for the latter diseases locally. These are numbers, be it remembered, and not rates, and belong to a time when the population of the town was 30,000 less than now.

Diseases of the Stomach and Gullet proper (other than cancer), were furnished as the causes of 40 deaths, against 50 the year before. Owing, however, to unavoidable errors of classification (due to want of precision in the drawing up of death certificates), it is well-nigh impossible to make a reliable comparison of these deaths in successive years. Still, the annual numbers have averaged between 30 and 40 for many years past.

Under this heading we find many deaths of children (15 in 1902) from various stomach disturbances, and also those of adults from gastric ulcer—commonest in females between 20 and 30, and in males between 30 and 40. There were 17 deaths ascribed to gastric ulcer in 1902—all but two due to perforation.

Simple Enteritis was held responsible for 39 deaths, 33 of which were of children under 5 years of age. The deaths under this heading vary so directly and constantly with the degree of prevalence of epidemic diarrhœa, as to compel the conclusion that they are, for the most part, only ill-certified fatalities from that disease.

During 1901 the deaths from diarrhœa were returned as 361, and those from simple Enteritis as 87. During 1902 the corresponding numbers were respectively 194 and 39.

Appendicitis was certified in 10 cases, as compared with 11 in 1901. Seven of the deaths were between the 10th and the 40th year.

Hernia and other Obstructive Diseases of the Bowels causes apparently some 29 deaths, a number slightly in advance of that for 1901, but otherwise somewhat below the average—which, for the five years ended with 1900, was 33.

Acute Nephritis and Bright's Disease were returned as the causes of 94 deaths. The total for 1901, and the annual average for the preceding five years were alike 105.

Tumours (non-cancerous) and other affections of the female organs of generation were certified as causing 25 deaths. The number for 1901 was 16, and the quinquennial average, 20.

Accidents of Child-birth were the cause of 20 maternal deaths, or 1 in every 343 births. Puerperal septicæmia (the cause of 8 deaths) has already been dealt with under general septicæmia.

If this be included (as it certainly should be) among the fatal accidents of child-birth, the ratio of the latter to total births becomes 1 to 245.

The deaths from accidents of child-birth, less puerperal septicæmia, during 1901, were 23 in number, and those from puerperal septicæmia, 9. The average annual numbers of each for the preceding five years were respectively 27 and 10.

It is to be hoped that the new Midwives Act, which although already in force, is not yet in operation (through lack of initial action on the part of the Central Midwives Board) will have the effect of still further reducing this maternal mortality.

The deaths from **Accidents or Negligence** were 106 in number, as compared with 103 in 1901, and an annual average of 113 for the five years ended with 1900. Of the deaths thus recorded in 1902, 4 occurred in coal-mines, 11 in the streets from vehicular traffic, 5 on railways, 4 in building operations, 3 by machinery, 16 by burns and scalds (3 being those of young children), 2 from chloroform, 1 from electric shock, 10 from drown-

ing (5 those of children under 10), 22 by overlying (all of infants under 1 year, 3 illegitimate), 4 by suffocation (otherwise induced), and 20 by falls.

There was one **homicidal** death. There were 32 deaths by **suicide**, 1 under 10 years of age, and 1 between 10 and 15, the rest between 20 and 85, 27 being between the 20th and 60th year of life. Nine were by poison, 9 by hanging, 6 by drowning, 2 by shooting, 4 by cut or stab, and 1 by precipitation from a height.

Uncertified Deaths.—There were 21 of these according to my returns, and 25 according to those of the Registrar-General. My figures are equal to 0·51 per cent. of the total deaths, as compared with 0·6 per cent. during 1901, and 0·77 for 1902. The corresponding proportion for London during 1902 was 0·3 per cent., and for the 76 great towns (of England and Wales) taken together, 1·2 per cent.

Inquests.—The inquests held by the City Coroner (Mr. C. L. Rothera, B.A.) or his deputy, during the year, numbered 271. This number is equal to 6·5 per cent. of the total number of deaths. The number and percentage for 1901 were respectively 270 and 6·1. The mean number of inquests during the preceding 5 years was 275. In London during 1902 the inquest cases were equal to 9·7 per cent., and in the 76 great towns to 7·7 per cent. of all deaths.

Chart of Meteorology, Births and Deaths in Nottingham for 1902.—This chart, drawn up us usual under the direction of Mr. Arthur Brown and myself, will be found at the end of the Report. Its form and features are identical with those of 1901.

CITY ISOLATION HOSPITAL, BAGTHORPE, BASFORD.

The total number of cases admitted to the hospital during 1902 amounted to 618. The numbers for the three immediately preceding years were respectively 574, 785, and 1293. The number for 1902 was made up as follows:—

Scarlet fever, 495 cases; enteric fever, 57 cases; diphtheria, 45 cases; other incidental diseases, 21 cases. No cases of small-pox were admitted during the year.

There were 104 cases remaining in hospital at the close of the year:—75 being of scarlet fever, 19 of enteric fever, 7 of diphtheria, and 3 of other incidental diseases.

Total Number of Cases in Hospital, 1902.

Disease.		Remaining at end of 1901.			Admitted during 1902.			Total cases during 1902.	Total deaths during 1902.	Case mortality of total cases, 1902.	Days of average residence.		Remaining at end of 1902.
			Recovered.	Died.		Recovered.	Died.				Non-fatal	Fatal.	
Scarlatina ..	M.	33	33	..	242	204	2	275	2				36
	F.	44	44	..	253	208	6	297	6				39
Total..		77	77	..	495	412	8	572	8	1·3	51	16.7	75
Enteric Fever	M.	2	2	..	26	18	..	28	..				8
	F.	9	9	..	31	14	7	40	7				11
Total..		11	11	..	57	32	7	68	7	14·2	47·5	8·5	19
Diphtheria ..	M.	2	2	..	17	13	2	19	2				2
	F.	2	2	..	28	20	3	30	3				5
Total..		4	4	..	45	33	5	49	5	10·2	26·8	27	7
Other Diseases	M.	..	..	..	11	7	1	11	1				3
	F.	..	..	..	10	10	..	10	..				..
Total..		..	..	..	21	17	1	21	1	4·7	14·9	11	3
Total		92	92	..	618	494	20	710	21	3·4	39·9	16·7	104

Seven cases sent in for scarlet fever, 6 for enteric fever, and 1 for diphtheria, proved to have been incorrectly certified, and are classed under the heading of "other diseases."

The cases actually under treatment during the year include of course those remaining in hospital at the close of the previous year. These numbered 92:—77 of scarlet fever, 11 of enteric fever, and 4 of diphtheria. By the addition of these to the number admitted we obtain a total of 710 cases under treatment between January 1st and December 31st. The ultimate result, so far as relates to hospital treatment, of the cases remaining at the close of each year—in this instance 104—is given, it must be remembered, in the report for the following year.

Table shewing the number of Beds occupied during each month of the year.

Month.	Beds Occupied.		Month.	Beds Occupied.	
	Highest.	Lowest.		Highest.	Lowest.
January	91	77	July	80	66
February	80	71	August	81	75
March	80	74	September ..	81	78
April	76	67	October	92	81
May	64	55	November ..	106	98
June	64	57	December	104	101

SCARLET FEV

The reputed cases of scarlet fever notified in Nottingham during the year, numbered 966. Of these 502, or 52 per cent. were removed to hospital. As already stated, seven cases proved, after admission, to have been incorrectly certified. The cases removed in the three immediately preceding years amounted respectively to 47 per cent., 49·5 per cent., and 47 per cent. of the totals for these years.

The return cases (or cases occurring in the houses to which hospital patients return after their discharge, within 21 days of such discharge) were 18 in number. This number is equal to 3·68 per cent. of all cases discharged, and 3·64 per cent. of all cases admitted during the year. The total number of return cases, and the proportion they bear to the total cases, are alike considerably below the corresponding figures for 1901.

These were, respectively, 24 and 5·5 per cent. Several of the return cases during 1902 were severe, but none fatal. The monthly incidence of return cases is given in the table on page 85 of this Report. It will be seen that 13 out of 18, or 72 per cent. occurred during the first half of the year.

The cases of actual scarlet fever admitted during the year numbered 495. There were 243 male cases, and 254 female. The fatalities among the male cases were 2, and among the female, 6. The male deaths were equal to 0·82 per cent. of all male cases., the female to 2·4 per cent. of all female cases. The rate of mortality among females, therefore, was almost exactly three times greater than that among males.

The total case mortality was equal to 1·61 per cent., and with the exception of that for 1901 (1·1) was the lowest on record.

The accompanying tables give the usual details of the age and sex distribution, and of the complications, of the cases under treatment.

Age and Sex Distribution of Non-fatal and Fatal Cases of Undoubted Scarlet Fever under treatment in Hospital during 1902, exclusive of those remaining at the close of the year, but inclusive of those carried over from 1901.

AGE PERIODS.	MALES.		FEMALES.	
	Recoveries.	Deaths.	Recoveries.	Deaths.
Under 1 year	..	..	..	..
Between 1 and 2 years	6	..	5	..
„ 2 and 3 „	9	1	9	1
„ 3 and 4 „	16	..	23	1
„ 4 and 5 „	30	..	21	1
„ 5 and 10 „	95	1	88	1
„ 10 and 15 „	45	..	47	..
„ 15 and 20 „	17	..	28	..
„ 20 and 25 „	11	..	20	..
„ 25 and 30 „	4	..	5	1
„ 30 and 35 „	5	..	1	1
„ 35 and 40 „	1	..	1	..
Over 40 years	2	..	..	..
TOTALS	241	2	248	6

Actual Age at Death in Fatal Cases.

MALE.		FEMALE.	
2 years	1	2½ years	1
7 „	1	3 „	1
	2	4 „	1
		8 „	1
		25 „	1
		32 „	1
			6

Total cases	497
„ deaths	8
„ case mortality	1·61%
Male cases	243
„ deaths	2
„ case mortality	·82%
Female cases	254
„ deaths	6
„ case mortality	2·4%

There is little to be said about the age incidence of the cases, as the latter constitute only a little more than half of all those notified. It may be observed, however, that, with the existing mild type of scarlet fever, the old rule of a specially high mortality in the first two years of life does not hold good. The two male deaths occurred at 2 and 7 years of age respectively. Four of the female deaths were, respectively, at 2½, 3, 4, and 8 years of age, but the other two were at 25 and 32 years of age.

The mortality among females is commonly higher than that among males at the more advanced ages, and this fact is usually explained by the occurrence of a larger number of cases among females than males at such ages, but this explanation is inadmissible here, as the male cases, from 25 years onwards at least, exceed the female.

The list of complications is always an interesting, and sometimes an anomalous study. One remarkable feature about it on this occasion is the large proportion of cases in which well marked secondary gland affections and nasal inflammation followed relatively mild attacks of the disease. Another somewhat remarkable circumstance is the comparative infrequency of diphtheria as a complication, at a time—like the present—when that disease as a primary disorder is becoming unusually prevalent in the town and district.

Recorded Complications among Scarlatina Cases under treatment during 1902.

Complications.	Cases affected.	Percentage of all Cases.
Periostitis	1	0·2
Rhinitis	128	25·7
Otitis	37	7·4
Nephritis	76	15·3
Adenitis	160	32·2
Arthritis	13	2·6
Cardiac Sequelæ	43	8·7
Quinsy	6	1·2
Psoriasis	3	0·6
Conjunctivitis	9	1·8
Alopæcia	3	0·6
Anæmia	1	0.2
Herpes	18	3·6
Broncho-pneumonia	2	0·4
Impetigo	15	3·0
Bronchitis	31	6·2
Post-Scarlatinal Diphtheria ..	3	0·6
Convulsions	3	0·6
Erythema Nodosum	2	0·4
Cellulitis	1	0·2
Chorea	2	0·4
Keratitis	1	0·2
Dactylitis	1	0·2
Delirium	1	0·2
Retinitis	1	0·2
Meibomian Ulcer	1	0·2
Meningitis	3	0·6
Sycosis	5	1·0
Pharyngitis	18	3·6
Urticaria	4	0·8
Vaginitis	1	0·2
Adenoids	16	3·2
Parotitis	4	0·8
Onychia	2	0·4
Abscess—Cervical	7	1·4
„ Mastoid	5	1·0
„ Post-Auricular ..	4	0·8
„ Pharyngeal	1	0·2
„ Buttock	3	0·6
„ Tonsillar	1	0·2
„ Soft Palate	1	0·2
„ Alveolar	3	0·6
„ Abdominal	1	0·2

There were five cases of second attack.

Thirty-five minor operations were performed, including the opening of abscesses, and the removal of tonsils and adenoids.

As I have already stated in the article on enteric fever, this disease was less prevalent and less fatal in Nottingham, by 26 per cent. and 37 per cent. respectively, in 1902 than in 1901. I have also explained the diminished prevalence as probably due to a relatively cold and wet summer and autumn.

The diminished prevalence affects the hospital by entailing a lessened demand for hospital accommodation. The demand was so much less during 1902 than the year before that it was only on two occasions necessary to refuse admission to cases for lack of room.

The total number admitted during 1902 amounted to 57; 11 remained in hospital at the close of 1901, and 19 at the close of 1902. By adding the former to the cases admitted during the year, and subtracting the latter, we obtain a total of 49 which were treated and seen to a finish during 1902.

The monthly admissions, when any took place, were as follows:—10 in January; none from February to May inclusive; 1 each in June and July; 2 each in August and September; and 15, 14, and 12 in October, November, and December respectively.

The table below gives the male and female cases, and the deaths in age-periods, also the case-mortality, and the actual cause of death in each of the fatal cases.

The general history of all the enteric fever cases notified in the city during the year will be found in the section devoted to this disease in the body of the Report. One singular fact, however, connected with the history of the hospital cases calls for special notice. There were 20 male and 29 female cases, the ultimate issues of which were determined during the year, and no less than seven of the female cases proved fatal, as compared with a total absence of fatality on the male side. This illustrates the peculiar tendency which enteric fever has to run in strains of mildness and severity—a tendency warning us to beware of rash inferences as to the influence of special lines of treatment.

Age and Sex Distribution of Cases of Enteric under treatment in Hospital during 1902, including those left over from 1901, but excluding those remaining at the end of 1902.

Ages.	Males.		Females.	
	Recovered.	Died.	Recovered.	Died.
Between 5 and 10 years	4	..	3	..
„ 10 „ 15 „	3	..	3	2
„ 15 „ 20 „	1	..	7	1
„ 20 „ 25 „	1	..	1	1
„ 25 „ 30 „	2	..	..	1
„ 30 „ 35 „	3	..	4	1
„ 35 „ 40 „	2	..	1	..
Over 40 years	4	..	3	1
Totals ..	20	..	22	7

Total Cases, 49.—Deaths, 7. *Total case mortality*, 14·2%.

Male Cases, 20.—Deaths, 0. *Case mortality*, 0.

Female Cases, 29.—Deaths, 7. *Case mortality*, 24·1%.

Cases remaining in Hospital at end of 1902—19.

The 49 cases are made up as follows:—

11 remaining from 1901.
57 admitted during 1902.

68

19 carried over to 1903.

49

In the 7 fatal cases deaths were due to:—

4 Toxæmia.
1 Hypostatic Pneumonia.
1 Pericarditis.
1 Myocarditis.

1 Female aged 72 recovered.

DIPHTHERIA.

The local prevalence of diphtheria has greatly increased during the past eighteen months. Our neighbours, Sheffield and Leicester, have suffered severely from it in recent years, but Nottingham has enjoyed a comparative immunity until within the above period.

The cases admitted during 1902 numbered 45. There were 4 in hospital at the close of 1901, and 7 at the close of 1902. Omitting the latter, as cases not finally dealt with in 1902, we have 42 to report upon

here. The monthly admission table shews the tendency which the disease exhibited to increase during the latter part of the year, the number of cases taken in being determined by the degree of prevalence and consequent (lesser or greater) demand for hospital accommodation.

Age and Sex Distribution of Cases of Diphtheria under treatment during 1902, including four left over from 1901, but excluding seven remaining at the close of 1902.

Ages.	Males.		Females.		Monthly Admissions.
	Recovered.	Died.	Recovered.	Died.	
Under 1 year ..	..	..	..	..	Jan. 2
Between 1 and 2 years	1	..	1	..	Feb. 1
„ 2 and 3 „	..	1	1	..	March 3
„ 3 and 4 „	4	..	3	1	April 3
„ 4 and 5 „	..	..	..	..	May 1
„ 5 and 10 „	4	1	7	2	June 4
„ 10 and 15 „	3	..	2	..	July 6
„ 15 and 20 „	1	..	3	..	August 2
Over 20 years ..	1	..	5	..	Sept. 7
„ 30 „ ..	1	..	..	..	Oct. 5
					Nov. 4
					Dec. 7
Totals	15	2	22	3	45

Total Cases, 42.—Deaths, 5. *Case mortality*, 11·9%.
Male Cases, 17.—Deaths, 2. *Case mortality*, 11·7%.
Female Cases, 25.—Deaths, 3. *Case mortality*, 12%.

The total 42 cases include four cases left over from 1901, and 38 of the 45 cases admitted during 1902, seven cases being carried over to 1903.

In the five fatal cases death was due to the following complications:—
Cardiac Paralysis—2 cases (one dying five minutes, the other six hours after admission).
Mixed Infection (Scarlet Fever with Septic Pneumonia)—3 cases.

The cold and wet months of the year are normally those most favourable to the development of diphtheria, but the increase which occurred in the latter half of the year is greater than can be explained by seasonal causes. There were but 14 cases admitted between January 1st and June 30th, whereas 31 were taken in during the next six months.

The case mortality was by no means high, being equal to 11·9 per cent. for all cases, 11·7 per cent. for males, and 12 per cent. for females. All patients were

injected with antitoxic serum on admission, and afterwards if necessary, and with excellent effect when taken early enough for the antidote to operate.

Table showing monthly admissions of Cases of Scarlet Fever, Enteric Fever and Diphtheria, together with the monthly numbers of return cases of Scarlet Fever.

Months.	Cases Admitted.			Return cases of Scarlatina.
	Scarlatina.	Enteric Fever.	Diphtheria.	
January	29	10	2	4
February	48	—	1	2
March	39	—	3	2
April	43	—	3	1
May	39	—	1	2
June	32	1	4	2
July	50	1	6	0
August	42	2	2	1
September..	45	2	7	1
October	52	15	5	1
November	39	14	4	1
December	37	12	7	1
	495	57	45	18

There were 21 cases of other Diseases which, when added to the above, make up a total of 618 cases of all descriptions admitted during 1902.

There were 489 Scarlet Fever cases discharged from the Hospital during 1902:—

Carried over from 1901		77
Admitted during 1902		495
		572
Died during 1902	8	
Carried over to 1903	75	
		83
		489

The following table furnishes particulars of cases of "other diseases" above referred to, which were admitted upon erroneous notification certificates or otherwise during 1902:—

Table of Cases of "Other Diseases" admitted during 1902.

	Admissions and Ages (years).		Recoveries.		Deaths.		Admitted for
	Male.	Female	Male.	Female	Male.	Female	
1	18	..	R	..	..	..	Enteric, proved to be Appendicitis.
2	41	..	..	..	D	..	do. do. Pulmonary Tuberculosis.
3	1	1	R	R	..	..	Scarlet Fever, proved to be Varicella.
4	..	1	..	R	..	..	do. do. do. Axillary Abscess.
5	30	..	R	..	..	..	do. do. do. Morbilli.
6	16	..	R	..	..	..	Impetigo Contagiosa, proved to be Gastritis.
7	..	21B	..	R	..	..	Diph., proved to be Quinsy.
8	30	..	R	..	..	..	Enteric, do. Intussusception.
9	..	1½	..	R	..	..	—
10	..	24B	..	R	..	..	Diph., proved to be Follicular Tonsillitis.
11	13	..	R	..	..	..	do. do. do.
12	8	..	R	..	..	..	—
13	..	22B	..	R	..	..	—
14	..	28B	..	R	..	..	Scarlet Fever, proved to be simple Erythema.
15	19	..	R	..	..	..	do. do. do.
16	..	48	..	R	..	..	do. do. do.
17	..	5	..	R	..	..	Enteric, proved to be simple Enteritis.
18	13	..	R	..	..	..	do. do. do.
19	14	..	R	..	..	..	do. do. do.
20	..	20	..	R	..	..	do. do. do.
	11	10	10	10	1		
	21		20		1		

B.—Signifies one of the Staff of Bagthorpe Hospital.

R.—Signifies Recovered.

D.—Signifies Died.

The case in which death was due to exhaustion and hæmoptysis following *acute* Phthisis was in the Hospital 11 days.

The Appendicitis case was sent to the General Hospital for operation, and recovered.

The City Accountant gives the expenditure on the General Isolation Hospital at Bagthorpe during the 12 months ending March 31st, 1903, as £5,462 3s. 1d., and that upon the Small-pox section as £406 5s. 5d. Both amounts are, of course, for current maintenance alone, all sums chargeable to capital expenditure being dealt with under a separate account. From the above total sums expended upon the Hospital as a whole (£5,868 8s. 6d.), must be subtracted the sum received for maintenance of patients, &c., which amounts to £184 3s. 10d. This brings the net expenditure down to £5,684 4s. 3d. The net expenditure for 1901 amounted in round figures to £5,480.

The cost per bed works out at £66 17s. 5d. for the isolation hospital as a whole, and £16 (three months) for the small-pox hospital.

The cost per patient was approximately (*a*) for the hospital as a whole, £8 7s. 2d.; and (*b*) for the small-pox hospital just over £8.

Dr. George Woodyatt Procter, who was appointed Resident Medical Officer of the hospital in 1901, continues to act in that capacity in a thoroughly satisfactory manner.

Miss Helen Wallace also remains with us as matron, and performs her duties, as heretofore, in such a way as to meet with your entire approval.

Handbills, Leaflets, &c. *(Distributed from the various sections of the Health Department.)*—Leaflet literature, relating to (*a*) the feeding and care of infants, (*b*) the prevention of diarrhœa and cholera, (*c*) the advisability of vaccination in view of the prevalence of small-pox, (*d*) the prevention of tuberculous consumption, (*e*) the care of scarlet fever patients discharged from Fever Hospitals, and (*f*) the provisions of the Shop Hours Acts, will be found reprinted in Appendix A of this Report.

Municipal Laboratory of Bacteriology.

—This laboratory is now doing much good and useful work under Dr. Jacob's direction.

The following is the substance of his report of work done during 1902:—

Particulars of Material received for Examination.

(*a*) In connection with Food Inspection.

1.	Specimens from sheep and cattle - -	66
2.	,, ,, game and other like animals - - - -	3
3.	,, ,, fish - - - -	4
4.	,, of tinned foods - - -	3
		76

(*b*) In connection with Human Cases of Tuberculosis or suspected Tuberculosis.

1.	Specimens of sputum examined for tubercle bacilli, with a positive result -	53
2.	Do. do. with a negative result -	66
		119

(*c*) In connection with Human Cases of Diphtheria or suspected Diphtheria.

1.	Specimens (throat swabs) examined for bacillus diphtheriæ, with a positive result	26
2.	Do. do. with a negative result -	27
		53

(*d*) In connection with Human Cases of Enteric or suspected Enteric Fever.

Widal's reaction—

1.	Positive result - - - -	77
2.	Negative result - - - -	57
		134

Disinfecting Department.—There was again a slight decline in the aggregate number of articles disinfected at the two public stations—at the Eastcroft Depôt and Bagthorpe Hospital respectively—as compared with the total of the previous year. This is explained by a corresponding reduction in the number of cases of those diseases for dealing with the infection of which our apparatus are employed.

Articles Disinfected at the Public Stations in Nottingham, 1891-1902.

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Bedding ..	5357	6735	8521	2943	10990	8822	4483	7550	22385	14582	12758	13002
Clothing ..	4741	10253	11266	20579	12652	9012	4768	5554	14605	10517	9403	3785
Furniture & Hngngs.	401	439	726	1541	1277	2184	1382	2130	2722	2397	3257	4455
Miscells. Articles	8586	13319	10573	10303	13272	8394	8341	7699	14093	9498	9410	11498
Total ..	19085	30746	31086	35366	38191	28392	18974	22933	53805	36994	34828	32740

In my last annual Report I drew attention to the fact that many articles (such as blankets and cloth clothes), for the thorough disinfection of which steam or boiling water are practically the only agents at once available and effectual, are almost necessarily damaged by either. I regret to say that during the past year we have again received many complaints of damage to such articles through disinfection by steam. I therefore feel constrained to repeat this warning, and to add that such unavoidable damage must be regarded as part of the penalty of infection. When dealing—as we now are—with the virus of diseases like enteric fever, diphtheria, and small-pox, we feel that no trifling is admissible; we must do our work thoroughly if it is to be effectual, and such incidental damage is a small price to pay for escape, when this is secured, from an extension of maladies like these.

The work of this Department is superintended by Mr. F. G. Williams, the principal infectious diseases Inspector.

The Mortuaries.—There were three public Mortuaries in use in the City during the whole of 1902. There were: (1) the old Eastcroft Mortuary, now (1903) superseded by the new one attached to the Police and Fire Station on Leen Side; (2) the large, recently erected Mortuary, similarly situated at Hyson Green; and (3) the small adapted building at the rear of the Bulwell Police Station—in use since August of 1901.

The number of bodies taken in at each establishment during each month of the year is given in the accompanying table.

The bodies taken to the Eastcroft Mortuary were three less, those to Hyson Green were 12 more, and those to Bulwell eleven more, than in 1901.

The total number of bodies taken in at the Mortuaries during 1902 was greater by 21 than that for 1901.

THE MORTUARIES.
Year ended December 31st, 1902.

MONTH.	EASTCROFT.			HYSON GREEN.			BULWELL.		
	Male Bodies.	Female Bodies.	Total.	Male Bodies.	Female Bodies.	Total.	Male Bodies.	Female Bodies.	Total.
JANUARY ..	3	4	7	2	1	3	1	0	1
FEBRUARY ..	4	3	7	9	6	15	1	0	1
MARCH ..	8	7	15	4	2	6	0	0	0
APRIL	7	9	16	5	3	8	1	0	1
MAY	6	4	10	4	4	8	0	1	1
JUNE	4	5	9	4	5	9	1	1	2
JULY	3	4	7	3	4	7	0	0	0
AUGUST ..	4	4	8	7	3	10	0	0	0
SEPTEMBER ..	4	1	5	6	4	10	3	2	5
OCTOBER ..	9	1	10	5	3	8	1	0	1
NOVEMBER ..	7	6	13	2	0	2	0	0	0
DECEMBER ..	8	10	18	5	2	7	0	0	0
	67	58	125	56	37	93	8	4	12
	TOTAL BODIES, 230								

The Public Lavatories of the Town now in use are situated as follows :—

For Men—Parliament Street (underground).
Milton Street (do.)
Gedling Street.
Shambles.
Carrington Street Bridge.
Trent Bridge.

For Women—Milton Street (underground).
Gedling Street.
Shambles.
Trent Bridge.

Common Lodging Houses.—The number of these upon the City Register at the close of 1902 was 52, being one less than at the corresponding period of 1901. Two small houses were voluntarily withdrawn from registration by their keepers, and one old house (in Taylor's yard, Narrow Marsh), previously closed for some time, was re-opened. Four transfers were applied for during the year, and all were granted.

An application was made for the registration, as a Common Lodging-House, of a house at 37 Crown Street, Bulwell, to take the place of the one in Main Street. The proposal was at first regarded with favour, because, if carried out, it would have the effect of removing one of these undesirable hostels from a prominent position in the principal thoroughfare, but you ultimately decided not to grant the application, on account of the strong opposition to it from residents in and about the neighbourhood of Crown Street.

The total bed accommodation in the Common Lodging Houses of the City is now enough for 1,044 persons, in 862 single and 91 double beds.

The Public Health Act of 1875 requires that these houses shall be limewashed and cleansed throughout in April and October of each year. This provision was complied with in every instance.

The two Corporation Lodging-Houses, that for men in Popham Street (28 beds), and that for women in North Church Street (20 beds) are still extensively patronized.

The Popham Street house once more passed all previous records by admitting no less than 9,282 lodgers during the year. This number is 1020 in advance of that for 1901.

This house is badly situated, and somewhat meanly equipped. Considering the extent to which it is now patronized, and the evidence of its growing popularity, I am of opinion that the time has arrived for providing a larger and better appointed establishment in a more prominent position to take its place. In addition to the common dormitories which afford the only sleeping accommodation under the present system, single cubicles, such as those in the Rowton Houses, could, I think, advantageously be introduced, to satisfy the requirements of a better class of lodgers, and a refreshment department might be added to save lodgers the necessity of going out for their meals or the material for their meals. This latter provision would certainly be a great convenience to the lodgers, and would also, I believe, tend to promote sobriety and good order in the house.

Situation of lodging house.	No. of beds.	No. of Lodgers admitted in each of the years.									
		1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Millstone Lane (Closed)	18	3,769	—	—	—	—	—	—	—	—	—
Popham Street (Men only.)	28	7,273	7,813	7,492	7,331	6 568	6,608	6,792	7,965	8,262	9,282
Parliament St. Formerly, now North Church St. (Women only.)	20	5,387	5,555	5,663	6,252	6,374	6,422	7,053	*3,603	3,612	4,631
		16,429	13,368	13,155	13,583	12,942	13,030	13,845	11,568	11,874	13,913

* House closed July 14th to December 24th.

The Corporation House for Women in North Church Street (opened in December, 1900, in place of the old Parliament Street house), has also done well during the year, having admitted 1019 more women than during 1901. The better class accommodation provided in one section of this house has certainly met with appreciation from the class it was intended to serve.

Mr. G. A. Read, Cert. San. Inst., the Inspector of Common Lodging Houses, reports that he has paid 1247 visits to individual houses on the register during the year, and records a marked and growing improvement in the condition of maintenance of a large majority of them. From personal knowledge also, I am pleased to say, I can confirm his statements in this respect.

The accompanying tables give the situation of the houses and details of their accommodation.

Common Lodging Houses. Situation:—

In Narrow Marsh	41
„ Millstone Lane	1
„ Canal Street and Leen Side	3
„ Main Street, Bulwell	2
„ Portland Place, Coalpit Lane	1
„ Water Street	1
„ Washington Street	1
„ North Church Street	1
„ Popham Street	1
	52

Common Lodging Houses. Accommodation Data, 1902.

For Males only.	For Females and Married Couples.	For Females only.	Mixed Houses.	Total.
20	15	1	16	52

	No. of Houses.	Bed Accommodation.						Registered amount of bed accommodation for lodgers.
		Less than 10 beds.	10 to 20.	21 to 30.	31 to 40.	41 to 50.	51 to 60.	
Houses on Register, 1901..	53	7	25	14	4	2	1	1,064
Registration surrendered..	2	1	..	1	..	..	..	30
Houses re-opened	1	..	1	..	..	..	..	10
Houses on Register at end of 1902	52	..	..	..	..	..	..	1,044

Housing of the Working Classes Acts, 1890 and 1900, Insanitary Dwellings and Areas.—The following eight houses were condemned by me during 1902, under Sec. 30, Part II., of the Act of 1890:—Nos. 6 and 6a, Burdett Court, Southwell Road (consisting of three separate tenements); Nos. 2, 3, 4, and 5, Gibraltar Place, Bellar Gate; Nos. 2 and 4, Pepper Place, Red Lion Street (Narrow Marsh).

Beside the houses actually condemned, there were 90 others repaired and cleansed, the situation of which it is, I think, unnecessary to mention.

By the removal of the occupants and the closure of the houses in Pepper Place (these being the last remaining tenements in the place), the whole of the latter is now clear of inhabitants, and in my opinion the entire area might with much advantage to the neighbourhood be acquired and set apart for the purpose of an open space and recreation ground.

I have dealt at such length in former reports with some of the principal difficulties under existing social and legislative conditions of what is now commonly known as the housing problem, that I feel constrained to content myself with a very brief notice here.

The chief difficulty from the local authorities' and property owners' point of view is one of pure economics. Decent poor-class houses cannot be provided and maintained with the money profitably available for the purpose. From the practical sanitarian's point of view, the principal and most insuperable difficulty of all is the *vis inertiæ*, the lack alike of energy, knowledge, and ambition, on the part of a large section of the class whose interests are involved in the question.

Original faults of character in the mass, fostered by evil environment, create, indeed, a social problem which it would require a very wise, wealthy, and powerful philanthropist to solve. I do not lose sight of the fact

that many men and women among the poor set a noble example to their richer neighbours, and that their devotion to duty in spite of the chilling discouragement of adverse circumstances beyond their control is nothing short of heroic. In visiting many poor homes containing, it may be, large numbers of young children, one is often simply astounded at the energy, patience, and resource evidenced on all hands by the pervading atmosphere of comfort, cleanliness, and good management, notwithstanding that the father, perhaps, is earning only a bare wage, and the mother has but her own head and hands to depend upon for assistance.

If the housing reformer had such material as this to work with, his difficulties would be comparatively simple; but, unfortunately, a large proportion of the people for whom, upon the face of things, better accommodation is required, are not themselves in a position to appreciate or benefit by such provision if it were made.

Some large towns have attempted a partial and tentative solution of the difficulty by providing houses or blocks of tenements containing the bare necessities of civilized life in the way of household appointments, for the improvident poor such as I have described, and keeping them under constant supervision.

I think it is probably in some such direction as this that the problem of re-housing such of the lower class of the improvident poor as must remain in the towns will find its best solution.

One thing is certain; many of the poorer houses in our slum districts are not only unfit for further habitation by reason of structural and sanitary defects and overcrowding, but they are also lacking in the most primitive requirements of civilized life. They afford no facilities whatever for the practice of decency and good management.

Canal Boats Acts, 1877-1884; and Regulations, 1878.—Mr. F. W. Franks, Cert. San. Inst., the local inspector of Canal Boats, reports that he has paid 88 separate visits to the canals and other navigable waters within the City during the past year, and that he has inspected 128 boats in the course of these visits. His inspections have been made at various hours, but all within the daily period laid down in the Acts. He has been well received on every occasion, and allowed to examine the cabins and other parts of the boats requiring inspection. All the cabins examined were clean and well kept. The 128 boats boarded by the inspector carried between them 24 women, 15 children under 5 years of age, and 4 between 5 and 12 years.

Breaches of the Acts and Regulations were discovered in only three instances, described as follows:—

Over-crowding of cabin - - -	1
Wrong certificate of registry - -	1
Want of paint - - - -	1

Notices served upon the owners of the boats to conform with the regulations were complied with in every case without demur.

No case of infectious disease was reported or discovered upon any boat during the year, nor was any boat detained for the purpose of disinfection or cleansing.

The total number of boats now on the City register is 147. Four have been registered during the year, and one re-registered on account of structural alterations. One change of name of boat has been reported to the inspector during the year, and the certificates altered accordingly.

Factory and Workshop Acts, 1891-1901.—In my report for 1901 will be found full particulars of the changes effected by the Act of 1901 in the duties of local authorities and their officers, in respect of factories, workshops, and work places. I have here, therefore, only to record the work done in compliance with the above and former Acts.

We have been notified of sanitary defects in factories (under Sec. 5, F. W. Act, 1901) in 16 instances, either by Mr. F. J. Parkes or one of the Lady Inspectors of the Home Office. All the matters complained of by these officers have been investigated by the local inspectors, and all necessary alterations have been carried out.

Under Sec. 133 of the Act of 1901, the Medical Officer of Health is called upon to send written notice to H.M. Inspector for the district of any case which may come to his knowledge of the employment of a child (under 14), or young person (14 to 18), or woman, in any workshop. Fifty-seven cases of the employment of this protected labour have come to my notice during 1902, principally through Mr. Flint or Mrs. Exton, the local inspectors for this department. All have been notified at once to Mr. Parkes.

It will be remembered—

"That (under Sec. 101) after 1st January, 1904, that is, after a period of two years from the coming into force of the Act, it will not be lawful to use any underground bakehouse (whenever established) unless the (District) Council are satisfied that it is suitable for the purpose in regard to construction, light, ventilation, and in all other respects, and have given it a certificate of suitability. This provision will apply to all bakehouses, whether wholesale or retail."

"That every bakehouse will be deemed an underground bakehouse if any room used for baking, or for any process incidental thereto, is so situate that the surface of the floor is more than 3 feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room."

"And that an underground bakehouse used in contravention of these provisions will be deemed to be a workshop not kept in conformity with the Act."

By the close of 1902, in pursuance of these provisions, all the underground bakehouses of the City to the number of 105 had already been scheduled, and arrangements made for their inspection by a sub-committee. At the time of writing, this inspection has been carried out, and a decision arrived at in respect of every bakehouse on the list.

With regard to the provisions under Secs. 107–115, affecting "Home Work," the following action has been taken by us :—

(1) Unwholesome Dwellings.

Seven notices have been served upon employers prohibiting the giving out of work to be done in unwholesome dwellings.

These notices have all been complied with.

(2) Infected Dwellings.

The giving out of work (lace, hosiery, clothing, bedding, etc.) to persons resident in houses also containing cases of notifiable infectious disease, has been stopped in a very large number of instances, but such action has been taken in every instance spontaneously by the responsible employer.

It must, however, be borne in mind that the enforcement of this provision in districts where the Isolation Hospital is inadequate to local requirements, is likely to entail great hardship and injustice upon many innocent people.

Lists of Outworkers.—The provisions set out below, as to the keeping of lists of outworkers by employers, and the forwarding of such lists to the local authority, and also as to the forwarding by one local authority, to whom the place or places of employment of outworkers may have been wrongly sent by employers, to another within whose area such place or places are situated, have been well carried out in this district.

No less than 108 lists have been already forwarded to us during 1902, containing an aggregate of some 2,282 names. The last provision, however, has entailed a very large amount of labour upon my office.

One of the lists sent us in June, 1902, contained the workplaces of 200 outworkers in 40 separate districts outside Nottingham, and to these districts corresponding notifications were immediately sent by my Department.

"In order that the (District) Council may be kept fully informed as to the places in its district in which home work is being done, occupiers of factories, workshops, or any place from which work is given out, and contractors employed by such occupiers are required, in regard to such classes of work as may be fixed by the Secretary of State, to keep lists showing the names and addresses of all persons employed by them, either as workmen or as contractors outside such factory, workshop, or place, and the place where they are employed, and to send to the Council twice a year (viz., on or before the 1st of February and the 1st August) copies of such lists.

"In the event of any occupier failing to keep or to send such lists he will be liable to a fine of £2 for the first offence, and to a fine of £5 for a second or subsequent offence. Proceedings to recover the fine may be taken by the Council.

"It will be the duty of the Council to have the lists so sent to them examined, and if the place of employment of any outworker included in the list is in another district, to furnish his name and place of employment to the Council of that district."

Means of Escape in case of Fire.—Additional means of escape in case of fire have been provided in 9 cases during the year at the instance of the local inspectors.

A table of other work done through the instrumentality of the latter officers will be found, as usual, at the end of this Report.

Diseases of Animals Act, 1894. Orders, Regulations, etc. of the Board of Agriculture.—The reputed cases of Swine Fever reported (as ordered) to the Board of Agriculture and yourselves during 1902 numbered 42. In only two of these, however, was the diagnosis subsequently confirmed. The cases occurred in June and December.

The regulations affecting the movement of swine at present in force in this City are briefly as follows:—

(1) (*a*) Swine for immediate slaughter are admissible to the City from infected districts with a movement license of the forwarding authority.

(*b*) From non-infected districts without license or restrictions of any kind.

(2) Swine for breeding purposes are practically not admissible to the City from districts outside the County of Nottingham.

(3) No swine (either fat or store) can be moved under any circumstances from the City into the County of Nottingham.

Lethal Chamber for Dogs, Cats, etc., at the Eastcroft.—This apparatus is still under the management of the Health Department, but all expenses of working and maintenance are defrayed as heretofore by the Watch Committee. The method of use is as follows:—The animals are confined in a cage, and then lowered suddenly into a chamber filled with chloroform vapour and carbonic acid gas. This produces painless and instantaneous death.

The numbers of dogs and cats annually destroyed since its establishment in 1898 have been as follows:—

	1898.	1899.	1900.	1901.	1902.
Dogs	422	472	731	770	856
Cats	64	108	180	297	371

Slaughter-houses.—The slaughter-houses on the local register now number 152. Two houses in Convent Street, the property of the Corporation, were closed and demolished during the year, and one old house in Milton Place, Parliament Street, was given up by the owners on account of its dilapidation and the unsuitability of its position. Two applications were made during the year for the licensing of new slaughter-

houses; one in Cornhill Street, Hyson Green, the other in Bradford Street, Bulwell. Both were refused, and the City Council have resolved that no further slaughter-houses shall be licensed in the City without their consent.

It is, I think, hardly necessary to remind you that, with a growing city like this, it will be difficult to continue indefinitely to refuse licences to private slaughter-houses, and at the same time take no steps to make other provision for the accommodation of slaughtering butchers—in the shape of the long projected abattoirs.

Offensive Trades.—Several complaints have been received during the past year in respect of alleged nuisance in connection with trades of this character. All but one of the cases have been dealt with satisfactorily.

Two applications were received by you for permission to establish the trade of tripe boiling. Both were refused.

Unwholesome Food Material.—Food materials of the following descriptions and quantities were either seized or surrendered as unfit for human consumption during the past year.

The inspection of butcher's meat and of animals which furnish it is still carried out by Inspector Moore; that of general provisions other than butcher's meat by Inspector Billington.

BUTCHERS' MEAT.

	Imperial Stones.	lbs.
Beef	1701	4
Mutton	120	11
Pork	566	12
Veal	167	12
Viscera	623	13
Sausages	2	2
Bacon	11	8
Udder	0	13
Total	3195	5

GAME AND POULTRY.

	Stones.
Rabbits	137
Hares	82
Chickens	21½
Rooks	12
Pigeons	8
Geese	5
Ptarmigan	4
Black Game	4
Pheasants	3
Venison	2
Wood-Pigeons	1
	279½

WET FISH.

	Stones.
Cod	806
Spragg	599
Hake	517½
Herrings	435
Sprats	428
Whiting	249
Mackerel	224
Haddock	139
Cat-Fish	120
Plaice	118
Mixed Fish	90½
Lemon-Soles	85½
Ling	76
Dabs	68½
Witches	48
Skate	48½
Sea Bream	44½
Coal Fish	42
Halibut	35
Codling	31
Smelts	19
Megrims	10
Roes	9
Salmon	6
Trout	1
	4,250

SHELL FISH.

	Stones.
Mussels	1866
Oysters	255
Shrimps	217
Whelks	195
Crabs	125½
Cockles	7
	2,665½

DRY FISH.

	Stones.
Kippers	288
Finneys	273
Bloaters	111
	672

FRUIT.

	Stones.
Bananas	205
Apples	188
Pears	149
Pomegranates	56
Tomatoes	32
Grapes	34
Lemons	24
Oranges	22
Sloes	18
Black-Currants	12
Gooseberries	6
Cucumbers	4
	750

VEGETABLES.

	Stones.
Carrots	1248
Potatoes	1116
Cabbage	743
Onions	400
Turnips	314
Cauliflowers	136
Kidney Beans	124
Vegetable Marrows	32
Brussel Sprouts	32
Horse Radish	22
Mushrooms	10
Bluebuttons	10
	4,187

TINNED GOODS.

	Stones.
Tomatoes	208½
Milk	180
Lobsters	140
Pineapple	138
Salmon	63
Pears	55
Apricots	43
Peaches	17
Sardines	17
Rabbits	6
Apples	3
Plums	1½
Herrings	1½
	873½

MISCELLANEOUS.

	Stones.
Eggs	75
Pickled Onions	32
Chillies	28
Pickled Walnuts	2
Cheese	2
Pickled Shrimps	¼
	139¼

Dairies and Cowsheds.—There are now no less than 968 names on the local Milksellers' Register, seven having been added and none removed during 1902. The Cow-keepers' Register contains 161 names—the same number as at the close of 1901.

I am hoping to undertake the revision of both these registers, as well as the more systematic inspection of milk-shops and dairies, with the assistance of the new inspector recently appointed.

Sterilized Milk.—It is much to be regretted that cleaned and sterilized milk, which has been prepared and sold for some time past by several local firms, has been so poorly taken up by both the medical profession and the laity in this City. Of course the safest sterilization for baby feeding is that which immediately precedes the baby's meal; but, where mothers cannot be depended upon to undertake habitually the immediate boiling before use, the sterilized milk sold in sealed bottles is a very useful substitute.

Ice Creams.—I wish once more to point out the desirability of obtaining special statutory control over the manufacture and sale of ice creams. A clause designed to afford you such control was inserted in the last local Bill before Parliament, but it was ultimately struck out as non-essential. It is not too much to say that the possession or non-possession of such powers by a local authority may make the difference of life or death to many people.

Sale of Food and Drugs Acts, 1875-1899. Adulterations and Abstraction.—Five hundred and twenty-nine samples were taken under these Acts, and sent to the City Analyst (Mr. S. R. Trotman, M.A., F.I.C.) for analysis, with results specified in detail in the table below.

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.	
Milk	182	163	Deficient in Fat.	Added Water.
			1. 22%	1. 18%
			1. 12%	2. 16%
			1. 11%	1. 14%
			2. 10%	1. 13%
			1. 9%	1. 11%
			2. 7%	1. 9%
			1. 6·6%	1. 7%
			1. 5%	1. 6·5%
			1. 4%	1. 6·4%
			1. 3·3%	1. 5%
			1. 3%	1. 3·6%
			13	1. 3%
				1. 2·4%
				2. 2%
				16
Cream	1	1	Pure.	
			With Foreign Fat.	With Excess of Water.
Butter	80	78	1. 100%	1. 7·7%
Margarine	21	18		1. 6·1%
				1. 6%
				1. 1·4%
				3
Lard	23	23		All Pure.
Cheese	38	37		One sample proved to be Margarine Cheese.
Bread	18	18		All Pure.
Flour	25	25		All Pure.
Jam	13	13		All Pure.
Marmalade	1	1		Pure.
Treacle	7	7		All Pure.
Preserved Plums	2	2		All Pure.
„ Damsons	1	1		Pure.
				With Salicylic Acid.
„ Gooseberries	2	1		1. 1·05 grains per lb.
Tea	5	5		All Pure.
Coffee	13	13		All Pure.
Pepper	2	2		All Pure.
Ground Ginger	10	10		All Pure.
				With Calcium Sulphate.
Cream of Tartar	6	4		1. 1·8%
				1. 1·47%
				2
Vinegar	13	13		All Pure.
Olive Oil	7	7		All Pure.
Ale	8	8		All Pure.
Scotch Whisky	4	4		All Pure.
Irish Whisky	5	5		All Pure.
				Deficient in Proof Spirit.
Brandy	6	3		1. 3·5%
				1. 2·2%
				1. 1%
				3

	No. of Samples.	No. Pure.	
Claret	6	6	All Pure.
Sherry	8	8	All Pure.
Port	2	2	All Pure.
Citric Acid	7	7	All Pure.
			Deficient in Alcohol.
Laudanum	1	—	1. 13%
			Deficient in Potassium Iodide.
Prescriptions containing Potass. Iodide & Infus. Quassiæ	5	4	1. 36%
Prescriptions containing Ung. Hydrarg. Amm.	7	7	All Pure.
	529	496	43

Where discrepancy occurs between the number of samples stated to have been adulterated or deficient, and the number of adulterations or deficiencies specified, such discrepancy is due to the fact that two or even more defects of this character may occur in one sample.

Prosecutions.—The following table speaks for itself. The list is slightly shorter than during 1901, but this is probably owing to the undoubted fact that increasing preventive action of this kind on the part of a Local Authority discourages the practices in respect of which such action is taken.

SALE OF FOOD AND DRUGS ACTS.

Offence.	Result.
Sale of Milk deficient in fat 12%	Fine of £2.
" " 11%	Fine of £2.
" " 11%	Fine of £1.
" " 6½%	Fine of £2.
" " 10% and added water 9%	Fined costs of case.
" " 9% " 13%	Fine of £2.
" " 7½% " 11%	Fine of £4.
" " 7% " 6·4%	Fine of £10.
" " 6% " 6%	Withdrawn, bottle containing sample having burst.
" containing 18% added water	Fine of 10/-.
" " 16% "	Fine of £2.
" " 14% "	Fine of £5.
" " 7% "	Fine of £2.
" " 6½% "	Fine of £6 9s. 9d., including costs.
Sale of Butter containing 95% foreign fat	Withdrawn on account of uncertainty of constitution of foreign butters.
Exposure for sale of Margarine without label	Fine of £4.
Sale of Brandy deficient in proof spirit 6%	Withdrawn.
" Potassium Iodide deficient in Potassium Iodide 36%	Fine of £1.

PUBLIC HEALTH AND OTHER ACTS.

Offence.	Result.
Exposure of Unsound Meat for Sale	Fine of £10.
" " Crabs "	Fine of £1.
" " Rabbits "	Fine of £3.
" Unclean Salmon "	Fine of £6, and £3 costs.
Deposit of Unsound Meat "	Fine of £5.
Sale of " " "	Fine of £7.
" " " "	Fined costs of case.
Contravention of Slaughter-house Regulations ..	Fine of £2.

Notices.—The written notices issued from the office of the Health Department during the past year were as follows :—

Statutory Notices	....	147
Ordinary ,,	....	1,212

There was an increase in all notices—both the above, and others of informal character by word of mouth and by letter—issued during the year, corresponding with the increased amount of work dealt with.

District Inspectors and their Work, Special Inspectors, and Health Visitors.—Some details of work carried out at the instance of the Inspectors of Nuisances will be found as usual at the end of this section (p. 108). The amount of work done shows an increase as compared with that of the previous year, but there is a limit to the possible increase of the work, which is set by the number of the men engaged upon it. In my special report upon the work and staff of the Health Department furnished last year, I gave it as my opinion that certain new officers were absolutely necessary for the due performance of the various duties which now devolve upon us. I am pleased to say that in response to this appeal you have seen fit to appoint another special inspector (Mr. John A. Sutton, Cert. San. Inst.); and I may also add that the work he has accomplished since his appointment, both in assisting

his colleagues, and also in the performance of special duties under the Housing of the Working Classes Acts and the Sale of Food and Drugs Acts, have already more than justified his selection.

With respect to the appointment of Lady Health Visitors, I cannot, I think, do better than quote the paragraphs which appear below, from my special report of last year on this subject, and then conclude by saying that the two ladies whose services you have secured by arrangement with and under a subsidy to the Ladies' Sanitary Association, have already shown their usefulness in every way I predicted for them and many others besides.

"In addition also to these statutory requirements, it has become increasingly apparent of late that a strong moral obligation devolves upon the local authority to assist and instruct the poorer sections of the community (1) in the feeding and care of infants, (2) in dealing with cases of minor infectious disease to which medical men are not called in, and (3) in the general management of their houses and households from a sanitary standpoint. I need only indicate the high mortality of infants—and especially the hand-fed infants of the poor—from diarrhœa, and the excessive prevalence of tuberculous diseases, to illustrate the truth of this statement. Work of this kind can be most fitly undertaken by ladies, and many ladies have qualified, and are now qualifying themselves for it by special study."

"We have a strong additional argument in favour of the appointment of sanitary missioners of this character in the large number of voluntary notifications of minor infectious diseases, and inquiries respecting the same and kindred matters, which we now receive regularly from the School Board authorities, and with which we are unable to deal satisfactorily for lack of staff to undertake the work involved. These notifications and inquiries can be made to serve a double purpose. They will be at once a basis of legitimate investigation (with a view to prevention) on the part of the School Board (or Education Committee), and a means also of introducing the health visitors to the homes of the people."

"I am now called upon to register a huge number of cases and reputed cases of minor infectious diseases, and to furnish to the Board of Education certificates respecting absentees from school on account of alleged infectious disease, and at the same time am possessed of no sufficient means of checking the notifications of cases and reputed cases."

Abatement of Nuisances, 1902.

Description of Work Done.	Inspector Ward. Cer. San. In.	Inspector Old.	Inspector Byrns.	Inspector Betts.	Total.
Houses Repaired	40	1	13	30	84
,, Cleansed	..	1	4	1	6
,, Unfit for Habitation Closed ..	4	..	..	..	4
,, Overcrowding of, Abated	1	3	5	4	13
Bath Wastes Disconnected	..	1	4	5	10
,, Trapped	1	1	5	9	16
Sink Wastes Disconnected	8	3	7	7	25
,, Trapped	..	..	3	6	9
Drains Repaired and Cleansed	227	119	347	233	926
,, Trapped	14	63	57	44	178
Water Closets Repaired	24	9	80	47	160
Pail Closets Repaired	146	32	161	151	490
,, Provided	..	..	3	3	6
Waste-water Closets Provided and Repaired	6	7	25	43	81
Ashpits Abolished	21	11	27	35	94
Privies Abolished	19	15	27	44	105
Water-Closets provided in lieu of Privies	21	15	27	13	76
Waste-water-Closets provided in lieu of Privies	..	..	..	15	15
Water-Closets provided in lieu of Pail-Closets	9	..	3	..	12
Soft-water Cisterns Cleansed	1	5	12	11	29
Courts and Yards Paved	69	47	55	49	220
Piggeries Abolished	4	26	3	5	38
Stables, etc., Drained	3	..	4	1	8
Urinals Repaired, etc.	4	..	6	4	14
Manure Pits Repaired, etc.	12	..	2	2	16
Offensive Accumulations Removed ..	33	27	34	24	118
Miscellaneous	215	28	136	89	468
Totals	882	414	1050	875	3221

(*b*) *Workshops.*

Inspector Flint. (Male).

Work done.

Workshops and bakehouses limewashed	338
Workshops and bakehouses repaired	11
Offensive refuse removed	29
Overcrowding abated in workshops	2
Additional ventilation provided in workshops	2
Defective drains and urinals repaired	9
Offensive animals removed from premises	2
New W.C.'s erected	10
Pail and W.C.'s repaired and cleansed	43
Insanitary bakehouses and workshops condemned and closed	7
Pail-closets abolished	4
Lavatory wastes disconnected and repaired	3
Offensive stable abolished	1
	461

INSPECTOR EXTON. (FEMALE).

Work done.

Workrooms limewashed	147
Staircases limewashed	3
Overcrowding abated in workrooms	14
Stairs, floor and ceiling repaired	9
Pail-Closets and W.C.'s repaired and altered	27
New W.C.'s provided	19
Pail closets converted to W.C.'s	2
Additional ventilation provided	6
Heating Apparatus provided	1
Means of exit re-opened	1
Anidjah Fire Escape repaired	1
	230

APPENDIX A.

HANDBILLS AND LEAFLETS.

City of Nottingham. The Feeding and Care of Infants.

1.—The natural and best food for a young infant is its mother's milk.

2.—The child should be suckled once every two hours during the day, and once every four hours during the night, until it is about three months old, and at gradually lengthening intervals after the lapse of this period.

3.—The child should, if possible, receive no other food than its mother's milk until it is at least six or seven months old.

4.—During the suckling period the mother should take plenty of good, plain, nourishing food, but should avoid alcoholic stimulants and spices.

5.—The mother should wash her nipples after each time of suckling. If they become sore she should apply some glycerine or lanoline to them, and, if necessary, use a nipple-shield carefully cleaned with soap and warm water after each time of using.

The following instructions may be advantageously followed, at the earlier ages in cases where the mother is unable to suckle her infant, and at the later ages in all cases.

(*a*) During the first six weeks after birth the child should be fed every two hours throughout the day, reckoned between 4 a.m. and 10 p.m., and once again between these hours in the night. Its food should consist of one part of fresh, pure cow's milk, and two parts of water, mixed and boiled, and, after boiling, sweetened with a small teaspoonful of Porto Rico sugar to each pint (of the mixture). Barley water may sometimes with advantage be used instead of plain water, but lime water is better avoided. The mixture should be kept in a clean covered vessel, and in a clean cool place, between meals. The temperature of the food given to a young child should be 95 degrees Fahrenheit, *i.e.*, about the heat of the human hand. One-and-a-half ounces (three tablespoonfuls) to two ounces (four tablespoonfuls) should be given to a child each time it is fed.

Two bottles should always be used, each alternately; one being scalded and rinsed, and afterwards left to soak, while the other is in actual use. The bottles should have no tube or neck, but have a mouth large enough to admit the first finger, and this should be fitted with an india-rubber teat only. The teats should be washed inside and out, after each time of using, with soap and warm water.

(*b*) From six weeks to three months old the child should be fed with a mixture of equal quantities of cow's milk and water, with sugar as above; but two teaspoonfuls of cream may now be advantageously added to each meal. The quantity given at each meal should be about four ounces (eight tablespoonfuls). The interval between meals should now be gradually but continually lengthened.

(*c*) From three months to seven months old the child should have a mixture of two parts of cow's milk to one of water. About four ounces (eight tablespoonfuls) should at first be given at each meal, but, the intervals between meals being still lengthened, a larger quantity than this will soon be required for each. The quantity of cream given with each meal may now be increased from two to three or four teaspoonfuls.

The following is a useful working rule for the feeding of a child, with such substitutes for mother's milk as mentioned above, during the period in which liquids should be exclusively used :—

Begin with about 16 oz. a day of twenty-four hours, as under (*a*). Increase this by the addition of 1 oz. to 2 oz. a week up to the end of the first month. After the first month add 4 oz. a month up to the end of the seventh month. At this period, unless the child is regularly to have some quantity of the farinaceous food mentioned in the next paragraph, its milk should amount to at least 40 oz. a day. At nine months a milk-fed child should have three pints in the twenty-four hours.

(*d*) From seven months to twelve months old the child should be given five meals in a day of twenty-four hours. The number of meals will thus have been reduced by a little more than one-half (from eleven to five) in the first seven months. Each meal should consist at the first of about five or six ounces (ten or twelve tablespoonfuls) of undiluted cow's milk, with cream as under (*c*); but three of the meals may also each contain about a teaspoonful or more of some whole-meal farinaceous food, well boiled and stirred up with the milk. All the meals in this period should be given between 6 or 7 a.m. and 9 or 10 p.m.

(*e*) From twelve months to eighteen months old the child should again be fed only during the day, and at about the same intervals (on five occasions) between early morning and night. The amount of milk should be about twice as great as given under (*d*), and porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally, may with advantage be given with, or in place of the milk as time goes on. It must not be forgotten, however, that pure fresh cow's milk, well boiled, is an excellent and sustaining food, as well as a palatable drink for human beings at all ages.

The quantities of food given above are those generally suitable, but the capacity of children for food varies much, and signs of indigestion due to over-feeding should not be overlooked because a comparatively moderate amount of food is being taken.

It is unwise for a mother to undertake the medical treatment of her child, except, perhaps, to the extent of giving it a little opening medicine occasionally. She should never give it sleeping or quieting medicine except under medical advice.

A young child should not on any account sleep in the same bed with nurse or parents.

A young child should be warmly but loosely clothed over the whole of its body and limbs, and as few pins as possible should be used in dressing it.

It should be remembered that a young child is exceedingly liable to suck or to swallow anything within its reach which admits of being so treated.

It should also be borne in mind that a young child has no dread of fire or hot things unless or until it is actually burnt.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health, Nottingham.

City of Nottingham. Prevention of Diarrhœa and Cholera.

These diseases may in great measure be avoided by the exercise of common care. Cleanliness of person and surroundings and a judicious diet are the best possible safeguards against them. Their germs enter the system through contaminated air, water, and food; it is most important, therefore, to secure the utmost possible purity of these three vital agents.

All parts of a house should be freely ventilated both by day and night:—there is as a rule much less harm to be apprehended from too much than too little fresh air, whatever its temperature or degree of moisture. No decomposing refuse should be allowed to remain in the house or its neighbourhood; all vegetable refuse should be burnt in the kitchen fire. The floors of all rooms, passages, and stairways should be frequently washed with soap and water, and all private courts, alleys, and yards should be flushed with fresh water, as often as possible. All dirty walls should be scraped and limewashed. All drains in the neighbourhood of the house should be flushed at short intervals, and all obstructions to the drainage and faults in the drains, which cannot be dealt with by the tenant, should be reported at once to the **Health Department in the Guildhall.** It is most important that all house drains should be completely disconnected from the sewers. All other offensive nuisances which are not receiving the necessary attention should also be at once reported.

The Public Water Supply of the town is now happily above the suspicion of contamination, but no water even from this source should be allowed to stand before being used for drinking purposes, and all water from private wells or other like sources should invariably be boiled before use.

Only sound and fresh flesh of any kind should be used as food, and this should be well cooked. The same remark applies to cooking vegetables of every description. Unripe or over-ripe fruit should be rigorously avoided. Infants under nine months of age should receive nothing but milk, or milk and water, well boiled, when the milk is from any other source than the mother's breast. All food utensils, and especially milk vessels and babies' feeding bottles, should be well washed and soaked before use, in clean, and, if possible, boiling water.

A qualified medical man should be at once called in to every case of severe bowel disturbance. It is a wise precaution to disinfect with strong solution of carbolic acid the bowel discharges of all Diarrhœa patients, before placing them in the closet pan or pail. All articles or material soiled with such discharges should be at once soaked and cleansed with the same solution.

After it has been ascertained that a patient is suffering from Asiatic Cholera it is essential that the strictest isolation should be maintained at home or in hospital, and that all discharges from the patient's body should be disinfected and placed in a separate receptacle, which will be provided and scavenged by the Corporation; and, further, that all articles soiled with such discharges should be promptly disinfected, or destroyed by fire. Persons attending upon Cholera patients should not touch with their hands, their own or other persons' faces, or any food or food utensil intended for their own or other unaffected person's use. Any case suspected to be one of **Cholera** should be at once notified to me at the **Health Department in the Guildhall.**

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

City of Nottingham. Prevention of Tuberculous Consumption.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it. It is, however, in many cases entirely curable under appropriate treatment.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should, as far as possible be received into a vessel containing a strong solution of Carbolic Acid (1 of Carbolic to 20 of Water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

The spit and other infectious matters from consumptive patients, whether disinfected or not, should always be destroyed (if possible by fire) before they become dry. They are most dangerous when dried, especially when taking the form of dust.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be freely ventilated both by day and night, and should be disinfected and cleaned (with damp cloths that have been soaked in disinfecting liquid) at short intervals.

Consumptive patients should spend as much time as possible in the open air. In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

A considerable proportion of milch cows suffer from tuberculous disease, and the milk of such cows, especially when the udders are affected, is liable to be highly charged with the tuberculous poison. It has been shown that animals taking tuberculous milk in the raw state are exceedingly liable to contract the disease; all ordinary cow's milk, therefore, should be sterilized or boiled before use.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

Nottingham Corporation. Bagthorpe Hospital. Scarlet Fever.

To Parents, Guardians, and Others.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital, it is impossible in some instances to insure against such an accident, for no one can say with certainty how long the scarlet fever poison may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a Fever Hospital should be allowed to sleep in the same bed as another until at least a fortnight after such discharge. A short holiday in the country, spent as far as possible apart from others and in the open air, is always desirable for persons convalescing from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed, and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated, and placed under the care of a medical man. In any case the Corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.D., *Medical Superintendent.*

City of Nottingham. Small-Pox and Vaccination.

Small-Pox is once more prevalent in this District and many other parts of the Country, and numerous fresh cases are reported daily. It is, therefore, desirable for people resident in Nottingham (and elsewhere) to seek protection against it.

Good Recent Vaccination is an Efficient Protection against Small-Pox, and the degree of protection it confers is directly proportional to the recentness and thoroughness of the operation.

All persons who have not been properly vaccinated or re-vaccinated within the past ten years, should be well vaccinated without delay.

The risk of injury from vaccination when considered in relation to the total amount of vaccination work done, is altogether insignificant.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

Official Notice under the Shop Hours Acts, 1892 to 1895, to amend the Law relating to the Employment of Young Persons in Shops.

Notice is Hereby Given that, under the above Acts, a young person cannot be employed in or about a shop for a longer period than seventy-four hours, including meal times, in any one week.

A young person cannot, to the knowledge of his employer, be employed in a shop who has been previously on the same day employed in any factory or workshop, as defined by the Factory and Workshop Act, 1878, for the number of hours permitted by the said Acts, or for a longer period than will, together with the time during which he has been so previously employed, complete such number of hours.

In every shop in which a young person is employed, a Notice must be kept exhibited by the employer in a conspicuous place, referring to the provisions of these Acts, and stating the number of hours in the week during which young persons may lawfully be employed therein. If any employer fails to keep exhibited this Notice in the manner required, he is liable to a fine not exceeding forty shillings.

Where any young person is employed in or about a shop contrary to the provisions of these Acts, the employer will be liable to a fine not exceeding one pound for each person so employed.

The Council of any County or Borough, and in the City of London the Common Council, may appoint such Inspectors as they may think necessary for the execution of these Acts within the areas of their respective jurisdictions, and Sections 68 and 70 of the Factory and Workshop Act, 1878, shall apply in the case of any such Inspector as if he were appointed under that Act, and as if the expression "Workshop," as used in those sections, included any shop within the meaning of these Acts.

In these Acts, unless the context otherwise requires, "Shop" means retail and wholesale shops, markets, stalls, and warehouses, in which assistants are employed for hire, and includes licensed Public-houses and Refreshment-houses of any kind.

"Young person" means a person under the age of eighteen years.

Other words and expressions have the same meanings respectively as in the Factory and Workshop Act, 1878.

Nothing in these Acts applies to shops where the only persons employed are members of the same family dwelling in the building of which the shop forms part, or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

And Notice is Hereby Given, that no young person can be employed in or about these premises for a longer period than seventy-four hours, including meal times, in any one week.

APPENDIX B.

The following Report is furnished by Mr. John Terry, Wharf Superintendent :—

COLLECTION OF REFUSE.

Pail Closets.—There are now within the City 37,617 of these closets, being a reduction of 141 as compared with the previous year. Each closet is regularly emptied at periods varying from one to five times per week. During the year 2,617,262 pails have been emptied, representing a weekly average of 50,332, and shewing that each pail has been cleared on an average 69·5 times per year.

The number of loads removed was 124,631, or 2,397 per week.

Considering the very large number of pails removed, the complaints received have been comparatively few, and in several instances on enquiry it has been found that there had been no neglect on the part of this department.

The following table gives a comparative statement of the number of pails emptied during the past 12 years :—

Number of Pails Collected, 12 years ending December 31st, 1902.

Year.	Nottingham	Basford and Bulwell.	Radford and Lenton.	TOTAL.	Weekly Average.
1891	1,503,674	560,127	432,324	2,496,125	48,002
1892	1,523,965	580,061	446,687	2,550,713	49,052
1893	1,525,804	587,718	443,960	2,557,482	49,182
1894	1,559,608	605,349	445,606	2,610,563	50,203
1895	1,594,130	631,219	432,450	2,657,799	51,111
1896	1,598,814	636,951	441,126	2,676,891	51,478
1897	1,568,172	636,744	444,859	2,649,775	50,957
1898	1,542,856	638,493	468,070	2,649,419	50,950
1899	1,529,546	637,420	478,475	2,645,441	50,874
1900	1,522,549	640,976	475,195	2,638,720	50,745
1901	1,510,423	640,653	476,124	2,627,200	50,523
1902	1,496,922	638,370	481,970	2,617,262	50,332

Ashpits.—The past year has seen a large increase in this branch of the work, owing to your Committee taking over the ashpit work at Bulwell and Basford, previously carried out by a contractor. Since this work was taken over, several ashpits have been emptied which had not previously been attended to for several years, and I am pleased to say the additional work has been carried out without a single complaint.

As far as I can ascertain there are no reliable figures as to the number of ashpits within the City, it is therefore impossible to give the number of times per year each pit has been cleared.

During the year we have emptied 2,382 privy ashpits, 1,102 dry ashpits and 12 cesspools, and there has been removed therefrom 5,611, 2,299 and 23 loads respectively, giving a total of 7,933 loads, as compared with a total of 4,654 loads for the previous year, or an increase of 3,279. These figures give some idea of the additional work you have taken over in the new district.

Dry Ash Bins.—There are at present on the books 12,190 ash pans or tubs (7,614 are worked from the Eastcroft depôt and 4,576 from Bulwell and Basford). There are no available figures for previous years, and to give some idea of the increased work in this department I have obtained from the City Engineer the numbers of new houses erected during the past six years, and as each house is now supplied with a pan which is emptied once or twice per week, the increase will be seen at a glance.

Year	1897	1898	1899	1900	1901	1902
Houses erected	784	900	837	871	850	1258

By the regular collections there have been removed 16,035 loads, equal to 308 per week. There have also been removed by the Pot Cart 2,215 loads.

Slaughter House Refuse.—This material is still removed by your staff, but during the past year the method of collection and removal has been altered. Instead of the refuse being stored in any receptacle the butcher cared to provide, and then carried away in a cart, each slaughter-house is now provided with a number of

galvanized bins with spring lids, these are brought away on a dray, emptied, washed out and returned clean. The receptacles are the property of the Committee, and are hired to the butchers at a charge of 2/6 each per year.

The number of loads collected during the year was 1,060.

The following table shews the total number of loads collected in each district during the past eight years.

Number of Loads Collected.

	1895	1896	1897	1898	1899	1900	1901	1902
NOTTINGHAM:—								
Pail-Closets	75,911	76,134	74,675	73,469	72,835	72,502	71,925	71,282
Night Ashpits	2,460	2,278	2,391	2,406	2,263	2,372	2,291	2,148
D.A. Pits and D.A. Tubs ..	8,820	9,518	10,230	11,851	13,275	14,055	15,018	11,000
Slaughter-house	975	1,037	1,021	1,034	1,023	1,058	1,123	1,060
Pot Cart	1,348	1,379	1,390	1,360	1,371	1,817	2,043	2,215
BASFORD AND BULWELL:—								
Pail-Closets	30,058	30,331	30,321	30,404	30,353	30,522	30,507	30,398
Night Ashpits								1,037
D.A. Tubs								5,035
RADFORD AND LENTON:—								
Pail-Closets	20,593	21,006	21,183	22,289	22,784	22,628	22,673	22,951
Night Ashpits	1,951	2,666	2,844	3,276	2,779	2,083	2,363	2,426
TOTALS	142,116	144,349	144,055	146,089	146,683	147,037	147,943	149,552
WEEKLY AVERAGES ..	2,733	2,775	2,770	2,809	2,821	2,828	2,845	2,876

Disposal of Refuse.—The disposal of the refuse from pail closets and privy ashpits has been a comparatively easy task, greatly due no doubt to the fact that the price has now been reduced to cost of carriage only. The whole of the manure collected, together with a large quantity stocked during previous years and amounting to a total of 52,320 tons, has been disposed of to farmers as follows:—By boat 16,925 tons; by rail from Eastcroft 12,847 tons; from Basford 6,319 tons; from Radford 5,732 tons; from Bulwell 712 tons; by traction engines from Basford and Radford 2,456 tons; taken direct to farms by dray 5,987 tons; and carted by farmers from Eastcroft 1,342 tons.

Dry Ashes and Trade Refuse—The difficulty of disposing of this refuse has been increased by the closing against us of various tips, and as this class of refuse is not suited either for the purpose of filling for building land or for manure, we have been compelled to store practically the whole of it at the Eastcroft. There has been carted from the Eastcroft for filling depressed land (not building sites) 31,969 tons, and it is entirely due to this that we have been able to cope with the large quantities received.

The following table shews the quantities sent out by rail and boat during the past eight years:—

Disposal of Refuse.

	1895	1896	1897	1898	1899	1900	1901	1902
No. of Wagons sent out	4,109	3,134	3,091	3,595	3,145	1,984	3,077	3,151
	T. C. Q.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C.	T. C. Q.	T. C. Q.
Average Weight per Wagon	7 17 2	7 18	7 19 3	7 19 1	8 1 2	8 0	8 1 2	8 2 2
No. of Boats sent out	359	574	514	479	592	734	633	580
	T. C. Q.	T. C.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.
Average Weight per Boat	32 10 0	32 10	32 17	33 6 1	33 2 2	31 10 1	29 17 2	29 3 2

The whole of the refuse received at the Eastcroft (excepting that from pail closets) is now weighed, and the figures for the past year are as follows:—

	Tons.
Dry Ashes	10,891
Wet Ashpit Refuse	1,988
Trade Refuse (General)	2,629
Trade Refuse (Butchers, &c.)	2,038
Ashes from Basford and Bulwell	1,830
Rammel from Radford	612
Total	19,988

While dealing with the question of disposal it may be interesting to note that the following has been collected from the refuse and sold.

	Tons.	Cwts.	Qrs.
Solder (recovered from old tins) ...	2	6	3
Light tins (from solder furnace) ...	71	16	0
Heavy Iron	15	14	3
Light Iron	22	17	3
Light Hoops	19	11	3
Galvanized Scrap	11	13	0

The sale of the above realised the sum of £199 14s. 5d.

Depôts.—These are four in number, situate as follows:—Eastcroft, Radford, Basford, and Bulwell.

The premises at each depôt have been maintained in good repair, and at the central depôt (Eastcroft) it has been found necessary to carry out several alterations. These include stabling for seven additional horses; new machinery for dealing with the hay and corn; alteration of the corn chambers; new drying room for horse cloths, &c.; and new dining room for the workmen. The whole of these alterations have been carried out by your own staff, and by this means a considerable sum of money has been saved. There have hitherto been no stables at Radford, Basford, and Bulwell, belonging to the Committee, and the result has been a very unsatisfactory state of things at these depôts; but the matter has received your very serious consideration, and during the present year stables have been erected at Radford, and will shortly be ready for occupation, while a suitable site has been selected on which to erect a depôt and stables to serve for the two districts of Bulwell and Basford.

HORSES.

Total number of Horses, Dec. 31st, 1901 ...	89
Disposed of during 1902...	9
Purchased during 1902	18
Number of Horses at Eastcroft...	65
,, ,, Basford	19
,, ,, Radford	9
,, ,, Bulwell	4
,, ,, Bagthorpe	1
Total Number ...	98

The average working life of the horses disposed of was 4¼ years; this is an unusually low figure, and is due to the fact that during the year we had three accidents by which we lost a horse in each case. Two horses turned out unsuitable for the work, and were disposed of to local farmers to work on land. The horses sold realised £27 13s. 6d. The horses purchased cost £47 each.

During the year the Committee supplied waterproof knee rugs for use by the draymen; this has, in my opinion, already paid for itself, as the men now use the horse cloths on the horses more than they did previously, with the result that during the past winter we have had none of the horses suffering from colds as in previous winters.

The past year has been an exceptionally heavy one as regards horsekeep, the prices of all foodstuffs having been half as much again as the normal prices, with the result that the cost of horsekeep, bedding, &c., works out at 16/9 per horse per week.

Rolling Stock.—The carts, drays, wagons, &c., have been maintained in good repair. During the year one dray and one cart have been made by your own staff, and one wagon and two carts have been purchased. The stock now consists of 63 drays, 59 carts, wagon, and 33 railway trucks.

The railway trucks are very old, and do not meet the present equirements of the Railway Companies; your Sub-Committee have n several occasions discussed the question of their disposal or lteration, but up to the present have not come to any decision on he subject.

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City of Nottingham.

Chart illustrating the relations of the number of deaths from various causes to the principal Meteorological conditions on each day of the year 1902.

Readings taken at 9 a.m.
After 1st June, Rainfall, Sunshine and Maximum Temperature is entered to previous day.

Estimated Population of the City, middle of 1901—243,900.
" " " " 1902—245,903.
Area of the City ... 10,935 acres.

Total Births during the year, 4,743.
Birth Rate per 1000 of population per annum, 27·9.

Total Deaths, 4,042.
Death Rate per 1000 of population per annum, 16·7.

ARTHUR BROWN, M. Inst. C.E., F. R. Met. Soc.
City Engineer.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health.